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Federation of Malaya

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Annual Report

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THE HIGH COMMISSIONER
FOR THE FEDERATION OF MALAYA
His Excellency Sir Henry Lovell Goldsworthy Gurney, K.C.M.G.

THE RULERS OF THE MALAY STATES

THE SULTAN OF JOHORE

Major-General His Highness Sultan Sir Ibrahim ibni Al-marhum Sultan
Abu Bakar, D.K., S.P.M.J., G.C.M.G., K.B.E. (Mil.), G.B., G.C.O.C. (I)

THE SULTAN OF PAHANG.

His Highness Sultan Sir Abu Bakar Ri'ayatu'd-Din Al-muadzam Shah
ibni Al-marhum Al-mu'tasim Bi'llah Abdullah, K.C.M.G.

THE YANG DI-PERTUAN BESAR OF NEGRI SEMBILAN.

His Highness Tuanku Sir Abdul Rahman ibni Al-marhum Tuanku
Muhammad, K.C.M.G.

THE SULTAN OF SELANGOR.

His Highness Sultan Sir Hisamuddin Alam Shah ibni Al-marhum Sultan
Alaiddin Sulaiman Shah, K.C.M.G.

THE SULTAN OF KEDAH.

His Highness Tunku Sir Badlishah ibni Al-marhum Sultan Abdul Hamid
Halim Shah, K.C.M.G., K.B.E.

THE RAJA OF PERLIS.

His Highness Syed Putra ibni Al-marhum Syed Hassan Jamalullail, C.M.G.

THE SULTAN OF KELANTAN.

His Highness Tengku Sir Ibrahim ibni Al-marhum Sultan Mohamed IV,
D.K., S.P.M.K., S.J.M.K., K.C.M.G.

THE SULTAN OF TRENGGANU.

His Highness Sultan Ismail Nasiruddin Shah ibni Al-marhum Sultan
Zainal Abidin, C.M.G.

THE SULTAN OF PERAK.

His Highness Paduka Sri Sultan Sir Yussuf 'Izzuddin Shah ibni Al-marhum
Sultan Abdul Jalil Radziah Hu'an-hu, K.C.M.G., O.B.E.

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Introduction

THE MALAYAN EMERGENCY

DEVELOPMENT OF THE EMERGENCY

The success of the Communists in China during the latter part of 1949 and the recognition by His Majesty's Government in the United Kingdom of the Chinese People's Government early in January, 1950, had a marked effect on the Emergency in Malaya. On the one hand the bandits themselves were much encouraged and on the other there was a significant change in the attitude of a considerable section of the Chinese in the Federation which became less ready to co-operate with Government and more disposed to insure themselves with the other side; for they feared that if they openly sided with the Government in Malaya, their relatives or their property, or both, in China, would suffer at the hands of the Communist Government.

It can be said therefore that the situation at the beginning of 1950 had deteriorated as compared with 6 months earlier. This was due not only to the external factors mentioned in the last paragraph but also to the fact that the Malayan Communist Party had, during the latter part of 1949, undertaken a training programme which enabled them, from the beginning of 1950, to step up materially their attacks on persons and property and, at the same time, to extend their activities in the field of propaganda.

A tendency had become increasingly evident at the end of 1949, particularly in the towns, for the general public of all races, with the exception of a relatively small number of public-spirited individuals, to regard the prosecution of the Emergency as a matter solely for Government and the Security Forces. It was clearly necessary to drive home the lesson that, without the full co-operation of the ordinary man-in-the-street on whom the authorities relied for information, the Emergency would continue indefinitely. Arrangements were therefore made for a special "Anti-Bandit Month"—starting on the 28th February and ending on the 2nd April—during which volunteers assisted the Police in such tasks as manning road-blocks and carrying out screening operations. In many instances these volunteers were able to release regular Police for more important duties. Over half a million adult males were enrolled and this response to the appeal for volunteers provided a complete refutation of the Communist propaganda lie that the bandits had the support of the Malayan people. Tasks were carried out which were beyond the capacity of the regular Police on their own and, where experience showed that they were fruitful, they were

continued, after the month was over, with the assistance of Auxiliary Police. In some places anti-bandit volunteers went on active operations.

Bandit-inspired incidents rose to 221 in February, an increase of 80 per cent. over the average monthly figure of 1949. This increase continued until May, 1950, when the number of incidents reached a total of 534, nearly double the previous highest monthly figure recorded since the start of the Emergency. There was a slight falling off during June and July, but the figures were still three times greater than the average for 1949. In August the number of incidents rose again and continued to do so until October, when the peak figure of 571 was recorded.

As part of the bandit effort Communist cells were being formed to an increasing extent in towns, villages and, in particular, in "squatter" areas wherever Chinese preponderated. Upon these, the Communist armed gangs depended for their maintenance and information, dominating the population by terrorist methods and by propaganda. These Chinese squatters, a relic of the Japanese occupation, were estimated to number about 500,000, spread over the country and beyond effective administration by the Government. The isolated situation of the squatters' dwellings combined with the jungle nature of Malaya, ideal for guerilla raids, meant that complete security, whatever the size of the Security Forces, could never be afforded them. The need to bring these squatters within the control of the administration and to provide them with protection had been realised at an early stage of the Emergency and the report of a Committee had been published in February, 1949. This was referred to State and Settlement Governments for consideration and it was not until the beginning of 1950 that effective steps to resettle squatters were begun.

APPOINTMENT OF A DIRECTOR OF OPERATIONS

In April, 1950, Lieut.-General Sir Harold Briggs, K.C.I.E., C.B., D.B.E., D.S.O., was appointed Director of Operations charged solely with the prosecution of the Emergency and the co-ordination of the efforts of the Security Forces with those of the Civil Administration to ensure that the maximum effort was effectively directed against the bandits.

It was realised that there was no quick or easy way of ending the Emergency. To kill bandits was not enough as replacements were always available; what was required was to break Communist morale and to remove or disrupt the bandits' sources of supply. This could only be done by accelerating the pace at which the "squatters" were being brought within administrative control. Above all, as this was progressively accomplished, it was essential to give security to them and control to Government by concentrating their dwellings.

General Briggs included this large project as the basis of his Plan and issued his first Directive in May calling for the people of Malaya to identify themselves with the battle against the bandits, ordering the re-deployment of the Police and the Army and an all out drive to tackle the problem of Resettlement.

An increase of two brigades of infantry made it possible, whilst maintaining equivalent security in the northern half of Malaya, to concentrate the maximum possible forces in Johore on 1st June, in Negri Sembilan and Malacca on 1st August, and in parts of South West Pahang on 1st September. Whilst resettlement was to continue throughout the country concurrently, priority of personnel and effort was to be given to these southern States to produce quicker initial results.

The Briggs Plan envisaged a Military framework of protection working in the jungle fringes, protecting the populated areas and communications from bandit encroachment, destroying bandits who, for maintenance of morale alone, must attempt entry, and cutting off their communications with their Communist cells in these places. The Police Force was to dominate the populated areas, dislocate and break up Communist cells therein, give local security and, by use of its C.I.D. and Special Branch, gain information from the population, now more responsive because of that added security. Once gained, that information was to enable them to anticipate any further recrudescence of active Communism. The R.A.F. was in support of both the Army and Police in increased weight.

The Plan entailed urgent steps being taken:

- (a) to get decisions quickly acted on through simplicity of procedure, especially financial procedure;
- (b) to get the maximum civil administrative effort "on the ground", especially in the matter of staff;
- (c) to increase the efficiency and numbers of the Police Force, especially in the matter of organisation, provision of leaders (above all, trained C.I.D. officers) and the formation of a para-military force composed of Police jungle companies.

In order to initiate action to implement this policy there were set up in April the Federal War Council, and State/Settlement War Executive Committees. Membership of the former consisted initially of the Chief Secretary, the Secretary for Defence and Chiefs of the Armed Forces and Police under the chairmanship of the Director of Operations. Later in the year membership was extended to include two Malays, a Chinese and a European planting representative under the chairmanship of His Excellency the High Commissioner. At State and Settlement level these committees were under the chairmanship of the Mentri² Besar or British Advisers in the Malay States, and of Resident Commissioners in the Settlements, with the Chief Police Officer and Officer Commanding troops as members. Here, too, frequent co-option of non-service representatives took place and the joint conception embodied in these War Executive Committees was followed at all levels with the Civil Administration, Police and Army working in the closest collaboration, and using Combined Operations and Intelligence Rooms wherever practicable.

The implementation of the Plan went ahead steadily from June 1st. In the local areas where resettlement was completed an immediate improvement was noticeable. This was borne out by a decrease in incidents, by bandit efforts to hinder resettlement (which later have

been ineffective) and by statements found in captured documents. An increasing desire for and satisfaction in resettlement was shown by the "squatters" who have been and are being settled. Generally, however, the morale of the population which had improved considerably in the knowledge that a definite plan, of which they approved, had been instituted, declined again when no quick improvement in the situation was discernible and the total number of incidents continued to rise. Evidence from captured documents showed however that the increase in bandit inspired incidents was a definite reaction to the Briggs Plan. Shortage of food consequent upon the method of deployment of the Security Forces and the gradual disappearance by resettlement of their supply areas, caused the breaking up of large gangs and the merging of M.R.L.A. and Min Yuen units into small mobile gangs. These small gangs carried out wide-spread "jitter" attacks on "soft" targets in an attempt to draw off Security Forces from their accepted tasks and so interrupt the progress of the Plan. Sixty per cent. of these were confined to stealing Identity Cards, cutting telephone wires, stray shots around the perimeters of resettlement areas and other incidents of a minor character.

By November the stage had been reached when it was possible to intensify the effort of the Security Forces against the bandits. A further redeployment was carried out and civil administrative measures to speed up the Plan were introduced with the result that the numbers of bandit inspired incidents dropped off by nearly 200 per month while bandit casualties increased considerably, 85 being killed in December alone.

By the end of the year, in spite of the adverse effect on public opinion of external events in the Far East, particularly in Korea and Indo-China, there was a distinctly apparent improvement in civil morale, some stiffening of anti-Communist feeling among the Chinese, and a further increase in the flow of information and generally in Security Force results. Among the population there seemed to be a real hope that, given time, successes would come, and acceptance of the fact that there was no quick solution.

Resettled persons generally showed increased appreciation of the security afforded them though active Chinese support was still generally lacking.

As a result of resettlement, accompanied by Security Force action, bandit gangs by the end of the year had, however, tended to disperse among the remaining squatters and especially among Estate and Mine labour, forcing these people to feed them and to aid them in activities such as rubber tree slashing.

The fact that bandits still did, and had to, maintain contact with the inhabitants confirmed the correctness of Security Force tactics whereby the role of the Army was to prevent such contacts by interception in small parties on the jungle fringes, and the role of the Police was to give local security to the population and to break up the Communist cells therein.

CASUALTIES

Throughout 1950 the bandits continued to show a reluctance to come to grips with our patrols, but in spite of this reluctance,

Security Forces succeeded in killing 639 bandits, capturing 147 and wounding 344. In the same period 147 bandits surrendered, 1,662 jungle camps were discovered and destroyed, and 1,368 small arms, 557 grenades and 131,393 rounds of ammunition were recovered. All these are known casualties. No estimate of the number of bandits who have died from wounds, starvation, etc., has been attempted.

Casualties suffered by the civilian population and Security Forces during the year were:

	Killed.	Wounded.	Missing.
Civilians	646	409	106
Police	222	321	—
Military	72	164	—

These figures are substantially higher than those covering the year 1949 and support the view that in 1950 the battle was truly joined whereas 1949 was a year of training and expansion on both sides. The terrorist nature of the campaign however remains apparent when civilian casualties are compared to those of the Security Forces.

THE SECURITY FORCES

The expansion and reorganisation of the Police Force during the year and the role it played in combating the terrorist campaign are fully described elsewhere. This section is therefore confined to a brief description of the contributions made by the three Services.

The Army.

Throughout the year the Army was fully deployed in aid of the civil power against the armed Communists gangs.

During the year two battalions at a time were withdrawn from operations for retraining. This number was reduced to one in December.

Reinforcements were received from Hong Kong in March when 26 Gurkha Infantry Brigade, consisting of 1st Battalion Cameronians (The Scottish Rifles), 1/2 Gurkha Rifles and 2/10 Gurkha Rifles, arrived. They were stationed in Johore. Further reinforcements arrived in July when 3 Commando Brigade Royal Marines, consisting of 40, 42 and 50 Commando came to Malaya from Hong Kong and were stationed in Kedah, later moving to Perak.

In August 2nd Battalion Coldstream Guards left for the United Kingdom, but were replaced by 1st Battalion Worcestershire Regiment.

On 1st June, 1950, with the inception of the Briggs Plan, a concentration of troops had to be built up in the priority area of Johore and 6 battalions were deployed in that State. The essence of deployment plans was to ensure a framework of troops throughout the Federation in the support of the Police, with reinforcements superimposed on this framework in Priority Areas. This framework which in effect means decentralising to Company, and in some cases Platoon, formations in each Police district, proved to be the most satisfactory tactical deployment for this unusual campaign.

FEDERATION OF MALAYA

As the plan progressed northwards extra battalions were allotted Negri Sembilan and South Pahang under command of 63 Gurkha Infantry Brigade in Negri Sembilan and 48 Gurkha Infantry Brigade in Pahang.

As a result of the arrival of reinforcements there was a command organisation. North Malaya Sub-District had under command 3 Commando Brigade RM, 1 Malayan Infantry Brigade and the 1st Battalion King's Own Yorkshire Light Infantry; 48 Gurkha Infantry Brigade remained in Pahang; and South Malaya District had under command 18 Infantry Brigade, 26 Gurkha Infantry Brigade and 63 Gurkha Infantry Brigade.

In September the 13/18 Royal Hussars, an armoured car regiment, arrived from the Middle East, and, at about the same time, 67 and 3 Gurkha Field Squadrons, Royal Engineers (who had been used in an infantry role) left for Hong Kong.

Soon afterwards 54 Battery of 25 Field Regiment Royal Artillery, equipped with 25 pounder guns, arrived from Hong Kong.

In December a start was made in forming the Malayan Scouts (Special Air Service). They are to be used in a special role in the anti-bandit campaign.

The 1st, 2nd and 3rd Battalions, the Malay Regiment, were on active operations—except for short periods of retraining—throughout the year. In April, 1950, the 4th Battalion, which had been raised towards the end of the previous year, moved to its operational area in Pahang, and was in action against the bandits shortly afterwards. At the end of the year it was announced that the Regiment is to be expanded to six battalions.

A great step forward was made during the year with regard to Malay officers. Malay officer cadets are now admitted to the Royal Military Academy, Sandhurst, and there are twenty such cadets from the Regiment undergoing training there now. The future intake from the Regiment will be twelve a year. On completion of their 18 months training, these cadets will be gazetted as Second Lieutenants in the Regiment. Malay Officers are now being given a new type of commission, issued by His Excellency the High Commissioner on behalf of His Majesty the King and Their Highnesses the Rulers, which raises their status to that of the British Officers serving with the Regiment.

The year saw the completion of training of the first batch of Specialists—fitters, mechanics and tradesmen of all types—and these are now working at their trades in the various ancillary units of the Malay Regiment, which have themselves been expanded to deal with the general expansion in fighting strength.

Casualties suffered by the Army were:

	OFFICERS.		OTHER RANKS.	
	Killed.	Wounded.	Killed.	Wounded.
British Units	7	12	32	77
Gurkha Units	2	2	12	48
Malay Units	—	—	19	25

The role of the Civil Liaison Corps became more firmly established during the year. The greater strength of the Army and an increase in the scale of Civil Liaison Officers with each Battalion as their usefulness was proved, led to the establishment being raised from the 1949 total of 100 to 270 by the end of the year.

The success of the Dayak trackers was also most marked. The Army found the special jungle knowledge of the Dayaks of the greatest value and asked for the establishment to be raised from the initial figure of 34 in 1949 to 108 in May and finally to 240 in November. Service with the Army attracted large numbers of volunteers in Sarawak and no difficulty was experienced in obtaining these numbers.

The Royal Navy.

Coastal patrols were carried out continuously by the Royal Navy assisted by launches of the Police Marine Branch and aircraft of the Royal Air Force.

These still appear to deter any attempt to reinforce the bandits by infiltration or the smuggling of arms and ammunition.

In addition, H.M. Ships and Motor launches have acted in support of the Civil and Military authorities by troop-carrying, landing armed parties and, on occasion, by bombardment.

The Royal Air Force.

As the tempo of ground operations against the bandits increased during the year, requests for all forms of air support were received by Advanced Air Headquarters at Headquarters Malaya, Kuala Lumpur, and were met on almost every occasion.

There was over 100 per cent. increase in the offensive air support, 786 air strikes being flown during the year. The busiest month for the medium bombers and ground attack aircraft was September, when they flew 106 strikes involving 505 sorties.

For the first time a squadron of Lincoln medium bombers arrived in the Far East from the United Kingdom, and started bombing operations during the latter part of March. In July, a squadron of R.A.A.F. Lincolns joined the R.A.F. squadron while other squadrons were operating with Brigands, Spitfires and Tempests. Night strikes were carried out by the Lincolns and bombing was found to be extremely accurate.

Bandit concentrations, often hidden below trees over 200 feet high, were usually difficult to locate. While the aim was always to kill bandits, the role of the R.A.F. was often in the nature of artillery, the object being to drive the enemy into areas where they could be more easily dealt with by ground forces. The number of casualties inflicted by air action has always been difficult to assess but follow-up troops and police frequently found areas of jungle devastated by bombing with enormous craters, while camps have received direct hits from bombs and strafing attacks.

Captured and surrendered bandits have expressed their fear of attack from the air, the number of hastily evacuated camps found by ground forces during the follow-up operations testifying to the truth of these statements.

As with airstrikes, the year has seen large increases in air supply sorties, R.A.F. Dakota crews from Kuala Lumpur having dropped nearly 3½ million lbs. of stores to British, Gurkha and Malay troops, the Police and Government Departments. Nearly 4,000 Military, Police, Government and civilian passengers and nearly half a million lbs. of freight were ferried between the main airfields of the Federation.

A Casualty Evacuation Flight was formed at R.A.F., Changi, during May, 1950, and was equipped with Dragonfly helicopters which lifted 26 sick or wounded personnel from jungle clearings. Austers of 655 (A.O.P.) Squadron have also been used in conjunction with the helicopters in addition to their normal duties of spotting, communication and reconnaissance.

Other duties carried out by the R.A.F. in Malaya have included dropping of surrender leaflets, visual and photographic reconnaissance, sea patrols and road convoy air cover.

One squadron of the R.A.F. Regiment (M), changed every six months, operated with Security Forces in the Selangor area.

INFORMATION AND PROPAGANDA

For the first few months of the year the Department of Public Relations continued to be responsible for the production and dissemination of psychological warfare material directed to the Communists and their supporters as well as for general information about the policy and actions of the Government. An intensive publicity drive in support of the special Anti-Bandit Month was described by the *Straits Times* as "an amazing demonstration of the effectiveness of a mass propaganda system never before employed in Malaya".

After the appointment of Lieutenant-General Sir Harold Briggs as Director of Operations it was decided to intensify the psychological warfare campaign against the Communists and Mr. Alex Josey was seconded in May from the Department of Broadcasting to the post of Staff Officer (Emergency Information).

In September Mr. Hugh Carleton Greene, Head of the East European Service of the B.B.C., was seconded for one year to Malaya and appointed to the post of Head, Emergency Information Services, with the task of directing and co-ordinating all propaganda media on behalf of the Director of Operations. Measures for which approval was obtained before the end of the year included the expansion of the fleet of mobile public address units to fifty-three and big increases in the staff and equipment of the Malayan Film Unit, while in the field of Broadcasting the amount of programme time devoted to the Emergency was expanded.

State and Settlement Emergency Information Officers were appointed to take charge of the local aspects of the propaganda campaign. The employment of surrendered bandits in large numbers both for word of mouth propaganda to the rural population and the production of leaflets addressed to their former comrades was initiated. In an attempt to increase the flow of information



Living huts in a typical resettlement area.



Helping Granny—a happy scene in the security of a resettlement area.



A drink—a chat—and instruction in the use of the carbine.



The security guard at a resettlement area.

from the public greatly increased scales of rewards were introduced for information leading to the capture or killing of Communist terrorists.

At the end of the year a change in news policy was approved by the War Council which permitted the issue of more detailed communiques about Emergency operations.

RESETTLEMENT

Plans for settling, resettling and regrouping squatters progressed and the pace increased as more staff became available. The position at the end of 1950 showed that 82 resettlement areas were practically completed while 58 others held and were receiving other families daily. The total number of persons then resettled or in the process of being moved was 67,000 in the Priority Areas and 50,000 in other areas while plans had been made or were being made for another 195 areas in which there would be resettled a further 332,500 squatters, including 52,500 in the Priority Areas.

In order to tackle this task it was necessary to take 40 officers away from non-Emergency duty in Federal Departments and direct them to resettlement work; to recall from overseas leave all officers who had been away for five months; to ask the Colonial Office to recruit 17 officers for resettlement work; and to recruit nearly 200 other officers locally. In addition, the Public Works and Survey Departments have directed a major portion of their staff and equipment for implementation of these measures.

During 1950 funds totalling approximately \$7,000,000 were provided by the Federal Government for expenditure on squatter resettlement schemes initiated by State and Settlement Governments. Of the total sum made available, \$3,800,000 was spent on subsistence allowances and housing grants to squatter families who, by reason of their resettlement, were temporarily deprived of their means of subsistence, and who were required to erect new houses in resettlement areas. The remaining \$3,200,000 went to cover the cost of land acquisitions and of public works in resettlement areas such as roads, drainage, latrines, wells, fencing, community halls and reception huts. In addition, orders were placed during 1950 by the Federal Government on the Crown Agents and local importers for a total of 2,156 tons of barbed wire for use in resettlement areas and supplies were distributed to State and Settlement Governments as they were received.

Expenditure in connection with the resettlement of squatters will be much higher in 1951 than in 1950.

CHINESE AFFAIRS AND THE EMERGENCY

The necessity to control the rural Chinese more closely has been clearly driven home by the Emergency. The need for special measures to bring the Chinese into a more satisfactory relationship with the State Governments has been met, in part, by the creation of posts of Secretary for Chinese Affairs in every State having a sizeable Chinese community. The Chinese Affairs Department has also been expanded to provide Chinese Affairs Officers both at State

and District level to assist in the administration of the large Chinese population. The Department should thus be in a position to interpret Government policy to this part of the population and in turn to convey their opinions and reactions to Government.

The expansion of the Chinese Affairs Department to include Junior Chinese Affairs Officers at District level is a new development indicative of Government's intention that, until the Chinese population has become truly Malayan, there shall be close contact, unimpeded by the barrier which normally results from an alien language and culture, between it and the Administration.

The resettlement and regrouping of rural populations has to a large extent overshadowed other branches of Chinese Affairs work, but the short term needs to provide protection and administrative control have not been allowed to obscure the long term value to Malaya of developing rural communities and giving them cohesion and a sense of social responsibility.

The formation of village committees in resettled areas, for instance, augurs well for their future. These committees have many of the features of a parish council and, under the guidance of the Chinese Affairs Officers who concentrate on this aspect of "after-care", will, it is hoped, become a firm basis upon which more advanced Local Government institutions can be built.

The Malayan Chinese Association continued to give energetic support to Government, which has found its leaders, at every level, anxious to co-operate. The early hopes of the Association becoming completely representative of the Chinese community have not, however, yet been fulfilled though its leaders have made genuine efforts to promote the Malayanisation of the Chinese population.

The lack of Chinese recruits for the Security Forces has been a disappointing feature of the Emergency. Chinese applied in large numbers for posts as Liaison Officers and Assistant Resettlement Officers, but few have been willing to serve in the Regular Security Forces. However, in the areas where Chinese Police have been recruited, there was convincing evidence of their fighting qualities and of the useful results which flow from having Chinese in the Police Force.

In the realm of Chinese Education, Chinese Affairs Officers joined with the Education Department in a concerted effort to make school committees more aware of their responsibilities. The problem of providing schools in resettlement areas is a vital part of the plan for closer settlement, and the Malayan Chinese Association has assisted in the financing of these as well as other projects.

FINANCE

It has been estimated that the Federal Government spent \$136,239,000, on Defence and the Emergency including the Police and Malay Regiment during 1950.

His Majesty's Government, in addition to bearing the cost of the armed Forces in operation, made a financial contribution in aid of expenditure on defence and internal security of \$25,714,286 and promised \$10 million towards the raising of the 5th and 6th Battalions of the Malay Regiment in 1951.

LEGISLATION

During 1950 the Emergency Regulations were developed still further in accordance with the general situation and the necessity for legal authority to deal with it. The following are the principal amendments and additions to the Regulations:

Emergency Regulation 4C.

The demanding, collecting or receiving of certain essential supplies from any other persons in circumstances raising a reasonable presumption that the person making the demand or the person for whom the supplies were intended is a terrorist was made a capital offence.

Emergency Regulation 4C.

The possession of terrorist documents or of supplies for which the possessor cannot satisfactorily account was also made a capital offence.

Emergency Regulation 6D.

Provision was made for the offence of possession of terrorist documents (e.g., subversive matter for propaganda, accounts showing collections or subscriptions or demands for supplies).

Emergency Regulation 17FA.

Power to declare certain areas to be controlled areas and residential areas was vested in State and Settlement executive officers. No person in a controlled area may reside except in a residential part or be at large in the controlled area during curfew hours.

Emergency Regulation 12.

Power was given to the Chief Secretary to prohibit the printing, sale, issue, circulation or possession of seditious or inflammatory matter of any kind.

Emergency Regulation 20A.

State and Settlement executive officers were given power to order the clearing of undergrowth on either side of public roads to a distance of 50 yards.

Emergency Regulation 17DA.

Power to impose a collective fine on the residents of any village, area or district, or to order the complete or partial closing of shops or the quartering of additional police therein, was conferred on the State and Settlement executive authorities, if they were satisfied, after inquiry by a competent authority appointed for the purpose, that the inhabitants had aided, abetted or consorted with bandits, suppressed evidence relating to offences against the Emergency Regulations, failed to give information to the police concerning bandit activities or failed to take steps to prevent the escape of bandits.

Emergency Regulation 17.

The Chief Secretary was authorised to extend orders of detention for two-year periods and provision was made for the cases of persons already detained to be reviewed after eighteen months detention. Power was also given to order that juveniles detained under the Emergency Regulations should be detained in Advanced Approved Schools.

Emergency Regulation 3A.

A Comptroller and Directors of Man-power were appointed, with power to direct any person in the Federation to perform such services, including military or police service, as might be specified (only males between 17 and 45 to be required to perform military or police service). Such services are to be paid for, and penalties are provided for failure to comply with the direction. Engagement in employment is also controlled, as is the maintenance of labour for essential work.

Other Regulations.

Other important regulations have been made under the Ordinance including :

- The Emergency (Restriction of Movement of Foodstuffs) Regulations, 1950 ;
- The Emergency (Control of Shops in Specified Areas) Regulations, 1950 ;
- The Emergency (Prohibition of Conveyance of Firearms) Regulations, 1950 ;
- The Emergency (Publications—Control of Sale and Circulation) Regulations, 1950 ;
- The Emergency (Publications—Import Control) Regulations, 1950 ;
- The Emergency (Home Guard) Regulations, 1950 ;
- The Emergency (Entry by Land from Thailand) Regulations, 1950 ;
- The Emergency (Tin-Ore Control) Regulations, 1950.

DETENTION AND DEPORTATION

At the end of 1949 there were 5,362 persons detained under Emergency Regulation 17 and with them 213 dependants, mostly children. By the end of 1950 the figures were 8,508 and 527 respectively. Of these persons 3,746 were subject to orders by the High Commissioner in Council under Emergency Regulation 17C to leave and remain out of the Federation.

During the spring of 1950, 75 persons who were natives of Hainan were repatriated under Emergency Regulation 17C to the island of Hainan, but thereafter the authorities at Hoihow, the port of Hainan Island, would not allow repatriates from Malaya to disembark there. The mainland ports of China having been closed to repatriates from Malaya in the autumn of 1949, the repatriation of Chinese thereupon came to a complete standstill. In November, however, one shipping company received permission to disembark repatriates at the port

of Swatow and during the last two months of the year 887 Chinese persons under detention accompanied by 514 dependent relatives were repatriated through that port.

Two hundred and twenty-five detainees with 316 dependants were repatriated to India during the year.

The power vested in the High Commissioner by Emergency Regulation 17D to arrest and detain all persons in a specified area was not used during the year 1950.

During the course of the year 79 male Chinese under orders of detention were unconditionally released after a period of vocational and other training at the Taiping Rehabilitation Centre.

To prevent youths coming under undesirable political influence in detention camps, arrangements were made for selected male Chinese under seventeen years of age whom it had been found necessary to detain to be accommodated at the Advanced Approved School for boys at Telok Mas, Malacca. At that institution the boys receive vocational and other training similar to that provided for youths who are sent to the School by the Courts under the provisions of the Juvenile Courts Ordinance.

Increasing attention was given to the problem of classifying detained persons according to their political complexion with the object of segregating those who had only acquiesced in terrorist activities or submitted to terrorist domination from those who had taken an active part in furthering terrorist crimes. A system of classification and segregation was devised and those who, when removed from political pressure by detention, show that are unlikely again to participate in insurgent activities will be released either under bond or unconditionally.

PART ONE

Chapter I

THE PEOPLE

Part I

POPULATION

The territory comprising the Federation of Malaya is part of the southernmost extension of the continent of Asia and constitutes an area of approximately 50,690 square miles. Its geography is briefly noticed elsewhere in this Report and it is sufficient to say here that it is an area of marked contrasts, over three-quarters of which is still primeval jungle or swamp. Densities of population vary from as little as 5 per square mile (over the 1,994 square miles of the District of Grik in Perak) to more than 20,000 per square mile over the 9.4 square miles of the Municipality of Georgetown, Penang. In fact, at the last census of population, which was taken on the 23rd September, 1947, the sparsest three-fifths of the area carried only one-tenth of the population. The mean population density was then approximately 97 and is now about 104 per square mile.

When the 1947 census was taken, a total of 4,908,086 persons (excluding transients, Service personnel in Service Establishments and the small number of Japanese surrendered personnel then remaining in the country) were enumerated. This total included the 29,648 nomadic aborigines counted on that occasion but (as has probably been the case at past census takings) the enumerated figure probably represents a substantial undercount.

1931 AND 1947 CENSUS POPULATIONS COMPARED

On the basis of the population enumerated on both occasions, the following were the percentage increases (or decreases) since the 1931 census was taken:

Total population	+ 29.6	per cent.
Malaysians	+ 30.3	"
Chinese	+ 46.7	"
Indians and Pakistanis ..	— 7.07	"
Others	— 4.31	"

After making due allowances for migration, these figures represented an average annual rate of increase in the case of Malaysians of approximately 1.9 per cent. and in the case of Chinese of approximately 2.0 per cent. These are remarkable figures, particularly in view of the fact that the natural increase in the population (i.e., births minus deaths) over the whole four-year period of the Japanese occupation averaged less than 30,000 a year

against about 90,000 immediately before the war, and, for instance, 115,670 in 1947.

These figures are high by any standard. In Formosa, for instance, between the years 1920 and 1930, and in Java during the second half of the last century, the average annual rates of increase were 2.3 per cent. and 2.2 per cent. respectively; and the next highest rates on record* are 1.7 per cent. in the Philippines between 1903 and 1934, 1.9 per cent. in Egypt between 1880 and 1907 and 1.6 per cent. in Ceylon between 1850 and 1900. All these, it should be noted, are selected rates for the most fertile populations known and, except in the case of Ceylon, owe little to immigration.

The only groups which did not show substantial increases but, indeed, decreased between 1931 and 1947 were the Indians and Pakistanis and the "Others" (many of whom, incidentally, were, in 1931, Japanese). The drop in the case of the Indians and Pakistanis was not typical but was due in some measure to the ban imposed in 1938 by the Government of India on the emigration to Malaya of unskilled labourers, but chiefly to abnormally high death rates and low birth rates during the Japanese occupation. In fact, this group was not restored to its 1931 size until the latter half of 1950, though its present rate of natural increase is even greater than that any of the other groups.

POPULATION SINCE 1947

The estimated population of the Federation of Malaya at mid-year, 1950, was 5,226,549, of whom 2,730,894 were males and 2,495,655 were females. This represents an increase of 144,701 on the total mid-1949 figure.

The following comparative table (which takes migration into account) shows the estimated population of the Federation as a whole and by race for the mid-years 1948 to 1950 and compares it with the population enumerated at the last two census takings:

	Total population.	Malaysians.	Chinese.	Indians and Pakistanis.	All others.
1931†	3,787,758	1,863,872	1,284,888	570,987	68,011
1947†	4,908,086	2,427,834	1,884,534	530,638	65,080
1948	4,987,427	2,457,014	1,928,965	536,646	64,802
1949	5,081,848	2,511,520	1,952,682	550,684	66,962
1950	5,226,549	2,579,914	2,011,072	564,454	71,109

RATES OF INCREASE

The annual rates of increase per 1,000 of the population for the years 1947/1948 to 1949/1950, based on the foregoing figures, are shown in the following table. The 1947/1948 rates have been computed on the 1947 Census figures (and adjusted in view of the fact that the base period was one of 40 weeks duration only) while the rates for the years 1948/1949 and 1949/1950 were computed on the estimated mid-year populations for 1948 and 1949 respectively:

Year.	Total population.	Malaysians.	Chinese.	Indians and Pakistanis.	All others.
1947/48†	21.0	15.6	30.6	14.7	5.5§
1948/49	18.9	22.2	12.3	26.2	33.3
1949/50	28.5	27.2	29.9	25.0	61.9

* "World Population"—Carr-Saunders, Oxford 1936.
† Figures for 40-week period multiplied by 52/40.

‡ According to the Census.
§ Decrease.

These figures, particularly those for the Chinese and the Indians and Pakistanis, are much affected by migration and they should therefore be considered in relation to the figures in Table A on page 19. Even so, the latter do not reveal the comparatively large differences that exist between the figures for the first and second halves of each year.

As a matter of interest it is recorded that most of the inward migrational surplus in the case of "Others" in 1949 is attributable to Siamese and that, although this group was not separately tabulated in 1950, the same is probably true of that year.

DISTRIBUTION

The estimated population as on the 30th June, 1950, was distributed by race group and territory as follows:

Territory.	Malaysians.	Chinese.	Indians and Pakistanis.	All others.	Total.
Penang	144,120	263,390	59,298	6,419	473,227
Malacca	131,069	102,641	21,098	3,700	258,508
Perak	386,486	473,622	149,160	9,335	1,018,603
Selangor	203,783	388,245	155,273	16,981	764,282
Negri Sembilan	118,872	122,919	41,663	5,094	288,548
Pahang	141,761	103,900	15,695	2,512	263,868
Johore	354,120	379,009	59,458	5,355	797,942
Kedah	399,887	124,314	54,105	10,894	589,200
Kelantan	426,622	24,162	5,242	8,287	464,313
Trengganu	214,493	16,417	1,726	535	233,171
Perlis	58,701	12,453	1,736	1,997	74,887
TOTAL	2,579,914	2,011,072	564,454	71,109	5,226,549

The distribution has not altered significantly since the taking of the 1947 census.

BIRTH AND DEATH RATES: RATES OF NATURAL INCREASE

The vital statistics for the year show that 1950 has been moderately healthy, though not as healthy as 1949.

The total number of births recorded during the year was 219,512 and the number of deaths 82,554, giving an excess of 136,958 births over deaths; but there were 3,270 fewer births than in 1949 and 10,142 more deaths.

The actual figures for births and deaths registered and for the natural increase (births less deaths) during each half-year from 1946 to 1950 appear in Tables B, C and D on pages 19 and 20.

These half-yearly figures are quoted for their interest because, although the fluctuations they exhibit are so considerable that they would appear to merit study, they are not conveniently available elsewhere. It will, for instance, be noticed that in most cases (and, in the case of the Chinese, in every case) the number of births recorded in the second half-year exceeds the number registered in the first. If this trend is maintained it will afford fascinating opportunities for speculation, for the anthropologist no less than for the ethnographer! The table also reveals the substantial drop which occurred in the number of births registered in the first half of 1948 (presumably an "echo" of the occupation period), and the fact that, in spite of a relatively high death rate, the absolute size of

The annual crude birth and death rates and the yearly rates of natural increase per thousand of the population for the Federation as a whole and for each of the main race groups separately are shown in the next three tables. These rates, unlike those based on the estimated population (which are calculated on the population at the *beginning* of the period) are calculated on the populations at each of the mid-years from 1947 to 1950 successively. Thus, for instance, the 1949 rates for Malaysians have been obtained by dividing the recorded figures for the year by the mid-year Malaysian population for 1949, viz., 2,511,520 :

RATES OF NATURAL INCREASE (per mille)						
Year.	Total population.	Malaysians.	Chinese.	Indians and Pakistanis.	All others.	
1947*	23.6	17.1	29.7	33.3	10.3	
1948	24.2	17.4	31.0	32.1	11.5	
1949	29.6	26.6	31.9	36.6	17.5	
1950	26.2	23.2	29.0	31.3	16.5	

It will be observed that apart from the "bad"

It is, however, chiefly to the yearly rates of natural increase that attention should be drawn. The natural increase in the population as a whole for 1950 amounted to no less than 136,958, which is 2.62 per cent. of the estimated mid-year population; and the mean of the four rates from 1947 to 1950 is 2.59 per cent. This figure might, indeed, have been even higher were it not for the substantial excess of males (110 males to every 100 females in the substantial group) which still exists in spite of the great improvement in this direction in the last two decades. The significance for the future of this rate of increase is profound for, if it is maintained and there is no appreciable migrational swing one way or the other, it will result

* Calculated on the population according to the Census, September, 1947

TABLE A.

	Immigration.			Emigration.			Inward Migrational Surplus.				
	1947.	1948.	1949.	1947.	1948.	1949.	1947.	1948.	1949.	1950.	
Malaydians	3,404	6,315	31,873	2,239	5,832	30,981	..	1,165	+	892	1,994
Chinese	26,201	38,443	32,845	29,850	40,745	41,991	..	3,649	-	9,146	1,408
Indians and Pakistanis	19,017	24,170	20,866	27,423	25,093	21,477	..	8,406	-	923	7,391
All others	7,753	9,588	18,322	7,388	8,840	14,824	..	365	+	748	6,522
TOTAL	56,375	78,516	103,906	66,900	80,510	109,273	..	10,525	-	1,994	10,511

TABLE B.

BIRTHS.

Period.	Malayans.			Chinese.			Indians and Pakistanis.			All others.			Total.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1st half 1946	19,239	17,667	36,906	18,814	16,262	35,076	4,095	3,786	7,881	223	179	402	42,371	37,894	80,265
2nd "	24,208	22,408	46,616	23,228	20,851	44,079	6,340	6,129	12,469	282	249	531	54,058	49,637	103,695
1st "	24,027	24,848	50,876	21,008	19,208	40,216	6,966	6,513	13,479	352	331	683	54,153	50,895	105,048
2nd "	25,437	24,167	49,604	22,008	20,438	42,446	6,395	6,370	12,765	361	331	752	54,431	51,336	105,767
1st "	21,716	20,517	42,233	20,928	19,102	40,080	5,706	5,307	11,013	375	353	728	48,725	45,279	94,004
2nd "	25,007	23,925	48,932	23,350	21,352	44,702	6,707	6,424	13,131	479	464	943	55,543	52,165	107,708
1st "	27,396	25,896	53,292	21,543	20,202	41,745	6,872	6,525	13,397	557	497	1,054	56,368	53,120	109,488
2nd "	28,196	27,090	55,286	22,344	21,045	43,389	6,926	6,623	13,549	547	523	1,070	58,013	54,281	112,294
1st "	28,960	27,660	56,629	19,683	18,683	40,898	6,489	6,393	12,879	558	563	1,121	54,296	52,32	111,528
2nd "	28,062	25,482	53,544	21,217	20,504	42,931	6,239	6,201	12,490	502	517	1,019	55,230	52,706	107,984
1st "	259,257	239,655	498,912	217,066	198,647	415,713	62,565	60,268	122,853	4,266	4,037	8,303	536,174	502,607	1,038,781
2nd "	259,257	239,655	498,912	217,066	198,647	415,713	62,565	60,268	122,853	4,266	4,037	8,303	536,174	502,607	1,038,781

TABLE C.
DEATHS.

Period.	Malaysians.			Chinese.			Indians and Pakistanis.			All others.			Total.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1st half 1946	14,538	13,987	28,525	10,463	6,060	16,523	3,820	2,433	6,253	243	151	394	29,064	22,631	51,695
2nd " 1946	16,496	15,164	31,660	10,211	5,824	16,035	3,031	2,242	5,273	236	141	377	29,974	23,371	53,345
1st " 1947	15,532	14,542	30,074	8,882	5,198	14,080	2,471	1,983	4,454	197	175	372	27,082	21,848	48,930
2nd " 1947	14,872	14,083	28,955	8,109	4,779	12,888	2,188	1,790	3,978	230	164	394	25,399	20,816	46,215
1st " 1948	13,221	12,203	25,424	7,572	4,629	12,201	2,013	1,446	3,459	259	180	439	23,065	18,458	41,523+1
2nd " 1948	12,106	10,864	22,970	8,013	4,710	12,723	1,931	1,534	3,465	308	180	488	22,358	17,258	39,616+2
1st " 1949	11,042	10,140	21,182	7,314	4,378	11,692	1,935	1,321	3,256	288	180	468	20,579	16,019	36,598
2nd " 1949	10,732	9,397	20,129	7,079	4,115	11,194	1,974	1,532	3,506	298	187	485	20,083	15,731	35,814
1st " 1950	12,559	11,215	23,774	7,944	4,733	12,677	2,245	1,677	3,922	286	194	480	23,034	17,819	40,853
2nd " 1950	12,802	11,708	24,510	8,147	4,787	12,934	2,127	1,645	3,772	300	185	485	23,376	18,325	41,701
TOTAL 1946-50	133,900	123,803	257,703	83,734	49,213	132,947	23,735	17,553	41,288	2,645	1,737	4,382	244,014	192,306	436,320+3

+ = Race and sex unknown.

TABLE D.
NATURAL INCREASE.
BIRTHS LESS DEATHS.

Period.	Malaysians.			Chinese.			Indians and Pakistanis.			All others.			Total.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1st half 1946	4,701	3,680	8,381	8,351	10,202	18,553	275	1,353	1,628	-20	28	8	13,307	15,263	28,570
2nd " 1946	7,712	7,244	14,956	13,017	15,027	28,044	3,309	3,887	7,196	46	108	154	24,084	26,268	50,350
1st " 1947	10,495	10,301	20,796	12,126	14,010	26,136	4,295	4,580	8,875	155	156	311	27,071	29,047	56,118
2nd " 1947	10,565	10,084	20,649	14,099	15,659	29,758	4,207	4,580	8,787	161	197	358	24,082	26,047	50,129
1st " 1948	8,495	8,314	16,809	13,356	14,473	27,829	3,693	3,861	7,554	116	173	289	25,060	26,821	51,881
2nd " 1948	12,901	13,061	25,962	15,337	16,642	31,979	4,776	4,890	9,666	171	284	455	33,185	34,877	68,062-2
1st " 1949	16,354	15,756	32,110	14,229	15,824	30,053	4,937	5,204	10,141	269	317	586	35,789	37,101	72,890
2nd " 1949	17,464	17,193	34,657	15,265	16,930	32,195	4,952	5,091	10,043	249	336	585	37,930	39,550	77,480
1st " 1950	16,410	16,445	32,855	13,272	14,950	28,222	4,244	4,713	8,957	272	369	641	34,198	36,477	70,675
2nd " 1950	13,260	13,774	27,034	14,280	15,717	29,997	4,162	4,558	8,718	202	332	534	31,904	34,379	66,283
TOTAL 1946-50	118,357	115,852	234,209	133,332	149,434	282,766	38,850	42,715	81,565	1,621	2,300	3,921	292,160	310,310	602,461-3

Estimated population

31-12-1950	1,292,501	1,310,276	2,602,777	1,096,420	938,566	2,034,986	331,168	242,124	573,292	41,316	34,337	75,653	2,761,405	2,530,303	5,291,708
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- = Race and sex unknown.

in the population doubling itself in approximately 27 years. In other words the population of the Federation would, in such circumstances, reach 10 millions by 1975. This is not the place to discuss the extent and nature of the challenge which would face the country were so violent a rate of growth to persist; but there can be no doubt that it would pose problems in every field of activity—and particularly in securing adequate food supplies, full employment and primary education—whose solution would strain the resources of the people of the Federation and their Government to the uttermost.

Taking the racial groups separately, it will be seen that by far the highest rates of natural increase are recorded in respect of the Indians and Pakistanis, the figures for whom must surely transcend those recorded anywhere and at any time. Next come the Chinese, amongst whom the rate has kept in the near neighbourhood of 3 per cent. per annum over the past four years. Although this figure loses something by comparison with the staggering rates for Indians and Pakistanis it is, of course, a very high one. The rate for the Malaysian group has averaged about 2.5 per cent. over the last two years, but only 2.1 per cent. if all four years are taken into account. Therefore, although the Malaysian population is, as has already been stated, increasing absolutely in relation to the Chinese, it is not doing so relatively.

It may, perhaps, be of interest in this connection to record the following comparative figures for Ceylon, for the period 1931-1946:

Mean crude birth rate	..	36.8 per mille
Mean crude death rate	..	22.2 "
Mean rate of natural increase	..	1.46 per cent.

INFANT MORTALITY

This is of great significance in relation to the rates of natural increase referred to above, and the most significant changes have been recorded in the case of the Malaysians where the infant mortality rate dropped from 129 in 1947 to 93 in 1949 (which was a remarkably good year for all groups), only to rise again sharply to 121 in 1950. But 1950 was, in this respect, not nearly as good as 1949 for all racial groups although the increase in the infant mortality rate amongst Malaysians (28 per 1,000) and Indians and Pakistanis (29 per 1,000) was substantially greater than the increase (10 per 1,000) in the case of Chinese. Contributory causes may have been increased employment of women as wage-earners (with the resulting loss of the mothers' care of their infants) and changes in dietary habits of the mothers and the food given to children.

The actual distribution of infant deaths by main racial group (with the corresponding figures for 1949 shown in brackets) was:

	Infant deaths (under the age of one year).	Births.	Monthly average of infant deaths.
Malaysians	13,075 (10,094) ..	108,173 (108,578) ..	1,090 (841)
Chinese	6,199 (5,451) ..	83,830 (85,134) ..	517 (454)
Indians and Pakistanis	2,883 (2,283) ..	25,369 (26,946) ..	240 (190)
Total population	22,301 (17,953) ..	219,512 (222,782) ..	1,858 (1,496)

and the rates for the last five years are as follows :

	1946.	1947.	1948.	1949.	1950.
Malaysians ..	118 ..	129 ..	111 ..	93 ..	121
Chinese ..	64 ..	70 ..	67 ..	64 ..	74
Indians and Pakistanis ..	92 ..	99 ..	88 ..	85 ..	114
All races ..	92 ..	102 ..	89 ..	81 ..	102

Part II MIGRATION

GENERAL

The re-organisation of the Immigration Department in the Federation which was started during 1949, continued during the year and is expected to be completed in 1951. The main effort was, in the first instance, directed to bringing the land frontier of the Federation under effective immigration control. This involved the construction not only of Immigration Examination stations on the border but also of quarters for staff as most of these stations are situated in remote places, where no alternative accommodation exists. This work is complete and there is now established, at every legal point of entry, whether by road, rail or river, an Immigration Control Post.

The control of immigrants arriving by large ocean-going ships is, within the limits of present immigration laws, satisfactory ; however, this cannot be said of the control exercised over the large numbers of small craft and junks which ply between the Federation and nearby countries. This problem has received special consideration and new measures calculated to reduce illegal immigration by small craft to a minimum will be introduced.

The enforcement of stricter immigration control necessitated taking action against persons for breaches or attempted breaches of immigration laws in 1,316 individual cases ; 815 persons were refused entry, 343 court prosecutions took place and 35 persons were deported by order of the Controller during the year 1950.

The completion of the re-organisation of the Department is hampered by lack of experienced officers and difficulties in obtaining and training suitable personnel. Apart from the Controller, there is only one officer in Divisions I and II who has been employed on Immigration work since before the re-occupation.

Furthermore, the present immigration laws were not drafted to meet a policy of restrictive selective immigration. A completely new Immigration Bill was introduced into both Legislative Councils and committed for examination to a Joint Select Committee.

ARRIVALS AND DEPARTURES

The figures for adults and children arriving and departing from Malaya, analysed by sex and race, will be found in Tables A, B and C on pages 25 and 26.

The year 1950 saw a marked alteration in the ratio of arrivals from abroad in the Colony of Singapore and the Federation respectively. The figures, which take no account of movements between the Federation and the Colony, nor of persons arriving in ships and aircraft and continuing their journey in the same vessels or aircraft are :

Year.	Total arrivals in Malaya.	Number entering or disembarking in the Federation.	Number entering or disembarking in the Colony.
1949 ..	213,872	103,057	110,815
1950 ..	274,680	179,968	94,712

Some of the reasons for this change are :

- the reduction in the number of arrivals from China. This chiefly affects the Colony statistics, as most arrivals from China disembark in Singapore whether the intended destination is the Federation or the Colony ;
- the much strengthened immigration control on the Thai/Malayan border resulting in a smaller number of persons entering otherwise than through an Immigration Control Post and the more accurate compilation of migration returns in respect of the land frontier ;
- certain vessels from India carrying large numbers of immigrants have been disembarking all passengers at Penang, including those whose destination is Singapore.

TRAVEL DOCUMENTS

During the year the Department in the Federation issued :

(a) Certificates of Admission to aliens ..	13,046
(b) Landing Permits to aliens ..	1,283
(c) Entry Permits to aliens, including permits for visits only but not permanent residence ..	2,743
(d) Visas to alien holders of Certificates of Admission ..	2,621
(e) Certificates of Identity known as Re-entry Permits issued to Indian and Pakistani nationals proceeding on visits to India and Pakistan and returning to Malaya ..	11,500
(f) Border Passes ..	23,193

There was a marked increase in the issue of British Passports, chiefly to Federal Citizens :

(a) Number of British passports issued in 1950 (1949 issue was 2,266) ..	5,472
(b) Renewals of British Passports ..	263
(c) Endorsements on British Passports ..	920

- | | |
|--|-------|
| (d) Emergency Certificates issued to British subjects
or British Protected Persons | 989 |
| (e) Visas for countries outside Malaya | 1,722 |
| (f) Other travel documents issued to persons not
eligible for passports for the purpose of
proceeding to countries outside Malaya .. | 2,741 |

Part III

FEDERAL CITIZENSHIP

In 1948, a Registrar of Federal Citizens for the Federation of Malaya was appointed by the High Commissioner-in-Council to carry out the registration of Federal Citizens under the provisions of the Federation of Malaya Agreement. The Registrar is assisted by a Deputy Registrar of Federal Citizens in each State or Settlement and there are Assistant Registrars in the Districts. All these officers are engaged for only part of their time on this work.

The Agreement provides for the acquisition of Federal Citizenship in two ways, namely, automatically "by operation of law" and "by application". Children under the age of 18 years may be included in the application of a parent.

It is estimated that approximately 3,120,000 persons have become Federal Citizens by operation of law since 1st February, 1948, the date when the Agreement came into force, and that, of this number, about 2,500,000 are Malaysians, 350,000 are Chinese and 225,000 are Indians, Pakistanis and Ceylonese.

The Regulations under which registration is effected did not come into force until the 1st February, 1949, and the following table shows the number of persons who have become Federal Citizens by application during the years 1949 and 1950. Many applications still remain to be considered.

Race.	1949		1950		Grand total.
	Adults.	Minors.	Adults.	Minors.	
Malaysians ..	61	92	1,383	1,747	3,283
Chinese	12,677	26,714	39,083	70,804	149,078
Indians, Pakistanis and Ceylonese ..	559	729	2,303	3,012	6,603
Others	41	50	143	133	367
	13,338	27,585	42,912	75,496	159,331

Thus it is estimated, in round figures, that the total number of Federal Citizens at the end of 1950 was about 3,275,000 sub-divided by race-group approximately as follows:

Malaysians.	Chinese.	Indians, Pakistanis and Ceylonese.	Others.
2,500,000	500,000	230,000	45,000

TABLE A

ARRIVALS OF PERSONS BY RACIAL GROUPS INTO MALAYA FROM ABROAD DURING THE YEAR, 1950.

(Excluding through passengers.)

RACIAL GROUP.	SINGAPORE.						FEDERATION OF MALAYA.						TOTAL MALAYA.					
	ADULTS.		CHILDREN.		Total.	Total.	ADULTS.		CHILDREN.		Total.	Total.	ADULTS.		CHILDREN.		Total.	
	Male.	Female.	Male.	Female.			Male.	Female.	Male.	Female.			Male.	Female.	Male.	Female.		
European ..	16,403	7,150	1,618	1,303	26,474	1,096	724	161	7	2,148	17,499	7,874	1,779	1,470	28,622			
Eurasian ..	162	139	48	42	490	36	39	7	7	89	198	178	55	49	480			
Chinese ..	34,988	8,326	4,208	2,794	50,336	24,937	7,131	519	443	32,390	59,285	15,457	4,727	3,207	82,676			
Malay ..	3,861	811	271	204	5,147	34,790	43,281	1,966	1,966	82,438	38,651	44,092	2,236	2,236	87,651			
Malayans ..	1,154	540	439	399	2,532	24,022	27,500	1,476	1,476	29,325	31,593	3,874	2,016	1,539	39,522			
Indian and Pakistani ..	7,571	1,164	103	98	9,136	22,312	8,255	1,635	1,326	33,578	24,298	8,717	1,790	1,424	36,229			
Others ..	1,986	462	103	98	2,651	22,312	8,255	1,635	1,326	33,578	24,298	8,717	1,790	1,424	36,229			
Total ..	64,971	18,042	6,790	4,909	94,712	106,553	62,150	6,249	5,016	179,968	171,524	80,192	13,039	9,925	274,680			

TABLE B
TEMPERATURES OF PERSONS BY RACIAL GROUPS FROM MALAYA DURING THE YEAR, 1950.

[illegible]

TABLE C

EXCESS (+) OR DEFICIT (-) OF ARRIVALS IN RELATION TO DEPARTURES BY RACIAL GROUPS DURING THE YEAR, 1950.
(i.e. Figures in Table A Minus figures in Table B.)

RACIAL GROUP.	SINGAPORE.					FEDERATION OF MALAYA.					TOTAL MALAYA.				
	ADULTS.		CHILDREN.		Total.	ADULTS.		CHILDREN.		Total.	ADULTS.		CHILDREN.		Total.
	Male.	Female.	Male.	Female.		Male.	Female.	Male.	Female.		Male.	Female.			
European ..	123	453	649	86	1,311	359	208	20	62	739	236	155	629	24	572
Eurasian ..	74	88	27	34	223	12	31	4	6	53	86	119	31	40	276
Chinese ..	6,937	506	1,799	1,253	3,379	673	711	243	69	1,696	7,610	205	1,556	1,184	5,075
Malaysian ..	2,763	807	486	475	4,531	1,833	651	522	279	1,953	4,596	156	1,008	754	6,514
Indian and Pakistani ..	5,653	278	229	227	6,392	7,617	159	200	56	7,520	1,959	119	429	283	1,128
Others ..	10	106	88	86	270	4,569	1,071	25	83	5,748	4,579	965	63	3	5,478
Total ..	15,397	1,050	374	413	15,660	10,051	1,499	916	253	10,381	5,346	449	542	160	5,279

Chapter II

OCCUPATIONS, WAGES AND LABOUR ORGANISATION

Part I OCCUPATIONS

The 1947 Census showed the numbers of those gainfully employed to be as shown in the table on page 28.

For the reasons which will be discussed in this Part, there have, of course, been substantial changes in the occupation-pattern since September, 1947. For all that, this analysis may still be taken as giving a tolerably close indication of the distribution of occupations during the year under review.

Throughout the year, as the price of rubber rose and more and more smallholdings and small plantations were brought into tapping, the labour shortage in the rubber industry became more severe. At first labour flowed outward from the larger plantations seeking the higher wages which the owners of small properties were prepared to pay; but later the tendency was checked, not because the demand was satisfied but rather on account of the immobility of a substantial part of resident labour forces—the family men with their households and livestock to consider—and because increases of pay were given through the Employers' Association, of which most of the larger plantations are members. Indeed, at the end of the year there were small movements back to those places where security was better and where, even if his wages were less than he might have received elsewhere, the workman did not have to "contribute" a large proportion of them to the Communist bandits. But the unrequited demand for labour on the small properties, where the "fifty-fifty" (and sometimes even sixty-forty) share-cropping system of payment held out the promise of abnormally high wages, continued to draw labour from other industries. Government itself suffered, in spite of the enhanced rates offered to labour by its contractors engaged in carrying out the large programme of public works connected with the Emergency; and there was a shortage of labour in the mines.

Returns of workers employed are not required from small properties, but is known that on large estates the population fell from 318,000 at the end of 1949 to 310,000 by June, 1950. The figure of 318,000 is a total figure for all types of estates, but during 1950 separate statistics have been collected showing the working population for each separate type of estate, and these give a figure of 27,000 employed on oil palm, tea and coconut estates. No

OCCUPATIONS TABLE

Occupation.	Total.	Including		
		Malaysians.	Chinese.	Indians.
Fishermen	59,788	41,429	17,646	565
Agriculture (including plantation industries) .. .	1,168,299	646,861	332,973	178,178
Mining, quarrying .. .	39,837	4,436	30,824	4,342
Treatment of non-metalliferous mine and quarry products ..	146	34	87	24
Brick, pottery and glass making ..	1,827	302	1,341	179
Chemical processes, paint making, etc.	868	120	702	39
Metal work excluding electro-plate and precious metals .. .	25,064	2,365	19,622	2,502
Precious metals and electro-plate ..	7,036	477	5,698	755
Electrical apparatus making and fitting, electricians .. .	5,028	1,520	1,936	1,360
Watch, clock and scientific instrument making .. .	1,178	72	1,082	21
Skin and leather making and leather substitutes .. .	236	46	184	6
Textile making .. .	4,337	3,822	483	19
Textile goods and articles of dress ..	14,648	2,254	10,948	1,381
Food, drinks and tobacco making ..	21,262	6,426	11,984	2,786
Wood and furniture making .. .	46,756	21,982	24,038	646
Paper and card-board making; book-binding .. .	472	76	286	101
Printing and photographing .. .	2,734	342	1,931	400
Building, bricklaying, stone and slate .. .	8,309	2,116	5,435	666
Painting and decorating .. .	2,142	190	1,600	319
Other materials .. .	7,164	1,393	5,376	368
Transport and communication .. .	67,817	25,837	23,819	17,024
Commercial and financial occupations .. .	153,035	25,804	103,405	22,459
Public Administration and defence ..	20,983	15,215	1,028	2,418
Professional occupations .. .	34,844	13,357	12,775	5,324
Entertainments and sport .. .	4,228	1,368	2,177	459
Personal service .. .	81,753	9,560	54,024	17,471
Clerks and Draughtsmen: Typists ..	36,896	7,101	21,077	5,879
Warehousemen, Store-keepers and packers .. .	1,608	337	741	422
Stationary engine drivers, dynamo and motor attendants .. .	4,002	1,244	1,504	1,192
Other and undefined workers .. .	82,415	25,324	22,594	33,616
Totals ..	1,904,712	861,410	717,320	300,921

movement of labour has been reported away from these estates and it can safely be assumed that this figure has remained fairly constant throughout the year. Given this assumption, the working population on rubber plantations must have been about 290,000 at the end of 1949. In June, 1950, it was 283,000, shewing a loss of some 7,000. This figure does not represent the true loss of established labour, since there is known to have been a considerable influx of completely unskilled labour, attracted by higher rates of pay from less lucrative employment, such as drivers, servants, and manual labourers. It is, indeed, very evident that the large rubber plantations, which were short of labour even at the beginning of the year, have borne the brunt of the shortage of experienced estate labour.

The increase of labour on smallholdings can be estimated tolerably well from the figures for their total production provided that one bears in mind the fact that the proportion of field workers to tappers on such places is almost negligible compared to that found on estates. The estimated increased production from smallholdings during 1950, as compared with 1949, was 42,000 tons. Such an increase would require some additional 30,000 labourers, basing calculations on the total rubber estate production and working population during 1949, and this gives a fair pointer to the extent to which the demand for labour on smallholdings has succeeded in shifting the working population of the country.

The number of Malaysians employed on plantations has fallen from 70,000 to 66,000, the result of a movement back to self-employment in the kampongs; while for Indians the figures show a fall of 7,000. The number of Chinese has also dropped but only by some 1,000. This does not by any means represent the large number of skilled Chinese tappers who have left, because, as they have gone, so have their places been taken by "resettled" squatters who have had to seek some alternative form of employment.

Returns made to the Mines Department show that the number of labourers employed on dredges and mines of all kinds remained almost constant at 53,000 throughout the year 1950. This has in fact meant a general shortage of labour since, following the large rise in the price of tin, the number of tin mines and dredging units increased from 686 in December, 1949, to 733 in December, 1950, the increase for tin mines alone, other than dredges, being 41.

However, while the rise in the prices of tin and rubber has, no doubt, had a powerful effect on the labour situation, this is by no means the only, or indeed the chief, cause of the present stringency. The simple fact is that the male working population of the Federation, like the male population in the 15-54 age-group (with which it is for obvious reasons in close correspondence), was smaller in 1947 than it was in 1931. The figures at the last three census-takings were as follows:

	MALES		
	1921.	1931.	1947.
Working Population ..	1,302,827	1,525,060	1,462,698
Population aged 15-54 ..	1,214,196	1,484,684	1,381,316

The explanation of the drop in the size of the 15-54 age group since 1931 and its relatively small increase since 1921 lies chiefly in the fact that formerly the age pattern of the population was grossly distorted by adult immigration, and adult male immigration in particular; whereas at the present time the population is largely locally-born (about 80 per cent.) and, therefore, contains a much higher percentage than formerly of non-working children. Another important factor was the abnormally heavy adult male death rate during the occupation amongst those sent to labour outside Malaya and principally on the Japanese Burma-Siam railway construction project. If one bears in mind that this fall in the working population since 1931 has been accompanied by an increment in the population by about one-third, that the needs of this increment in goods and services have somehow to be subserved and that, on top of all these circumstances is the significant fact that over 100,000 men are now serving in the Police, in the Special Constabulary and with the Services, one need look no further for the causes of the present shortage of labour.

Very tentative estimates have been made which indicate that the average rate of increase in the size of the male 15-54 age group is rather less than 20,000 persons a year, that there will be no significant change in the rate in either direction until 1957 (when there will be a drop owing to the low birth rates and high infant-mortality rates during the Japanese occupation) and that the rate will begin to climb rapidly in 1962 when the high post-occupation birth rates and greatly improved infant-mortality rates will begin to make themselves felt.

The general prosperity of the country has also been reflected in the increase in business among engineering firms ancillary to the leading industries, and in factories generally. Between December, 1949, and June, 1950, employment had increased by 14,000 in these concerns, and it is significant that the greatest proportionate increase was among Malaysians whose number rose from 6,000 to 10,000 during that period.

Despite the Emergency and steadily increasing costs definite progress was made in rebuilding and renovating living accommodation on plantations and mines. During the last three-quarters of the year plans were submitted for approval by 325 employers, and records show that 5,737 units of accommodation were to be built on 282 places of employment thus providing improved accommodation for some 20,000 workers. Nearly half the plans approved were for semi-detached cottages, well above standard requirements in size and construction. Special mention must also be made of those employers in isolated and dangerous areas who in spite of many difficulties went ahead with their building programmes. The smaller estates and mines have, after some stimulation, also made an effort to improve living conditions for their employees though much remains to be done. Amenities on the larger places of employment, plantations, mines and factories, continued to improve and a live interest has been shown in more imaginative layouts for accommodation, replacing the old "lines

site" idea, designed to provide these amenities as an integral part of community life. Unfortunately, the standards of housing for urban workers leave much to be desired but it is probable that the position will improve rapidly once the Emergency is over.

No serious strikes occurred during the year and although there were a number of industrial disputes and some protracted negotiations, industrial peace was maintained. A total of 37,067 man-days were lost throughout the year. Two strikes, one in Penang and one in Selangor, accounted for a total of 19,370 man-days and there was only one strike in the mining industry. In 1948, 5,390 man-days were lost and the increase during the period under review was mainly due to the rising cost of living and difficulties in interpreting certain wage-rate directives in the rubber industry. Wages increased in both the rubber and tin industries but although the mine workers appeared to have been satisfied with a bonus scheme based on the price of tin, rubber workers, in spite of increases in wage-rates, decided to go to arbitration in December.

The figures for the production of tin and rubber during the year, which are shown in another section of this report, are in themselves a remarkable tribute to the employers and workers in the Federation who, throughout the year, have lived under the dangerous and challenging conditions of a serious Emergency. Squatter resettlement and the regrouping of labour have moved many thousands of workers from their homes and this has thrown a tremendous strain on them and also upon their employers. The steadiness and industry of the established labour forces on the larger places of employment in these circumstances was one of the most encouraging features of a difficult year and has, of course, been of inestimable value to the Malayan economy.

Part II

WAGES AND COST OF LIVING

WAGES

The devaluation of Sterling and the international situation during 1950 brought prosperity and with it an increased cost of living to Malaya. As a natural result wages rose throughout all industries. Real wages and, therefore, the standard of living also improved in some measure during the year.

In the plantation industries, as the result of the sudden steep rise in the price of rubber following devaluation, the Malayan Planting Industries Employers' Association in negotiation with some rubber estate workers' unions gave two increases, each of 12 per cent., over the original basic levels laid down in April, 1948. The first was given as from 1st April, 1950, and was to have force for so long as the price of rubber remained above 47 cents per pound. The second increase was granted in September pending final settlement of further demands put forward by the

rubber estate workers' unions, demands which eventually led to the setting up of an Arbitration Board as the two sides failed to reach any agreement.

On smaller properties, not in membership with the Employers' Association, wage-rates steadily followed the price of rubber, were often three or four times the rates paid on large estates, and increased to giddy heights as properties which had previously been abandoned were brought under the knife. To meet this competition and also to maintain good attendance, many forms of bonus pay were held out as inducements on the larger plantations where wage-rates were limited by agreement and such pay now makes up no small part of the tappers' wages.

In the mining industry wage levels remained constant, except in isolated instances, until September, when a new prosperity bonus scheme was announced by the Malayan Mining Employers' Association and was brought into force at the beginning of the month. This bonus is scaled against the price of tin and is payable normally only to those labourers who have good attendance records.

In the same month steps were taken by Government to increase the wages of daily-paid workers.

Towards the end of the year as the results of inflation began to be felt by almost everyone and workers considered that the state of trade warranted demands for extra wages, many substantial increases were granted in other industries. In particular, workers in rubber, shoe and cigar factories, in road transport and in the goldsmith industry benefited by these increases.

COST OF LIVING

As Tables A, B, C and D on pages 34 to 38 show, the cost of living for all groups for which indices were maintained rose steadily throughout the year.

Table A shows that, based on January, 1950=100, the indices had risen by December to : European 109.7; Malay (Clerical) 115.4; Chinese, Indian and Eurasian (Clerical) 116.5; Malay (Labourer) 122.4; Chinese (Labourer) 119.0 and Indian (Labourer) 117.1.

As will be seen from Table C indices based on 1939=100 were as follows :

	1950.		
	January.	December.	Average.
European	238 ..	261 ..	245.
Malay (Clerical)	331 ..	382 ..	347
Eurasian, Chinese and Indian (Clerical)	322 ..	375 ..	341

Table D gives cost of living indices for Indian and Chinese labourers based on January, 1947=100 and Malay labourers based on January, 1949=100.

Food, with the exception of rice, showed the greatest price increase of all groups and was closely followed by clothing and tobacco, but increases were recorded in each budget group in all indices.



A Malay Special Constable on a rubber estate in Johore.



A young Malay woman selling rice in the market at Kota Bharu, Kelantan.

Half-yearly surveys are made of wages paid to servants. All such wages showed an increase in January, 1950, over the 1949 figure, and a further increase was shown in the July survey. Barber and dhoby rates also showed increases over 1949.

Price indices were published monthly throughout the year in the *Government Gazette* for various items of food, as well as for drink, tobacco, firewood and lighting, clothing, household requisites, and transport. Table E on pages 39 and 40 gives the monthly retail price indices for 1950 and annual averages for 1948-1950. As distinct from the cost of living indices, these indices are unweighted and show only the trend in retail prices of consumer goods. It will be noticed that in almost every group an increase is shown on the year.

Average retail market prices for food continued to be published monthly in the *Gazette*. One table gave the overall average prices for 15 markets while an additional table showed the average prices at each of the markets. Rice was one of the few items of food to show a decrease in price during 1950 and the following figures show monthly and annual average prices of free market rice in cents per *kati*:

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Siamese...	37	36	35	35	36	37	37	37	37	38	37	37
Local ..	31	30	28	28	29	29	30	31	31	31	30	30
Broken ..	27	26	25	25	24	24	25	25	25	24	23	24

AVERAGE.

	1950.	1949.	1948.	1947.
Siamese ..	37	42	60	77
Local ..	30	32	44	55
Broken ..	25	28	33	44

The controlled price of rice was 26 cents per *kati* from January to April. On the 1st May three grades were introduced, the prices being as follows:

High grade	33 cents per <i>kati</i> .
Medium grade	26 "
Low grade	22 "

These prices remained unchanged throughout the rest of the year, the average price of the three grades being 27 cents per *kati*. The average controlled price for 1949 was 28½ cents, for 1948, 30 cents and for 1947, 24 cents.

On the 11th September rationing and price control of sugar were re-introduced. From the 11th September until 1st October the controlled price was 32 cents per *kati* and from 2nd October until the end of the year 34 cents per *kati*.

The following figures show the average retail prices of free market sugar during 1950 and the averages for previous years:

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
White ..	28	27	26	27	33	34	34	37	40	41	37	37
Light Brown ..	30	27	26	28	30	32	32	34	45	38	40	40
Brown ..	34	32	32	32	33	35	35	38	51	69	60	55
Rock ..	61	60	58	56	59	60	61	61	74	98	93	87

AVERAGE.

	1950.	1949.	1948.	1947.
White ..	33	38	51	91
Light Brown ..	33	33	42	56
Brown ..	42	34	39	56
Rock ..	60	68	77	93

Electricity rates were increased on the 1st December, and the price of petrol was increased to \$1.55 per gallon in November. The cost of all car and bicycle tyres and tubes increased in September, in sympathy with the rising price of rubber.

TABLE A

EUROPEAN, CLERICAL CLASSES, AND LABOURERS.

Base : January, 1950=100.

1950.	CLERICAL CLASSES.			LABOURERS.		
	European.	Malay.	Eurasian, Chinese and Indian.	Malay.	Chinese.	Indian.
January	100	100	100	100	100	100
February	100.0	100.0	100.6	99.7	99.7	100.0
March	99.6	98.5	99.1	100.3	100.0	100.0
April	100.0	99.1	100.0	101.2	101.0	101.0
May	100.8	100.9	101.6	102.0	101.3	101.7
June	101.7	102.7	103.4	106.4	105.4	102.4
July	102.5	103.9	104.7	108.2	106.0	103.6
August	103.8	106.6	107.4	112.0	109.0	106.3
September	105.0	109.1	109.9	114.3	110.7	108.9
October	106.3	110.6	111.8	115.2	112.4	109.6
November	108.0	112.7	114.0	119.0	115.4	113.7
December	109.7	115.4	116.5	122.4	119.0	117.1
Average	103.1	105.0	105.8	108.4	106.7	105.4

COST OF LIVING INDICES, 1947, 1948, 1949 AND 1950.

Chinese, Indian and Malay Labourers.

MONTH.	CHINESE.				INDIAN.				MALAY.	
	Base: January, 1947=100.				Base: January, 1947=100.				Base: January, 1949=100.	
	1947.	1948.	1949.	1950.	1947.	1948.	1949.	1950.	1949.	1950.
January	100	90	85	82	100	101	92	90	100	100
February	101	91	84	82	99	100	91	90	100	99
March	97	90	83	82	97	98	90	90	100	100
April	91	88	82	83	99	97	89	91	97	101
May	92	87	81	83	100	96	89	92	95	102
June	91	86	81	87	97	95	89	93	96	106
July	92	86	81	87	101	95	89	94	96	108
August	91	86	81	90	101	95	89	96	96	112
September	90	86	81	91	99	94	88	98	97	114
October	88	86	81	92	99	92	89	99	98	115
November	89	85	82	95	98	92	90	103	100	118
December	89	84	82	98	99	92	89	106	100	122
Averages	92	87	82	88	99	96	90	95	98	108

TABLE C

FEDERATION OF MALAYA.
COMPARATIVE INDICES OF COST OF LIVING FOR EUROPEAN AND CLERICAL GRADES.

BUDGET GROUP AND RACE.	1948.					1949.					1950.												
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Average for year.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Average for year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average for year.
(i) FOOD—																							
European	311	307	304	300	306	296	288	292	295	293	300	302	297	304	310	312	314	320	329	334	344	354	318
Malay	485	446	425	422	445	411	394	403	418	406	427	427	416	420	433	438	446	460	476	484	490	505	452
Chinese, Indian & Eurasian	437	409	395	391	408	385	370	376	385	379	400	402	392	398	408	412	420	435	450	464	478	427	
(ii) DRINKS AND TOBACCO—																							
European	274	272	276	279	275	279	279	280	280	279	283	285	288	276	291	302	302	302	302	302	302	302	296
Malay	241	241	257	265	251	265	265	268	268	267	268	272	276	276	276	315	315	315	315	315	315	315	298
Chinese, Indian & Eurasian	241	241	257	265	251	265	265	268	268	266	268	272	276	276	276	316	316	316	316	316	316	316	298
(iii) SERVANTS—																							
European	231	231	232	233	232	245	245	246	246	245	251	251	251	251	251	251	256	256	256	256	256	256	254
Malay	279	279	281	286	281	284	284	293	293	288	298	298	298	298	298	298	307	307	307	307	307	307	303
Chinese, Indian & Eurasian	282	282	284	289	284	287	287	296	296	291	300	300	300	300	300	300	309	309	309	309	309	309	305
(iv) FUEL, LIGHT AND WATER—																							
European	145	145	145	146	145	153	159	157	159	157	162	162	162	162	162	162	162	158	157	160	162	161	
Malay	167	167	167	170	163	177	179	175	178	177	182	182	182	182	182	182	182	175	172	178	180	179	
Chinese, Indian & Eurasian	167	167	167	169	163	177	179	175	178	177	182	182	182	182	182	182	182	175	172	178	179	179	

TABLE C
(cont.).

FEDERATION OF MALAYA.

COMPARATIVE INDICES OF COST OF LIVING FOR EUROPEAN AND CLERICAL GRADES—(cont.)

Base, 1939=100.

BUDGET GROUP AND RACE.	1948.				1949.				1950.															
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Average for year.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Average for year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average for year.	
(v) TRANSPORT—																								
European ..	180	178	178	179	179	179	179	177	180	179	181	181	181	181	181	181	181	184	184	186	186	187	191	184
Malay ..	206	202	200	199	201	192	197	196	194	195	194	194	196	196	202	200	200	201	202	205	211	222	223	204
Chinese, Indian & Eurasian..	206	202	200	199	202	192	197	196	194	195	194	194	196	196	202	200	201	201	202	205	211	228	229	205
(vi) EDUCATION—																								
European ..	129	129	129	129	129	135	135	135	135	135	134	134	134	134	134	134	134	134	134	134	134	134	134	
Malay ..	157	157	157	157	157	152	152	152	152	152	141	141	141	141	141	141	141	141	141	141	141	141	141	
Chinese, Indian & Eurasian..	157	157	157	157	157	152	152	152	152	152	141	141	141	141	141	141	141	141	141	141	141	141	141	
(vii) CLOTHING—																								
European ..	313	311	308	308	310	308	308	306	306	307	312	312	311	307	308	308	309	325	328	345	354	359	323	
Malay ..	319	317	312	316	316	314	314	310	309	312	302	301	301	300	300	300	300	311	315	320	336	346	311	
Chinese, Indian & Eurasian..	319	317	312	316	316	314	314	310	309	312	302	301	301	300	300	300	301	311	316	320	337	346	311	
TOTAL WEIGHTED INDEX																								
European ..	234	232	232	231	232	234	232	233	235	234	238	238	237	238	240	242	244	247	250	253	257	261	245	
Malay ..	359	340	331	331	340	326	317	322	327	323	331	331	326	328	334	340	344	353	361	366	373	382	347	
Chinese, Indian & Eurasian..	342	328	321	321	328	317	310	313	317	314	322	324	319	322	327	333	337	346	354	360	367	375	341	

TABLE D

FEDERATION OF MALAYA.

COMPARATIVE INDICES OF COST OF LIVING FOR MALAY, CHINESE AND INDIAN LABOURERS.

Chinese and Indian, Base January, 1947=100; Malay, Base January, 1949=100.

BUDGET GROUP AND RACE.	1948.				1949.				1950.															
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Average for year.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Average for year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average for year.	
(i) RICE AND RICE EQUIVALENTS—																								
Indian ..	126	122	119	118	121	118	116	114	112	115	110	110	109	110	108	108	108	108	108	109	109	109	110	109
Chinese ..	119	111	107	104	110	104	100	97	95	99	93	93	92	92	91	90	90	91	91	91	91	92	92	92
Malay ..			Not available			101	97	96	97	98	94	94	93	95	94	94	94	100	104	99	99	99	99	97
(ii) OTHER FOODSTUFFS																								
Indian ..	98	95	94	90	94	89	87	88	90	88	92	92	92	93	94	95	97	100	103	104	109	113	99	99
OTHER FOODSTUFFS AND KEROSENE—																								
Chinese ..	89	84	83	81	84	80	75	73	76	76	79	78	78	80	82	83	83	86	89	92	96	100	86	86
OTHER FOODSTUFFS KEROSENE, POTTS AND PANS AND FIREWOOD—																								
Malay ..			Not available			98	92	93	100	96	103	102	101	102	105	106	107	110	113	115	123	130	110	110
(iii) CLOTHING AND BUILDING—																								
Indian ..	66	63	62	61	63	59	56	54	54	56	53	54	54	54	55	55	55	59	59	61	64	67	58	58
Chinese ..	67	65	62	58	63	58	60	61	62	61	63	63	63	64	64	65	66	69	70	73	78	81	68	68
Malay ..			Not available			102	101	101	101	101	101	103	102	102	103	104	106	111	113	116	124	126	109	109

TABLE D
(cont.).

FEDERATION OF MALAYA.

COMPARATIVE INDICES OF COST OF LIVING FOR MALAY, CHINESE AND INDIAN LABOURERS—(cont.).

Chinese and Indian. Base January, 1947=100; Malay, Base January, 1949=100.

BUDGET GROUP AND RACE.	1948.				1949.				1950.											
	1st 2nd 3rd 4th				1st 2nd 3rd 4th				1st 2nd 3rd 4th											
	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Qtr.	Average for year.
(iv) TOBACCO & MATCHES—Chinese ..	77	77	84	90	82	89	85	85	86	85	87	87	103	104	107	107	108	108	110	98
SIRIH, PENANG, MATCHES AND CIGARETTES—Malay ..	Not available					100	98	97	98	97	102	102	120	125	127	127	129	129	131	116
(v) RENT—Chinese ..	100	100	98	95	98	91	95	95	94	94	94	94	95	97	97	97	97	99	101	96
(vi) MISCELLANEOUS—Indian ..	95	92	93	88	92	87	86	86	87	87	87	87	87	87	88	89	90	89	91	88
Chinese ..	96	92	90	88	92	89	88	87	88	87	87	88	87	88	89	90	92	92	95	89
Malay ..	Not available					104	107	108	107	107	107	108	107	107	110	111	113	113	115	109
TOTAL WEIGHTED AVERAGE—																				
Indian ..	100	96	95	92	96	91	89	89	90	90	91	92	93	94	96	98	99	103	106	95
Chinese ..	90	87	86	85	87	84	81	81	82	82	83	83	87	87	90	91	92	105	98	88
Malay ..	Not available					100	98	96	98	100	100	102	106	108	112	114	115	118	122	108

NOTE.—(Certain of the budget groups vary for the different races.)

TABLE E

FEDERATION OF MALAYA.

RETAIL PRICE INDICES (UNWEIGHTED) FOR FOOD, CLOTHING, HOUSEHOLD REQUISITES AND TRANSPORT, 1950.

Base, 1939=100.

No.	Group.	No. of items in each group.	Average Index numbers, 1948.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average, 1950.
1	Food (Market Prices).	4	419	395	400	395	420	433	442	440	464	475	491	520	541	451
2	Meat ..	2	314	314	324	317	318	307	310	310	323	343	359	383	416	335
3	Poultry ..	2	357	357	360	357	357	357	357	357	357	357	357	357	357	357
4	Eggs ..	1	357	357	360	357	357	357	357	357	357	357	357	357	357	357
5	Fresh Milk ..	6	357	357	360	357	357	357	357	357	357	357	357	357	357	357
6	Fresh Fish ..	4	357	357	360	357	357	357	357	357	357	357	357	357	357	357
7	Dried Fish ..	10	357	357	360	357	357	357	357	357	357	357	357	357	357	357
8	Fresh Vegetables ..	1	357	357	360	357	357	357	357	357	357	357	357	357	357	357
9	Rice (Rationed) ..	1	357	357	360	357	357	357	357	357	357	357	357	357	357	357
10	Rice (Free Market) ..	1	357	357	360	357	357	357	357	357	357	357	357	357	357	357
11	Sugar (Rationed) ..	1	357	357	360	357	357	357	357	357	357	357	357	357	357	357
12	Sugar (Free Market) ..	1	357	357	360	357	357	357	357	357	357	357	357	357	357	357
13	Coconut Oil ..	1	357	357	360	357	357	357	357	357	357	357	357	357	357	357
14	Margarine and Dipping ..	6	357	357	360	357	357	357	357	357	357	357	357	357	357	357
15	Fresh Fruit ..	6	357	357	360	357	357	357	357	357	357	357	357	357	357	357
16	Singapore Cold Storage, Kuala Lumpur.	6	195	212	212	212	212	212	212	212	212	212	212	212	212	212
17	Meat ..	2	317	317	317	317	317	317	317	317	317	317	317	317	317	317
18	Bread ..	2	179	189	209	240	240	240	240	240	240	240	240	240	240	240
19	Bacon ..	2	179	189	209	240	240	240	240	240	240	240	240	240	240	240
20	Offal ..	4	179	189	209	240	240	240	240	240	240	240	240	240	240	240
21	Butter (Fresh and Tinned) ..	2	238	250	269	275	276	275	275	275	275	275	275	275	275	275
22	Coffee and Tea ..	2	231	226	250	256	256	256	256	256	256	256	256	256	256	256
23	Miscellaneous ..	13	226	220	216	219	219	222	219	227	223	229	230	233	233	226
24	Firewood and Lighting.															
25	Firewood ..	1	208	208	208	208	208	208	208	208	208	208	208	208	208	208
26	Kerosene ..	1	153	171	187	187	187	187	187	187	187	187	187	187	187	187
27	Electricity ..	1	122	134	143	143	143	143	143	143	143	143	143	143	143	143

* Sugar ceased to be rationed on 11th July, 1949, and the price ceased to be controlled on 1st September, 1949. † The substantial increase in the index number for this item is due to a great extent to the rapid rise in the price of pepper, and, to a lesser extent, to the rise in the price of mace.

on the 11th September, 1950.

FEDERATION OF MALAYA.

RETAIL PRICE INDICES (UNWEIGHTED) FOR FOOD, CLOTHING, HOUSEHOLD REQUISITES AND TRANSPORT, 1950—(cont.)

Base, 1939=100.

No.	Group.	No. of items in each group.	Average Index numbers, 1948.	Average Index numbers, 1949.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average, 1950.
15	Transport.																
16 (a)	Petrol and Oil	2	178	172	188	187	187	187	187	187	187	187	187	187	190	196	188
16 (b)	Car Tyres and Tubes	9	112	106	109	109	109	108	108	108	135	135	150	150	150	169	128
16 (c)	Bicycle Tyres and Tubes	2	256	248	248	248	248	248	248	248	265	265	304	304	304	304	276
	Bicycles	4		167	158	158	158	158	158	158	162	164	164	166	164	167	161
17 (a)	Drinks and Tobacco.																
17 (b)	Spirits and Beer	4	306	311	302	302	302	302	316	319	319	319	319	319	319	319	313
18 (a)	Aerated Waters and Cordials	3	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223
18 (b)	Cigarettes	3	254	268	268	268	268	268	268	268	336	336	336	336	336	336	313
18 (c)	Tobacco	7	225	244	252	262	277	277	277	319	319	319	319	319	319	319	298
19	Telnet Requisites	8	200*	222	212	212	212	223	223	221	221	221	221	221	228	237	221
20	Household Linen and Bedding	8	368	388	391	399	408	394	410	410	386	409	409	433	439	455	412
21 (a)	Clothing.																
21 (b)	Women's	10	800	836	834	834	834	830	830	833	833	835	835	834	838	851	808
21 (c)	Children's	6	318	338	328	328	328	328	328	328	328	328	328	328	337	356	334
21 (d)	Men's	8	285	296	309	309	309	312	315	312	314	325	335	338	360	372	326
21 (e)	Sarong and Baju	2	306	276	284	284	284	284	284	284	255	259	259	266	270	276	261
21 (f)	Men's Materials	3	410	396	396	396	394	393	391	392	397	411	419	470	506	538	425
21 (g)	Women's Materials	9	374†	341	353	353	353	330	330	330	330	344	351	361	363	373	343

* Based on 7 items.

† Based on 5 items.

NOTES.—1. Indices for food are calculated from market price lists for 15 centres.

2. Indices for men's clothing groups are calculated from returns received from stores and shops throughout the Federation.

3. All other indices are based on Kuala Lumpur prices.

4. The price of rationed rice is controlled.

Part III
TRADE UNIONISM

GENERAL

Notwithstanding the restrictions and risks arising from Emergency conditions, 1950 has been a year of reorganisation, consolidation and progress for trade unions in Malaya.

Language difficulties and illiteracy amongst a large section of workers have presented, and will continue for a considerable time to present major administrative and technical problems for the trade union movement; and although trade union leaders and members are steadily gaining experience, there is still a dearth of really capable leaders. Practically all trade union officers are voluntary workers for very few employees' trade unions can afford the services of paid secretaries or paid clerks.

Other factors, too, operated during 1950 to produce problems, either organisational or administrative, which taxed the ability of officers and members of the unions. These included the transfer of functions in certain establishments from Government to Boards or Local Government Authorities; the amendment of the Trade Union Enactment which, although good in itself, caused a deal of work and expense to unions and their officers; and a continuation of Communist attacks on the independent unions with, in some cases, the actual murder of union leaders by the Communists.

Several important events affecting the philosophy and the future of the Trade Union Movement occurred during this period.

MALAYAN TRADE UNION COUNCIL

The first and perhaps the most important event during the year was the formation of the Malayan Trade Union Council following upon proposals made by the trade unions in 1949. They felt the need of a central organisation for establishing closer liaison not only between themselves but also between them and the workers' representatives on such bodies as the Federal Legislative Council and State and Settlement Councils. After a great deal of preliminary spade work, the Malayan Trade Union Council came into existence on the 25th March, 1950, during the Second Delegates' Conference of all trade unions in the Federation. The Central Committee was at the same time elected and Divisional Committees were subsequently elected in each State. At the close of the year 104 registered trade unions were affiliated to the Malayan Trade Union Council.

Recognition was given to the Malayan Trade Union Council by the Government, the British Trade Union Congress and the International Confederation of Free Trade Unions.

The British Trade Union Congress offered a scholarship, valued at £1,000 and tenable for one year at Ruskin College, Oxford, to a Malayan Trade Union Council nominee, and also promised to assist the young organisation with office equipment, and with a gift of books and other material for the purpose of setting up a small library. The Malayan Trade Union Council was also invited by

the British Trade Union Congress to nominate a workers' representative to the British Delegation which attended the First Meeting of the I.L.O.'s Committee on Work of Plantations held in Indonesia in December. The representative was Mr. P. P. Narayanan, President of the Malayan Trade Union Council and another trade union leader (Mr. V. M. N. Menon) attended the same Meeting as an adviser to the Delegation.

The International Confederation of Free Trade Unions accepted the affiliation of the Malayan Trade Union Council on 11th November, 1950. Trade unionists in Malaya were greatly heartened by the fact that the Malayan Trade Union Council was accepted as a member and partner of a democratic Trade Union Movement of an international character.

GOVERNMENT ANTI-BANDIT MONTH

The Trade Union Appeal during the Anti-Bandit Month was a sign of the growing sense of responsibility amongst the trade union leaders. Its planning, organisation, publicity and direction were well thought out and bold in conception.

IMPORTANT VISITS

During 1950 trade union leaders in Malaya had the opportunity of meeting trade unionists and other people from abroad, and this has, no doubt, helped to increase their experience and widen their outlook. Amongst those whom they met were the Right Honourable the Secretary of State for the Colonies, Mr. James Griffiths, P.C., M.P., the International Confederation of Free Trade Unions Delegation under the chairmanship of Mr. F. W. Dalley, which toured the Federation in August, and the Delegation, headed by Lord Listowel, from the United Kingdom Commonwealth Parliamentary Association which visited Malaya in October.

EMPLOYER-EMPLOYEE RELATIONS

More and more trade unions and employers' organisations in the country have accepted the advantages of collective bargaining and joint consultative machinery for maintaining good industrial relations.

Considerable progress has been made in setting up machinery in the Government Service to ensure improved relations between the staff and the Administration.

The Interim Joint Council, established in August, 1946, on the recommendation of the Department as an interim measure pending the development of more comprehensive Whitley Council machinery, was successfully operated during the year to settle the claims of the daily-rated staff in the Government Service for upward revision of their wages.

Informal meetings have been held in various other departments as and when required by both parties. This type of meeting provides valuable training to both official and staff sides prior to Councils being set up on a more formal basis.

The year also showed evidence of the growing realisation amongst employers and employees outside the Government of the advantages of direct negotiations. For the first time in the history of the Malayan Trade Union Movement, the unions catering for the largest and most important industry in Malaya decided to open direct negotiations with their employers' trade union, the Malayan Planting Industries Employers' Association, for a revision of wage rates and improvements and alterations in their conditions of employment.

STAFF RELATIONS IN THE PUBLIC SERVICE

The year witnessed the approval by the Legislative Council of the principle that rates of remuneration for Public Service employees are properly a matter for collective bargaining between employer and employee; and the decision to offer opportunities to any service directly to negotiate these issues in preference to accepting decisions arrived at by Government Committees has been welcomed.

The decision to set up a special Whitley Council Office in the Service Branch of the Federal Secretariat is a logical step and in line with the growing development of Whitleyism. This Office is intended to provide the Secretary for all Government Whitley Schemes and to act as a liaison office between the various Governments and Departments.

Whitley Councils have now become well established in the Postal Service Department where they appear to be working well at all levels. The Councils which had been set up before the beginning of the year continued to function and in addition the first meetings of Departmental Councils in the Survey Department, in which District Committees had been functioning for some time, and in the Telecommunications Department were held during the year. In the Malayan Railway negotiations have been conducted with a view to revising the framework of the Whitley Council machinery in order to make it more suitable both for the structure of the Administration and to the organisation of the staff.

The development of Whitleyism has inevitably been slow in these early stages. On matters of conditions of service the main pre-occupation both of the staff and of Government has been with the basic question of salaries. This has occupied much of the time of the officer concerned with the development of Whitley Councils and the question is being dealt with by special negotiating machinery set up for that particular purpose. It is hoped that experience gained by both sides in the course of these negotiations will facilitate the extension of permanent Whitley machinery.

TRADE UNION EDUCATIONAL ACTIVITIES

A welcome development was the growing interest shown by many of the trade unions in educational activities amongst their members. Some of the unions have organised adult education classes and others are promoting classes for the purpose of improving their members' technical and professional qualifications.

Part IV

REGISTRATION OF TRADE UNIONS

A résumé of the registration of trade unions during the period 1st July, 1946, to 31st December, 1950, is given below :

	APPLICATIONS FOR REGISTRATION.			REGISTRATIONS EFFECTED.		
	1946/ 1949.	(1) During 1950.	Total.	1946/ 1949.	(2) During 1950.	Total.
Employers	27	..	27	24	1	25
Employees	552	33	585	354	18	372
Total	579	33	612	378	19	397

TRADE UNIONS DURING THE PERIOD 1946/1950.

POSITION AS AT
31ST DECEMBER, 1950.

	(3)				(4)		
	Aban- doned or Refused.	Dis- solved.	Can- celled.	With- drawn.	Total.	No. of Unions Regis- tered.	Outstand- ing Appli- cations.
Employers	2	9	7	2	20	7	—
Employees	182	43	150	11	386	168	31
Total	184	52	157	13	400	175	31

At the beginning of the year there were 169 trade unions on record and 17 applications for registration under consideration. The table therefore reflects the passing out of existence in 1948/49 of a large body of communist-controlled unions and the birth of a new and growing trade union movement.

Membership of registered employees' unions on 31st December, 1950, was 54,579 as compared with 41,305 at the beginning of the year. The breakdown by races is approximately as under.

Malays	..	6,549	..	(12%)
Indians	..	31,656	..	(58%)
Chinese	..	14,191	..	(26%)
Others	..	2,183	..	(4%)

The Federated Malay States Trade Unions Enactment, 1940, as amended by subsequent legislation and applied to the Federation by the Trade Unions Ordinance, 1946, continues to govern the registration of trade unions. There have been no amendments in the year under review.

The year has generally been one of the regrouping and consolidation of a free and healthy trade union movement. It has become increasingly evident that trade unionists are more conscious of their status, rights and obligations and this is reflected in the slow but steady increase in membership.

Of all the events in 1950 contributing to a greater confidence in the movement, the chief was the establishment of the Malayan Trade Union Council, an advisory body, in which for the first time, Government and non-Government unions have been enabled to participate to further their common aims.

The following is an analysis of income and expenditure in respect of employees' unions for the financial years ending 31st March, 1949 and 31st March, 1950 :

Total Income for the year 1949/50=\$498,021.88.

		1948/49	1949/50			1948/49	1949/50
		%	%			%	%
Entrance Fees	..	3.3	4.2	Establishment Expenditure	..	13.0	4.0
Subscriptions	..	74.5	76.0	Salaries, Allowances, Wages	..	28.6	36.6
Levies	..	.1	—	Rents, Rates and Taxes	..	11.5	9.8
Sales of Rules, etc.	..	1.8	1.4	Stationery, Printing and Postages	..	11.9	11.7
Donations	..	5.8	2.4	Compensation in Trade Disputes	..	.2	.2
Other Income	..	14.5	16.0	Benevolent Activities, Social, Religious	..	5.3	6.1
				Affiliation to Federations	..	.1	.6
				Other Expenses	..	20.3	12.6
				Excess of Income over Expenditure	..	9.1	18.4

Membership of employees' trade unions on the 31st March, 1950, was 41,508. The income and expenditure shows an average annual contribution per member as follows :

		INCOME.				EXPENDITURE.	
		\$ c.	\$ c.			\$ c.	\$ c.
Entrance Fees	..	32	50	Establishment Expenses	..	1 27	48
Subscriptions	..	7 35	9 12	Salaries, Allowances and Wages	..	2 82	4 39
Sales of Rules, etc.	..	17	17	Rents, Rates and Taxes	..	1 13	1 17
Donations	..	57	29	Stationery, Printing and Postage	..	1 17	1 40
Other Income	..	1 43	1 92	Benevolent Activities	..	45	30
				Educational, Social and Religious	..	52	43
				Other Expenditure	..	2 02	1 63
				Savings	..	46	2 20
						9 84	12 00

Part V

CO-OPERATIVE SOCIETIES

GENERAL

The shortage of staff continued to hamper the progress of the Movement throughout the year. Ten probationer officers were recruited between May and August but they will not be fully trained and available for field work until the end of 1951. Among these probationers is the first Chinese officer to be recruited into the field staff of the department.

However, despite this shortage of staff, 1950 has been a memorable year in the Movement's history in Malaya. There was evident throughout the country an awakening to the value of co-operation and demands for the organisation of societies were far in excess of what it was possible to do with the exiguous staff. A Federation of Rural Co-operative Societies was registered. Two Rural Banking Unions were formed. A farmers' co-operative society and two co-operative stores were formed among Chinese peasants in resettlement areas. These are the first societies to be formed among

illiterate Chinese peasants. One hundred and forty-six new rural credit societies for Malay peasants were registered during the year though the continuance of terrorism curtailed further development in certain parts of the country. The Consumers' Movement gained momentum with the prodigious rise in the cost of living. With the creation by Government in September of the Rural and Industrial Development Authority the Movement should receive great assistance in its spread among the rural population, for the Authority will have the capital that has been up to now so hard to obtain in the *kampung*, while the Co-operative Movement will be able to supply the best, perhaps the only successful, organisation for the investment of that capital. The repeal of the Moratorium and the enactment of the Debtor and Creditor Ordinance have forwarded the settlement of pre-war and occupation accounts and the majority of societies that had dealings during the occupation period have been able to straighten out their accounts.

The audit section of the department did sterling work and cleared off all arrears during the year.

Owing to the Emergency, the Co-operative Advisory Board held no meetings in 1950.

The Department's name was changed, on the advice of the Secretary of State for the Colonies, from the Co-operative Societies Department to the Department of Co-operative Development, and the Director of Co-operation became the Commissioner for Co-operative Development.

The Commissioner was appointed a member of the Board of the Rural and Industrial Development Authority.

RURAL CREDIT SOCIETIES

These societies, which have unlimited liability, are composed of Malay peasants, owning rubber, coconut, or *padi* lands. The number of Rural Co-operative Credit Societies increased from 168 to 311. Total membership was 8,248 as against 5,077 in the previous year. Loans to the value of \$106,693 were granted and \$66,388 were repaid. Share capital was \$261,373, deposits \$59,212 and Reserve Funds \$36,299.

The phenomenal rise in the number of these Raiffeisen-type societies was largely brought about by the formation of the Federation of Rural Co-operative Societies in the State of Perlis to negotiate with the Federal Government for part ownership of the Federal Government's Rice Mill at Arau. The Malay rice-growers in Perlis bought shares to the total of \$135,000 and formed themselves into 113 Rural Co-operative Credit Societies and five Seasonal Co-operative Credit Societies. These societies formed the Federation. Although by the end of the year the agreement for the partnership between the Federal Government and the Federation of Rural Co-operative Societies had not been signed owing to legal formalities, the two prospective partners were working in close co-operation in the running of the Rice Mill.

Rural Co-operative Credit Societies are limited to 50 members, though in special cases this limit is extended. It is found in practice, however, that owing to the low standard of education and leadership existing in the rural areas, a membership of between 30 and 50 is as much as Honorary Secretaries can manage. The capital of these societies is built up by the payment by instalments of shares of \$100 each (£12 approx.) over the course of ten years. On the Raiffeisen principle, they cater for short-term credit on personal security but in certain cases, medium-term credit on a mortgage collateral is granted.

Certain societies have been experimenting in joint sales of members' produce and joint purchases of manure. Where such ventures are successful it is hoped to form marketing societies.

A welcome development was that a number of old societies were beginning to manage their committee meetings on their own, merely submitting the minutes of their meetings to the Malay Co-operative Officer for his information and comment. Thereby Malay Co-operative Officers were able to give more of their time to forming new societies.

FISHERMEN'S SOCIETIES

There was a slight increase in the number of these societies, from five in 1949 to seven in 1950. Many fishermen, however, are members of Rural Co-operative Credit Societies and obtain financial help through those societies. During the year considerable research was made into the most suitable form of by-laws for these societies, when it was found that the best were such as would permit marketing of the members' catch through the society, regular deductions being made from the sale of the catch for the purchase of shares and the repayment of loans. Such arrangements are possible, however, only in places where the fishermen are free to sell their catches where they wish. Such localities are mainly in Kedah, the Dindings and Pahang. Elsewhere the fishermen are so far in debt to the middlemen that it is an almost impossible task to free them, especially since there is little or no desire on their part to be freed from the middlemen whose control is usually of a paternal nature. All that can be said is that during the year under review membership rose from 288 to 344, share capital from \$2,097 to \$3,588, and working capital from \$2,399 to \$4,213. Loans were granted to a total value of \$943 and repayments amounted to \$1,328.

SEASONAL CO-OPERATIVE CREDIT SOCIETIES

These societies are of limited liability and composed of *padi* planters, many of whom are tenant farmers, and their purpose is to finance the annual crop and to maintain the planters during the period from planting until the harvest. The traditional Malay custom of selling their *padi* crop forward ("*padi kuncha*" or "*padi ratus*" as it is termed in Malay) is very burdensome, but since credit is given in kind, the *padi* planters accept it uncomplainingly.

These societies endeavour to provide the required credit on easy terms and thereby enable their members to enjoy a greater return from their crop.

With the formation of rural co-operative Banking Unions there has been a move among the older seasonal societies to convert from limited liability societies to societies of unlimited liability in order to improve their credit worthiness for outside borrowing.

During the year the number of societies functioning was 88 as against 78 in 1949. The membership rose from 1,737 to 2,162 and their paid-up share capital from \$35,847 to \$49,040. Loans to the value of \$24,339 were granted to members.

RURAL UNIONS

The chief development during the year was the formation of two Co-operative Banking Unions, one among the Province Wellesley rural Malay societies and another among the societies in Krian and Selama (in the State of Perak). A Federation of Rural Co-operative Societies was also formed in the State of Perlis. The paid-up share capital of these two Unions and the Federation amounted to \$135,715 and a sum of \$43,000 was borrowed from urban co-operative societies. For 1950 these bodies granted loans to member societies on short term credit to finance the 1950-51 rice crop but, when firmly established, they aim to be able to provide medium term credit. The Rural and Industrial Development Authority has decided to finance agricultural credit through such bodies and has set aside a million dollars for this purpose. This has encouraged similar developments elsewhere in Malaya, and it is hoped that during the coming year several more such unions or federations of rural co-operative societies will be formed, for this is a development that will greatly strengthen Co-operation in the rural areas.

LABOURERS' CO-OPERATIVE CREDIT SOCIETIES

The number of these societies rose from 380 to 389. There was a growing recognition of the value of these societies among both employers and employees, for the opportunity they afford to save money and to borrow small sums against the members' own subscription capital, for necessary expenditure on weddings, funerals, etc., or the purchase of livestock or poultry, or remittances abroad. A considerable reason for the popularity of these societies has been the unflinching regularity of the Indian Co-operative Officers' visits, despite the fact that many of them are situated in areas constantly under the threat of banditry.

It is possible that, with the establishment in 1952 of the Employees Provident Fund scheme, labourers on estates will not be able to afford to contribute both to the Provident Fund and to their Co-operative Society. The coming year will show whether this fear is justified.

The membership of these societies, while mainly Indian, is composed also of Malay and, to a small extent, Chinese labourers.

During the year it rose from 35,333 to 39,085. Share capital fell from \$1,384,924 to \$1,118,097 and Reserve Funds rose from \$42,543 to \$44,282.

Several Estate Labourers' Co-operative Credit Societies have formed investment unions to obtain better investment of their combined available capital.

CO-OPERATIVE THRIFT AND LOAN SOCIETIES FOR URBAN SALARY EARNERS

From the commencement of the Movement 28 years ago right up to the present these societies have been far and away the most characteristic development of Co-operation in Malaya. Out of the \$10,647,256 subscription capital and paid-up share capital for all types of societies, \$9,048,400 belongs to this type of society though they number only 85 out of the 1,095 societies in the Federation. They are formed amongst salaried workers in every walk of life from senior Government officers to the lower paid employees of Government, the Municipalities and commercial firms. Some are formed on a departmental basis (such as the Malayan Railways, the Police and the Post and Telegraphs Co-operative Thrift and Loan Societies) while others, such as the Jaffnese Co-operative Society Ltd., are on a communal basis. The strength of these societies lies in the fact that contributions and payments are deducted at source on the paysheets, thus providing an easy and comparatively painless form of thrift. Credit is granted on the personal security of two or more fellow members and at moderate interest rates and many members have, by this means, been helped out of the slough of heavy indebtedness to professional money-lenders. It is, however, worth noting that as the majority of new members have little or no debt to declare, loans are generally for more productive purposes than the mere discharge of debt. Far too great percentage of them are, however, still being sought for "medical purposes."

This form of Co-operation has now largely covered the field for which it is intended and there are many welcome signs that the thoughtful members of these societies are turning their attention to fresh fields of co-operative endeavour, e.g., the consumers' movement, co-operative banking, co-operative insurance, and co-operative housing schemes.

Membership rose from 32,989 to 39,483 and subscription capital from \$7,361,300 to \$9,048,400. Loans to the value of \$3,963,700 were granted. The total of the Reserve Funds rose from \$606,503 to \$660,901.

UNIONS OF CO-OPERATIVE THRIFT AND LOAN SOCIETIES

These societies have long formed themselves into three regional unions, which keep in close correspondence with each other and have occasional conferences. The object of these unions is to promote the welfare of their member societies, and during the year they requested the Government, through the department, to decrease the rate of contribution to the Reserve Funds. Their claim that

expenses since the war had greatly increased was upheld by the department and the following sliding scale of contribution was approved :

- (i) during the first five years of the existence of a society or where the reserve fund is under 6 per cent. of the total paid up subscriptions and deposits 25 per cent. of net profits
- (ii) where the reserve fund is between 6 per cent. and 8 per cent. of that total.. .. 10 per cent. of net profits
- (iii) where the reserve fund is between 8 per cent. and 10 per cent. of that total 7½ per cent. of net profits
- (iv) where the reserve fund is over 10 per cent. of that total.. .. 5 per cent. of net profits

These unions have also been considering the formation of co-operative central banks, of a Pan-Malayan Co-operative advisory body, of a co-operative printing press and the drawing into their membership of types of co-operative societies other than purely thrift and loan societies.

They also manage certain scholarship funds for assistance in the education of the children of co-operators. It is hoped that, in the forthcoming year, there may be considerable developments in this sphere of their activities.

GENERAL PURPOSES SOCIETIES

There was a reduction in the number of these societies during the year from 152 to 137. As these societies are designed to be the first step in rural co-operation, inculcating thrift and giving their members an opportunity to learn the principles of Co-operation and the management of a Co-operative Society, this reduction is not an indication of failure but rather the opposite, for it shows that a number of these societies have served their purpose by introducing their members to the co-operative way of life.

Seventy-three of these societies were in the State of Kedah, where their chief object was the management of death benefit funds. The department has, since the liberation, been waging a campaign to wean the members of these societies from preoccupation with the dead and persuade them to adopt objects designed to improve the lot of the living.

Membership in this type of society throughout the Federation amounted to 20,238 and deposits to \$68,063.

Many of these societies are anxious to purchase land in common and farm it out to members, a development which is also noticeable among societies composed of women members.

OTHER TYPES OF RURAL SOCIETIES

There were only four cattle and goat breeding societies, all in Pahang, but there are good prospects that with the aid of the Rural and Industrial Development Authority this activity will show good progress during the forthcoming year. However, the difficulty of obtaining good breeding stock coupled with the high rate of livestock destruction during the Japanese occupation and the embargo on imports from Siam, is a serious impediment to progress. But the Veterinary Department is assisting these societies and breeding may become an important co-operative venture.

There were five Co-operative Fair Societies, in Kedah, Selangor and Johore. They serve a useful purpose in providing an opportunity to the *kampong* folk to sell their produce direct to the consumer, without passing through the middlemen's hands. But a lot more can be done in this sphere and progress is largely thwarted by the lack of enterprise on the part of the managing committees, who look more to good dividends than to the promotion of the common welfare of the rural population, and are inclined to encourage the occupation of the stalls by Indian, Chinese and Indonesian pedlars rather than by the *kampong* people themselves.

CONSUMERS' MOVEMENT

The rise in the cost of living has aroused great interest in this side of the Movement. However, progress was far from smooth. Since salaries and wages are paid monthly and not weekly, the vast majority of salary-earners and wage-earners are in the habit of running credit accounts with the small local provision shops rather than paying cash for their purchases at the time of purchase. This reluctance to pay in cash—which is deep-rooted—is a great handicap to the proper functioning of co-operative stores, which depend entirely on quick turnover to provide sufficient surplus to pay the patronage rebate (or "Divi" as it is called in England). Unless a co-operative store can pay a reasonable rebate on purchases it cannot attract a large membership nor can it fulfil its object of keeping the cost of living down. The Government has endeavoured to overcome this difficulty by permitting, in the case of its employees, deductions direct from the paysheet to co-operative stores to cover arrears and so do not greatly assist the rapidity of the turnover of the co-operative stores' capital. But the Government has in another way greatly assisted this movement, namely by a grant of money towards the cost of management of the Malayan Co-operative Wholesale Society Ltd., and by guaranteeing an overdraft of \$100,000 for its working. Since then the Malayan Co-operative Wholesale Society has been able to come to the aid of the movement to an ever increasing extent by arranging for the direct distribution of rationed commodities (rice and sugar) to member stores, by the direct purchase of articles such as cloth, curry stuffs, coconut oil, etc., and by the provision of a thirty days' accommodation. If it could but obtain reasonable godown space, the Malayan Co-operative Wholesale Society could really function as its great prototypes in England and Scotland do. But godown space is exceedingly

difficult to obtain and there appears little likelihood of the Malayan Co-operative Wholesale Society being able to overcome this difficulty without Government aid.

A similar difficulty was experienced by all co-operative stores societies. The movement is largely a post-war one and has had to take such shop-house accommodation as it could obtain at a time of great housing shortage. Therefore the majority of co-operative stores societies are accommodated away from the shopping centres, with all the disadvantages that entails. One society, Penang Co-operative Stores Society Ltd., has risen to the occasion and bought itself a site in the centre of Penang Town and is raising a loan from Thrift and Loan Societies to commence building.

The number of urban co-operative stores societies has risen from 14 to 18 during the year. The number of rural co-operative stores societies has remained at three. Membership has increased from 6,527 to 7,606 and share capital from \$101,900 to \$129,600.

Great interest has been shown by estate managers in the proposal to form co-operative stores on estates and several are now in the course of formation.

Attempts have been made to interest trade unionists in forming co-operative stores or joining co-operative stores societies already in being. In Penang one trade union (the Municipal and Government Labour Union) has taken up the department's suggestion and is forming such a society. It is hoped that considerable development will take place in this direction during the coming year.

The development of co-operative stores in rural areas is difficult owing to the custom of the rural population to pay for their provisions in kind and the difficulty of finding men of sufficient ability to act as managers. It may, however, be possible for the Rural and Industrial Development Authority to organise produce-purchasing depots which can be run in conjunction with co-operative stores. The co-operative stores societies have been formed among resettled Chinese squatters and, with the recruitment of Chinese co-operative officers, this development should progress.

Generally the Consumers' Movement is handicapped by the shortage of capital. Unless capital can be pumped into it from an outside agency, the Movement will have to rely on the accumulation of capital by the societies themselves, and so follow the slow but steady progress that has characterized its development in the West.

PRODUCERS' MARKETING AND PROCESSING SOCIETIES

There are four such societies in the Federation, three for rubber and one a coconut oil mill society. One of the rubber societies functioned efficiently, smoking its members' rubber sheets and selling them direct to the exporters. The other two societies did not show much life. The oil mill society produced the finest quality oil which was greatly sought after. The Malayan Co-operative Wholesale Society has guaranteed to purchase the whole of its production for distribution to co-operative stores but the venture has been handicapped by lack of trained and efficient management.

It is this lack of efficient management that has from the beginning militated against the success of Co-operation in this sphere among the Malay peasantry; and it is here above all that Co-operative Education is most urgently required. It is hoped to provide training courses for secretaries of rural co-operative societies and for other intelligent Malay peasants if the staff can be obtained.

At the close of the year a Farmers' Co-operative Society was formed among resettled Chinese squatters in Tasek Glugor in Province Wellesley. If this society can overcome its teething troubles, it should prove a success and an example to be followed in other resettlement areas in the Federation.

HOUSING SOCIETIES

Owing to the great housing shortage in the towns of the Federation very great interest was shown by the middle classes in the formation of Housing Societies; but during the latter part of the year the cost of all building materials rose so steeply that no actual building was done by any society in the Federation. The number of these societies rose from two to eight. Membership was 761 and share capital was \$50,000.

WOMEN IN CO-OPERATION

Although convention and custom among the Malays still militate against the formation of societies whose membership consists entirely of women, considerable progress in this direction has been made in Penang and the Krian area of Perak. There are three women's *padi* planters societies, five women's general purpose societies and eight women's thrift and investment societies. Of these latter, seven are in Georgetown, Penang, and have decided to form a union among themselves to provide a woman inspector to visit member societies and do propaganda work. They also intend to invest their combined funds in real estate.

The chief difficulties in women's societies lie in finding a good secretary and holding regular committee meetings. As regards thrift, these Malay women are considerably superior to their menfolk. During the last year deposits amounted to \$8,954 and membership rose to 628 at the end of the year.

In most rural societies there are women members, but they take no part in the management of their societies.

EDUCATION AND PROPAGANDA

Owing to shortage of staff the Department was unable to undertake any steps to promote Co-operative Education during the year.

Propaganda was carried on by field officers by word of mouth at meetings of co-operative societies and in the mosques. One or two talks on co-operative subjects were given over the Malayan Broadcasting network.

Efforts to interest schools in forming co-operative societies among their students have as yet produced no results. It is to be hoped that more success in this sphere will be achieved in the near future.

Chapter III

FINANCE AND TAXATION

PUBLIC FINANCE

The Federal Estimates for the year 1950 are summarised as below :

Revenue	\$ 273,724,629	
Recurrent Expenditure—		
1. Personal Emoluments	\$80,938,179	
2. Other Charges, Annually Recurrent	99,550,600	
	180,488,779	
Surplus		\$ 93,235,850
Extraordinary Expenditure		
Allocations to States and Settlements to meet	\$ 21,647,149	
Estimated Expenditure		
Allocations to States and Settlements to meet	78,297,849	
unforeseen services	440,210	
	100,385,208	
Deficit		\$ 7,149,358

These estimates do not include the revenue or expenditure of the Malayan Railway. Furthermore, no provision was made in these estimates for expenditure on Defence and the Emergency other than the full cost of the Regular Police Force, and the first three battalions of the Malay Regiment.

The accounts for the year 1950 have not yet been closed but the latest estimate of Federal Revenue for 1950 is given below :

Head.	In the Estimates.	Revised Estimates.	Increase or Decrease.
1. CLASS I.—			
(i) Customs	181,116,500	303,097,051	+ 121,980,551
(ii) Excise	4,130,000	6,407,752	+ 2,277,752
(iii) Forests	86,000	—	—
(iv) Licences and Internal Revenue	51,584,104	66,376,133	+ 14,812,029
2. CLASS II.—			
(v) Fees of Court or Office, Payment for Specific Services and Reimbursement-in-Aid	8,673,574	13,415,154	+ 4,741,580
3. CLASS III.—			
(vi) Light, Power, etc.	—	—	—
(vii) Posts	7,010,000	7,718,241	+ 708,241
(viii) Telecommunications	10,095,000	11,612,825	+ 1,517,825
4. CLASS IV.—			
(ix) Rents on Government Property	155,964	162,463	+ 6,499
(x) Interest	6,070,637	3,135,208	- 2,935,429
5. CLASS V.—			
(xi) Miscellaneous	1,466,150	29,827,986	+ 28,361,836
(xii) Sale of Property	70,000	259,722	+ 189,722
6. CLASS VI.—			
(xiii) Colonial Development and Welfare Fund	2,686,700	1,585,315	- 1,101,385
	273,724,629	443,597,845	+ 169,873,216

The increase of \$121,980,551 in Customs revenue was mainly due to the fact that receipts from the export duties on rubber and tin and tin-in-ore exceeded the original estimate by \$67,474,234 and \$14,245,868 respectively.

In addition, the receipts from the import duties on spirits, malt liquors, etc. and those on tobacco, cigars and cigarettes exceeded the original estimate by \$10,410,470 and \$13,723,385 respectively due to increases in the rates of duty.

An increased revenue of \$12,975,601 from Income Tax was more than responsible for the increase under "Licences and Internal Revenue".

A contribution of \$25,714,286 from His Majesty's Government accounts for the large increase under "Miscellaneous".

The provisional total of expenditure on Federal Services for 1950 is \$271,427,345, including \$124,846,116 on account of expenditure on Police, Defence Services and the Emergency.

Taking into account the revised estimated allocations to States and Settlements, amounting to \$71,163,043, the total revised estimated expenditure from Federal funds is \$342,590,380. On this basis, there is an estimated surplus of \$101,007,456.

PUBLIC DEBT

The Federation Public Debt at the end of 1950 is summarised below :

Issue.	Final Maturity.	Interest Paid.	Outstanding.
<i>External.—</i>			
(1) 3 s, 1935	1970	January and December 15	\$ 4,000,000
(2) 3 s, 1949	1976	May and November 15	8,050,000
<i>Internal.—</i>			
(3) 4½s, 1931	1959	June and July 1	\$16,000,000
(4) 3 s, 1936	1956	January and December 15	15,000,000
(5) 3 s, 1940	1959	April and October 1	20,000,000
(6) 3 s, 1941	1960	June and July 15	10,000,000
(7) 2½s, 1946	1956	June and July 15	12,500,000
(8) 3 s, 1946	1966	June and July 15	54,000,000

The special provisions relative to these Loans are as follows :

(Paragraph numbers refer to issues numbered correspondingly above)—

- (1) Callable at par at any time from June 15, 1960 on 3 months' notice. Semi-annual sinking fund of $\frac{1}{2}$ per cent. per annum from December 15, 1935.
- (2) Callable at par at any time on or after May 15, 1974. Half-yearly sinking fund will begin on May 15, 1951.
- (3) Callable at par at any time on or after January 1, 1953. Annual sinking fund began January 1, 1934.
- (4) Callable at par at any time on or after December 15, 1956. Annual sinking fund is provided.
- (5) Callable at par at any time on or after October 1, 1952. Annual sinking fund is provided.
- (6) Callable at par at any time on or after July 1, 1953. Annual sinking fund is provided.
- (7) Callable at par at any time on or after July 15, 1954. Half-yearly sinking fund began on January 15, 1948.
- (8) Callable at par at any time on or after July 15, 1962. Half-yearly sinking fund began on January 15, 1948.

BANKRUPTCY

As the following figures show, insolvency in the Federation is increasing :

	1948.	1949.	1950.
Receiving and Adjudication Orders against Firms and Individuals engaged in Trade ..	10	38	33
Wage Earners' Administration Orders ..	7	14	34
Estimated Gross Liabilities ..	\$200,155.54	\$763,014.34	\$1,228,142.57
Estimated Total Assets ..	\$ 15,934.23	\$197,145.28	\$ 233,610.41
Estimated Loss to Creditors ..	92 per cent.	74 per cent.	80.98 per cent.

The volume of insolvency is largely proportionate to the amount of trading and the above figures reflect to a very great extent the increasing volume of business throughout the country. Failures arise even in times of prosperity through an endeavour to trade on insufficient capital or on too small a margin of profit. Small traders working under such conditions find themselves unable to cope with rising prices.

Of the thirty-four Wage Earners' Administration Orders made in 1950, no less than twenty-seven were in respect of Government employees.

By virtue of the rules made under Section 27 of the Societies Ordinance, 1949, the Official Assignee is appointed to wind up the affairs of Societies, the registration of which is refused or cancelled. These duties do not necessarily relate to insolvency and although the work is very considerable the amount of money involved is generally small. The year 1950 has however been exceptional. Fifty Societies were refused registration and the assets of two of these alone amounted to \$280,700 approximately.

Two hundred and sixty-four dividends were declared and paid during the year and the amount distributed was \$144,191.67. At the close of the year a sum of \$562,871.32 was held on investment in the Bankruptcy Estates Account.

On 31st December, 1950, there were 2,662 undischarged bankrupts and debtors throughout the Federation.

PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR

No change took place in the organisation of the Department during the year. Proposals for opening further branch offices were deferred for fuller consideration.

The Public Trustee Ordinance, 1950 (No. 61 of 1950), was passed by the Legislature but had not been brought into force by the end of the year, as it was desired that the Rules to be made thereunder should come into force simultaneously. This Ordinance, which will supersede the present Enactment of the Federated Malay States Cap. 62 F.M.S. and the Straits Settlements Ordinance Cap. 51 S.S., extends the activities of the Public Trustee throughout the Federation.

During 1950, 256 new estates and trusts were accepted and 416 were wound up, leaving in hand under administration at the end of the year 396 estates and trusts, apart from 214 others of a petty nature. Business transacted during the year exceeded \$8,400,000. The value of assets in hand at the close of the year was approximately

\$7,247,000, consisting of \$1,209,900 in real estate, \$5,500,000 in trustee investments, \$241,300 in cash with bankers and \$295,800 in shares and other movables.

The total expenditure in 1950 chargeable against Government votes was approximately \$153,942 while revenue from fees amounted to approximately \$46,224.

INCOME TAX

Following the amending Ordinance of 1950, the rates of tax are as follows :

- (a) Companies, non-resident persons, trustees (other than trustees of an incapacitated person) and executors 20 per centum.
- In the case of non-resident persons, there is a provision for a proportion of personal reliefs to a British subject or a British protected person.
- (b) Persons other than those referred to in paragraph (a) above—
- | | |
|---|-------------|
| for every dollar of the first \$ 500 of chargeable income | 3 per cent. |
| for every dollar of the next 500 | 4 .. |
| 500 | 5 .. |
| 500 | 6 .. |
| 1,000 | 7 .. |
| 2,000 | 8 .. |
| 2,000 | 10 .. |
| 3,000 | 12 .. |
| 5,000 | 15 .. |
| 35,000 | 20 .. |
| for every dollar in excess of 50,000 | 30 .. |

The following personal reliefs are deductible in arriving at chargeable income :

Single individual	\$ 3,000
Wife allowance	2,000

Allowances for children—

- \$750 for the first child ;
- \$500 each for the second and third child ;
- \$300 each for the fourth and fifth child ; and
- \$200 for each subsequent child up to a maximum of \$3,150, i.e. nine children.

The deduction for a child may be increased up to double the appropriate deduction when the sum expended on education and maintenance of the child outside Malaya exceeds the allowance which would otherwise be due in respect of the child.

Relief is allowable for life insurance premiums with restrictions similar to those in the United Kingdom.

Approximately 53,000 return forms were issued for the year of assessment 1950 as compared with approximately 46,000 for the previous year.

The yield of tax for the year of assessment 1950 is expected to be approximately \$40 million to include tax assessed on the Federation's behalf in the Colony of Singapore. The net tax actually collected in the twelve months ended 31st December, 1950, for the years of assessment 1948, 1949 and 1950, including sums collected by the Colonial Income Tax Office in London on the Federation's behalf, was approximately \$44½ million. Adjustments will require to be made in due course in respect of the tax assessed and collected in the Federation on behalf of the Colony and vice versa, but it is expected that the net transfer to the Federation will be less than the figure for 1949.

The tax collected in 1949 before the above-mentioned adjustment was effected was approximately \$33 million, but in that year the adjustment in respect of the tax collected for the two years of assessment 1948 and 1949 by the Federation on behalf of the Colony, and vice versa, resulted in a net transfer to the Federation of approximately \$5 million.

The filling of the senior posts in the department has continued to present difficulties.

A branch office was opened in Malacca in May, 1950, and is responsible for the issuing of returns and the making of assessments in the area covered by Malacca, Johore and Tampin. The branch office opened in Penang in March, 1949, deals with Penang, Province Wellesley, Perlis, Kedah and the Districts of Krian, Kroh, Selama and Matang.

Chapter IV

CURRENCY AND BANKING

CURRENCY

The standard currency of the Federation of Malaya is the Malayan dollar with a value of two shillings and four pence and divided into one hundred cents. The currency is issued by a Board of Commissioners of Currency which was established under an agreement signed in 1938 by the Governments of the Straits Settlements and the Malay States. The currency of the country is on a sterling exchange standard and the Commissioners are bound to issue on demand currency notes at the rate of one dollar for two shillings and four pence in exchange for sums in sterling lodged with the Crown Agents for the Colonies in London and to pay on demand the sterling equivalent of Malayan currency notes lodged with them in Malaya. Under the law the Commissioners can charge commission at the rate of three-sixteenths of a penny for every dollar issued and one farthing in respect of every dollar received.

Provision is made for the establishment and maintenance of a Currency Fund in such a way that its value shall stand at between one hundred and one hundred and ten per cent. of the face value of the currency notes and coin in circulation. There is also provision for making each Government liable to meet any deficiency to the Fund should the assets at any time prove inadequate to meet legal demands upon the Currency Commissioners for the conversion of currency into sterling.

The Currency (Transitional Amendment) Ordinance, 1946, which came into force on 1st April, 1946, appointed the Financial Secretary of the Malayan Union and the Financial Secretary, Singapore, to be the Board of Commissioners of Currency for Malaya.

By proclamations issued on 23rd August, 1948, under the currency legislation in force in the Colony of Singapore, the Settlements of Penang and Malacca and in the States of Kedah and Perlis, and by virtue of section 6 of the Currency Enactments in force in other States, all currency notes issued by and bearing the name of the Government of the Straits Settlements and all currency notes bearing dates prior to 1st July, 1941, were declared to be no longer legal tender in the Federation after 31st August, 1948.

The average amount of currency notes in circulation in December, 1950, including notes in circulation in the Colony of Singapore, and in the Colonies of British North Borneo and Sarawak and in the State of Brunei, amounted to \$610,377,294.

FOREIGN EXCHANGE CONTROL

There has been little or no relaxation during 1950 in the Control's requirements for conservation of exchange. The major change has been brought about by the European Payments Union Agreement of September, 1950, for a multilateral system of payments which will ease the restrictions on imports from certain European countries and should, it is hoped, assist a return to the general convertibility of currencies.

Restrictions on the repatriation of new capital have been eased to encourage foreign investment in Malaya. Some time must elapse before results can be assessed.

The Hashemite Kingdom of Jordan returned to the Sterling Area on 1st July.

Restrictions on the import of Indian Currency Notes were imposed on 2nd March, at the request of the Government of the Republic of India.

CHINESE FAMILY REMITTANCES

Chinese Family Remittance Shops are permitted to collect from individual Chinese in the Federation for remittance to China for the maintenance of their families amounts not exceeding \$45 per family per month. The sums collected must, in accordance with the terms of the licence, be remitted within a week after collection through an authorised Bank. The total remitted during 1950 was \$6,843,989. These figures cover the collections throughout the Federation. They show a substantial increase over the 1949 figures (\$1,941,509) and are about 26 per cent. higher than the 1948 total \$5,426,991. The heavy fall in 1949 is attributed to the disturbed conditions and lack of postal facilities which then prevailed in China. There was a gradual increase throughout 1950, the rate of increase accelerating in November and December, probably partly due to the approach of the Chinese New Year but mainly to the rise in incomes from the rubber and tin boom.

CAPITAL ISSUES

Applications were approved for the issue of new capital amounting to \$26,477,000. This compares with the 1949 total of \$18,127,000.

GOLD

The ban on the import of gold has been strictly maintained and a substantial part of the gold mined in Malaya is purchased and despatched to the United Kingdom. The official price for sale to authorised dealers remains as gazetted on the 15th February, 1950, viz. :

Gold of 900 fineness and above	\$101.52 per fine ounce
Gold of below 900 fineness	100.67 " "
English sovereigns	24.63 each
English half-sovereigns	12.31 " "
United States dollar coins	5.06 per U.S. dollar
Other foreign coins	104.81 per fine ounce

TRAVEL

The total amounts released for basic, business and health travel were :

European countries	£ 29,450
U.S.A.	U.S. \$ 18,340
China	Mal. \$729,850
Other Asian countries	Mal. \$ 20,500

The figures for China represent "basic" travel.

BARTER TRADE

	Exports.	Imports.
<i>Siam—</i>		
January/June	\$ 5,244,100	\$ 5,079,365
July/December	8,045,994	8,316,939
Total 1950	\$ 13,290,094	\$ 13,396,304

This represents an increase of 80 per cent. over the figures for 1949, which, following a 20 per cent. increase in the previous year, reflects the very healthy condition of the valuable entrepôt trade with Siam. Part of the increase is no doubt due to the receipt of reparations payments and the healthy condition of tin mining in Siam.

	Exports.	Imports.
<i>Sumatra—</i>		
January/June	\$ 10,387,495	\$ 9,185,005
July/December	13,101,402	12,500,397
Total 1950	\$ 23,488,897	\$ 21,685,402

This represents an increase of 46 per cent. in total value of barter trade between Penang and Indonesia over that of 1949. It should be noted that while the figures for 1949 show an excess of imports over exports amounting to \$2,829,500, those for 1950 show a favourable balance of exports over imports of \$1,803,495.

MECCA PILGRIMAGE

Travel exchange facilities granted to pilgrims to Mecca amounted to £253,635 (Mal. \$2,173,681) in 1950 as compared with £323,265 (Mal. \$2,770,381) in 1949. Approximately one-third of these figures represent dues to the Saudi Arabian Government. The smaller figure for 1950 does not indicate a reduction in the number of pilgrims but arises from the fact that pilgrims from Siam (about 500 in 1950) were required to obtain their exchange facilities from the Siamese Government.

BANKING

The following is a list of the Banks operating in the Federation at the end of 1950 with the location of their branches :

Ban Hin Lee Bank Limited	Penang
The Bank of China	Penang, Kuala Lumpur

The Batu Pahat Bank Ltd. . . .	Batu Pahat
The Chartered Bank of India, Australia and China	Alor Star, Ipoh, Klang, Kuala Lumpur, Penang, Port Swettenham, Seremban, Sitiawan, Taiping, Telok Anson, Butterworth
The Eastern Bank Limited . . .	Penang, Butterworth, Kuala Lumpur
The Hongkong and Shanghai Banking Corporation	Cameron Highlands, Ipoh, Johore Bahru, Kuala Lumpur, Malacca, Muar, Penang, Sungei Patani, Telok Anson
The Indian Bank Ltd.	Kuala Lumpur, Penang
Indian Overseas Bank Ltd. . .	Ipoh, Kuala Lumpur, Penang
Kwong Yik (Selangor) Banking Corporation Ltd.	Kuala Lumpur
The Malay National Banking Corporation Ltd.	Kuala Lumpur, Temerloh
The Mercantile Bank of India Limited	Ipoh, Kuala Lumpur, Kota Bharu, Kuala Trengganu, Kuala Lipis, Kuantan, Penang
Oriental Bank of Malaya Ltd. .	Kuala Lumpur, Klang, Seremban
Oversea Chinese Banking Corporation Limited	Alor Star, Batu Pahat, Johore Bahru, Ipoh, Klang, Kuala Lumpur, Kluang, Kota Bharu, Malacca, Muar, Penang, Seremban, Segamat, Taiping, Telok Anson
The United Commercial Bank Limited	Penang
Netherlands Trading Society . .	Penang

Chapter V

TRADE AND INDUSTRY

GENERAL

During the year under review the Economic branch of the Federal Secretariat continued to provide the main connecting link between the Government administration on the one hand and commercial and industrial interests on the other. It also continued to be the branch of the Secretariat on which depended the Government departments concerned with production, an account of whose activities will be found in the following Chapter. Under the constitutional arrangements coming into force early in 1951 those Departments were to become the responsibility of a separate Member of Legislative Council. In anticipation of this arrangement the internal working of the Economic Branch was re-organized, so that when the event occurred the transition would be smooth, and the co-ordination continuous.

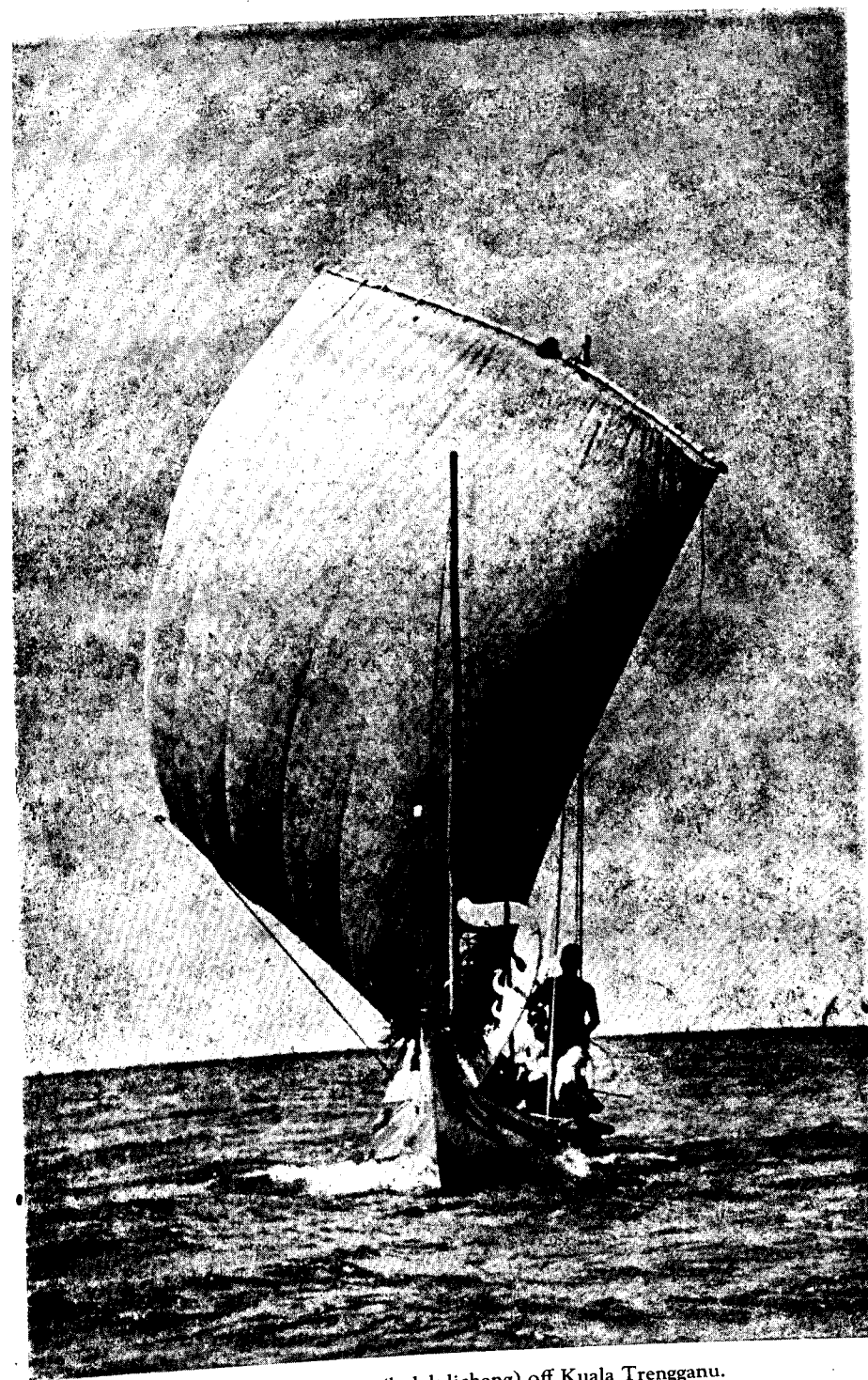
The basis of the economy of the Federation can be clearly seen in the statistics of its external trade. Roughly four-fifths of the total value of its exports are made up of the two items of rubber and tin; roughly half of the value consists of exports through the port of Singapore. The latter fact indicates the intimacy of the relationship between the two territories in commercial matters. For the rest, the published statistics are both a reminder of the overwhelming importance of two basic commodities, and a warning of the constant necessity to encourage other forms of production in order to broaden the basis of the Malayan economy. During 1950 an attempt was made to formulate these and other principles in what has come to be known as the "Draft Development Plan", the first chapter of which had already appeared towards the end of 1949 and is mentioned in the Annual Report of that year. This Plan was accepted in principle by the unanimous vote of the Legislative Council at its July meeting. In addition to a statement of general economic objectives it includes a draft programme of schemes and projects for the six years 1950-1955. This programme was referred for consideration in its details to the State and Settlement Governments and, subject to their comments and to the revisions which are certain to be found necessary as time goes by, it is being introduced in successive annual budgets.

The assumption made in drawing up this programme was that the prevailing state of insecurity, even if it were to continue for some time, would only retard and not altogether interrupt the steady expansion of the capital resources of the country on which its future prosperity depends. Although accurate information

regarding the rate of capital investment is unobtainable, the indications are that such investment continued at a high rate during the year under review—thanks, it must be said, to the efforts of the planting and mining communities, working often in conditions of danger and always under a heavy strain. Their efforts were made more remunerative by the rise in the price of rubber and tin (to name only these two commodities), which occurred about the middle of the year and is referred to at greater length later in this chapter. This general increase in the value of the country's principal exports, welcome and necessary though it was, brought its own inflationary consequences, and these had already become very marked before the end of the year. At the same time import costs, particulars of which are given later in this Chapter, were rising rapidly. Nor were these the only factors contributing to the general inflationary trend. The necessary diversion of man-power and money from economic and productive processes to the campaign against the communist bandits was an added inflationary factor and was evidenced by a growing shortage of labour. The cumulative effect of all these factors on the capacity of the country to undertake larger programmes of development and investment is a matter for much concern. Building costs for example, which are already much higher than they were when the estimates were drawn up, will increase even further if the programme of works which it is proposed to undertake is extended to the point where, in conjunction with other demands, it exceeds the economic capacity of the country. Revision of the programme, which would have been necessary in any case, must therefore be undertaken immediately. The revenue proposals contained in the six-year plan may similarly need revision, but here it is still too early to say how matters will turn out. The original intention was that the developments envisaged should be financed partly from the country's own resources, partly from a substantial grant to be made under the provisions of the Colonial Development and Welfare Act, and partly from a new loan of \$100 million to be raised in 1950-52. These proposals must be regarded as to some extent modified by the "Colombo Plan", the connection between which and the Draft Development Plan already mentioned calls for some comment.

The Colombo Plan was published in November, 1950, after a series of meetings of Commonwealth Ministers to discuss the economic progress of South East Asia countries had taken place at Colombo, Sydney and London earlier in the year. The probable requirement of capital for investment was not the only matter discussed; equal attention was given to the question of training or recruiting technical personnel to carry out the various developments planned. With this end in view a Council for Technical Co-operation has been established, composed of representatives from each of the participating Governments, assisted by a Bureau with headquarters in Colombo.

The bulk of the section of the Colombo Plan which deals with the Federation of Malaya is taken up with items which had already appeared in the Draft Development Plan previously mentioned



A Malay fishing boat (kolek lichang) off Kuala Trengganu.



Young Malay girl.

and these need not be specified in detail. It also included certain supplementary projects which, though of equal importance with those contained in the Draft Development Plan, had been omitted from it for reasons of financial stringency; at a very provisional estimate their cost would amount to an additional \$170 million. These new projects included one for expanding the supply of electricity (already needed on tin mines and increasingly demanded by estates), another for the improvement of ports and railways, a third for providing certain additional capital for education, and a fourth for agricultural development. The last of these took into account the possibility of giving some help towards the replanting of rubber or other crops, particularly on smallholdings. Some capital for this has now been assured by the planting cess which is to be levied on all rubber exported from the territory after January 1st, 1951.

The Colombo Plan also contained provision for the probable needs of the newly established Rural Industrial Development Authority—as it is called, although its final constitution has not yet been decided. The Authority has the dual function of planning rural economic and industrial development, and of considering ways and means of assisting the primary producer to develop a sound economy. In practice the system is likely to be that plans of the kind which R.I.D.A. is able to assist (such as schemes for the marketing and processing of rural produce) will be prepared in the States or Settlements, which will be provided by the Authority with the extra staff required for this purpose and for supervising the schemes when approved, and submitted to the Authority, whose business it will be to find the necessary finance. In the early stages the source of finance will be almost exclusively Government; at a later stage, assuming that the work of the Authority develops on sound business lines, other sources of capital may become available.

Although stated clearly enough in the documents themselves it needs to be restated here that both the original Development Plan and the Colombo Plan which incorporates it and adds to it are certain to require very substantial modification as time goes by. It is believed however that the alterations are likely to be of detail rather than of principle. Possibly the most important of these principles is the emphasis on the fact that the economic policy of the Federation must be closely related to the interests of the primary producer—a dweller in the country rather than in the town. At the same time it is clearly recognized that there is vast scope for improvement of the processing industries which deal with his produce and, beyond this again, for the establishment of secondary industries which either do not exist or are present in only a primitive form. In the course of time such development might come of itself but there is undoubtedly a great opportunity for Government to accelerate the process. The first step in this direction, consisting of the appointment of an Industrial Development Officer, was taken at the end of the year under review. Unfortunately, owing to the prior claims of the emergency, the officer selected for this post had to be diverted temporarily to other duties.

EXTERNAL TRADE IN 1950

Published Malayan statistics contain the most detailed and accurate figures of Malayan trade that are available. It must be borne in mind however that their accuracy is by no means perfect. For those without access to these statistics diagrams have been prepared, and are reproduced in "Trade and Industry Statistics" between pages 68 and 69, showing the values of:

Imports by commodities	.. Table A†
Exports by commodities	.. Table B†
Imports by countries	.. Table C†
Exports by countries	.. Table D†

It should be mentioned that, in tables designed to bring out clearly the simple balancing of imports against exports, there is no possibility of showing with equal clarity the particulars of the special trade passing through the port of Penang, and this will be mentioned separately below. Here it is only necessary to remark that while the entrepôt trade of that port is included in the Malayan statistics, the transshipment trade, which also involves considerable quantities of merchandise, is not. "Transshipment trade" is defined as trade on through bills of lading from one non-Malayan country to another and remaining in the custody of shipping and airline agents. Thus imports of rubber from Thailand on a through bill of lading are not included in the Penang import and export trade figures; though if they were to arrive from that country overland for re-export through Penang they would be included. In some instances entrepôt trade may pass through the ports with little more handling than transshipment trade, but the above definition is found to provide the most practicable line of demarcation.

Space does not permit a detailed analysis of the statistics shown in these tables, but a few general observations may be of interest. In the first place it is necessary to remember that the figures quoted are of the value and not of the volume of trade; this value has increased in the following proportions:

1949	1950
Imports \$ 936.4 million ..	\$1,176.7 million
Exports \$1,324.1 ..	\$2,609.6 ..

Thus while the value of imports increased by about one-fifth the value of exports was almost doubled.

In Table A the most significant change is in the relative value of manufactured imports (Class II) to the value of imports as a whole; this rose from over 8 per cent. to over 17 per cent. Only one case occurs of an absolute decline in the value of an import, the item in question being Grain and Flour, the 1950 imports of which were valued at \$172 million (including \$130 million of edible rice), compared with 1949 imports valued at \$180 million (including \$138 million of edible rice). The reason for this is probably to be found in the exceptionally good 1950 Malayan padi harvest and a fall in prices.

† (In order that these diagrams should be easily intelligible, values of a lower order than \$10 million have for the most part not been entered separately).

In Table B the increases in the values of rubber and tin are the most significant feature. Rubber and rubber latex are mentioned separately as are also tin-ore and tin-ingots, the output of the latter from the Penang smelter being classified as a manufactured product. In 1949 exports of rubber and tin constituted approximately 76 per cent. of the total value of Federation exports, in 1950 the proportion was 86 per cent., figures which illustrate the overwhelming importance of rubber and tin in the Federation economy.

Tables C and D show what a very large proportion of the total trade of the Federation passes through Singapore. The statistics cannot show the real origin of the imports, or the ultimate destination of the exports, as in many cases these are not known. It is thus impossible to assess the exact contribution made by the Federation of Malaya to the balancing of the sterling-dollar account, a problem to which much attention has been given in recent years. It may be stated however that this contribution has been very large and, taken together with the Singapore contribution, has been one of the decisive factors in overcoming the problem. The Pan-Malayan figures are:

Exports (Malayan \$ million)

	to U.S.A.	Canada.	American * account countries.	Total.
1948	458.3	44.3	16.5	519.1
1949	430.3	36.0	19.5	485.8
1950	1,048.2	98.3	48.5	1,195.0

The other side of the picture is even more impressive, as showing that in spite of their high U.S. dollar earning capacity, the two territories have kept their demands on this currency down to a minimum.

Imports (Malayan \$ million)

	from U.S.A.	Canada.	American * account countries.	Total.
1948	209.2	22.8	11.0	243.0
1949	112.7	18.2	4.9	135.8
1950	89.0	16.4	3.7	109.1

The trading position of the Federation as a whole was not significantly altered during the year under review. Foodstuffs and manufactured goods again made up the bulk of the imports, while exports consisted, as before, almost entirely of the natural products of the country. Supply and foreign exchange considerations made it necessary to continue import and export control throughout the year, though in general there was steady progress towards liberalisation. Export control over such goods as gunny sacks, scrap iron, bottles and machinery of all kinds could not be removed, as there was still an unfulfilled demand in South East Asia for such goods and it remained necessary to conserve local supplies. Import controls were progressively relaxed and trade

* U.S. dependencies, Philippine Islands, Bolivia, Columbia, Costa Rica, Cuba, Dominican Republic, El Salvador, Ecuador, Guatemala, Haiti, Honduras (not British), Mexico, Nicaragua, Panama, Venezuela.

with Western Europe in particular became easier during the course of the year. Though as has been seen, imports from the U.S. dollar area fell off, partly no doubt as a result of the increased cost of such goods in Malayan dollars after the revaluation of sterling, this did not lead to shortages as supplies from European sources improved. The supply position in respect of certain commodities such as butter and cheese which were subject to import quotas was also much better; in fact by the end of 1950 most goods were more readily obtainable than at any time since the liberation of the country. The effect which rearmament programmes would have on this situation was still obscure, though signs of impending shortage were not lacking. Costs of imports had already begun to rise very rapidly, as may be seen from the following table:

Monthly Index Number (Base 1938=100)

PAN-MALAYAN FIGURES

Food, drink, tobacco.		Manufactured articles.	
January ..	432	..	222
February ..	432	..	221
March ..	438	..	230
April ..	446	..	227
May ..	441	..	219
June ..	446	..	228
July ..	446	..	215
August ..	448	..	239
September ..	485	..	239
October ..	473	..	245
November ..	466	..	249
December ..	481	..	256

The effect of these increases was, of course, felt most by those whose earnings had not directly benefited from the higher prices being paid for Malayan exports.

THE ENTREPÔT TRADE OF PENANG

It has been mentioned that the port of Penang occupies a special position in the economy of the country, since besides handling its share of the imports and exports into and from the Federation, it also enjoys a considerable entrepôt and processing trade with other countries in the South East Asia region. The statistics of Penang's trade with these countries are interesting and, as they are not readily obtainable, are given below:

Imports (\$).

	1947.	1948.	1949.	1950.
Thailand ..	18,228,699	10,089,645	24,848,548	59,907,672
Sumatra ..	20,397,773	30,073,965	25,778,784	50,893,880
Burma ..	18,416,267	51,838,743	46,115,821	20,447,103
Republic of India ..	8,212,090	9,298,469	13,873,703	25,296,286
Ceylon ..	322,786	632,093	570,416	602,832
	<u>65,577,615</u>	<u>101,932,915</u>	<u>111,187,272</u>	<u>157,147,773</u>

Trade & Industry Statistics
Federation of Malaya

Table A	Imports by Commodities 1949-1950.
" B	Exports by Commodities 1949-1950.
" C	Imports by Countries 1949-1950.
" D	Exports by Countries 1949-1950.
" E	R. S. S. Spot Rubber Singapore Quotations 1950.

Federation of Malaya
TABLE "A"- Imports by commodities 1949 and 1950
(value in \$ million)

CLASS I 45.0% - 37.5%	
GRAIN & FLOUR	180.1
	172.3
OTHER FOOD & DRINK	170.8
	236.8
LIQUOR & TOBACCO	79.8
	87.9
CLASS II 8.1% - 17.1%	
TIN ORE & CONCENTRATES	28.7
	59.0
RUBBER	20.8
	181.7
OTHER RAW MATERIALS	26.5
	36.1
CLASS III 46.4% - 44.5%	
EARTHENWARE, CEMENT, GLASS	14.5
	24.4
IRON, STEEL ETC.	31.5
	40.9
FILMS	40.2
	50.2
ELECTRICAL GOODS	20.2
	21.8
MACHINES, (NON ELECTRICAL)	33.2
	53.4
COTTON YARN & MANUFACTURES	70.2
	95.5
WOOL, SILK, & OTHER TEXTILES	18.1
	32.1
APPAREL	10.0
	15.5
CHEMICALS, DRUGS ETC.	22.3
	30.7
PETROLEUM PRODUCTS	45.3
	53.7
PAPER & PAPERWARE	10.0
	13.8
VEHICLES	43.9
	53.0
OTHER ARTICLES WHOLE, OR MAINLY MANUFACTURED	77.0
	108.5
CLASSES IV & V 0.5% - 0.2%	
PARCEL POST DULLION & SPECIE	5.0
	11.8

Total Imports 1949 \$ 938.4 million
1950 \$ 1324.1 million

Note:- The above figures include imports from Singapore. Comparable pre-war figures are not available. It may be noted however that 1938 imports to the territory now forming the Federation of Malaya, excluding imports via Singapore were valued at \$187 million, compared to \$537 million in 1949 and \$768 million in 1950.

Federation of Malaya
TABLE "B"- Exports by commodities 1949 and 1950
(value in \$ million)

CLASS I 6.0% - 2.7%	
GRAIN & FLOUR	21.0
	21.4
OTHER FOOD & DRINK (INCLUDING LIQUOR & TOBACCO)	50.7
	87.9
CLASS II 71.1% - 81.7%	
TIN ORE & CONCENTRATES	138.4
	173.7
WOOD & TIMBER	10.6
	21.8
COPIRA & COCONUT OIL	50.8
	76.0
PALM OIL & KERNELS	39.5
	37.8
RUBBER - DRY & GRAPE	549.6
	1824.3
RUBBER - LATEX	40.0
	136.4
OTHER RAW MATERIALS	7.3
	13.9
CLASS III 22.6% - 15.4%	
TIN INGOTS ETC.	153.0
	268.2
FILMS	33.1
	37.4
COTTON YARN & MANUFACTURES	11.7
	11.7
OTHER ARTICLES WHOLE, OR MAINLY MANUFACTURED	37.4
	61.7
CLASSES IV & V 0.3% - 0.2%	
PARCEL POST DULLION & SPECIE	3.0
	3.0

Total Exports 1949 \$1176.6 million
1950 \$2609.6 million

Note:- The above figures include exports to Singapore. Comparable pre-war figures are not available. It may be noted however that 1938 exports from the territory now forming the Federation of Malaya, excluding exports via Singapore were valued at \$257 million, compared to \$522 million in 1949 and \$1475 million in 1950.

TABLE "E"

R. S. S. SPOT-RUBBER - SINGAPORE QUOTATIONS.

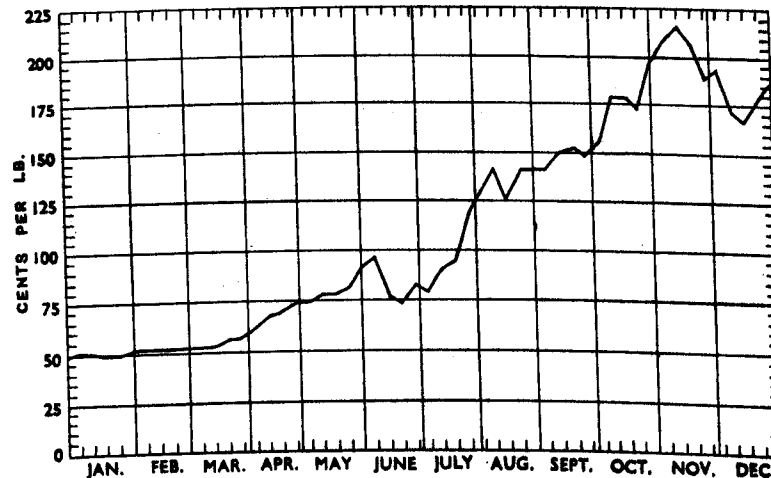
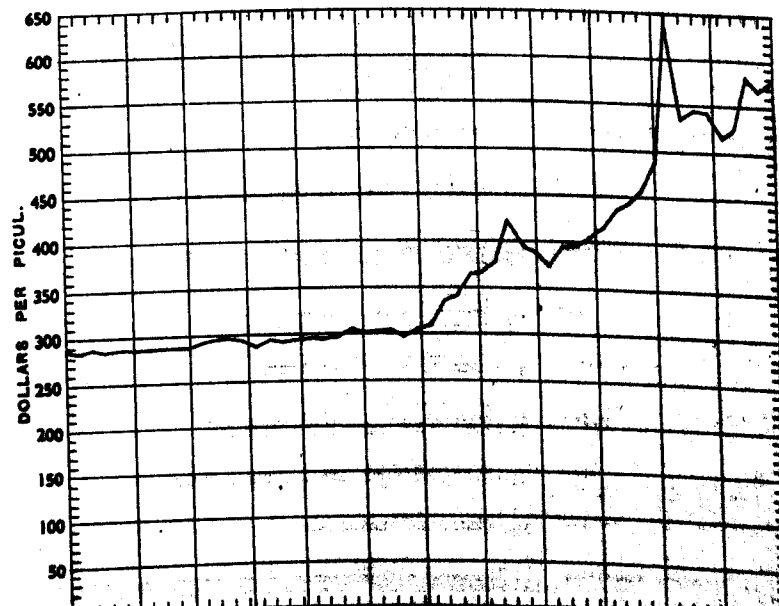


TABLE "F"

WEEKLY SINGAPORE TIN PRICES.



Exports (\$).

	1947.	1948.	1949.	1950.
Thailand	2,091,571	5,376,778	6,179,454	8,412,172
Sumatra	3,492,993	13,744,973	13,046,976	20,878,022
Burma	5,427,502	7,788,365	5,745,860	5,624,808
Republic of India..	15,544,993	21,124,481	29,493,844	38,503,895
Ceylon	316,687	444,376	4,715,253	2,388,402
	26,873,746	48,478,973	59,181,387	75,807,299

The exports were mainly manufactured goods; the imports mainly the natural products of the region which were brought to Penang to be sorted, processed and re-exported. This two-way trade is carried on mainly in small vessels, and is conducted largely on a barter basis. Balance of payments and foreign exchange considerations have resulted in the creation of artificial impediments to the entrepôt trade with Burma, Siam and Northern Sumatra, but the economic advantages which Penang possesses added to the strength of ancient trading ties have more than counterbalanced these difficulties. The traditional trade of the port with neighbouring territories has, on the whole, expanded, and although the simple procedures of the past have had to be elaborated in the face of changing conditions and the pattern of the trade has altered to some extent, the general position remains the same.

REGISTRATION OF COMPANIES

The legislation in force consists of separate Ordinances dealing with Companies, Life Assurance Companies, Fire Insurance Companies and Trust Companies. A draft Ordinance relating to the position of companies formed and registered during the Japanese occupation is still under consideration. The only significant legislative change during the year under review was the increase of the maximum fee payable for registration of nominal share capital from \$500 to \$700.

The number of Local Companies (i.e., Companies incorporated in the Federation) on December 31st, was 1,134. This total included the following:

Companies pending War Claims (not in operation) ..	11
Companies formed and registered during the Japanese occupation ..	87
Companies in voluntary liquidation or pending removal ..	45

Particulars of registrations of Local Companies made during the past three years are given below:

Year.	Number registered.	Number registered without a Share Capital.	Companies registered with a Share Capital. Number.	Nominal Capital.
1948 ..	122	1	121	\$38,220,000
1949 ..	90	—	90	20,361,000
1950 ..	107	2	105	47,637,100

Of the 105 Companies registered with a Share Capital in 1950, 10 were public companies having an aggregate Nominal Capital of \$12,309,519 (an average of \$1,230,951) and 95 were private companies having an aggregate Nominal Capital of \$35,327,581 (an average of \$371,869). The figures for registrations of Local Companies during the last three years may be compared with the figures for liquidations which were as follows :

Year.	Compulsory liquidation.	Supervision liquidation.	Voluntary liquidation.	Total.
1948	1	—	8	9
1949	—	—	20	20
1950	3	1	30	34

The Share Capital of the 30 Local Companies voluntarily liquidated during 1950 amounted to \$9,110,000.

In addition to the Local Companies, there were 958 Foreign Companies (i.e. Companies incorporated outside the Federation, including Companies incorporated in Singapore) on the Registers on the 31st December. This total included the following :

New Companies registered during 1950	31
Companies registered pre-war and re-registered during 1950	3
Pending registration or under investigation	6
Companies owned by Japanese	19

During the year 19 Foreign Companies were removed from the Registers as having ceased to maintain a place of business in the Federation.

The figures of Local Foreign Companies quoted above include the following :

	Local.	Foreign.
Trust Companies	1	4
Insurance Companies	—	100
Banking Companies	4	12

Two Banking Companies were registered during the year, but only to engage in limited activities.

REGISTRATION OF BUSINESSES

The Registration of Businesses Ordinance, 1947, came into effect on 1st April, 1948, the schedule of businesses requiring registration being confined to nine types. The details of the businesses and the numbers of each type that were registered or terminated during the year under review, together with the total numbers of businesses on the register or awaiting registration at the end of this period are given below :

Type of business.	Registered during 1950.	Terminated during 1950.	Total number of businesses on register 31-12-50.	Applications for registration outstanding on 1-1-51.
(i) Money-lending	245	37	1,376	11
(ii) Mining businesses employing more than 20 persons	117	27	557	5
(iii) Rubber Estates exceeding 50 acres in extent	122	48	1,291	13
(iv) Pawn Shops	26	14	—	—

Type of business.	Registered during 1950.	Terminated during 1950.	Total number of businesses on register 31-12-50.	Applications for registration outstanding on 1-1-51.
(v) Goldsmiths and jewellers..	146	30	1,823	5
(vi) Sundry goods and provision businesses	809	193	11,249	9
(vii) Importers and Exporters. Commission Agents	201	51	1,810	10
(viii) Sawmills, timber and fire-wood merchants	99	20	823	6
(ix) All other businesses	3,043	490	19,004	91
Total	4,808	910	38,084	151

Consideration is at present being given to a revision of the register which would make its contents more valuable to the business community.

GOVERNMENT PROCUREMENT AND RATIONING

Imports of rice ceased to be controlled by the International Emergency Food Council from the beginning of 1950, and it was therefore necessary for official representatives to visit Thailand early in the year and arrange a contract for the delivery of 220,000 tons with the Thai Government. Deliveries of this rice were satisfactory, and smaller quantities also reached the Federation from Burma. As a result of these arrangements and of the excellent local harvest, it was possible to maintain without difficulty the 1949 ration scale, namely $3\frac{1}{2}$ *katties* (= $4\frac{1}{2}$ lbs.) per head per week. From 1st May onwards, in order to conform more closely to market practice, the rice was sold in three grades, and not in one grade as previously. As a result of improvements in the shipment, storage and distribution of the imported supplies, it was found possible slightly to reduce the price. As regards the local crop, the pre-war practice was again followed of fixing a guaranteed minimum price, so that the grower should be certain of selling his *padi* at not less than its proper value. The price fixed for the 1949-50 crop was \$15.00 per *pikul* (1 *pikul* = 133½ lbs.) at mill door. Some 38,000 tons or less than one-tenth of the estimated production was sold at this rate, the remainder being consumed or sold to millers under private arrangement presumably at higher prices. For the 1950-51 crop the guaranteed price has been fixed at \$15.00 per *pikul*. The *padi* from the 1949-50 crop purchased by Government was handled by four Government and 86 private licensed mills which contracted to sell rice to Government at \$24.40 per *pikul*. These mills were permitted an extraction rate of 60 per cent., which represented a departure from the policy of undermilling which had been pursued since the war. Although the latter policy was sound from a nutritional point of view, rice so produced loses palatability if stored for more than a few weeks and could no longer be sold when supplies of polished rice became abundant.

Flour, during the year under review, continued to be subject to an allocation system under the International Wheat Agreement. It was handed over to commercial procurement on 1st September, 1950, when Government ceased to import. Government stocks

remaining at that date were, however, retained in being as a buffer stock for use in the event of a temporary shortage. Price control was lifted on the same date as the transfer to commercial procurement was made.

Sugar continued to be imported under a Ministry of Food allocation. Rationing had to be reintroduced with effect from September 11th in order to protect the public from the effects of hoarding, due partly to fears of a possible world shortage and partly to the feeling of uncertainty engendered by the Korean war. The ration was again fixed at $\frac{1}{2}$ kati (=10 $\frac{3}{4}$ ozs.) per head per week. Price control was reimposed at the same time.

RUBBER

Planting and production statistics are quoted in the next Chapter and need not be dealt with here; but this Report would not be complete without an account of the very remarkable movement of prices which took place during the year and is illustrated in Table E. Though the strength of the various influences upon the market cannot of course be precisely measured, one of the principal reasons for the initial rise lay in the fact that manufacturers had allowed their stocks to fall to a low level and were faced with the need of replenishing these at a time when world demand for natural rubber was exceptionally heavy. Malayan output remained constant, but production elsewhere fell short of expectations. The consequential shortage of supply during April led to a rise in price but this, according to general opinion, was likely to be temporary in view of the counter attraction exercised by synthetic rubber, the production of which could, it was thought, be increased sufficiently rapidly to depress the price of natural rubber to its former level. And this is, no doubt, what might have happened if other factors had not been brought into play. These new factors were political, rather than economic. The chief of them was the outbreak of hostilities in Korea, an event which created an immediate apprehension among consumers, manufacturers and Governments alike concerning the security of their future supplies. These feelings were powerfully reinforced when, a month later, some thousands of tons of rubber were destroyed in a factory fire in Singapore due, it is believed, to sabotage. Thus both economic and political factors combined to force up the price, and to maintain it at a high level for the rest of the year. The counter measures taken by consuming countries will be mentioned shortly; these may have helped to prevent a further rise in prices but they did nothing to reduce them.

In the circumstances it was to be expected that there would be allegations that stocks were being held back by Malayan producers. These could however be readily disproved by stock statistics which show a lower average in 1950 than in 1949 (69,631 tons as against 72,330 tons). Apart from the inducement of prices, the ever-present risk of arson and the difficulty of insuring adequately against it on a rising market provided the best of reasons for shipping rubber out of the country without delay.

Meanwhile the future of the rubber industry for several years to come was also being shaped in the main consuming country, the United States of America, where, after protracted debate, the Synthetic Rubber Act of 1948, which was due to expire on June 30th, was extended for a further two years. Responsibility will accordingly remain with the executive during that period for determining the output of synthetic and for placing such restrictions on the use of natural rubber as may be considered necessary in the public interest. In exercise of these powers it was announced on July 7th that three of the stand-by synthetic rubber factories would be reactivated. The effects of this action are likely to be that the U.S. production of synthetic rubber, which was less than 400,000 tons in 1949 will rise to an annual rate of approximately 700,000 tons in December, 1950, and to an annual rate of approximately 900,000 tons by the second half of 1951. Further control measures were instituted on August 25th and again on October 20th with the object, it is understood, of saving a larger share of the imports of natural rubber for the national stockpile. Although as had already been noted, these events were not reflected to any marked extent in current prices, their possible results have to be carefully weighed by the industry. Competition on equal terms between natural and synthetic rubber, never yet achieved, now appears farther off than ever.

The events which have been briefly related above occurred for the most part subsequently to the seventh meeting of the International Rubber Study Group which was held in Brussels in May and was attended, as in former years, by a British Colonial and Dependent Territories delegation. The composition of this delegation was almost entirely Malayan. One of the principal achievements of the meeting was the setting up of a marketing Committee to deal with the problem of grades and standards, the inadequacy of which during the post-war years has been a source of frequent complaint and no small financial loss to the producer. This Committee also has the task of preparing the way for the acceptance of a proposal, which has been much discussed in recent years, to grade rubber by its intrinsic properties rather than by its appearance. The proposal is a logical one, but could not be adopted without profound modifications of market practices by buyers and sellers alike. A different though connected problem is that of ensuring that, whatever standards are in force, they are properly complied with. As mentioned in last year's report a Rubber Shipping and Packing Control Ordinance designed to effect this result was prepared, and has now been passed by both Governments. Certain difficulties having arisen, this legislation has not yet been brought into force, but there is reason to hope that it may be in the not too distant future.

The five year programme of research and development has now completed its second year and is being supported by a number of other Commonwealth countries which are interested in the crop as producers. The publicity campaign mentioned in the 1949 report was also continued for a further year.

The figures of the value of rubber and rubber latex exports shown in Table B are almost certainly over-estimates. It must also be remembered that costs of production increased during the year very substantially. Nevertheless, by comparison with 1949, substantial profits were made. Government revenue also benefited, the amount of export duty collected being \$89 million as compared with \$28 million in 1949, \$33 million in 1948, \$32 million in 1947, and \$34 million in 1946. During the latter part of the year, when it became evident that the increase in the price of rubber might be more than a temporary phenomenon, arrangements were made for the introduction of a new rate of export duty which would both divert a proportion of the additional profits being made into the Government revenue and at the same time act as a protective measure against the inflation which was bound to follow. To avoid confusion of the market it was necessary to give advance notification of the new rates which were not therefore introduced until January 1st, 1951. The effects are that when the price is 60 cents per pound or less, the old rate of 5 per cent. *ad valorem* applies. Above this, the rate increases by one cent for every five cents in price. A proportion of this increase is however paid into a trust fund and becomes available to the industry for new planting or replanting. The need for this is discussed in the following Chapter.

TIN

Production is now at about 70 per cent. of the 1941 rate, but the rate of increase is slowing down. Further particulars of output are given in the following Chapter, but something may be said here about price. The movement of prices is shown in Table F and this may be compared with that shown in Table E; though disproportionate (the percentage increase in rubber prices being much greater than that of tin) the two courses are roughly parallel and exhibit the usual tendency of the prices of raw materials to rise or fall in conjunction. Once again it was external political and economic factors that were mainly responsible. It will be observed however that while rubber prices began their upward trend well in advance of the outbreak of war in Korea, the price of tin remained relatively stable until that date. As will be seen from Table B, the value of the 1950 exports was very well in advance of the figure for the previous year and there was a consequential increase in the amount of export duty collected. This amount was \$52.0 million, as compared with \$38.0 million in 1949, \$29.4 million in 1948, \$13.5 million in 1947, and \$4.9 million in 1946.

Imports of tin concentrates into the Federation were mainly from Burma and Thailand. Comparison between 1949 and 1950 values is made in Table A, the figures for these two years being 8,027 tons and 13,066 tons respectively. During 1949 negotiations were entered into for the direct sale of Malayan tin for the U.S. stockpile. These negotiations were continued in 1950, but it proved impossible to agree on satisfactory terms and they were abandoned, the Malayan tin industry giving assurances that

so far as possible, supplies would be made available through normal market channels.

It was remarked in the annual report for 1949 that the tin mining industry had still to meet the problem of its future position, which amounted in brief to the fact that world consumption of tin for ordinary commercial purposes was estimated to be significantly less than world production. The problem still exists although owing to world events it no longer has the same urgency as it appeared to have in 1949. It was, however, sufficiently urgent for the fifth meeting of the International Tin Study Group which was held in Paris during March, 1950, and attended by representatives from Malaya, to adopt, by a majority, a resolution requesting a United Nations Conference to be convened to discuss a commodity control agreement on tin. The meeting was held at Geneva in October, but having failed to reach agreement, was adjourned till a more favourable occasion.

The International Tin Research and Development Institute, which maintains a large research staff, continued its operations during the year under review. The functions of this Institute are to disseminate knowledge of the physical and chemical properties of tin, to promote by scientific research the consumption of tin and the discovery of new uses, and to increase tin consumption by propaganda. The Institute is very largely supported by Malaya which, under present arrangements, contributes two-fifths of its total cost. A third of this is met by a contribution from the Federation Government, and two-thirds from a cess on exports, the current rate of which is 30 cents per pikul.

ECONOMIC COMMISSION FOR ASIA AND THE FAR EAST

This Commission has continued in being during the year under review, and has maintained an active correspondence with the Governments of the region, including the Federation of Malaya. The Commission acts within the framework of the policies of the United Nations and is subject to the general supervision of the Economic and Social Council of that body. Furthermore, the Commission may not take action in respect of any country without the agreement of the Government of that country. Subject to the foregoing, the Commission's duties are:

- (a) to initiate and participate in measures for facilitating concerted action for the economic reconstruction of Asia and the Far East, for raising the level of economic activity in Asia and the Far East and for maintaining and strengthening the economic relations of those areas both among themselves and with other countries of the world;
- (b) to make or sponsor such investigations and studies of economic and technological problems and development within territories of Asia and the Far East as the Commission deems appropriate;

- (c) to undertake or sponsor the collection, evaluation and dissemination of such economic, technological and statistical information as the Commission deems appropriate.

The Federation of Malaya, with Singapore and the British Borneo territories, is an associate member of the Commission, and was represented at its sixth session which took place at Bangkok in May.

The work of the Commission during the first two years after its foundation (1947-1949) was of a somewhat exploratory nature. During the last year however, the main problems, having, as it were, been isolated, are now being subjected individually to a more searching analysis. Necessary though this procedure may be, it has inevitably led to requests for information of even greater complexity, and in even greater detail than in previous years. The administrative effort required to satisfy these requests is considerable, and in present circumstances such extra efforts cannot always be made. The E.C.A.F.E. Secretariat has been sympathetic towards these difficulties, and has itself proposed methods by which they can be partially circumvented. The fact remains, however, that the contribution which the Federation of Malaya is able to make in respect of the second of E.C.A.F.E.'s functions quoted above is less than what would have been made if conditions had been more favourable.

Chapter VI

PRODUCTION

Part I

AGRICULTURE

RUBBER

Comparative acreages under rubber in the Federation are as follows:

Year.	PLANTED ACREAGES		
	Estates. Acres.	Smallholdings. Acres.	Total. Acres.
1947 ..	1,934,106	1,383,193	3,317,299
1948 ..	1,952,347	1,410,178	3,362,525
1949 ..	1,970,579	1,394,881	3,365,460
1950 ..	1,964,370	1,394,881	3,359,251

Owing to the Emergency, it has not been possible for the Land Offices to re-check the area of smallholders' planted rubber and the same figure is given as for 1949.

The industry reacted strongly to the higher prices which were characteristic of the second-half of 1950 as the following figures show:

Year.	PRODUCTION (IN TONS)		
	Estates.	Smallholdings.	Total.
1946 ..	173,515	229,692	403,207
1947 ..	395,865	285,364	645,229
1948 ..	402,907	294,071	696,978
1949 ..	400,009	270,248	670,257
1950 ..	375,853	316,732	692,585

Pan-Malayan imports and exports of rubber during the same periods were:

Year.	PAN-MALAYAN IMPORTS AND EXPORTS (IN TONS)		
	Gross Exports.	Gross Imports.	Net Exports.
1946 ..	558,001	191,090	366,911
1947 ..	953,688	313,549	640,139
1948 ..	979,107	300,091	679,016
1949 ..	899,211	220,141	679,070
1950 ..	1,106,483	448,656	657,827

The increase (46,500 tons) in smallholders' production meant that little progress was made in the replanting of their holdings, very few smallholders being prepared to cut down any tree, however old and obsolete, as long as it continued to yield even a drop of latex at the present high prices. It is not surprising therefore that

only approximately 3,000 acres of smallholders' trees were replanted during the year under review. A similar acreage of new ground was also planted by them. In both cases the areas were established with improved planting material made available under a scheme financed by a grant made under the Colonial Development and Welfare Act; and clonal seedlings proved much more popular than budwood.

The undoubted desire to expand the area under rubber has not been fully satisfied. The Emergency has called men away for service in the Security Forces and there has been a shortage of labour for opening up new land; moreover new jungle land implies a closer proximity to bandits than most smallholders care for.

There have also been doubts as to the desirability of permitting smallholders to take up land solely for the purpose of rubber growing, and these doubts are likely to persist until a satisfactory system of interplanting rubber with other crops has been evolved. The dangers of monoculture are very well appreciated.

The Committee set up to advise on ways and means of assisting smallholders issued an interim report in 1950. Methods of group replanting have been explored, but appear unlikely to prove satisfactory in practice. The Committee recognized that the great majority of smallholders' trees were obsolete but concluded that the decline in production would be gradual. The Committee recommended that no time should be lost in obtaining as much information as possible on the technique of replanting small areas, since, until this problem has been solved, it is not possible to give the smallholder advice as to how to proceed, even if the financial difficulties inherent in the cutting out of a cash crop can be overcome.

The Rural Industrial Development Authority has taken a keen interest in the collection and processing of smallholders' latex, and is examining a number of proposals designed to assist the smallholder in preparing good quality rubber and in getting full value for it. The activities of the Authority, as indeed those of all Government Departments, have however been greatly hampered by shortage of staff.

RICE

The season 1949-50 was particularly favourable and a record planted acreage was matched by a record total yield.

The total area of wet and dry padi planted was 930,530 acres of which 910,330 acres were harvested giving a total yield of 435,840 tons of rice—an increase of 128,660 tons over the previous season.

The following table gives comparative figures for acreages under wet and dry padi together with yields since the 1945-46 season:

Season.	WET PADI.		DRY PADI.		TOTAL.	
	Acreage (Planted).	Yield (In Tons).	Acreage (Planted).	Yield (In Tons).	Acreage (Planted).	Yield (In Tons).
1945-46	684,010	358,258	105,640	16,448	789,650	374,701
1946-47	732,620	405,940	80,930	22,240	813,550	428,180
1947-48	802,730	520,808	82,760	23,808	885,490	544,616
1948-49	842,450	467,825	65,820	19,882	908,070	487,657
1949-50	871,470	667,485	59,060	24,425	930,530	691,910

The figures for the Malayan production of rice, in relation to retained imports and consumption, for the past five years are as follows:

	RICE				
	1946.	1947.	1948.	1949.	1950.
Retained imports (tons)	136,434	237,119	449,565	483,391	429,788
Production (tons)*	225,044	257,164	343,065	307,180	435,840
Consumption (tons)	361,478	494,283	792,630	790,571	865,628
Percentage production of consumption	62	52	43	39	50

The consumption of rice in 1950 fell short of annual consumption in the years immediately preceding the war by some 140,000 tons. Nevertheless the 1950 figure represents a reasonable *per capita* ration of this basic food. It is interesting to note that, given a really good harvest, Malaya can supply half its rice requirements on the basis of a reasonably liberal ration.

The cost to Malaya of its rice imports is heavy, and this constitutes another practical reason for increasing local production to the maximum.

COST OF RETAINED RICE IMPORTS

	Tons.	Value in \$
1946	136,434	24,530,956
1947	237,119	57,401,711
1948	449,565	184,073,360
1949	483,391	195,329,964
1950	429,788	169,013,170

OIL PALM

Shortage of labour and factors connected with the Emergency have prevented rapid extension of the area planted to oil palms during 1950. Given proper cultivation, the oil palm is capable of very high yields in Malaya where the rainfall is heavy and well distributed and where the hours of sunshine are many. With the use of pedigree seed exceptional yields are obtainable, and it is not surprising that programmes of selection and breeding are receiving close attention by certain estates and by the Department of Agriculture.

The cultivation of oil palms offers an attractive alternative to rubber, and though the acreage under oil palms is still comparatively small, the crop already makes a definite contribution to the diversification of Malaya's agricultural economy. It is to be regretted that the oil palm industry is confined entirely to estates and is at present of no interest to the smallholder. In spite of the fact that palm oil is more nutritious than coconut oil and that an oil palm produces more oil than a coconut palm, the people of Malaya have shown great reluctance to include palm oil in their diet. This must be held as a major reason why smallholders are not prepared to plant oil palms; another pertinent reason lies in the difficulty of preparing high quality oil without expensive presses and in selling such oil once obtained.

* During the 1945-47 seasons the recovery of rice from padi was 60 per cent., during the 1947-50 seasons it was 63 per cent.

The acreages planted with oil palms and the production of oil and kernels are as follows:

Year.	Planted Acreage.	Palm Oil (In Tons).	Palm Kernels (In Tons).
1946 ..	77,458	11,756	931
1947 ..	78,181	39,115	5,737
1948 ..	83,320	45,257	8,471
1949 ..	90,507	50,561	10,459
1950 ..	93,331	53,171	13,442

COCONUT

The price of coconut oil and of copra increased during the second-half of the year and the coconut smallholder has enjoyed a profitable year.

Considerable damage caused by leaf-eating caterpillars of the Artona moth occurred on a certain group of estates on the north west coast. The outbreak was more severe than any previously recorded. Control measures eventually proved successful but some two thousand acres of coconut palms were defoliated.

Drainage schemes in the west coast coconut belt of Johore began to produce improvement in the appearance and yield of the palms.

The production of coconuts is difficult to assess because the distribution of the nuts is constantly fluctuating in accordance with the price for fresh nuts, for dried copra and for coconut oil. In all markets throughout Malaya fresh nuts are to be bought and these are either used for the extraction of oil or for direct consumption of the "meat". But the main production of oil comes from dried copra treated in power-driven mills which are situated among the dense coconut areas of the western coastal belt. A high price for oil either for export or for local consumption is reflected in a low export of copra. The relative disparity in the price of copra and of oil often results in Malaya becoming a net importer of copra; this has been the experience since the liberation, but in 1950 the trend has been reversed and Malaya has recommenced exports of copra on a small scale, as will be seen from the Table "NET EXPORTS" which follows.

Copra cake finds a ready local market as feed for pigs.

PRODUCTION (IN TONS)				
Copra.		Coconut oil.	Copra cake.	
Year.	Estates. Smallholdings.			
1947 ..	—	51,186	40,760	
1948 ..	19,011* .. 45,608*	51,164	37,970	
1949 ..	36,957 .. 85,980	63,698	43,300	
1950 ..	38,612 .. 110,866	72,800	47,819	

NET EXPORTS					
Year.	Copra.			Coconut oil.	
	Tons.	Value.		Tons.	Value.
		\$			\$
1946 ..	†34,213 ..	† 7,731,995 ..		8,008 ..	4,683,425 ..
1947 ..	†45,439 ..	†14,734,312 ..		41,112 ..	24,668,790 ..
1948 ..	†28,624 ..	†14,018,149 ..		45,245 ..	45,531,182 ..
1949 ..	†24,424 ..	† 7,159,041 ..		60,504 ..	54,521,306 ..
1950 ..	4,778 ..	14,902,910 ..		56,045 ..	60,747,279 ..
* July-December only.					

* July-December only.

† Net Imports.

PINEAPPLE

The area under pineapples was extended during the year and was mainly concentrated on the deep peat soils in Johore. Areas previously planted came into bearing and the quantity of fruit for canning substantially increased.

The industry is showing signs of great vitality and there are plans for a further considerable expansion of the planted area. Modernisation of the canneries continued and the appointment of an experienced Canning Officer has done much to assist in this. Schemes for regulating the quality of the pack for export were introduced on a voluntary basis; and when the legislation to control the industry has been passed, grading and inspection of canned pineapples will become compulsory.

During the year cans required by the industry were no longer imported but were manufactured locally. Difficulty has, however, been experienced in importing sufficient quantities of tin plate and it is to be hoped that this will not prove a limiting factor in the expansion of the industry.

The following table shows the exports of canned pineapples from Malaya since 1946:

Year.	EXPORTS	
	Tons.	Value.
		\$
1946 ..	13 ..	11,568
1947 ..	2,611 ..	2,430,951
1948 ..	4,099 ..	3,652,621
1949 ..	8,137 ..	6,307,169
1950 ..	14,671 ..	12,203,911

TEA

Blister blight of tea—a disease new to Malaya—made an unwelcome appearance on one upland estate early in the year. It spread rapidly and by the end of the year the disease was to be found in all the upland tea areas. Control measures similar to those adopted in Ceylon have been put into effect on a number of estates. It appears that the disease will inevitably increase the cost of production, but if the control measures are carried out in the right way at the right time there is no reason to take too gloomy a view over the future of upland tea in Malaya.

The disease has been found on lowland tea also but the climatic conditions associated with lowland tea are inimical to the spread of the disease.

Perhaps more than any other agricultural enterprise in the Federation the upland tea estates suffered from acute labour shortage.

In the circumstances the production of made-tea during 1950 must be regarded as satisfactory. The figures, as reported by estates, are as follows:

Year.	MADE-TEA		Sold locally.
	Production.	Exports.	
	lbs.	lbs.	lbs.
1946 ..	420,532 ..	108,069 ..	405,842
1947 ..	1,242,285 ..	641,804 ..	885,913
1948 ..	2,257,619 ..	1,853,291 ..	1,447,189
1949 ..	3,233,950 ..	1,653,510 ..	1,606,282
1950 ..	3,259,209 ..	—	1,555,298

The following is an analysis of provisional 1950 statistics for highland and lowland estates :

	No. of estates.	Planted area. (Acres).	Area in production. (Acres).	Reserved land. (Acres).	Production made-tea. (lbs.)
Highland ..	35	5,324	3,841	3,721	1,404,784
Lowland ..	14	3,134	2,252	13,214	1,854,476
	49	8,458	6,093	16,935	3,259,210

FOODCROPS, VEGETABLES AND FRUIT

Much of the production of foodcrops and vegetables is in the hands of Chinese squatters and their "resettlement" has inevitably led to a dislocation in production.

In spite of considerable imports of vegetables from Australia and Sumatra, production in the Cameron Highlands expanded, mainly in respect of cabbages.

Fruit plays an important part in kampong economy; crops of mangosteens, durians and rambutans were generally good in 1950 and fetched good prices. The demand for selected budded fruit trees exceeded the appreciable supplies raised on the Department of Agriculture's Stations.

MANILA HEMP

This crop is still in the experimental stage, interest being shown by a number of estates which have established small trial areas. Before the war the Philippines provided most of the world's needs for this hemp, but "bunchy top" disease has seriously curtailed production there and the prospects of good prices are likely to remain for a number of years. The crop requires a fertile soil and the greatest care is needed to ensure that any planting material used is free from the "bunchy top" virus which some experts consider to be already present in Malaya.

JUTE

A small experimental area was planted with introduced jute seed. Growth was encouraging though not comparable with the best cultivations in Pakistan. Further trials are being made.

CACAO

Continued interest in the possibilities of this crop has been shown by a number of estates but the immediate shortage of good planting material of necessity dictates a policy of going slow. Introductions of good varieties have been and are being established on the Department of Agriculture's Station at Serdang, after prior growth in the isolation nursery at Pulau Tekong.

Valuable information is being acquired on the best methods of establishing cacao. Evidence confirms the necessity for shade, at any rate during the early growth of the plant. In general, cacao planted through partially cleared jungle has so far proved most satisfactory both from the point of view of growth and of establishment costs.

A company was formed in 1950 for the specific purpose of growing cacao. Twelve hundred acres of jungle land in the East of Malaya were acquired and experimental planting has already commenced.

Part II FISHERIES

PRODUCTION AND EQUIPMENT

Estimates of production are shown in the following table, in which the season November, 1949, to October, 1950, is compared with the twelve months preceding :

	1949-50.		1948-49.	
	Quantity. (Tons).	Value. (\$'000).	Quantity. (Tons).	Value. (\$'000).
Marine Fish :				
Official recorded landings ..	77,321	113,043	64,080	73,628
Additional 25 per cent. for unrecorded landings ..	19,330	28,260	17,800	20,452
Personal consumption ..	24,752	16,213	23,000	14,398
Fresh Water Fish :				
Commercial landings ..	8,500	3,281	7,142	1,630
Personal consumption ..	16,500	4,983	15,200	2,560
Fish caught for manure ..	20,639	3,467	18,250	2,957
	167,042	169,247	145,472	115,625

According to these estimates, the total landing of sea-fish increased in 1950 by 8.5 per cent. over 1949. Part of the increase was due to abnormally high landings of *ikan kembong* at Pangkor in October, and part to the progress in mechanisation of the industry. While outboard engines are popular and serve a useful purpose on some sections of the coast, particularly in Northern Perak and the Settlement of Penang and Province Wellesley, there is a healthy demand for the heavy duty type of Diesel engine. The distribution of fishing boats of the powered and non-powered varieties is of interest, and is shown in the following table :

	Powered Boats.	Non-Powered Boats.	Total.
Perlis ..	14	299	313
Kedah ..	79	2,829	2,908
Penang and P. Wellesley ..	53	2,076	2,129
Perak ..	303	2,999	3,302
Selangor ..	10	2,363	2,373
Negri Sembilan ..	2	198	200
Malacca ..	10	1,020	1,030
Johore ..	334	3,587	3,921
Pahang ..	—	798	798
Trengganu ..	—	4,458	4,458
Kelantan ..	6	1,371	1,377
Total ..	811	21,998	22,809

Thus the total number of licensed powered fishing boats rose from 327 at the end of 1949 to 811 at the end of 1950. This is most heartening, since it means that fishermen are getting longer hours.

at sea and are going a little further afield. The motor boats are used for drift netting, baited long lines, purse seining, servicing fishing stakes, as tugs for off-shore seine nets and as mother ships and fish carriers. Perhaps the most remarkable progress is to be seen at Pangkor where the most modern Diesel engines are now in demand and the owners of the craft are not satisfied with a speed of less than 12 knots. Fifteen years ago the Pangkor fleet was entirely unmechanised. Combined with this increase in mechanisation is the use of ice at sea. Visits to fishing villages have shown that the condition in which much of the fish which is being landed to-day, shows a marked improvement over that of fifteen years ago. The increased landings of *ikan merah* (*Lutianus spp.*) *ikan kerapu* (*Epinephelus spp.*) and other bottom-living species which come in the first grade and their subsequent disposal as fresh fish, instead of dried and salted, are marked. In all this development the Department has had the willing co-operation of the importing firms and ice producers, the officers of the Department acting as the liaison between the fishing industry and the commercial firms. This is all real, encouraging and permanent progress.

MARKET PRICES

The price of nearly all grades of fish has risen, as the following Kuala Lumpur market comparative price list shows (figures are of retail price per lb.):

	November, 1949.	October, 1950.
	\$ c.	\$ c.
Bawal putih	94	1 23
Bawal hitam	70	1 07
Kurau	1 26	1 58
Senangin	75	1 19
Tenggiri	68	1 13
Parang	68	90
Chincharu	36	54
Kedra/Belanak	29	60
Merah	79	1 22
Terubok	45	72
Yu	37	42
Prai	23	23
Gelama	22	20
Kembong	21	30

There is no reason to suppose that excess profits are made in the fish trade, as is sometimes alleged. The commodity is highly perishable and must be disposed of quickly, since there are not adequate refrigerated stores to hold fish over from periods of abundance to periods of shortage.

Nor is it true, as is sometimes stated, that imported fish can be sold cheaper than local fish. Such statements derive from comparisons of the prices of first grade local fish with those of third grade imported fish. It is also of interest to record that the relative scarcity of first grade local fish in the retail markets in the bigger consuming centres is due to the heavy demands of the Security

Forces whose contractors often have their purchasing agents at the main fish landing points, where they can more easily secure the desired quantities of the higher grades.

The Singapore Government has started a detailed survey of the fishing industry and trade. Investigations over the first six months have shown that the fish trade in Malaya is not a monopoly but is very highly competitive, and that retail prices are not manipulated by a ring. The organisation of the fish trade is complex and achieves a great deal, but is backward in so far as there is excessive handling. Another important factor in the increase in price of all grades of fish has been the rising cost of all the imported producer goods such as cotton yarn and sail-cloth, twine, hooks, brass wire and galvanised iron wire and wire netting (used in fishing stakes). Finally there has been an increased assertion by the Indonesian Government of their territorial water rights, which has denied to Malaya the supplies of fish which formerly came from these sources. All these factors have operated cumulatively and independently of the inflationary trends in the country. The Emergency has, however, affected the fishing industry and trade to a negligible extent, except in so far as the curfew on the Straits of Johore has reduced supplies in that particular zone.

GENERAL PROGRESS

In 1948 the number of licensed fishermen was recorded to be 64,120; in 1949 the number was 70,889. The total is now recorded to be 72,697, distributed as follows:

	Malays.	Chinese.	Indians.	Thais.	Others.	Total.
Perlis	910	100	—	56	—	1,066
Kedah	3,935	1,126	12	115	—	5,188
Penang and Province Wellesley	2,985	2,436	122	10	—	5,553
Perak	2,092	5,916	199	—	—	8,207
Selangor	1,139	4,344	31	—	3	5,517
Negri Sembilan	246	248	5	—	—	499
Malacca	2,032	841	2	—	101	2,976
Johore	1,658	2,253	—	—	—	3,911
Pahang	3,041	192	—	—	—	3,233
Trengganu	31,392	—	—	—	—	31,392
Kelantan	5,145	2	—	8	—	5,155
	54,575	17,458	371	189	104	72,697

Detailed investigations into the fishing industry and trade have been taking place, with the co-operation of the Department, in Pahang, Perak and Trengganu. It is most important that the proper understanding of the problems facing the industry be appreciated both by the administrative, health and medical officers of Government and by unofficials, since efforts to remedy deficiencies must be conjoint, and if those who are to be responsible for improving conditions understand the underlying factors affecting the industry a practical solution is more likely to follow. A detailed nutritional and economic survey of a fishing village in Province Wellesley was started with the Institute for Medical Research. One fact has become clear from both this survey and that taking place in

Singapore, which is that in these two areas the fishermen obtain very considerable incomes during at least a part of the year, and that certainly in the Province Wellesley survey area any poverty among the Malay fishermen is due entirely to their own improvidence. This must not however be taken as a generalisation valid for the whole of Malaya. Correlated with these investigations has been the extension of fishermen's associations and committees. In all this work the Department has maintained close touch with the Department for Co-operative Development, and, since its inception, with the Rural Industrial Development Authority.

Fresh-water fisheries have increased. Fry of various species of fresh-water fish have been distributed by air, road and rail both to new padi-field areas and to pond owners. In Negri Sembilan a most successful fish pond competition was organised in which over thirty pond owners took part. In Penang a new type of pond on a commercial basis yielded over two tons of fish to the acre in the year, at the same time providing income from a water yam grown on the surface of the ponds in quantity and collected for use as pig fodder. The overall contribution of fresh water fish from swamps, padi fields, impounded reservoirs and ponds was of the order of 25,000 tons in the year.

During the year shipments by sea and air of the padi-field fish, *ikan sepat Siam* were made to the West Indies, British Honduras and the Gambia for stocking the new padi areas of these territories. Shipments by air direct to Ceylon were made of the same fish and also of the Malayan carp, *ikan temakang* (*Helostoma teminckii*), which is used for pond culture in Perak and elsewhere. Reports from these territories indicate that the fish arrived safely and are now thriving. Another new fully-trained Fisheries Officer joined the staff in August and was posted to the North Western zone. He is making a special study of pelagic fisheries off the North West Coast in all their aspects, with a view to devising a rational and economic plan for large scale mechanised development.

A new Diesel motor fishing craft for the Department was commissioned in the early part of the year. In type, this is a departure from established English craft and combines features of both Swedish and Californian fishing boats. The M.F.V. 986 which was taken over from the Admiralty in 1946 was stripped down, altered and had additions made to her at the Public Works Department workshops, Penang (almost entirely with second-hand and scrap materials) so that she is now equipped for on-shore mechanised fishing.

During the year final agreement was reached between the Governments of the Federation of Malaya, Singapore, North Borneo, Sarawak and Brunei on the establishment of the Regional Marine Research Station for South East Asia and the finalised project is likely to be put under way in 1951. The Secretary of State appointed Mr. C. B. Taylor, sc.d., as Director of the Fresh-Water Fish-Culture Research Institute in Penang. Building has, however, been postponed for six months owing to priority having to be given to works connected with the Emergency.

Part III

FORESTRY

(Note.—In this part, 1949 figures are given in brackets).

MANAGEMENT

Reservation.

The total area of reserved forest showed a net increase of 416.8 square miles bringing the total for the Federation up to 11,774.1 square miles, representing 23.2 per cent. of the total land area. The increase was brought about by the constitution of forest reserves, mainly in Johore, Trengganu and Kedah. Reserves preliminarily notified amounted to 1,466.9 square miles in these three States and in Pahang. Further reservation remains to be done in Kelantan, Trengganu and Pahang but in the western States reservation will have been virtually completed when areas now proposed or preliminarily notified are finally constituted. A classification of productive and non-productive forest reserve was undertaken during the year and indicated that there are about 4,000 square miles of unproductive forest which has been reserved for protective purposes such as the prevention of erosion and safeguarding of water supplies.

Regeneration.

The year 1950 was not a good seed year but satisfactory fruiting was reported from some States, notably Selangor where there was also good seed production in the mangrove forests.

Departmental improvement works were undertaken in all States and a total area of 232,869 (180,275) acres was under regeneration at the end of the year. A further 6,277 (8,044) acres was passed as being fully regenerated bringing the total regenerated area to 46,332 (40,410) acres.

Planting.

Regular plantations in areas clear-felled during the Japanese occupation were extended by a net total of 873 acres of which 669 acres were in Negri Sembilan and Malacca. This division now has 3,613 acres of plantation out of a total for the Federation of 4,600 acres.

Working Plans.

A complete and detailed working plan for the Matang Mangroves in Perak was prepared and brought into effect during the year. This important work is being printed and published as a pattern for subsequent plans of this nature. A skeleton working plan for the inland forests of Kedah was also completed and although detailed plans are still required for the more important working circles, the whole State can now be said to be under planned management—plans for the mangrove forests having been put into effect during 1950. A similar plan, also based on saw-mill exploitation areas, was prepared for Johore, while the mangrove forests in the State were covered by a detailed plan. In Negri

Sembilan the revision of the working plan for the mangroves was completed and preliminary work was commenced on plans for two inland working circles.

PRODUCTION

Timber.

The outturn of timber from all sources was 36,169,842 (28,236,540) cubic feet in the round (quarter girth measurement) of which approximately 11 per cent. was in the form of primary hardwoods. This large increase was mainly attributable to the prosperity of the country and the consequent increase in new building and repairs. Emergency demands for timber for resettlement work have also been partly responsible. There was a decrease in the proportion of timber coming from forest reserves—49 per cent. as against 51 per cent. in 1949—and an increase in that from State land. This must have been due in part to the very keen demand for timber, both for export and local consumption, as a result of which the range of acceptable species continued to expand and State land areas which were “creamed” in the past could be reworked for what were previously unmarketable timbers. There was a considerable increase in the production of poles, the total volume produced being 4,639,834 (3,749,422) cubic feet, with Johore now becoming one of the main producers. Resettlement building and fencing were probably the main reasons for the increased consumption.

Firewood and Charcoal.

The production of firewood 14,508,659 (13,686,138) cubic feet and of charcoal 5,438,018 (4,986,646) cubic feet both showed considerable increases. Although the export trade, mainly to Hong Kong, was maintained it remained true that for Malaya as a whole, the import of firewood and charcoal was considerably in excess of its export. Approximate figures are firewood imports 2,402,142, exports 911,539; and charcoal imports 3,365,410, exports 705,398 cubic feet.

Minor Produce.

In spite of the continued decrease in *jelutong* production the total revenue from minor produce \$309,022 (\$293,805) increased slightly, with gains under *nipah*, *rotan* and miscellaneous. The revenue from *jelutong* dropped to \$40,486 (\$54,069) because the main tapping areas, almost always in very remote forest, had to be closed on account of the emergency. The departmental damar factory at Kuala Pilah continued operation during the year, but here too the emergency greatly discouraged production while prices remained so low as to be scarcely economic. Collections totalled only 153 piculs but sales of 201 piculs (including stocks from 1949) resulted in a trading profit of \$2,292.

The Timber Trade.

The total quantity of timber supplied through the Timber Purchase Branch was 641,461 (714,718) cubic feet sawn, and 48,508 (57,250) cubic feet round. The Malayan Railways were the largest purchasers taking 502,496 (598,988) cubic feet sawn and 45,553 (57,250) cubic feet round. The Public Works Department took

35,723 (24,891) cubic feet and the Services 44,188 (42,117) cubic feet. The supply position became steadily more difficult as the year progressed, particularly in respect of heavy constructional timbers, such as *chengal*. Many logging areas were closed on Police instructions owing to terrorist activity, and work in others was confined to easily accessible strips of forest adjacent to roads which, for the most part, had already been worked for primary hardwoods. Towards the end of the year there was a serious shortage of labour, the continued high price of rubber attracting men away from the logging camps.

Prices.

As a result of this combination of circumstances prices rose steadily from the beginning of the year, culminating in a very marked increase during the last three months. The following table gives the average prices, for all sizes, ruling during 1941 and the past four years. Figures are in dollars per ton of 50 cubic feet.

Type of Timber.	1941.	1947.	1948.	1949.	1950.
Primary hardwoods (sawn) ..	60 ..	190 ..	196 ..	221 ..	276 ..
Secondary hardwoods (sawn) ..	33 ..	98 ..	100 ..	100 ..	138 ..
Light hardwoods (sawn) ..	33 ..	79 ..	96 ..	98 ..	124 ..
Secondary hardwoods (logs) ..	10 ..	33 ..	30 ..	35 ..	51 ..
Light hardwoods (logs) ..	10 ..	33 ..	28 ..	31 ..	40 ..
Piles and Poles ..	25 ..	55 ..	59 ..	50 ..	64 ..

By the end of December nearly all prices were some 20 per cent. higher than those quoted above for 1950, while those for primary hardwoods had soared to anything between \$300 to \$450 according to species and specification. The shortage of primary hardwoods is likely to continue until such time as work can again be allowed in deep jungle, and not until then will hardwood prices fall to more reasonable levels.

The Timber Export Trade.

Exports of graded timber sawn in Federation sawmills continued to increase and totalled 2,322,907 cubic feet compared with 813,705 cubic feet in 1949. Of this total 1,602,661 (415,888) cubic feet were shipped from Federation ports, the balance, mostly produced in Johore, being shipped from Singapore. Grading difficulties, which held up exports to some extent during the latter part of 1949, have been overcome by increasing the strength of the Timber Inspectorate to 20 (16) and by providing facilities for the training of non-government Graders. Over 50 employees of sawmilling and exporting concerns were trained during the year, all of whom completed specially arranged courses in timber identification held at the Forest Research Institute, Kepong.

The colony of Singapore imports an increasing quantity of logs from the Federation and some of this material is sawn for export in Singapore mills. It follows that no true picture of the timber export trade can really be given without considering Malaya as a whole. The following table gives the exports of sawn timber from Malaya (including Singapore) for the years 1948, 1949 and 1950. The principal receiving ports are shown in brackets and the figures are in tons of 50 cubic feet.

Exported to	1948.	1949.	1950.
Aden, Bahrein and Kuwait	2,936	4,320	4,396
Arabia (Jeddah)	7,419	10,352	6,649
Australia* (Sydney, Adelaide)	363	2,717	9,410
China (Shanghai)	7,822	1,372	151
Holland* (Rotterdam)	—	170	943
Hongkong	2,287	10,789	13,634
Indonesia (Palembang, Riouw)	7,826	7,930	7,719
Iraq (Basrah)	233	1,000	907
Mauritius (Port Louis)	1,132	1,543	3,676
Pakistan (Karachi)	884	3,945	11,156
South Africa* (Durban)	218	2,059	983
Union of India (Calcutta, Bombay)	911	4,664	277
United Kingdom* (London, Liverpool)	2,226	17,011	59,116
Other places not shown above	1,892	880	1,416
Total	36,149	68,752	120,433
Approximate f.o.b. value in \$ Straits	3,984,000	8,629,000	17,475,000

As will be seen, the volume of timber exported to the United Kingdom again showed a spectacular increase. Much of this timber was in the form of mixed light hardwoods which are largely used in the United Kingdom as a substitute for softwoods normally obtained from hard currency areas. Board of Trade Statistics show that Malaya ranked fifth in exports of sawn hardwoods to the United Kingdom, after France, British West Africa, Yugoslavia and Finland. It is no exaggeration to say that Malayan light hardwoods have materially assisted Britain's housing programme and it is interesting to note that Malayan timbers are incorporated in buildings erected for the Festival of Britain on the South Bank site in the metropolis.

FOREST ENGINEERING

Road Construction.

The road construction programme was continued, although on a reduced scale and with many vicissitudes. During the first four months of the year the unit operated in the Sungei Lalang Forest Reserve, Selangor, but bandit activities constantly interrupted work and only half a mile of formation could be made. The whole unit was therefore moved to a "safe" project in the Kemahang Forest Reserve, Kelantan, where work progressed well and five miles of road had been cleared and the formation completed over half that length by the end of the year. Construction was, however, slowed down owing to the loan or transfer of some of the unit's plant for urgent emergency work.

Extraction.

The old methods of logging by hand on *panglongs* and by buffaloes have become increasingly expensive since the war; in addition it is difficult to keep full gangs at work in the forest owing to the

* All timber to these markets was graded by the Department of Forestry.

Emergency Regulations which require loggers to live in areas where they can be protected, often some miles from their work. In the circumstances many millers are considering changing over to mechanical extraction. A demonstration of logging by tractors carried out in Selangor proved conclusively that extraction costs could be greatly reduced and did much to dispel any fears that tractors might not be able to handle the timber. The experiment was carried out on the foothills of the main range among broken ridges and ravines, often very steep. Costs in the experiment were probably higher than would be the case in commercial practice, but even so were probably less than half that of hand logging. There is no doubt that mechanical logging will soon be the rule rather than the exception and there is thus a great opportunity in this country for British made tractors which, unfortunately, are not yet available here.

Saw-milling.

In spite of the difficult conditions prevailing throughout the year the outturn of sawn timber again increased, a total of 271,488 (205,873) tons being sawn by 208 (184) sawmills in the Federation. This outturn figure must be treated with reserve as it is based on returns supplied by the mills themselves. Pan-Malayan figures (i.e. including Singapore) are 445,554 (335,026) tons produced by 228 (203) sawmills. This increase in production is a notable achievement in view of the fact that the closure of logging areas on Police instructions prevented many mills from working to full capacity. Four sawmills were totally destroyed by terrorists but this did not prevent sawmillers from keeping going and developing their plant. Thirteen new mills were, indeed, planned, some of which were in production before the end of the year. Construction was started on a mill of a new type to Malaya which is to have an American head-rig break-down saw with a cradle log carriage in conjunction with a double-edger. It will be interesting to see how production from this mill compares with that from the standard type of Malayan sawmill.

RESEARCH

Silviculture.

Shortage of staff retarded progress in the compilation of existing information but an article "The Elements of Malayan Silviculture, 1950" was published in *The Malayan Forester* Vol. XIII, No. 3, describing the present sequence of operations to ensure adequate natural regeneration and giving instructions for carrying out tending operations. This is the first time that Malayan silvicultural technique has been officially put on record as a guide for District Forest Officers, and for use in training. A description of linear regeneration sampling on which the technique is based was published in the same number.

Many sample plots could not be maintained or measured during the year owing to the presence of terrorists in their vicinity. A large number of additional trees were, however, added to girth-increment

plots in the Forest Research Institute plantations; and five new plots were established in the mangrove forest of Perak and one in the inland forest of Kedah. The compilation and analysis of many thousands of measurements made in existing plots still awaits the necessary staff to undertake the work which is becoming urgent, the last compilation having been made as long ago as 1930. Single tree volume measurements for the preparation of volume tables were regularly made by field staff in spite of terrorist activity. A number of random one acre volume outturn plots have been demarcated, felled and measured but many more measurements are required before any useful results can be obtained.

Botany.

Acquisitions to the herbarium during the year amounted to 1,561 (1,024) made up of 744 by the Malayan Forest Department, and 817 duplicates from the North Borneo Forest Department. These bring the total number in the herbarium to 39,085 compared with 41,096 on the 1st January, 1941. Three hundred and ninety-four bark and timber specimens were added to the existing collection. Twenty-eight bark and 80 timber specimens were received from the Conservator of Forests, North Borneo.

The list of non-dipterocarp timber trees prepared at the end of 1949 has been elaborated to a list of timber trees, both dipterocarp and non-dipterocarp, arranged alphabetically according to vernacular names. It includes some vernacular synonyms, timber names and indicates classification under primary, secondary or light hardwood, and contains very brief notes on distribution and habitat in Malaya. It is intended to publish this together with field keys, in pocket book size, for the use of field staff.

Entomology.

A study of the principal larval forms of Malayan *Scolytidae* and *Platypodidae* is now nearing completion, and 116 species belonging to 57 genera or species-groups have been examined. This study is of considerable taxonomic interest, and suggests that the morphology of the larvæ may be a more reliable guide to classification than that of the adults. The large genus *Xyleborus*, in particular, appears to cover a conglomeration of numerous distinct genera in which the adults have, owing to similar habits, come to bear a very close resemblance to one another. Particular attention was paid to the problem of the cause of initial attraction of swarming ambrosia beetles to their host. The data so far obtained from numerous observations and small experiments suggest that an attractant is formed in the sapwood as a result of a pathological condition which, may, however, be very slight, such as a small decrease in the general vigour of the tree. The essential process is probably fermentation, but the actual product of fermentation that forms the attractant is still uncertain. As a result of control experiments it seems possible that benzene hexachloride might give effective protection for a reasonable period except to the outer inch or two of the log; whether its use is justified or not can be determined only by large scale service tests.

Timber Mechanics.

The mechanical and physical properties and woodworking characteristics of the following four species of timber were investigated: *Rengas* (*Melanorrhoea torquata*), *Durian Daun* (*Durio oxleyanus*), *Bengang* (*Neesia altissima*) and *Membatu* (*Shorea guiso*). During this investigation which was undertaken in accordance with the scheme laid down for pilot tests, 1,149 standard mechanical tests were made. Work on *Membatu* was still in progress at the end of the year. A further 417 mechanical tests were completed on a limited quantity of green material from *Resak* (*Vatica sp. E.*), *Mata ulat* (*Lophopetalum maingayi*), *Mengkulang* (*Tarrietia javanica*), *Seraya* (*Shorea curtisii*) and *Merawan* (*Hopea sulcata*), and another 234 mechanical tests were carried out on green material of two exotics, the West Indian locust tree (*Hymenia courbaril*) and Brazil Nut (*Bertholletia excelsa*), both of which grow very well in Malaya.

Wood Preservation and Durability.

Samples of all timbers received for mechanical testing were submitted to standard tests to determine their amenability to preservative treatment. Arrangements were completed for the treatment by the pressure process of *Keruing* sleepers with a 3 per cent. solution of Boliden salts, and some 250 *Keruing* sleepers have been put aside for pressure treatment with a 3 per cent. solution of copper naphthanate in Diesel fuel. In addition to the standard test sticks, quantities of boards, pickets, fence posts and shingles were treated by the open tank process with a mixture of equal quantities of creosote and Diesel fuel.

Sticks of *Dedali* (*Strombosia javanica*), *Jelutong* (*Dyer costulata*), *Sepetir* (*Sindora coriacea*) and the West Indian Locust tree (*Hymenia courbari*) were buried in the testing grounds; exposure tests on locally manufactured plywood were completed; samples of plywood bonded with rennet casein glue were subjected to soaking tests; and *Kapur* (*Dryobalanops aromatica*) fence posts were added to the timbers undergoing service tests.

EDUCATION

The annual nine-month course at the Forest School, Kepong, opened as usual in March with thirty-four students drawn from all over the Federation and also from North Borneo and Brunei. Five students gained credit certificates and twenty-one others satisfied the examiners. Funds for the expansion of the Forest School to accommodate fifty students were provided under Development Plan expenditure and work on the necessary new buildings will commence early in 1951.

Eight Government Timber Inspectors (six from the Federation and two from Singapore) and 33 private graders attended specially arranged courses in timber identification. Two Probationary Sub-Assistant Conservators successfully completed an advanced course in general forestry; another two Sub-Assistants together with two newly appointed Assistant Conservators were undergoing training at the close of the year.

FINANCE

Revenue for the year was \$5,774,384 (\$4,661,505) and expenditure \$1,844,150 (\$2,088,402) giving a surplus of \$3,930,234 (\$2,573,103). In spite of the emergency, revenue and surplus continue to increase but bandit activity has severely curtailed silvicultural work in all States with the result that large arrears of tending and maintenance are being accumulated.

Part IV

GAME DEPARTMENT

The fundamental purpose of a Game Department is the protection and preservation of the indigenous fauna of the country by law enforcement and the maintenance of reserves and sanctuaries. Inseparable from this basic function are research in the field of zoology and ecology and the protection of life and property when a threat from wild animals is established.

The nature of its functions makes the Department singularly vulnerable to the effects of banditry. Maintenance of reserves and sanctuaries has had to be temporarily abandoned, research work outside the National Park suspended, and all field work curtailed. A high proportion of the staff has been employed on special emergency duties and those available for normal duties have concentrated on the protection of cultivated areas in a greater or lesser degree according to local conditions.

The following Game Licences were issued: Big Game 2, Deer and Game Bird 29, Deer 381, Game Bird 576.

Three hundred and forty-three calls for assistance were received and 5 elephants, 3 tigers, 1 panther, 5 deer, 441 wild pig and 89 other animals were destroyed on control operations. Animals were driven away on numerous occasions from cultivated areas.

It is gratifying to be able to record that the situation in the King George V National Park has remained unaltered. The programme of Emergency defence works and a limited building programme have been completed. Paths, salt licks and artificial feeding grounds have been maintained on the Tembeling river and its tributaries and a limited amount of field observation and research carried out. Further specimens of fish and reptiles have been sent to Raffles Museum for identification and some valuable additions made to the Department's records of the distribution and habits of the fauna in the Park area.

Part V

VETERINARY SERVICES

LIVESTOCK CENSUS

During the Japanese occupation there was a marked reduction in the livestock population. Legislation was therefore introduced in 1946 in order to prevent the indiscriminate slaughter of potential

breeding buffaloes, oxen, sheep and goats and, as a result, there has been a steady increase in the population of most of these species. This increase was maintained in 1950 despite the fact that more locally-bred animals were slaughtered than in the previous year.

The livestock census figures for 1950, compared with those of 1949 and a reasonably typical pre-war year (1939) are as follows:

	1950.		1949.		1939.
Buffaloes:					
Malayan swamp ..	217,900		208,500		
Indian Murrah ..	5,200		3,700		
	223,100		212,200		217,000
Oxen:					
Agricultural and draught	189,700		187,400		
Milking ..	53,400		48,000		
	243,100		235,400		287,700
Goats ..	227,300		206,700		300,000
Sheep ..	21,000		20,600		31,500
Swine ..	311,300		350,900		599,400
Equines ..	700		700		600

In view of the very important part buffaloes play in rice cultivation the increase in numbers of these animals by more than 52,000 over the past five years to a total exceeding the pre-war figure is particularly gratifying and augurs well for the future development of this agricultural crop. The main increases in the buffalo population during 1950 occurred in Kedah, Kelantan, Malacca, Trengganu and Negri Sembilan.

The oxen population has remained practically unchanged since the war. These animals supply the main demands for fresh beef and such population changes as occur are usually a reflection of the availability of imported slaughter oxen in the Federation.

Local requirements of fresh mutton were met to a large extent by importations of live sheep from Australia and, although goat mutton is preferred to imported sheep mutton and commands a higher price, so long as imports are available the demand on locally-bred goats is reduced. This is reflected in a corresponding increase in the goat population by nearly 10 per cent. over 1949. Increases took place mainly in Penang, Perak, Kedah and Trengganu.

Continued unsettled conditions made the livestock census collection a difficult task in many parts of the country and there is little doubt that the figures in the above table tend to err on the low side. The enumeration of pigs presents particular difficulties and, estimates, based on known slaughter and export figures, indicate that the swine population is probably more correctly in the region of 500,000. The local pig industry was able, in fact, not only to meet virtually all the Federation's demands for fresh pork but also to supply over 72,000 pigs to Singapore markets during the year. Nevertheless, the resettlement of the squatter population had a depressing effect on the industry in some parts and there were reports of temporary shortages in certain areas. As, however, provision for the rearing of pigs is being made in most of the resettlement areas it is expected that the industry will quickly recover from these temporary setbacks.

IMPORTS AND EXPORTS

Exports of livestock from the Federation were, with the exception of swine (72,562), negligible. On the other hand, importations, which consisted mainly of stock for slaughter, showed an increase over the previous year, as follows:

From	Buffaloes.	Oxen.	Sheep.	Goats.	Swine.
Indonesia ..	622*	5,582*	—	—	2,507*
Thailand ..	190*	465*	—	—	—
Australia ..	—	—	35,287*	176*	—
Singapore ..	—	85†	—	67†	8†
Pakistan ..	4†	39†	—	—	—
Arabia ..	—	—	—	3*	—
Total 1950	816	6,171	35,287	246	2,515
Total 1949	1,255	2,702	32,161	1,351	24

A number of horses, mules and dogs were also imported.

There is also a fairly extensive movement of poultry between Singapore and the Federation but from the figures available it appears that imports (mainly from Singapore) into the Federation exceeded exports by over 183,000 head.

VALUE OF LIVESTOCK

The year was notable for the steady and substantial upward trend in the value of livestock and, with it, in the price of fresh meat. For instance, good specimens of Malayan swamp buffaloes were quoted at \$350 to \$400 per head in some States, Murrah milking buffaloes as high as \$700 to \$800 per head and milking cattle from \$350 to \$500. The average quotation for pigs rose from \$80 per pikul live weight in January to \$108 by the end of the year.

The total value of the domestic livestock in the Federation, based on average current market prices and having regard to the age, condition and geographical distribution of the stock, may be conservatively estimated at \$160,000,000.

There was some increase over the previous year in the slaughter of local livestock for the fresh meat markets. The extent to which the country relied on its own resources to supply these markets may be judged from the fact that about 100 per cent. of the fresh pork, 90 per cent. of the fresh beef and 60 per cent. of the fresh mutton were of local origin.

The supply of imported animal feeding stuffs was fair but certain commodities tended to become scarce towards the end of the year and prices generally rose.

ANIMAL HUSBANDRY

Work on the Veterinary Department's two Animal Husbandry Stations at Kluang and Seremban progressed steadily. At the larger Station at Kluang consolidation of past developments continued and much improvement in the quality of pasture was effected by fully utilising mechanical equipment for cultivation manuring, and seeding. Rotational grazing was practised by

* For slaughter. † For breeding.

using electric fencing. A setback to the breeding programme was occasioned by the discovery of the presence of contagious abortion (*brucellosis*) which necessitated repeated blood-testing of the herds and the disposal of reactors. At the end of the year the Station, which covers nearly 4,000 acres, carried 932 buffaloes and oxen. The Paroi Livestock Station at Seremban, which comprises 250 acres with 40 acres under fodder grasses, was devoted mainly to up-grading local milch cattle by selection.

None of the pure-bred Sindhi bulls that had been obtained from India in 1938 for up-grading local cattle in Negri Sembilan survived the Japanese occupation but a number of their half-bred progeny was still available. In order, therefore, to resume this promising work a consignment of 40 head of pure-bred Sindhi and Sahiwal cows and bulls was obtained from Pakistan during the year. These breeds are recognised as the outstanding milk producers in India and Pakistan and are also useful beef and draught animals. The cows and the best of the bulls will form foundation herds at the Department's Animal Husbandry Stations while the remaining bulls will be sent to centres throughout the country for the use of local breeders. The use made of locally-bred stud bulls already maintained by the Department at Kuala Lumpur, Malacca and Taiping has shown that a keen demand exists for such a service.

LIVESTOCK DISEASES AND VETERINARY RESEARCH

The country continued to remain free of the common cattle epizootics of the tropics and no case of rinderpest, foot and mouth disease, anthrax or tuberculosis was detected during the year. The outbreak of contagious abortion (*brucellosis*) in the Kluang Animal Husbandry Station already noted was the first to be confirmed in the Federation and followed the detection of *brucellosis* among cattle in Singapore in 1949. The source of the infection at the Station is still a matter of conjecture but in the absence of new importations for many years it must be assumed that the congregation of cattle at the Station has exposed relatively immune cattle to a "carrier" harbouring a low grade infection. The assumption of the absence of the disease in the past has been based mainly on the lack of clinical evidence but it is possible that the disease has, in fact, been in existence in parts of Malaya for some years without being suspected. No case has, however, so far been detected outside this Station but the test survey of representative herds has not yet been completed.

Small outbreaks of haemorrhagic septicaemia occurred in Kelantan, Perak, Trengganu and Johore but were quickly suppressed by local quarantine measures and the prophylactic inoculation of in-contact animals.

Work on the treatment of liver-fluke disease was continued in Malacca and Pahang where over 4,400 buffaloes, 1,000 oxen and 1,000 goats and sheep were treated with hexachlorethane with good results. Work was also carried out in several States on the control of other helminth parasites in calves with phenothiazine. Both these measures are proving very popular with the *ra'ayat*.

The outbreak of rabies which started in 1946 continued to cause much concern and trouble in the northern half of the country. The unsettled conditions in many parts of the country militated considerably against the campaigns for the destruction of stray and unmuzzled dogs in *kampongs*, estates and towns. Nevertheless, more than 34,000 dogs were destroyed by various means in all parts of the country and, while no appreciable progress towards the eradication of the disease from rabies-infected areas was apparent, it was possible to keep it from spreading to fresh areas. Over 1,000 dogs were held under veterinary observation as rabies suspects. The species affected and distribution of the known positive rabies cases were as follows:

	Dogs.	Cats.	Buffaloes.	Oxen.	Goats.
Perak	61	—	1	4	—
Kedah	43	1	—	1	1
Province Wellesley ..	12	—	—	—	—
Perlis	4	—	—	—	—
Kelantan	1	—	—	—	—
Total ..	121	1	1	5	1

The free vaccination of poultry by the Veterinary Department against Ranikhet disease (Newcastle disease, fowl pest) continued to gain in popularity and in spite of the limitations placed on travelling by the Emergency some 877,000 birds were vaccinated in all parts of the country during the year, thus bringing the total since the vaccine was first introduced in 1947 to nearly two million birds. The initial apathy with which the average poultry keeper accepted the new agent for the control of this poultry scourge has now given way to a positive demand for it and it is already an acknowledged concomitant of enlightened poultry-keeping in the country.

A large volume of work was dealt with by the Veterinary Laboratory in spite of its inadequate and unsatisfactory accommodation. The production of Ranikhet disease vaccine was the main undertaking and the output of over three and a half million doses more than doubled the previous year's production. Besides meeting the Federation's requirements nearly one million doses were supplied to Singapore and over half a million to Hong Kong, Borneo, Brunei and Sarawak. Other work which imposed considerable strain on limited facilities included the examination of over 3,500 blood samples for contagious abortion, the production of 7,000 doses of haemorrhagic septicaemia vaccine, and routine diagnosis work relating to blackquarter, swine erysipelas, mastitis, fowl-pox and *Eurytrema pancreaticum*.

TRAINING

One Federal Veterinary Scholarship, tenable in the United Kingdom, was awarded to a locally born candidate.

Part VI GEOLOGICAL SURVEY

DEVELOPMENT

A grant of £325,000 (\$2,785,714) has been made available under the Colonial Development and Welfare Act and is to be utilised for expanding the scale of the Department's operations. It is to cover the five-year period from 1950 to 1954 and further financial assistance will be considered by the United Kingdom Government during 1954. The expansion to be effected will involve increasing the staff to approximately three times its 1949 strength, and removing the Headquarters from Batu Gajah to Kuala Lumpur, where offices, laboratories, and the mineral museum will be constructed and fully equipped.

Five new senior and four new subordinate officers have been appointed during 1950; of these three senior appointments form part of the expansion programme.

GEOLOGICAL MAPPING

Detailed geological mapping provides the basis of a sound land-alienation policy, for it discloses those areas containing mineral wealth and those with richer soil suitable for agriculture. As in other fields, so in this did the Emergency hinder normal field work during 1950. Preliminary work was, however, carried out in northern Trengganu in conjunction with the Topographical Survey Party and a geologist is shortly to be stationed there. Detailed geological work has been continued in the mining areas of the Kinta Valley, Perak, and in the vicinity of Kuala Lumpur, Selangor.

MINERAL PROSPECTING

The expansion of the Department is scheduled to include provision for intensified mineral prospecting in certain areas found by preliminary geological survey to show promise of containing mineral resources. Unfortunately Emergency conditions have not permitted any boring to be started.

Records of prospecting carried out by mining companies and private individuals are filed at Headquarters and totalled 3,575 at the end of the year. The majority of the files are available for reference by the public.

ENGINEERING CONSULTATIONS

The Department has been called upon on several occasions for advice in connection with such problems as the siting of a dam (for the Kuala Lumpur water supply), foundations for buildings and bridges, and the location of stone quarries. Reports on mining properties have been furnished to companies and information regarding the marketing of mineral products has been given.

IDENTIFICATION AND ANALYSIS OF SAMPLES AND SPECIMENS

A large number of specimens and samples of rocks and minerals for identification and analysis have been received from other

Government departments, from commercial firms and from private individuals. Among the samples submitted were several radioactive samples for testing with the Geiger-Muller Counter. No commercial quantities of uranium have been reported but a number of concentrates from "amang" have been found to contain monazite with saleable percentages of thorium and rare earths. Many bore samples of bedrock have been identified for mining companies and prospectors.

PUBLICATIONS

A Memoir describing the geology and mineral resources of the Merapoh and Chegar Perah area of northwest Pahang (sheets 2N/8 and 2N/12) has been published, complete with coloured geological maps; while another describing the Fraser's Hill area of North Selangor is being printed. Coloured geological maps of the Fraser's Hill, Kuala Selangor and Rasa areas were printed for the Department by the Photo-Lithographic Branch of the Survey Department. Other memoirs describing the Kuantan area of East Pahang and the Bentong area of southwest Pahang have been prepared for publication.

TRAINING OF STAFF

Owing to the pre-occupation of the Senior Staff with Emergency work the annual training course for subordinate officers could not be held. Regular tuition has however been given by available senior officers to the Field Assistants and Rock Collectors.

Part VII MINING

Note.—Statistics quoted in this part are taken from the 1950 Bulletin of Statistics relating to the Mining Industry of Malaya.

TIN

This is by far the most important mining industry in the country, employing 89 per cent. of the mining labour force and 95 per cent. of the power. The 1950 output of concentrates with a tin content of 57,537 tons makes Malaya the leading producer with about 35 per cent. of the world's production, well ahead of Indonesia, its nearest rival.

The number of mines working increased during the year from 686 to 733, and but for the Emergency, which made it virtually impossible to prospect new areas, the number would probably have been greater.

At the end of the year Government loans outstanding to the industry amounted to about \$80 million, the number of mines concerned being 433. This help has resulted in a substantial increase in production and also in direct revenue derived from export duty besides contributing to the general well-being of the country through increased employment.

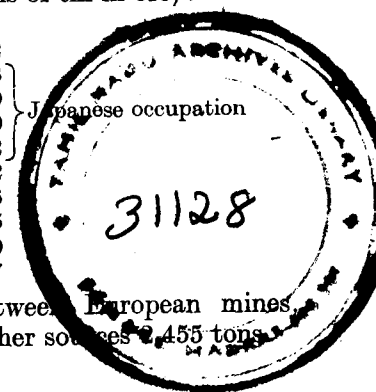
The supply of electric power and coal continued to be inadequate to meet the demand. Engineering materials were not always easy to obtain and prices increased. Wages also increased considerably, largely owing to the high prices of both tin and rubber and the tendency of the industries to bid against each other for labour.

There was a net increase of four dredges and forty-three gravel pump mines during 1950, the total number in operation being:

Dredges	80
Gravel Pump Mines	561
Hydraulic	19
Others	73

The progress made towards pre-war levels of production is illustrated by the following figures (long tons of tin-in-ore):

1940	80,651
1941	60,292
1942	15,748
1943	26,000
1944	9,309
1945	3,152
1946	8,432
1947	27,026
1948	44,815
1949	54,910
1950	57,537



The 1950 production was divided between European mines 33,902 tons; Chinese mines 21,180 tons; other sources 2,455 tons.

COAL

The only coal mines operating in the Federation of Malaya are those at Batu Arang, Selangor. Production increased from 386,898 tons in 1949 to 415,777 tons in 1950, but was never equal to demand and during the last half of the year was on the average nearly 10,000 tons per month below it.

In spite of extensive mechanisation the output per manshift is little if at all higher than it was when nearly all production was by hand. Labour is therefore inefficient, and it is also difficult to obtain. The prospects of adequate production in the near future are not good.

It has not yet been possible to do any deep drilling to test the extent of the coal field, nor is it likely to be possible until security against Communist banditry is greatly improved.

The coal has a low calorific value and is non-coking. Its use is at present approximately: Malayan Railway 41 per cent., Power Stations 38 per cent., Mines 20 per cent., Others 1 per cent.; but it must be borne in mind that mines also consume by far the greater part of the output of the Power Stations.

GOLD

Raub Australian Gold Mines Ltd. in Pahang continued to produce almost the entire output of gold, which rose from 13,601 oz. Troy in 1949 to 18,436 oz. Troy in 1950.

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IRON

The mine at Bukit Besi, Dungun, in Trengganu, was in full operation during the year and produced 498,530 tons of ore, most of which was shipped to Japan. There was as usual a small output of iron ore near Tambun, Perak, for use as jig-ragging on dredges. Figures of production in previous years are of more than historical interest and are quoted in detail :

Year.	Perak.	Johore.	Kelantan.	Trengganu.	Total Malaya.
	Tons.	Tons.	Tons.	Tons.	Tons.
1940 ..	957	625,550	226,241	1,109,715	1,962,463
1941 (to Sept.)	715	314,005	154,697	680,275	1,149,697
1942 ..	116	—	—	90,660	90,776
1943 ..	17,643	—	—	30,718	48,361
1944 ..	10,441	—	11	1	10,453
1945 ..	13,375	—	—	—	13,375
1946 ..	—	—	—	—	—
1947 ..	888	—	—	—	888
1948 ..	641	—	—	—	641
1949 ..	424	—	—	7,966	8,390
1950 ..	373	—	—	498,530	498,903

ALUMINIUM

The ore of this metal, bauxite, was exported to a total of 42,106 tons, all from stock-piles accumulated in Johore during the Japanese occupation, when it was also mined in Malacca. Since the war there has been no new production but it is hoped that mining in Johore will start again in 1951.

Powerful companies have shown great interest in acquiring bauxite-bearing areas and it is probable that some remain to be discovered. The present security position, however, makes prospecting almost impossible.

TUNGSTEN

The production of Scheelite was 10 tons and of Wolfram 5.35 tons, both being obtained either as by-products or from the re-treatment of old dumps. The price was extremely high at the end of the year, but it was impossible to work Malaya's most important Wolfram mine, near Sintok in Kedah, on account of communist activity.

TITANIUM (ILMENITE OR "AMANG")

Amang is the term used in Malaya for heavy minerals associated with alluvial tin concentrates. To be saleable it must be removed from the tin by magnetic separators, and it then consists mainly of Ilmenite, an oxide of iron and titanium.

EXPORTS OF ILMENITE

	Tons.
1940 ..	2,555
1941 (January- September) ..	44
1942-1945 ..	Not known
1946 ..	Nil
1947 ..	13,081
1948 ..	13,566
1949 ..	19,718
1950 ..	24,915

CHINA CLAY OR KAOLIN

This is worked on a very small scale in Perak, Selangor and Johore and is consumed in Malaya, mainly by the rubber industry. The total production was 1,435 tons, but deposits are very large.

Chapter VII

SOCIAL SERVICES

Part I

EDUCATION

GENERAL

In the sphere of Education 1950 has been a year of steady progress. The number of children of all races attending all types of schools has increased by more than 50,000 to a total of 621,635, which is considerably more than twice the number of children in schools in 1941. Diagram C between pages 116 and 117 shews the comparative enrolment in all schools. Some new schools have been built and many extensions made to existing buildings; but all of them are still crowded with pupils. The year also saw the initiation and acceptance of a scheme to provide government assistance to villagers to help in the erection of "Committee" village schools.

The continuing fall in the average age of classes indicates that the abnormal condition brought about by the admission of a very large number of over-age children immediately after the Liberation is passing away. At the same time the continued steady pressure for admission to the schools shows that the so-called "bulge", far from being a temporary phenomenon, in fact indicates the scale on which school places will have to be provided if the present demand is to be met.

The Central Advisory Committee on Education, to which reference was made in the 1949 Education Report, presented its first report in May. This was the subject of an adjourned debate in Legislative Council in July.

In February a new Registration of Schools Ordinance was passed, amending as well as consolidating the several former Enactments, and applying the law uniformly throughout the Federation.

New departmental publications have been a suggested Geography Syllabus for English Schools and a very complete handbook on General Science, the latter produced as the Science Section of the Education Code.

Among the outstanding events of the year were the visits of Sir Christopher Cox, K.C.M.G., Adviser on Education to the Colonial Office, who spent five weeks in Malaya, visiting most parts of the country, and of Miss Freda Gwilliam, Assistant Adviser on Education to the Colonial Office, who also spent five weeks in Malaya, visiting girls' schools, and discussing problems relating to women and girls.

Another event which is likely to have a far-reaching effect on education in Malaya was the setting up of a committee, under the chairmanship of Mr. L. J. Barnes, Director of Social Training, University of Oxford, to enquire into, and to make recommendations regarding, the education of Malays.

Growing appreciation of the value of Visual Aids in education led to the setting up of a Federal Central Visual Aids Committee, which has explored the possibility of producing film strips of Malayan content and interest. At the end of the year a number of strips were in preparation, and the most advanced (on the tin industry) was on the point of completion.

THE VERNACULAR SCHOOLS

The Malay Schools.

Vernacular education in Malay is provided free for a period of six years, though a seventh year of education in Malay has been started in a few schools. Children enter the Malay vernacular schools at the age of six years. A network of Malay schools has been gradually built up by Government all over the Federation, the first schools of this type being those opened in Penang and Malacca early in the 19th century. At the end of 1950 there were 1,574 government and aided Malay schools in the Federation, of which 1,390 were boys' schools or mixed schools, and 184 were girls' schools. The system of education in the mixed schools is not, unfortunately, truly co-educational, since the shortage of staff makes it impossible adequately to meet the divergent needs of the older boys and girls. Girls in mixed Malay vernacular schools generally suffer from lack of training in Domestic Arts, and in Physical Training the development of a more suitable style for girls is sometimes neglected. In districts where sufficient numbers of girls attend school, separate buildings are provided, staffed (with only one or two exceptions) by women teachers. In all these schools sewing is taught and the teaching of Domestic Science is introduced wherever instructors with a knowledge of this subject can be found. Some women teachers are usually employed in mixed schools and in the lower standards of some boys' schools.

The increase in enrolments in Malay vernacular schools has continued. The total was 265,611 (boys 171,332; girls 94,279) as against 238,592 (boys 155,654; girls 82,938) in 1949. This increase (approximately 10 per cent. for boys and 14 per cent. for girls) in numbers covers all standards in the school, and shows the same relatively greater increase in girls' enrolment that was noted in 1949. Diagram E between pages 116 and 117 shews enrolments by classes. In order to accommodate the increased number of pupils some schools have been extended while new schools have also been erected, most of them built by Malay parents or with money collected in the *kampong* to assist in the provision of a school. In one *kampong* \$10 was contributed by every household to put up a new wing in the girls' school. Malay schools are still crowded, and in many schools some classes have to attend in the afternoon because there is not sufficient accommodation. The provision of furniture is fairly satisfactory.

One result of the continuing increase in enrolments has been the continued employment of many young untrained teachers.

The new experimental syllabus is now being used, and English has been introduced as a subject in many Malay schools; but it is not yet possible to estimate the success of either of these projects, though one State reports good results in the teaching of English.

Open air activities have continued during the year. A new system of marking for the school gardens competition is being tried out in one State, and there is emphasis on the growing of more fruit trees with skilled instruction in bud-grafting. The Boy Scout and Girl Guide movements have continued to expand, and the presence of a Girl Guide trainer from England is expected to have a considerable influence on Malay Guides as well as on those of other races. Drill and games competitions have continued to be popular in both boys' and girls' schools, though in some States teams have had to restrict their travelling because of the Emergency.

In most cases there has been close co-operation between the Administration and the Staff, who have in the main done their best to surmount the difficulties that have arisen through the unsettled state of the country and to raise the standard of education amongst their own people; that there were dangers as well as difficulties is evidenced by the regrettable fact that several teachers were murdered by terrorists and a number of schools closed during the year owing to the activities of communists in their districts.

The Chinese Schools.

Of the 1,319 Chinese vernacular schools open in 1950, two were Government schools, 1,091 were committee-controlled schools, 39 were mission schools, 63 were private schools and 124 were night schools. About 95 per cent. of the day-school pupils were attending the committee-controlled schools, while there were only 2 per cent. at the private schools. All but a few of the schools were co-educational.

The enrolment at all schools was at a record maximum of 221,600 in March (compared with 208,000 in March, 1949), but, following the usual annual tendency, dropped to 216,455 in September. Diagram A between pages 116 and 117 shews enrolments by classes. Of the total Chinese population of the age-group 6 to 11-plus (i.e., the normal six-year primary schools age-range) about 40 per cent. were attending school in September; and of these about 7.5 per cent. were at English schools. As the ratio of boys to girls in the Chinese schools was 2.5:1, it follows that about 57 per cent. of school-age boys, and 23 per cent. of school-age girls were at school.

There were 32 schools with middle (secondary) departments, but the number of students who complete the secondary course is a very small fraction of the total. Outstanding among these is the Chung Ling High School, Penang, with an enrolment of over 1,400 pupils. This school provides courses in Chinese and in English; and pupils take the School Certificate examination in addition to their Chinese studies.

The registration of schools and teachers continued to improve. Registered schools increased from 76 per cent. of the total in January

to 83 per cent. in December; and registered teachers, in the same period, from 62 per cent. to 74 per cent. Before a school can be formally registered its premises must be approved by the Health Officer; and the unregistered schools were chiefly small schools with unsuitable premises which were permitted to continue provided they had plans for improvement in the near future. The enrolment in these schools was only 8 per cent. of the total. The registration percentage for teachers is not as unsatisfactory as it appears at first sight. Under the present system of registration, only teachers with suitable qualifications are eligible for registration; but some teachers are given temporary permission to teach even though their qualifications fall short of Departmental requirements. Then again, a teacher can be registered only if he teaches in a registered school. If a teacher resigns from his appointment in a registered school he automatically becomes "de-registered" and the process of re-registration, on his resuming in a different school, takes time. Therefore it is unlikely that there will ever be 100 per cent. registration of teachers. All teachers however, apply for registration; so that, although 26 per cent. of them are unregistered, this does not mean that they are unknown to the Registrar of Schools.

Of the day-school pupils, 86 per cent. attended the government-aided schools, i.e., those mission and committee schools which receive an annual government grant of from \$5 to \$10 per pupil in "primary" schools, and from \$12 to \$18 in "middle" schools, according to the grade at which the schools are assessed on inspection. Government was at the end of the year considering proposals for an increase in the Grants-in-Aid.

There were seventeen free schools, including the two government free schools in Kuala Lumpur. In the remainder fees ranged from \$1 to \$7 per month in the primary schools and from \$4.50 to \$10 in the middle schools. Two thousand, two hundred and fifty-two pupils, the children of Federal Citizens, enjoyed partial remission of fees (\$2.50 per month) from Government, while 17,832 enjoyed remission of fees from private sources.

The curriculum was much the same as in the previous year but special attention was given to the teaching of Malay, English, handwork and physical education. English has been taught for many years in most Chinese schools, often very badly, but the introduction of Malay was something quite new. By the end of the year there were 321 Malay teachers employed, part-time, teaching 15,000 pupils. These teachers were paid by Government. Very successful refresher courses were held for teachers of physical education and for teachers of handwork.

A revised version of the textbook "How Malaya is Governed" was completed in Chinese. The book, which will be published early in 1951, is for use in the middle schools where it will take an important place in the civics course.

The effect of the Emergency on enrolment was noticeable, mainly in the small schools in remote areas. For reasons directly or indirectly connected with the Emergency, 189 small schools with a total of 5,840 pupils were closed. Some schools, previously

closed, were reopened, and nineteen schools, mostly in Johore, were opened in Re-settlement areas with a total enrolment of over 3,000 pupils. In addition, new schools and extensions to existing schools, all built by donations from the Chinese public, provided additional accommodation for about 8,500 pupils.

In the past Chinese schools have had a two-term year with small mid-term breaks. It was suggested that they should in future come more into line with English schools and adopt a three-term calendar. This was considered carefully by school committees and they agreed to adopt the new system in 1951.

The annual examinations for middle schools (3rd year) conducted jointly with the Department of Education, Singapore, were held in October and the results were published in December.

The examination of school textbooks, submitted by the leading publishers, continued to be carried out as in previous years at Headquarters. The publishers readily accepted advice about lessons which were considered unsuitable for Malayan Chinese school children, and, at the same time, received suggestions for improvements of a purely technical nature.

Indian Vernacular Schools.

The Indian Vernacular Schools of this country, which are distributed throughout the country excepting Trengganu, provide primary education for the first six years in the mother tongue. This, for the majority of the pupils is Tamil, although in a few schools other Indian languages form the medium of instruction. Out of 881 schools operating at the end of September, 1950, 821 were Tamil schools, 27 were combined Tamil and Telugu, 11 were Gurmukhi, 10 were Telugu, 5 were Malayalam, 3 were Hindi, and the remaining four used, respectively, Tamil and Malayalam combined, Sinhalese, Gurkhali and Gujerati.

The schools fall naturally into four types: those maintained and run by Government (mainly for the children of government employees); estate schools (estates are bound by the Labour Code to maintain schools where there are ten or more children of school-going age resident on the estate); private schools run by committees of local residents and mission schools run by various missionary bodies. There were 28 government schools, 710 estate schools, 119 private committee schools and 24 schools run by missionary bodies, the numbers of pupils enrolled in each group being respectively, 3,898; 23,807; 8,522; and 2,606. The total enrolment was 38,833 compared with 38,743 in 1949. Diagram D between pages 116 and 117 shews enrolments by classes.

It has been found convenient to classify these four types of school under headings according to the localities in which they are situated. The government, committee and mission schools are located in urban areas, whilst the estate schools represent rural area schools. Whereas in the urban schools the enrolment has been practically constant throughout the year and there has been considerable pressure on accommodation, resulting in many cases in the running of a morning and afternoon session in the same building, the same cannot be said of the estate schools. In these schools,

not only is there no pressure on accommodation, but many schools are not filled to capacity; indeed, some have closed down owing to insufficient enrolment. The enrolment in estate schools has fallen from a maximum of 26,132 in March, to 23,807 in September, a drop of 8.9 per cent. compared with a drop in the urban school enrolment over the same period of 2 per cent. The large drop in enrolment in the estate schools is due to two factors, one of which is always present, and which only time will cure, whilst the other is due to disturbed social and economic conditions which it is hoped will be of a temporary nature. The first of these factors is the illiteracy of the parents and their assessment of an increase in the family income as of more value than the continuing education of their children. The second is that, owing to the high price of rubber, small estates and smallholders are now able to offer higher rates of wages than the larger and better organised estates which spend considerable sums of money on housing, water supplies, medical and health measures, education and welfare generally many of which had, moreover, sold their rubber "forward" at comparatively low prices. The nett result has been a migration of labour from estates which provide schools for the children to smallholdings and small estates which have no schools. There has also been an increasing tendency for parents to remove their children from school to assist them in "making hay while the sun shines". This situation is serious because 62 per cent. of the children attending Indian schools are in the rural school category.

The teaching of English and Malay in the Indian schools has made some headway; but so many of the pupils leave these schools before the age at which these subjects are taught that progress is bound to be slow. Moreover most estate schools are situated in remote areas, far away from centres where English teachers are available, it will be a slow and difficult business to introduce English into them and only a little less difficult to introduce Malay.

The majority of the schools receive government aid on a very generous scale. This aid consists of a subsidy to cover the cost of the salaries and cost of living allowances of the teachers at the same rates as those laid down for government teachers, and the initial provision of all school furniture and equipment. It is questionable whether estate employees realise the extent to which Government contributes to the cost of educating their children. The urban schools on the other hand, realise that without the financial support of Government they would be unable to carry on, and it is significant that though they lack the financial security and solid background of a big business undertaking such as an estate, the urban schools are on the whole far more advanced than their rural counterparts. It must not be supposed, however, that all the estate schools are inferior to the urban schools, or that the estate managers take no interest in their schools. Nevertheless, it must be admitted that the managers are not always able to do as they would wish, for they hesitate to interfere with the early removal of the children from school for fear of losing their labour force. One estate in Perak has instituted a scholarship and one of the estate school children now attends an urban English school at the

expense of the estate. This is an excellent example, and may well be the forerunner of the grant of similar benefits elsewhere.

The placing of teachers on grade and incremental salary scales consequent upon the system of grant-in-aid has effected a big improvement in the quality of the teachers, in their general bearing, and in the interest they take in their schools. Of the 881 schools, only 29 are without assistance from Government. These have failed to qualify for assistance through insufficient enrolment or inadequate buildings or because the chosen medium of instruction is the mother tongue of a very small minority of the pupils in this country. Of the 710 estate schools, all except 12 are fully aided.

The desire of the Indian estate labourer to make capital out of his children and put them to work at the youngest possible age leads to many of the children being removed from school by the age of about eight years, because this is the age at which the Children and Young Persons Enactment permits children to be used on light tasks and in helping their parents. The effect on the schools is that the bulk of the enrolment is found in the first two standards, the enrolment thereafter falling off fairly rapidly. This situation carries the danger that these children may relapse into the illiteracy of their parents. Serious as this situation is, it has shown a progressive yearly improvement. In 1947, 86 per cent. of the school enrolment was to be found in the first two standards, while in 1950 this figure had dropped to 64 per cent. That this improvement has been progressive is encouraging and there is no reason why it should not continue. As conditions in the rubber industry become more normal the labour force may be expected to settle down again and keep their children longer at school.

The minimum qualification for registration as a teacher is Standard VII, and to enable prospective teachers to obtain this qualification a central examination is conducted annually by the Assistant Director of Education (Indian). Classes to prepare for this examination are organised and run by the Tamil Teachers' Association and Unions in various districts throughout the country, and practically all of the Indian teachers now possess this qualification. The number of candidates for this examination jumped from 318 in 1949 to 500 in 1950.

The Teachers' Associations and Unions have been very active throughout the year and have done some very useful work. They have organised Standard VII classes, district sports meetings and handwork exhibitions, and many of them hold an Annual Conference. Arising out of and expressed partly through the Teachers' Associations and partly through the medium of their schools, there is a refreshing spirit of keenness among the teachers. This can be seen not only in the work of the schools, but in the personal appearance and general bearing of the teachers.

THE ENGLISH SCHOOLS

The total enrolment in Government and Aided English Schools was 73,539 (boys 46,479; girls 27,060) compared with the equivalent figure for 1949 of 67,266 (boys 42,764; girls 24,502). Enrolment in private schools was 27,197 (boys 21,158; girls 6,039)

(corresponding figures were not given in 1949 Report). The total, therefore, in Government, aided, and private schools was 100,736. Diagram B between pages 116 and 117 shows enrolments by classes.

Pressure on accommodation is generally more severe in the case of the English Schools than in the case of the others. It is, therefore, all the more satisfactory that 1950 should have seen the erection of a number of new buildings and extensions. The Sisters of the Holy Infant Jesus have built an excellent new branch school to accommodate 560 girls in the Pulau Tikus district of Penang. At the other end of the country the Sisters of the Canossian Institute have erected a concrete building in the Portuguese Settlement in Malacca to accommodate 160 children, and a fine new building to accommodate 480 girls at Kluang in Johore. In the same State also the beginnings have been made of a new Government English School at Mersing. Extensions have been made to 19 Government and Aided Schools ranging from a fine new wing comprising assembly hall, science laboratory, art room, library and classrooms added by the Methodist Mission to its new Senior Girls' School in Kuala Lumpur, to modest blocks of two and three additional classrooms in smaller schools. Altogether these new schools and extensions provide accommodation for 3,680 additional children and at the same time add to the facilities needed to provide the specialized teaching proper to the secondary stage.

Other buildings have already been commenced but are not yet complete. Among these is a new Government English School at Batu Gajah to replace a group of old buildings. Notable among the many extensions is a project to convert the old Government Offices at Bukit Zahrah, Johore Bahru, to educational purposes. Altogether the schools and extensions begun but not yet complete will provide accommodation for 2,480 additional children.

The only considerable change in the curriculum has been the introduction of Malay, which has been commenced in Standard III. The arrangements made are, for the most, part temporary and are to be developed. An increased emphasis is being laid on the study of current events as a preparation for citizenship. Steady progress is also being made towards the implementation of the departmental policy by which a four-year course in General Science is to become an integral part of the education of every boy and girl in secondary schools or departments. The greatest obstacle here is the persisting shortage of trained science teachers, particularly in the girls' schools. While local arrangements are being made in several areas to remedy this lack, a number of children—particularly girls—remain unprovided for. In Penang, Kuala Lumpur and Johore Bahru the science facilities of the Government boys' secondary schools are shared by nearby girls' schools. Accompanying this is a growing realization of the need for development of activities which assist the emotional development of the pupils. In several areas there has been an increase in musical activity; and the exhibition of school paintings which was shown in Ipoh, Kuala Kangsar, Kuala Lumpur, Malacca, Penang, and Seremban has done not a little to increase interest in artwork in the schools. There have also been

The year has seen an increase in the number of advanced classes (post school certificate). They have been organized in six States and in both Settlements, as well as at the Malay College, Kuala Kangsar. The general experience, however, has been that enrolments have fallen heavily half way through the school year as a consequence of admissions to universities, the Technical College and the Normal Classes.

The creation of these advanced classes has placed a new importance upon the libraries of secondary schools and departments as a means of weaning would-be university students from an undue dependence on the teacher. These have accordingly been strengthened both by the efforts of the schools concerned and by the gifts from U.N.E.S.C.O. and Australian Commonwealth Government sources which were acknowledged last year. Nor have the libraries of primary schools and departments been neglected; it is difficult to find a school at either level where the library situation does not at least compare favourably with that existing before the Occupation. At the same time teachers' reference libraries are being steadily built up in all Education Offices and are doing much to stimulate an interest in improved methods of teaching.

The number of Malays in Government and Aided English Schools has increased by 2,446 to a total of 15,913. This has been brought about both by the creation of additional Special Malay Classes and by a tendency observed in some areas for more Malay parents to enter their children directly into the primary classes of the English Schools. Of this total 7,129 have been granted remission of fees and 854 are, in addition, enjoying scholarships of varying amounts; 1,100 Malay children attending English Schools are accommodated in hostels, in some areas without charge and in others with the assistance of a Government subsidy.

The only completely residential schools in the Federation (apart from a private European School in Cameron Highlands) are the Malay College, Kuala Kangsar, and the Malay Girls' College, Kuala Lumpur, which cater for the most promising Malay children in every State and Settlement. Admission to these schools is by examination and there is provision for scholarship assistance to as many as 50 per cent of the pupils enrolled.

At the Malay College, Kuala Kangsar, the King's Pavilion has been lent by His Excellency the High Commissioner to provide accommodation for the Junior School. Fifty boys were admitted to this section of the school in January, 1950. The total enrolment up to the School Certificate Class was 246. The Malay Girls' College had, at the end of 1950, an enrolment of 73 in classes up to Standard VI level.

In spite of the increase in salaries and in the price of practically everything in Malaya, the fees in English Schools have not been increased. The charges are \$30/- (£3.10s.) per year for the first eight years and thereafter \$48/- (£5.12s.). There is a generous system of free places and scholarships.

At the end of the year 1,951 candidates (boys 1,537; girls 414) sat for the Cambridge School Certificate.

TECHNICAL TRAINING

Junior Technical (Trade) Schools.

For the first time since the Liberation, the Junior Technical Trade Schools are filled almost to the limits of their capacity as fixed by present staffing. There has been an increase of 184 in the enrolment and the present total is 520, of whom 336, or nearly 65 per cent. are Malays drawn both from the English and the Malay Schools. In addition 96 Other Ranks of the Malay Regiment have been given a year's special training in one or other of the schools. They have now completed their training and have been replaced by a smaller group of 32 who will be concentrated in the Kuala Lumpur School. There has been no change in the curricula of the schools, but there has been everywhere an increasing use of visual aids. The Ipoh, Johore Bahru and Kuala Lumpur Schools between them provide hostel accommodation for 200 boys.

Commercial Day Schools.

There are now only two independent Government Commercial Day Schools, one in Penang and one in Ipoh, the Kuala Lumpur School having been for special reasons, merged temporarily in a secondary school. The enrolments of the two remaining schools continue to be small and to show a sharp falling off in the course of the year as students succeed in obtaining employment. The Penang School continued giving a more advanced course to second year students.

Training Establishments exclusive to Government Departments.

Almost all Departments have some arrangements for training their staffs, but the following are mentioned as being specifically institutional.

The Department of Forestry maintains a Forest School at Kepong, Selangor, for the training of its field staff. The enrolment during the year, which was limited by the available living accommodation, was 35. The school provides a nine months' elementary course in subjects which include Forest Botany, Elementary Wood Technology, Silviculture and Forest Management, Surveying and Drawing, Forest Mensuration, Forest Laws, Forest Engineering and Forest Utilization. Field work is an important part of the course, but owing to the present Emergency had to be confined to the Institute's plantations and the forests of Selangor.

The Medical Department maintains regional schools at Johore Bahru, Kuala Lumpur and Penang for the training of nurses. In Penang a new development, introduced in view of the present acute shortage of Dental Officers, was the training of nurses to carry out the simpler forms of dental treatment.

The Malayan Railway maintains a Railway School for the training of signalmen, clerks, guards and permanent way overseers. During the first year of employment they attend for two months, during the second year for one month and during the third for two weeks. Engine drivers and fitters attend evening classes during their five years of apprenticeship.



Students at the Malay Girls' College, Kuala Lumpur, reading a letter from a pen-friend in Europe.

The Department of Telecommunications maintains a Training Centre in Kuala Lumpur for the training of Junior Technical Assistants. During the year it had an average enrolment of 45, the number again being limited by the available accommodation. The three months' course includes subjects relevant to the student's eventual departmental duties. The Centre also provides such specialist refresher courses as are required.

University and other Post-Secondary Education.

The Federation is served by three institutions of higher education : the newly established University of Malaya, the Technical College, Kuala Lumpur, and the Agricultural College, Serdang. In addition a number of students are studying abroad.

The University of Malaya.

The University of Malaya, which was founded on 8th October, 1949, held its first Convocation on 8th July, 1950, when there were conferred five Honorary Degrees for distinguished services to the University and 72 degrees of the University. There are Faculties of Arts, Science and Medicine (Medical, Dental and Pharmacy). A new development of particular interest to Education was the admission in October of a number of graduates to a Department of Education which provides a year's course leading to a Diploma in Education.

The Technical College.

The Technical College at Kuala Lumpur is a Federal Institution under the Department of Education. It accepts technical apprentices from the various Government departments for training as technical assistants and, after Government requirements have been met, a certain number of private students. The qualification for admission is a Grade I or II Cambridge School Certificate with credits in English Language and Elementary Mathematics and, if possible, in Science. The College provides a three-year course in civil, mechanical, electrical and telecommunications engineering as well as surveying and architecture. The technical apprentices receive in addition a year's practical training in their own departments. During 1950 there were 161 technical apprentices, 41 private students and eight State Scholars in the College.

Considerable progress was made during 1950 in the preparation of plans for the new College, for which \$4.85 millions have been granted from Colonial Development and Welfare sources. Building will commence in 1951.

The College of Agriculture.

The College of Agriculture at Serdang, a few miles outside Kuala Lumpur, is, like the Technical College, a Federal Institution. It is under the Department of Agriculture, for the training of whose technical staff it primarily exists. It is pleasantly situated in extensive grounds and with buildings designed for its purposes. The College at present provides two courses : a Diploma Course of three years' duration given in English and intended in the first place for students training for the post of Agricultural Assistant in the Agricultural Department itself, and also a Minor Course of



Malay women teachers learning the finer points of cookery at the Domestic Training Centre, Ipoh.

one year's duration given in Malay and intended in the first place for students training for the junior post of Malay Agricultural Subordinate.

The Federation Government students for both the Diploma and Minor Courses are recruited by a system of scholarships, the minimum qualification being the School Certificate in the first case and a pass in Standard V of the Malay School in the second. Additional Government students are accepted for both courses from North Borneo, Sarawak and Brunei and, in addition, a certain number of selected Penghulus (Malay village headmen) and of Malay vernacular school teachers are admitted to the Minor Course. When all governmental needs have been satisfied, private students are admitted as far as the available accommodation allows. The present total enrolment is 73.

Both courses give a wide training in practical and theoretical agriculture and, with the co-operation of the Officer-in-Charge of the neighbouring Federal Experiment Station, students are given the opportunity to obtain experience of all important field crops, the working of mechanical equipment, and such processes as palm oil extraction, the manufacture of both Indian and China tea, and the preparation of coffee beans and Manila hemp. The second-year students of the Diploma Course and the students of the Minor Course again spent a week at the Coconut Experimental Station, Port Swettenham, and the same students later devoted two weeks to an intensive rubber course organized with the assistance of the Rubber Research Institute.

STUDY OVERSEAS

The students proceeding overseas for higher education include Queen's Scholars and Fellows selected for post-graduate training from the most successful students of the constituent colleges of the University, serving Government officers, and others selected for training to fit them for promotion to senior posts and private students studying on their own initiative and at their own expense.

The Queen's Scholarships and Fellowships are the most coveted awards. There are at present four Fellows and six Scholars at various universities and institutions for post-graduate study in the United Kingdom; one Fellow and three Scholars, chosen during the year, and one other chosen in 1949 await places in similar institutions.

The remainder of the 101 Government Scholarship holders from the Federation in the United Kingdom during the academic year 1949/50 held Departmental, Colonial Development and Welfare and British Council Scholarships. During 1950 some State and Settlement Scholarships, several Departmental Scholarships, three Colonial Development and Welfare Scholarships and three British Council Visitorships were awarded. Most of the holders will leave for the United Kingdom during 1951 and five will go to Australia to study Surveying. The Australian Government awarded two Scholarships and the New Zealand Government two to students from the Federation; and scholarships were awarded to American Universities through the United States Information Service.

During the academic year 1949/50 there were at least 139 private students studying in different institutions in the United Kingdom. Admission, however, is becoming more difficult and more private students are turning to Australia. Universities in Australia are known to have admitted 15 students from the Federation during 1950 and a further 23 have so far been selected for the 1951 courses. Several other private students have been admitted to the Universities of Melbourne and of Western Australia and others to the University of Hong Kong and to Universities in India.

TRAINING OF TEACHERS

Teachers in Malay Vernacular Schools.

There are at present two Colleges for the training of teachers for Malay Vernacular Schools; one for men, with an enrolment of 412, at Tanjong Malim, and one for women, with an enrolment of 166, at Malacca. Both provide a three-year course which includes an extension of the general education received in the Malay Schools together with instruction in the theory and practice of teaching. The new experimental syllabus has necessitated changes in the syllabus. English has continued to be taught with success, the emphasis being on the understanding of English rather than on fluency of expression, which will come later if the students have linguistic ability. An extension to the Malacca College in the early part of the year has enabled an additional 56 women to be trained. The training of students in Scouting and Guiding has continued to give impetus to these movements in Malay Schools. One hundred and thirty-six men and 28 women teachers completed their training during the year.

Because these two Colleges can produce only a small proportion of the teachers required for the greatly increased numbers of Malay pupils, weekly training classes have been organized in every State and Settlement for those who have been unable to secure entrance to them. The courses are held on Saturday mornings over a period of three years and give instruction in the theory and practice of teaching all subjects in Malay Schools. The teachers in these classes do not, of course, reach as high a standard as those trained in the Colleges, but their value has been recognized and a special salary scale provided for them.

Probationers attend classes on Saturday mornings for not more than their first three years, after which they enter either a training college or a weekly training class.

The introduction of the teaching of English in Malay Schools has been provided for by a two-year weekly training course for students who have English School qualifications.

In two States special courses in Domestic Science, in which instruction reached a high level, were provided for selected women teachers.

Teachers in Chinese Vernacular Schools.

The training of Chinese teachers continued to receive special attention, and there were over a thousand students in training classes throughout the Federation. There was a great demand

for trained teachers and this will continue for many years to come. The programme of training should not only cover natural "wastage" but should also provide for an increase corresponding to the annual increase in school enrolments. In September there were 5,807 teachers for 216,496 pupils, giving an average of 37 pupils for each teacher, a figure altogether too high for efficient teaching. Plans are now being made to build four Government "Normal" Schools as envisaged in the Draft Development Plan. These will be built at Penang, Ipoh, Kuala Lumpur and Malacca; and it is probable that the one at Penang will be completed in 1951. These schools will accept students who have completed the primary course and give them three years' academic training followed by two years' professional training. Each school should, in time, provide annually between sixty and eighty fully trained primary school teachers.

Teachers' Associations exist in most States and 3,803 of the 5,807 teachers (65 per cent.) are members. These associations not only strive for the betterment of conditions of service for teachers, but take an active part in trying to improve the standard of education in the schools by conducting refresher courses for teachers, or inter-school sports, or helping with the final examinations for primary schools, the papers for which are set by officers of the Department.

Teachers in Indian Schools.

The total number of teachers was 1,388, of whom 516 were trained and 417 were undergoing training. The training course lasts three years during which the teachers attend a six hour session every Saturday or Sunday, at training centres in their own State or Settlement. Some of the teachers travel as far as 50 miles to reach their training centre. The effect of this training is very quickly felt in the schools, and most of these teachers lose very little time in putting their new ideas into practice in the classroom.

Teachers in English Schools.

Owing to the demand for teachers in the still rapidly expanding English Schools, and the continued lack, owing to financial, staffing and other difficulties, of training colleges, the student teachers continued to be trained in training classes known as Normal Classes, where they received instruction in the theory and practice of teaching, and in English Language and Literature, from senior members of staffs of the English Schools to which the student teachers are attached.

Much progress was made in the direction of a more modern attitude towards methods of teaching and this was helped by the issue of a new syllabus for Normal Class Training. In certain areas special courses have been given in Music, Art, and Physical Training. Holders of the Diploma of Raffles College completed the 3rd Year of the Normal Course, but in future University graduates will obtain their professional training by obtaining the University's Diploma of Education.

Students in remote areas continued to be trained by a correspondence course organised by the Superintendent of Teacher Training.

DIAGRAM A
ENROLMENTS BY CLASSES IN CHINESE VERNACULAR SCHOOLS

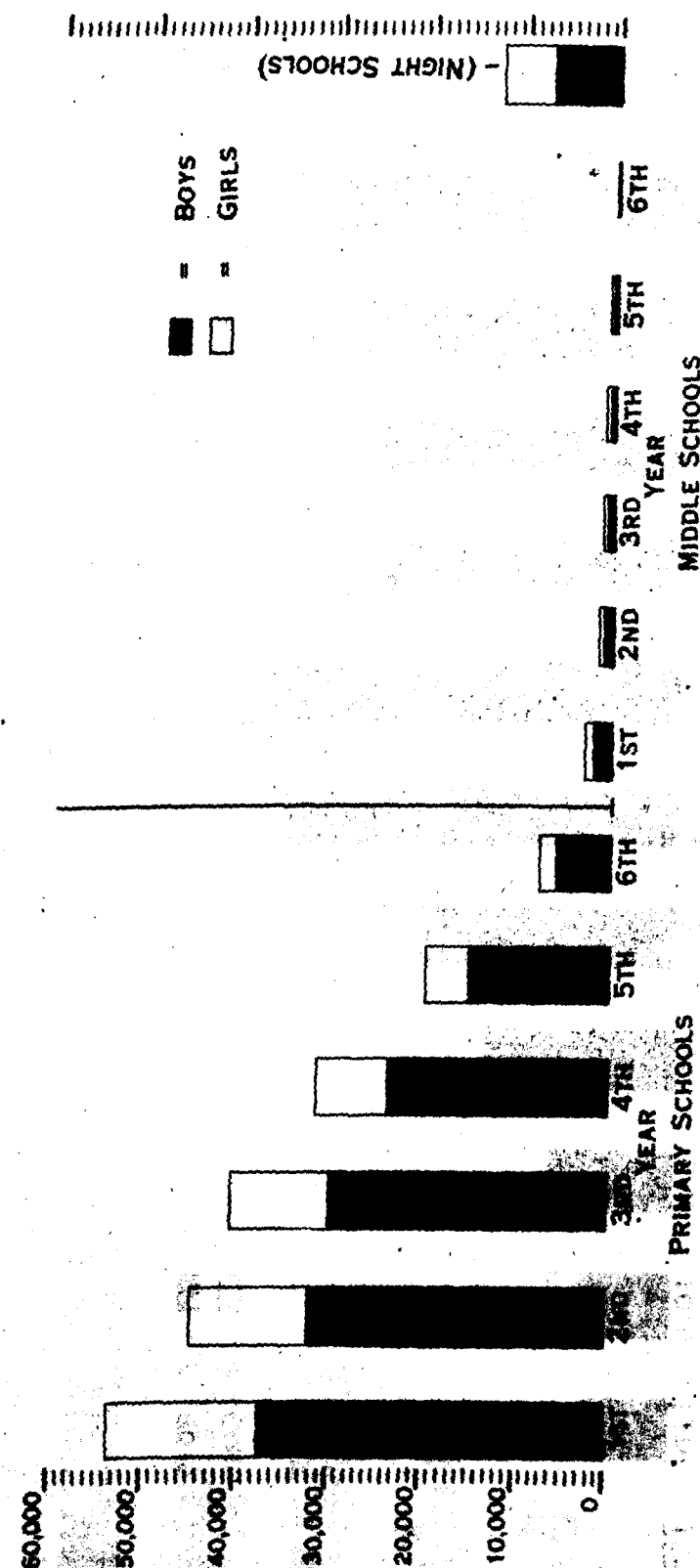


DIAGRAM C
COMPARATIVE ENROLMENTS IN ALL SCHOOLS.

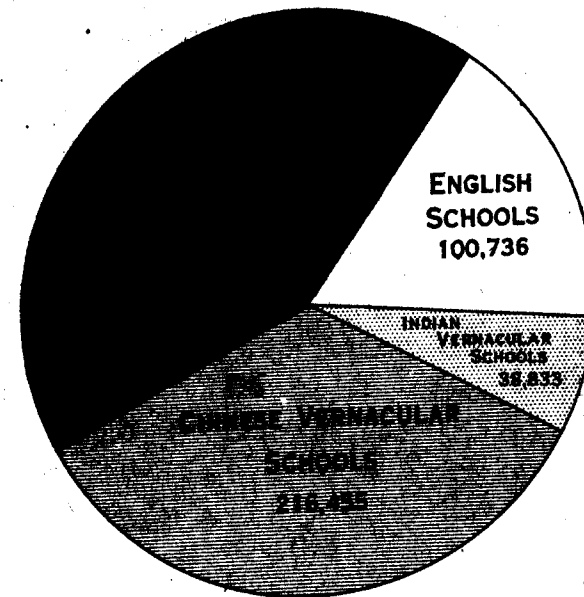


DIAGRAM D
ENROLMENTS BY CLASSES IN INDIAN VERNACULAR SCHOOLS

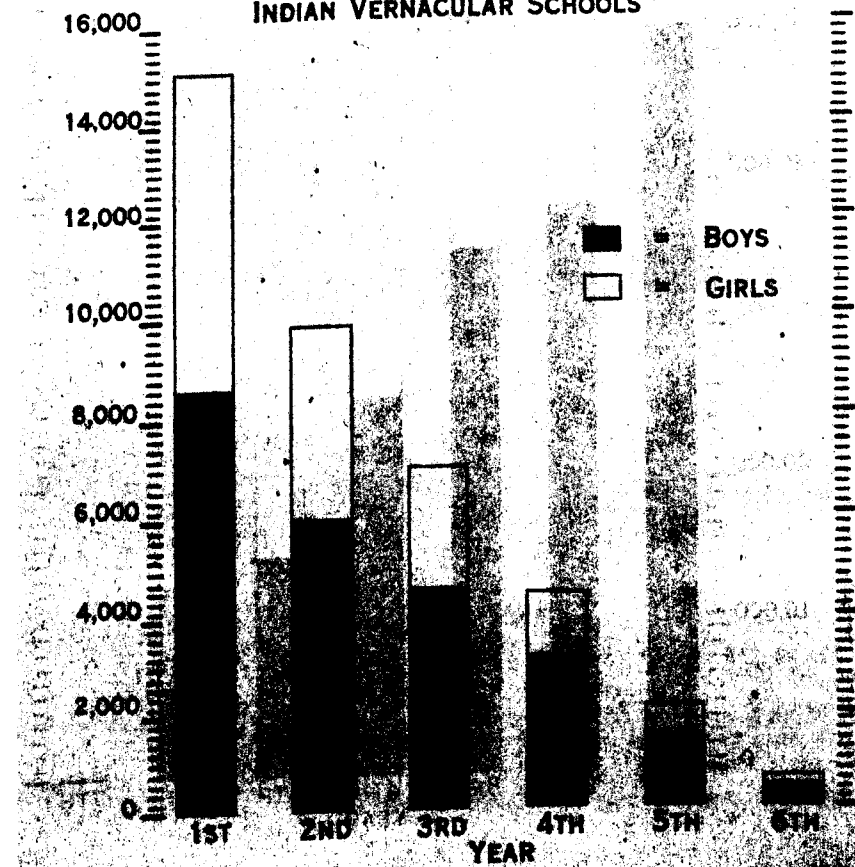


DIAGRAM B
ENROLMENTS BY CLASSES IN ALL ENGLISH SCHOOLS.

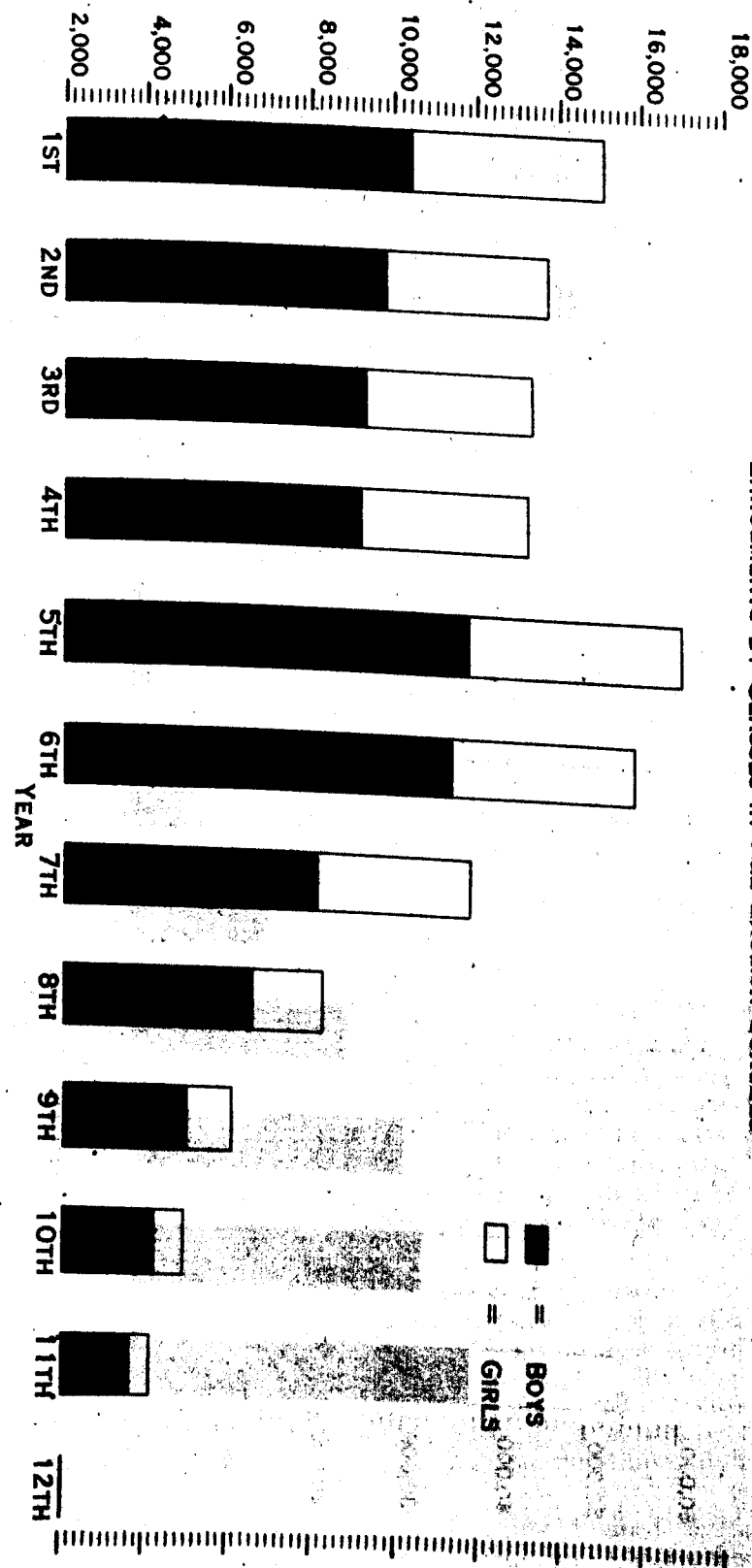
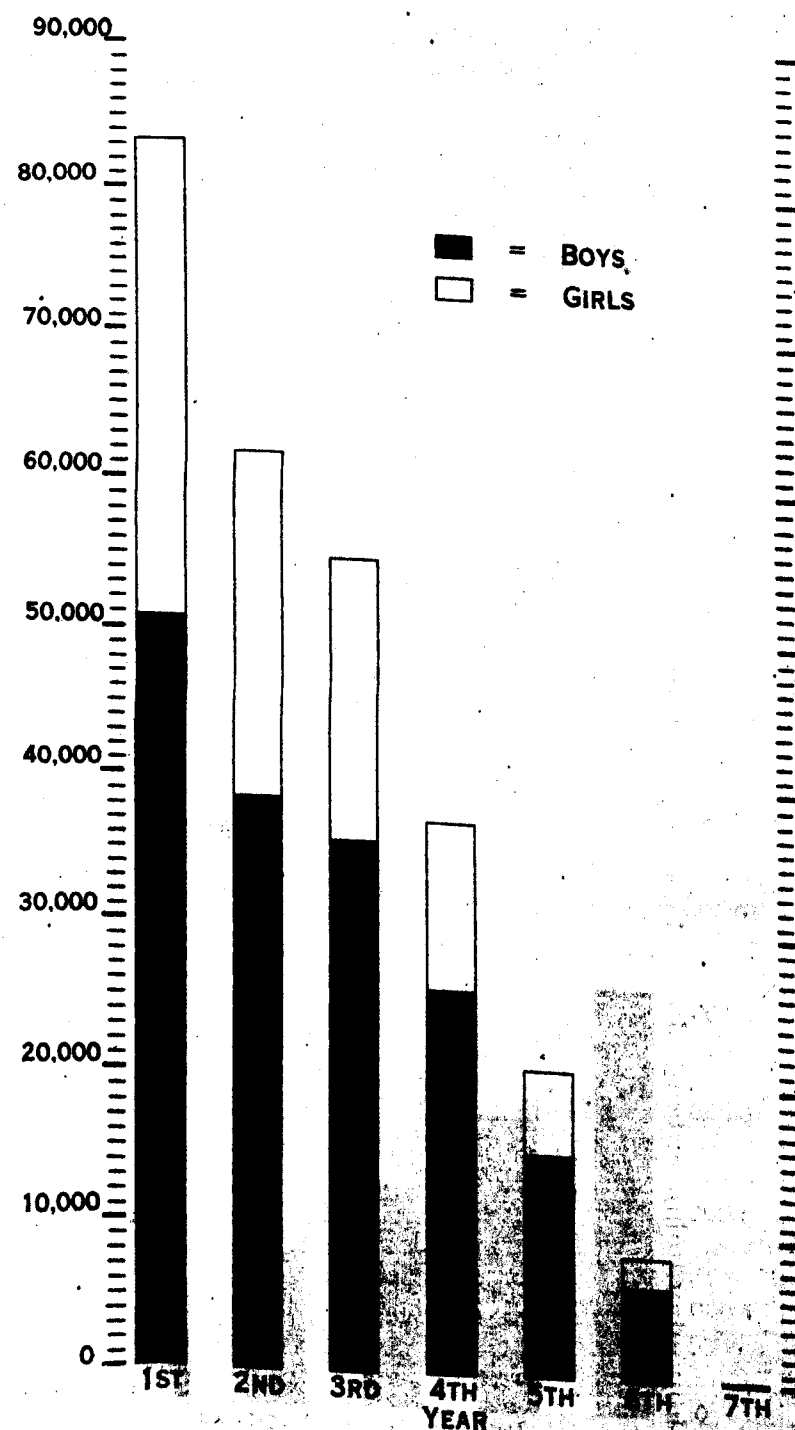


DIAGRAM E
ENROLMENTS BY CLASSES IN
MALAY VERNACULAR SCHOOLS



PHYSICAL CONDITIONS

The least satisfactory aspect of school conditions is the overcrowding already referred to. There is an ever increasing demand for places both in the English and the vernacular schools, and overcrowding is the only alternative to turning away even more children than must be refused admission at present.

A great deal is done to ensure the good health and proper physical development of children. Physical Training is an integral part of the curriculum of every type of school, and organized games are carried out in all schools to the extent permitted by the available space.

At most schools satisfactory arrangements exist for the provision of cheap nourishing food for such pupils as are not able to return home for the mid-day meal. The Medical Department operates a Nutritional Feeding Scheme by which undernourished children are given supplementary feeding either in the form of cooked meals or of biscuits, cocoa, milk and similar light foods.

SOCIAL AND MORAL WELFARE

In the English Schools conducted by Missions, religious instruction is given to children of their own persuasion and to others whose parents consent. These schools also frequently provide some sort of ethical instruction for other pupils not attending the religious instruction. In Government English Schools no direct religious instruction is given, but religious or quasi-religious instruction is included in the time tables of Government Malay Schools in some areas. In many cases their buildings are also used for Koran classes in the afternoons.

In all schools, whether religious instruction is given or not, great importance is placed on the effect upon character of a properly organized community life, including participation in team games, the Boy Scout and Girl Guide movements and the out-of-school activities which exist in some shape or form in all types of schools. It is interesting, in this context, to note that 47 Malayan Girl Guides attended a Jamboree in Western Australia this year.

Education for citizenship, made more important by the prospect of eventual self-government, is also provided both directly through the teaching of Current Events and Civics and in some cases through the organisation of School Councils and School Parliaments and indirectly through the Prefect System. Groups of attentive senior pupils were present in the visitors' galleries at every meeting of the Legislative Council, and at many of the meetings of State and Settlement Councils.

ADULT EDUCATION

Education for adults was provided in evening classes organized in all States and Settlements. These included special classes organized by the Technical College in Kuala Lumpur both for its own graduates and others in subjects needing the heavy equipment not available elsewhere. In general the limiting factor is the extent of the public demand. The most popular subjects everywhere were those commercial subjects which promise a fairly

immediate cash return; but English and certain technical subjects also attracted large enrolments. Other classes were organised in a variety of subjects from economics to musical appreciation, but it is perhaps a sign of the country's cultural immaturity that a markedly stronger interest was shown in utilitarian subjects than in the purely cultural.

Many of the classes were designed to prepare their students for the examinations of the London Chamber of Commerce and the London City and Guilds Institute. In fact a large number of candidates sat for the examinations of both, and a smaller number for examinations organized by other bodies. That there are also more ambitious adult students working by themselves is shown by the success of Federation candidates in the Intermediate and Final Examinations of the University of London.

An interesting experiment is going on in one area where a committee has been set up among Malay school teachers on a voluntary basis to study the question of launching a literacy campaign. Experimental centres were opened in two rural areas towards the end of the year.

Part II

HEALTH

The account of work which is appropriate to State Institutions will be contained in the reports of the States and Settlements. This Federal report deals with the general trends of public health, with developments of Federation-wide interest and with the account, in greater detail, of the work of the Federal Institutions.

Though the climate of Malaya is equatorial, the incidence of diseases commonly associated with the tropics is relatively low. The large towns are almost entirely free from malaria and the use of mosquito nets is mainly for protection from nuisance mosquitoes. In some towns nets are hardly necessary. Water supplies, which are controlled by the Public Works Department, are of high quality in all the large towns and in most of the smaller ones. The health officers act in close alliance with the engineers in checking the purity of the supplies.

MEDICAL ORGANISATION

Each State and Settlement has a Medical Headquarters from which the hospital and health services are jointly administered. On the health side there are health officers in each State, under whom is a large body of sanitary inspectors, either attached to the Town Boards or working directly under their jurisdiction in the rural areas. Each sanitary inspector is responsible for an area with a population varying between 5,000 and 10,000 persons. Hospitals exist in all the large towns and in many of the smaller ones. The number of medical officers in these hospitals is dependent on their size. Specialist officers are attached to the large hospitals and their services are available, if required, anywhere within the States or Settlements. Certain specialist officers are Federal and

they may be called upon to visit and advise in any State or Settlement in the Federation.

VITAL STATISTICS

The vital statistics for the year already appear in Chapter I, where they have been considered in some detail. They show that, although the birth rate has dropped and the death and infant mortality rates have increased somewhat since 1949, the year under review was a moderately healthy one.

As a matter of interest, it is recorded that the total maternal deaths were 1,172 for 219,512 births, compared with 1,192 for 223,013 births in 1949. The maternal mortality for all races therefore remained practically unchanged at 5.3 per 1,000 live births.

SPECIAL DISEASES

No cases of plague, cholera or smallpox were reported in 1950.

The incidence of malaria has reached even lower levels than in 1949. The number of cases treated in Government hospitals was 14,559 with 328 deaths as compared with 17,731 with 441 deaths in 1949.

Active field experiments in the control of malaria, under conditions applicable in scattered peasant houses, by the use of insecticides and by the controlled administration of paludrine are still continuing. Unfortunately, from the experimental point of view, the low transmission rate of malaria has prevented any clear-cut conclusions from being made at this stage.

Thirty-five thousand six hundred and fifty-seven cases of yaws were treated during the year as compared with 62,551 cases in 1949.

Dysentery and diarrhoea are not notifiable. Hospital statistics show admissions as 6,509 with 840 deaths.

The number of cases of enteric fever reported was 887 with 96 deaths. The disease is endemic in Malaya. There was no outbreak in any particular area, but cases occurred sporadically throughout the country.

Nine hundred and one cases of diphtheria occurred with 242 deaths.

Fifteen cases of cerebro-spinal meningitis were reported with six deaths. There was no epidemic of either diphtheria or cerebro-spinal meningitis, cases occurring sporadically.

Forty-four cases of poliomyelitis with three deaths were reported.

The incidence of tuberculosis appears to be decreasing slowly, as judged by the figures for hospital admissions and deaths. Admissions to hospitals for pulmonary tuberculosis were 6,305 with 1,767 deaths, as compared with 6,510 admissions and 1,916 deaths for the corresponding period last year. The total deaths from tuberculosis registered with the Registrar-General were 3,109 for the year as compared with 3,305 in 1949. Facilities for the treatment of tuberculosis are being expanded steadily. The modern tuberculosis ward and out-patient department in Malacca have been completed and the expansion of the Tuberculosis Sanatorium at Pulau Jerejak, Penang, is going on, with the help of a grant under the Colonial Development and Welfare Act.

B.C.G. Vaccine.

As a result of an agreement made between the World Health Organisation and the Federal Government, the United Nations International Children's Emergency Fund sent out a team of experts (one doctor and two sisters) who arrived in Johore Bahru in December to teach members of the Medical Department how to use this vaccine. Several teams had already undergone fourteen-day courses of instruction by the end of the year. Once supply lines have been consolidated this work will gather momentum.

It is too early to make any estimate of the popularity of this vaccination but up to date there has been a magnificent response, both from parents and from the general public. By the end of December 1,200 pupils had been tested of whom approximately 500 were requiring vaccination.

Teams from other States and Settlements will be taught and it is expected that this very important preventive measure will form part of the routine work of Maternity Hospitals, Women's and Children's Clinics and schools in 1951. In addition, outdoor clinics for the treatment of adults will be opened in all the larger towns, and if staff becomes available this work should proceed right into even the most isolated rural areas.

B.C.G. is not, of course, a cure, and it is fully realised that the raising of standards of housing and of living generally is more fundamental in the fight against tuberculosis.

HEALTH ON ESTATES

Progress continues to be made in health measures for estate labourers. The general health of labourers has improved, the main feature being the low incidence of malaria. The estate hospital position, however, is not satisfactory, for there is a tendency to close them down, thereby throwing an additional strain on the already overworked and understaffed Government hospitals. The rationalisation of the hospitals position, both Government and estate, is overdue and is being considered by a Committee under the Chairmanship of the Commissioner for Labour, as part of a larger plan for the improvement of rural health generally.

HEALTH ON MINES

Most mines have no hospitals and their labourers are sent to Government hospitals. The provision of adequate hospital accommodation for labourers on mines is also under consideration.

RAILWAY SANITATION

The health and medical work of the Malayan Railway is under the charge of a medical officer seconded from the Government Medical Service. The main activities of this officer and his staff are medical treatment of railway staff and their dependants, general public health measures in railway areas and anti-malarial work on railway property. The anti-malarial measures taken are oiling, D.D.T. barrier spraying and prophylaxis.

Thirteen railway dispensaries including those in major construction areas functioned during the year. First-aid instruction

based on the St. John's Ambulance handbook was given during the year to the staff. First-aid boxes and stretchers are available on all passenger trains, at workshops and at all stations.

PORT HEALTH WORK

During the period from 1st January, 1950, to 31st December, 1950, one hundred and fifty-five ships from India, forty-four from China, three pilgrim ships from Jeddah and one hundred and eighty-six from other infected ports arrived, carrying a total of 57,103 saloon and deck passengers.

Out-going pilgrim ships.

Two pilgrim ships carrying a total of 3,875 pilgrims left the port of Penang during the period. One case of chicken-pox was detected and the patient and three contacts were sent to hospital. Their places were filled by four others who had been unable to obtain passages before.

In-coming pilgrim ships.

Three pilgrim ships carrying a total of 3,525 pilgrims arrived during the period. A total of 25 deaths, chiefly due to senile debility, occurred on these ships.

Quarantine Station.

The Quarantine Station, Pulau Jerejak, which ceased to function after the end of July, 1948, was still being used as a Detention Camp under the supervision of the Prisons Department. It is hoped that arrangements will be completed in 1951 for the return of certain parts of that camp to enable a limited number of contacts to be quarantined.

Vaccination and inoculations performed at the Port Health Office.

During the year, 14,042 vaccinations and 10,198 inoculations were performed. Out of the total number of vaccinations performed, 182 were primary vaccinations and 13,860 were revaccinations for purposes of International Certificates.

Inspection of aircraft.

Two hundred and thirty-four aircraft were inspected during the year (144 at the Bayan Lepas Aerodrome, Penang, and 90 at the Permatang Kuching Aerodrome, Province Wellesley). Altogether 1,036 crew members and 3,134 passengers were examined but no case of infectious disease was detected among them.

MATERNITY AND CHILD WELFARE

This is a State service, particulars of which will be found in the Annual Reports of individual States and Settlements.

Maternity and child welfare work has been hampered by the activities of the terrorists which have made visiting by health sisters and nurses unsafe in some districts. The demands for this service continue to increase.

The total number of women admitted to maternity wards in 1950 was 38,814 and the total number of deaths was 313. This compares with 37,741 admissions and 280 deaths in 1949.

Child Welfare Centres.

This is also a State service. There are Infant Welfare Centres in all the main towns. Periodic visits are paid by the staff to the surrounding districts.

HOSPITALS AND DISPENSARIES

Hospitals and dispensaries are a State service. The total number of beds available for patients was 13,332 and the daily average number of in-patients was 10,355.

During the year 207,483 patients were treated. This does not include the inmates of the leper and mental institutions whose numbers were 521 and 2,208 respectively.

Malaria.

The number of malaria cases treated in Government hospitals was 14,559, a drop of 3,172 from 1949. The distribution of types of malaria, diagnosed microscopically, was :

Subtertian	..	..	69 per cent.
Benign Tertian	..	..	26 "
Mixed	..	..	4 "
Quartan	..	..	1 "

Other Diseases.

The following gives an indication of the commoner conditions treated :

Disease.	Admissions.	Deaths.	Mortality percentage.
Malaria	14,559 ..	328 ..	2.19
Pulmonary Tuberculosis	6,305 ..	1,767 ..	28.02
Dysentery	1,675 ..	79 ..	4.72
Diarrhoea and enteritis	4,834 ..	761 ..	15.74
Pneumonia and Broncho-pneumonia	4,226 ..	1,154 ..	27.31
Bronchitis	8,402 ..	76 ..	.91
Beri-Beri	618 ..	48 ..	7.77
Venereal Diseases	3,795 ..	55 ..	1.45
Enteric Fever	773 ..	91 ..	11.77
Injuries due to external causes	21,128 ..	650 ..	3.08

Radiological work.

The replacement of the deficiencies in equipment caused by the war has been completed in most respects and an advance has been made, particularly with X-ray equipment.

A new development of interest is a mobile X-ray unit for pulmonary tuberculosis survey work. This operates in the State of Kedah, which has been especially progressive in this respect. 80,103 patients have been examined by X-ray and 2,031 patients treated in the X-ray and electro-therapeutic departments.

Out-patients.

All hospitals have out-patient departments. These are supplemented by small dispensaries situated in many of the smaller towns

and by travelling motor dispensaries operating on the main roads. Hospital Assistants in charge of fixed dispensaries travel by bicycle throughout their areas to deal with places which the travelling dispensary cannot reach. In Johore, Pahang, Perak and Kelantan a certain amount of travelling is also done by river. The Emergency has, however, restricted the use of travelling dispensaries, though the demand for this service is great. There were 2,126,253 out-patient attendances recorded in 1950. This figure, however, does not include attendances at Infant Welfare Centres and Venereal Disease clinics. 685,015 of these attendances were at travelling dispensaries.

Dental Surgery.

The staff position improved considerably during the year. Six Dental House Surgeons were recruited from the University of Malaya. Three of these officers were stationed in Penang, two in Johore and one in Ipoh.

The number of attendances has risen from 118,063 in 1949 to 166,650 in 1950.

NEW DEVELOPMENT

Department of Child Health.

The work of the Department of Child Health has gained during the year by having the benefit of a keen and experienced child health specialist who has strengthened the link between the preventive and the hospital side of child health work. During the year better co-ordination has been established between the hospitals and the child welfare and school health services. Health education has been increased in the schools and welfare clinics. A new feature in welfare clinics is demonstrations of cooking, using methods and foodstuffs which are readily available in the homes of the people.

A new section for the care of premature infants has been established in the Maternity Hospital in Penang and this is proving valuable in relation to the training of nurses in the care of premature infants. It may be mentioned in passing that the "international" definition for prematurity includes all children whose weight at birth is 5½ pounds or less, a definition which takes no account of the fact that a large number of babies born in Malaya under this birth-weight show no signs of prematurity and are very lusty.

The following note from the Child Health Specialist is of general interest :

"The chief clinical disorders met with in the children in Malaya are the result of malnutrition, worm infestation and tuberculosis, so that although the majority of diseases seen in England are also seen in Malaya, yet the approach to disease and its treatment must always bear in mind these three mentioned conditions. Cross infections in children's wards and nurseries appear less prevalent than in colder climates. This is probably due to better ventilation in the open wards in Malaya ; nevertheless, it is still a real danger in this country."

It is worthy of note that this impression of children's diseases in Malaya, as seen in Penang, takes no account of malaria nor of the

other so-called tropical diseases, because they are relatively inconspicuous.

Dental.

The Dental Nurses' School at Penang continued to function satisfactorily and the first batch of trainees returned to their States or Settlements to work under the supervision of Dental Officers. Five nurses passed the examination in June and nine were successful in December.

In Penang, Dental Nurses were stationed in clinics situated in schools. Here they worked as part of the school organisation and were visited by the supervising Dental Officer. This method of school treatment is probably the best way of employing Dental Nurses.

VENEREAL DISEASES

Treatment centres are available in all hospitals and out-patient clinics. A number of special clinics function in the larger centres of population. The following statement gives the number of cases treated :

Race.	Syphilis.	Gonorrhoea.	Other V.D.
Malays	3,104 ..	1,867 ..	345
Chinese	3,309 ..	1,825 ..	831
Indians	2,499 ..	1,191 ..	791
Others	136 ..	196 ..	35
Total, 1950	9,048 ..	5,079 ..	2,002
Total, 1949	10,960 ..	5,651 ..	1,866

SPECIAL INSTITUTIONS

INSTITUTE FOR MEDICAL RESEARCH

The Institute to-day is a branch of the Malayan Medical Service. It has a central group of laboratories in Kuala Lumpur organised by divisions for bacteriology, biochemistry, entomology, malaria, nutrition and pathology; a lymph station for the production of vaccine lymph; and branch laboratories in the States of Perak and Negri Sembilan. Restricted in its early years to medical research, the Institute has now an added responsibility to the Medical Services for the manufacture of biological products and the laboratory diagnosis of disease. Rather more than one-half of its permanent resources are reserved for medical investigation; but research is not restricted to the Malayan staff, for laboratory hospitality is extended to Commonwealth and foreign research workers and some of the most useful work of the past few years has come from collaborative effort with teams from America and the United Kingdom. During the past year the Institute has welcomed, among others, a third research team from the U.S. Army

Research and Graduate School in Washington, while a typhus research team from the United Kingdom, financed by a Colonial Development and Welfare grant has operated throughout the year in Malaya and neighbouring territories with the Institute as a base.

Bacteriology.

The Senior Bacteriologist was absent in Europe for most of the year. He visited the laboratories of the Pasteur Institute in Paris and the State Serum Institute, Copenhagen, to study the methods of manufacture of B.C.G. vaccine, and attended the International Congress on Anti-biotics held in Milan in May, contributing by invitation a paper on the use of chloromycetin in Malaya. There was necessarily some restriction of the divisional research programme.

Experiments in collaboration with the Lymph Station have been made to determine whether streptomycin can be used to destroy the gas-forming anaerobic bacteria which have led in the past to the rejection of many batches of vaccine lymph. The preliminary results are encouraging. The effects of the anti-biotics chloromycetin and aureomycin on *Leptospira* are also being investigated *in vitro*, and it is now considered possible that chloromycetin may prove to be a useful alternative to penicillin in the treatment of human leptospirosis.

The Perak branch of the Institute has continued trials of rapid methods for growing tubercle bacilli in the chick embryo. The recognition of infection is now supplemented by histological examination of the chorio-allantoic membrane.

In co-operation with the Perak Medical Department a small-scale study has been made of the effect of TAB inoculation on the Widal reaction. Examinations made two months after inoculation of 200 members of the Taiping Hospital staff showed that a marked rise in the Widal titre was usual.

Biochemistry.

The problems of nutrition in Malaya and the more complicated routine examinations beyond the scope of the hospital laboratories have taken up most of the time and resources of the Division of Biochemistry during the year. A small laboratory rice mill has been installed for the study of controlled methods of parboiling rice, and the distribution of thiamine and riboflavine in the rice grain has been examined by physical and chemical methods. There seems little doubt that the vitamins of rice, concentrated largely in the germ, are diffused to a great extent into the main body of the grain and are thus retained when the rice is milled. Further tests have shown that the main loss of vitamin during the cooking of white rice occurs during the washing process and that there is little further loss when excess cooking water is used and discarded. The systematic investigation of certain nutrients in different varieties of rice is being continued. Preliminary work is being done on the chromatographic separation of the amino-acids in rice. This method when fully developed should prove a useful tool for investigating certain nutritional problems in the Federation.

From the routine work of the division arises further evidence of the relative high frequency of diabetes among Indians compared with other races. Nearly half of about one hundred diabetic patients examined during the year were Indians, though Indians comprise only about one-sixth of the population of Kuala Lumpur and district.

Entomology.

Field investigations on DDT and BHC (Gammexane) have been continued and extended in the Division of Entomology. It appears that single doses of DDT at 200 mgm per square foot, or BHC at 40 mgm gamma isomer per square foot, remain effective in houses for about six months against *Anopheles maculatus*, the principal malaria carrier. House spraying against this mosquito twice a year should, therefore, be sufficient. Gammexane (BHC) seems to kill all mosquitoes, but against many culicine mosquitoes the effect is not lasting. DDT on the other hand, though it does not kill culicines, continues for a long time to drive them out of houses by its irritant effect, and prevents many from biting. These insecticides are also being tried against the other important vectors of malaria and against the vectors of filariasis.

A wealth of information is being collected at the Tampin malaria branch of the Institute on those aspects of mosquito biology which have a practical importance now that insecticides are directed against the adult insects. Serious gaps in our knowledge are being filled. It is now known, for example, where *A. maculatus* and other anophelines rest by day and where they can be collected in their outdoor hiding places among vegetation. From mosquitoes caught in this and other ways, the proportion likely to bite man or cattle under a given set of conditions and their innate biting behaviour in relation to their reluctance or inclination to enter houses are being studied.

As a larvicide, DDT in oil has been shown to be effective and extremely economical on still water, and is now in routine use in the Kuala Lumpur area. Present efforts are directed to finding a means of using it on flowing water against *A. maculatus*, where the difficulty is to get an effective distribution on the breeding places of this species. Results show that emulsification of the DDT/oil solution may be a feasible way out of the difficulty, and that emulsions are much superior to wettable powders for this purpose. The routine use of DDT as a larvicide on flowing water would be an important economy.

Malaria.

The Malaria Research Division has continued the experimental testing of anti-malarial drugs on hospital patients, an activity which has continued for over twenty years, interrupted only during the Japanese occupation. The drugs under trial were Proguan (Paludrine), Camoquin, Chloroquine, and its German prototype Resochin.

The studies reported from the Institute last year on the control of malaria in *kampongs* by house-spraying with the insecticide

DDT and BHC (Gammexane), have proceeded smoothly. Much of the time and resources of the divisional staff are taken up with this work, involving as it does the individual examination of over 3,000 persons twice a year, and the fortnightly blood examination of some 250 infants dwelling in scattered *kampongs* throughout four of the rice-growing valleys of Negri Sembilan. There is some evidence of a reduction of malaria in the *kampongs* under observation, but the incidence of the disease in the country as a whole has again been low, and accurate assessment of results is therefore difficult.

Nutrition.

An interesting finding has emerged from the feeding experiments which the Division of Nutrition is making in the Settlement of Malacca. A disease condition generally regarded as due to a deficiency of riboflavin, a member of the B2 vitamin complex, has been recognised in persons whose diet was rich in this vitamin. The explanation of this anomalous finding is not yet clear.

The Division has made a dietary and economic survey in a coconut-growing area on the Selangor coast. The Malay peasants in this area were little better off than peasants examined elsewhere, and there were some households on a bare subsistence level. The effects of supplementing the diet of the school children with a school meal were also studied.

A dietary survey among recruits for the Malayan Police showed the marked improvement in health and physique which results from training and more and better food. A preliminary report on this important work, already distributed in mimeographed form, is shortly to be published.

The feeding of infants has received attention by the Division. Among some groups of the community there are local customs which have a lasting, harmful effect on the health of the child. For instance, rice, "that which strengthens a thousand times", is often fed to Malay infants a few days old, and the diet of the mother restricted after delivery, customs which give the infant a diet very different from that of the mother's milk.

The Division maintains records of dietary deficiency diseases treated in the hospitals of the Federation. The general incidence of deficiency disease is slightly lower than in any comparable period since the end of the war, with one notable exception; a slight, but possibly significant, increase in beri-beri.

Scrub Typhus Research Unit.

The discovery of Chloromycetin has robbed scrub typhus of the dangers for which it was so feared in the past, but the disease still needs expensive hospital treatment and puts a worker out of action for several weeks. The Scrub Typhus Research Team, supported entirely by a Colonial Development and Welfare grant, is investigating how patches of ground become dangerous and, since rats are closely involved, is studying the life history of the Malayan forms of these ubiquitous pests.

Recent work has shown that colonies of scrub typhus infected mites occur in virgin forest and it is probable that they are

maintained by a native forest rat—Muller's Giant Rat. When the forest is cut down and the cleared land is neglected, infected colonies, maintained by the more numerous field-rats thereby introduced, enlarge and spread until areas of dangerous size and intensity develop. Detailed experiments are in hand at present to discover how far rats travel and how long they live.

A reliable mite-breeding technique has now been perfected. Many larval mites have been bred through to the adult stage in order that the two stages may be correlated in different species. The important vector mites have been bred through many generations and experiments on the ability of these mites to take up infection from rats and to transmit infection to their offspring are continuing.

In countries with more pronounced seasons, scrub typhus is a seasonal disease. The irregular fluctuations of the Malayan climate make it possible to analyse the effects of individual climatic factors, and these studies are being made on a wide front, helped by comparable collections of mites from Hong Kong, Sarawak and the Nicobar Islands.

In January a party from the unit, accompanied by the Forest Botanist, Mr. Wyatt-Smith, visited the small uninhabited island of Jarak in the Straits of Malacca. On this island the extreme conditions of a large infected mite-population borne upon a dense colony of rats provide a ready-made experiment in the maintenance of mite-populations. Later in the year two assistants of the unit, and one from the visiting American team, visited Sarawak to make collections of mites and their hosts and accompanied Mr. Tom Harrisson, Curator of the Sarawak Museum, on an expedition into the interior.

The Colonial Development and Welfare grant for research into the ecology of the vector of scrub typhus expired in April of this year. It has been given a preliminary extension to the end of the year while details of a further extension are being discussed.

Pathology.

Towards the end of 1949 the scope of the Division of Pathology was extended to include a small section for the study of virus diseases. Satisfactory progress has been made. Using the chick embryo technique, the Division is now able to cultivate certain of the viruses, and hospitals are beginning to make use of the facilities for diagnosis in virus disease which are slowly being developed. A promising laboratory test for smallpox, based on the well-known principle of haemagglutination inhibition has been developed.

A change in the technique of preparing canine rabies vaccine is under trial. Recent American work suggests that an efficient vaccine can be prepared from virus grown in the chick embryo. The first batch of vaccine prepared by this method from the Fleury strain of virus is ready for trial in conjunction with the Veterinary Department.

The investigation into the racial distribution of cancer continues; suggestive differences in site incidence are becoming apparent

although larger numbers are needed before definite conclusions can be drawn.

Filariasis Enquiry.

Steady progress has been made with the investigation of the distribution, transmission and treatment of filariasis, started by the Divisions of Entomology and Malaria Research two years ago. Visits have been made to endemic areas of the disease in Kedah, Province Wellesley, Penang Island and Pahang. Patients examined in Kedah one year after treatment with Hetrazan showed an improvement in their physical condition. A survey of the population of Pahang Tua, at the mouth of the Pahang River, revealed the extraordinarily high infection rate of 51 per cent. (315/619) a rate which is even higher than was found in the same area in 1937. Advice was given on the possibilities of controlling the disease. The treatment of cases with Hetrazan has now begun in Kuantan hospital.

Haematological Enquiry.

Early in 1950 a start was made with a haematological survey among various communities from rural and urban areas. The enquiry has two objects; firstly, to get an overall picture of the differences in haemoglobin levels in the various social and racial groups, and secondly to discover what proportion of the people with severe anaemia were suffering from nutritional megaloblastic anaemia. The thousand or so persons examined so far include Malays, Tamils, and Senoi and Negrito-Senoi aborigines, and observations on the families of Chinese squatters are beginning.

The U.S. Army Medical Research Team.

A third medical research team from the Virus and Rickettsial Diseases Section of the U.S. Army Research and Graduate School, Washington, was attached to the Institute from February to July. The results of their work will appear in American medical journals and will be communicated in due course to the Malayan Medical Service. This valuable liaison with American workers is a most welcome development in current research policy.

Routine Activity.

The Institute maintains a diagnostic and advisory service for the Federation of Malaya and manufactures biological products which are distributed throughout the peninsula and as far afield as Burma. In the Kuala Lumpur and Ipoh laboratories 73,033 laboratory examinations were made during the year for the medical services and for private practitioners. Prophylactic vaccines prepared include 1,575,000 doses of vaccine lymph, 86,650 cc of typhoid vaccine, 48,250 cc of cholera vaccine and 51,400 cc of vaccine for human and canine rabies for prophylaxis.

Rabies.

The smouldering post-war enzootic of rabies in northern Malaya, a legacy of the Japanese occupation, is not yet under control. Brains from 229 suspected animals, mostly from Kedah, Perak and Kelantan, were examined and 125 animals proved to be rabid.

A vaccination campaign among dogs, using the new chick-embryo vaccine prepared from the Fleury strain of virus is planned by the Veterinary Department when vaccine becomes available.

Yellow Fever.

Vaccine for yellow fever prophylaxis is not prepared in Malaya but is bought from the South African Institute for Medical Research in Johannesburg. Regular assays of potency are necessary, however, to meet international obligations. The Institute is recognised by the World Health Organisation as a centre where the standard potency tests, performed on groups of mice, may be done, and 23 batches of vaccine were so tested during the year. There are three centres for yellow fever inoculation in Malaya, namely, at Singapore, Kuala Lumpur and Penang.

Smallpox vaccination.

The demand for vaccine lymph remains high and totalled 1,652,270 doses during 1950. The Lymph Station has, in addition, met a considerable demand (for 195,000 doses) from the Burma Government during the year, and a further demand of nearly a million doses is expected over the next twelve months.

Training of Technicians.

Nine technicians from the Medical Department and elsewhere have received training in the laboratories during the year. A scheme whereby laboratory assistants of the Medical Department receive three years' probationary training in the Institute is planned but is not yet in operation.

LEPER SETTLEMENTS

There are three leper settlements in the Federation, the Sungei Buloh Settlement in Selangor, the Pulau Jerejak Settlement in Penang and the Leper Hospital, Johore Bahru.

The treatment of leprosy with sulphone preparations and particularly with diamino-diphenyl-sulphone has been expanded to the stage where it is now the general routine treatment. The effect of the new drugs is more evident in the general improvement in the condition of patients than in the number who are discharged as apparently cured. This number is, however, steadily increasing and 230 patients were discharged from the leper settlements during the year. The total number of patients in the three settlements in the Federation is now 3,017.

Leper Settlement, Sungei Buloh.

During the year the number of patients in the settlement increased from 2,130 to 2,222. The figures are :

	Men.	Women.	Boys.	Girls.	Total.
Malays ..	164	43	13	2	222
Chinese ..	1,076	488	114	75	1,753
Indians ..	196	24	10	4	234
Others ..	9	3	—	1	13
	1,445	558	137	82	2,222



Chinese girls washing for tin.

MENTAL HOSPITAL

The Central Mental Hospital at Tanjong Rambutan deals with all cases of mental disease from the Federation of Malaya. Four rooms for first class patients have been provided and have proved their usefulness for both Asian and European patients.

The admissions during the year were 2,208 as compared with 2,132 in the previous year. There were 1,487 discharges, of whom 888 were graded as recovered, 476 as relieved and 123 as not improved. Deaths numbered 381, yielding a death rate of 7.68 per cent. of the 4,958 patients treated.

Deep Insulin and Electric Convulsive Therapy continued to be used with good results.

PHARMACEUTICAL LABORATORY

The last of the equipment ordered in 1946, together with further equipment ordered in subsequent years, arrived at the end of the year.

This equipment included a mixing/sifting machine, an ointment mill, and an extraction distillation plant. The ampoule filling room was fitted with a small air-conditioning unit and working conditions therein are now satisfactory.

Over 143,000 ampoules were made compared with 110,000 in 1949; and 56,319 lbs. of galenicals and other preparations as compared with 65,500 in 1949.

The production of sulphone preparations for the treatment of leprosy was raised to 449,850; and 921,808 doses of other preparations for injection were produced.

ORTHOPAEDIC APPLIANCE CENTRE

Although comparatively unknown to most people in the Federation, the Centre was kept busy throughout the year with demands not only from the Federation and Singapore, but also from Siam and from His Majesty's Forces in the Far East. Enquiries have also been received from Sarawak and Ceylon.

In spite of working under difficult conditions, the Centre has served the needs of many physically handicapped people, and has given them the chance of independence where in the past their lives have been a burden to their families or to welfare institutions.

Artificial limbs and other appliances have been available in the past only from overseas; but they can now be supplied more quickly and more cheaply, with the added advantage of accurate "on the spot" fitting.

The Centre has also been successful in the manufacture of plastic fingers, noses, ears, and other parts, and there is evidence of a growing desire for such prosthesis among those in need of it. The service is particularly valuable in view of the fact that plastic surgery is comparatively unknown in this country.



Putting the finishing touches to an artificial leg at the Orthopaedic Appliance Centre, Kuala Lumpur.

CHEMISTRY

The Department of Chemistry had greater demands made upon its services than ever before. The arrival of further equipment and chemicals enabled output to be stepped up despite grievous shortage of adequately trained staff. In the Penang and Kuala Lumpur branches the analytical services rendered to the public showed an increase of 53 per cent. and 20 per cent. respectively. These services include analysis of a wide variety of local natural products for specification, minerals, ores, fats and foodstuffs.

The Department continued its close co-operation with many Government Departments particularly Customs and Excise, Police and Medical. In a large number of cases the work is necessary for the collection and protection of revenue and is normally of a routine nature. Besides routine chemical and bacteriological analyses of regular public water supplies, a large number of analyses has been carried out to ensure that Resettlement Areas have satisfactory water supplies.

It is hoped that the early cessation of Emergency demands will permit of an expansion of the present considerable regular examinations of milk, foodstuffs, drugs and medicines. There are many food products on sale in this country whose quality is questionable and would repay investigation.

Part III

HOUSING

Standards of housing everywhere are determined by climatic conditions, the customs of the people, and the industrial development and economy of the country; and in the Federation of Malaya, which is no exception to the general rule, these factors are reflected in the diversity of the standards and types of houses erected.

Housing in the Federation may be classified under four separate heads, namely:

- (1) Housing of staff and labour forces on mines and estates, and by the Government.
- (2) Housing of agricultural small holders in small organised communities (*kampong* dwellers).
- (3) Housing of non-resident contract, estate and mine labourers, and of scattered agricultural small holders, including "squatters".
- (4) Housing in village and town areas.

The Labour Department controls housing provided for resident labour forces on mines and estates by enforcing satisfactory standards of construction, sanitation and water supply. Typical plans for the design of house units are supplied by the Department and consideration is given to the prevention of overcrowding as well as to privacy and to general convenience. In certain recent schemes the desirability of planning the layouts as community groups has been appreciated, and social amenities have been

provided. Higher standards of accommodation and planned layouts are improvements to be expected in the future.

Government housing of staff and labour forms a material contribution to rural housing. Improvement in standards of design and construction, and the erection of additional accommodation, in particular for Security Forces, have formed the greater part of the rural housing programme during the year.

Tradition has evolved the construction of the Malay *kampong* house, a satisfactory type of small agricultural dwelling. The general design and appearance is attractive and the layout convenient. The construction with local materials is economic, and the personality of the owner is often expressed in its adornment by wood carving. The layout of the small holdings dispersing, as it does, the population over a wide area is, however, not conducive to the development of a social life and the provision of public services such as education, health and shopping facilities, is difficult. The chief problem of the *kampong* areas is, therefore, the need for sociological planning and the improvement of public services. An interesting development to meet the special problems of the rice growing areas is the planned proposals for the Tanjong Karang area in Selangor. This regional plan provides, in addition to the *padi* fields, mixed agricultural lands each approximately one acre in extent on which dwellings will be erected, as well as villages with shopping markets and educational facilities at convenient centres.

The squatter, the non-resident estate and mine contract labourer together with isolated small agricultural holders form the hard core of the housing problem in the rural areas. Standards of construction and design are marked by their absence, occupation of land is often unauthorised, and little or no thought is given to proper water supply or sanitation. However, the dispersion of the houses coupled with the habit of the Chinese people of boiling their water before they drink it have mitigated the potential hazard to health. Resettlement schemes on an extensive scale are being planned and their completion will solve many of the main problems. These schemes are designed to form organised communities with educational, shopping and social amenities. Reserves have been made for playgrounds and community centres, and water supply and sanitation are provided. For reasons of expediency and economy, it has not always been possible to enforce good standards of construction and design of the houses, but it should be possible to effect these improvements in the future. Resettlement, when complete, will form a revolutionary step forward in rural housing and should ultimately remove most of the existing objectionable features.

With the exception of standards enforced by the Labour Department for the housing of estate and mine labour forces, the major portion of rural development is not subject to building or planning control; but regulation of the sub-division of lands, and the building tradition of the *kampongs*, together with resettlement schemes, form a satisfactory basis for advancement when building and planning administration are ready for introduction in rural areas.

All building development within the boundaries and environs of the villages and towns is subject to planning and building by-law control. This control is primarily of a negative type, prohibiting improper development and low standards of construction. The Housing Trust Ordinance enacted during the year will, however, permit of the formulation of a positive housing policy. In the past, lack of finance for the erection of houses for the lower income groups and difficulties in the sub-division of lands, limited the provision of small houses. The Housing Trust, with available capital, the authority to raise loans, to build and rent houses, and to assist private development with loans, and moreover with the power to compel the layout and development of vacant lands, will ensure in the future a positive policy of housing development shaped to meet the requirements of the country.

The overcrowding in the urban areas has been accentuated by the continued movement of rural population into the larger towns. Housing in these areas varies extensively in type and standards. Permanent construction in the past consisted primarily of large detached houses, shop and terrace-houses, Government quarters and small bungalows. The standards of construction and accommodation of the first group are high, but building costs and rents in this group are beyond the means of all but a small portion of the population. The shop and terrace-houses provide accommodation for a large portion of the urban population. The rents are high even in this group but, on account of shortage of accommodation, one house is often shared by many families. The danger to health by this overcrowding is increased by the low standard of ventilation provided in this type of building. Dr. Morland in his report on Tuberculosis in Malaya states—"the shop-house must be looked on as the most potent single factor in the production of the high rate of tuberculosis in Malaya". A Government Committee has been formed to examine the detailed design of the shop-house and to submit recommendations for improving new construction, and alleviating existing conditions. Improved designs have been prepared by private enterprise during the year, and a small proportion of private developers are aware of the necessity of adopting new standards. Government quarters provide a substantial contribution to the housing of the middle and lower income groups, the estates being laid out to form garden suburbs with enlightened standards of design and construction. During the period under review, the Government programme provided the major portion of small permanent houses erected in urban areas. Owing to the high cost, which precludes letting at an economic rent, the construction of small detached bungalows by private enterprise has been on a very limited scale.

The overcrowding of the shop-houses, the movement of population into the towns, and the high cost of building have resulted in the continued erection of temporary houses. During the Japanese occupation a large number of temporary houses were erected, and the present housing shortage has further bedevilled the problem of control of this type of structure. Often the individual buildings are satisfactory and of not unpleasant design, but they are usually

sited without regard to the provision of drainage facilities, water supply and road access—or, for that matter, fire hazards. The Administration has been strained for many years in trying to control this type of development. Layouts have been prepared to direct development to suitable sites, but the majority of developers are indifferent to the advantages of providing proper services and a planned layout. Major reconstruction schemes will be required in the future to rectify this unfortunate and undesirable development. In the attempt to promote cheap alternative construction, relaxations of by-law standards have been permitted but the only final solution will be by action of the Housing Trust in the provision of accommodation satisfactory in price no less than in amenities.

The activities of the building industry were primarily directed during the year to security works and the provision of housing and the limitation of supplies of labour and material prevented any immediate expansion of the building programme. Continued sub-division of private lands on a large scale is however an indication that when building prices fall, many private enterprise schemes will be promoted.

Co-operative Housing Societies continue to be formed and their membership has steadily increased. Lands for development have been acquired but lack of capital has restricted progress. Good progress can be expected in the future from this type of enterprise.

Part IV

SOCIAL WELFARE

GENERAL

The decentralisation of the functions of the Department commenced on the 1st January, 1948, when a Social Welfare Officer was posted to each State and Settlement. The policy of decentralisation continued during the year and the recommendations in Legislative Council Paper No. 41 of 1949 (that all responsibility for matters coming within the scope of "General Welfare" should be transferred to State and Settlement Governments) will take full effect on 1st January, 1951.

Voluntary organisations continued to develop their work as supplementary to that of the Department. The State and Settlement Welfare Councils, as independent bodies with their own constitutions, were able to devote attention to local problems and the encouragement of public interest in social welfare services. Management Committees of Homes and Institutions, the Boards of Governors of the two Approved Schools, Juvenile Welfare Committees, Community Committees specialising in family disputes, the Women's Service League and those interested in Blind Welfare, all made a valuable contribution in close co-operation with the Department.

The Emergency placed added duties upon all officers of the Department, but without serious interruption to normal social

welfare services. Nutrition schemes for children not attending schools, the United Nations International Children's Emergency Fund feeding schemes, rural welfare and the establishment of community centres all made satisfactory progress.

The interim Malayan Youth Council set up in 1949 was firmly established during 1950, ratified its constitution and was represented at the meeting in Istanbul of the World Assembly of Youth.

An Acting Principal Probation Officer, with the responsibility for establishing the Federation's first course of training for locally recruited Probation Officers, for setting up Juvenile Courts and for developing Approved School services, was appointed in February. Three fully experienced expatriate officers entered the Service and were posted to Perak, Selangor and Penang. The result has been that the Juvenile Courts Ordinance, which became law on the 1st December, 1949, is now in force throughout Malaya.

The Advisory Committee on Social Welfare for the Federation is the Central Welfare Council. The branch Welfare Committees in the States and Settlements are advisory to this body.

The directives for Social Welfare Officers in the States and Settlements and for case work in general welfare received the approval of the Federal Government.

TRAINING

Four Social Welfare Scholars returned from England and were posted, one to the Probation Service and the other three as Cadet Officers for duty in Penang, Malacca and Pahang respectively.

Two basic training courses at Headquarters were held during the year. The first, from June 1st to July 30th, was attended by six recruits to the Department, a Welfare Inspector and the seven United Nations Children's Emergency Fund Scholars who had been selected for Scholarships tenable in England. The cost of their training at the University of London is being borne by the Fund.

A second Course from October 7th to November 1st was held for Probationer Social Welfare Officers and Welfare Inspectors—thirteen in number—from all parts of the Federation. This course was in keeping with the policy that each serving officer should receive training and must pass a Departmental Examination.

The syllabus of study included case work, juvenile delinquency, the Children and Young Persons Ordinance, the Juvenile Courts Ordinance, elementary psychology, the psychology of adolescence and citizenship.

In the training courses the Department owed much to the help given by other Government departments and by unofficials, for lectures on co-operation, labour, resettlement, Chinese affairs, the work of the Agricultural, Veterinary, Drainage and Irrigation Departments, visual aids to education, nursery work, boys clubs and health problems. Visits of observation to places of interest were included. Authorities on religious law, customs and traditions addressed the classes.

PROBATION AND APPROVED SCHOOL SERVICES

The first training course for Probation Officers was held in Malacca from 1st March to 30th June, 1950. Twelve men and two women attended. The objective was compliance with the provisions of the Juvenile Courts Ordinance which places on the Department responsibility for the Probation Service and service in Juvenile Courts. Training, in the wide range of subjects of which Probation Officers must have knowledge, was both theoretical and practical. All lecturers and examiners were recognised authorities in their respective fields.

The twelve Presidents of the Sessions Courts are Presidents of the Juvenile Courts. Juvenile Courts can therefore be held at any centre visited by the Presidents when on circuit. A Probation Officer must be present at each centre.

The Probation Service has now been established throughout Malaya. There are three expatriate officers, one of whom is acting as Principal Probation Officer at Headquarters, and seventeen Asian Probation Officers, three of whom have had their training in England and the other fourteen at the Malacca Course. Each State and Settlement, with the exception of Perlis which is served from Kedah, has at least one Probation Officer.

All the students successfully passed the Departmental Examination and were posted to States and Settlements where they assisted in setting up the Juvenile Courts, in which their chief activity as Officers appointed under the Juvenile Courts Ordinance will lie. The number of Juvenile Courts, which was 39 at the end of the year, is expected to increase to about 88. In addition to duties under the Ordinance the work of these Officers covers adult probation, certain matrimonial disputes, the disposal of destitutes and vagrants, the probation and surveillance of opium addicts and work for discharged prisoners. Probation Officers act as after-care officers for discharges and releases on licence from the Advanced Approved Schools as well as from Approved Schools. They have begun the work of assisting the Prisons Department in dealing with the problems of short-term, and some cases long-term prisoners.

There are two Approved Schools, one at Sungei Buloh for seniors and another at Taiping for the junior and intermediate categories. Taiping School was improved during the year by the building of classrooms, and workshops, the renovation of the Superintendent's and staff quarters and the improvement of the playing field. Development work at Sungei Buloh came to a stop when the area was taken over for Resettlement purposes. Another site is being provided.

The Camp School at Morib is ready for use but is at present occupied by women and children dependants of detainees. Work on Telok Ayer Tawar School began and this will be ready for use early in 1951.

During the year an allocation of over one million dollars was made from the Colonial Development and Welfare Fund to provide the capital expenditure for four Approved Schools for boys and an

Approved School for girls, ten Remand Homes, and two Camp Schools. It is hoped that work on the schools will begin in 1951 and be completed within three years.

There is one Remand Home each in Malacca, Penang and Trengganu as well as Homes of a temporary nature in Selangor, Perak, Johore and Kelantan. In Pahang, Kedah and Negri Sembilan special arrangements are made for accommodation as and when it is needed.

Services for the prevention of juvenile delinquency steadily grew. The number of boys' and girls' clubs and children's playgrounds is on the increase. In these services voluntary organisations, assisted by Probation Officers and Social Welfare Officers, played a prominent part.

The Guidance Committee of Selangor opened the Flying Club Road Hostel for ex-Approved School boys; and the Rotary Club of Kuala Lumpur has drawn up its plans and completed preparations for building another hostel in 1951 for such boys.

CHILD WELFARE

Forty-six Places of Safety were gazetted under the Children and Young Persons Ordinance. These receive orphans and other children in need of care and protection, provide them with training and make arrangements for their future employment. Places of Safety have been admirably served by voluntary committees of public spirited persons interested in the well-being of children.

The number of children placed in foster homes increased and with that came an increasing need for regular visits by social workers, official and unofficial, to follow the progress of the children.

As yet the Department has no Children's Officers to exercise the full and far-reaching powers of the Children's Ordinance; but steps are being taken to set up a complete scheme of work.

YOUTH WELFARE

Youth Organisations have representation on each Welfare Committee.

The number and range of youth activities increased during the year and this, in turn, stimulated the development of youth work centred on Community Centres and of organised games for youths and children during leisure hours. In most States and Settlements there are officers of the Department who have had some training in youth work and the organisation of clubs.

Social Welfare Scholars in England are receiving training in youth leadership work. They will be able to reinforce and help to put into practice the training now being given within the recognised youth organisations already strongly established in Malaya.

WELFARE OF CHILDREN AND YOUNG PEOPLE IN NEED OF SPECIAL CARE

Physically and mentally handicapped children were maintained in Government and in Grant-aided Homes and the handicapped child need no longer be neglected or wrongfully used. There is,

however, as yet no special institution for these special classes of children, but Y.M. Tengku Ampuan Fatima of Selangor has generously placed her house at Morib at the disposal of the Department for use as a Home for crippled children. The Home has been reconditioned and its furnishings and equipment are being provided from donations.

Destitute and vagrant children were cared for in Places of Safety.

Attention was given, to a limited extent, to the problem of children and young persons in moral danger, each child whose case was brought to the notice of the Department, being removed from the source of danger and placed under care and protection. Work in this field is, however, limited by the fact that the Department has no trained Children's Officers.

Each Social Welfare Office is a Citizens' Bureau and a Social Information Centre. Additional and valuable work under this head was carried out by the Community Welfare Committees and the Women's Service League. The latter received a grant-in-aid from the Government to assist in the expenses of administration.

The Department's General Welfare Vote—which will be taken over by the State and Settlement Governments in 1951—provided the Malayan counterpart of Public Assistance in the United Kingdom. The assistance took the form of aid to become self-dependent, encouragement in the establishment of working centres in rural areas and help in reviving home crafts and industries.

For aged persons there are Homes and Institutions where those who can no longer earn a living are encouraged to learn new trades and make a useful contribution to their upkeep.

RURAL WELFARE

The General Welfare Vote has been increasingly used for the improvement of social conditions in rural areas, an activity in which the State and Settlement Governments have exercised both foresight and energy. There is, however, a great need for the expansion of rural work which can come about only by greater concentration on rural problems on the part of Social Welfare Officers, the smallness of whose staffs at present limits work in that field.

As Community Centres grow in numbers so will the opportunities to provide rural welfare services. There has been an increase in the number of such Centres, notably in Negri Sembilan. Real progress can, however, be made only if those in charge have training in Community Centre work.

Nutrition feeding schemes for children in rural areas were supplemented by the establishment of child welfare work in Community Centres. In addition each Centre is designed for the full range of children's activities.

BLIND WELFARE

Steady progress continued in building up this technical branch of the Department's work. The plan for the establishment of a Braille printing unit for the Federation was forwarded by the

arrival of the printing press donated by the Central Welfare Council. A site was selected for the building to house it and there will be room on the same site for the Training Centre for the Blind which was also envisaged in Legislative Council Paper No. 17 of 1950.

There was also some progress with the third proposal in that Paper, namely, the scheme for the Princess Elizabeth School for Blind Children which is to be built at Johore Bahru. The capital cost of the School will be provided for by the Princess Elizabeth Fund together with allocations from the Central Welfare Council out of the proceeds of the State and Settlement "Welfare Weeks".

Registration of blind persons went on steadily. During the year special concessions, namely, free licences for wireless sets and reduced railway fares, were approved for the blind.

The Blind Welfare Scholar sent by the Central Welfare Council for training to England returned to Malaya after high successes in theory and practical courses. The Blind Welfare Officer was also in England on study leave.

Voluntary workers have done excellent work in translating Malay works and other books into Braille.

The Constitution of the Association for Blind Welfare and the Prevention of Blindness has been drawn up and the Association will begin its work in 1951.

GRANTS-IN-AID

Unofficial bodies managing Homes, Institutions and Places of Safety were assisted by grants-in-aid. There are 30 such Homes and Orphanages. In addition the Department administers grants to voluntary organisations for development work in rural areas, for boys' and girls' clubs and for community centres.

COMMUNITY FEEDING

The community feeding centres known as Public Restaurants continued to serve their purpose of providing meals of good quality cooked under hygienic conditions for the lower income-groups of the community. Towards the end of the year the feeding centres were in most cases taken over by State and Settlement Governments.

THE EMERGENCY

A special allocation made to the Department for the relief of the dependants of detainees, mainly in the form of food parcels, enabled this work to continue during the year. Clothing according to need was issued to dependants of detainees at the time of repatriation, whether to China, India or Indonesia.

Welfare staffs were increased to deal with the necessary administrative arrangements for dealing with such dependants. The transit camp for dependants was improved by providing additional dormitory space and making better feeding arrangements and by providing accommodation and equipment for a dresser and special amenities for many hundreds of children.

In liaison with the Police authorities feeding arrangements for detainees in transit throughout the Federation were improvised through the community feeding centres.

Early in the year the Department was asked to help by making arrangements for the supply of food to aboriginal groups assisting, and being protected by, the Police and Military. As a result of co-operation with the Police, Royal Air Force and Air Dispatch Units, the Department was responsible for the air drop of 151,831 lbs. of food supplies from February to the end of December, 1950.

RELATIONSHIP WITH VOLUNTARY ORGANISATIONS

Co-operation in the States and Settlements and at Federal Headquarters between the voluntary organisations and the Department has been most satisfactory. The note-worthy development is the increasing attention of these organisations to special branches of social work, for example, in the campaign against tuberculosis, in the management of Homes and Orphanages, in work in and for the Juvenile Courts and the Probation Services, in Discharged Prisoners' Aid Societies, after-care for ex-Approved School boys and blind welfare. The State and Settlement Committees have their special sub-committees to further each scheme of work undertaken by them. More people are interesting themselves in youth work and the Rotary Clubs and similar bodies are developing the theme of constructive community service. "Welfare Weeks" throughout Malaya were an outstanding success. In Pahang the State Committee built a Home for old people, in Malacca the Jubilee Boys Home was completed, in Negri Sembilan the Community Centres were begun, in Selangor the Guidance Committee formed its Boys' Hostel and the Perak Government went ahead on the construction of the State Home for the Aged.

Part V

GOVERNMENT INFORMATION SERVICES

DEPARTMENT OF PUBLIC RELATIONS

The Special Committee of the Federal Legislative Council set up to investigate the working of the Department of Public Relations reported in June, 1950. The Committee expressed appreciation of the services which the Department was giving to the public and recommended that the Department be made a permanent part of the machinery of Government. This recommendation was accepted.

The production resources of the Department necessarily continued to be largely devoted to the preparation of all types of publicity material relating to the Emergency. The number of Emergency leaflets in vernacular languages produced during the year exceeded 35 million. Publicity material produced specifically for Anti-Bandit Month alone amounted to some 170,000 posters, 4,100,000 leaflets, 40,000 booklets and other material.

The work of the field teams and mobile public-address units amongst the rural population was expanded. The increasing production of locally made films by the Malayan Film Unit was

of considerable assistance to the work of these mobile units. The fortnightly newsreel produced in Malay by the Film Unit proved exceedingly popular with rural audiences throughout the Federation and provided a most useful channel for imparting information about current events. At the end of the year plans to equip a further 30 such units were in hand.

To the regular weekly newspapers published by the Department in Malay (50,000 per week) and Tamil (30,000 per week) were added a Chinese paper for squatters and resettlement areas (30,000 per issue) and a monthly Malay paper for the information of the members of the Malayan Police Force.

The publicity material produced during the year included a series of posters and booklets designed in collaboration with the Rubber Research Institute with the object of improving the standard of rubber produced by small-holders. Publicity and informative material was also devised and produced for a number of Government departments and for the Public Health Education Committee.

The Federal Film Library operated by the Department now contains more than 2,000 copies of 16 mm. educational films which are available for use by schools, clubs, technical associations and estates or other groups possessing projectors. The total number of films borrowed during the year was 6,098. It is estimated that a monthly average of 350,000 people in rural areas saw films shown by the Mobile Units of the Department while schools and other users exhibited them to not less than 97,000 people.

Close liaison with the Department of Broadcasting was maintained and material suitable for vernacular programmes was provided on an increased scale. The Department also published for use in schools a number of booklets based on radio programmes including "How the Constitution Works", "What Government Departments are Doing" and "Malayan Affairs".

Regular Press Conferences continued to be held by the Federal Government throughout the year. In addition more than 4,200 Press Statements were issued through the Press Division of the Department. Of this number 2,618 were issued on behalf of the Federal Government, 975 on behalf of the State and Settlement Governments, the remainder being on behalf of the Services, and of the Government of Singapore.

BROADCASTING

Throughout the year programmes were broadcast from Kuala Lumpur, Penang and Malacca in the Malay, Chinese, English and Tamil languages, the hours of broadcasting being generally the same as those employed in 1949. Relays from the Singapore station made up a considerable part of the programmes, particularly in the sphere of talks and features connected with the Anti-Bandit Campaign. During the year, however, the Federation stations increased their own individual output, both of music and of the spoken word. This increase of locally-produced programmes, the result partly of the

policy increasingly to meet local requirements and partly of the need to offset the poor quality reception on short wave from Singapore that prevailed at certain times of the day and periods of the year.

The most outstanding feature of the year was the contribution by the Federation Broadcasting stations to the Anti-Bandit Month campaign. During this period of approximately three months, the output of locally originated talks and feature programmes dealing with the Emergency exceeded by far anything that had previously been attempted. No less than 96 talks, interviews, eyewitness accounts and features, including broadcasts by surrendered and captured bandits, were transmitted at this time. Ninety-five per cent. of Radio Malaya's contribution to the campaign originated from the three Federation Stations, although for technical reasons it was broadcast from Singapore.

A new 5 KW shortwave transmitter was brought into full operation at Kuala Lumpur in January and the medium wave transmitter used for the Blue Network at Kuala Lumpur was increased in power from 250 watts to 700 watts. Work continued on the new transmitting stations at Kajang and at Penang, and if the present rate of progress is maintained, the two new stations should be completed in 1951. Extensive studio rehabilitation at Kuala Lumpur was started in September but programmes continued uninterrupted.

The average number of hours of broadcasting in each language per week, exclusive of schools broadcasts, was: English—from Kuala Lumpur 54½ hours, from Penang 54½ hours, from Malacca 27½ hours; Chinese—from Kuala Lumpur 18½ hours, from Penang 13½ hours, from Malacca 6½ hours; Malay—from Kuala Lumpur 14½ hours, from Penang 8 hours, from Malacca 14½ hours; Tamil—from Kuala Lumpur 17½ hours, from Penang 17½ hours, from Malacca 10½ hours. Chinese programmes were broadcast in the Mandarin, Cantonese, Hokkien, Teochew and Khek dialects.

There has been a considerable extension in the number of schools now listening daily to the series of educational broadcasts which are compiled especially for English, Malay and Chinese schools; and surveys which have been made indicate that this Schools Broadcasts Service is valuable and extremely popular.

The cost of a Broadcast Listening Licence remained the same as in previous years, \$12, and the total number of licences issued up to December 31st was 46,522. Revenue, including fees received for the issue of duplicate licences and Individual Sale Licences, amounted to \$611,760, shewing an increase of \$175,693.50 over 1949.

The estimated expenditure of the Department of Broadcasting in the Federation of Malaya for 1950 was \$1,048,336 against \$840,605 for 1949.

The different types of programmes broadcast during the year occupied the following proportions of the total hours of broadcasting time:

Features and talks	..	..	9.6 per cent.
News broadcasts	..	..	14.5 "
Entertainment	..	..	75.9 "

MALAYAN FILM UNIT

The decision, taken late in 1949 to put the Film Unit on a permanent footing put new life and purpose into the Department.

This was reflected in the special efforts made by the Unit to assist in the success of Anti-Bandit Month. Seventeen trailers of varying lengths, all dealing with various aspects of The Month, were produced—at an average rate of one every four days—and distributed to commercial cinemas in the Federation and Singapore.

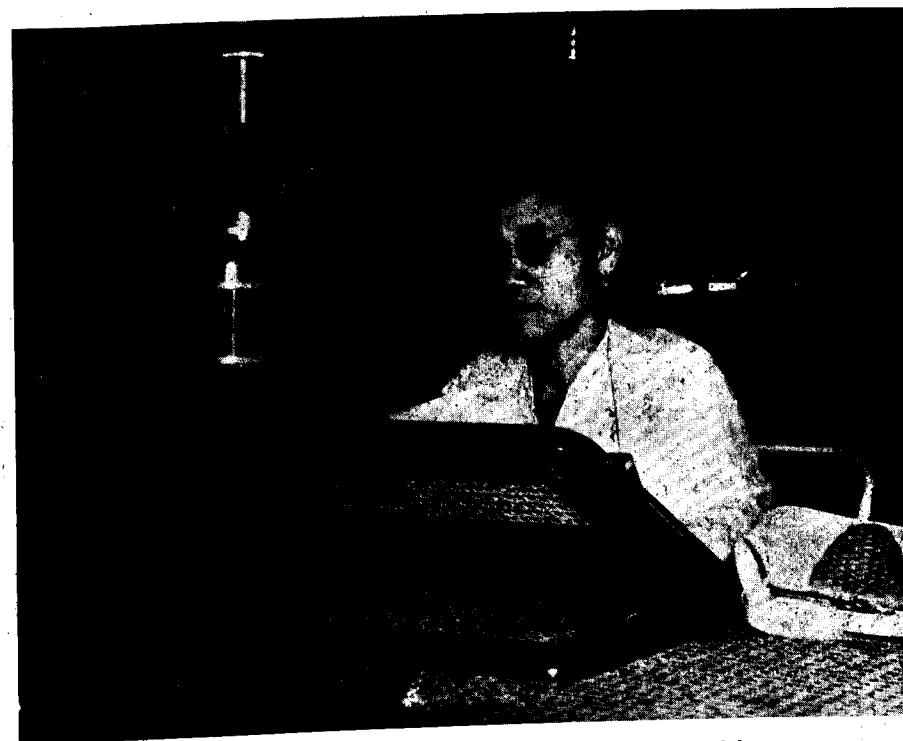
At the same time two documentary films were produced, one for the War Office, called "Jungle Warfare Air Supply" and the other, "The Harvest Ahead" dealing in detail with all phases of life at the new University of Malaya.

In March another documentary film, produced in English, Malay, Chinese and Tamil, was made for the Malayan Association for the Prevention of Tuberculosis. It shows how tuberculosis affects the lives of the people and what should be done to combat the disease.

Half way through the year six short films sponsored by the Rubber Research Institute of Malaya were started. Each deals with some aspect of rubber production by smallholders and each demonstrates how better methods will improve both product and income.

Two newsreels were produced monthly throughout the year, one "The Malayan Gazette" in English, and the other "Berita Melayu" in Malay. These have proved very popular, the "Malayan Gazette", being shown in commercial cinemas and "Berita Melayu", reduced to sub-standard (16mm) size, by the Department of Public Relations Mobile Cinema Units. Several trailers, each dealing with some aspect of the Emergency, have also been produced and similarly distributed. Mr. Stanley Hawes, Producer-in-Chief of the Australian National Film Board, visited the Federation in March, 1950, to investigate and report on the organisation and staffing of the Unit. He made a number of recommendations, the chief of which were that the Unit should be permanently located in Kuala Lumpur and that permanent buildings should be erected to house it; and also that a Malayan Film Board should be constituted. These recommendations were accepted and a Colonial Development and Welfare grant for the new buildings was subsequently made. The Malayan Film Board was also set up and the remaining recommendations made in the Report were placed before it for consideration. Since its inception the Board has taken an active interest in the affairs of the Film Unit and as a result the Unit is now in a very favourable position regarding new staff and equipment.

In October it was decided that propaganda by means of films should be intensified and, to that end, the number of mobile cinema units operated by the Department of Public Relations considerably increased. As a corollary it will be necessary for the Film Unit to produce an even larger number of films in 1951 and also to augment their output by acquiring films made by the United Kingdom Central Office of Information and "dubbing" them into vernacular languages.



A Malay woman Trade Unionist speaking over Radio Malaya.



A production crew of the Malayan Film Unit at work in a rubber estate, making an instructional film for the Rubber Research Institute of Malaya.



A survey team at work in Malacca.

Chapter VIII

LEGISLATION

NEW LEGISLATION

During the year 1950, 76 Ordinances were added to the statute book. Of these, 15 are unifying and consolidating measures, 21 are new laws, 31 are amending legislation, 2 are repealing Ordinances, 1 is a Clarification measure, 2 are Supply Ordinances and 3 extend the provisions of the former Federated Malay States laws to the Malay States and Settlements. There is also a revival of an old Ordinance that had been allowed to lapse, viz., the Legal Representation of His Majesty's Forces Ordinance.

Those Ordinances of particular interest are :

- (1) The Malayan Auxiliary Air Force Ordinance, 1950.

This Ordinance provides for the establishment of an Auxiliary Air Force for the defence of Malaya. Every male person who is a British subject or a Federal Citizen is eligible for enrolment.

- (2) The Prevention of Corruption Ordinance, 1950.

This measure applies a uniform anti-corruption law throughout the Federation in place of those existing in the former Federated Malay States, the State of Johore and the former Straits Settlements.

One important provision of this measure is that the Court is allowed to take into consideration as corroborating evidence pecuniary resources or property disproportionate to the known resources or income of an accused person.

- (3) The Registration of Schools Ordinance, 1950, replaces the laws in force in the States (except Trengganu which had no law on the subject) and the Settlements and introduces certain changes and additions to the law which experience has shown to be necessary or desirable. One of these changes will make correspondence schools subject to the Ordinance in future.

- (4) The Civil Liability Ordinance, 1950.

This measure declares the law relating to "Civil Liability" payable to members of the Local Defence Forces during the war and provides for the making and payment of awards in respect thereof and for gratuities to be granted in cases of special financial

hardship arising in consequence of the cessation of "Civil Liability." No legal proceedings shall lie or be instituted or maintained in any Court on account of relief or allowance in respect of any period of time subsequent to the 15th day of February, 1942.

- (5) The Malayan Royal Naval Volunteer Reserve Ordinance, 1950, provides for the establishment of a volunteer force for the naval defence of Malaya. Enrolment in the Force is confined to British subjects and Federal Citizens.

- (6) The Weekly Holidays Ordinance, 1950.

This Ordinance provides for a weekly holiday for persons employed in shops, restaurants and theatres.

- (7) The Local Authorities Elections Ordinance, 1950.

This measure aims to provide for elections to Local Authorities and for matters incidental thereto.

- (8) The Post Office Savings Bank (Revaluation of Withdrawals) Ordinance, 1950, provides for the revaluation of amounts withdrawn during the Occupation period from the Post Office Savings Bank. The amounts thus withdrawn will be revalued in accordance with the scale set out in the Schedule to the Debtor and Creditor (Occupation Period) Ordinance, 1948.

- (9) The Public Trustee Ordinance, 1950, consolidates the law on the subject. This measure also provides for the transfer of trusts to the new Public Trustee and for the taking over of trusts accepted by the Japanese Public Trustee in certain approved cases.

- (10) The Housing Trust Ordinance, 1950, provides for the constitution of a Housing Trust for the Federation of Malaya and makes provision for the development of land for housing and for the charging of development rates in respect of such land. The Trust is empowered to make Housing Schemes where lands are at present vacant and to require the owners to build in accordance with such schemes. Failure to comply with such schemes will make the land liable to an annual rate called the Development Rate.

- (11) The Federation of Malaya Air Training Corps Ordinance, 1950, provides for the establishment of an Air Training Corps. British subjects and Federal Citizens are eligible for enrolment.

- (12) The Required Records and Accounts Ordinance, 1950.

This measure which will come into force on 1st January, 1952, provides that all records and books of accounts required to be kept under certain scheduled written laws shall be kept in English or Romanised Malay. Prior to this measure, it was found in practice, that books and records kept in other languages were not readily comprehensible by

the officers of Government when produced for their examination and the object of requiring such accounts and records to be kept was thereby constantly defeated.

- (13) Social and Welfare Services Lotteries Board Ordinance, 1950.

This measure establishes a Board for the purpose of issuing public lotteries to raise money for social or welfare purposes. It is an experimental measure and is in force only for five years unless that period is extended by resolution of the Legislative Council. By the Social and Welfare Services Lotteries Board (Clarification) Ordinance, 1950, the position of those of the Muslim faith under the principal Ordinance was clarified.

THE LEGAL DEPARTMENT

The authorised establishment of the Legal Department, including the Attorney-General, the Solicitor-General and the Legal Draftsman, is sixteen, in addition to which there is a leave reserve of three. There were, however, actually available for duty during the year only thirteen officers (and occasionally twelve) together with two locally recruited officers who were attached to the Department for training.

Of the available officers, at least six have to be stationed away from Headquarters to act as Legal Advisers to the different States and Settlements. These officers are at present stationed at Johore Bahru, Kuala Trengganu, Alor Star, Seremban, Ipoh and Georgetown. The duties of Legal Adviser, Selangor, and Legal Adviser, Pahang, are performed by officers stationed at Headquarters in Kuala Lumpur.

The legal and legislative problems of the Federation continued to be heavy. The continuation of the Emergency throughout the year necessitated the making of much Emergency subsidiary legislation; while the criminal prosecution side of the Department's work showed no signs of decreasing.

Chapter IX

JUSTICE

GENERAL

There is little new to add, with regard to the administration of justice, to what has already been said under this heading in the Federation of Malaya Annual Report for 1949.

The new judicial organization has continued to work smoothly and successfully. The Courts of the First Class Magistrates have been inspected regularly by the Chief Justice and the Puisne Judges in whose areas they are situated.

The standard of judicial work in the Magistrates' Courts has continued to improve, assisted by the arrangement whereby three Magistrates at a time are attached to the Supreme Court at Kuala Lumpur for instruction. During 1950 ten Magistrates have had the benefit of this training course.

One Judicial Department scholarship has been granted and it is hoped that another scholarship will be awarded early in 1951 on the performance during 1950. These scholars are sent to England to be called to the Bar.

One meeting of the Interpreters' Whitley Council was held in 1950.

The unified Rules of Practice and Procedure for the Subordinate Courts in both the Malay States and the Settlements were drafted by an *ad hoc* committee presided over by the Chief Justice, and it is intended to enact the Rules in 1951.

The Juvenile Courts Ordinance, 1947, was brought into force on the 1st of December, 1949, and there has now been an opportunity of observing its working for a year. A Juvenile Court is presided over by a President of a Sessions Court assisted by two members of the public appointed as Advisers. Practice has proved that the Ordinance can be improved and the Chief Justice has appointed a committee to consider amendments conducive to its more efficient working. The Committee has concluded its work and it is hoped that an amending Ordinance will be passed in 1951.

The moratorium was terminated by the Moratorium Proclamation (Repeal) Ordinance, 1949, which came into force on the 1st of October, 1949. On the same date the Courts (Restriction of Civil Jurisdiction) (Repeal) Ordinance, 1949, also came into force. The fact that there is now no restriction on the bringing of actions has increased civil litigation. The increase is illustrated by the statistics at the end of this Chapter.

The Emergency continued throughout 1950 and the number of Emergency cases coming for trial in the Courts did not decrease to any appreciable extent.

The practice of not having a fixed Calendar for the Court of Appeal and for the Assizes continued throughout the year. The Court of Criminal Appeal continued to sit in Kuala Lumpur. The Court of Appeal held sessions at Kuala Lumpur, Penang, Ipoh and Kota Bharu, to deal with civil appeals.

The Chief Justice, after consultation with the Bar Council, decided to fix a Court Calendar for 1951 in respect of the Court of Appeal. In present circumstances it is not considered advisable to have fixed dates for Assizes.

During the year under review three Presidents of Sessions Courts were seconded from the Judicial Department to the Administration for special duty as full-time Chairmen of Committees of Review, established under the Emergency Regulations, 1948. During the year two of these officers have returned to the Department, but one officer still remains seconded.

STATISTICS

(a) Court of Appeal :

- (i) Criminal—80 criminal appeals were heard relating to 117 persons; 51 were appeals against sentences of death, mainly in cases under the Emergency Regulations. The figures in 1949 were 109, 138 and 91, respectively.
- (ii) Civil—53 Civil Appeals were entertained compared with 24 in 1949. At the end of the year 21 Civil Appeals were pending.

(b) High Court :

- (i) Criminal—246 cases involving 317 persons and 375 charges were decided resulting in 35 discharges, 51 acquittals, 287 convictions and 2 were remitted or transferred to other Courts. The figures in 1949 were 321, 474, 530, 83, 91, 350 and 6, respectively.
- (ii) Civil—1,457 civil suits were disposed of compared with 763 in 1949. 3,974 Grants of Probate and Letters of Administration were made and 155 grants were resealed. The figures for 1949 were 4,602 and 158, respectively.

Miscellaneous applications in Chambers were 4,608 as compared with 1,797 in 1949. 57 Bankruptcy petitions were filed, 109 Bankruptcy Notices were issued and 34 Receiving Orders were made; the figures in 1949 were 50, 70 and 42, respectively.

(c) Sessions Courts :

- (i) Criminal—4,536 criminal cases were decided, 5,482 persons being charged in respect of 6,098 charges. Convictions were recorded on 3,714 charges. The figures in 1949 were 4,739, 6,801, 7,404 and 4,868, respectively.
- (ii) Civil—1,429 civil cases were disposed of compared with 766 in 1949.

(d) Magistrates' Courts:

(i) Criminal—61,485 criminal cases were decided, 74,084 persons being charged in respect of 78,716 charges. Convictions were recorded on 64,582 charges. The figures in 1949 were 76,446, 91,639, 96,010, and 79,446, respectively.

(ii) Civil—6,731 civil suits were disposed of compared with 4,162 in 1949.

(e) Inquests and Enquiries into Deaths:

There were 2,338 Inquests and Enquiries into Deaths compared with 2,690 in 1949.

(f) Revenue:

	1950.	1949.
Supreme Court	456,362.89 ..	361,565.36
Sessions Courts	201,746.19 ..	175,035.99
Magistrates' Courts	1,483,400.26 ..	1,243,798.95
Total	<u>\$2,141,509.34</u> ..	<u>\$1,780,400.30</u>

Chapter X

POLICE AND PRISONS

Part I

FEDERATION OF MALAYA POLICE FORCE

GENERAL

The Police Force has tackled two main tasks during the year; firstly the combating with the fullest support and co-operation of the Armed Forces, of communist banditry, and secondly a further phase of the large expansion programme initiated in 1948.

As was to be expected, emphasis has been on operations in rural areas, where the main bandit concentrations are and where they launch attacks on estates, mines and communications. However, it has been necessary to maintain the utmost vigilance in the carrying out of watch and ward duties in urban areas to prevent bandit activities spreading to the towns. In a great measure these efforts have been successful and incidents have been comparatively few and far between. In this task the Regular Force has been materially assisted in its work by volunteers of the Auxiliary Police.

There were two distinct phases in the operational sphere during the year. The earlier phase entailed the development of methods and tactics introduced in the autumn of 1949, which called for a considerable proportion of the Police effort to be concentrated upon the elimination of the larger and more active units of the Communists wherever they could be tracked down. This task was in addition to the primary police task of maintaining law and order and the protection of populated areas, in connection with which many new stations were established throughout the country.

In May, with the arrival of considerable troop reinforcements, it was possible to accelerate considerably the establishment of new police stations and police posts. Many of these were needed for the resettlement areas into which squatters from outlying districts were being moved. The man-power required for this purpose was in general found from police jungle squads who could by this time be relieved of their original task in most areas by troops. These jungle squads had done excellent work, but the large and rapid calls for men in connection with resettlement schemes necessitated their diversion to other duties.

This change of function was in accordance with the general principle that the Police should concentrate on the maintenance of law and order in populated areas, leaving the Army to deal with the bandits in the jungle and to patrol the fringes of the jungle.

Some indication of the results obtained since the beginning of the year may be had from the fact that, during the year, 933 bandits were lost to the Communist cause through death, capture or surrender. Many others had been wounded and undoubtedly a proportion of these died due to lack of proper medical attention in the jungle.

One thousand, six hundred and twenty-two bandit camps were located and destroyed. Various types of weapons totalling 1,386 were seized by the security forces. Large quantities of serviceable ammunition have fallen into our hands and many valuable documents have been captured which have provided information of the greatest value.

Concurrently with the major preoccupation of the Emergency, the Force has continued to implement the expansion plans drawn up in 1948 and 1949 and to carry out its daily watch and ward duties throughout the Federation.

The reorganisation and expansion continued at speed. This was particularly noticeable at Police District level where assistance in their routine office duties was provided for O.C.P.Ds. thus enabling officers to devote more time and energy to Emergency tasks and to the training and well-being of their men.

The incidence of serious crime for the year showed a marked increase over 1949. This rise was due, in the main, to bandit activity, with particular emphasis on the seizure of Identity and Ration cards. There were 1,745 reports of documents being forcibly removed from their owners, a total of 72,466 being involved. It is interesting to note, however, that serious crime unconnected with the present Emergency has remained practically the same as in 1949.

The Police Force has continued to be gravely handicapped in its work by the failure of the public to come forward with information. This state of affairs applies equally to persons who fail to report information in their possession regarding bandit activity, to witnesses in criminal cases who, from fear of the consequences, will not give evidence, and to others who neglect to report the commission of offences. It cannot be gainsaid that under certain circumstances and in some areas the civil population is subject to strong pressure from the communist bandits. However, unless and until the people at large give unstinted and full support to the security forces, the task of rooting out the evil elements in the Federation will remain incomplete and a continued state of lawlessness, hardship and uncertainty will prevail.

STRENGTH

Regular Force.

The Police Force personnel strength was further increased during the period 1st January to 31st December, 1950 :

	Strength as on 1st January, 1950.	Strength as on 31st December, 1950.
Gazetted Officers	356	477
British Inspectors	19	12
Asian Inspectors	295	432

	Strength as on 1st January, 1950.	Strength as on 31st December, 1950.
Police Lieutenants (Sergeants) ..	442	513
Rank and File	13,637	14,606
Detectives	768	784
Police Clerks and Interpreters ..	339	370
Temporary Clerks	354	435

Casualties during the year were :

Retired on age limit	229
Retired for medical reasons	204
Killed	120
Died	37
Resigned	114
Discharged	261
Transferred	31

Mr. W. D. Robinson, formerly of the Indian Police Service, arrived in Malaya during the year and has now assumed duty as Deputy Commissioner of Police. Sir William Jenkin, another senior retired officer of the Indian Police arrived earlier in the year to take up duty as Adviser on C.I.D. methods and the reorganisation of the Branch.

On 1st August, 1950, the rank of European Sergeant was abolished on the recommendation of the Police Mission and substituted by that of Police Lieutenant. The authorised establishment of Lieutenants is now 787. Two hundred and thirty-nine former sergeants were re-engaged under the new terms and 293 new appointments made during the year.

Due to the large increase in the establishment of both gazetted officers and Lieutenants, it was decided to organise a recruiting campaign in the United Kingdom and a senior officer was sent to the United Kingdom to assist the Colonial Office in this work. Results have been most satisfactory so far as gazetted officers are concerned. In addition to permanent appointments, a number of experienced Indian and Colonial Police Officers have been engaged on contract terms. Concurrently with recruitment in London, local selection boards have been at work in the Federation. Ten Asian Inspectors were promoted to gazetted rank and further recommendations are awaiting approval. Thirty-three European Sergeants and three Lieutenants have been appointed as Cadets on Agreement.

The Inspectorate has been strengthened considerably. Out of 29 members of the Rank and File who received accelerated promotion to Probationary Inspector, 20 were eventually confirmed. One hundred and fifty-four candidates, with a minimum educational qualification of the Senior Cambridge Certificate, have been directly appointed as Probationary Inspectors.

Special Constabulary.

The strength of the Special Constabulary at the beginning of the year was 29,987. During the first three months of the year, this number was reduced to 29,413 in accordance with the Government

policy to cut down establishments wherever possible. However, in April, the policy was again revised in order to implement new security measures, such as the squatter resettlement plan, and an increase to an establishment of 37,000 was approved. On 31st December, 1950, the strength of the Special Constabulary had reached 34,053.

Two hundred and twenty-two personnel of this section of the Force were killed in the execution of their duty during the year.

As the Police Depot in Kuala Lumpur was committed entirely to the training of Regular Police it was not found possible, nor would it have been economical, to train recruits for the Special Constabulary centrally. Their training takes place largely at Police Circle and District level, making the best use of local facilities. Great difficulties were experienced in finding the right type of recruit for enlistment in the Special Constabulary. The sharp rise in the price of tin and rubber enabled the planting and mining industries to offer higher wages to unskilled labour than ever before in the history of the Federation and this led to a scarcity of recruits and an anxiety on the part of many of those already serving to leave the Special Constabulary.

TRAINING

Nearly 1,000 recruits for the Regular Force passed through the Depot between January and December. In addition the courses for Inspectors which were started in 1949 were continued for both candidates for promotion within the Force and direct-entry Probationary Inspectors. Further large numbers of recruits will be required in the future and plans are now being examined for a considerable extension of the existing Depot premises.

Jungle operational training has been intensified and a Jungle Training School has functioned throughout the year. The school is situated in ideal surroundings at Sik in Kedah. Personnel attending the course are put through a most rigorous and thorough curriculum of jungle warfare and tactics. This school has proved of the utmost value to personnel engaged in anti-bandit duties in rural areas.

Plans are well advanced and have been approved in principle, for the establishment of a Police Higher Training School. This centre is intended to provide advanced courses on all aspects of police work for Asian and European officers and Asian subordinate officers.

FORCE TRANSPORT

The Force transport fleet has been further expanded and modernised. During the early part of the year 200 Land Rover Cars arrived from the United Kingdom and a further 41 were acquired later. In consequence, a total of 201 over-age and highly uneconomical vehicles were withdrawn from service. Later in the year 32 Armoured Personnel Carriers were purchased and distributed to those districts most in need of them. A further 60 of these vehicles were ordered before the end of the year.

Plans have been approved for the construction of a workshop and M.T. Store in Kuala Lumpur.

Force vehicles have covered 17,660,000 miles during the year. Due to modern accounting and checking methods adopted in 1949, the cost per mile run has dropped very considerably.

The Police Force is still short of experienced drivers but progress is being made in the training of M.T. personnel at Contingent Driving Schools throughout the Federation.

SIGNALS

The Police Wireless Branch has been able to make better progress during 1950 than was the case in 1949, but difficulties are still being experienced in obtaining supplies of equipment and trained personnel.

During the year, 63 H.F. Stations were opened, making a total of 143 in operation. Forty-two V.H.F. Stations were also installed, to bring the total in use up to 126.

Some idea of the increased use of wireless telegraphy in the Force may be obtained from the following figures of groups transmitted :

	1949.	1950.
Wireless Telegraphy	2,910,000	11,271,000
Teleprinter	1,814,000	2,241,500

Very considerable technical problems had to be faced when V.H.F. equipment was first introduced into the Force network. The loan of a Home Office wireless expert, Mr. Watson, was arranged and, with the assistance of the Telecommunications Department, he carried out a complete survey of the Federation. It was decided, after tests, that V.H.F. could be used with advantage, and a network covering all Police Stations in the Federation was planned. Equipment was ordered and was beginning to arrive in Malaya at the end of the year. It is hoped to complete the main network to provide first class communications by late 1951.

The Telecommunications Department has continued to maintain Police W/T equipment throughout the year and is responsible for the installation of the new equipment, including the preliminary tests. A large increase in the staff of the Department has been approved specifically for the maintenance of the Police wireless network.

MARINE BRANCH

The Marine Branch of the Force has operated continuously within the territorial waters and rivers of the Peninsular. One hundred and two outboard launches are now in service, with two 72-foot launches building and one 36-foot launch expected to come into commission early in 1951.

The Royal Navy has assisted greatly in coastal patrol duties, particularly on the east coast.

SUPPLIES AND EQUIPMENT

The "Q" Branch at Police H.Q. has continued to be responsible for the provision of all material needs of the Force.

Orders for stores, clothing and equipment in excess of \$4,000,000 have been placed during the year. It is recorded as a matter of interest that the Police Force now requires over 700 miles of cloth annually for the provision of uniforms.

Large quantities of firearms and ammunition have been imported and issued to formations. In order to meet Force and Auxiliary increases, the War Office has released several thousand rifles on loan. Further large scale supplies of shotguns have been ordered.

With jungle operations increasing in the early part of the year it was decided to produce a specially packed canned operational ration. Four types are now in production, for Malay, Sikh, Chinese and European Police. A very great measure of co-operation and assistance has been received from the Military authorities in this work. Issues during the year totalled 557,282 tins.

Great help has been given by the Royal Air Force in the dropping of supplies to isolated stations, posts and to operational parties in the jungle. A total of 293,132 lbs. of stores and rations were dropped during 1950.

BUILDING PROGRAMME

The following Police buildings were completed during 1950 :

- (i) Seven new Police Stations and 36 Squatter Resettlement Stations.
- (ii) Barracks for 248 Rank and File.
- (iii) Six Offices and Operations Rooms.
- (iv) Four Stores.
- (v) Four M.T. and W.T. Workshops.
- (vi) Eight quarters for officers.

The following major works were approved in principle during 1950:

- (i) Police Dépôt expansion scheme.
- (ii) Police Higher Training Centre.
- (iii) C.I.D. Headquarters, Kuala Lumpur.
- (iv) Police Federal Stores.
- (v) Police Central M.T. Workshops and Stores.

CRIMINAL INVESTIGATION DEPARTMENT

The reorganisation of the Department was begun under the guidance of Sir William Jenkin, who was appointed as C.I.D. Adviser for this specific purpose. With the increased establishment of officers and the greater numbers coming forward from the Dépôt it has been possible to strengthen the Department considerably. Special Branches are being progressively opened at Police Circle level.

The Crime Branch is now responsible for criminal matters throughout the Federation and for the Criminal Registry, Record and Photographic Branches.

One of the most important of the recent developments is the progress made in combating corruption. From March, following the passing of the new Corruption Ordinance, 134 cases were investigated, 93 prosecutions undertaken and 59 cases convictions obtained. In addition, 41 persons have been prosecuted for offering bribes, 26 of whom were convicted by the Courts.

The Central Criminal Registry (Fingerprints Bureau) which deals with all enquiries from the Federation, the Colony of Singapore

and the State of Brunei handled 25,982 forms during the year. Persons traced numbered 5,371 (or 20.7 per cent.).

Fourteen returned banishees and two returned repatriates were detected.

The Photographic Branch has worked under great pressure and has issued a total of 269,462 prints during the year.

Part II

PENAL ADMINISTRATION

There are 23 penal establishments in the Federation and these are classified as follows :

Central Prisons	6
Local Prisons	9
Female Prisons	7
Advanced Approved School (Borstal)	1

With one exception, all prisons are under the control of prison officers.

Central prisons receive all classes of prisoners irrespective of sentence ; while local prisons receive all classes of prisoners but retain only those sentenced to a term of imprisonment not exceeding twelve months.

The Advanced Approved School receives all young offenders between the ages of 14 and 17 years who are ordered detention by the Juvenile Courts under the provisions of the Juvenile Courts Ordinance, 1947. Young prisoners of this age-group sentenced to imprisonment are also transferred to the School. In addition, young detainees of the same age-group are transferred from detention camps to the School and are subject to the same training as other inmates.

At all Central Prisons and some Local Prisons, separate accommodation is provided for unconvicted persons. In all cases such persons are strictly segregated.

Central prisons are in charge of Superintendents and Local prisons are controlled by Gaolers or Senior Prisons Officers under the supervision of the Superintendent of the District. The Headquarters office of the Department is situated at Taiping at which station there is the largest Central prison.

Remission of sentence up to one quarter of the total period of imprisonment is granted to all prisoners sentenced to periods in excess of twelve months. Prisoners sentenced to over one month and up to twelve months are granted a remission of one-sixth of their sentence. Remission is awarded at the commencement of a sentence and any forfeiture for misconduct is deducted in days.

During the year, a Prison Camp to accommodate 500 prisoners was opened at Pengkalen Chepa, Kelantan. This has considerably relieved overcrowding on the East Coast. The progress made in training and in general penal methods since the Camp was opened has been most satisfactory.

The new Advanced Approved School, which has replaced that previously accommodated at the Muar Prison, was opened to provide accommodation for young detainees. Further extensions to the School have been approved and should be ready by the middle of 1951. The total population of the School will then be between 350 and 400.

There were 12,287 prisoners admitted to prisons during the year. Of these, 5,301 were sentenced to penal imprisonment, 5,128 were committed for safe custody and 1,858 prisoners were detained under the Emergency Regulations. The number of the latter shows a considerable reduction. This was achieved by arranging for such persons to be transferred direct to detention camps instead of retaining them in prison. Overcrowding in prisons was, in consequence, very considerably reduced.

The total number of persons in prisons at the beginning of the year was 4,667 and at the end of the year 3,715. From statistics now available it would appear that the convicted prisoner population will normally be between 3,500 and 4,000.

The total convicted population was made up of 2,769 Chinese, 1,745 Malays, 611 Indians and 176 of other races. The daily average prison population was 3,618.

Over 2,787 of the total convicted population were between the ages of 25 and 50 years and the average age of recidivists was 35 years. The chief offences for which persons were sentenced to imprisonment were: offences against the person, offences against property, unlawful possession, possession of chandu, and offences against the Emergency Regulations.

There was a marked decrease in the number of short sentence prisoners admitted. It is difficult to ascertain the exact reasons for the decrease but it would seem that petty crime is on the decline. Increased employment in the rubber and tin industries may also be a major factor.

During the year, arrangements were made whereby the relatives and friends of all prisoners sentenced to imprisonment with the alternative of a fine were notified by the prisons concerned. The local Probation Officers co-operated, and it is satisfactory to record that many prisoners were released in consequence of these efforts.

The discipline in the prisons of the Federation was, on the whole, good. There was one escape from prison custody during the year.

Considerable new building construction and minor alterations to existing buildings were carried out during the year. At certain central prisons, special reception blocks were provided, and it is now possible to segregate prisoners on first admission until they are classified and located in their respective halls.

The new legislation to modernise the penal system did not come into force in 1950 but it is expected that it will be enacted during 1951. During the year, classification was applied to all prisoners, an Earnings Scheme was introduced, the privilege of receiving letters and visits was extended and a Progressive Stage system implemented. These improvements in the penal system resulted

in a better standard of discipline and the prisoners in general showed an increased spirit of co-operation.

Additional teachers were appointed during the year and further improvements made to the educational system both in the prisons and at the Advanced Approved School. In many cases the prison libraries were completely changed and extra books were supplied to all prisons. Physical training and games were also provided. The facilities for games and exercise were considerably extended during the year, particularly at the large prisons. Every effort was made to reduce the time prisoners spent in their cells during non-labour hours. At Central prisons, Dramatic Societies were introduced, and plays and concerts were produced by the prisoners. In all Central prisons and some of the local prisons, radio sets were installed. In nearly every case, these sets were presented by members of the public.

The industrial training and handicraft classes introduced last year were considerably expanded, and certain wood-working machinery was installed in the Central prisons. A sum of nearly \$80,000 was paid into Revenue. The total value of prisoners' work for the year was estimated to be \$350,000. The following trades are now in operation:

Carpentry	Baking
Cabinet making	Pottery
Tailoring	Laundry
Shoemaking	Net making
Tin smithing	Metal Licence Plate making (for trishaws)
Printing and Bookbinding	Rope and mat making
Rotan work	Cane chair making
Lace making (women)	Soft toy making (women)
Crochet work (women)	Mat weaving (women)
Cloth weaving	
Building	

During the year, Trade Instructors were appointed for the various industries which are now carried out in the prisons. Instruction was given both in the theory and practice of various trades.

The number of female prisoners increased; and, in consequence, the system of training was considerably extended.

The Warders' Training Depot is now in operation. The Depot caters for the training of all recruits and serving Warders as well as for promotion and refresher courses. The hours of duty of the subordinate staff are approximately 96 hours a fortnight with alternate week-ends off duty. The educational classes for Warders which were introduced last year have been continued.

Progress was again made in the year under review with the organisation of aftercare arrangements for prisoners. The gratuity was increased, and the whole system linked to the Earnings Scheme. The various Discharged Prisoners Aid Societies also assisted in finding employment for prisoners and providing funds for their upkeep after release. Special arrangements were made in connection with the release and aftercare of inmates from the Advanced Approved School.

Chapter XI

REGISTRATION OF RESIDENTS

The present system of "National registration" of all persons over the age of 12 years was introduced in the Federation in 1948. The initial registration was carried out by the States and Settlements over a period of about four months and was completed in March, 1949. During this period an identity card was issued to each person registered, each State or Settlement having its own form of card. In October, 1950, a uniform card was introduced for the whole Federation and, while the old cards still remain current, the new card is used for all replacements and new issues. Each identity card bears the photograph and thumbprint of the holder in addition to details as to his registration number, name, sex, race, age, language or dialect spoken, birthplace, occupation, permanent address, father's birthplace and ration card number. Changes of address are also recorded.

Duplicate cards are made out and form the Register of Residents. This register is not centralised, but is maintained at 19 different offices, each of which is headed by a registration officer who is responsible for keeping a record of all persons registered within his area and for issuing identity cards to all persons in the area when they become registerable. Any change in the particulars recorded on a person's identity card is required to be reported to the registration officer and noted on the identity card and in the register.

The following is a record of identity cards issued, replaced and cancelled during the year 1950. No record is available of the number of changes of address notified.

NEW ISSUES

Children attaining age of 12 years.	New arrivals in the Federation.	Exchange of Singapore cards.	Discharge from the Armed Forces, Police and Institutions.	Total.
118,884	19,546	13,112	4,125	155,667

It should be explained that while an identity card issued in Singapore to a resident there is valid while the holder is temporarily in the Federation, a person who removes his permanent address from Singapore to the Federation is required to obtain a Federation identity card in exchange for his Singapore card.

REPLACEMENTS

Damaged cards.	Cards taken or destroyed by bandits.	Lost cards.	Total.
115,838	86,538	24,077	226,453

The large number of damaged cards is due mainly to the difficulty of protecting them against the general wear and tear of outdoor working conditions in a humid climate.

The bandits have made serious attempts to disrupt the registration system by stealing and destroying identity cards. They have, indeed, caused the Registration Department some trouble, and in Perak special measures had to be taken to deal with the situation; but the chief result of their activities is to put the general public to the inconvenience and expense of obtaining replacements.

CANCELLATIONS

Death of holder.	Removal out of the Federation.	Other reasons.	Total.
30,472	13,697	3,919	48,088

A comparison of the above figures with those relating to deaths and migration which appear elsewhere in this Report shows clearly the need for an improvement in the system of notifying removals from the register both in respect of deaths and persons leaving the Federation. Since persons who leave the Federation are not required to surrender their identity cards on leaving, it is fairly safe to assume that the group of 13,697 persons shown above consists almost entirely of those who removed to Singapore, where they had to surrender their Federation cards to the Singapore authorities before they could get new ones.

Chapter XII

PUBLIC UTILITIES

Part I

ELECTRICITY

The Electricity Ordinance (No. 30 of 1949) provided for the establishment of the Central Electricity Board on September 1st, 1949, and the Board completed its first working year on September 1st, 1950. The Board consists of the Financial Secretary to the Government of the Federation as Chairman, the former Director of Electricity as Deputy Chairman and Chief Executive Officer of the Board and five other members of whom at least three must be unofficials.

The functions and duties of the Board are set out in section 15 of the Electricity Ordinance and are :

- (a) to manage and work the electrical installations transferred to the Board by the Ordinance and such other installations and apparatus as may be acquired by the Board under the provisions of the Ordinance ;
- (b) to establish, manage and work such electrical installations as the Board may deem it expedient to establish ;
- (c) to promote and encourage the generation of energy with a view to the economic development of the Federation ;
- (d) to secure a supply of energy at reasonable prices ;
- (e) to make regulations in accordance with provisions of the Ordinance governing the generation, transmission, distribution and use of energy ;
- (f) to advise the High Commissioner on all matters relating to the generation, transmission and distribution and use of energy.

As the Board took over the former Government Electricity Department, as a going concern, there was no sudden change in general policy. All commitments entered into by the Electricity Department were taken over and the Crown Agents for the Colonies were appointed Agents for the Board in the United Kingdom.

Delayed deliveries of plant and equipment ordered as far back as 1945 and lack of funds to enable orders to be placed for additional plant continued to impede the development of electricity supplies

throughout the Federation. At the end of the year the estimated shortage of generating plant to satisfy the power demands throughout the country was at least 120 MW. In practically every town potential load exceeded the total capacity of plant available by a large amount and the restriction of load during the evening peak hours of 6.30 p.m. to 10.30 p.m. was the rule rather than the exception.

The total units generated by undertakings owned by the Board during the period 1st September, 1949, to 31st August, 1950, amounted to 159.4 million, an increase of 30.0 million over the previous 12 months.

The units generated at Bungsar Power Station, Kuala Lumpur, increased from 91.0 million units to 115.1 million units and at Ulu Langat Hydro Power Station from 11.8 million units to 14.4 million units. The output of the Board's 32 Diesel Stations increased from 26.6 million units to 29.9 million units.

An additional 75,000 lbs. per hour boiler was commissioned at Bungsar Power Station early in 1950, enabling the output of the Station to be increased from 16,000 KW to 21,000 KW. The demand for industrial power in Selangor, however, continued to increase and cannot be met until the new 80 MW Power Station at Connaught Bridge, Klang, is completed. Work on the first half of the Station proceeded steadily throughout the year and the plant now being installed should be in commission by January, 1953. The full output of the first half will not however meet the known demands and the second half must be proceeded with. It was not possible to place orders for the second half during 1950 due to lack of funds but it is hoped that funds will be available in 1951.

Investigations into the proposed Cameron Highlands Hydro Electric Scheme (100 MW) had to be curtailed due to communist bandit activity culminating in the murder of the Board's Hydro Electric Engineer.

A new Diesel Station was installed at Bahau in Negri Sembilan during the year and additional Diesel/Alternator sets were installed at Malacca, Tanjong Malim, Kemaman, Mentakab, Kuala Trengganu, Kota Bharu, Cameron Highlands, Port Dickson and Kuala Lipis. This brought the total capacity of Diesel plant operated by the Board to 11,200 KW, an increase of 1,200 KW over the previous 12 months.

Arrangements were made for bulk supplies of electricity to be made to Johore Bahru and Raub from the Singapore Municipality and the Raub Australian Gold Mining Co. Ltd. respectively.

The shortage of engineering staff, which existed prior to the formation of the Board, persisted throughout the year and it will not be possible to proceed with the Board's large expansion programme unless additional staff is obtained. To help overcome this shortage the Board has approved a policy of sending selected employees to the United Kingdom for training.

Part II

DRAINAGE AND IRRIGATION

GENERAL

Priority of effort during the year was directed to the construction of schemes for increased rice production. In addition, normal work was carried out on the operation and maintenance of completed schemes, the construction of drainage schemes, surveys and investigations for new schemes, the collection of hydraulic data, river conservancy and flood mitigation works, research, design, and preparation of working drawings. Steady rather than spectacular progress was made.

Progress on the construction programme was restricted by shortage of trained technical staff, shortage of mechanical equipment and, towards the end of the year, by shortage of labour, both skilled and unskilled, which had been attracted to rubber estates by the much higher wages obtaining there.

In all States and Settlements, the Department has been called upon to help, in some degree, in the carrying out of works directly connected with the emergency. This help has required the diversion of personnel and equipment to carry out surveys, to advise on and carry out improvements to drainage, to construct strategic road formations, and to improve access facilities to selected areas.

Towards the end of last year a grant was received under the Colonial Development and Welfare Act for the construction of a Hydraulic Laboratory to replace the one destroyed during the Japanese occupation. Contracts amounting to \$132,600 were placed early in the year for the construction of the laboratory and the ancillary workshop. Orders were also placed with the Crown Agents for the supply of pumps and equipment. Construction work was delayed owing to the shortage of materials, chiefly cement and steel, and the contracts are not likely to be completed until about the middle of 1951.

During the year, construction work was carried out on 36 major schemes, financed from Loan and Federal Funds, estimated to cost \$19,287,500. In addition, work was in hand on 30 smaller schemes, financed from State/Settlement Funds, estimated to cost \$1,753,850. The following is a brief description of the more important works carried out during the year.

SITUATION IN THE STATES

Selangor.

The highlight of the year was the colonisation of the remainder of the Tanjong Karang Irrigation Area of 50,000 acres. This is the most successful major irrigation scheme carried out in Malaya for the transformation of swamp jungle into productive *padi* land. Construction work has been in progress since 1940, and it is hoped by the end of 1951 that the drainage and irrigation works for the

entire area will be completed. In order to attain this target, 10 dragline excavators and one dredger are at present working in the area.

In addition to a large number of internal distribution controls, the scheme comprises :

(i) Irrigation headworks	.. .. .	1
(ii) Main canal	.. .. .	19 miles
(iii) Subsidiary canals	.. .. .	52 "
(iv) Main drains	.. .. .	158 "
(v) Main bunds	.. .. .	94 "
(vi) Irrigation offtakes from main canal	.. .. .	19 "
(vii) Drainage syphons	.. .. .	14 "
(viii) Tidal control gates	.. .. .	14 "

Excellent crops have been obtained from a large part of the older established area and when the transformation of this area is fully completed, it should produce up to 35,000 tons of rice annually. It is estimated that at the end of the year there were 16,000 small-holders in the area, of whom 13,000 were Malays and the balance Chinese and Indians. The co-ordinated effort of the engineers and the administrators has been rewarded by the state of activity which it has stimulated and each community has played its part in the development of the area. There is an excellent spirit of co-operation amongst the settlers which has helped to build schools, mosques and rice-mills, and to organise the marketing of eggs, poultry, dried fish, vegetables, and copra which are exported in large quantities from the area.

Other important works carried out during the year were the extension of the Sungei Besar Drainage Area to include a further 3,000 acres of coconut small-holdings. A start was also made on work in connection with the extension of the Bernam Peninsula Drainage Area to include an additional 2,500 acres.

Perak.

The Sungei Manik Irrigation Scheme, in Lower Perak, is another story of the successful conversion of swamp jungle to productive *padi* land although its progress has not been so spectacular as that of the Tanjong Karang Scheme. In order that construction work should not get too far ahead of colonisation, this Scheme was designed and developed in five Stages. Stages I to IV, covering an area of 20,000 acres, have been fully colonised. Work on Stages I to III is completed, and during the year, work on Stage IV was confined to protective bunding, provision of access roads, and improvement of drainage facilities. Construction work on Stage V has been deferred pending prospecting to ascertain the stanniferous value of the area.

At the Changkat Jong Irrigation Scheme, also in the Lower Perak District, work on the excavation of drains and canals was continued and three more permanent controls were completed. Security conditions in this area are bad, and towards the end of the year a fourth control which was under construction was sabotaged.

An important objective reached during the year was the signing, by all the mining companies concerned, of the General Agreement covering the carrying out of the Kinta River Deviation. This deviation will be over 20 miles in length and when completed, will be the result of many years of research and planning by the Department on which has also fallen the brunt of nearly all negotiations with the companies concerned.

Kelantan.

Work on the Salor Irrigation Scheme, including the installation of the pumps and the electric motors was completed. Unfortunately the pumping plant was received from England too late in the season to be of use for irrigating the 1950 crop, but trials have shown that there should be no difficulty in raising the water necessary to irrigate this area of 4,600 acres.

A new permanent headworks was constructed at Tiga Daerah in the Bukit Abal Irrigation Area, and this, together with the reconditioning of three miles of *tali-ayer* and the construction of nine controls will give an assured water supply to a further 1,000 acres of existing *sawah*.

Trengganu.

The Sungei Angga Headworks to serve the first stage of the Besut Irrigation Scheme were completed. This was built by direct labour, as there are no suitable contractors in the State, and tenders submitted by experienced contractors from the West Coast were unreasonably high. A start was also made on the excavation of the main canal and at the end of the year some two miles were completed.

Other schemes on which further work was done were Batu Rakit Controlled Drainage Scheme, Sungei Ibai Bunding Scheme, Bukit Tumboh, and Sungei Telabab Schemes, the last two being completed.

Work was also started on the Trengganu River Pumping Scheme, where the rock foundation at Pulau Musang was blasted to form the well for the Pump House.

Penang and Province Wellesley.

Coastal bunds, six miles long, were constructed by means of dragline excavators at Juru and at Pulau Betong. In each case, these are for the protection from inundation by the sea, of existing *sawah* and also small-holdings.

The work, started in 1949, of extending the irrigation supply from the Sungei Kulim Scheme to serve an additional 4,000 acres of existing *sawah*, was continued, and it is expected that the work will be completed in time to irrigate the 1951 crop.

Further work was done on strengthening and raising the coastal bund at the reclamation area of Bukit Tambun and no trouble was experienced when the equinoctial tides occurred in October. It is disappointing, however, to record that of the 400 acres thus made available for cultivation, only some 55 acres are actually under cultivation.

Pahang.

Security conditions in this State limited the amount of work which could be undertaken, but the routine supervision of the 109 existing schemes scattered throughout the State, was continued.

At Paya Kangsar a few miles downstream from Jerantut, a floating pumping plant was installed to irrigate an area of 800 acres on the left bank of the Sungei Pahang. Unfortunately the plant could not be completed in time to be of use to the 1950 crop, but the interest shewn by the local inhabitants when, at its trials, the plant lifted water 38 feet from the river to the *sawah*, gives grounds for hoping that 1951 will see abandoned *sawah* once more brought into cultivation.

Negri Sembilan.

This State is not well adapted by nature for wet *padi* cultivation, its rivers in general traversing narrow valleys on gradients steeper than those in the wider valleys and coastal areas of other States. The result is that irrigation schemes planned to give adequate water control are, by comparison with other States, expensive.

At Tanjong Ipoh, in the Kuala Pilah District, a permanent headworks was constructed on the Sungei Muar and the ancillary controls and distribution system to serve 840 acres of existing *sawah* are almost complete.

Further work was done on the Sungei Raya Scheme in the Port Dickson District. This scheme which will, it is hoped, provide 650 acres of new *padi* land, is a perpetual source of worry to all concerned with its execution. It is not an easy scheme to carry out and the local populace are backward in taking up such land as has already been improved.

Tenders were received for the construction of an irrigation scheme to improve 430 acres of existing *padi* land at Durian Gasing in the Jelebu District. All tenders were in excess of the funds provided, and it was decided to defer construction work in the hope that costs will fall in the near future.

Malacca.

It can be said that almost all land in the Settlement suitable for wet *padi* cultivation is now or has been at some time, used for that purpose. The Department is concerned therefore with the improvement of existing or the reclaiming of abandoned *sawah*, and not with the development of new areas.

Schemes which have been under construction for a number of years and which were completed during 1950 were at Bachang and Duyong. At the former a 57 H.P. pumping plant was installed for the dual purpose of draining 850 acres of swamp and irrigating some 2,400 acres of existing *sawah*, whilst at the latter a 64 H.P. pumping plant will irrigate some 2,800 acres of existing and abandoned *sawah*. Both these schemes are now completed and it only remains for the un-occupied land to be taken up for these two areas to become productive additions to the Settlement's food supply.

In the Alor Gajah District good progress was made on the carrying out of the Sungei Bharu Ilir Irrigation Scheme. The permanent headworks were constructed together with approximately 70 per cent. of the ancillary controls and 90 per cent. of the distribution system, which will irrigate 925 acres of existing and potential *sawah*.

Johore.

In Johore, the emphasis during the year was on drainage works for the improvement of *kampongs* and coconut small-holdings. For many years extensive areas of coconut small-holdings along the west coast, from Muar to Pontian, have been going out of cultivation, owing to bad drainage and inundation by sea water. Surveys and investigations have been in hand for the last few years, and a comprehensive drainage scheme has been prepared to arrest further deterioration and to restore satisfactory conditions for successful agricultural development, by the construction of coastal bunds, the provision of tidal control gates and the improvement of internal drainage. The target for the comprehensive scheme is the improvement of drainage facilities on about 300,000 acres of existing small-holdings, comprising coconuts, areca nuts, rubber and fruit trees.

Work on two stages of the comprehensive scheme at Senggarang and Sri Menanti, for the improvement of 75,000 acres, has been in progress for some time, and it is expected that the necessary drainage works will be completed by the end of 1951. The scheme for these stages comprises 24 miles of river and coastal bunds, eight reinforced concrete drainage control gates, two road culverts, and many miles of reconstruction of the internal drains.

Work on the irrigation schemes at Endau, Kahang, Lukut, and Assam Bubok was carried out under very trying conditions. In certain areas, notably Endau, a permanent police guard to protect the staff engaged on construction work was necessary. The emergency and the high prices obtaining for rubber had a serious adverse effect on the extent of planting in all *padi* areas, *padi* planters apparently preferring to work as Special Constables or as rubber tappers on estates and small-holdings.

Kedah.

Interest in Kedah was chiefly centred on the Kubang Pasu Irrigation Scheme for the improvement of 80,000 acres of existing *padi* land and the opening up of 20,000 acres of potential *padi* land. The main feature during the year has been the transfer of the focus of construction work from Jitra down towards the coastal area, where the general deterioration of the existing works was having serious effects on local conditions. Construction has been started on a large tidal control gate at Kuala Jerlun and the excavation has virtually been completed for a new canal passing through Jitra which connects the main canal from Tanjong Pauh with the Alor Changileh Canal, now being enlarged and reconstructed. This canal is over 13 miles long; the construction of the major controls and offtakes is being pushed ahead, and it is hoped that it will be ready for service early in 1952.

The only works carried out on the inland side of the scheme were the continued excavation of the main canal from the Tanjong Pauh Headworks towards Kodiang, of which some three miles had been completed by the end of the year and the construction of the Headgates across that canal, the completed part of which includes a section 36 feet deep.

Work was started on the widening and reconstruction of the Alor Janggus and Ayer Hitam Canals which run parallel to the sea coast and progressed on both canals simultaneously, with the use of dragline excavators. The mechanical plant operating on this scheme consists of seven bulldozers, three scrapers, one steam dipper dredger and six dragline excavators, including the 'Lima' excavator which has a bucket capacity of two cubic yards, the biggest machine in the Department.

The controlled drainage scheme at Kota Bukit Meriam includes an area of 4,000 acres of some of the richest rice land in Kedah which is entirely dependent for its water supply on rainfall. During 1950 one of the three outlet controls included in the scheme was completed at Sungei Dedap in the Bukit Meriam locality and work started on a second on Sungei Deraka leading to the Muda River.

Perlis.

Work was continued throughout the year on the South Perlis Irrigation Scheme for the improvement of 11,000 acres of existing *padi* land and the opening up of 6,000 acres of potential *padi* land. Throughout the year the enlarging and reconstruction of the Arau Canal was carried on with a dragline excavator and bulldozers for trimming and forming the banks and access roads when weather conditions permitted. The full width of the canal has been excavated for about three miles upstream from Simpang Ampat Village and for a further three quarters of a mile, widening has been done on one side only.

Plans for the large tidal control gate at Kuala Sungei Bahru have been completed and work in this structure will start early in 1951.

Part III PUBLIC WORKS (i)—BUILDINGS

GENERAL

The year was characterised by the large quantity of building work undertaken, much of it at very short notice. A certain amount of it was normal but much effort had to be directed towards works arising out of the Emergency, the chief being resettlement work. As in 1949, so in 1950, there were also extensive programmes of work designed to meet the expansion of the Military and Police Forces.

The high cost of building works caused considerable concern and materially hindered maintenance work later in the year when, after a comparatively stable first half year, prices rose substantially but erratically. The price rise was general throughout the country

but was greatest in the more disturbed parts of the country where labour was at a premium. These price rises were, of course, due largely to the local inflation which followed upon the rises in the price of rubber and tin and the general shortage of labour. Other contributory factors were :

- (a) The building construction and allied industries were working at nearly full capacity.
- (b) The large quantity of work in hand throughout the country has led to shortages of both locally produced and imported building materials.
- (c) For some imported articles, particularly steel and cement, it is difficult to place firm orders either as regards price or delivery date.

A further feature was the suddenness with which demands for works arose. The practice is now comparatively common of providing lump sum items in the Estimates to cover building programmes, leaving the actual planning of the programme until after the money has been voted. In such cases it may be comparatively late in the year before the Public Works Department is aware of requirements and this, in turn, necessitates making extraordinary efforts to speed the work. Furthermore works programmes had to be altered during the year to permit of resettlement works going ahead with all possible speed.

Experience shows that all such efforts to speed up work place a heavy burden on engineering staffs. Pressure is always exerted to cut down the engineering planning time and this, in turn, leads to more expert attention being given to a job in the hope that the judgement of expert staff will compensate for lack of planning. In short, the demand for speed leads to engineers handling work which might otherwise be delegated to junior officers.

GENERAL BUILDING WORKS

Maintenance work continued on the same lines as in former years but was materially curtailed towards the end of the year by the rising prices. In Johore, maintenance funds were reduced by 50 per cent. to provide funds for emergency works.

The largest single project in progress during the year was the P.W.D. Factory and Federal Stores in Kuala Lumpur. It is hoped that this \$3,000,000 project will be completed in 1951. Many small works were executed but in this field the emphasis was on staff housing.

To meet the requirements of the expanding Military and Police forces extensive works were undertaken. The military works were on the following scale :

Johore	\$119,600 worth of miscellaneous military work completed
Negri Sembilan..	\$857,800 worth of work completed for the Malay Regiment
Pahang	\$1,097,200 worth of work completed
Perak	\$803,000 worth of work put in hand in August for the Malay Regiment and \$364,500 worth of work completed for other formations

The Police Buildings Extension Scheme was partly a carry-forward of works it had been impossible to complete in 1949 and partly a fresh programme initiated in 1950. The extent of this work is summarised below :

Johore	\$489,000 worth of work completed and \$160,000 in progress
Kedah	\$316,000 worth of work completed
Perlis	\$54,500 worth of work completed
Kelantan	157 buildings completed and work on a further 84 in progress
Malacca	\$117,900 worth of work completed or in hand. This represents work on 15 separate sites
Negri Sembilan..	5 Police Stations completed and work in progress on 11 sites
Pahang	\$562,000 worth of work completed. This includes 9 Police Stations with quarters
Penang and Province Wellesley	Work on 102 married quarters (rank and file) in progress or completed
Perak	\$2,130,000 worth of work completed, in hand or in the planning stage
Selangor	\$650,000 worth of work completed. This includes 2 Police Stations and 15 Police Posts
Trengganu	\$241,800 worth of work completed. This includes 4 Police Stations

EMERGENCY WORKS

Resettlement and associated work (frequently referred to as the "Briggs Plan") started in earnest in Johore in May and reached other States by about July. These other States consequently benefited by the experience in Johore. The Public Works Department commitments varied considerably from State to State. With resettlement schemes the policy has been to decentralise so far as is possible to States. In general the Public Works Department was called on to provide Police Stations (with accommodation), buildings for dispensaries, administration and schools and, in addition, roads, fencing and water supplies. Depending on individual circumstances piped water supplies are being provided in certain instances.

This work had to proceed with the utmost possible speed. This generally led to standardisation of plans, and, in some instances, to prefabrication. In Perak, for instance, it was found possible to erect a Police Post complete with accommodation and ancillary works within three weeks of the demand being placed. Prefabrication methods were used, the buildings were of timber and the work was done by contract. In Selangor use was made of precast concrete. In Pahang two woodworking machines were installed in Bentong which prepared timber at the rate of $3\frac{3}{4}$ tons, the equivalent of 1.8 buildings, a working day. A further advantage of prefabrication, particularly in disturbed areas, was that it reduced the working time on site.

Practices varied from State to State partly on account of the decentralisation already referred to and partly because of the policy of delegating authority to committees in States and Settlements.

Consequently, what was acceptable in one State was not necessarily acceptable elsewhere. On the other hand this policy had the advantage of enabling States to make the best use possible of available resources.

The incidence of resettlement work on the Public Works Department was very uneven and is summarised briefly below :

Johore	Six Resettlement schemes completed and work on 10 in progress
Negri Sembilan, Kedah and Perlis, Pahang, Penang and Province Wellesley	No substantial works involved
Kelantan	Assistance given on 3 schemes but these schemes were not a P.W.D. responsibility
Malacca	Police Stations provided for 3 schemes and assistance given on other schemes
Perak	Twenty-two Police Posts, with accommodation provided
Selangor	By the end of the year out of an estimated 100,000 persons for resettlement, 7,000 had been resettled. Twenty-six schemes were planned, the estimated cost being \$3,922,000. A duty post of Settlement Engineer was created
Trengganu	One scheme completed

In association with resettlement work some work was done on detention camps, \$517,000 being spent in Johore and \$117,746 in Kelantan. In addition at the close of the year a programme was being initiated for the provision of Police Jungle Training Camps.

The Police V.H.F. Wireless Scheme involved the provision of miscellaneous works, at Police Stations, the building of maintenance depots and, principally, the erection of wireless stations on hill tops. The following is a statement of the position :

	Scheme.	Remarks.
Johore	Gunong Pulai	Investigated
	Bukit Banang	"
Kedah	Kedah Peak	Completed
Kelantan	Bukit Maninjau	No access route yet found
Malacca	Bukit Bruang	In progress. Access by "Jeep" only
Negri Sembilan ..	Seremban	Under investigation
	Kuala Klawang	"
	Bahau	"
Pahang	Bukit Peninjau	In progress
	Bukit Pelindong	Under investigation
Penang	Western Hill	Investigated
Selangor	Bukit Besi	"
	Bukit Tagar	"
Trengganu	Bukit Serai	"

With certain exceptions this is a list of the more precipitous and inaccessible hills in each region and access is a major problem. There is nothing particularly modern in the idea of perching buildings on almost inaccessible hill tops and the modern engineer has more resources at his command than was the case in former days. But the fact remains it is still far more troublesome to execute works in such places than in more accessible places.

(ii)—WATER SUPPLIES

Public water supply systems throughout the country are operated and maintained by the Public Works Department with the exception of the Malacca and Georgetown (Penang) Municipal systems. Some indication of the extent of this work is given by the following statistics :

State/Settlement.	Number of schemes.	Total normal operating capacity m.g.d.	Remarks.
Johore	14 ..	4.41 ..	Water is also purchased from Singapore Municipality
Kedah and Perlis ..	12 ..	4.01 ..	—
Kelantan	2 ..	0.50 ..	—
Malacca	1 ..	0.06 ..	Malacca Town has a Municipal supply from which the Jasin supply is drawn
Negri Sembilan ..	8 ..	2.83 ..	—
Pahang	13 ..	1.46 ..	The new Raub supply of 0.75 m.g.d. is excluded
Penang : Penang Island ..	4 ..	0.53 ..	Georgetown has a Municipal supply
P. Wellesley	2 ..	1.60 ..	—
Perak	20 ..	12.90 ..	The quantity quoted is the average quantity supplied and not the capacity
Selangor	11 ..	17.40 ..	—
Trengganu	— ..	— ..	—
Total	87	45.70	

Note.—The figures for the number of schemes are for schemes as a whole.

Of the 87 supply schemes, 18 have a normal operating capacity of 0.5 m.g.d. or greater. The largest is that of Kuala Lumpur which supplies 10.25 m.g.d. to about 230,000 people. The second largest is the Kinta Valley supply system which supplies 5 m.g.d. to 117,000 people inclusive of Ipoh town.

The smaller supply schemes vary considerably in quality. The more recent ones have been built to modern standards but the older ones are often little more than stream intakes supplying untreated water by gravity to large villages. Such schemes are very susceptible to drought conditions and the quantity is generally inadequate for present day requirements.

The general nature of the works executed in States and Settlements during the course of the year is set out below :

Johore The Labis supply, opened in 1949, was completed. Investigations into the extension of existing supplies were severely hampered by the disturbed state of the country. At Pontian investigations continued over the deterioration of the water after it leaves the treatment plant. Break-point chlorination was tried without success.

Kedah and Perlis	...	...	Designs were completed and work started on the improvements to the Alor Star supply system.
Kelantan	..	..	Investigations were completed for the Pasir Mas new supply and a scheme prepared
Malacca	..	..	Assistance was given to the Municipality over the provision of a service reservoir and treatment plant for the supply from the Ayer Keroh reservoir.
Negri Sembilan	..	..	Investigations continued for the combined Seremban-Port Dickson regional water supply. A contract was placed for the 14" steel main from the Seremban (Pantai) headworks to the filtration plant site on Gun Hill, Seremban.
Pahang	..	..	The new Raub water supply of $\frac{1}{2}$ m.g.d. capacity was brought into operation in December.
Penang and Province Wellesley			Good progress was made on the North Province Wellesley Water Supply. Contracts were let for the supply of water mains and pumping machinery and for the construction of a $1\frac{1}{2}$ million gallon service reservoir. This scheme, when fully developed, should supply 3 m.g.d. to a rural and urban population.
Perak	..	..	Investigations were carried out for a new supply for Bidor. Designs were prepared for a new supply for Grik and orders placed for pumps, mains, etc.
Selangor	..	..	With the establishment of the Kuala Lumpur Municipality, all works other than the water supply scheme ceased to be a Public Works Department responsibility. This necessitated substantial Departmental reorganisation. Investigations continued on the Klang Gates scheme and the tunnel under the river was finally completed. No major rock fault was found and consequently the advice of consulting engineers is now being sought over the construction of a dam on this site. Work continued on the Klang and Coast supply system. Cemetery Hill reservoir (Klang) was brought into use in November and contracts were placed for equipment for the purification plant and also for mains.
Trengganu	..	..	Investigations were completed for a two m.g.d. supply for Kuala Trengganu to be pumped from the tidal reaches of the Trengganu river. Extensive salinity tests were carried out and, as a result, a site for the intake has been selected which is some seven miles nearer Kuala Trengganu than at first appeared possible. The resulting saving in cost is likely to be about half-a-million dollars.

(iii)—AIRFIELDS

The maintenance and construction of airfields continued to be a function of the Public Works Department. The following airfields used by scheduled air services were maintained :

Location.	Type of runway.
Alor Star (Kedah)	Bitumen surface
Bayan Lepas (Penang)	"
Ipoh (Perak)	"
Kota Bharu (Kelantan)	Grass
Kuala Lumpur (Selangor)	Bitumen surface
Kuantan (Pahang)	Grass
Taiping (Perak)	Grass and part bitumen surface

The normal passenger-carrying aircraft using these airfields is the DC3 (Dakota) with an all-up weight in the 30,000 lb. class.

In addition a number of other airfields are maintained either on a non-operational care-and-maintenance basis or for the Services and others using light aircraft. These range from small grass prepared airfields suitable for Auster aircraft to the concrete runways of war-time airfields not now required.

Practically all airfields used by scheduled air lines have been the cause of much concern to the engineers responsible for maintenance. All of them were constructed either before or during the occupation when extension generally became necessary owing to the development of aircraft. The original work was done to meet the needs of the day and the extension work was poorly done, probably designed to provide airfields for a mere year or two. Certainly none of this work was done to meet the needs of Malaya in 1950. The reasons for the failure of Bayan Lepas runway, as set out in the Engineer's report, are typical of all such airfields :

"This runway constructed 15 years ago was designed for use by Atlanta type aircraft which it is believed exerted only half the pressure on the ground of the DC3's which have been using the runway. When an airfield is used by aircraft heavier than those for which it is designed it does not fail at first but failure progresses as the number of repetitions of landing and take-off increases."

When such failure occurs, repairs may be extremely difficult, laborious and expensive to execute particularly if the airfield is to remain "operational" since, when aircraft are landing or taking off it is essential to remove all obstructions from the runway and the land on either side. Commonly, this problem is solved by constructing a new airfield elsewhere, but, in Malaya, the cost and available engineering resources have precluded this being done.

Certain important technical problems have arisen in connection with airfields. All modern runway design is based on the science of soil mechanics and it has not yet been possible to establish a laboratory for examining these problems. It is hoped to establish such a laboratory in 1951. Another problem causing concern is the maintenance of bitumen surfaces. These have proved very satisfactory on roads but a runway is required to carry very heavy,

if occasional, loads and it is being found that this infrequent loading leads to deterioration of bitumen surfaces. This is a problem of some magnitude for which no solution has yet been found.

Bayan Lepas Airfield.

For the reasons already given this airfield deteriorated so severely that finally in September it had to be closed to all traffic to allow remedial measures to proceed and work was still proceeding at the close of the year. The airfield is being re-constructed for limited use only and complete rebuilding, or the provision of a new airfield, will shortly become essential.

Kuala Lumpur Airfield.

Reconstruction of this airfield became essential and work was put in hand in April to bring up the capacity to 35,000 lbs., a figure which was later increased to 42,000 lbs. This is a joint-user Civil—R.A.F. airfield and could not be closed down during the reconstruction period. Traffic was therefore maintained on part of the width of the existing laterite gravel runway while a narrow runway was rebuilt on the balance of the runway width. The intention is to complete this portion of the new runway, open it to traffic and even widen it over the gravel runway now in use. This operation was initially attempted under traffic and work started in April. However, delays caused by the necessity of withdrawing labour and plant to allow aircraft to land became so serious that in June the airfield had to be closed down daily from 12 noon to 4.30 p.m.

Kuala Trengganu Airfield.

A grass strip with prepared landing area 1,500 yards by 50 yards and suitable for 30,000 lb. aircraft was under construction at Kuala Trengganu. This airfield when completed will be suitable for the DC3 aircraft used for the internal air services. The major problem with regard to this airfield is to stabilise the top soil and grass is being used for this purpose.

Alor Star Airfield.

The Kepala Batas (Alor Star) airfield was extended to 1,500 yards and the whole runway seal coated.

Part IV

SURVEY

REVENUE SURVEY

Having regard to the difficult conditions under which field parties have in many cases been required to work and to the heavy demands made for surveys of various types by squatter resettlement, the year's outturn of work amounting to 30,634 lots involving 4,509 linear miles of traversing was satisfactory and compares with 24,743 lots and 4,372 miles of traversing in 1949. The highest praise is due to the field officers and their parties who have contributed to this result for the way they have carried on, often in dangerous areas.

Bandit activity in Pahang resulted in one field officer and his mandor losing their lives in an ambush. The camp of a field party in Kedah was raided by bandits and their instruments and equipment lost. On two occasions field parties in Perak were ambushed, fortunately without loss of life.

In Kedah, the Chief Surveyor was made State Resettlement Officer while in all other States/Settlements the resources of the Survey Department have been called upon for planning of resettlement areas and their marking out on the ground after preliminary contour survey.

TOPOGRAPHICAL BRANCH

The Emergency One Inch Mapping Programme calls for the survey of 19,577 square miles of which 12,703 square miles have been mapped. Of this total 5,645 square miles were mapped during 1950. This mapping is being done from air photographs, in the compilation of which assistance was given by the Revenue Survey Branch in various States/Settlements.

Alongside the Emergency Programme, progress was made with the standard mapping at a scale of one inch to a mile and at the end of 1950 2,000 square miles of this was in hand. Extensive trigonometrical observations in the field to improve the existing triangulation and much preparatory work in the office made a considerable contribution to the re-mapping of Malaya on a new projection designed to improve the utility of the existing maps in the One Inch series. The diagrams between pages 178 and 179 shew both the existing and proposed new Sheet layouts.

Computational work in connection with the revision of the Malayan triangulation proceeded and during the year 84 points were recomputed. The revision is now complete in Kelantan, Trengganu and Eastern Pahang while work in Johore is in hand.

An appreciable amount of precise levelling was completed in both field and office.

CARTOGRAPHIC BRANCH

A very large programme of map production was disposed of in 1950 and to this were added the usual heavy demands for the printing of numerous certificates, posters, charts, forms, diagrams and minor maps. The leisurely days of the past when the publication of a new map was an event of some magnitude have gone, to be replaced by the present time when a week which passes without another map being printed is equally an event to be noted.

Foremost among the 1950 production were—

The printing of 5,500 copies of each of 42 one inch to one mile

Emergency maps compiled from air photography.

The six miles to one inch map of Malaya.

The State map of Selangor.

The State map of Johore.

This alone, without the vast amount of subsidiary work, frequently without any relation to map production, was a formidable task.

The value of the year's production was \$381,210 against \$297,854 in 1949.

The value of map sales and free issues was \$177,626 against \$64,387 in 1949. A good deal of this increase is due to modification in accounting procedure. Nevertheless, even on the old procedure, the year's sales and free issues would represent a considerable increase over the figures for 1949.

INSTRUMENT REPAIRING BRANCH

The Branch has functioned efficiently during the year and has successfully met all demands by the Department as well as by other Government Departments and private individuals, firms, and organisations. With the installation of further new machines it has been possible to undertake more work for the public on payment.

The value of work done by the Branch in 1950 was \$87,653 compared with \$69,411 in 1949.

Interesting evidence of the versatility of the Branch is afforded by the construction of the following pieces of apparatus:

A Recording Instrument for testing Current Meters, made for the Drainage and Irrigation Department.

Two miniature rice polishers for the Institute for Medical Research and the Department of Agriculture. These are intended for use in experiments in connection with the vitamin content of rice after polishing.

An apparatus for testing the tensile strength of rubber. This, made for a commercial firm, records automatically and continuously the elongation and tension of the specimen under test.

TRAINING OF STAFF

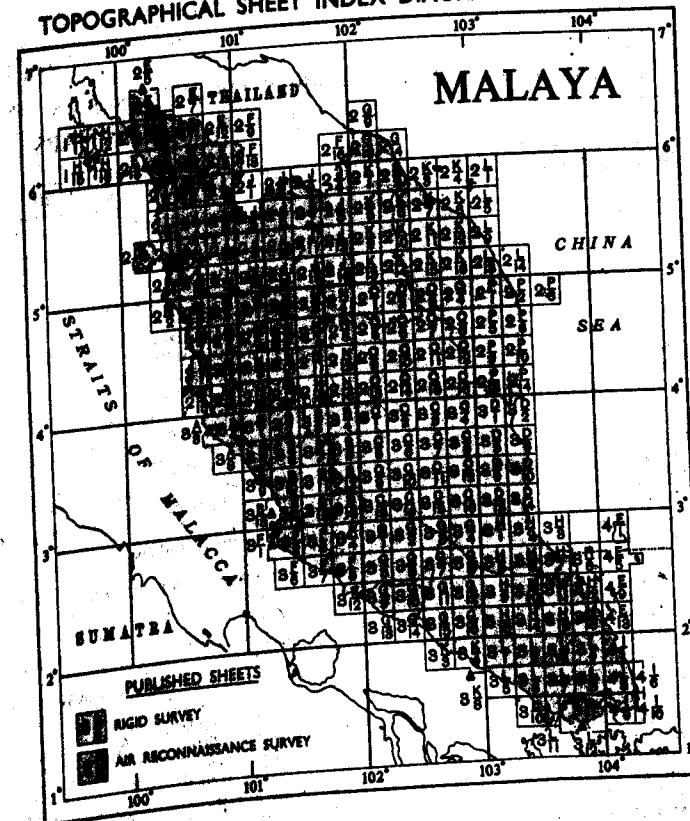
In pursuance of the Department's part in implementing the Government's policy of fitting locally domiciled officers for higher posts in the service, seven officers were in various Australian Universities for the attainment of professional qualifications. The first of these to proceed to Australia completed his final examination with distinction and is due to return to Malaya in 1951.

By arrangements made with both the Royal Institution of Chartered Surveyors and the Survey Board of Australasia, it is now possible for officers who possess adequate basic educational qualifications to sit for the examination locally. Three officers sat for the examination of the first named authority, one of whom obtained a complete pass and will shortly proceed to England for further studies. Three others sat for various sections of the examination of the second named authority with varying degrees of success.

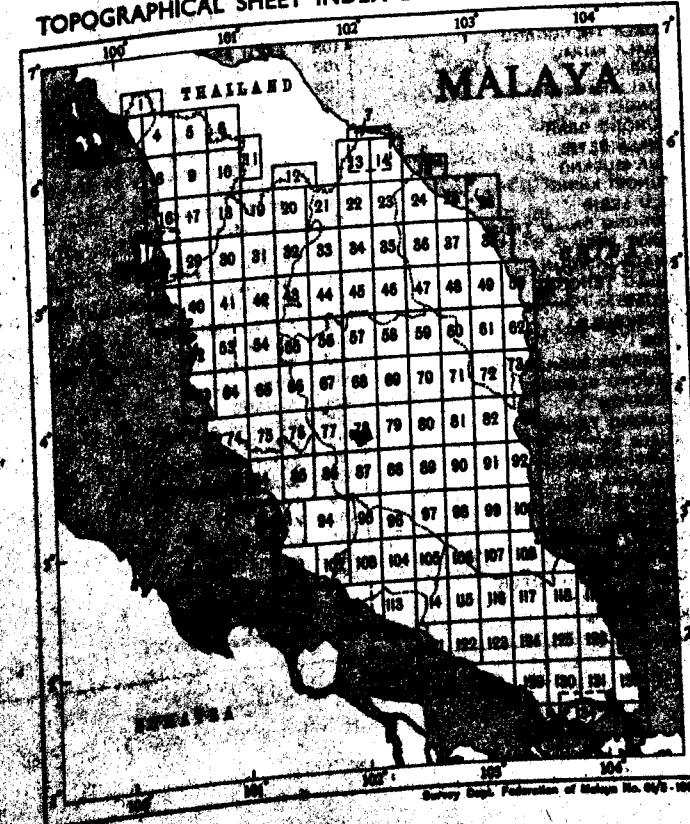
Every encouragement is given to the Asian officer to fit himself for promotion to the higher posts in the service.

Spare time tuition continued to be given by the more senior officers of the Department for the preparation of the more junior officers for the Departmental examinations. In 1950 there were 164 candidates for these examinations of whom 51 gained full passes, and 63 gained deferred passes.

ONE INCH TO ONE MILE
TOPOGRAPHICAL SHEET INDEX DIAGRAM OLD SERIES



ONE INCH TO ONE MILE
TOPOGRAPHICAL SHEET INDEX DIAGRAM NEW SERIES



**SHEET NUMBERS AND NAMES OF NEW SERIES
ONE INCH TO ONE MILE TOPOGRAPHICAL MAPS**

SHEET NUMBER & NAME	SHEET NUMBER & NAME
1 PADANG BESAR	69 KUALA TENBELING
2 LANGKAWI ISLANDS	70 SUNGEI TEKAI
3 KANGAR	71 GUNONG RALLAS
4 JITRA	72 AYER PUTEH
5 KUALA NERANG	73 OHUKAI
6 PAKIR TERBANG	74 BAGAN DATOH
7 KOTA BHARU	75 CHANGKAT JONG
8 ALOR STAR	76 TANJONG MALIM
9 NAMI	77 FRASERS HILL
10 WENG	78 GUNONG BENOM
11 MUDIN BESAR	79 JERANTUT
12 SELUM	80 SUNGEI TEKAM
13 PASIR MAS	81 ULU LEPAR
14 PASIR PUTEH	82 SUNGEI LEMBING
15 PERHENTIAN ISLANDS	83 KUANTAN
16 SUNGEI PATANI	84 KUALA SELANGOR
17 KUALA KETIL	85 RAWANG
18 BALING	86 KUALA KUBU BAHRU
19 KRUNEI	87 BENTONG
20 TAPONG	88 TEMERLOH & MENTEKAS
21 BATU MELINTANG	89 OHENOR
22 TANAH MERAH	90 MARAN
23 KUALA KRAI	91 PULAU MANIS
24 KAMPONG RAJA	92 PEKAN
25 KAMPONG BULOH	93 PORT SWETTENHAM & KLANG
26 PULAU REDANG	94 KUALA LUMPUR
27 PENANG ISLAND & BUTTERWORTH	95 KUALA KLAUANG
28 BUKIT MERTAJAM	96 DURIAN TIPUS
29 KULIM	97 TASEK BERA
30 LENGGONG	98 SUNGEI JERAM
31 GRIK	99 KUALA AUR
32 TEMENGOR	100 NENAS
33 SUNGEI JENERA	101 TELOK DATOK
34 KUALA GRIS	102 SEPANG
35 MANEK URAI	103 SEREMBAN
36 GUNONG LAWIT	104 KUALA PILAH
37 ULU TELEMONG	105 GEMAS
38 KUALA TRENGGANU	106 BATU ANAM
39 KUALA KURAU	107 KUALA SEKIN
40 TAIPING	108 ROMPIN
41 KUALA KANGSAR	109 ENDAU
42 SUNGEI SIPUT	110 PULAU SRI BUAT
43 GUNONG GRAH	111 PULAU TIOMAN
44 KUALA BETIS	112 PORT DICKSON
45 GUA MUSANG	113 MALACCA
46 SUNGEI ARING	114 MOUNT OPHIR
47 ULU LEBIR	115 SEGAMAT
48 GUNONG GAJAH TROM	116 LABIS
49 BUKIT BESI	117 SUNGEI BELAI
50 KUALA DUNGUN	118 MAHANG
51 PULAU TENGGOL	119 MERBING
52 BRUAS	120 PULAU TINGGI
53 TRONOH	121 MUAR
54 IPOH	122 BATU PAHAT
55 CAMERON HIGHLANDS	123 TONG PENG
56 GUNONG BEDONG	124 KLUANG
57 MERAPON	125 GUNONG BLUMUT
58 GUNONG TAHAN	126 ULU BEBES
59 KUALA BAT	127 BENDU
60 MANDI ANGIN	128 GEMAS
61 ULU PAKA	129 PORTIAN
62 KUALA KERTEN	130 KILAI
63 LUMUT	131 KOTA TINGGI
64 TELOK ANSON	132 SUNGAI PEKAN
65 TAPAH	133 KUALA KANGSAR
66 GUNONG BATU PUTEH	134 KUALA KANGSAR
67 KUALA MEDANG	135 KUALA KANGSAR
68 KUALA LIPS	136 KUALA KANGSAR

Chapter XIII

COMMUNICATIONS

Part I

ROADS

GENERAL

With the exception of roads within the Municipal areas of Kuala Lumpur, Malacca, and Penang, the public road system of the Federation is maintained by the Public Works Department. It covers 6,064 miles, 2,146 miles of which are classified as Federal roads and the remainder as State roads. Details of construction and classification are shown below :

Class.	Type.	Mileage.
A ..	Concrete surface	19
	Metalled surface grouted or sealed with bitumen	3,999
B ..	Metalled surface, waterbound	317
C ..	Hard surface, bitumen sealed	232
D ..	Hard surface, waterbound	806
E ..	Earth surface	691
Total ..		6,064 miles

A considerable proportion of the resources of the Department has been devoted during the year to the continued construction of strategic roads, the object of which is to secure road access, principally for the Security Forces, to remote areas. The quality of these roads varies from gravel surfaces to simple earth surfaces, but from the engineering point of view, the work involved constitutes no more than a normal extension of the road system. The individual schemes upon which work is in progress are shown below :

State/Settlement.	Scheme.	Magnitude.
Johore ..	Lenga-Bukit Kepong Road ..	6 miles
	Niyor-Paloh Road	\$105,000 worth of work improving and extending existing tracks
	Bukit Tiga Road (Mawai resettlement area)	5 miles
Kelantan ..	Tanah Merah-Nibong Road ..	20 miles
	Nibong-Jeli Road	13½ miles
	Jeli-Batu Melintang Road ..	12 miles
	Gua Musang-Kuala Betis Road ..	21 miles
	Gua Musang-Pulai Road	8½ miles

State/Settlement.	Scheme.	Magnitude.
Negri Sembilan..	Batang Road Malacca-Ayer Kuning	6 miles of improvement works to tracks
Pahang ..	Mengkuang-Triang Road	6 miles
Perak ..	Redang Panjang-Simpang Tiga Road	5½ miles
	Grik-Klian Intan Road	19 miles
	Langkap-Chui Chak-54½ miles, Bidor-Teluk Anson Road	7 miles
Selangor...	Tanjong Karang-Sekinchang Road	9 miles
	Bukit Lanjan-Sungei Penchala Road	4 miles

In addition to the work detailed above, there were substantial demands for other works connected with the Emergency such as roads in Resettlement areas, access roads to Police V.H.F. Radio Stations and the like.

The Temerloh-Maran Road project, estimated to cost \$3,908,000 (of which \$2,000,000 has been provided under the Colonial Development and Welfare Act), is intended to reduce the distance between the east and west coasts by 72 miles. The road is being designed and constructed to meet the demands of modern high speed traffic. Construction continued during the year but progress was poor for want of earth-moving equipment. Two quarries, one of which was equipped with a crushing plant, were opened and developed during the year and in view of the serious shortage of skilled road labour, good progress was made on the reconditioning and block metalling of the formation completed in 1941, which had suffered considerable damage since then owing to weathering. It is, however, obvious that the greater use of road making machinery and mechanised methods will be necessary.

WORKING CONDITIONS

A feature of all road works in the country is that for any major earthwork the use of machinery is to-day virtually essential. Manual labour is not now available for bulk earthwork and if the work is to be done within a reasonable time there is no alternative to the use of machinery. Moreover, with wages at their current levels, the use of machinery is very much cheaper. In the early part of the year the Public Works Department had very little road-making machinery suitable for earthmoving and owing to financial stringency in past years, very little was on order. Towards the close of the year, however, the purchase of about \$12,000,000 worth of plant was being planned and certain supply contracts had been placed. Efforts were also made to secure plant from other sources. Some was borrowed or hired from the Services and commercial sources and some obtained from other Departments, the Drainage and Irrigation Department, for instance, undertaking the construction of the earthwork for the Tanjong Karang-Sekinchang Road in Selangor.

The large demands placed on the Public Works Department coupled with the extreme shortage of suitable plant were a constant source of exasperation. Comparatively large quantities of plant

are required and delivery times are slow as the following mean delivery times quoted for typical plant items show :

Heavy tractor	..	1 year
Excavator	..	8 months
Dumper	..	1 year
Power Grader	..	7 months

These delays also involved the condition that while odd items of plant could be purchased, hired or borrowed at short notice, balanced teams of plant could not be built up.

The unsettled condition of the country from time to time caused considerable inconvenience and on many occasions staff worked under very trying, not to say dangerous, conditions. Certain quarries had to be closed down in accordance with security requirements. Damage to Public Works Department plant and property continued intermittently throughout the year.

During the year engineers continued experiments on road works and it is hoped to establish in 1951 an organisation for the correlation of such experimental work. During the year tests were made with cutback bitumens and with bitumen emulsions with the object of evolving a low-cost road suitable for light traffic.

THE CENTRAL ROADS BOARD

The Central Roads Board was established during the year and held its first meeting on the 6th November. The Board is constituted under the Chairmanship of the Chief Secretary, the members being the Director of Public Works, the Economic Secretary, the Chairman of the Rural Industrial Development Authority, the Commissioner for Road Transport, and ten State and Settlement representatives. The secretarial work of the Board is undertaken by the Public Works Department. The Board is responsible for advising the Federal Government regarding road development, for recommending priorities for construction and for the correlation of individual State and Settlement projects.

A ROAD RECONNAISSANCE

At the end of the year a road reconnaissance was carried out which is of interest as demonstrating the use that can be made of modern resources. Two engineers were given the task of establishing a practicable route for a road between Batu Melintang in Kelantan and Grik in Perak. The direct distance is about 45 miles over very mountainous, jungle-covered, and uninhabited terrain. Air photographs were available of the entire area and a one inch to one mile topographical map without contours was compiled from these photographs. A reconnaissance by air using a Dakota aircraft established fairly closely the possible routes and also enabled the altitude of the main pass to be estimated at 2,500 feet (the altitude of the main pass on the Kuala Kubu-Raub Road is 2,793 feet.) With the assistance of the air reconnaissance and a careful examination of air photographs it was decided that a route via the Sungei Tiang was likely to be the best.

The party set out on foot with an escort and radio communication facilities provided by the Malay Regiment. It was supplied by air-drop and a study of the map and photographs with the assistance of a pocket stereoscope proved invaluable in determining exact positions on the ground. Two aneroid barometers were carried with the object of establishing levels at places clearly visible in the air photographs but one barometer failed and the other became suspect before all necessary levels were established. The intention to re-photograph the planned route on completion of the ground reconnaissance and then, using the established levels as control points, to plot in contours adequate for road location purposes on the map, had, therefore, to be abandoned. However, the Department was fortunate in securing the use of a Royal Air Force helicopter with which the levels not secured during the ground reconnaissance were established. The success of the reconnaissance was due to the use of air photography, stereoscopes, radio communication and, particularly, of supply by air-drop which enabled the party to select its own route away from established paths. The ground reconnaissance took 40 days, the route covering some 105 miles and, despite the use of modern aids, was an arduous and exacting task.

ROAD WORKS IN THE STATES AND SETTLEMENTS

The following indicates the general extent of works in individual States and Settlements apart from those already mentioned :

Johore.

Maintenance funds were severely cut in May to provide money for Emergency works. Emergency conditions have led to more traffic using the West Coast road and there is at times congestion at the Batu Pahat and Muar ferries.

Kedah and Perlis.

Four large permanent bridges were built at Jitra, Sungei Lallang, Jeniang and Changlun respectively. Six smaller permanent bridges were also built.

Kelantan.

The suspension bridge over the Sungei Nal was rebuilt. A 90 ft. "N" girder steel bridge was built over the Sungei Yong. This bridge was designed and fabricated in Kelantan and erected principally with Malay labour.

Malacca.

The work during the year was generally confined to normal maintenance work.

Negri Sembilan.

In the Tampin District labour had to be diverted from maintenance work to construction work on the Batang Malacca-Ayer Kuning Road. Work was also in progress on the reconstruction of eight miles of road between Port Dickson and the Menyala Cantonment. Some War Department plant was obtained for this

work, some plant was hired and some purchased. The cost of this project will be about \$800,000.

Pahang.

A feature of the Pahang roads is their narrowness. Outside the towns only about two miles of carriageway are over 16 feet in width. The roads are consequently not adequate for the present heavy Security Forces' traffic. Maintenance work was slightly reduced on account of Emergency conditions.

Penang and Province Wellesley.

The work during the year was confined generally to normal maintenance.

Perak.

A large deviation of the Main Trunk Road was carried out in connection with the Kampar Padang and Hospital scheme. Extensive reconstruction of the Krian roads was also carried out, an additional \$300,000 being obtained for this work.

Selangor.

The labour shortage and the pressure of other works led to an almost complete stoppage of road work within 15 miles of Kuala Lumpur, this deviation of labour (and plant) leading to deterioration of road surfaces. It was not possible to make any progress on the replacement of the inadequate bridges erected during the Japanese Occupation. The Klang River crossings consisting of two Bailey Pontoon bridges gave further trouble and it must be expected that breakdowns will be more frequent in the future. Approximately \$100,000 was spent on these bridges during the year. It is intended that consulting engineers should be obtained from England to prepare designs for a new permanent bridge.

Trengganu.

The approaches to the Jerteh ferry were concreted and the Dungun and Geliga ferries were improved. Six bridges were reconstructed and road surfaces were generally maintained.

Part II

ROAD TRANSPORT

The major event of the year was the abolition of petrol rationing on the 1st April, 1950. Its abolition did not, however, result in any increase in licensing revenues as rationing had not (as it had in Great Britain where the basic petrol ration for private motors was so small as to make it uneconomic to license a private motor vehicle) been severe enough to cause vehicles to be laid up. It resulted, of course, in increased receipts from the petrol tax; but so far as the Road Transport Department was concerned its main effect was to relieve the Department of an onerous and unpopular duty which had been carried out for five years with the help of a few temporary clerks.

The total number of vehicles now in use in the Federation is 43,338 comprising 20,914 private cars, 7,796 motor cycles, 1,352 omnibuses, 1,607 hackney carriages, 7,656 commercial load carrying vehicles and 4,013 Government-owned vehicles.

During the year buses travelled some 57 million miles and carried 125 million passengers.

The total Government revenue from the licensing, etc., of vehicles amounted to \$9,887,775. If the tax on petrol, now 68 cents per gallon, is also taken into account, it will be seen that road transport makes a very considerable contribution to the country's revenues.

There are some 9,210 persons employed in the passenger industry and some 22,800 on the goods side. There has been no labour trouble in either during the year, the road transport industry enjoying a singularly good record in this respect.

The industry has inevitably had to bear its share of suffering in the terrorist campaign. Road vehicles, particularly those on lonely routes, are particularly vulnerable to the type of attack practised by the communist bandits and some omnibus companies have suffered heavily through vehicles being held up and burnt. Up to date some 149 have been totally destroyed in this way. Casualties amongst personnel, either crew or passengers, have fortunately been negligible.

Apart from the loss of vehicles, whose cover by insurance is becoming increasingly difficult and expensive, companies suffered loss of revenue and the travelling public loss of facilities, while new vehicles were being built. On some routes where attacks on vehicles are frequent, the Department has sanctioned the use of ex-Military load carriers adapted for the carriage of passengers.

Part III

MALAYAN RAILWAY ADMINISTRATION

GENERAL

The main line of the Malayan Railway runs from Singapore in the south along the alluvial plain which lies between the high central mountain range and the west coast to Prai opposite to Penang Island in the north. Short branch lines run to the coast at Port Dickson, Port Swettenham, Teluk Anson and Port Weld: a longer branch line runs from a point near Prai northwards to connect with the Thailand State Railway at the frontier. This coastal strip, which contains almost four-fifths of the whole population, is well served also by road, sea and air: and the resultant competition which the Railway has to face has grown very considerably in recent years.

The long branch line, known as the East Coast Line, which runs northwards through difficult country from Gemas to Tumpat on the coast at the eastern end of the frontier with Thailand is of more recent development. Completed in 1931, a distance of 200

miles from Mentakab to Kuala Krai was removed by the Japanese during the War. Reconstruction at the southern end was interrupted at Jerantut in 1948 owing to bandit activity and has not since been resumed. At the northern end, the line has been reconstructed and re-opened to traffic to Dabong (Kuala Pergau) 86 miles south of Tumpat, whilst construction railhead is at Bertam, almost 20 miles further south. The gap of 114 miles from Bertam to Jerantut remains to be completed.

FINANCIAL STATEMENT, 1950

Gross Revenue	\$42,587,376
Gross Expenditure	\$38,282,530
Balance to Railways Renewals Fund against the assessed contribution of \$5,028,700	\$4,304,846

Special Expenditure on Reconstruction and Rehabilitation during 1950 was \$13,704,437 of which an amount of \$5,145,448 was met from the Railways Renewals Fund, a further \$1,843,200 from other Railway Funds and the balance of \$6,715,789 from Government Loans and Funds.

OPERATING STATISTICS

Item.	Unit.	1950.	1949.
Route miles open to traffic ..	Miles	894	870
Passenger train mileage ..	Miles x '000	1,575	1,352
Passenger journeys	x '000	5,759	4,442
Average receipt per passenger journey (ordinary)	\$	1.43	1.97
Goods train mileage	Miles x '000	2,110	1,784
Paying goods tonnage	Tons x '000	2,036	1,761
Paying goods ton mileage ..	Ton Miles x '000	241,960	198,722

	Unit.	1950.	1949.
Port Swettenham (Railway Wharves)—			
Imports	Tons	439,356	342,100
Exports	Tons	310,982	271,035
Total Imports and Exports	Tons	750,338	613,135
Prai—			
Imports	Tons	206,734	198,255
Exports	Tons	160,324	156,948
Total Imports and Exports	Tons	367,058	355,203

THE EMERGENCY AND THE RAILWAY

There were 368 attacks of one sort or another by terrorists on the Railway during the year. The track was interfered with on 101 occasions involving 59 derailments of trains. Trains were subjected to small arms fire on 54 occasions: 19 passengers were killed and 58

were injured. Incidents included attacks on permanent way gang lines and interference with the Railway's signals and telecommunications. Two wayside stations and 2 living quarters were destroyed by fire. Locomotives were damaged on 47 occasions, coaches on 14 occasions, and wagons on 148. Seven coaches were destroyed.

The protective measures employed in 1948 and 1949 for night mail trains were continued in 1950. Trains on the East Coast Line mounting Police escorts continued to run at reduced speeds; and four lightly armoured trains remained at the disposal of the Security Forces.

WORKING RESULTS

Prices of materials, which rose progressively during the year, and increases in salaries and wages estimated to add over \$2 million annually to the railway wage bill, resulted in substantially increased operating costs. Difficulties of operation caused by the Emergency increased materially during the year, and resulted in a reduction in practicable railway capacity estimated at 30 per cent. The increased goods tonnage moved despite these serious operating difficulties fell short of the public demand, and substantial additional revenue could have been earned but for this handicap.

GENERAL REHABILITATION

The task of rehabilitating railway property, locomotives and rolling stock continued throughout the year to the extent practicable under Emergency conditions. Work was commenced on the final two major buildings at Sentul Works, and these will be completed by mid-1951. No decisions were reached during the year on the proposals for the construction of additional wharves at Port Swettenham, where tonnages continued to increase, but a programme for the provision of additional transit shed accommodation for the existing ocean wharf was approved, and equipment designed to speed up the unloading of ships at that wharf is on order.

STAFF

Establishment.

The number of Railway employees at the end of the year compared with that at the end of 1949 was as follows:

	1950.	1949.
Malays	3,714 ..	3,732
Chinese	1,171 ..	1,306
Indians and Ceylonese	8,419 ..	8,851
Europeans	92 ..	103
Eurasians	249 ..	250
Others	193 ..	221
Total	13,838 ..	14,463

Of these 3,398 were salaried staff and 10,440 wages staff. There were no cases of withdrawal of labour during the year.

Part IV MARINE

SHIPPING

The total number and nett tonnage of ships of 75 tons and over that entered and cleared at Federal ports were as follows:

	No. of vessels.	Tonnage.
Penang	3,645 ..	10,180,481
Port Swettenham	2,038 ..	7,019,726
Malacca	495 ..	283,602
	6,178 ..	17,483,809

COUNTRY CRAFT

The total number and nett tonnage of all small merchant ships under 75 tons and country craft of all tonnages that entered and cleared at Federal ports were as follows:

	No. of vessels.	Tonnage.
Penang	7,506 ..	406,772
Port Swettenham	10,449 ..	127,257
Malacca	6,583 ..	92,752
	24,538 ..	626,781

NAVIGATIONAL AIDS

Regular inspections were carried out of all the navigational aids around the Federation coast. All lighthouses, light beacons and light buoys, etc., have been maintained in a state of efficiency.

During the year a new flashing light was installed on Tanjong Marang (Seal Bluff) in the State of Trengganu. With the establishment of this light mariners can now pass between the headland and the off-lying Seal Rocks during the hours of darkness in relative safety.

The light beacon which was situated at First Point in South Klang Strait, and disappeared during the Japanese occupation period, has been replaced.

DREDGING

Dredger "KUANTAN" and attendant Hopper "MORIB" were employed during the year in dredging alongside the Coastal Wharf, Port Swettenham in order to maintain a depth of 18 feet at Low Water Ordinary Spring Tide alongside the wharf and approaches.

The new grab Hopper "KETAM" which was commissioned during the early part of the year has proved a very useful and economical unit to operate. After completing trials in Penang "KETAM" proceeded to Malacca and removed 20,000 tons of spoil from the Malacca River and attained a minimum depth in the entrance at Low Water Ordinary Spring Tide level of 8 feet for the first 600 feet.

During the fine weather season on the East Coast "KETAM" dredged alongside the Government Wharf in Kuantan, in the State of Pahang, to a depth of 15 feet at Low Water Ordinary Spring Tide and deepened the water on the Kuantan Bar before proceeding to Dungun, in the State of Trengganu.

In Dungun Harbour, the grab was employed in cutting a channel through a sand spit which seriously hampered the working of Dungun Ferry during the periods of low water.

PORT SURVEYS

The harbour entrances of Tumpat, Kuala Besar, Kuala Trengganu and Kuantan were surveyed by the Survey Department and navigational aids re-sited in accordance with the new surveys.

Periodic check surveys have been taken in the entrance to Malacca River and in the vicinity of the Coastal Wharf in Port Swettenham in order to keep a close watch on the silting in these two areas.

Part V POSTS

GENERAL

The number of postal articles dealt with increased by 19 per cent. and there was a similar increase in the volume of nearly all services provided by the Post Office. Detailed statistics follow.

FINANCE

Expenditure and revenue figures for 1950 were \$6,091,730 and \$7,736,938 respectively as compared with \$5,812,820 and \$8,513,646 in 1949. The decrease in revenue was due to the diminishing amounts received from philatelists for the purchase of the new and special issues of postage stamps which were first placed on sale during 1949.

The total cash turnover at Post Offices amounted to \$438,910,369, which was an increase of \$89,228,523 over the amount for the previous year.

STAFF

There were 1965 officers of all grades on the establishment, two fewer than in 1949. As in other Government Department, continued difficulty in recruitment was experienced as candidates with the requisite educational qualifications were not forthcoming.

Some improvements in welfare facilities were effected, but progress in this direction was restricted owing to the lack of accommodation and for financial reasons.

Relations between the Staff and the Administration were most satisfactory. Good results were obtained locally by District Whitley Councils while at the first meeting of the Departmental Whitley Council in November agreement was reached on a number of points and other matters were fully discussed.

Trade unions within the Department made good progress during the year and a Federation of the Uniformed Staff Unions made application for registration.

POST OFFICES AND AGENCIES

One hundred and eighty Post Offices and 127 Postal Agencies were in operation. In addition, there were 295 licensed Stamp Vendors.

Inadequate and unsuitable accommodation presents an increasingly serious problem. Several new Post Offices are needed and many of the existing offices require replacement. The provision of funds to remedy this situation is envisaged in the Draft Development Plan.

MAILS

Air Mails—Internal.

The frequency of the services provided by Malayan Airways, Limited, was increased during the year and the fullest use was made of these services. The weight of first-class mail carried was more than double that carried in 1949.

The new surcharged service providing for the conveyance of second-class mail matter by air, introduced on the 22nd August, 1949, increased in popularity, but the volume of such traffic was still very small.

Air Mails—External.

Scheduled air despatches to and from the United Kingdom were five a week in each direction. The average transit time between the Federation and the United Kingdom was four days.

A new service providing for the conveyance of second-class mail matter by air from the United Kingdom to Malaya was in operation during the year. A similar service from Malaya to the United Kingdom, India, Pakistan, Ceylon, Hong Kong, New Zealand and Australia commenced on the 1st November.

An air parcel service from the United Kingdom to Malaya was introduced on the 7th July.

Surface Mails—Internal.

Dislocations in the rail and road services occurred owing to floods and terrorist activity, but the Departmental organisation developed for dealing with such emergencies prevented any serious delay to mails.

Destruction by terrorists of premises, vehicles and mails.

Two Postal Agencies and several contract vehicles conveying mail were totally destroyed by fire. In some instances, mails carried by contract vehicles were violated and very little of such mail was recovered.

On the 2nd August, the coaches containing mails from overseas, Singapore and South Johore, were totally destroyed by fire when the night mail train from Singapore was derailed by terrorist action.

Re-Settlement of Squatters.

The movement of population brought about by the re-settlement of squatters in areas beyond normal postal boundaries raised problems, but every effort was made to provide postal facilities in the new areas.

Postage Rates.

From the 22nd February, external postage rates including air mail rates to many countries, were increased as a result of the re-valuation of sterling.

The internal rates for Commercial Papers were reduced from 1st August.

Stamps.

New issues of stamps were introduced in the States of Pahang, Kedah, and Perak during the year, and all States and Settlements with the exception of Kelantan and Perlis have now their individual postage stamps. It is hoped to complete the issue early in 1951.

SAVINGS CERTIFICATES

Victory Savings Certificates were withdrawn from sale after the 31st December.

SAVINGS BANK

The number of transactions for the year was 450,740 compared with 430,107 for 1949, an increase of 4.8 per cent. During the year the value of transactions was \$56,876,478 of which \$32,641,218 represented deposits and \$24,235,260 withdrawals. The excess of deposits over withdrawals was \$8,405,958 compared with \$594,483 during 1949. This remarkable improvement was largely due to transactions during the second-half of the year; and, though the Savings Campaign launched towards the end of the year was in some small measure responsible, there can be no doubt that it chiefly reflects the great prosperity which followed upon the rise in the prices of rubber and tin.

The number of depositors at the end of the year was 251,760 and a total amount of \$56,884,406 including interest remained on deposit compared with 229,652* depositors and \$47,287,826* on deposit at the end of the previous year. The average amount standing to the credit of each depositor was \$226 compared with \$206 in 1949. During the year 30,199 new accounts were opened and 8,091 accounts were closed.

Withdrawals on demand and telegraph withdrawals were allowed up to a maximum of \$50 and \$200 respectively. Withdrawals on demand made during the year were 121,099 as against 126,248 in 1949 and withdrawals by telegraph, 2,571 as compared with 3,347 during 1949.

* Figures for 1949 published in the Annual Report for that year were provisional.

POSTAL STATISTICS, FEDERATION OF MALAYA

	1949*	1950†
Postal articles (total) ..	100,561,405	120,078,127
Government correspondence ..	16,301,714	19,814,106
Foreign mail (air) ..	5,157,932	6,248,255
Parcels ..	1,180,220	2,106,325
Money Orders issued ..	{ No. 447,427 Amount \$41,258,265	{ No. 520,615 Amount \$50,280,816
Money Orders paid ..	{ No. 267,937 Amount \$23,777,476	{ No. 300,342 Amount \$28,770,056
Total revenue ..	\$8,513,646	\$7,736,938
Total expenditure ..	\$5,812,820	\$6,091,730
Total cash turnover ..	\$349,681,846	\$438,910,369
Postal Orders issued ..	No. 202,576	No. 252,730
Postal Orders paid ..	No. 91,178	No. 97,899
Total weight of inland and overseas letter mails conveyed by the internal air service ..	107,359 lbs.	317,962 lbs.

Part VI

TELECOMMUNICATIONS

ORGANISATION

The Department of Telecommunications is responsible for the provision, maintenance and operation of all telecommunications services for the public throughout the Federation of Malaya and Singapore, except for the local telephone systems in Singapore and Johore Bahru which are maintained and operated by a commercial undertaking.

The Department, in addition to providing communications for the public, is responsible for the provision and maintenance of Malayan Railway signalling equipment, of Civil Aviation and Meteorological radio control equipment throughout Malaya and of the Police radio services throughout the Federation. The last named service, together with normal development of telecommunication services and the communications demanded for Defence and the Emergency, has been responsible for an increase of staff in the senior grades of approximately one-third.

A new section at Headquarters for Police Communications and a new Region covering the State of Negri Sembilan and the Settlement of Malacca were created. A further Region covering the States of Perlis and Kedah is to be formed as soon as circumstances permit.

During the year the law in respect of telegraphs (F.M.S. Cap. 163) was consolidated with slight amendments and extended to the whole Federation as the Telecommunications Ordinance, 1950.

GENERAL PROGRESS

The year has been one of intense activity for the Department and a vast amount of development work has been carried out.

* Final figures. † Provisional figures.

Even so, the provision of services in connection with the Emergency and to meet increased demands by the rubber and tin-market business, by favourable trading conditions in the country and by the general international situation, have taxed Departmental resources to the utmost.

STAFF

An increase of 27 duty posts for Senior Officers bringing the total number to 75, was authorised as from 1st July, 1950. This, with reliefs for leave, requires a senior staff (including Singapore) of 92 for which there were 64 officers at the end of the year. During the year five senior officers left the service while seven new appointments were made.

The total number of monthly paid subordinate staff employed fell from 2,109 at the beginning of the year to 2,050 at the end, while the number of daily rated staff employed rose from 2,348 to 2,419. These figures reflect the problems of recruitment of suitable staff and the limitations imposed by the training facilities which can be provided. Considerable numbers of additional employees are required and it is a tribute to the existing staff that they have accomplished so much under conditions of continuous stress and not infrequent danger and personal discomfort.

FINANCE

Departmental expenditure and revenue figures for the last four years are indicative of the growth of business. The revenue figures do not, however, take account of the considerable amount of non-revenue-producing work that has been carried out in providing services in connection with the Emergency.

	Expenditure.	Revenue.
	\$	\$
1947 ..	8,704,727 ..	5,557,774*
1948 ..	11,553,491 ..	7,275,244
1949 ..	14,680,493 ..	8,176,705†
1950 ..	15,349,123 ..	11,539,509

In keeping with the general expansion of the departmental services the work of the Accounts Branch has increased and this situation has been dealt with very satisfactorily by the introduction of improved methods.

TELEGRAPH SERVICES

There has been some reduction in the number of telegrams of all classes sent and received, the total number of messages handled during the year being 1,299,802. This reduction can be attributed to the increased use of telephone facilities and private teleprinter services. At the end of the year there were 44 teleprinter stations in the Federation compared with 31 a year earlier.

* A surcharge of 25 per cent. on the pre-war rates for telephones was introduced on 1st July, 1947.

† The surcharge of 25 per cent. on the pre-war rates for telephones was increased to 75 per cent. on 1st December, 1949. On the same date the rates for inland telegrams were increased by 66½ per cent.

In accordance with the International Telegraph Regulations (Paris Revision 1949) certain changes were introduced in foreign telegraph traffic on the 1st July, 1950. The principal changes were the abolition of the deferred rate telegram and alterations to the rates in respect of urgent and ordinary telegrams. The changes necessitated many alterations to the Telegraph Rules which were completely revised and became the Telegraph Regulations, 1950.

TELEPHONE SERVICES

It was towards the expansion of telephone services to meet an ever increasing demand that the main efforts of the Department were directed. The results achieved can best be appreciated by considering individually the various units which go to make up a telephone system.

Subscribers' lines.

The following figures (which, in each case, are in respect of the 31st December) indicate the rapid growth of the system over the past four years:

	1947.	1948.	1949.	1950.
Number of telephone instruments in use ..	13,657	17,553	20,362	24,414
Outstanding applications for telephone service ..	5,029	5,049	4,371	4,027

It has become apparent that the demand is difficult to meet, experience showing that as soon as the waiting list in an exchange area is cleared a further and hitherto unexpressed demand arises.

Overhead lines.

During the course of the year the total mileage of pole routes increased from 6,175 miles to 6,253 miles while the length of overhead wire increased from 51,640 miles to 56,040 miles. The largest line construction project was the completion of a pole route along the main trunk road between Kuala Lumpur and Seremban, a distance of 42 miles; while the number of new installations at isolated police posts and on estates and mines is unprecedented.

Underground cables.

During the course of the year the length of underground cables was increased from 428 miles to 610 miles. The distribution networks in a number of towns were extended and in Kuala Lumpur alone over 60 miles of cable were laid and jointed. An extensive underground cable development scheme in Penang was started; and the delivery from the United Kingdom of two major trunk cables, to be laid between Kuala Lumpur and Klang and between Johore Bahru and Singapore, has commenced.

Telephone Exchange equipment.

The main work in this field has been on the installation of the new automatic and manual exchange for Kuala Lumpur which is expected to be completed in the first half of 1951. The new exchange will have an initial capacity of 4,200 subscribers' lines with an ultimate capacity of 7,400 lines. In addition telephone

services in Kuala Lumpur have been augmented by the opening of 200-line satellite exchanges at Sentul and Ampang, while a 100-line extension to the Salak South satellite exchange was nearing completion at the end of the year.

At Penang, where there is also a very long waiting list, work started on the building to house the new automatic exchange which will have an ultimate capacity of 7,000 subscribers' lines. As an interim measure locally manufactured manual switchboards have been added to the existing exchange during the year, increasing its capacity from 1,700 subscribers' lines to 1,900.

Ipoh is another town where a completely new telephone exchange and an exchange building are required. As an interim measure, six locally manufactured operating positions have been added to the existing manual switchboard to permit the connection of 200 additional subscribers.

At Kluang the construction of a new telephone exchange building, due for completion in mid-1951, has been started.

Of importance among the new manual exchanges installed were Taiping (630 lines), Kuala Kangsar (240 lines), Bentong (200 lines), and Raub (200 lines). A new manual exchange for Seremban (700 lines) was practically ready for service while work on a new manual exchange for Malacca (950 lines) was 60 per cent. completed.

Two new rural automatic exchanges were opened and 18 converted to automatic working. A further 14 rural automatic exchanges were renewed or extended. Six minor manual exchanges were extended and three renewed.

The total number of telephone exchanges in operation at the end of the year was 201, consisting of 99 manually-operated and 102 automatic exchanges.

The following figures indicate the expansion of exchange facilities:

	Dec., 1947.	Dec., 1948.	Dec., 1949.	Dec., 1950.
Number of subscribers' exchange lines in service	10,875	12,359	13,497	14,945

Trunks and Junctions.

The growth of the inter-exchange network can best be illustrated by the following figures :

	Dec., 1947.	Dec., 1948.	Dec., 1949.	Dec., 1950.
Trunk circuits ..	175	207	245	260
Junction circuits ..	397	442	483	510

The negligible improvement in the time taken to connect long distance calls despite these valuable increases in the number of circuits has led to the decision to instal a multi-channel radio telephone trunk network as soon as possible; and the arrival of the additional carrier telephone trunk equipment to provide new circuits (which is now on order) will enable the replacement of the existing old and unsuitable equipment with its ever increasing fault liability.

DEPARTMENTAL RADIO SERVICES

The departmental radio telephone and telegraph services, which complete the communication network in the Federation to places where land lines are impracticable or are subject to frequent interruptions, have been fully loaded during the year. The Very High Frequency radio telephone services have proved to be extremely valuable and an additional link between Kuala Lipis and Mentakab has been installed. The equipment used for these services is reaching the end of its useful life but not before proving, without doubt, the practicability of Very High Frequency radio telephone communication in this country.

In July a radio telephone link between Singapore and the United Kingdom via Nairobi was established. The rate charged is \$33.00 (£3.17s.) for a call of 3 minutes duration. Traffic over this link from the Federation has averaged four calls per day.

In November a radio telephone link to Hongkong was brought into service. The rate charged is \$16.20 (£1.17s.6d.) for a call of 3 minutes duration. While this circuit has proved to be most popular with Singapore telephone subscribers, traffic with the Federation has averaged less than one call per day.

Tests were completed for the introduction of a similar service to Australia to be introduced in January, 1951, and tests from Singapore to Manila and to Bandoeng are proceeding.

CIVIL AVIATION AND METEOROLOGICAL RADIO SERVICES

With the increasing usage of internal and international air services the radio facilities provided by the department have dealt with an ever increasing volume of traffic as indicated by the fact that whereas 168,707 messages were handled on behalf of the Civil Aviation Department in 1949, the corresponding figure for 1950 was 217,954.

During the year additional equipment was installed at Alor Star aerodrome. Also an additional radio telephone channel for aircraft in flight was introduced and operated successfully from all aerodromes with the exception of Alor Star.

POLICE RADIO COMMUNICATION SERVICES

At the beginning of the year an expert from the Communications Board of the United Kingdom Home Office visited the Federation in order to make recommendations for the provision of a radio communication system for use by the rapidly expanding Police Force. A comprehensive scheme was drawn up and the Telecommunications Department was charged with the task of implementing the proposals. The plan is being brought into operation with all possible speed, the erection of the necessary additional buildings is well advanced, and delivery of bulk items of radio equipment from the United Kingdom is awaited. A serious limiting factor in the scheme is likely to be the availability of trained technical staff.

The part of the new network covering the States of Kedah and Perlis has been brought into operation. Various problems have

arisen in this connection and their solution will provide valuable information and experience for the completion of the project.

At the end of the year the number of equipments in service (including duplicate and spare equipments) was :

HF Transmitter and Receiver combinations	..	127
VHF Transmitter and Receiver combinations	..	128
VHF and HF mobile equipments	..	60

RAILWAY COMMUNICATIONS

The Telecommunications Department continued to be responsible for the installation and maintenance of electric signalling and communications equipment on behalf of the Malayan Railway Administration.

The rehabilitation of the overhead routes throughout the country was virtually completed by the end of the year during which 20 miles of new pole route and 170 miles of overhead wiring were erected.

The installation of Key Token Instruments throughout the Railway system progressed rapidly and was 75 per cent. completed at the end of the year. The reinstallation of equipment throughout the Railway Telegraph System was completed during the year.

STORES

This has been an exceptionally busy year. Vast quantities of stores of all kinds have been handled, consequent upon a considerable improvement in the rate of delivery of stores by the Crown Agents and the accelerated activities of the Department. If it is borne in mind that a large proportion of the items used in telecommunications work are relatively small in size some idea of the volume of work handled by the Departmental Stores can be gained from the following figures.

	1947.	1948.	1949.	1950.
Number of transactions	80,560	107,594	118,964	101,924*
Value of transactions (in dollars) ..	4,460,909	7,351,286	11,380,844	13,503,310†

WORKSHOPS

The increased general activity of the Department has been reflected in the quantity of work handled by the Departmental Workshops which have been fully occupied in the construction, maintenance, and repair of innumerable items of equipment. The very diverse list of works completed during the year included :

- 80 Switchboards constructed and 43 modified ;
- 4,000 labels engraved ;
- 2,000 telephones and 770 typewriters repaired ;
- 2,126 medical instruments electro-plated ;
- 6,000 stay rods and 37,400 wooden arms for poles manufactured ; and
- 480 vehicles overhauled.

* The year 1950 does not include items handled and paid for direct from votes. † Does not include all items ordered and paid for by the Police Force. The quantity of these was considerable.

TRANSPORT

The gross mileage covered by Departmental vehicles during the course of the year was 1,400,000 and, with the replacement of various ex-Army vehicles, the transport fleet as at the end of the year consisted of 84 lorries, 106 vans, 32 jeeps and rail jeeps and 22 motor-cycles.

TRAINING

Seven locally domiciled officers of the Department are under training in the United Kingdom in order to qualify for appointment to senior posts in the Department.

Twenty-eight Technical Apprentices are undergoing a four-year course of instruction at the Technical College, Kuala Lumpur, in order to qualify for appointment to the Technical Assistants' Scheme in the Department. The Department is responsible for the field training of these students during the third year of the course and for specialised training during the final year.

With the impact of the extensive Police Communications Scheme the Departmental Training School had to devote all its resources to the training of personnel as radio technicians. This has proved to be a most difficult task, as the supply of youths who wish to take up this work falls short of requirements both in quantity and quality. Additional temporary accommodation is being erected at the Training School so that training of personnel for general telecommunications work may be resumed. Fourteen courses totalling 2,267 student weeks were conducted during the year.

Correspondence courses in technical subjects were continued and at the end of the year 128 students were undergoing instruction in eleven subjects by this method.

Part VII

CIVIL AVIATION

Despite the limited funds available for the expansion of Civil Aviation aerodromes and facilities there has been a steady if not sensational increase in air services throughout the Federation during the year 1950. Malayan Airways have in particular increased the popularity of their services as the following brief statistics indicate :

	12 months ending 31st August, 1949.	12 months ending 31st August, 1950.
(a) Aircraft miles flown ..	1,252,176	1,538,537
(b) Passengers carried ..	61,069	74,111
(c) Passenger miles ..	15,117,460	18,835,730
(d) Total Ton miles (Passenger, mail cargo) ..	1,605,190	2,064,075
(e) Capacity Load Factor Scheduled services ..	63.3%	65.8%

PASSENGER STATISTICS 12 MONTHS ENDING 31ST AUGUST, 1950

Airports.	No. of Passengers uplifted.	No. of Passengers set down.
Kuala Lumpur	18,380 ..	19,998
Ipoh	6,054 ..	6,260
Taiping	2,047 ..	1,121
Penang	15,560 ..	16,441
Alor Star	307 ..	508
Kota Bharu	5,500 ..	5,643
Kuantan	2,782 ..	2,418

As was the case in 1949 little further development of aerodromes and air travel facilities has been possible except in the cases of the Kuala Lumpur and Penang airports where it has been necessary to rehabilitate the existing runways and drainage systems. For these purposes special Federal expenditure amounting to \$965,000 was approved early in the year.

In order to meet the operational requirements of the Royal Air Force using the Kuala Lumpur Aerodrome work was put in hand early in 1950 to reconstruct the runway and improve the taxi track and hard standings. This work is not likely to be completed before the middle of 1951.

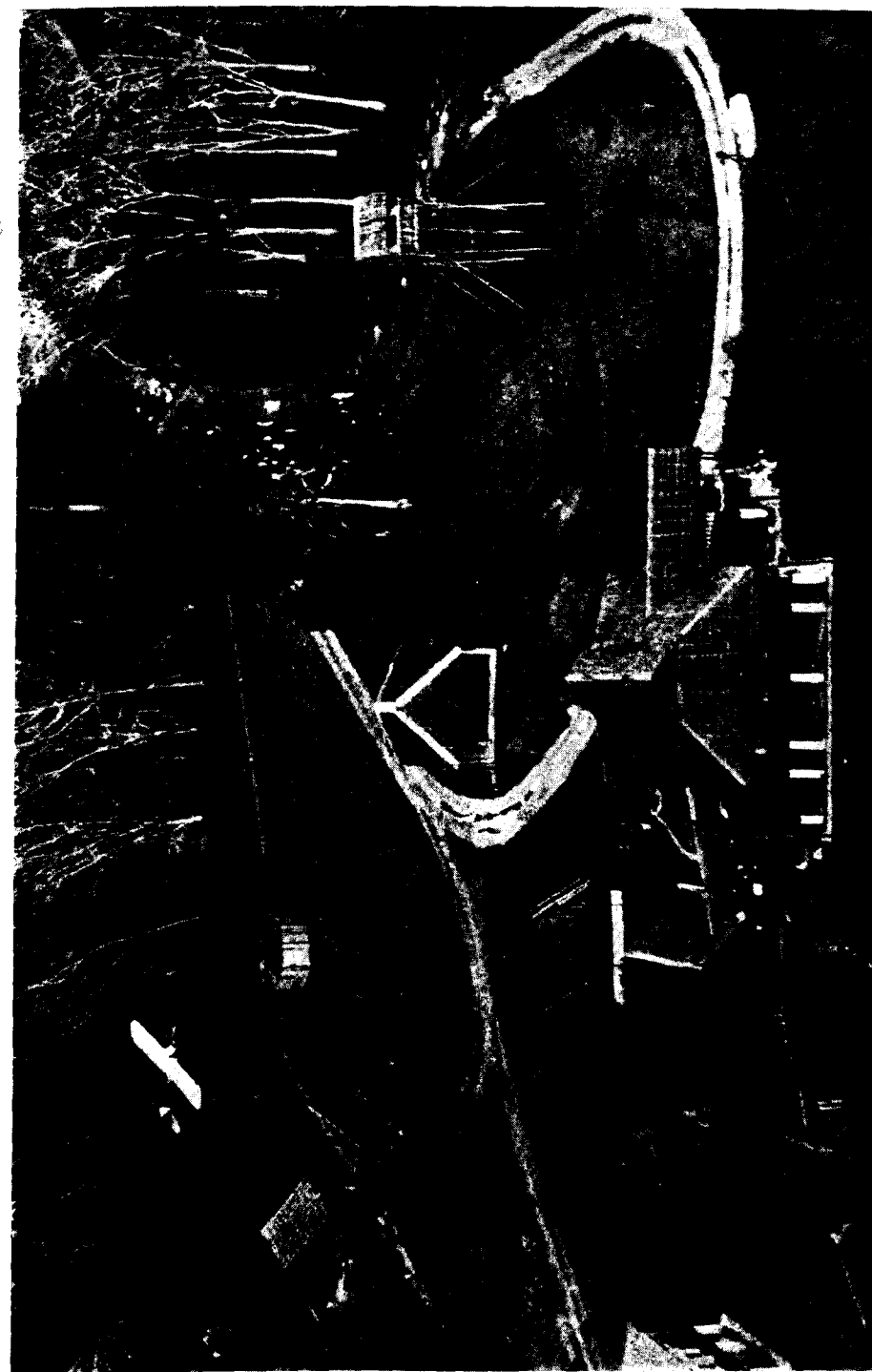
In September, 1950, the runway at Bayan Lepas Airport, Penang, was rendered unserviceable as the result of extremely heavy rainfall. It was therefore decided, with the concurrence of the Air Officer Commanding, Malaya, to transfer all civil air transport operations to the R.A.F. Station at Butterworth until such time as the runway at Bayan Lepas could be repaired and improvements already in hand completed. It is expected that all air transport services will return to Bayan Lepas early in 1951.

Although the majority of the capital cities in the Federation are already linked by air communication it still remains to develop airstrips in the more remote areas. This has been provided for in the Six Year Draft Development Plan but it will be necessary to wait for both financial provision and engineering capacity. Priority has, however, been given for the improvement of the Malacca Aerodrome during 1951 in order that Malayan Airways may operate services linking Malacca with Singapore and Kuala Lumpur.

All of the seven airports which are already licensed for public use have been provided with fully trained staff and modern equipment.

Revenue from Landing and Housing Fees, rentals, etc., in the Federation up to the end of December, 1950, was \$320,595 and Expenditure was \$1,307,932, against equivalent figures for 1949 of \$334,345 and \$1,557,695.

Private flying and club flying activities in the Federation have also increased and it is interesting to note that several estate managers are now operating their own private aircraft from airstrips built by the Companies concerned. Other estates are benefiting from the pay-dropping facilities provided by the Kuala Lumpur and Penang Flying Clubs. These flights are of a charter nature and provide much needed revenue to the Flying Clubs which do not receive any direct subsidy from Government.



A typical "pay-drop" by an Auster aircraft of the Kuala Lumpur Flying Club. Money for labourers' wages is safely delivered to isolated estates and mines in this way.



A Hindu child being ceremonially bathed near Batu Caves, before being shown to the goddess Subramaniam, during the Hindu festival Thaipusam.

PART TWO

Chapter I

GEOGRAPHY AND CLIMATE

GEOGRAPHY

The territories comprising the Federation of Malaya are situated in the southern section of the Kra Peninsula which protrudes at the south-eastern corner of Asia between India and China, between latitudes 1° and 7° North and longitudes 100° and 105° East. The Federation of Malaya covers an area rather more than twice the size of the Island of Ceylon and slightly larger than England without Wales. The largest of its territories is the State of Pahang, which is twice the area of Lancashire and Yorkshire combined and the smallest is the State of Perlis which is about twice the size of Rutland.

Four-fifths of the surface of the Federation of Malaya is covered by dense tropical jungle. The only generally cleared parts of the country are the long stretches down the west coast, an area in the north and a number of open stretches up the principal rivers. The State of Trengganu, for example, is divided into sixteen river basins all of which empty into the China Sea.

The Malayan rivers at their sources and in their upper reaches are quick flowing often with tortuous rapids and precipitous gorges. In the lower reaches, the descent is more gradual and the water takes on a muddy colour from contamination with the silt of the plains through which they meander before debouching ultimately through strips of mangrove swamp, particularly on the west coast.

The two principal rivers of the Peninsula are the Perak and the Pahang, the latter being some ten miles shorter than the River Thames. It springs in the main range of mountains, the highest of which is Gunong Tahan which rises to over 7,000' at its summit. This and other peaks constitute some of the highest territory south of the Himalayas, while there are half a dozen prominences which would comfortably overshadow Ben Nevis. That part of the country free from the torrid luxuriance of forest and jungle has been developed into great rice-producing areas as in the alluvial plains of Kedah, Perlis, and Kelantan. Other stretches have been scarred by the incisions of industry as in the Kinta valley of Perak, which opens out into a monotonous prospect of silver grey silt, the residuum of tin extraction.

The coast line of Malaya extends for over one thousand miles; on the west a practically unbroken succession of mangrove and mud-flats with infrequent indentations of picturesque bays fringed with coconut palms and the graceful spires of the casuarina. On

the east coast there are long unbroken stretches of sand and surf bordered by a littoral vegetation which lends to it a beauty possibly unparalleled in the tropics.

Within the territorial waters lie the Langkawi Islands off the north Kedah coast rising to over 2,000' and wrapped in wild and rugged beauty. Farther south there is the island of Penang, picturesque in a different way, whose features have been eulogised by travellers from the earliest histories. The island of Pangkor off the coast of Perak was once a Dutch settlement but little remains in evidence of this history beneath the vegetation which has long since reclaimed its own.

Finally off the east coast among a sprinkle of beautiful islands there is Tioman with its symbolic silhouette of granite peaks.

CLIMATE

The principal features of the Malayan climate are copious rainfall, high humidity and uniform temperature. The year is commonly divided into south-west and north-east monsoon seasons which correspond roughly with the summer and winter of northern latitudes; but, apart from the east coast, the differences of climate normally associated with the word "monsoon" are barely discernible in Malaya. The months between these two seasons which correspond with the spring and autumn of northern latitudes are the wettest months over most of Malaya. Coastal districts, however, have their own peculiar rainy seasons.

Rainfall averages about 100 inches a year, though the annual fall varies considerably from place to place and year to year. Jelebu, in Negri Sembilan, is the driest place in Malaya with an average of 65 inches and Maxwell's Hill the wettest with 198 inches a year.

The average maximum temperature in the plains is rather less than 90° F. and the minimum about 70° F. At the hill stations temperatures are considerably lower; at Cameron Highlands the extreme temperatures recorded are 79° F. and 36° F. and at Fraser's Hill 81° F. and 53° F.

Chapter II

HISTORY

THE ABORIGINES

The Malayan aborigines comprise a series of exceedingly complex yet primitive groups, few of which have yet received detailed study. Perhaps the best known as well as racially the purest are the Negritos (Malay; *Semang*, *Pangan*) in the North. A wandering pygmy people divided into several distinct tribes they are akin to similar infantile Negritos in the Andaman Islands, New Guinea, the Philippines and newly recorded groups in Indonesia. Originally living in relatively open areas the Negritos have been driven into the hills by Malay and Chinese expansion and have recently forsaken the bow and arrow for the blowpipe of their *Senoi* neighbours whose language and way of life they are also adopting. Many small Negrito groups, particularly in Kedah, have died out since the beginning of the century.

The *Senoi* in the central highlands show many varying racial traits although superficially similar in material culture and their shifting methods of agriculture. There are several distinct variations of language which appears generally Mon Khmer in character. In physical appearance the *Senoi* differ widely, the distribution of distinct types bearing little relation to ethnic group. Only one type is markedly Mongoloid and recent research workers have reported Melanesian, Australoid, Papuan and other elements as common. Social organisation varies widely. The *Temer* in Eastern Perak and Ulu Kelantan have a relatively elaborate system and are a virile active group markedly contrasting with the *Semai* of Cameron Highlands whose integrity has suffered considerably by the opening up of this region. In the lowlands there are a number of settled *Senoi* groups who, with their rubber plantations and fruit orchards, are more than holding their own against Malay and Chinese competition. It was formerly the custom to refer to these people as *Sakai* but this somewhat degrading term has gained popular usage to cover a variety of aborigines without distinction and most anthropologists now prefer to use *Senoi* the common word for mankind in their languages.

In the Southern lowlands are a number of aboriginal groups variously described as *Jakun* or Proto-Malay. The *Jakun* dialects belong to the Malayan Polynesian group and are furthermore, mixed, through an intercourse extending over many centuries, with the historical Malay tongue. They are poorer in material culture than the *Senoi* and appear to have originated in the Rhin-

Archipelago. It would seem that they have formed the nucleus of much of the modern Malay population of the South—a circumstance which is continuing at the present time. One special group, the former boat dwelling *Orang Laut*, have settled down in fishing villages notably along the west coast of Johore.

Many speculations have been made as to the order in which these aborigines reached Malaya. This, however, is a question for archaeological research, and not enough has yet been undertaken to draw any conclusion of value. The census of 1947 showed the total number of "nomadic aborigines" to be 29,648, a figure which, for various reasons, is almost certainly an underestimate.

THE INDIAN PERIOD

About the first century, A.D., Indian traders from the Coromandel coast began to arrive in the Peninsula and in other parts of the Archipelago in great numbers. They came to barter their fabrics, their iron implements, their beads and the like for the produce of the jungle: its gums, camphor, wood and gold-dust. Ptolemy's account of the "Golden Chersonese" is clearly descriptive of the Peninsula about this period.

In time many of these Indians, accompanied by their skilled craftsmen, such as architects, cloth weavers and workers in metal, settled here and in numerous other places in the Archipelago, inter-married with the aborigines and built towns. In our part of the Peninsula their chief settlement was on the river Merbok in Kedah. This town came to be known in Malay records as Langkasuka. These Indian colonies led the virtually autonomous existence of city-states but, as time went on, they all came under the domination of Sri Vijaya, an Indo-Malay Kingdom, which had its capital, at one period, in Palembang. Later Sri Vijaya shifted its capital, it is thought, to Langkasuka.

The Indians wielded an important influence among the tribes with whom they had contact in the neighbourhood of the towns and the ports. They introduced Indian customs, including the system of rule by rajas in place of, or side by side with, the old simple Proto-Malay patriarchal or matriarchal tribal organisation. They disseminated Buddhism both of the southern school (Hinayana) and the northern school (Mahayana). Animism was, however, the basic cult of the Malays until it was replaced by Islam. The Indians brought a large number of Sanskrit words into the Malay language, introduced Indian alphabets for writing that language, and in time familiarised the Malays with the great Indian epics to which Malay literature and drama of the Shadow Play variety came to owe so much.

Indian economic and cultural dominance lasted here from the early Christian era up to about the 15th century when the arrival of Islam first weakened and then destroyed it. The process of destruction was accelerated by the advent in 1511 of the Portuguese who came to control the Malayan trade which up to that time had

THE KINGDOM OF MALACCA

It is conjectured that it was from the Kingdom of Sri Vijaya that the State of Tumasik (later to be known as Singapore) was founded about the 13th century. The latter, in turn, gave rise to the Malay Kingdom of Malacca. Tumasik, after beating off an attack by the Siamese about 1348, fell to the forces of Majapahit about 1376 and disappeared from history for four hundred years. The dispossessed ruler of Tumasik, Parameswara, fled to Malacca (then a little fishing village) which in the course of the following century grew to be of such great importance. The infant Malay State which he founded there was beset by enemies, chief among whom were the Siamese who claimed allegiance from its rulers. The latter, however, appealed for protection to the Emperor of China who raised the title of the Malay ruler to that of King of Malacca in 1405, freed him from any dependence on the Siamese, and warned that people to refrain from attacking Malacca. Later in the century the Siamese renewed their attacks, but by then the Malays had grown powerful enough to defeat them without outside assistance, and even to conquer the Siamese vassal State of Pahang about 1458.

The new Kingdom of Malacca grew apace in the 15th century. Its port was thronged by traders from many nations and small settlements of Javanese, Chinese and others, were established there. By the end of the century it had extended its sway over the Malay Peninsula as far north as Patani and over some of the coastal regions of West Sumatra. During that century, too, began the conversion of the Peninsula Malays to Islam.

The first centre of Islamic missionary effort in the Malay Archipelago was Northern Sumatra. Thither Indian, Persian and Arab Muslim missionaries flocked from the 14th to the 17th centuries. From Northern Sumatra Islam spread to Malacca which, by the end of the 15th century, had become the centre of the new religion in the Archipelago.

This process of Islamisation was gradual; it started in real earnest in the Peninsula in the 15th century and was not completed till about the 17th century, when Iskandar Muda, Sultan of Aceh, compelled acceptance of Islam at the point of the sword. Its progress appears to have been stimulated by the violent opposition of the Portuguese. Its effect among the Malays was enormous; India lost its pre-eminence among them as a sort of mother-country; Indian ties were loosened and finally broken, Indian culture was no longer sought after; the Arabs and their religion and culture were taken as a pattern; the Indian pantheon was replaced by the Muslim belief in One God. Buddhism and Hindu rites yielded to Islam; Indian temples and religious symbols were destroyed; Indian names of places were in some cases altered; the local rulers who used to be known by the Indian titles of Maharaja or Parameswara were thenceforth called by the Arabic title of Sultan; the Arabic alphabet was adopted in place of Indian scripts; the flow of Sanskrit words into the Malay language ceased and that source was replaced by Arabic. The Malay versions of the Indian

epics, the Mahabharata and the Ramayana, were put in the background and replaced by writings with a Muslim bias. Malay versions of Hindu romances were often altered to give them a Muslim colouring. Indian aestheticism gave way to Muslim rigidity; and the convivial habits of the Malays were replaced by the strict teetotalism prescribed by Islam.

The Malay Kingdom of Malacca came to an end in 1511 when, after fierce fighting, the town was captured by a Portuguese fleet under Alfonso d'Albuquerque. The Malay ruler, Sultan Mahmud, fled to Johore where, in the course of time, he set up a new kingdom based on Johore, Pahang and the Riau Archipelago which became known as Riau-Johore.

The Portuguese held Malacca from 1511 until 1641 when they were dispossessed by the Dutch. They were crusaders rather than traders, and their compulsory conversions to Christianity made them detested by the Muslim Malays. In view of the scanty reinforcements which they received from Europe they encouraged their soldiers to inter-marry with the local women and enlisted the sons born of these unions in their armed forces. Lack of assistance from their home country was mainly responsible for the Portuguese defeat by the Dutch in 1641.

The Dutch conquerors of Malacca held their new possessions till 1795. In striking contrast to their predecessors they concerned themselves almost entirely with trade. When they were replaced by the British they left behind in the town of Malacca a few interesting specimens of Dutch Colonial architecture which are still in use.

In 1795, during the Napoleonic wars, England took peaceable possession of Malacca, returned it to the Dutch in 1814 in accordance with the Convention of London, and finally regained possession of it by virtue of the Anglo-Dutch Treaty of Holland of 1824 which recognised the Malay Peninsula as being within the British sphere of influence.

THE KINGDOM OF RIAU-JOHORE

Mention has already been made of the Kingdom of Riau-Johore which was founded by the fugitive Sultan of Malacca and which included Johore, Pahang, Trengganu, the Riau Archipelago and the Karimon Islands, and indeed loosely took in all those parts of Malaya over which the Portuguese did not exert effective control, that is to say, almost the whole of Malaya, for the Portuguese (and their successors the Dutch) could command only the coastal areas between Malacca and Batu Pahat in Johore. These European nations, however, held command of the sea; an all-important factor which debarred their Malay enemies from legitimate trade and drove them all the more readily to piracy.

The Riau-Johore Kingdom, with its capital at Kota Tinggi, Johore, from the very outset had an uneasy existence. Its rulers were weak; deprived of trade, its funds were low: it was desolated by internecine conflicts, and it was not long before other enemies, this time non-European, appeared on the scene. Early in the 17th century a great and sinister figure made his appearance in the

Archipelago : Iskandar Muda, Sultan of Aceh, in North Sumatra. His piratical hordes swept through Malaya massacring, pillaging and carrying away into captivity many thousands of Malays. Malacca was the only place that he failed to capture, but no other territory as far north as Patani was immune from his depredations. He completed the conversion of the Peninsular Malays to Islam by compelling conversion at the point of the sword.

This invasion further weakened the already weak position of the Riau-Johore Kingdom. The year 1699 was signalized by the murder of the Sultan, known posthumously as "*Marhum mangkat di-julang*", the last and the most degenerate of the direct line of the old Malacca Kings. The extinction of the old royal stock of Malacca in Johore, coupled with the periodical invasions of the Bugis which began to occur about this time, and to which reference is made below, commenced the disintegration of the Riau-Johore Kingdom which the Anglo-Dutch Treaty of 1824, by splitting up the Kingdom into English and Dutch spheres of influence, completed.

The successors of the murdered Sultan lost most of their power, and retired to Riau, leaving their Bendahara behind in Pahang, their Temenggong in Johore, and another high official in Trengganu. These chiefs, nominally the Ministers of the Sultan, eventually became the rulers in their respective States and the present royal families of Pahang, Johore and Trengganu are descended from them.

The Bugis from the Celebes began to swarm into the Malay Peninsula about the beginning of the 18th century. They were a bold, piratical people and established a great name for themselves as fighters. They were led by warriors with the names of Daing and Suliwatang and they often wore armour consisting of coats of chain-mail. The Bugis overran Johore and Selangor, made themselves felt in Perak, Pahang and Trengganu, and in the course of the century they invaded Kedah on several occasions. When they conquered a territory and settled there their chiefs invariably took wives from the local notables. The ancestors, on the male side, of the present royal families of Johore and Selangor are descended from the offspring of such unions. It is probable that, but for the presence of European nations in the Archipelago, the Bugis would have carved out for themselves quite a considerable kingdom in Malaya.

In 1773, the country now comprising Negri Sembilan, inhabited by a people of Minangkabau origin who had extensively inter-married with the local Proto-Malays and who followed a matriarchal system of society, seceded from the crumbling Riau-Johore Kingdom to form a confederation of little States under a Minangkabau Prince from Sumatra.

RELATIONS BETWEEN SIAM AND THE NORTHERN MALAY STATES— FOUNDATION OF PENANG

Although Siamese aggression in the southern part of the Malay Peninsula had been effectively checked by Malacca in the 15th century the destruction of that Kingdom in 1511 by the Portuguese (who cultivated Siamese friendship) had the effect of reviving Thai

pretensions to the Northern Malay States : Kedah, Kelantan and Trengganu. The Siamese suzerainty over these States was vague, fitfully exercised and often resisted. The practice, however, grew up for these States to send periodically to Siam a ceremonial present of "Golden Flowers" (*bunga emas*). This offering was claimed by Siam to be a mark of submission but by the Malays to be merely a sign of respect and friendship. The Siamese suzerainty, when exercised, was resented by the Malays and, in the case of Kedah, the issue became acute when Francis Light, in 1786 on behalf of the East India Company, took possession of the Island of Penang which hitherto had formed part of Kedah. Light had been negotiating with the Sultan for the cession of Penang. Chief among the terms demanded by the Sultan were a guarantee of military assistance in the event of attack upon Kedah by land (that is to say, by Siam, Selangor under the Bugis, or Burma) and the annual payment of a sum of \$30,000. Although Light forwarded these terms to India for acceptance and proceeded to take possession of the Island the Company vacillated upon the terms while declining to give up possession.

In 1791 the Sultan was defeated in an attempt to retake the Island by force. By a treaty made in 1800 between him and the Company the cession of Penang, to which Province Wellesley was now added, was confirmed, and the Company agreed to pay the Kedah ruler \$10,000 a year while they remained in possession of these places. The treaty was silent as to military assistance. Throughout the negotiations for the cession of Penang the Kedah ruler had omitted to consult Siam. The Siamese were furious at this ignoring of their suzerainty but they bided their time.

In 1821 came their opportunity for vengeance. A Siamese force under the Raja of Ligor invaded and conquered Kedah. No quarter was given to the inhabitants and many thousands were massacred, Kedah losing thereby, it was claimed, more than half its population. The Sultan was driven into exile and the Siamese assumed direct control of the country, a state of affairs which continued until 1842 when the Siamese officials were recalled and the ex-Sultan was reinstated, though Perlis, which hitherto formed part of Kedah, was placed under a separate Raja. Kedah, however, together with Kelantan and Trengganu, remained under the suzerainty of Siam until 1909 when the Siamese, by the Treaty of Bangkok, transferred all their rights over these States and over Perlis to Great Britain.

Penang, the cession of which to the East India Company had been the source of such trouble for Kedah had, in many respects, a promising start. Acquired primarily as a naval base, it had an assured food supply from the agricultural region of Province Wellesley ; it was a free-trade port ; it allowed the occupation by settlers of such land as they could clear with a promise of title ; its status was raised in 1805 to that of a Presidency like Bengal, Madras and Bombay, and it was subject only to the control of the Governor-General of India. All these factors attracted to the Island a large and varied population and the stage seemed set for the development of Penang into a really important city. But the deaf ear turned by India to Francis Light's appeals for administrative

assistance resulting in the necessary alienation of lands without prescribing rent or conditions of cultivation, and the omission to reserve land for public purposes, his dependence upon opium, arrack and gambling farms for revenue, and his dependence upon India for decisions greatly impeded the progress of Penang. The Indian habit of permitting officials to engage in local trade was another factor which militated against Penang's progress. But above all Penang as an important city was doomed by its inferiority as a sea-port to Singapore which, through the foresight of Thomas Stamford Raffles, was founded as the great natural trade entrepôt in the Malay Archipelago.

SINGAPORE

Thomas Stamford Raffles, a young official in the employment of the East India Company at Penang, was the founder of Singapore. In 1808 he attracted the notice of Lord Minto, Governor-General of India, by his eloquent plea against the proposed abandonment of the ancient town of Malacca—a proposal put forward by the Directors of the East India Company on the ground that Malacca would soon have to be returned to their Dutch rivals.

Later, Lord Hastings, successor to Lord Minto, authorised Raffles to seek a trading-station south of Malacca on the route of English ships to the Far East, on a site not already occupied by the Dutch, the great rivals of the East India Company in their unceasing quest for profitable trade centres. Raffles decided upon the Island of Singapore, at that time included in the territories still nominally held by the rulers of the Kingdom of Riau-Johore. A difficulty in negotiating arrangements with the ruler was that the then nominal Sultan of that Kingdom, Abdurrahman, an appointee of the Dutch and the Bugis, was not the eldest but the second son of the preceding ruler. The eldest son Husain had been ignored. Raffles solved the difficulty by entering into negotiations with Husain, and with the Temenggong of Johore, nominally the minister in Johore of the Riau-Johore Kingdom, but virtually the ruler of all Johore except the Muar district; and in 1819, the Temenggong and Husain, now recognised by Raffles as Sultan, signed an agreement allowing the British to choose land for factories in return for annual allowances of \$5,000 to the Sultan and \$3,000 to the Temenggong. In 1824 a final agreement was concluded ceding Singapore in perpetuity to the British.

Raffles' policy of free trade for Singapore, his encouragement of settlers, and above all the natural advantage of Singapore as a port serving the whole of the Archipelago, led to the phenomenal development of the new town.

People of many races, above all the Chinese, thronged to Singapore as, in a lesser degree, they were thronging to Penang. The descendants of these Chinese were to become the pioneers of the Chinese immigration into the Malay States which began on a large scale in the latter half of the 19th century.

Raffles was a scholar of Malay with an intensely sympathetic interest in the local peoples of all races especially the Malays. He

worked upon a scheme for a complete federation embracing the States of the Peninsula and of the Archipelago including Mindanao in the Philippines. He protested against the reintroduction of the slave trade and against slavery. He planned a Malay College for Singapore.

ESTABLISHMENT OF BRITISH PROTECTION IN THE MALAY STATES

Raffles strongly favoured British expansion not only in Malaya but elsewhere in the Archipelago. With his disappearance from the scene the ideal of a forward policy in this part of the world became dormant until it was awakened, in the last quarter of the century, by the rivalries of the great European powers and by the demands of British and Chinese capital seeking fresh fields for expansion coupled with the discovery of the rich mining resources of the Malay hinterland. The *laissez faire* policy of the successive British Governments and the unenterprising attitude of the East India Company (which governed the Straits till 1858), particularly sensitive to any venture savouring of expense, left the Malay States almost completely untouched although some of these States had asked for British protection.

In the seventies of the century, however, the British Government came to realize that a more progressive and realistic policy was necessary in its dealings with the Malay States. The administration of affairs in the Straits was now under the control of the Colonial Office to which it had been transferred from the India Office in 1867, and the new system enabled London to pay more attention to the Malay Peninsula.

The reasons which prompted the British Government to play a more positive part in the affairs of the native States were as follows:

FIRST—This was the period of annexation of many of the backward territories in the world by the great European nations. If Britain did not take immediate action to dominate the Malay territories there was a grave danger that another European power would step in and do so. In this connection the granting by the Rajas of huge concessions of land wholesale to Europeans and others, a practice that became prevalent at this period, constituted a grave danger to the British position in the Malay Peninsula as there was always a possibility that these concessions would fall into the hands of the subjects of another European nation which would thus be provided with a pretext for interference in the Malay States. This danger was very real (and came chiefly from France, Germany and Russia).

SECOND—There was the danger from Siam. In 1873, the year before the signing of the Pangkor Treaty, she had almost succeeded in inducing Perak to come over to her as a tributary State; she already had vague rights over the States of Kedah, Kelantan and Trengganu. But it was not so much Siam that was feared: the fact was that the very existence of Siam herself as an independent nation was imperilled by France. If Siam fell into the hands of the French then her Malay subject territories would

automatically go to France too, and the stage would have been set for an Anglo-French war.

The THIRD reason which determined British intervention was that the position of the Western Malay States had deteriorated; disputed succession to a Sultanate and quarrels (in which the Chinese took a prominent part) as to the ownership of lands rich in tin led to civil wars and to widespread disorders.

The FOURTH reason was the impulse of British capital (either European or owned by Malayan Chinese) attracted by the mineral wealth of the interior as demonstrated by the rich tin fields in Larut and elsewhere.

So in 1873, Sir Andrew Clarke, the new Governor of the Straits, came out armed with authority from the home Government for more active intervention in Malaya. The first result of the new policy was the Treaty of Pangkor with Perak in 1874. In the same and the following decade of the century there followed agreements with Selangor, with Sungei Ujong and the other little States of Negri Sembilan, and with Pahang. In 1909, after long negotiations with Siam, that country transferred to Great Britain her rights in the Northern States, and in the same year agreements were concluded with Kedah, Kelantan and Perlis, and in 1919 with Trengganu. Relations with Johore were regulated by a treaty made in 1914.

These treaties, either in their original form, or in the form in which some of them were later modified, were in their main features substantially similar. The provisions common to all these agreements were as follows:

- (1) The Malay States agreed to accept British protection and to have no dealings with foreign powers except through Great Britain.
- (2) Great Britain guaranteed the States protection against attack by foreign powers.
- (3) The agreement provided for the appointment to the State of a British Officer whose advice must be taken and followed except in matters concerning Malay religion and Malay custom.

Some of the treaties contained no express mention of custom, but the undertaking not to interfere with custom was accepted as being implicit in all the agreements with the Malays, whether it was set forth in the actual words of the treaty or not.

Although the title of the British Officer appointed in pursuance of the treaties varied—in Perak, Selangor, Negri Sembilan and Pahang he was called Resident, in the other States, Adviser—it was never intended that there should be any difference in their functions; they were all meant to be advisers. But from the very start in Perak, Selangor, Negri Sembilan and Pahang the Residents not only advised on policy, they were placed in such a position that they had to see that any policy decided upon was put into operation; they became in fact not alone advisers but the chief executive officers of the State. In the other States, on the other hand, the Advisers had almost always confined themselves to the giving of advice;



The Right Honourable Mr. James Griffiths, M.P., Secretary of State for the Colonies, arriving in Kuala Lumpur by Royal Air Force Dakota, on his visit to the Federation of Malaya in May, 1950.

the translation of that advice into action in internal affairs was a matter for the Malay administration.

The early Residents were faced with great difficulties: the Colony Government was not generous, and money had to be found to finance the new regime and put it on its feet, to compensate the Sultan and Chiefs for the withdrawal of their customary privileges of taxation, to construct roads, buildings and other public works and the like. It was decided to raise part of the revenue required by imposing rents on land as land. The Malays were accustomed to taxation only on the produce of land and this innovation (which was ultimately welcomed by the Malays) often caused considerable unrest at first. Then the Chiefs regarded as completely inadequate the allowances which they were given in lieu of their former perquisites. In some instances the valid claims of Chiefs, owing to the absence of accurate information at the Resident's disposal, were rejected. The Resident was given insufficient funds to set the administration at once on a sound basis, and yet he was expected, almost immediately the treaty was signed, to produce sensational results. Consequently, in some matters in which it would have been wise to have proceeded with caution, the Resident was compelled to act somewhat precipitately. One of the most delicate questions was the problem of slavery. The method ultimately evolved was to prohibit the creation of new slaves, and to provide that existing slaves could purchase their redemption for a small fixed sum. Another source of trouble was the direct use in some States, without reference to the Ruler or to the territorial Chiefs, of the Malay Forced Labour law (*Kerah*) for the carrying out of public works.

Apart from the personal factors involved, it was the cumulative effect of all these matters: the introduction of land-taxation in a form not understood by the Malays, the abolition of slavery, and the withdrawal of the revenue-collecting powers of the Rajas and Chiefs, that led to the Perak rising of 1874 and the Pahang rising of 1891-1892.

In time, however, the ability, patience and conciliatory attitude of the Residents led to a satisfactory adjustment of these difficulties. Chief among these early Residents were Sir Hugh Low, British Resident of Perak from 1875 to 1888, and Sir Frank Swettenham. Low's official diaries make interesting reading and show how Perak, from small beginnings, was built up stage by stage to the important State that it eventually became. Low was one of the outstanding men of the century in Malaya, a fitting second in his own sphere to Raffles. Not only did he leave Perak prosperous and well governed but Sultan Idris and he were largely responsible for the atmosphere of goodwill which existed between the Malays and other communities.

In 1895, Perak, Selangor, Negri Sembilan and Pahang were constituted into a Federation at the head of which was placed a Resident-General to whom the Residents were subordinated. This inaugurated the system of centralized Government in the Federated Malay States which lasted in varying forms till 1932.



The Resident-General was the chief executive officer of the Federation. In 1909 was created a Federal Council on which the Rulers of the four States had seats. The Council took over practically all the legislative functions of the State Councils. The title of Resident-General was replaced by that of Chief Secretary with somewhat diminished powers, and the authority of the Residents was partially restored. In 1927 the Malay Rulers withdrew from the Federal Council and were replaced by four Unofficial Malay Members.

In 1932 came devolution or decentralisation whereby legislative powers were to some extent restored to the States, the authority of the Rulers and the Residents reinforced, and the post of Chief Secretary replaced by that of Federal Secretary with greatly diminished powers.

The cultivation of huge areas of land with para rubber, a product first planted in Malaya towards the end of the 19th Century, together with the development of new rich tin-producing areas and improved methods for tin-extraction in existing areas—enterprises in which Chinese and Indian labour under European and Chinese capital, and Malay small agriculturists played such a great part—opened up an era of phenomenal prosperity for Malaya in the current century. This prosperity was reflected in the opening up of communications on a large scale, in the growth of towns, the construction of public buildings, the development of irrigation areas for rice cultivation, the expansion of social services and in progress in many other respects.

This progress was brought to an abrupt halt when the Japanese invaded Malaya on the 8th December, 1941. During the enemy occupation for 3½ years, the great majority of Government servants were either interned or suffered the rigours of occupation.

On the eve of the campaign for the liberation of Malaya the Japanese government surrendered unconditionally. In September, 1945, a military administration was established under the command of the Supreme Allied Commander, South East Asia, and this administration remained unchanged until the establishment of the transitional Civil Government of the Malayan Union on the 1st April, 1946.

The Malayan Union comprised the British Settlements of Penang and Malacca and the former Federated and Unfederated Malay States. The administration of the Malayan Union continued throughout 1946 and 1947 under the arrangements set up under the Malayan Union Order in Council, 1946. The Federal Executive power was vested in the Governor who administered the territory and legislated in consultation with an Advisory Council, the members of which were nominated by himself.

The Federation of Malaya which succeeded the Malayan Union came into being on the 1st February, 1948, on the conclusion of the Federation of Malaya Agreement, 1948, between His Majesty the King and Their Highnesses the Rulers of the Malay States. A short summary of the Constitution of the Federation of Malaya is given below.

CONSTITUTION OF THE FEDERATION OF MALAYA

The Constitution of the Federation of Malaya came into existence on the 1st February, 1948, as a result of:

- (a) the Federation of Malaya Agreement, 1948, between His Majesty and Their Highnesses the Rulers of the Malay States of Johore, Pahang, Negri Sembilan, Selangor, Perak, Kedah, Perlis, Kelantan and Trengganu; and
- (b) the State Agreements between His Majesty and Their Highnesses the Rulers of the Malay States; and
- (c) the Federation of Malaya Order in Council, 1948.

The State Agreements.

The State Agreements made between His Majesty and the Malay Rulers provide that, subject to the provisions of the State and Federation Agreements, the Rulers shall enjoy the prerogative, power and jurisdiction which they enjoyed prior to the Japanese occupation. His Majesty has complete control of the defence and of the external affairs of the Federation.

Each Malay Ruler undertakes to govern his State subject to the provisions of a written constitution, and the State Agreements also provide that the Ruler desires, and His Majesty agrees, that it shall be a particular charge upon the Government of the State to provide for and encourage the education and training of the Malay inhabitants of the State so as to fit them to take a full share in the economic progress, social welfare and Government of the State and of the Federation.

The Federation Agreement.

The Federation of Malaya Agreement establishes, under the protection of Great Britain, a Federation called the Federation of Malaya which consists of the nine Malay States and the Settlements of Penang and Malacca. Power is reserved to His Majesty and to Their Highnesses the Rulers by mutual agreement from time to time to admit within the Federation any other territory.

Under the Federation Agreement, the Central Government of the Federation comprises a High Commissioner appointed by His Majesty, a Federal Executive Council to aid and advise the High Commissioner, and a Federal Legislative Council.

The Agreement records the desire of His Majesty and Their Highnesses that progress should be made towards eventual self-government, and as a first step to that end, His Majesty and Their Highnesses have agreed that as soon as circumstances permit legislation will be introduced for the election of members to the several legislatures.

The High Commissioner.

In exercise of his executive authority the High Commissioner has the following special responsibilities:

- (a) the protection of the rights of any Malay State or any Settlement and of the rights, powers and dignity of Their Highnesses the Rulers;

- (b) the prevention of any grave menace to the peace and tranquillity of the Federation or any Malay State or Settlement comprised therein;
- (c) the safeguarding of the financial stability and credit of the Federal Government;
- (d) the safeguarding of the special position of the Malays, and of the legitimate interests of other communities.

Federal Executive Authority.

The Executive authority of the Federation extends to matters with respect to which the Federal Legislative Council has power to pass laws, as defined in the Second Schedule to the Federation Agreement. This Federal Legislative list is extremely comprehensive. In certain cases laws made by the Federal Legislature may confer executive authority on the States and Settlements. The Federal Executive Authority on the States and High Commissioner either directly or through officers subordinate to him. He is empowered to delegate Federal Executive powers to the Government of any State with the consent of the Ruler concerned, or to a Settlement Government.

Federal Executive Council.

The High Commissioner presides over the Executive Council, which consists of 3 *ex officio* members, 4 official members and 7 unofficial members. Of the last named three are Malays, two Chinese, one is an European and one an Indian.

Federal Legislative Council.

The Council consists of a High Commissioner as President, 3 *ex officio* members, 11 State and Settlement members, 11 official members, and 50 unofficial members. The State and Settlement members (who have the same freedom as unofficials to speak and vote) consist of the 9 Presidents of the Councils of State in the States and one representative of the Settlement Council in each such Council. The 50 seats for the unofficial members are allotted as follows:

Labour	6
Planting (rubber and oil palms):	6
(a) Public companies	3
(b) Proprietary estates and small holdings	3
Mining	3
Commerce	4
Agriculture and husbandry	6
Professional, educational and cultural	8
Settlements	4
States	2
Representing the Eurasian community	9
Representing the Ceylonese community	1
Representing the Indian community	1
Representing the Chinese community	1
The official languages of the Legislative Council are English and Malay.	2

Powers of Legislative Council.

The powers of the Legislative Council to make laws for the Federation extend to the matters set out in the Second Schedule to the Federation Agreement and Bills passed by the Council require the assent of the High Commissioner and of the Rulers expressed by a Standing Committee consisting of two Rulers. If the High Commissioner considers that it is expedient in the interests of public order, public faith or good Government that any Bill introduced, or any motion proposed for discussion in the Legislative Council should have effect, and if the Council fails to pass the Bill or motion within such time and in such form as the High Commissioner may think reasonable and expedient, the High Commissioner has "reserved power" to give effect to the Bill or motion as if it had been passed by the Council.

The Rulers and the Conference of Rulers.

There is established under the Federation Agreement a Conference of Rulers consisting of all the Rulers of the Malay States. The Conference meets whenever necessary under the chairmanship of any one of the Rulers as may be selected at the Conference and meets the High Commissioner at least three times a year.

Except in cases of urgency the High Commissioner is required to send to each of the Rulers an advance copy of every Bill which it is intended to bring before the Legislative Council. Every new draft salary scheme for Federal Public Officers and every draft scheme for the creation or major reorganisation of a department of the Federal Government is also sent to Their Highnesses and may be discussed in the Conference of Rulers if desired.

It is the duty of the High Commissioner to explain to the Rulers the policy of the Federal Government on matters of importance to the Malay States and to ascertain the views of the Rulers. It is also the particular duty of the High Commissioner to consult the Conference of Rulers from time to time upon the immigration policy of the Government and in particular when any major change in such policy is contemplated by the Federal Government.

The Malay States.

There is in each Malay State a State Executive Council and a Council of State. The State Agreement provides for the promulgation of a written Constitution for each State in conformity with the relevant parts of the Federation Agreement.

Executive Authority in the States.

Executive Authority in each State is exercised by the Ruler either directly or through State officers in his name. The Chief Executive Officer in the State is the Mentri Besar. State Executive authority extends to all matters which are not included in the sphere of the Federal authority; and the Ruler in the exercise of his executive functions is aided and advised by the State Executive Council.

Council of State.

The Council of State may pass laws on any subject :

- (a) other than those in respect of which the Federal Legislative Council has power to pass laws ;
- (b) in respect of which the Federal Legislative Council has, by law, authorised the Council of State to legislate.

A Bill passed by a Council of State requires the assent of the Ruler of the State. Any law passed by a Council of State is void in so far as it is repugnant to a law passed by the Federal Legislative Council. The Councils of State are empowered to legislate on matters relating to the Muslim religion and the custom of the Malays. In each State's sphere of responsibility each Ruler possesses a reserved power similar to that of the High Commissioner referred to above.

There is a British Adviser in each Malay State, whose duty it is to advise on all matters connected with the Government of the State other than matters relating to the Muslim religion and the custom of the Malays.

The Settlements of Penang and Malacca.

The Federation Agreement incorporates the Settlements of Penang and Malacca into the Federation and provides that their administration shall be in such manner as His Majesty may from time to time prescribe by Order in Council. The Agreement provides for the constitution in each of the two Settlements, of a Settlement Council, with legislative powers similar to those exercised by the Councils of State in the Malay States. The Chief Executive Officer is the Resident Commissioner.

Financial.

Schedules attached to the Federation Agreement define the sources of revenue for the Federation Government, on the one hand, and for the State and Settlements Governments on the other, and the Heads of Expenditure for which the various authorities are responsible. Where expenditure to which States and Settlements are committed exceeds their own revenue, block grants are made from Federal revenues to enable State and Settlements to meet their approved expenditure. In addition to the expenditure budgeted for by States and Settlements a certain sum is granted each year for expenditure on unforeseen services. The amount varies according to the expenditure of the State and Settlement concerned.

Chapter III

THE ADMINISTRATIVE ORGANISATION OF GOVERNMENT

The seat of the Federal Government is in Kuala Lumpur and it is here the High Commissioner resides and the Federal Legislative and Executive Councils meet. Kuala Lumpur is also the headquarters of the General Officer Commanding, Malaya, whose command covers the whole of the Federation, and of the majority of the Federal Departments of Government. During the Emergency the Advanced Headquarters of the Air Officer Commanding, Malaya, has been established here.

The States and Settlements are divided into administrative districts in which the chief Government representative is usually the District Officer, a member of one of the Administrative Services who is responsible to the Mentri Besar or the Resident Commissioner for the general administration of the district. The smallest administrative units are the *mukims* into which each district is divided. These vary considerably in size in the various parts of the country and are in the charge of salaried headmen called *Penghulu* or *Penggawa*. The method of appointment of these Malay officials, upon whom the District Officer relies for keeping in touch with village affairs and with small holders in rural areas, also varies in the several States and Settlements, but in practice they are the acknowledged representatives of the local community in which they live, as well as being officers of the administration.

In each State or Settlement there are both officers of State or Settlement Departments such as the Medical and Health and the Education Departments, who are responsible to the Mentri Besar or the Resident Commissioner, and departmental officers of Federal Departments as for instance the Telecommunications Department, and the Postal Department, who are responsible to their head of department in Kuala Lumpur, but work closely with the Mentri Besar or the Resident Commissioner and District Officers in any matters of concern to the State or Settlement Administrations.

Many administrative and departmental officers in the higher grades of the services are Asians and it is the policy of the Government to promote the training of locally domiciled personnel to fill senior appointments. Much has been achieved in this direction since the war ; but as the training of officers at Universities and Colleges, particularly for technical posts, takes several years the effective increase of local recruitment will not become apparent until about 1952.

Municipalities already exist in Georgetown, Penang, in the Town and Fort of Malacca and in Kuala Lumpur. These are administered by a President who is a senior officer of the Administrative Service. Municipal Commissioners in Penang and Malacca are nominated partly by the Resident Commissioner and partly by representative associations, and are appointed by the High Commissioner. In Kuala Lumpur representative associations are asked to submit names and the Municipal Commissioners are appointed by the Ruler in Council. The Municipal Commissioners impose rates and administer such matters as town planning, street lighting, town cleansing and conservancy, fire services, and the licensing of theatres, lodging houses and certain trades.

Local matters in other town and village areas are controlled by Town Boards in the States and by Rural Boards in the Settlements under the chairmanship of the local administrative officer. These Boards are composed partly of local heads of such departments as Health, Public Works, Police and Social Welfare and partly of unofficial members representing the major interests in the town or rural area. These Boards perform duties similar to those of the Municipalities but do not enjoy the same degree of autonomy as the Municipalities.

There are in addition Licensing Boards in respect of the sale of intoxicating liquor and Drainage Boards in the coastal areas, composed of official and unofficial members, on lines similar to the Town Boards.

Chapter IV

WEIGHTS AND MEASURES

The standard measures recognised by the laws of the Federation of Malaya are as follows :

- (a) Standard of Length, the Imperial yard.
- (b) Standard of Weight, the Imperial pound.
- (c) Standard of Capacity, the Imperial gallon.

Among the Asiatic commercial and trading classes, Chinese steel-yards (called "*liteng*" and "*daching*") of various sizes are generally employed for weighing purposes.

The undermentioned are the principal local measures of weight and capacity used, with their relation to English standards :

The <i>chupak</i>	.. ..	—	1 quart
The <i>gantang</i>	.. ..	—	1 gallon
The <i>tahil</i>	.. ..	—	1½ ozs.
The <i>kati</i> (16 <i>tahils</i>)	.. ..	—	1½ lbs.
The <i>picul</i> (100 <i>katis</i>)	.. ..	—	133½ lbs.
The <i>koyan</i> (40 <i>piculs</i>)	.. ..	—	5,333½ lbs.

The more common local measures of length in use are :

2 <i>jenkals</i>	.. ..	—	1 <i>hasta</i>
2 <i>hastas</i>	.. ..	—	1 <i>ela</i>
2 <i>elas</i>	.. ..	—	1 <i>depa</i> (1 fathom or 6 ft.)

Other weights in common use are :

10 <i>huns</i>	.. ..	—	1 <i>chi</i>
10 <i>chi</i>	.. ..	—	1 <i>tahil</i> (1½ ozs.)
1 <i>bahara</i> (3 <i>piculs</i>)	.. ..	—	400 lbs.
1 <i>kuncha</i>	.. ..	—	160 <i>gantangs</i>
1 <i>nalih</i>	.. ..	—	16 <i>gantangs</i>
1 <i>gantang</i> of <i>padi</i>	.. ..	—	5 lbs. approximately
1 <i>gantang</i> of rice (milled)	.. ..	—	8 lbs. approximately

Measures of area in use only in the States of Kedah and Perlis are :

4 square <i>depas</i>	.. ..	—	1 <i>jemba</i> (144 sq. ft.)
400 <i>jembas</i>	.. ..	—	1 <i>orlong</i> (1½ acres)
1 <i>relong</i>	.. ..	—	.71 acre
1,210 square <i>depas</i>	.. ..	—	1 acre

Chapter V

NEWSPAPERS AND PERIODICALS

The following is a list of newspapers and periodicals published in the Federation of Malaya:

Daily—

ENGLISH

Malay Mail (Kuala Lumpur)
Daily News (Ipoh)
Pinang Gazette and Straits Chronicle (Penang)
Straits Echo and Times of Malaya (Penang)

MALAY

Majlis (Kuala Lumpur)
Warta Negara (Penang)

CHINESE

China Press (Kuala Lumpur)
Kin Kwok Daily News (Ipoh)
Kwong Wah Yit Poh (Penang)
Sin Pin Jih Pao (Penang)

TAMIL

Tamil Nesan (Kuala Lumpur)
Sevika (Penang)

PUNJABI

Pardesi Khalsa Sewak (Kuala Lumpur)

Weekly—

ENGLISH

Sunday Mail (Kuala Lumpur)
Sunday Gazette (Penang)
Sunday News (Ipoh)

MALAY

Panduan Ra'ayat (Kuala Lumpur)
Pengasoh (Kota Bharu)

CHINESE

Overseas Chinese Weekly (Kuala Lumpur)

Weekly—(cont.)

TAMIL

Janobahari (Kuala Lumpur)
Tamil Nesan (Sunday Edition) (Kuala Lumpur)

Fortnightly—

ENGLISH

Young Malaysians (Kuala Lumpur)

Monthly—

ENGLISH

Scouting (Kuala Lumpur)
The Planter (Kuala Lumpur)
Malayan Police Magazine (Kuala Lumpur)

MALAY

Mujallah Guru (Kuala Lumpur)
Juita (Kuala Pilah)

Quarterly—

ENGLISH

The Malayan Nature Journal (Kuala Lumpur)
Dharma (Kuala Lumpur)
The Malayan Agricultural Journal
The Malayan Forester

Chapter VI

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