INDUSTRIALIZATION AND URBANIZATION—
THE IMPACT ON HEALTH: THE EXPERIENCE OF PENINSULAR MALAYSIA

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GEOGRAPHY

Malaysia is a tropical country which is composed of three parts, namely, a part of the Malay Peninsula and two eastern parts on the island of Borneo known as Sarawak and Sabah. Peninsular Malaysia has a common border in the north with Thailand and in the south is separated from Singapore by the Straits of Johor. On the east, the Peninsula faces the South China Sea and on the west lies the Straits of Malacca. Sarawak and Sabah face the South China Sea in the north and their southern border is common with Kalimantan of the Republic of Indonesia.

The multi-racial population of Peninsular Malaysia in 1986 was estimated at 16.1 million persons with about 83% of them living in Peninsular Malaysia, 9% in Sarawak, and 8% in Sabah. The population has been growing at an estimated rate of 2.4 to 2.6% annually since 1980.

This paper focuses mainly on Peninsular Malaysia’s experience with industrialization and urbanization as the non-availability of documentation on Sabah and Sarawak at the time of preparing this report prevented including their experiences.

INDUSTRIALIZATION IN MALAYSIA

Most developing countries regard industrialization as necessary for development and modernization as well as a means to affluence and as a means to escape low-income levels and poverty. Industrialization became a policy objective for Malaysia’s national development only after independence in 1957. It continued its growth with the community development programs to be described later, which provided the infrastructure facilities such as good roads, railways, port, electricity, communications, health, and educational services—all pre-requisites to industrialization. This has further been enhanced through the five-year development programs of the country. A continuing feature of the government’s efforts to promote industrialization is that the principle of balanced growth has been ac-
cepted from the beginning as the best policy for overall economic growth. Neither
the notion of agricultural fundamentalism, whereby agriculture is considered the
most basic and important economic activity, nor of industrial fundamentalism,
whereby industrialization is considered the only solution to economic development,
has been adopted. Instead, the principle of balanced growth has been pursued
by the government fairly consistently. In the first decade after independence,
ageculture was strengthened and expanded to support the efforts for industriali-
zation in the subsequent period.

Yet another continuing feature of the Malaysian industrialization policy has
been the acceptance of the idea that concentration should be on light, not heavy,
industries. Light industries do not require complex technology, can be instituted
to achieve import substitution, are better suited to the relatively small size of the
local market, and facilitate the substitution of handicraft output by factory output.
As a result, most of the manufacturing industries today are in such areas as food
processing, wood products, chemicals, textiles, rubber products, footwear, metal
products, electrical goods, and leather products. It is expected that with the
continued growth of the industrial sector, the increasing development of skills and
technical expertise, and the establishment of a regional economic union in Southeast
Asia, more heavy industries may become feasible in Malaysia.

Before 1969, the government efforts for industrialization consisted more of
measures to promote industrial development than to participate in it. There was
little direct governmental participation in the industrialization process. Although
the methods and incentive schemes applied by the government before 1969 gener-
ated a fair degree of industrial growth, these were not sufficiently effective and were
not bringing about certain necessary social changes. Based on these experiences,
after 1969, there was a change in the strategy for industrialization. A New In-
dustrial Development Strategy was conceived with five main features:

1. The selection of economic projects would be deliberately guided by con-
sideration of employment creation and social and political harmony.
2. State governments would give priority to the development of new indus-
tries.
3. The government would take the initiative in industrialization and par-
ticipate in the establishment of selected industries, either by itself or in
joint venture with the private sector.
4. The employment structure in all industrial organizations would reflect the
multi-ethnic composition of the Malaysian population.
5. The government would take firm measures to induce industries to go to
rural and economically-depressed areas.

Stemming from this strategy, the government has developed an aggressive
policy for promoting industrialization. Through liberal tax and tariff incentives,
the government is actively promoting foreign investment and encouraging local
entrepreneurs and investors. In addition, the government itself is participating
directly in manufacturing activities as part of its larger strategy to change the balance of ownership of the share capital in limited companies, which continue to be owned primarily by foreign interests (RAO et al.).

Consequences of industrialization

The development of industries in Malaysia has had the beneficial effect of generating more employment opportunities and increasing the income-earning capacity of thousands of Malaysians. This is demonstrated by the improved employment situation accompanying the spurt of industrial activity in recent years. Many young men and women were able to find employment in the factories set up in Penang, Selangor, and elsewhere, and the rapid growth of electronic and other industries in Penang virtually eliminated unemployment in that state in 1973. Regrettably, the recession that began to affect parts of the world in the second half of 1973 resulted in a certain amount of retrenchment and a return to growing unemployment. In addition, there has been an increase in Malaysia's foreign exchange earnings through the export of manufactured products. The expansion of the manufacturing sector has also diversified the economy and introduced an element of stability.

Even so, the geographical distribution of existing manufacturing industries has been uneven, such that there is inordinate concentration in a few parts of the country. This has resulted from simple convenience and efficiency and from the lack of governmental pressures and sufficiently attractive incentives to reverse the situation. Although the government is generally aware of the dangers associated with the over-concentration of industry in a few areas, it has not yet been able to improve the distribution of industrial projects throughout the country.

At the same time, the pursuit of industrialization as a means of solving unemployment and of raising income levels is resulting in urban congestion, pollution, traffic problems, increasing crime, and the like. This is particularly true in areas like Kuala Lumpur and its outskirts. Another negative feature of the industrialization process—especially when it results in an influx of large foreign firms—is the development of oligopolistic and monopolistic situations. Because the markets of Malaysia are relatively small, a relatively small number of firms is able to supply the total demand in many productive areas. This can eliminate small-scale enterprises. Thus, even though new employment is created, existing employment opportunities are also eliminated. These negative effects must be considered in order to determine the true or net benefits of industrialization. In addition, the social costs of industrialization must be taken into account in any appraisal of its long-term benefits (RAO et al.).

URBANIZATION

Over the years there has been a natural tendency towards urbanization re-
resulting from the government's policy of encouraging the growth of industries. With rural-urban migration being common, more urban centers are emerging all over the country. The most important function of urbanization in motivating change is that centers of urbanization serve to provide the gateways for new people, new ideas, and new products from other parts of the world.

Since the beginning of urbanization, tremendous changes have been seen in our rural society, particularly those who live in the proximity of urban or semi-urban centers. Their traditional socio-economic system has gradually been replaced by a modern socio-economic system. Essentially, urbanization is constantly undermining the base of the traditional system, with old cultural ways being transformed in order to make it compatible with modern activities and institutions. The extended family system is disintegrating in the urban society. With the population being conducive to changes, programs introduced to improve their quality of life have in general been accepted. The process of urbanization is thus closely linked to community development efforts of the governments.

Consequences of urbanization

Consequences of urbanization are best illustrated by looking at Kuala Lumpur, one of the fastest growing cities in the world, with a population growth rate of about 7.5% p.a. Much of this rapid growth has been due to rapid industrialization in Kuala Lumpur and the surrounding areas. With the urbanization rate growing faster than that of economic growth, the city administration is faced with a host of problems related to housing, health, public transportation, traffic congestion, sanitation, refuse disposal, environmental pollution and conservation. With regards to housing, a major concern is the provision of housing, particularly for the squatter families. However, in addition to this concern it is desirable for housing schemes to be provided with adequate amenities such as shop houses, parking spaces, and playgrounds which could contribute to the quality of life besides enhancing the environment.

There has been increasing congestion of the city as the growth pattern has been in the form of an urban nucleus consisting of narrow streets and a multiplicity of building types and uses. Private multiple-ownership of land and small size of the lots have often hindered planning and urban renewal programs to overcome these problems.

With growing ownership and usage of motor vehicles, compounded by rapid population growth, the city is increasingly affected by traffic noise and pollution. The rapid growth of the city has affected the environment as a result of the extensive tearing down of vegetation and hills, which are invaluable to the ecosystem, to make way for the tall massive buildings which are rapidly changing the skyline. Extensive land clearings have resulted in "flash floods," a common phenomenon causing undue hazards to people living in the low-lying areas. Noise nuisance is becoming a common problem, largely arising from traffic, people,
industry, radios and televisions.

Awareness of these problems has resulted in a master plan having been drawn up, which is now being implemented in stages.

The squatter population is largely made up of rural migrants in search of jobs in the industrial areas in and around the city. As industries do not provide accommodation for their employees and as these migrant employees are unable to pay the rents prevailing in urban areas, they squat on available land as close as possible to the place of work so that they do not have to spend much of their small incomes on transport. The squatter settlements consist generally of huts closely packed together without or with limited amenities such as electricity, piped water, drainage, refuse disposal, and sanitation facilities. Most of the squatters can be categorized occupationally as industrial-based casual workers or laborers, small-scale farmers, vegetable gardeners, petty traders or workers. Small-scale industries such as brick kilns, sawmills, and metal manufacturing industries often draw their labor from squatter areas. While attempts to resettle these squatters in flats are made, a problem emerges in that resettlement would make it difficult for the squatters to continue to be employed by these industries and could result in their being unemployed. The squatter problem is thus not merely a housing problem, but also a problem of providing opportunities for the squatter population to adapt to urban life economically, socially, and psychologically.

COMMUNITY DEVELOPMENT

Prior to 1960, Community Development activities were carried out in selected villages as pilot projects. However with the implementation of five-year development programs, Community Development received greater attention. Thus during the period 1961–1965, a Rural Development Program was launched and as part of this initiative, Village Development Committees (subsequently called Village Development and Security Committees) were set up as an institution to motivate the involvement and participation of the people in national development, and through this to improve their quality of life. Nevertheless, during this period, priority of the government was directed towards providing amenities for the rural population with the consequence that the people were more dependent on government assistance, and not on their own efforts and actions to improve their standard of living.

With the Rural Development Program being successful in providing infrastructure to the rural population, it was opportune for the people to play an active role in Community Development. Thus through the First Malaysia Development Plan (1966–1970), the government in 1966 launched 'gerakan maju' (development operation) on a “mass approach” throughout the country, on a “selective approach” at the village level, and as a “strategic approach” where the efforts of the people were focused on economic production. The population were called
upon to overcome interrelated problems of poverty, lack of education, health, and indifferent attitudes. In 1968 a program called 'Jaya Diri' (self reliance) was launched, whereby the people were called upon to give priority to the economic aspects of projects that were implemented.

Subsequent to 1969 and with the launching of the Second Malaysia Development Plan (1971–1975), the government strengthened its efforts to streamline the requirements of the people with the objectives of the New Economic Policy and national policies which give priority to national unity. The two prongs under The New Economic Policy are eradication of poverty and restructuring of society. All government agencies operate within the objectives of this policy, including the Ministry of Health (Malaysia, 1978).

It is against this background of national development, policies, and programs that the health services of the country have developed, which serves to bolster the government's community development programs started very much earlier to improve the quality of life of the people.

THE HEALTH SERVICES

Currently, health programs in the country are delivered to the community through a network of facilities including health centers, clinics, district health offices and hospitals. In the rural areas, the system consists of the rural health services scheme, which is essentially a three-tier system consisting of one main health center per 50,000 population, one health sub-center per 10,000 population, and one midwife clinic per 2,000 population. These clinics are supervised by the district health office. Services provided are medical care including dispensing of drugs and provision of minor surgical procedures; dental care; maternal and child health care including immunization and family planning; applied nutrition; school health service; communicable disease control; environmental sanitation; health education; and laboratory services. This system is being further modified to a two-tier system consisting of one health center for a population of 15–20,000 and one rural clinic for a population of 3–4,000.

Right from the outset, the strategies, objectives, and programs of the Ministry of Health have been part of the country's overall socio-economic development plan as embodied in the New Economic Policy. The four major objectives of the Ministry of Health in the Fifth Malaysia Development Plan (1986–1990) are as follows:

1. To achieve Health For All by the Year 2000, using the Primary Health Care approach aimed at improving health and reducing the disparity in health status among different population groups and areas.
2. To continue to facilitate the attainment and maintenance by the individual of a standard of health conducive to a socially and economically productive life, while encouraging greater community commitment through
increased community participation, cost-sharing, and better cooperation among relevant public and private sector agencies.

3. To increase productivity by inculcating desirable work ethics and values, strengthening management, and promoting cost-containment.

4. To improve intersectoral and interagency coordination and collaboration in health and health-related activities. This will ultimately contribute towards the formulation of a National Health Plan.

To achieve these objectives, a number of policies and strategies have been identified from which 23 programs (see Appendix 1) have been developed. These strategies and programs serve to further support and strengthen the provision of basic health care to the total population.

MONITORING AND EVALUATION

A working group was set up in the Planning and Development Division of the Ministry of Health to develop national indicators that would be appropriate for national and international use. These indicators cover the following:

— Social and socio-economic development indicators
— Health status indicators
— Specific health problem indicators
— Health services improvement indicators
— Indicators of political commitment.

In developing the indicators, the following factors were taken into consideration:

— availability of the required data without special complex investigation
— completeness of coverage where the index should be derived from data covering the entire country or parts thereof
— universality where the index should express factors that determine or affect the level of health
— ease of calculating the index
— the index should be widely accepted and easily interpreted
— the index should be sensitive to changes
— validity, where the index should be a true expression of the factors which it is supposed to measure.

In addition, the function of the index for health programs utilizing it was looked into. The level of management (national, state, district, or operational) utilizing the indicators and sources of data generation were identified. Since some of the proposed indicators were not available, these were earmarked for future development. New indicators considered appropriate and essential for management would be developed and introduced as an on-going activity (Malaysia, 1987).
HEALTH STATUS INDICATORS

Malaysia’s per capita Gross National Product was approximately MYR$ 5,019 (US$ 2,010) in 1986 compared to MYR$ 1,360 (US$ 545) in 1973 (Malaysia, 1974–1987). Currently, 38% of the population is below the age of 15 years. Allocation to the health sector is approximately 4.13% of the total national budget. Over the years, there have been increases in the building of health facilities and the availability of health manpower. Thus, the doctor-to-population ratio in 1985 was 1: 3,174 compared to 1: 3,800 in 1980. Latest figures indicate that this ratio is 1: 2,900. The nurse-to-population ratio was 1: 745 in 1985 compared to 1: 1,886 in 1980.

The general indicators of health status in a country are usually based on the absence of disease or the prolongation of life. The various health indicators for Malaysia for the years 1981 and 1986 are as follows (Malaysia, 1970–1987, 1988):

<table>
<thead>
<tr>
<th></th>
<th>Peninsular</th>
<th>Sabah</th>
<th>Sarawak</th>
</tr>
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<tbody>
<tr>
<td>Crude Birth Rate</td>
<td>30.8</td>
<td>30.2</td>
<td>42.3</td>
</tr>
<tr>
<td>Crude Death Rate</td>
<td>5.2</td>
<td>5.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Infant Mort. Rate</td>
<td>19.7</td>
<td>15.5</td>
<td>26.3</td>
</tr>
<tr>
<td>Toddler Mort. Rate</td>
<td>1.8</td>
<td>1.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Maternal Mort. Rate</td>
<td>0.6</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Life Expectancy at birth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>68.0</td>
<td>68.5</td>
<td>n.a.</td>
</tr>
<tr>
<td>Female</td>
<td>72.9</td>
<td>73.7</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

(n.a. = not available)

For Peninsular Malaysia in 1975, the Crude Birth and Death Rates were 31.4 and 6.4 respectively while the Infant, Toddler, and Maternal Mortality Rates were 33.2, 3.1, and 0.8, respectively. These indices thus reflect an improvement in the health status of the population. The immunizable diseases in the country have declined considerably over the years but other diseases such as heart diseases, accidents, and malignant neoplasms are now among the leading causes of deaths.

IMPLICATIONS FOR THE FUTURE

The momentum for industrialization and urbanization has been established and the consequences of these as described earlier are already being experienced and will continue to occur. These will have to be closely monitored and overcome in order to maintain a satisfactory level of quality of life of the population. Various programs that have been implemented and are likely to be implemented in this direction will have to be followed up and evaluated in order to ensure that targets and objectives are met. Training of key persons, particularly those concerned with managing development programs, will need to be carried out as an ongoing process and not be neglected. In particular, greater emphasis on leadership
development will need attention as the environment, within which programs to improve the quality of life of the people are carried out, is becoming increasingly more complex.

Research will have to be carried out but studies must be relevant and practical so as to be of value to policy makers and decision makers. Newer and innovative ways of handling old problems have to be sought, taking into account regional, cultural, ethnic, and socio-economic differences.

Intersectoral collaboration and coordination will increasingly become an important mechanism to solve problems in the future. Thus, in Malaysia, it has been recognized that the health sector requires the services or product of other sectors in implementing various health programs in order to prevent disease and promote health. On the other hand, input from the health sector may be needed by development in other sectors. Further, coordination will ensure consistent developmental strategies and policies as well as ensure all-round development. Thus intersectoral coordination has been an integral part of the five-year socio-economic development plans of the country. This has probably received greater emphasis under the New Economic Policy, which forms the basis of all sectoral and agency plans.

Coordinating mechanisms have been established at all administrative levels. The highest political body concerned with this is the National Economic Council and the National Action Council, both within the Prime Minister's Department. At the official level, the National Development and Planning Committee chaired by the Chief Secretary to the Government coordinates sectoral and agency plans and programs. The Economic Planning Unit, located in the Prime Minister's Department and which is the economic planning arm of the government, is the secretariat to the National Development and Planning Committee. An inter-agency planning group, a forum consisting of representatives from related agencies, constitutes a coordinating mechanism for the Economic Planning Unit. Within the Prime Minister's Department there is also the Implementation Coordinating Unit, which apart from monitoring performance of programs of agencies also maintains a National Operation Room. The National Operation Room could be considered the nerve center for monitoring.

At the state or provincial level, there is a corresponding state or provincial development committee and operation room. There is also a state development officer who liaises very closely with the Economic Planning Unit and the Implementation Coordinating Unit of the Prime Minister's Department.

At the district level, the lowest administrative level, there is a district development committee and district operation room in the district officer's office. The district officer is the chief administrative officer of the district. At the village level, as was mentioned earlier, there is the Village Development and Security Committee, based usually in the village community center. District socio-economic profiles are kept in the district office which coordinates and monitors development in all
sectors of the district in order to improve the quality of life of the people.

Hence, the government, through the coordinating mechanisms at every level of the administration, from the center to the village level, is committed to inter-sectoral coordination in development, an advantage that must be capitalized on.

However, barriers to intersectoral coordination are common, being-associated with structural (ministerial) and attitudinal (loyalty to one’s own agency, feeling of competition) factors. Lack of communication between sectors, difference in training backgrounds of key persons in the different sectors, and differing value systems are but some of the other factors that stand in the way of intersectoral coordination. One way of overcoming these problems would be through coordination starting at the conceptualization phase of development. An important advantage of this approach would be that during this phase the situation is fluid where information can be freely exchanged and ideas discussed openly before one takes positions. In addition, this could probably encourage better understanding and a common ownership of decisions arrived at. There would also be top-level commitment, a minimization of inconsistent policies, rules, and procedures, as well as a willingness to work together towards the common goal of improving the quality of life of the people. Intersectoral coordination definitely requires priority attention in the coming years to minimize resource utilization and achieve maximum results.

CONCLUSION

Improvements in the quality of life of the people is apparent. However, complacency should not set in, as there is a need to build upon the successes already attained and to strive towards greater levels of achievement. This would undoubtedly need the commitment of all sectors and the people themselves, who can be an important pressure group in this endeavor. Finally, the concept that health is the sole responsibility of the medical profession needs to be demystified so that Primary Health Care and the attainment of the highest level of quality of life become the responsibility of all.

REFERENCES

APPENDIX I

CURRENT PROGRAMS OF THE MINISTRY OF
HEALTH FOR HEALTH FOR ALL

Twenty-three programs have been identified as follows, based upon the policies, objectives and strategies of the Ministry of Health:

Preventive and promotive programs

1. Family Health Program—this includes maternal and child health services, immunization, family planning in rural areas, applied food and nutrition program, school health service, promotion of breast feeding, and use of oral rehydration solution for control of diarrheal diseases.

2. Control of Communicable Diseases Program—this includes surveillance, investigation, and control of preventable diseases including water-borne diseases, sexually transmitted diseases and AIDS.

3. Tuberculosis Control Program.

4. Leprosy Control Program.

5. Vector-Borne Disease Control Program—this includes the control of malaria and other vector-borne diseases such as filariasis and dengue fevers.

6. Rural Environment Sanitation Program—this program covers rural communities with the objective of providing safe water supply and proper excreta disposal activities.

7. Food Quality Control Program—the objective of this program is to ensure that the production, distribution, and sale of food for public consumption is safe.

8. Occupational Health Program.

9. Health Education Program.

Diagnostic, curative and rehabilitative programs

10. Outpatient Care Program.

11. Inpatient Care Program.

12. Laboratory Support Program.


Dental care program

14. Preventive Dental Care Program.

15. Personal Dental Care Program.

Support services

16. Pharmacy and Supplies Program—this program provides the necessary support with regards to drugs, equipment, etc., to all the other programs and has a comprehensive range of activities including procurement and distribution, production, enforcement, and hospital pharmacy services.

17. Engineering Services Program—this program provides public health engineering services, hospital engineering and maintenance services, and radiation protection services.
(18) Manpower Development and Training Program——this program is responsible for the overall planning of health manpower requirement for the Ministry of Health and other health and health-related agencies. It is also responsible for the training of specific categories of health personnel.

(19) Planning and Development Program——this program deals with the development of the health plan which includes the objectives, policies, and strategies of the Ministry and undertakes to implement various projects.

(20) Bio-Medical Research.
(21) Health Systems Research.
(22) Finance.
(23) Service.

(Source: Ministry of Health, Malaysia)