PLANNING PERSPECTIVES FOR SRI LANKA

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The city as it exists today is a consequence of certain historical processes that include rapid population growth, industrialisation and migration from rural areas to further employment opportunities and better living conditions. This trend commenced at the turn of the century. As recently as 1971 urban population constituted about 16 percent of the world's population. In 1980 it rose to 41.3 percent. It is envisaged that at the end of the century a phenomenal 50 percent will live in cities. Between the years 1980 and 2000, the third world will approximately double their population from 972 million to 2116 million, whereas in the case of the developed world the increase will be from 834 million to 1093 million which represents an increase of 31.1 percent.

In accordance with the 1981 Census the urban population of Sri Lanka is estimated to be around 22 percent of the total population. In this connection, the urban population is confined to the Municipal and Urban Council areas only. Considering the situation in Colombo, the 1981 Census indicates a population of 602,000. However, the Colombo urban area could be considered to have extended to a radius of approximately 10 miles from the City Centre to include Town Council areas such as, Maharagama, Battaramulla, Thalawathugoda, Hendala and Wattala; thereby effectively increasing the population to approximately 1.4 million. Similar increases in the urban population could be applicable to other cities such as Kandy, Galle, Matara, Negombo and other urban centres. On this basis we could estimate the present urban population of the country to be around 30 percent of the total (i.e. 4.5 million).

The main factors that could be attributed to the increase in the population in urban areas are the location of government offices, major commercial establishments and the opportunities for employment, schooling, hospital and other service facilities.

Although we notice a considerable increase in the urban population the facilities available in the urban areas in regard to schools and hospitals have not shown a significant improvement. Moreover, the existing services are being allowed to deteriorate due to reasons such as lack of finances and a comprehensive plan for development.

In trying to meet these demands the extent of prime land suitable for commercial development and land suitable for parks and open spaces are being reduced due to construction of buildings. There is an alarming tendency for house builders in the city to utilise 5-7 perches of land at exhorbitant rates and locate them back to back and side to side purely to be within easy access of the leading schools, hospitals, government offices and their services; as result of which the land values in Colombo and its environs have increased twenty fold in the last ten years.

The direct consequence of the desire to visit the cities from the neighbouring areas is the problem of traffic congestion. There is no doubt that the existing road network in the cities are inadequate to accommodate the present flow of traffic from the suburbs. The improvements to these facilities that are being carried out at considerable expense will not be adequate to meet demand if the present growth of traffic and increase in urban population is to continue.This situation will be more dominant in the case of Colombo where the catchment area will extend to a radius of approximately 20 miles by the turn of the century, at which stage the improvements required for strengthening the infrastructure services would be of a formidable scale.

The Victoria Project has stimulated the growth of the Digana Town Centre and the resultant demands on facilities existing in Kandy are subject to increasing strain.

Negombo has had a similar impact as a result of having to cater to the needs of the nearby Free Trade Zone. Thus the over-urbanised cities constitute serious problems and require radical thinking when considering planning perspectives for the 21st Century.

It is noted that similar problems have existed and continue to exist in several major cities of the world to a scale much larger than what we experience in Sri Lanka.

Shanghai

Prior to the planning element being introduced, Shanghai was growing at an abnormally fast pace, with the influx of impoverished peasants from the countryside, resulting in the population increase from one million in 1930 to 5 million in 1949, an increase that imposed a severe strain on the existing facilities.

Subsequent to order being restored with the liberation of the Country in 1940, an appreciable increase in the standard of living took place as a result of the improvement to facilities and the levelling off of population increase through various means, one being family planning. Orderly development made it possible for the industrial production in 1979 to increase 23 times over the level that prevailed in 1949. A noticeable increase in agricultural production was also recorded. This increase in production went hand in hand with the provision of welfare facilities such as public health, medical care, social secuirity, and the care of the sick, old and the disabled. This resulted in the dramatic increase in life expectancy from 43.8 years in 1951 to 73 years in 1979.

Hanoi

As in other Asian cities the population increase in Hanoi was very marked during a period of instability. Since conditions were stabilised, Hanoi has managed to restrict population increase to 1.9% per year (inner city rate is lower) through family planning means.

Moscow

The orderly development of one of the biggest cities in the world (Population in 1981 - 8,099,000) had been made possible by means of a Master Plan. The vast problems that are seen elsewhere in similar agglomerations had been avoided by the adoption and efficient implementation of the Master Plan on a long term basis. The provision of scope for cultural appreciation and leisure activities is a key element of the Master Plan.

Cairo

Of the Egyptian population of 42 million in 1980, as much as 21 percent lives in the Capital City of Cairo. Devices such as family planning and disincentives to migration and the provision of facilities in the sorrounding areas are being adopted to reverse this trend.

Rome

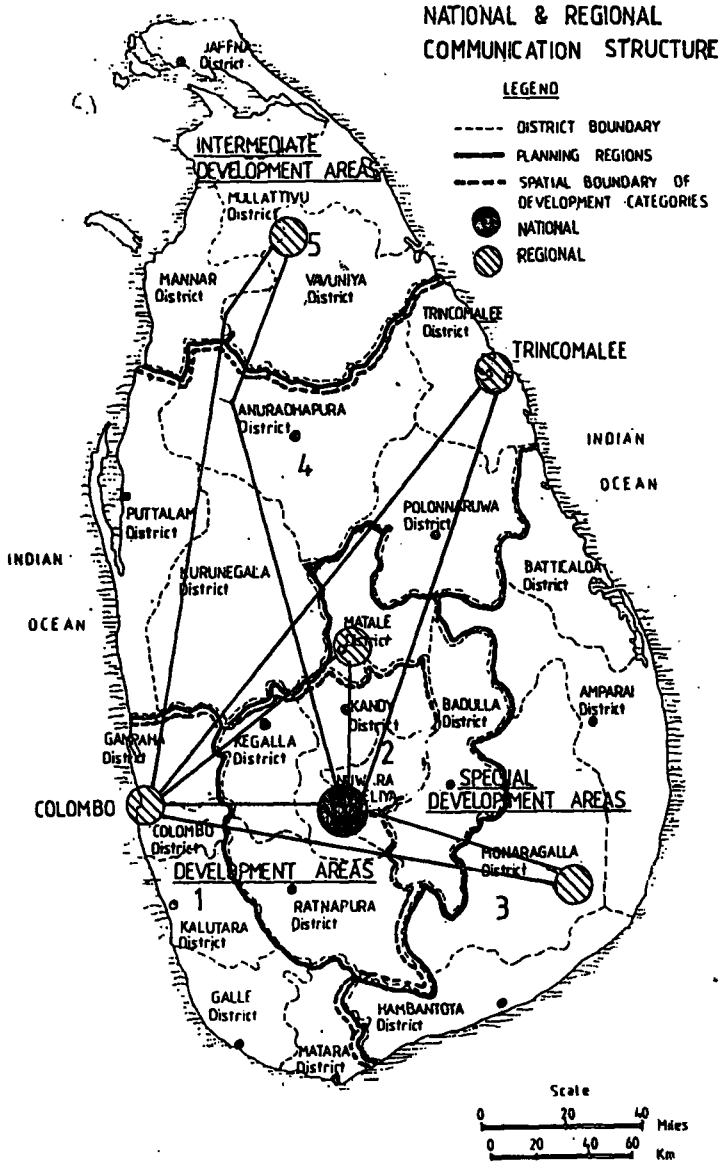
Rome's population in 1982 was 3 million. Its growth had been mainly due to the absence of controlling legislation thereby creating an 'illegal' Rome alongside a 'legal' Rome. The remedy now sought is to build satellite cities and to prevent the growth that was like an oil spill in concentric circles.

It could be seen from these instances of abnormal growth that it is the planning element together with stable political conditions that had been in a position to check and redress the ugly features of over-urbanisation.

Having discussed the need for change, I shall in the next part of this paper examine what the patterns of change should be.

Patterns of Change

The patterns of development since Sri Lanka gained independence, upto 1977 could be categorised under: (1) change due to ad-hoc planning and development; and (2) incremental. There has not been a comprehensive or systematic approach to planning since the priorities had varied with successive Governments. Subsequent to 1977 the pattern could be classified under the third category-Leal Forgging, with development being more dynamic and result oriented.



The Mahaweli Development Scheme which was originally programmed for a thirty year period was eventually scheduled to be completed within a period of 6 years. In the field of urban development, almost three million sq.ft. of office space has been built. In the Hotel Industry 3,000 additional rooms have been provided. The target of 100,000 houses has been achieved and the million houses programme is now in progress. Similar progress has been achieved in exports too.

In the meantime there has been infrastructure improvement in communications with the introduction of subscriber trunk dialling, international direct dialling, telex , facsimile, computers and colour TV. These developments have been accepted by the peo-

ple and have tended to change their outlook within a very short period. The level of unemployment in the country has also been reduced significantly from 22 percent in 1977 to 12 percent in 1985. A large measure of technological transfer was also possible. Future development should therefore take into consideration the continuity of this pattern of change, since these changes were made possible with the financial assistance received in the form of Aid, Grants and Special Loans from foreign countries and lending institutions. It should be realised that assistance of this kind cannot be expected to continue ad infinitum.

It is therefore necessary to alternate sources of financing in order that the development activity may continue at the same or accelerated pace so as to achieve an appreciable increase in the per capita income from a figure between US$ 250 and US$ 300 to US$ 10,000 within the next four decades. In this connection a parallel could be drawn from the South Korean experience wherein the per capita income rose from under US$ 200 to US$ 5,000 within a period of 18 years.

If one were to look into the shortcomings that exist today, the following could be highlighted: (A) Over-urbanisation in and around Colombo and its environs as previously described, (B) Transportation, (C) Communications (D) Educational facilities (E) Health Care facilities, (F) Employment (G) Housing and Sanitation (H) Social activities.

The regional development function by itself could bring about a substantial improvement in the abovementioned areas. For this purpose the country should be divided into five regions as indicated in Map No. 1. The policy in this regard should include: a) Commitment to a gradual decentralisation of public administration/privatisation b) Evolution of a degree of decision making power to regional administrations initially in the fields of housing, education, health, employment and transport systems.

The planning should also consider the technical and financial feasibility of regionalisation of certain state utilities such as, Telecommunications, Electricity and Water Supply.

One source of these functions could be by diverting funds that would otherwise be utilised for improvements to already urbanised areas. This should be supplemented by other means of raising funds.

One of the most important features of the system of regional planning should be the setting up of a Regional Development and Planning Authority for each administrative region. The main tasks of such an Authority should include the preparation of a Master Plan taking into consideration the avilable resources of the region and the monitoring of the implementation of these plans to stimulate the social and economic development of the region.

The composition of the Regional Development Authority should be multidisciplinary by nature. The Chairman of the Authority should be a Minister overlooking the region, who will co-ordinate action between the regions and the central government. The Authority has to be autonomous with powers to formulate policies and implementation procedures in respect of each of these regions. The objectives of the Regional Development Authority should be: a) To encourage and foster the economic development of the region, b) Widen and strengthen the base of the economy of the region, c) Encourage and foster the establishment and development of Agriculture, Industry, Commerce, Education, Housing, Health care etc., e) Administer affairs of the region through co-ordinated implementation units for:- 1. Human settlements 2. Education and Health care 3) Highways and Transportation 4) Agricultural and Industrial development, 5) Social and Cultural development, 6) Explore and exploit untapped mineral and industrial resources of the region including research and development functions. These functions are to be similar to the functions of the G.C.E.C.

21st Century Perspective

I would like to commence by quotina from Alvin Toffler's "The Third Wave (1980)"

"A new civilization is emerging in our lives, bringing with it new family styles changed ways of working, loving and living, a new economy, new political conflicts beyond all these and altered consciousness. Humanity faces a quantum leap forward. It faces the deepest social upheavel and creative restructuring of all times." It is now necessary to devise ways and means of accelerating the implementation process to meet the demands of the 21st Century. Technology should be the basis for the generation of income, knowledge and providing for the overall well-being of the people. The technology so relevant is now broadly called Information Technology. This involves the gradual introduction of micro electronic devices which are daily becoming less expensive and thereby affordable to many in Sri Lanka. These devices include satellite communications equipment, TV, computers, robotics, fascimile, data transmission etc., They will accelerate the pace of development with a view to rapidly improving the standards of living of the people.

One will not imagine a person in any region in Sri Lanka in the 21st century not having the use of Telephones or TV or even a Computer for his productive use. Our challenge is to find the resources to make these available initially at least at the community level if individual facilities cannot be provided at the commencement.

I would now indicate how Information Technology can assist in the integrated planning and development process which will permit a comprehensive development of Sri Lanka.

In planning for the future, integrated development efforts would involve the initiation of a communication and information system that would co-ordinate between the Rural, Regional and National needs. Rural Development has hitherto sufffered as a result

of the absence of reliable communication thereby isolating itself from the field of information. Besides skills acquisition and the provision of basic and continuing education, health services and other social services too have been neglected as a result.

The advantages in these innovations is their low cost reduced power requirements and the use of simply constructed earth stations with ability to reach remote locations in undeveloped areas and difficult terrain with the minimum of infrastructure facilities. The Information Technology and their applications have the capacity to evaluate the implications of changes in supply, demand, production, consumption, poverty levels, affluence etc., and has access to the knowledge that identifies the best possible means for the development of policies, programmes and measures in this respect. In order to reap the maximum benefit from the Information Technology at the grass roots level, it is necessary to have links with the national and regional levels.

Information Technology systems of increasing capacities from the village to the National Centre that form the heirachial order will then be the medium of communication and information to the masses.

At a village level, these inatallations shall initially be accessible on a collective basis (Community Command Base) and gradually extend to individuals (Home Command Base). With the general improvement in living standards the home will undergo a vast change with increased use of appliances.

With further advancements the same information technology wil make it possible for individuals to operate from their home bases and have access to the Global Network enabling them to purchase products, manage financial affairs, communicate with business concerns, have personal contacts and learn and work from home.

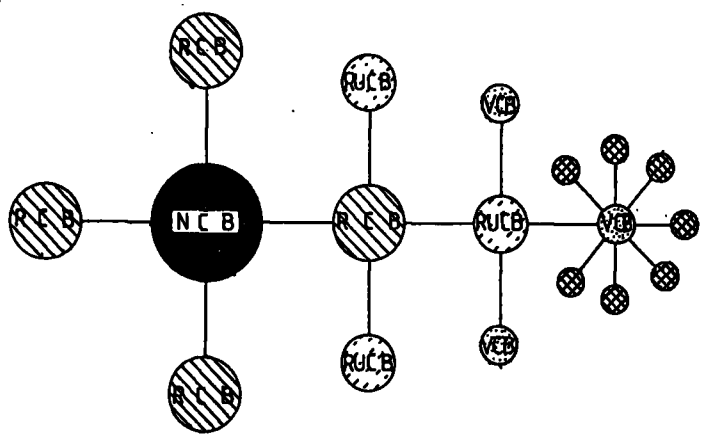
The physical impact will then be flexi place location, independent working, with the home as the supreme command base providing housing, working, consuming for the individual and thereby creating a new economic sector.

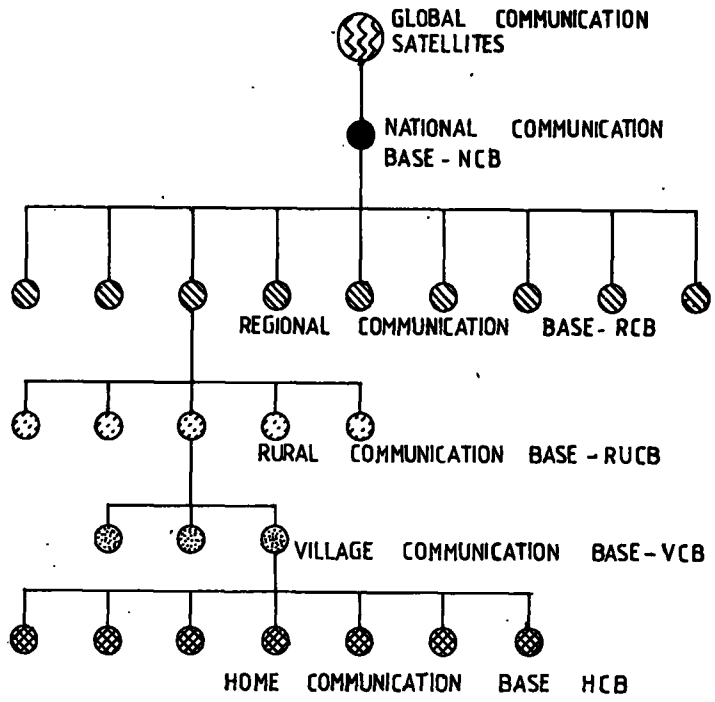
The first industrial revolution resulted in migration to urban areas. The 21st Century will reverse this trend with the de-urbanisation becoming inevitable. Further impetus in this direction will emanate from a change in the corporate structure and the need for location diminishing with conuberations becoming almost obsolete as distance will then no longer be a hindrance.

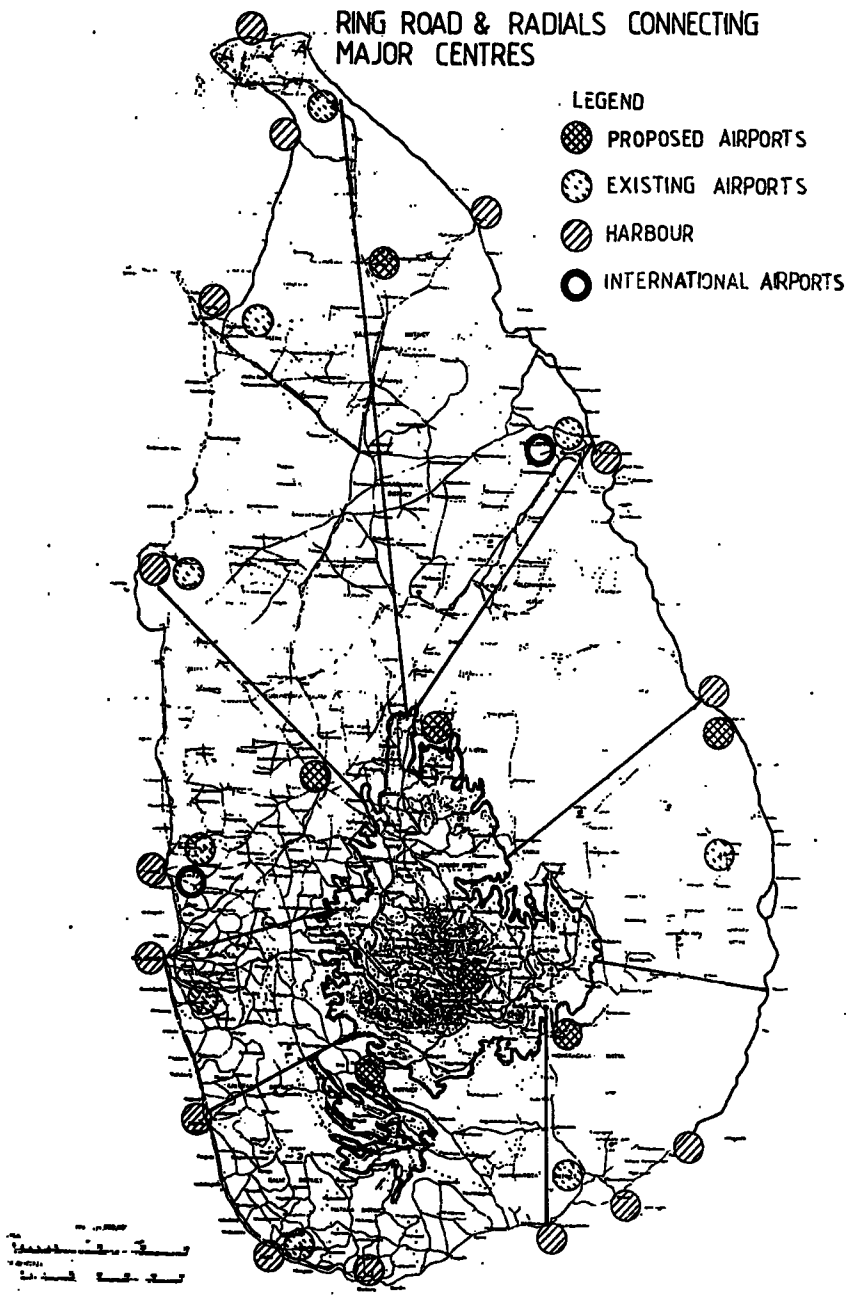
In this emerging pattern, the 21st Century will witness a radical change in the structure of National, Regional and Rural settlement irrespective of locational or proximity determinants and the resultant settlements pattern would be clusters of predominantly eletronic villages in a nuclear development order of built form as shown in Plate 1.

Recommendations

Having looked into the reasons as to why a change is necessary and in what direction we should change, I would now set out some recommendations of particular activities to be undertaken to meet the demands of the 21st Century.







1.In planning the future road network system, it is desirable to have rapid transit motorways linking the major cities. However, it would not be economically feasible to provide links only between one or two cities in implementing such a programme. I would therefore propose a Ring Road at about 1,000 MSL elevation which would connect locations such as:
Eheliyagoda, Kuruwita, Uggalkalthota, Weelawaya, Bibile, Mahiyangana, Pubbanawela, Nalanda and Mawatagama.

1.1Radial roads emanating from this Ring Road could be provided to connect other cities not covered by the ring road in a structure that is similar to a "COBWEB". Refer Map No. 2.

1.2Colombo by-pass from North and East to divert traffic to the South to be carried out as early as possible. Similar approach to be adopted in other major cities such as Kandy, Kurunegala, Galle, Matara.

1.3Construction of fly-overs or overhead bridges for the road network at Railway crossings.

2. Rail Net Work

Whilst laying emphasis on the development of the road network, it would be necessary to supplement this with an efficient rail and air transport system.

2.1Rail Network
Development of the rail network should include the electrification of the system within the Colombo Region.

2.2Introduction of underground railway network within the city which would be a surface railway system in the suburbs. The underground network system should be ideally located beneath the major roads, for example, Galle Road, Highlevel Road, Buller's Road, Reclamation Road etc.,

2.3To relocate the existing coastal railway lines from Colombo to Matara by moving it inland by approximately 5 miles from the coastal line.

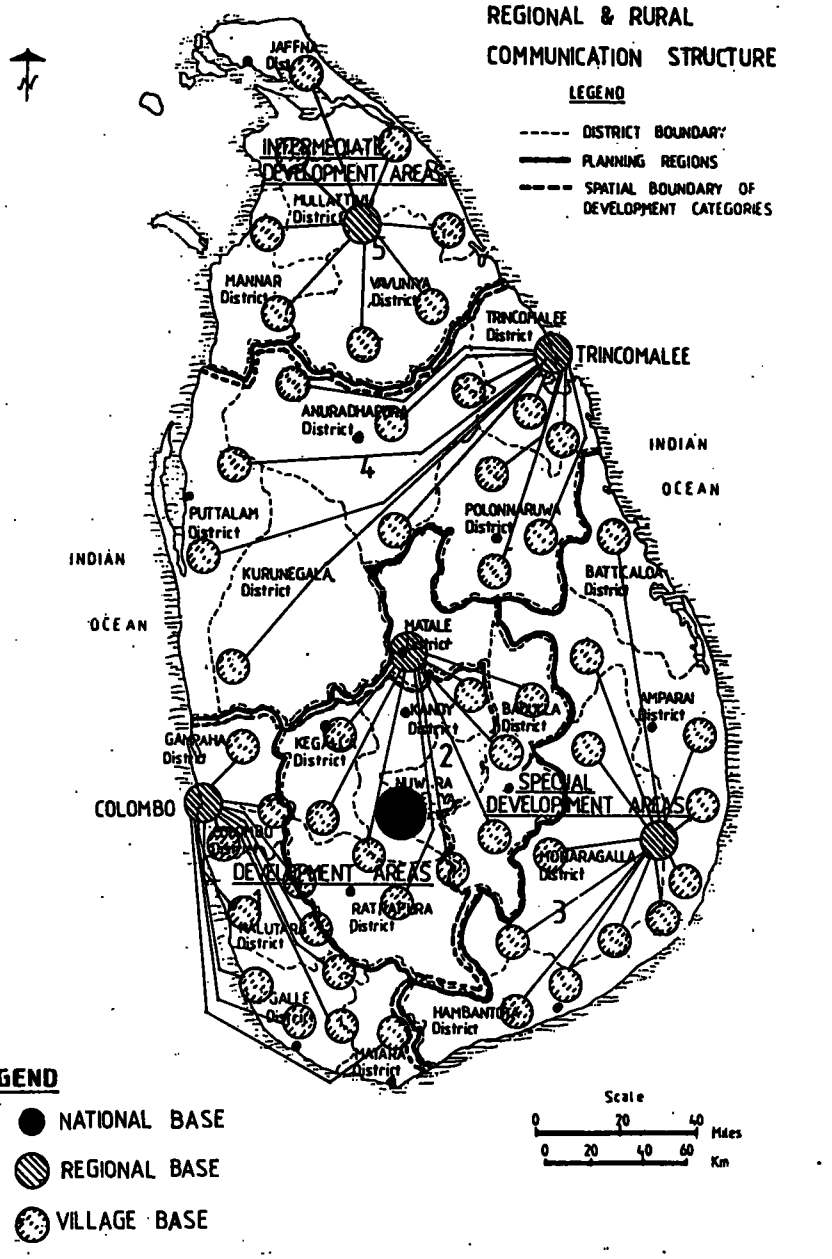
3. Air Strips

The location of air strips should be outside the Ring Road at points close to Pelmadulla, Wellawaya and Nalanda. In addition, air strips could be located at Welimada,Kurunegala, and Mullaitivu. These would serve to supplement the existing domestic air stips at Weerawila, Amparai, Batticaloa, Chinabay, Pallali, Mannar, Puttalam, Negombo, Ratmalana and Koggala. The pressure now felt at the International Airport at Katunayake could be relieved by the location of a second International Airport in Trincomalee. See Map No. 2.

4. Harbours

Harbours for coastal transportation should be provided at Arugam Bay, Batticaloa, Trincomalee, Mullaitivu, KKS, Pooneryn, Mannar, Puttalam, Negombo, Colombo, Beruwela, Galle, Matara, Hambantota and Kirinda.

5. Over the past 50 years the City of Colombo has been transformed from the Garden City to a highly congested urban situation as we observe today. This is a result of the inadequacies in the planning function that have been carried out and the resulting ad-hoc development over the years. We should therefore learn from this experience.



and avoid similar mistakes when planning for the 21st Century. The proposed Regional Development Plans should therefore include effective controls in the allocation of land for different purposes such as Residential, Commercial, Educational, Industrial, Agricultural and so on at Regional/Urban/Rural and village levels. For example, the residential development areas should be confined to small units with 200-400 housing units together with common infrastructure facilities. This will not only result in better utilisation of land but will also bring about economies in providing infrastructure services. In addition, this will assist in the setting up of the electronic communication network planned for the 21st Century as referred to in Plate 3.

6. Establish communication centres at village, rural and regional levels linking to a national centre through which access can be gained from village to a global level. In this respect reference should be made to Map 3 and Plate 1.

(Excerpted from a paper presented at the annual sessions of the Sri Lanka Institute of Architects).