

Department of Geography
Sida/ SAREC Research Cooperation Project

Regional Development in Sri Lanka
Resetting The Agenda

Editors
M.M. Karunanayake
Anders Närman

University of Sri Jayewardenepura
Sri Lanka
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PREFACE

This publication consists of seven papers that have been presented at various forums both national and international. The papers by Nimal Dangalle, M.D.C.Abhayaratne, Dhammika Wanasinghe, Anders Närman and, Petter Pilesjö and Emile Stroh have been presented at the international conference on Regional Development: Experiences Across Countries held at the University of Chiang Mai, Thailand in November 2002. The paper by R.S. Gunatunga and M.M.Karunanayake was presented at the 18th European Conference in Modern South Asian Studies held at the University of Lund, Sweden under the auspices of Swedish South Asian Studies Network (SASNET) in July 2004. Wilbert Gooneratne's paper was originally presented as the keynote address at the workshop on Regional Development Experience in Sri Lanka: Retrospect and Prospect held in Colombo in August 2004 under the aegis of the Sida/SAREC Research Cooperation Project on Regional Development and Poverty Alleviation implemented by the Department of Geography, University of Sri Jayewardenepura, Sri Lanka. All authors have rewritten the papers purpose of this publication.

In Sri Lanka in spite of a declared commitment to achieve a more balanced regional structure the realities are pointing in another direction. Disadvantaged regions are lagging behind, a process of marginalisation is in evidence and individuals within local communities find themselves powerless and socially an economically excluded. It is clear from the papers in this volume that regional development in Sri Lanka is in a crisis. Therefore, the time is opportune to think of resetting the regional development agenda for Sri Lanka. Hopefully, this volume can be of value to reflect on the Sri Lankan experience and as a means to inform the international debate.

As co-editor Anders Närman contributed much to prepare the publication for the press. In fact he spent a week in Sri Lanka in September 2004 totally engrossed in tying up the loose ends of the publication. Sadly, he was not to see his efforts bear fruit because of his all too sudden demise in November 2004. Anders was not only an eminent development theorist but also one who actively promoted an interest in "alternative development" among scholars, policy makers and planners of the South. In his demise we have also lost a sincere friend and colleague. In this publication we carry an appreciation of Anders Närman penned by Clas Lindberg of the Department of Social and Economic Geography of the Uppsala University, Sweden, as a tribute to him.

I would like to place on record the support provided by Prof. Chandima Wijebandara Vice Chancellor, University of Sri Jayewardenepura and Dr. Krishan Deheragoda, Head of Department of Geography, University of Sri Jayewardenepura to bring out this publication. Dr. Sunethra Thennakoon and Mr. G.F. de Alwis helped in procedural matters. Mr. R.M.K. Ratnayake helped in the technical aspects of the publication. Messrs. H.P.M. Janaka Handunpathiraja and H.A. Nishantha Hettiaracchi helped in the preparation of maps. Ms. A.M. Agra ably assisted with word processing.

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INTRODUCTION

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Sri Lanka has been the arena for all kinds of experiences in regional planning that will be commented on in this volume. Even so, it is evident that in Sri Lanka regional development is very much an unfinished business. It is the thesis of this publication that to bring about effective peripheral development, Sri Lanka needs to reset its regional development agenda. The country at one time was one of the leading lights behind the concept of a self-reliant development. At a later stage Sri Lanka emerged as one of the pioneers of a neo-liberal open economy - with the ambitious, but up till now futile, agenda of being the next "Tiger Economy". Throughout the years we can observe how a string of reforms has been aimed at the decentralisation of power to the local structures of authority. However, this has not been followed by a substantial transfer of economic power to the local/district levels. At the same time private economic interests, internal and external, tend to preserve regional inequality. It is clear that the formulation of a holistic agenda for regional development (and development) has escaped the attention of the policy maker. Indeed, one issue that has not been resolved is if the politicians really have a serious commitment to change the regional structures fundamentally. Before we present the case for resetting the agenda for regional development in Sri Lanka it is pertinent to provide some reflections of a theoretical nature.

THEORETICAL REFLECTIONS

How do we explain Sri Lanka's position from a theoretical perspective? One reason simply is that in Sri Lanka (as in other parts of the developing world) theoretical considerations that have, so far, guided regional planning efforts are strongly grounded in the experiences of Western Europe and North America. An over-all impression created seems to be that we still live in a World in which

the thinking of von Thünen, Lösch and Christaller has formulated a memorandum of understanding on how to over-come regional disparities. A relevant approach has been to make references to the dichotomy between the northern and the southern part of Italy – the industrial parts in the north compared to the lagging parts in the south. Experiences have also been drawn from perceived disadvantaged regional configurations, such as western Ireland or the northern sections of Sweden. Somehow the understanding of why a specific region or group of people are not included in the national development process is not generated from examples drawn from the South.

At the same time practical applications in regional planning tend to live in the past neglecting much of the theoretical progression. The thinking of John Friedman (1992) has been very innovative with his deliberations on concepts such as *"territory and function"* and *"empowerment"*. However, to guide the practice it would seem that the experiences in Venezuela from the 1960s are of more relevance. Similarly, writings by Perroux (1955) and others have led to a constant identification of growth poles and growth centres not least in the African states. Another trend has been the role played by the neo-liberal globalisation and the identification of the free market solutions as a panacea for development or underdevelopment. When global responsibility for poverty was replaced by a demand for national economic adjustment the growth of individualism prevailed. To some economists, like Schumacher (1974), this has simply been an institutionalisation of non-responsibility.

In the age of globalisation the concept of a cultural imperialism is growing stronger by the day (Said 1995). This is not least so in academic life, as has been explored by Cline-Cole (1999). What is immediately evident is that the process of knowledge building and the dissemination of results is largely a product of the North, which is clear from the Euro-centric approach. At the same time it has benefited from the knowledge system in the South, but this has neither been really accepted nor acknowledged. This was partly caused by colonial (or neo-colonial) policy.

Development thinking in the late 1990s and early 2000s has slowly moved out of its "impasse" entering a stage of post-modernism, post-colonialism, or why not post-development (Simon 1999). Academic research has for a long time been pre-occupied with finding a critical discourse that challenges previous understanding of the complex notion of development. In every-day life development is understood by all, with the exception of those who are supposed

to be the experts in the field (Stöhr and Taylor 1981). A decade ago we were not only enmeshed in the attempts to find a way out of the impasse, but also the mood of out-right rejection or anti-development (Sachs 1992). All this must be seen against the claim that, in fact, development is nothing less than one of the most complex words in the English language (Watts 2000). Against this background it is possible to grasp why it is difficult to correlate development theory to practice (Simon and Närman 1999). It seems that to a certain extent the academic development debate has lived a life of its own (Hettne 1995), and its practical application would challenge an existing power balance (Wolfe 1996). In addition to that the basic logic in development is constructed on a western mind-set that is blind to real experiences from the South (Cowen and Shenton 1995).

After a prolonged period of top down externally induced development it might be an opportune time for the countries of the developing world to draw from their traditional knowledge bases in moving towards an alternative development. This has to be seen as a combination of the old traditional understanding merged with the present conditions. This may be part of what Nabudere (1997) has referred to as post-traditionalism, which was a response to post-colonialism. This was in recognition of the fact that Third World reality might be closer to local traditions than the experiences derived from colonial rule. Possibly the pre-colonial background, coupled to resistance towards colonialism would form a better foundation for development alternatives in countries of the developing world.

One aspect of regional development that has been neglected up to now is the impact of cultures. All too often regional planning has been a matter for planners with a knowledge and skill in a complete set of tools found on the experiences of the North. This might not be relevant when translated into the South. There is a need for a deeper understanding of the cultural/ideological foundations for development in a specific situation. If we miss out on this we might not get much further. Our contemporary World is to a large degree understood as perceptions and perspectives. This relativity of knowledge has pushed for a research that has to leave the pure boundaries of empirical data collection into a form of reflection. The insight of humans and their perception into their own conditions has to be grounded in life-worlds. Consequently, people live in a world that contains cultures, beliefs, values, myths etc. Any social order is a representation of a synthesis of such "soft" knowledge, combined with "hard" facts. Further, this is moulded in a conflict between the euro-centric world-view and all other diversities of cultures and traditions that are found.

What can be argued from the above is that these experiences illustrate some of the obvious dilemma for regional planning. In spite of all the efforts the general trend seems to be increasing gaps between some regions and the more disadvantaged ones. In addition to that it is obvious that it has been very difficult to "reach the poor". From the way of thinking in the north – development is very much an identification and implementation of certain models of development, which thereafter will trickle down. Obviously, this is a gross misconception, as the so - called trickle down effects are hard to find. Instead we know that relative wealth often leads to further accumulation. This realisation would lead us over to a need to move from "targeting the poor", towards a re-direction of research to focus on poverty – as perceived and understood by the poor themselves. As has been so eloquently elaborated by Chambers (1983; 1997) there is a strong structural link between power and poverty. That has to be given further attention, as well as the broadening of the understanding of poverty spear-headed in the writings of Sen (1999).

There is a need for new knowledge to emerge from the south through critical analysis and examination that will help redefine many of the concepts that the researcher in the North takes for granted. For example, external (western) scholars have dominated studies on gender relations in many countries in the South. If the studies try to not only map out the disadvantaged position of women, as a matter of fact, but also the processes that underlines this structure there will be certain cultural clashes. When we talk about issues such as power, domination, and oppression etc. the meaning might not be the same in the Sri Lankan society as it would be in the North. With a different grasp of family sentiments and intra household division of labour there could be space for a mismatch between perception and reality.

To contribute to the practical development process in a positive way it would also be essential for research to carry out a detailed actor analyses. We have to understand how local decision-making is related to external influences. In addition, it would be of the utmost importance to analyse the relationship between public authority and private sector interests. One sector that has been active in local level development in developing countries is the NGOs, even if it has been taken to task lately (Singh 1999). Sometimes it would be of value to go deeper into objectives, perceptions and interests represented within this whole arena. Micro credit and leadership training might be perceived as important by the foreign donor community, but the concept of individualism might be promoted unreservedly at the expense of traditional values of collective co-operation.

How are we to reconcile these theoretical considerations with practice at the grassroots? It is necessary to question development reality from a critical perspective. As Sundin (2004) comments:

> *A critical approach to research - in the form of what we refer to as post modernistic – presents an exciting challenge and, at the same time, provides the stimulation for questioning, which in turn can open up the way to fresh ideas. The ambition of critical social research is concerned much more with questioning the established than with confirming prevailing conditions, and with clarifying and analysing conflicts and tensions than with departing from a position of superficial understanding. The intention is to encourage and provide stimulation for the re-examination of established "truths" and conventions.*

According to Alvesson and Deetz (2000) the purpose of critical social theory analysis is to draw attention to hidden aspects and offer alternative interpretations. It could be a means of building 'new knowledge' in development practice. In the context of regional and local development new knowledge could take the form of integrating the modern with the traditional. This calls for the mining of traditional knowledge. Goonatillake (1999) has provided interesting examples of the use of traditional knowledge in the modern context and presents the case for a global science that is based on the mining of civilizational knowledge. He shows, for example,

> *Ethno-ecology, which constitutes indigenous ways of perceiving, managing, and using resources, has been recommended for countering the social and ecological destruction of Amazonia. Posey and his co-workers explored six areas of local ecological knowledge – cosmology, agriculture, aquaculture, gathered products, resource units, and knowledge of the interrelationship between these categories. The researchers came to the conclusion that development based on these local knowledge bases would lead to more ecologically sound production, which, at the same time, would be commercially viable.*

This brings us to the question of rediscovering the past to build alternative futures. The reasoning formulated by Nabudere (1997), is one form of creating new institutions and structures partly based on post traditionalism. Singh and Singh (2002) have commented on how Indian reality has moved away from the more rational choice built on Ghandhian morality. Sarvodaya movement in Sri Lanka has expressed a similar thinking. If we further explore we might even find alternative development in a kind of globalization process based on diversity derived from the civilizational experience of the South.

What are referred to in the various contributions in this volume are aspects on development on a regional and local level in Sri Lanka. It is an assessment of what we have seen and experienced. At the same time history is always catching up with the social scientist. A new approach has been adopted for regional development – Rural Economic Advancement Programme (REAP) (Karunanayake and Abhayaratna, 2002a). More than being a development strategy this can be seen as an ideological approach to development. It is a refinement down to the local level of the free market mechanism. But the approach itself is evolving and changing. This has emerged as a new challenge to the social scientist and the policy maker to disentangle further.

REGIONAL DEVELOPMENT IN SRI LANKA: THE IMPASSE

Regional development initiatives in Sri Lanka have taken many forms such as the transfer of public funds for the provision of social and physical infrastructure; irrigation development and land settlement; village settlement expansion; river basin development (that includes the Mahaweli Development Project) and the Integrated Rural Development Pogrammes (IRDPs) implemented at the District level. At present the IRDPs are being replaced by the Rural Economic Advancement Programmes (REAPs) with a focus on enterprise development (Karunanayake and Abhayaratna 2002a). It may be noted that many of these programmes have had a specific area bias as against a regional development bias. Industrial decentralization mainly through the Industrial Estates and the 200-Garment Factory Programmes has been another strategy that has been adopted for regional development. Poverty alleviation programmes have figured prominently in State policy since the late 1980s.

While there have been significant improvements in the provision of social and physical infrastructure in the peripheral regions and in raising the quality of life of the rural population, the persistence of regional imbalances and worse, growing regional inequalities, have dogged regional development efforts in Sri Lanka (Moore 1984; O'Hare and Barrett 1996; Gooneratne 2001; Wanasinghe 2001; Karunanayake and Abhayaratna 2002b). Note that in this volume the contributions by Dangalle and Gooneratne focus on spatial disparities in Sri Lanka from a macro perspective while Abhayaratna and Wanasinghe in their contributions highlight the manner in which such disparities find articulation at the sub-national level.

How do we explain this impasse? There is no gainsaying that it is the outcome of a complex set of factors that have been mutually reinforcing. One problem has been the uncritical acceptance of development theories and concepts that have their origins in the North. We have seen for example, micro credit and leadership training could be at the expense of the traditional values of collective cooperation. Narman in his comparative assessment of education shows how free market solutions have adversely impacted local level education, as much as education in general, in Tanzania and Sri Lanka.

The absence of a clearly defined national policy on regional development has often led to uncoordinated development efforts at the national and the local level. This has prevented the implementation of concerted policies and strategies capable of suppórting the 'upward transition' of lagging regions in order to overcome or reduce regional inequalities.

It is also evident that despite a political commitment to devolution there has been no serious commitment to power sharing. A corollary of this is that the processes of regional development and political devolution have failed to converge. They have continued to run on parallel tracks much to the disadvantage of the peripheral regions. Hence the Provinces and the Divisions have very little capacity to plan and execute regionally and locally feasible development programmes. This has also meant that up till recently the central government was responsible for regional planning. However, at present a conflict situation has emerged by the setting-up of Regional Ministries of Development on one hand and the failure of provincial governments to comprehensively take over planning responsibilities on the other. There is also no institutional arrangement responsible for setting the broad policy framework for regional development. As noted at the outset this raises the issue whether there is serious political commitment in Sri Lanka to bring about fundamental changes in regional structures. Dangalle comments that there are stakeholder conflicts markedly underlined by political considerations.

It can be argued that regional development in Sri Lanka has been planned and implemented without much concern for the spatial aspects of development. As Gooneratne well articulates in his paper appearing in this volume there is a need to revisit the question as to what constitutes the appropriate unit for regional development in Sri Lanka. As already evident from the institution of the various Regional Development Ministries the concept of larger development units has gained ground in official thinking, but the demarcation of such units has been

quite arbitrary. There has also been a tendency to consider regional development purely in terms of rural development. This has resulted in the neglect of the role of urban clusters and networks as well as urban-rural linkages in regional development (Wanasinghe and Karunanayake 2003).

There is no doubt that the weaknesses in institutional structures have also contributed to dampen regional development efforts. The concept of 'learning institutions' has eluded the attention of policy makers. The loss of 'institutional memory' in regard to the planning process has also emerged as a significant drawback. As Gunatunga and Karunanayake point out in this volume the capacity of the divisional level administration to benefit from information technology is little realized. The data collection process is poor and the data storage and retrieval capacity is constrained by many defieiencies (Karunanayake and Abhayaratna 2004). The quality and the reliability of data has often been a cause for concern. In this volume Pilesjö and Stroh point to the possibilities that Geographic Information Systems (GIS) offer to the regional planning process. Unfortunately in Sri Lanka regional planners have failed to generalize GIS applications for regional development. On the institutional front problems has also been caused by the over-dependence of the provincial governments on central government funds. It would also appear that progressive legislation and procedures supportive of investment in the periphery have not been put in place to catalyse regional development. It is also abundantly clear that bottom-up development strategies have not been adequately supported by appropriate institutional structures (Karunanayake 2002). The failure of governance mechanisms, in particular monitoring and evaluation mechanisms that have a bearing on transparency and accountability has often been in evidence in development projects. It is, therefore, no surprise that the collusion of the new rich with local power groups and segments of the bureaucracy has often worked to the disadvantage of the poor.

It is also a truism that policies and strategies for regional development have been far too inward looking in Sri Lanka. This point can be well illustrated with reference to the IRDPs. In the IRDPs no attempt was made to tie up local micro-enterprises to urban, regional or global markets. As such the poor were left with no options but to produce for the poverty market. Furthermore, regional development policy as made explicit in the IRDPs was not so much concerned with bringing about a broad based production oriented development in the rural areas (Hewavitharane 1989). We may note in passing that when the first IRDP was introduced in 1979 the economic liberalization policy was already in place. The inward looking policies have not been capable of injecting any kind of

dynamism into the regional development process so as to make 'regions' catalyse development on their own.

We also find that creating space for private sector participation in the regional development effort has come rather belatedly. It finds explicit expression in the strategy formulation of REAP. Already, there are some initiatives in this direction as evinced by the Hambantota District Chamber of Commerce (HDCC). Some of these initiatives have been quite successful. But at the same time it is observed that in respect of meeting the more specific goal of poverty reduction the impact may not be that significant. As noted by Jerve et al. (2003):

> *HIRDEP's mandate, to improve the living conditions of the inhabitants of the District, was much wider than what a chamber of commerce can have. The contribution of HDCC to reaching such a goal can only be indirect: What is good for the private sector is good for the poor. Whether that is the case is an empirical question- it may or may not be true.*

What is of relevance is that private sector participation is, as yet, not effectively integrated with the regional development process. Effective involvement of the private sector calls for structural changes in both the public and the private sector. In the case of the public sector this necessitates taking up the role of a facilitator rather than that of implementor. In turn this calls for a change in the mindset of the state bureaucracy. A primary responsibility of the public sector would also be to create an environment – legal, procedural and institutional – facilitative of private sector participation. On the part of the private sector playing a lead role in regional development would necessitate involvement with local communities, organizations and institutions. This would necessitate new forms of capacity building within the private sector. The profit motivation needs to be tempered with a concern for social responsibility. Hitherto, these considerations have not been sufficiently taken note of by the planner and policy maker to the detriment of regional development.

Poverty has been and continues to be a persistent problem affecting the Sri Lankan population. This is more so in the rural than in urban areas. Although the government has implemented poverty focussed rural development programmes and supplemented them with the Samurdhi programme (a more generalized initiative to help the poor exit poverty) these attempts have failed to make a dent in the poverty situation of the rural poor. One reason for this may be that these programmes have been concerned with poverty reduction than promoting

economic growth among the poor. Further, the interdependency between poverty alleviation and regional development has not been given due attention by the policy maker. The lack of political commitment particularly in regard to strengthening good governance also stands out as a drawback.

Despite the fact that Sri Lanka has a mostly rural and poor population there has been no attempt to build natural disaster management in development practice. The response to natural disasters has been reactive rather than pro active. Disaster relief (often weak in implementation) has substituted for management. This has been a primary reason preventing the poor from exiting poverty as frequent natural calamities make resilience difficult in the household economies.

The civil war in Sri Lanka, waged over a twenty year period, has had a devastating impact on regional development. There is now an uneasy cessation of hostilities based on the Memorandum of Understanding (MoU) signed between the state and the Liberation Tigers of Tamil Ealam (LTTE). The adverse impacts of the war have been most felt in the North and the East, but disruptive impacts have also been felt in areas bordering the war-torn Provinces. There are also shades of opinion that attribute the war itself to iniquities in spatial development. Thus Shanmugaratnam (2002) comments:

> *Since 1983, government adopted a more explicit dual policy of pursuing the war in the Northeast and implementing its economic policy in the rest of the country. Even before 1983, two of the three lead projects initiated in 1978 by the UNP government, the Accelerated Mahaweli Development Programme (AMDP) and Export Processing Zones, did not include the NEP, and the third project, Housing and Urban Development, had only a marginal impact on the Tamil speaking areas. These three projects together accounted for an investment ratio of over 30 percent of the GDP from 1978 through 1983..... After 1983, the NEP came to be further excluded from state-sponsored development programmes, such as Integrated Rural Development Projects (IRDPs), the '200 Garment Factories', and Village Reawakening Programmes. Since, the late 1970s, IRDPs have been implemented in 16 Districts, but none of them in the NEP.*

The conflict in Sri Lanka has also resulted in a war economy that interacts with the larger economy (Shanmugaratnam 2002). In terms of regional development the war economy has also had its inevitable adverse impacts, though according to Shanmugaratnam (2002) 'international comparisons suggest that Sri Lanka has done better in dealing with the problem of entitlement failures among the

civilian population than several other countries affected by protracted civil wars'. The Assessment of Needs in Conflict Affected Areas Survey undertaken by the government with assistance from the Asian Development Bank, United Nations and the World Bank, subsequent to the signing of the MoU, estimates that the overall cost of reconstruction and rehabilitation of the North and the East is in the region of 4.9 billion US dollars. This is an indication of the magnitude of social and physical devastation caused by the war and the challenge facing regional development in the North and the East.

OVERCOMING THE IMPASSE: RESETTING THE AGENDA

A priority need in resetting Sri Lanka's regional development agenda would be to revisit the theories, concepts and ideologies on which we have based regional development in particular from a critical social theory perspective. There is a need to reconcile theoretical considerations with practice at the grassroots. It is equally important to formulate a national policy on regional development incorporating national goals and priorities on an immediate, medium and long term basis. The national policy should aim at promoting an alternative regional development based on a critique of past practices and strategies as suggested above. It should be guided by a desire to realize comparative and competitive advantages of regions as much as their individual potential. The national plan should encourage an outward looking regional development that would take advantage of the global developments while being mindful of whatever adverse consequences. Hence a related imperative would be to develop regional resilience to counter global market failures. There is a need to encourage the growth of regional identities as well as regional interdependencies. As discussed below territorial units for regional development have to be appropriately delimited. These will have to be superimposed on existing devolved units of governance, as the national regional policy should be concerned with planning units that encompass fairly large and geographically differentiated areas. A matter of utmost importance is that the national regional development policy should contribute to the process of national integration.

The delimitation of regions is another area that merits attention of the policy maker and the regional planner. These regions should have the capacity to function as 'development regions'. Gooneratne's paper appearing in this volume provides some possibilities in this direction. It is important that such regions become dynamic regions with capacity to catalyse development. A point that Gooneratne makes

in this connection is that the regions should be imbued with some imperatives that have been categorized under two broad heads viz. main drivers of the development region and key instruments of promoting regional growth. He has also identified the basic characteristics of the development region. It is a moot point whether the areas that come under the various regional ministries of development are, in fact, 'development regions' in the sense used here.

We have noted that the units of sub national governments have little capacity to formulate and implement regional development projects. At present their role is solely confined to the implementation of some of the centrally conceived infrastructure projects. This situation has to change so that the sub-national governments become principal stakeholders in the regional development effort. However, this would require the strengthening of the institutional framework for local level planning, which at present is under utilized. This, of course, is tied to the broader issue of local autonomy that falls within the domain of the politics and state power.

The importance of redefining the role of the public and the private sector in implementing regional development has been discussed in the previous section. However, what is equally important is to forge development partnerships between the two sectors. It is claimed that the "formation of such partnerships create a framework for co-operation, whilst their subsequent synergistic functioning constitutes an evolving co-operation process" (Apostolakis and Smith 2002). It is possible for such partnerships to be established on the basis of coalition building and network building (Sundin 2004). Hence, this is an area that the policy maker and the regional planner have to focus on to give a new direction to regional development in Sri Lanka. The ability to set up partnerships could also be a means of executing regional growth agreements to promote sustainable growth (Sundin 2004).

Alleviating regional poverty is a central issue pertaining to development in Sri Lanka. It is necessary that the present 'poverty focused approach' be replaced by a 'growth focussed' approach to poverty alleviation, to provide 'choices' and 'opportunities' to the poor, to raise their life skills and means of gainful employment. This would require taking 'soft' science and technology to the rural poor. There is a need to make assets creation for and by the poor a crucial objective of poverty alleviation. The recently formulated *Framework for Poverty Reduction* (2000) of the government of Sri Lanka has identified three approaches

to poverty reduction viz. (a) creating opportunities for the poor to participate in economic growth (b) strengthening the social protection system (c) empowering the poor and strengthening governance. However, what is important is to translate these approaches to political action. It is also necessary to develop suitable indicators not only to identify the poor but also those exiting poverty.

Another requirement is to build natural disaster management in executing regional development projects. This is particularly important in view of the dependence of rural people that constitute the majority in the peripheral regions, on a biomass economy. In fact natural disasters in the form of droughts, floods, tropical cyclones, landsides and wave induced destruction (that was seen in its most destructive form in the Tsunami of 26th December 2004) have been one reason for the failure to realize incremental gains in the regional, local and the household economies. Yet the consideration given to natural disaster management has been rather lackadaisical. Provision of relief has been considered as a convenient option to institutionalizing natural disaster management. Moreover, response to natural disasters has been thought of as a function of the central government. Fortunately action is underway to bring about a change in this situation but building regional capacities for natural disaster management has to be a prime task of local authorities and the regional planners. In this regard it is particularly relevant to resuscitate the coping mechanisms of the poor by mining traditional knowledge. Learning from cross-cultural experiences would be of relevance here.

In resetting the regional development agenda it is particularly important to put in place policies, strategies and mechanisms for the development of the North and the East. We have already noted the devastating impact of the war on the North and East. There are many problems that are the specific outcome of the war such as landmine infested as well as derelict lands, resettlement of incoming refugees and the internally displaced, increase in the number of female headed households, poverty and unemployment, problems associated with the high security zones, disruption of the social and the physical infrastructure of the region etc. These problems have been further compounded by the destruction, which accompanied the Tsunami that struck the coastal areas in many parts of Sri Lanka, including the North and East. The challenge to regional development offered by the North and the East is all the more, because Sri Lanka has had no previous experience of reconstructing a war ravaged area. The weakening of existing institutional structures is also in evidence in the North and the East. While the government has launched action to address issues of reconstruction, resettlement

and rehabilitation, these have to be considered as palliatives to meet the immediate situation. In the aftermath of a political solution to the conflict there has to be a well conceived plan for regional development that takes notice of the specific issues raised here. While we are not in any way neglecting the potentials brought in by peace it is important to remind ourselves of the difficulties associated with a post conflict development. If such a stage in the political and economic life of a nation is not considered properly the danger of renewed conflict is eminent.

The institution of efficient monitoring and evaluation and systems is another important aspect that has to be considered in resetting the regional development agenda. It has to be kept in mind that functioning of an effective monitoring and evaluation system is a hall mark of good governance. Until recently there had been no systematic effort to build monitoring and evaluation in development programmes and projects. This is not to deny that some projects and programmes have made good use of monitoring and evaluation as a mechanism for corrective action. Nonetheless, a general weakness had been the lack of compulsion to bring the substance of evaluation reports to public scrutiny for greater transparency. There is now a growing concern in the State sector to institutionalize monitoring and evaluation. This concern should be extended to the sub-national level and given expression in planning for regional development. A vital consideration here would be to develop suitable monitoring and evaluation indicators and also institutionalize systems of beneficiary participation in the monitoring and evaluation process.

OVERVIEW OF THE PAPERS

Nimal Dangalle writing on "Spatial disparities in Sri Lanka" observes that despite the achievements seen in social and economic development during the second half of the 20th century, the persistence of poverty and inequality between and within countries continues to be an intractable problem of development. It has made the human development impact of the entire development discourse the subject of intense debate.

The spatial disparities in development occur, as mainstream development theories suggest, due to various factors like weak human and physical resource bases, i.e., the inability of the local economies to create positive environs required by the development programmes implemented. The strategies introduced to attain development through modernisation and industrialisation have, in most cases, strengthened the core-periphery dichotomies and created clear-cut spatial

disparities in development. The lack of participation in the development process has, in turn, limited the opportunities necessary for strengthening the capabilities that would enhance the development potentials of the people in the periphery. There is the danger that the emergence of neo-liberal economic policies would further intensify disparities.

After gaining independence Sri Lanka has followed a liberal economic policy that has shown a heavy commitment to growth with welfare. The development policies and programmes implemented in Sri Lanka to date have without doubt contributed to uplift the living standards of the people. In the year 2001, Sri Lanka experienced a negative rate of economic growth and, questions are being increasingly raised about the wisdom of maintaining a higher level of social development at the expense of economic growth.

Although in comparison with most underdeveloped countries Sri Lanka has attained a higher level of social development, its extent of spatial variation is considerable. Spatial disparities in Sri Lanka have been explained primarily with reference to a core-periphery framework of analysis but an attempt has also been made to analyse disparities as occurring along a Southwest to Northeast axis/corridor. While the Colombo Metropolitan Region emerges as the relatively most developed part of the country yet there are considerable spatial disparities both within and outside the core region. The distance from the core alone does not explain the level of development of a district. In Sri Lanka whereas the Human Development Index exhibits a considerable variation by district, its social development components show little spatial variation. But the low level of economic development has overshadowed the attainment of a high level of social development at the regional level.

The lack of employment opportunities and sources of income is central to the economic problems experienced by the periphery. The narrowness of the industrial base even in the core region is a major problem. Furthermore, industries depend on imported raw materials thus curtailing opportunities for backward industrial linkages. It has also been difficult to attract entrepreneurs to the periphery given the limitations in infrastructure.

The restricted opportunities available to the population are also an outcome of personalisation and politicisation of development, which has been gaining ground in recent times. The authority and freedom of State officials have been severely

curtailed thereby negatively influencing development activities. These tendencies have also stifled people's participation in development.

According to many local level planners and administrators, development in the regions is encountering a crisis. This is made worse by conflicts between and among stakeholders. Another conflict in the making is that between Regional Development Ministries and the Provincial Councils.

Abhayaratne's paper focuses attention on the regional development implications of the Mahaweli Development Project in relation to its downstream systems. Mahaweli is Sri Lanka's largest multi-purpose development project both in terms of financial commitment and area cóverage. The Accelerated Mahaweli Project (AMP) covers approximately 40 percent of the land area of the country in its non-contiguous 'Systems'. The enclave nature of Mahaweli Systems and concentration of services within specific boundaries have exerted negative impacts on the surrounding areas thus retarding the development of productive linkages in the wider regional context. When viewed from the regional development perspective, infrastructure provision has contributed to exacerbate inequalities between the Mahaweli Systems and surrounding areas. Even within the Systems access to infrastructure facilities depends largely on the adequacy of provision of such facilities and affordability on the part of the beneficiaries. The negative effects of non-targeted groups reaping more benefits and leakages particularly because of the infiltration by outsiders are also in evidence.

The concentration of agricultural development within the confines of System boundaries too has led to negative impacts on farming in the surrounding settlements. On one hand, those who were drawn to the Mahaweli farmlands as casual labourers have shown a tendency to neglect their own agricultural work in the villages. On the other, they are unable to derive benefits from the agriculture infrastructure densification of the Mahaweli Systems. Efforts at development within Systems have fostered lop-sided agricultural growth rather than region-based integrated development. As such, the development potential of some lands for plantation forestry and eco tourism and other resources such as large reservoirs, nature and wildlife reserves and archaeological sites for recreation have been overlooked.

Similarly adequate emphasis has not been paid to non-farm employment that provides a good measure to determine the level of diversification of the regional economy. Almost all enterprises established in the Mahaweli Systems belong to

self, micro and small enterprise categories that have to do with basic consumer items and services (including repairs). Their employment generation potential is limited with little or no labour absorption capacity. Even the larger service centres have failed to attract industrial ventures that could absorb labour from the wider region to effect spatial integration.

In view of the restricted availability of funds and the socio-political changes taking place in the country many changes could be expected in the Mahaweli Systems in the future. Factors relating to the political economy (e.g. the devolution of power to the regions), which were not visualized at the inception of the Mahaweli Project, need special consideration. Fostering better farmer participation in management, reducing the number of officials in System administration, handing over of administrative activities to line agencies of the Government, progressive liberalization of the land market and the increasing involvement of local level politicians through Provincial Councils and Pradeshiya Sabhas (Divisional Councils) in regional development decision making are some changes that could shape the future of Mahaweli Systems.

The paper on "Planned Townships in the Downstream Areas of the Mahaweli Development Project in Sri Lanka: An Analysis of their Contribution to Regional Development" by Wanasinghe is a critical assessment of the performance of planned townships in the downstream areas of the Mahaweli Development Project. The downstream areas cover the irrigation systems B, C, H and G in which 83,000 farm and non-farm families have been settled.

A three – tier hierarchy of service centres with townships at its apex was introduced to the region to provide goods and services, a market for local produce and employment opportunities to settlers in order to contribute to their social and economic development. The Government planned to establish institutions in all townships to provide higher and middle order administrative, health, educational and other essential services and to facilitate the growth of trade and commerce, industries and other non – farm activities of the private sector.

The analysis of the role of townships after two decades reveals that not all townships have been able to attract services and facilities of the same quality and quantity or serve a wide hinterland. A few townships such as Tambuttegama, Bakamuna, Nochchiyagama and Dehiattakandiya were selected by the government as suitable locations to establish middle and higher order institutions

such as District and peripheral hospitals, senior secondary schools, banks and branches of Central and Local Governments offices. These townships have a greater concentration of commercial enterprises, service industries and processing industries of the private sector than others. They provide commodities required by the agricultural hinterland such as agricultural inputs, tractors, motor spare parts, expensive and durable consumer goods and markets for the collection and distribution of local produce at competitive prices. In all townships permanent shops and stalls in the periodic markets tend to attract more consumers after harvest especially during the New Year festivities in April.

Among the sixteen townships established in the region, Tambuttegama, Bakamuna and Nochchiyagama have emerged as dynamic multi-functional towns and have reached a higher level in the regional Central Place hierarchy of the North Central Province, on par with several older towns. However, since enterprises are predominantly single owner-operated units, townships have not succeeded in providing employment opportunities to absorb excess labour in rural areas.

The paper identifies the complex set of factors that have inhibited the growth of certain townships. Decisions taken at the inception of the project have had a bearing on the poor performance of some townships. Planning for townships in isolation without taking into consideration the presence of older established towns outside the region, location of townships in system H close to each other, poor site selection and the establishment of higher/middle order functions in selected townships are some of the factors responsible for the slow growth and stagnation of townships such as Galnewa and Migalewa.

It was expected that interaction between townships and rural hinterlands would benefit both rural and urban areas. There is evidence that most members of farm and non – farm households avail themselves of higher and middle order services in townships such as hospitals, banks and government offices. Further, many households purchase consumer durables from townships or larger towns outside the region, during periods of prosperity. Links with townships are stronger after harvest. However, in common with rural areas in other developing countries, in the purchase and sale of commodities, the poorer farmers remain "locked into the sphere of influence" of a single local trader or an urban-based middleman who generally bypasses small towns and sells the produce to large cities. The inability to break out from the grip of monopsonestic traders is attributed to indebtedness resulting from seasonal poverty, low income, growing income

inequities, landlessness (despite the equitable distribution of land at the inception) and unemployment. It is obvious that townships cannot prosper without an expanding demand from the rural hinterland.

The introduction of townships has had the desired impact on social development, but they have not been able to reduce the grip of local boutique keepers and middlemen or to increase the bargaining power of the poorer farmers. Wanasinghe concludes that unless emerging income inequities and other problems in rural areas are reduced and employment opportunities in the larger townships increased, it is unlikely that townships can contribute to the economic development of the Mahaweli Development Areas.

In the paper titled "Bridge over Troubled Water: A Study of Pangani District (Tanzania) and Hambantota District (Sri Lanka)" Anders Narman reflects on the need for closer analysis of development issues by researchers from the South. Research on development ought to be a collaborative effort based on various regional perspectives. The point is made that in order to combine theoretical understanding with development practice it is necessary to carry out comparative regional studies. Hence, the paper takes as a starting point two comparatively poor districts one in Sri Lanka and the other in Tanzania.

It is made clear that an analysis of local conditions in the Third World cannot ignore the influence played by global and national strategies. The World Bank has taken over an increasingly more dominant role as the ideological leader of western development. Education is given as an example on how global strategies are wielding an enormous influence in the way individual countries are formulating their national policies. Modernisation and economic growth have been leading principles in these strategies that is supposed to be guided by free market actors. Prominent researchers have been able to illustrate convincingly that we live in a world of forces building their power on structural relationships and dependency. Imperialism is as much a part of the global system today as it was in the early part of the last century. It is high time we face the truth – we are not living in a world built on harmony and there is no trickle down effects from the rich to the poor. It has been possible to find certain alternative concepts being proposed in the development debate. Individual contributions in all this has been taken up, deliberated on and finally adjusted to mainstream development thinking. Narman proposes that the original concepts coming from an alternative agenda should be taken up for a closer analysis, by researchers from the south.

In terms of economic development Tanzania has for long been ranked among the five poorest countries in the World, as measured by GNP per capita. Education was to provide a communal sentiment of co-operation needed for a majority rural population based on the ideology of African socialism enunciated by Julius Nyerere. Primary education and adult learning were the two pillars on which to establish this education. Further, due to a combined effect of high Gross Enrolment Rate (GEP) and adult education the literacy figures in Tanzania were comparatively high. Mainstreaming of education in Tanzania into a more general African situation, partly on external advice has worked to the disadvantage of the poor. This has made schooling very competitive and a matter of financial means. Even if fees are now formally abolished it is doubtful whether the commercialisation of schooling has seized.

With the Structural Adjustment Programmes there has also been a considerable increase in the secondary school enrolment rates, but this has mainly been due to the introduction of private schools. This has enabled the more affluent to gain access to the kind of education that would prepare them for the wage earning labour market or higher education.

As in Tanzania there has been a strong priority on the social sector development in Sri Lanka. A strong emphasis on regional development planning, taking different forms, has been a characteristic of the development scenario. It is obvious that Sri Lanka had a very positive position at the early stage in educational development.

One crucial dilemma within education in Sri Lanka is the extent to which it is to be correlated to the labour market. There is an ever-increasing need for higher school qualifications for a job now compared to earlier. At the national level there is a relatively low dropout rate compared to neighbouring countries. On a less positive note we can observe the high failure rate in higher-level examinations. It is further noted that distribution of resources lead to limited financial means for remote rural schools. This leads to a decrease in quality, especially in comparison to urban schools. Opportunities for dropouts from the secondary level are inadequate. If pupils were offered a qualitatively better primary schooling the efficiency at secondary level could improve substantially.

Even if indicators for Pangani on primary school enrolment is fairly high there is a decreasing trend in literacy from the middle of the 1980s up to the end of the century. As important as the enrolment is the actual attendance in school. Not

being enrolled or non-attendance can be caused by long distance, perception of the school as offering a low quality education, or a high cost.

A general lack of financial means is a basic dilemma for educational development and the ability to offer quality schooling in Pangani. School fees and contributions are supposed to alleviate some of the difficulties facing individual schools, although the reality is different. In Pangani secondary school is a matter of a substantially higher investment. The cost was far above what most people in Pangani could ever be expected to afford. In addition to limited access to secondary schools, the lack of vocational training is acute.

Schooling, in itself, is not the issue in Hambantota, but rather the kind of education enrolled for. As education is regarded as a way to improve the living standards for the poor it opens up for an increased commercialisation of schooling. One-way of doing this is private tuition at all levels, and it has created a mentality among both parents and students to devalue the school education system.

Apart from private tuition one strategy for education is to send the children to an urban school that is normally regarded to provide better teaching. It was claimed that the rich sent their children to urban schools, while the others remained in the village. Normally teaching facilities, as well as teacher qualifications are substantially better in the urban schools. It has been said that the educational authorities have very little regard for the rural schools and their needs.

If the schools were to offer more practical skills that would be a way to develop further. However, the vocational training/education sector is planned erratically, organised within different ministries. Increasing cost of education contributes to a widening gap between the poor and rich. Obviously Hambantota is an example on how demand for school qualifications is brought up, with higher enrolment at all levels.

The two case studies presented give an illustration to the marginalization that has followed on global development. It can also pose the question if this is out of default, ignorance or a lack of commitment.

In the paper by Gunatunga and Karunanayake the point is made that information and communication technologies (ICT) have been growing rapidly in developed countries over the last five decades. ICT has revolutionised the way in which people in these countries live and conduct their affairs. Moreover ICT has changed the administration, governance, education, business competitiveness and global

operations in them. The developed countries consider ICT as a much-vaunted technology for increased socio-economic development and depend on the "knowledge economy" for wealth creation. In contrast to the developed countries that have been steadily capitalising on the rapid pace of ICT, a large number of developing countries, particularly low-income countries have failed to adapt these technologies to their cultural milieu thus contributing to the "digital-divide" between the developed and developing countries. This is predominantly so in the rural areas in that modern technology has not reached local institutions. In other words, the majority of people living in rural areas have neither access nor the means to obtain modern ICT because of their low economic position. ICT can be implemented in rural institutions to improve administrative capacity, increase transparency (by making them accountable to the public) and connect villagers to the administration and socio-economic processes. However, this can be achieved only through the development of social and physical infrastructure within the government institutions and villages. The paper presents the issues, challenges and strategies in this regard with reference to the Kotmale Divisional Secretariat Division in hill country Sri Lanka.

Pilesjö and Stroh discuss the possibilities and limitations of implementing geographical information systems (GIS) in the social sciences. Geographical data are both spatial and non-spatial. While GIS can be used for data analysis and management, map making is one of its most important tasks. The success of map making is heavily dependent on how data are imported, stored, structured, edited and analysed. For successful implementation of GIS it has to be incorporated in the research process.

In implementing GIS it is necessary to ensure that the geographical data are accessible, relevant and captured with an acceptable quality. Further, the research question has to determine the nature of data and not the other way round.

The standard of the GIS software is continuously improving. More user-friendly programs are developed, that often give the user the possibility to carry out analyses that were impossible only a few years ago. Initially, the GIS software should be used in order to visualise and analyse geographical data at different levels of detail (i.e. scale). This is particularly valuable when selecting a study area and setting up research hypothesis. Within a project, the researchers then have the possibility to investigate irregularities between data on different levels. The visual and statistical analyses of e.g. education and social trends can, among

other things, reveal inequalities and possible errors connected to level of detail of quantitative data. Investigation of relationships between different variables is also identified as a useful way of using GIS in social science. Both single (e.g. between literacy and education) and multiple (e.g. between poverty and level of education, population density and employment) relationships can easily be investigated. The value of investigation of "geometrical" variables in the GIS environment is also stressed. Geometrical variables are defined as variables that can be estimated by the use of the geometrical data. Examples are distances to different objects (either Euclidian (straight) distance or distances following existing roads and/or tracks) and densities (e.g. road densities in different districts). The spatial analyses and representation demand that all geographical data be adequately stored in a GIS database.

Map making is probably the most important use of a GIS. Visual interpretation of maps can reveal interesting spatial patterns, like irregularities and clusters. In many situations, a map is more easily interpreted than a numeric table of attribute values. However, maps can be made in different ways, and even maps based on the same data can look different and give different impressions to the viewer. The choice of colours and symbols are important, but also the number of classes that are presented and how these classes have been created. Even more important than the number of classes is the spatial resolution of the dataset. Higher spatial resolution provides more detail.

Instead of a statistical analysis like regression it is sometimes desirable to make a map showing more than one attribute. It's then possible to get an immediate impression of the relation between the attributes, and then judge if further analysis is of interest. It is also often relevant to examine if certain attribute values are related in space, i.e. if there is any spatial trend in the material. Spatial trends of polygon (or point) attributes can be described as the equality between neighbouring, or closely located, objects. When this equality, or correlation, is investigated in space we name it spatial auto-correlation. The higher spatial auto-correlation we have, the better is the relationship between attribute values of closely situated objects.

A crucial part of the implementation of GIS is the staff. Even if there are specialists doing the most advanced analyses it is extremely important that staff is "part" of the new technology, and know the possibilities and limitations relating to the tool. The use of GIS can be divided into a number of steps, all demanding different

skills and training. The "basic level", involving map making, search for attribute data by pointing at map objects and visualising attribute data spatially, demands a limited amount of training and has to be known by all staff. Apart from the basic use of GIS, a number of persons with special training in advanced analysis are needed. The technically and mathematically most advanced GIS staff are the modellers and system builders.

One important part of the GIS implementation, often neglected, is the role of regulations and ethical considerations. Both copyrights and security are important parts relating to data accessibility. Often, proper data management, intranet solutions and/or high security can solve these problems. Standardisation and harmonisation are other important parts of database management. In order to be able to share data with other users there is an obvious need for standardisation. It is also important to bear in mind that individual rights and ethical considerations are important parts of the GIS analyses and presentations.

In the concluding paper Wilbert Gooneratne reflects on the need for a system of development regions in Sri Lanka. It is argued that although Sri Lanka is a small country, there are significant spatial differences in its geography, economy and society. There are also considerable differences in terms of development problems and potentials between and within regions.

Regional differences in terms of income and living standards of the population are significant and growing. The excessive growth concentration in the CMR has created a growth pattern that has relegated the rural/peripheral regions to a weak and disadvantageous position. This polarizing trend has been accentuated under the more liberal open economic policy regime and the country's integration with the global economy, creating serious social and political tensions.

Since Independence Sri Lanka has adopted a variety of policy instruments and interventions to address the issues of poverty, unemployment and poor access to basic services and facilities in the rural periphery and plantation areas. But these efforts that have been undertaken within the confines of narrow and restricted concepts, policies and institutional arrangements have failed to produce strong and resilient regional economies to address the problems of poverty and regional inequality in a sustained manner.

Hence the argument is presented that the setting up of a system of development regions is the most effective and practical way to promote regional growth. It is

further argued that a system of development regions would help deal with regional inequality and some of the emerging local, national and global challenges of development.

The paper identifies several distinguishing characteristics of development regions and their role in generating regional growth as well as the required mechanisms and institutional arrangements for such growth. Key stakeholder participation and science and technology are recognized as two of the driving forces of competitive regions while regional cities and urban networks, industrial clusters and knowledge infrastructure are identified as the key instruments of building competitive and resilient regional economies.

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SPATIAL DISPARITIES IN DEVELOPMENT IN SRI LANKA

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INTRODUCTION

During the second half of the 20th century a large number of countries in the developing world were able to increase their levels of income, life expectancies, adult literacy and the extent of participation in the global economy. This is evident in some of the indicators published by organizations such as the United Nations Development Programme (UNDP). The proportion of people living on less than $1 a day in the developing countries, a measure used to mark the poverty line, declined from 29 per cent to 24 per cent between 1990 and 1998. At the same time, between 1990-92 and 1996-98, the number of undernourished people in the developing world fell by 40 million. Some 80 per cent of the people in these countries now have access to improved water sources. Further, by 1997, more than 70 countries had a primary net enrolment above 80 percent (UNDP 2000). However, with all these achievements in social and economic development, the persistence of poverty and inequality between and within countries continue to be one of the most problematic issues in development today (Kothari and Minogue 2002; Sen 1999). Expectedly, the human development impact of the entire development discourse has been subject to intense debate.

The spatial disparities in development occur, as mainstream development theories suggest, due to various factors like weak human and physical resource bases, i.e., the inability of the local economies to create positive environments required for the implementation of development programmes. However, the notion that some of the development approaches and strategies followed so far have, in fact, contributed to an increase in the incidence of poverty and inequality can hardly be ruled out. For instance, the strategies introduced to attain development through modernisation and industrialisation have, in most cases, strengthened the core-periphery dichotomies and created clear-cut spatial disparities in development. They have resulted not only in an urban-biased development pattern but also in excessive urbanisation, rural-urban migration and impoverishment of

rural areas due to backwash effects (Myrdal 1957; Lipton, 1976; Potter et al 1998). Some have even argued that the economic development process itself has been a causative agent of poverty among the masses (Yapa 2002). It has also been pointed out that the power structures that govern many of the development programmes in the developing world have invariably resulted in the marginalization of the rural poor, not only economically but also socially and politically. Although the rhetoric of the participatory approach to development has been around for quite some time, the institutions in the periphery, in general, lack the capacity to internalise the external processes and externalise the internal processes that would ensure a sustainable participatory process (Karunanayake 2001). The lack of participation in the development process has, in turn, limited the opportunities necessary for strengthening the capabilities that would enhance the development potentials of the people in the periphery (Sen 1999). In addition, the inability of the practitioners following the modernisation ideology of development to absorb the views of the periphery into the mainstream development process has been another major contributory factor to the spatial variations in development (Nabudere 1997). At the same time, when spatial variations in development coincide with a specific ethnic pattern, attempts at development are seen as contributory factors to differences in development, thereby making the spatial disparities in development more complex (Shanmugaratnam 2001). There is also a looming danger that with the emergence of neo-liberal economic philosophies that have total faith in a perfect market mechanism these existing disparities would further be intensified. Already, the process of globalisation, in combination with the structural adjustment programmes, has produced enough evidence for the difficulties experienced by the less advantaged segments of the population in the poor countries (UNDP 1999).

THE CASE OF SRI LANKA

The development experience of Sri Lanka since independence provides an example for the plight of the development discourse described above, i.e., the experimentation with different theories of development for more than half a century with only a limited amount of success, especially in regard to alleviation of poverty and income inequality. After gaining independence in 1948, embracing the then hegemonic mainstream development paradigm, Sri Lanka pursued a liberal economic policy with a heavy commitment to growth with welfare. J.R. Jayewaradene, the Minister of Finance of the first Parliament of independent Ceylon, presenting his budget remarked: *'we are spending ...about 40 percent of our total expenditure on social welfare services. Free Lanka may justly and proudly call itself a social service state.'* Due to the favourable market

conditions for her exports, mainly rubber, Sri Lanka was in a position to adopt such a policy, but a decade later the deteriorating balance of payments situation and the continuing disparities in the levels of living among the people forced her to change into another development strategy. Thus in the early 1960s, encouraged by the development thinking espoused by the dependency school, Sri Lanka began to adopt protective economic measures characterised by stringent quantitative import restrictions and foreign exchange licensing. Thus by the mid-1970s the country was transformed into '*one of the most inward-oriented and regulated outside the group of centrally-planned economies.*' (Atukorala 1997). However, the people became extremely dissatisfied with the protective economic strategies that resulted in deteriorating social service provision, rising unemployment, low incomes, extreme shortages of essential goods, widespread rationing of food items and, above all the lack of vitality in the whole economy. Their disbelief was translated into action by a massive mandate given to the United National Party at the General Election of 1977 and the new regime, turning a full circle, re-introduced the liberal economic policies. The opening up of the economy, as it was called, included trade liberalisation, encouragement of foreign investment, relaxation of foreign exchange controls, opening of the banking sector to foreign banks and invitation extended to the private sector to play a leading role in the economy. The changes in the development strategy received widespread acceptance from the people and the new policy continued to be dominating even though there was a change in Government in 1994. In the early 1990s, the 'second wave of liberalization', as it was called, marked the advent of neo-liberal economic policies spearheaded by structural adjustment programmes, privatisation of public enterprises, and accelerated integration of the economy into the globalisation process.

The development policies and programmes implemented in Sri Lanka up till now have no doubt, contributed to the uplift of the living standards of the people. In recent times Sri Lanka has been placed at a higher point in the continuum of social development – measured by various indices such as the Physical Quality of Life Index and Human Development Index. It was also identified as an outlier in the development continuum (World Bank 2000). Moreover, with the change of economic policies in the late 1970s that resulted in an increased rate of growth in GDP, expectations were so high that Sri Lanka was on her way to become the first South Asian country to attain Newly Industrialized Economy (NIE) status (USAID 1991). Unfortunately, for various reasons, those expectations could not be transformed into reality and instead, the country was dragged off the development track. As the above-mentioned World Bank publication pointed out Sri Lanka has missed many opportunities and there is a growing realization that its development has been well below its potential. In the year 2001, Sri

Lanka experienced a negative rate of economic growth and, questions are being increasingly raised about the wisdom of maintaining a higher level of social development at the expense of economic growth. However, in analysing the weak performance of the Sri Lanka economy it must not be forgotten that the country has been ravaged by a continuing civil war for a considerable length of time.

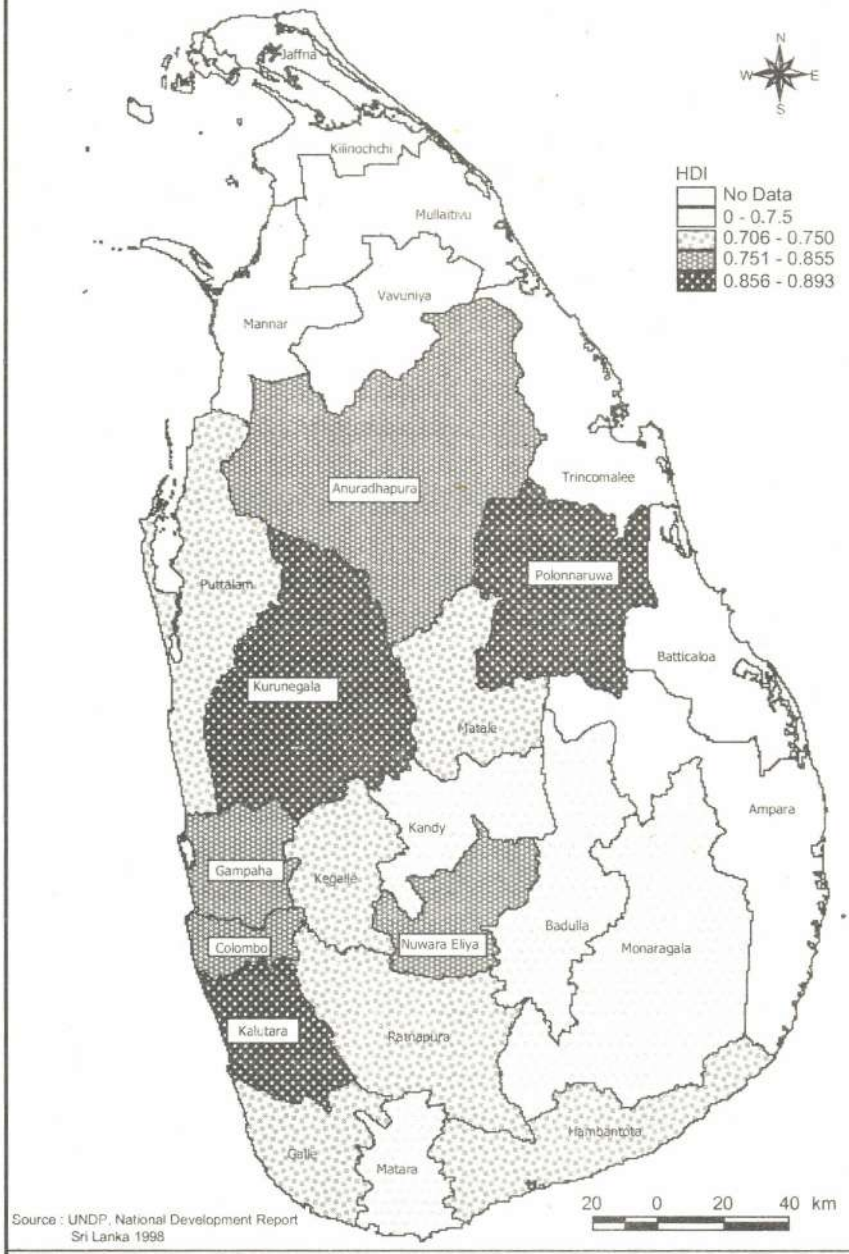
The achievements that have been realized in economic and social development become meaningful only if they have reached the people in every part of the country irrespective of their economic and social status and geographical location. In the case of Sri Lanka, various measures have been adopted with a view to improving the levels of living of the people with particular attention to their spatial distribution (Dangalle 2002). It is pertinent, therefore, to examine the development record of Sri Lanka from a spatial perspective. Such studies would not only reveal the spatial patterns of development, but also shed light on the effectiveness, efficiency and, in some instances, negative effects of development policies and programmes implemented by the state.[1] They will also pave way to identify the regions that lag behind and understand the mechanisms at work at regional level that affect the development process. Also, spatial disparities in development will remind the planners that blanket programmes will not yield expected results and due attention should be paid to the varying economic, social and cultural factors and resource potentials of different regions.

DEVELOPMENT DISPARITIES IN SRI LANKA

Although in comparison to most underdeveloped countries, Sri Lanka has attained a higher level of social development, its extent of spatial variation is considerable.[2] As a UNDP study on human development in Sri Lanka reported, '*the regional pattern of human development in Sri Lanka exhibits substantial variation*' (UNDP 1998). Figure 2.1 shows the spatial distribution of human development index in Sri Lanka in 1994 for the 17 districts for which data were available. The non-availability of data for 8 districts where about 15 percent of the total population of the country live, itself is indicative of the spatial disparities in development opportunities. The people in those districts, due to the prolonged civil war, have lost their basic human right to be counted in the national development exercise irrespective of their ethnicity. On the other hand, even between the 17 districts shown in Figure 2.1 the achievements vary considerably. The highest HDI was recorded for Kalutara district (0.893) in the Western Province and the Central Province district Kandy faired worst with an index of 0.649. As the Report stated, '*this is a substantial difference, suggesting that levels*

Fig 2.1

Human Development Index by District



Source : UNDP, National Development Report
Sri Lanka 1998

GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

of human development between these two regions vary considerably'. There were seven districts with HDIs above the national average of 0.753; the average of the index for those seven districts was 0.857. The remaining 10 districts had an average of 0.719 and the difference in the averages of high performing and low performing districts was 0.14. *'This is a large gap in human development and confirms the presence of major regional disparities within the country'*.

In the development literature on Sri Lanka a few studies could be found attempting to identify and analyse the spatial disparities in development. Moore, for example, using the core-periphery framework of analysis showed that development in Sri Lanka has been limited to a few districts in the Western Province (Moore 1984). He divided Sri Lanka into five development regions on the basis of their location in relation to Colombo, the capital city, and the variability of their agro-ecological potentials. He identified the Southwest coastal area of the Wet Zone as the ***Core*** of the country that included the districts of Colombo, Kalutara, Galle and Matara (present Gampaha district was then part of Colombo district). The Core was surrounded by an ***Inner Periphery***, which comprised the districts of Kegalle, Kandy and Nuwara Eliya, all located in the Central hills of the Wet Zone. The ***Outer Periphery***, the third region, consisted of the districts of Puttalam, Kurunegala, Matale, Badulla, Moneragala and Ratnapura. The Dry Zone districts of Mannar, Vavuniya, Kilinochchi, Mullaitivu, Anuradhapura, Polonnaruwa, Trincomalee, Ampara, Batticaloa and Hambantota belonged to the ***Extreme Periphery***. Owing to its cultural identity ***Jaffna*** district was identified as the fifth region (Fig. 2.2).

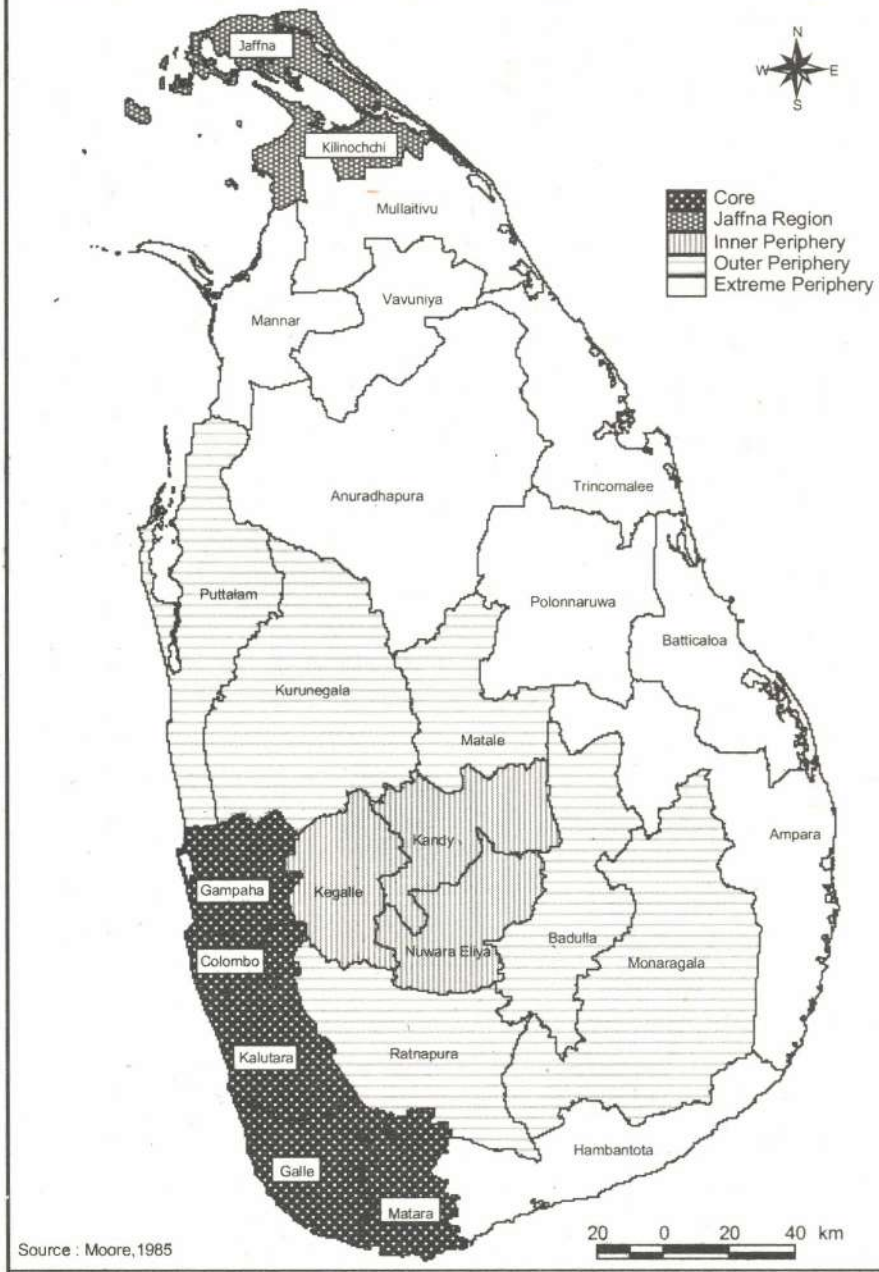
O'Hare and Barrett, using a wide range of economic and social development data for 23 districts in the island carried out a statistical analysis to find a different pattern of spatial variation in development in Sri Lanka (O'Hare and Barrett 1996). Unlike Moore, they were of the view that development in Sri Lanka has occurred along an axis/corridor extending from the Southwest to Northeast.

> *[T]here is evidence of a swathe of districts with high development running from the south-west of the island (Colombo, Gampaha, Kalutara, Galle and Matara) through the central highlands (Kegalle, Nuwara Eliya and Kandy) to the north and east (Polonnaruwa and Trincomalee)' and 'on either side of the development axis there are districts with significantly lower development levels (Badulla, Anuradhapura, Kurunegala, Batticaloa)* (Fig 2.3).

However, there are two exceptions to this general pattern: first, a lower scoring district (Matale) lies in the central segment of the axis and a relatively high scoring

Fig 2.2

Core and the Periphery (According to Moore)



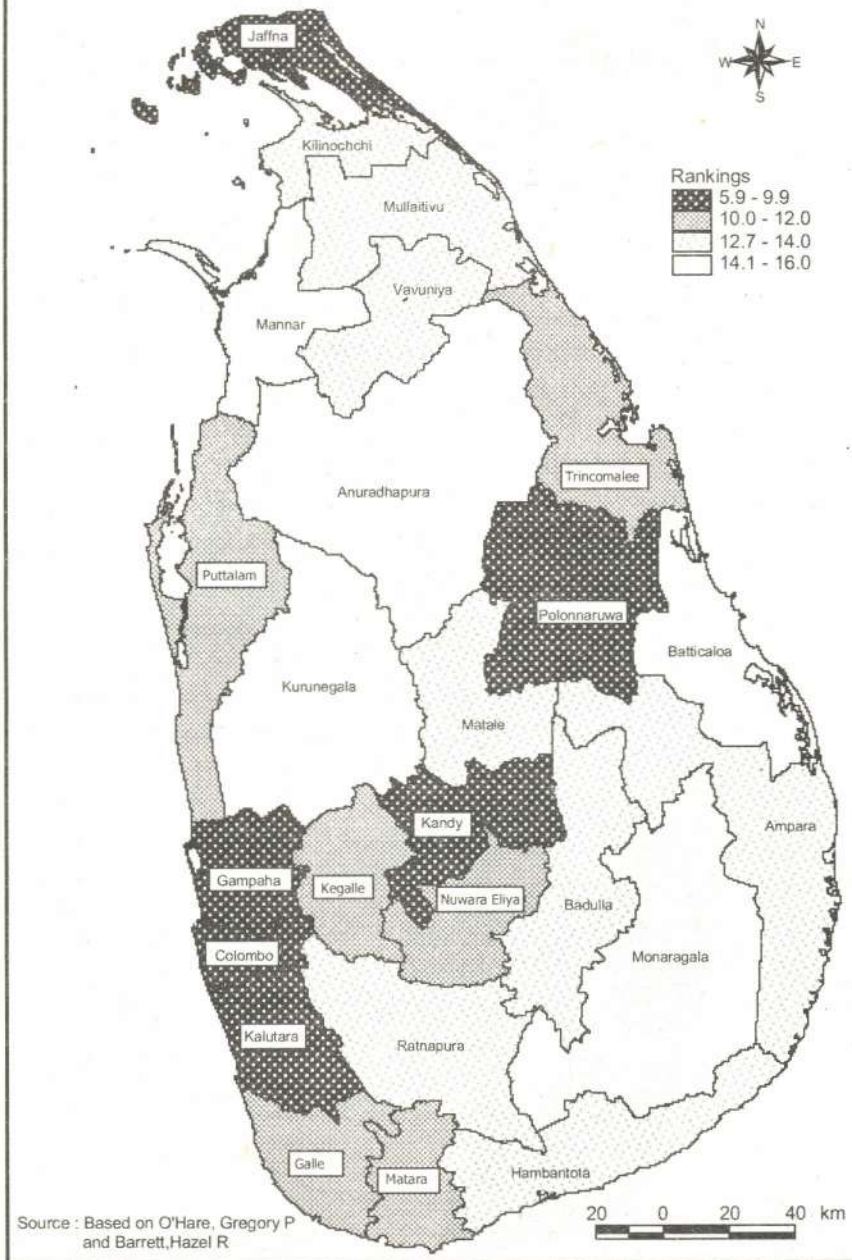
Source : Moore, 1985

GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

Fig 2.3

Spatial Patterns of Development

(Aggregate Rankings of Individual Economic and Social Development Scores)



Source : Based on O'Hare, Gregory P and Barrett,Hazel R

GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

district (Puttalam) is outside the axis. Second, the high scoring Jaffna district lies far away from the development corridor. The core-periphery dichotomy in development in Sri Lanka has been analysed further by Wanasinghe in a recent paper (Wanasinghe 2001). The other studies of importance in analysing the regional disparities in development in Sri Lanka include Samarasinghe (1984), Wijedasa (1992), Sumanasekera (1981) and Karunanayake (2001).

The UNDP study on human development mentioned above excluded the Northern and Eastern districts due to the unavailability of data. However, Moore, and O'Hare and Barrett have identified Jaffna and Trincomalee as relatively developed districts. Unfortunately, the continuing war in these districts and other Northern and Eastern districts has completely ruined their economic and social development bases. The closed economy - a result of the war- has kept the people in these districts away from the rest of the country which was beginning to experience the fruits of an open economy.

However, caution must be observed in the interpretation of spatial variations in development revealed by different studies. A comparison of the results of those studies bears evidence (Table 2.1). As Table 2.1 shows different studies reveal different spatial patterns of development. All three indicators used by the studies mentioned above suggest that the districts of Colombo, Gampaha and Kalutara, identified as the Colombo Metropolitan Region (CMR), belong to the relatively developed part of the country. They are all situated in the *Core* (Moore) and rank high in terms of HDI (UNDP). According to O'Hare and Barrett, they have scored high in terms of both economic and social development. As far as HDI and O'Hare's rankings are concerned the district of Polonnaruwa, too, is a fairly developed district but according to Moore located in the extreme periphery of the country. The suggestion is that the distance from the core alone does not explain the level of development of a district (O'Hare and Barrett 1996). The district of Jaffna is another example. Although it is located far away from the metropolitan core of the country, it has a fairly high level of social and economic development. On the other hand, Matara, a district located in the Moore's *Core*, ranks low in terms of HDI and social and economic development. Meanwhile, a large number of districts, namely, Ampara, Badulla, Batticaloa, Hambantota, Kegalle Mannar, Matale, Moneragala, Puttalam, and Vavuniya, rank low in HDI and perform poorly in social and economic development. Also, they all lie in the periphery. However, there are another 7 districts that do not show any such pattern. As can be seen from Table 2.1 these districts rank high in terms of human development, but economically they are underdeveloped.

TABLE 2.1

Sri Lanka: A comparison of the indicators showing spatial variation in development in Sri Lanka

District	HDI Rankings[a]	Rankings by O'Hare and Barrett[b]	Moore's Classification[c]
Kalutara	1	5	C
Kurunegala	2	23	OP
Polonnaruwa	3	6	EP
Anuradhapura	4	19	EP
Gampaha	5	2	C
Colombo	6	1	C
Nuwara Eliya	7	10	IP
Ratnapura	8	18	OP
Hambantota	9	16	EP
Kegalle	10	11	IP
Galle	11	8	C
Matale	12	15	OP
Puttalam	13	12	OP
Badulla	14	13	OP
Matara	15	9	C
Moneragala	16	22	OP
Kandy	17	3	IP
Jaffna	na	4	EP
Vavuniya	na	14	EP
Mannar	na	20	EP
Batticaloa	na	21	EP
Ampara	na	17	EP
Trincomalee	na	7	EP

a Sri Lanka National Human Development Report 1998

b O'Hare and Barrett 1996, Table 2.2

c Moore, (1985), C= Core, IP = Inner Periphery, OP = Outer Periphery, EP = Extreme Periphery

na data not available

For example, the Kurunegala district that lies in the extreme periphery ranks number 2 in terms of HDI, but dropped to the last position (number 23) on the O'Hare and Barrett ranking. Anuradhapura, located in the extreme periphery, is another district that ranks high in HDI but scores less on the O'Hare and Barrett ranking. The same could be said of the districts of Moneragala, Ratnapura and Hambantota.

In Sri Lanka, although the HDI as a composite index exhibits a considerable variation by districts, its social development components show little spatial variation. A major component of HDI, which shows the level of social development, is the opportunity to live a long and healthy life, measured in terms of life expectancy. As the National Human Development Report (1998) states,

> *[o]n this dimension of human development, all districts in Sri Lanka perform relatively well. ...the regional variations in life expectancy between districts are comparatively small with all districts clustering in the range 70 –82 years. The district with the lowest life expectancy, 70 years, is Nuwara Eliya. This is higher than the world average, 63 years and the average for all developing countries, 61 years*

Figure 2.4 shows how the life expectancy index has deviated in different districts from the national mean. A majority of districts are clustered around the mean and there is little dispersion ranging from +0.91 to –1.09.

The relatively high longevity and life expectancies found in almost all districts have been attributed to many factors. The availability of universal access to free public health care through an extensive network of government hospitals, health facilities and health services, the existence of a parallel private health sector which has contributed to easing the congestion and resource constraints in the public health sector, high levels of educational attainment of the people and the extensive

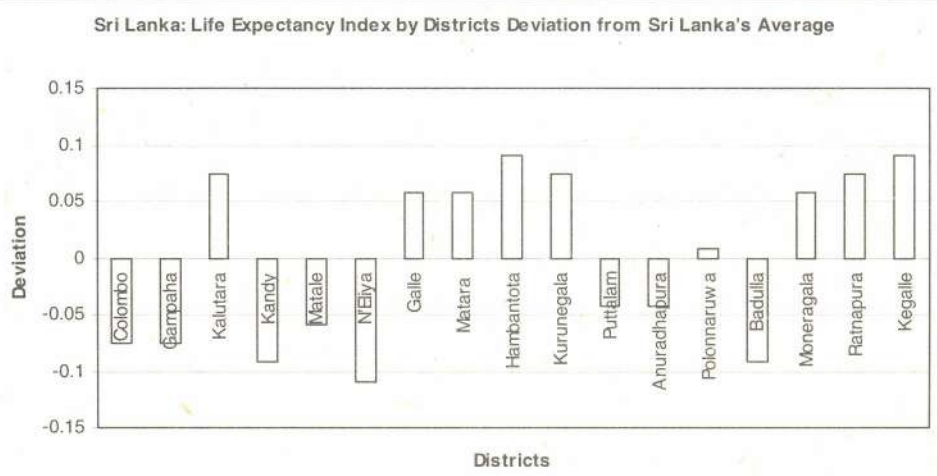


Fig. 2.4. Sri Lanka: District deviation of the Life Expectancy Index from the National Value, 1994 Source: UNDP (United Nations Development Programme) (1998) *Sri Lanka: National Human Development Report,* UNDP, Colombo.

poverty alleviation and social welfare programmes implemented throughout the country have been identified as the major contributory factors to the situation described above.

The second component of HDI that shows the level of social development is the access to the world of knowledge and information. As the National Human Development Report states, '*nearly all districts provide widespread access to knowledge and information* (UNDP 1998). An examination of the spatial distribution pattern of Sri Lanka's Education Index which measures the country's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment, shows that in the 17 districts for which data were available there was very little variation. In 1994, the education index for Sri Lanka was 0.670 and only one district, Nuwara Eliya (0.669), fell below the national average (even there the index was almost the country's average). However, this does not show the complete picture. It must be remembered that data were not available for 8 districts, and of them, a certain number of districts should have had index values below the national average for the simple reason that almost all districts for which data were available were above the average.

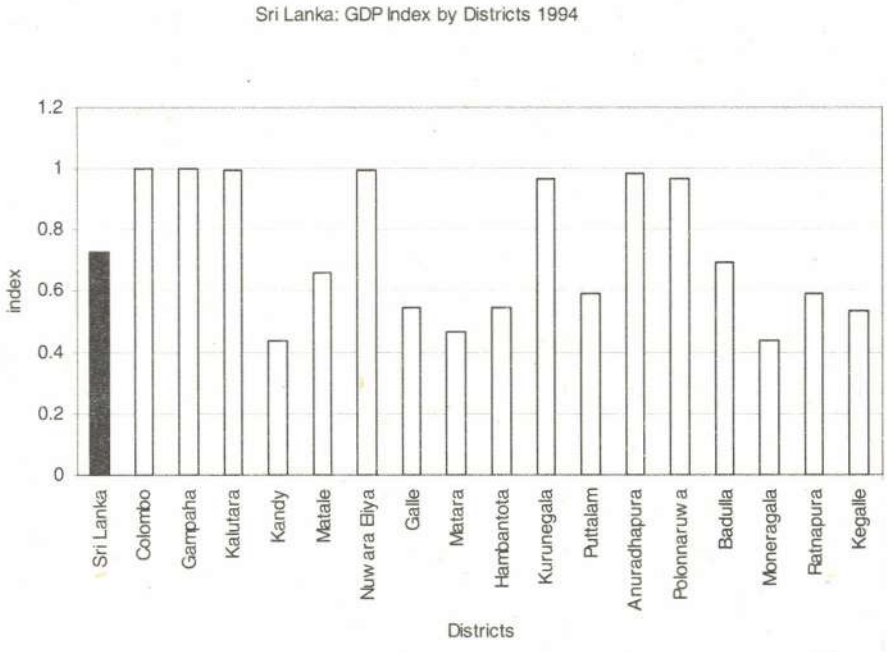


Fig. 2.5. Sri Lanka: Per Capita Gross Domestic Product Index by Districts, 1994 Source: UNDP (United Nations Development Programme) (1998) *Sri Lanka: National Human Development Report,* UNDP, Colombo.

However, in the case of economic indicators, as shown by per capita GDP values, wide spatial variations do exist (UNDP 1998). Figure 2.5 shows the distribution of per capita GDP index for 17 districts in Sri Lanka. The index for Sri Lanka was .730 and there were seven districts with indices above the national average. Three of them, Gampaha, Colombo and Kalutara, were in the *Core* of the country where a high concentration of industrial, business, administrative and service activities can be found. Of the remaining four, one, Nuwara Eliya is a rich agricultural district where the best plantations are located. The other two, Anuradhapura and Polonnaruwa, are major paddy producing areas of the country and have been producing a rice surplus for a considerable period of time (Dangalle 1982).

The poorest districts in the country, in terms of GDP are Moneragala, Kandy, Matara, Kegalle and Hambantota. The low level of economic growth in these districts has been attributed mainly to their peripheral location, i.e., the geographical distance from the economic centre, poor infrastructure and the absence of major development projects.

As is evident, therefore, the low levels of economic development have overshadowed the attainment of a relatively high level of social development at regional level. According to the National Human Development Report (UNDP 1998), the main reason for the spatial variation in HDI in Sri Lanka has been the regional disparities in income. As it states,

> *the regional disparities in per capita GDP are substantially greater than the disparities in life expectancy, literacy and education enrolment. ... The three districts that possess the lowest HDI values, Kandy, Moneragala and Matara, also have the lowest incomes. Anuradhapura and Polonnaruwa, in contrast, possess high HDI rankings chiefly because they also have relatively high income levels.*

Thus it could be argued that in Sri Lanka various programmes aimed at social development have been successful in strengthening the capabilities among people but without the opportunity to exercise those capabilities. As a Marga study (1974) pointed out,

> *the fundamental weakness in the social programme of the fifties and early sixties was that it attempted to solve the problems of poverty through redistributive measures and neglected the structural changes and economic changes that would have raised the output, productivity, and the income earning capacity of the traditional sectors where the problems of poverty were most acute.*

LAGGING ECONOMIC GROWTH

The low levels of economic growth in the districts have been a major contributory factor to low levels of income. As revealed by the Household Income and Expenditure Survey 1995/96 conducted by the Department of Census and Statistics of Sri Lanka, in a large number of districts outside the core, the level of household income was very low. For example, in Badulla district 50 per cent of the total households received less than Rs. 2,430 a month. Compared with the monthly income of a household in Colombo district, a household in Badulla district received only one-third of the monthly income of its Colombo counterpart. The households in the districts of Moneragala, Hambantota, Matale and Ratnapura also received very low incomes and their incomes as a percentage of that of the households in Colombo district were only 38, 39, 40 and 42 respectively. Although the households in the Core districts received a relatively higher income it too varied considerably by district. For example, a household in Kalutara district received only 61 per cent of the income earned by a household in Colombo district (Table 2.2).

The lack of opportunities available for people to earn an income is evident in the pattern of income distribution in the districts irrespective of their core-periphery status. Even in the district of Colombo, of the total income only 15 per cent was received by the poorest 40 per cent of the households. The inequality in the distribution of income is also indicated in the high Gini coefficient for the district (0.43). The limitations in economic growth and opportunities have resulted in high incidence of poverty among people (Fig.2.6).

The economic problems experienced by the peripheral districts and, in consequence, the meagre opportunities available to the people, perhaps, are best expressed in a report prepared by the Hambantota Integrated Development Project (HIRDEP). In its Annual Programme of Activities for 1991, HIRDEP (after twelve years in operation) identified an array of problems experienced by the district. The extensive poverty leading to low levels of savings and low purchasing power (in 1989, nearly 72 per cent of the families were food stamp recipients), high levels of unemployment and underemployment, especially among the youth (the unemployment rate is around 20 per cent), very low proportion of employment in manufacturing and industry (below 11 per cent in 1983), lack of easily accessible major markets (urban population is below 10 per cent), absence of towns larger than 8000-12000 people, lack of resources of comparative advantage, poor transport infrastructure (no railways; no ports)

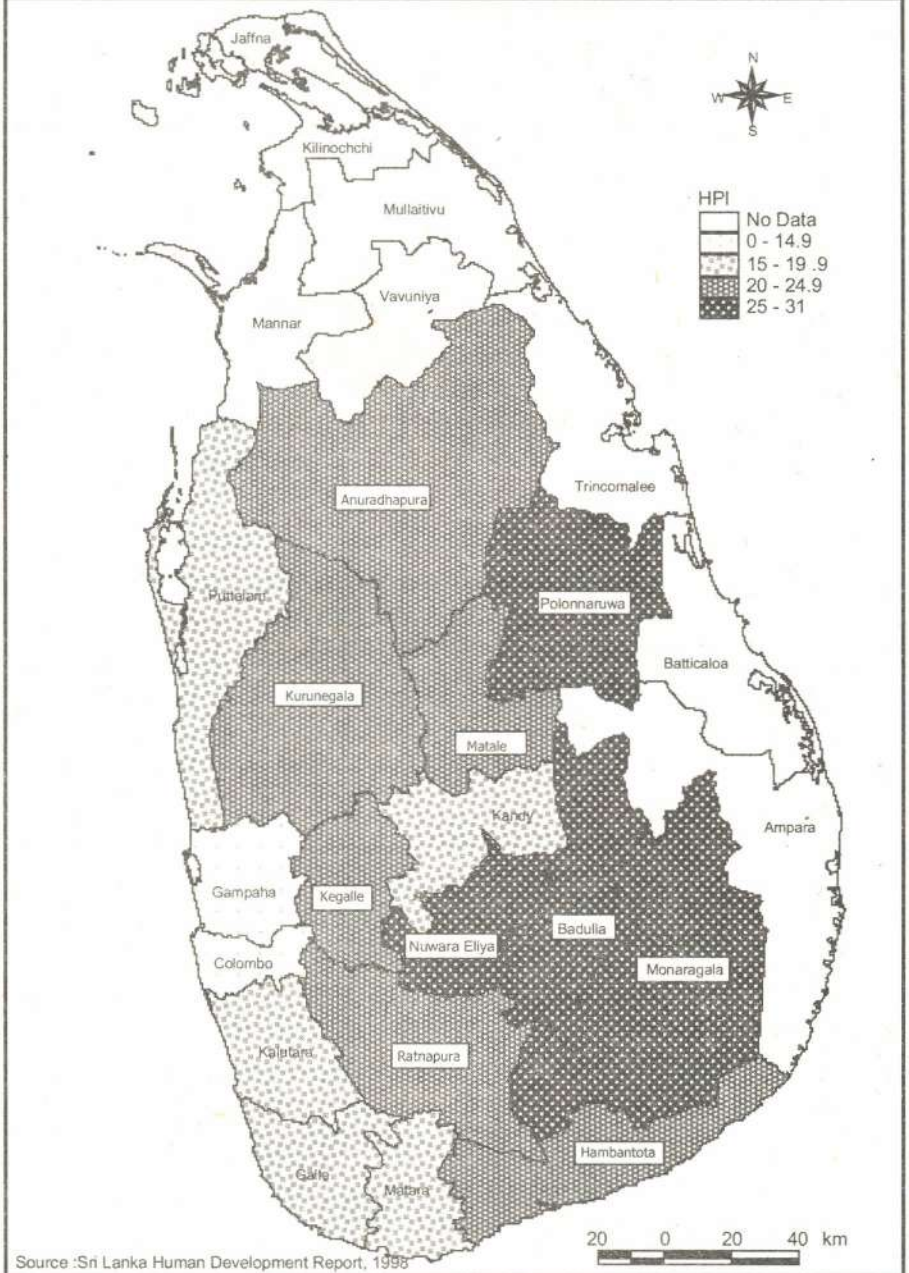
TABLE 2.2
Sri Lanka: Distribution of Income by Districts

Province and District	Average Monthly Income (Rs)		Median Monthly Income (Rs)	Percentage of income received by poorest 40% of households to total income	Gini coefficient for household income
	Per household	Per person			
Sri Lanka	**6,476**	**1,442**	**3,793**	**15.2**	**0.46**
Western Province	**9,229**	**1,961**	**5,354**	**15.0**	**0.43**
Colombo	11,107	2,279	6,674	14.9	0.43
Gampaha	8,538	1,872	5,340	16.7	0.40
Kalutara	6,785	1,461	4,018	16.2	0.45
Central Province	**5,344**	**1,130**	**3,521**	**17.4**	**0.41**
Kandy	5,900	1,219	3,423	15.2	0.44
Matale	4,550	988	2,973	17.8	0.42
Nuwara Eliya	4,946	1,067	3,861	22.9	0.32
Southern Province	**5,540**	**1,126**	**3,548**	**16.9**	**0.41**
Galle	5,976	1,229	3,811	16.8	0.40
Matara	5,795	1,145	3,957	17.2	0.37
Hambantota	4,397	911	2,770	16.8	0.41
Northwestern Province	**5,311**	**1,223**	**3,548**	**18.0**	**0.38**
Kurunegala	5,143	1,189	3,396	17.6	0.38
Puttalam	5,718	1,304	4,251	20.5	0.39
North Central Province	**5,976**	**1,309**	**3,533**	**16.2**	**0.45**
Anuradhapura	6,083	1,362	3,453	15.5	0.48
Polonnaruwa	5,744	1,203	3,854	17.3	0.39
Uva Province	**3,888**	**828**	**2,620**	**16.9**	**0.38**
Badulla	3,702	815	2,430	15.9	0.39
Moneragala	4,231	849	2,813	18.9	0.38
Sabaragamuwa Province	**4,858**	**1,033**	**3,060**	**16.5**	**0.43**
Ratnapura	4,684	991	2,767	16.0	0.47
Kegalle	5,051	1,079	3,404	17.3	0.38

Source: Government of Sri Lanka, Department of Census and Statistics, Household Income and Expenditure Survey 1995/96 (2000) Table 2.2.

Fig 2.6

Human Poverty Index by District - 1994



Source :Sri Lanka Human Development Report, 1998

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were among the major problems experienced by the district (HIRDEP 1990). The failure of HIRDEP to create opportunities for people was brought to notice once again at the introduction of the next regional development programme in 2001viz. the Rural Economic Advancement Programme (REAP). The insufficient income generation and employment creation, failure to improve the family level income, inadequate involvement of the private sector in development activities, inability to create external linkages for development beyond subsistence level, highly localized micro-level projects, and the absence of rural-urban linkages have been identified as the major shortcomings of the HIRDEP.

The lack of employment opportunities and sources of income are central to most of the economic problems experienced by the people in the periphery. Especially, the absence of industries, a sector to which most of the new entrants to the labour force who move away from agriculture would like to enter, is a major problem encountered by the peripheral districts. Non-existence of a diversified economy has exacerbated the situation, as many of the new entrants are reluctant to accept farming as a means of employment. Not only the youth but also the parents generally do not like their children becoming farmers. On the other hand, plagued with numerous problems like the small size of land holdings, shortage of land, increasing cost of farming, the agricultural sector is also not in a position to absorb the new entrants to the labour force. In such a situation industries can be an important source of employment and income but as the regional distribution pattern of industries in Sri Lanka shows it fails to provide that opportunity. As Table 2.3 shows a majority of industries in Sri Lanka are concentrated in the districts of Colombo, Kalutara and Gampaha, known as the Colombo Metropolitan Region (CMR). In 2001, for example, 80 per cent of all industrial enterprises in the country were located within the CMR. Although Sri Lanka is a small country and any place could be reached within a day's travel time from Colombo (the commercial hub), entrepreneurs still tend to locate their industries in Colombo or neighbouring districts. Studies conducted in some of the peripheral districts also show that the industrial base of the peripheral districts is very weak and narrow. In a study entitled Industrial Development and Small Towns in the Regional Economy, Chandrasiri et. al.(1993) state that in the Province of Sabaragamuwa,

> *'the secondary and tertiary level economic activities within the province remain at a low level of development and less integrated with the primary sector'.* They also point out that *'most of the mineral resources are not yet exploited for industrial use and the agricultural and mineral products appear to move away from the district with little or no processing'.*

TABLE 2.3
Sri Lanka: Regional Distribution of Industrial Enterprises

District	Number of Enterprises 1999	% of Total	Number of Enterprises 2000	% of Total	Number of Enterprises 2001	% of Total
Colombo	**1,965**	**56.3**	**2,014**	**55.6**	**2,023**	**55.8**
Gampaha	**704**	**20.2**	**744**	**20.5**	**716**	**19.7**
Kalutara	**153**	**4.4**	**157**	**4.3**	**163**	**4.5**
Galle	89	2.6	92	2.5	91	2.5
Puttalam	123	3.5	131	3.6	127	3.5
Kandy	97	2.8	102	2.8	104	2.9
Kurunegala	66	1.9	71	1.9	73	2.0
Matara	44	1.3	46	1.3	48	1.3
Hambantota	34	1.0	36	1.0	41	1.1
Nuwara Eliya	43	1.2	45	1.3	45	1.2
Ratnapura	34	1.0	37	1.0	38	1.0
Anuradhapura	25	0.7	27	0.7	28	0.8
Badulla	28	0.8	29	0.8	30	0.8
Kegalle	24	0.7	28	0.8	26	0.7
Matale	18	0.5	18	0.5	21	0.6
Moneragala	11	0.3	12	0.3	13	0.4
Polonnaruwa	8	0.2	9	0.2	11	0.3
Ampara	10	0.3	11	0.3	12	0.4
Trincomalee	4	0.1	4	0.1	5	0.1
Batticaloa	4	0.1	4	0.1	4	0.1
Vavuniya	2	0.05	2	0.05	2	0.05
Jaffna	3	0.08	3	0.08	4	0.1
Mannar	-	-	-	-	-	-
All Districts	3,489	100.0	3,622	100.0	3,625	100.0

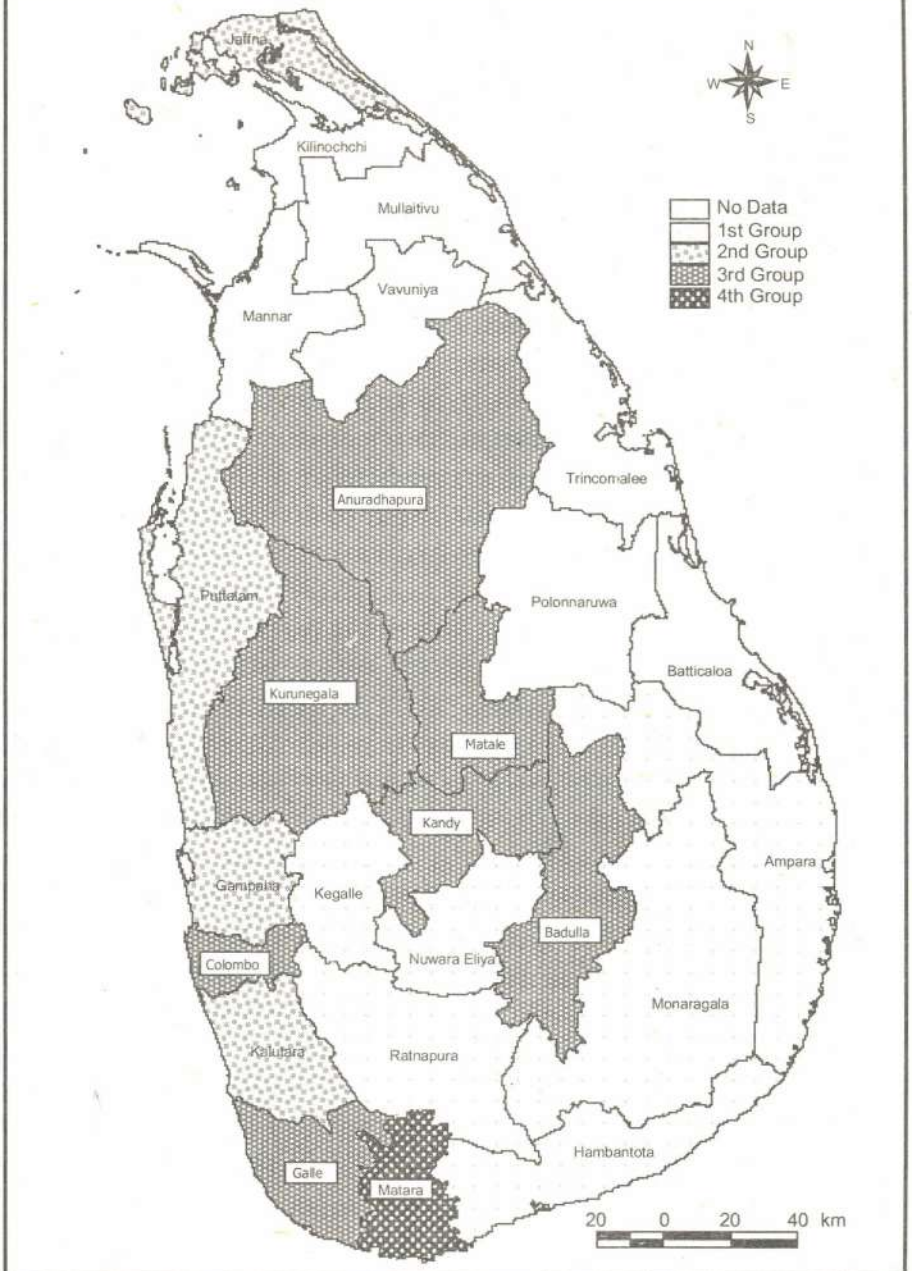
Source: Central Bank of Sri Lanka, Annual Report 2001

The narrowness of the industrial base, even in the core region, has been a major problem faced by the regional development planners. Using Weaver's Combination Index, an attempt was made by the author to identify the industrial structure in Sri Lanka by district in terms of the employment opportunities provided by each industrial category (in Sri Lanka, eight major industrial categories have been identified). The number of people employed in each category was used with a view to assessing the strength of specific industrial categories. Figure 2.7, based on the above-mentioned statistical analysis clearly shows that the industrial base of the districts in Sri Lanka is limited only to two or three industrial categories. The narrowness of the industrial base, limits the potential for forward and backward industrial linkages, which in turn is resulting in limited employment

Fig 2.7

Composition of Industrial Base in the Districts- 2001

(in terms of Persons Employed)



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opportunities. At the same time, in most cases, the industrial base has been dominated by a single industrial category- Textiles, Apparel and Leather Goods. It is important to note that these industries depend, to a very large extent, on imported raw materials thereby curtailing the opportunities available for backward industrial linkages that create employment opportunities.

Although programmes aimed at regional development has been in operation for more than five decades, drawing the attention of entrepreneurs to the peripheral districts is still a major problem. A recent meeting in Hambantota between the Ministers representing the district and a Norwegian delegation bear evidence to this situation. According to a newspaper report covering the meeting, the then Deputy Minister for Health, Welfare and Nutrition, while appreciating the support extended by the Norway Government, **stressed the importance of having industries that would provide greater opportunities to the educated youth**. He was also quoted as saying 'we have a large number of educated unemployed youth in our district. We need opportunities of employment for these youth and **if you could get the investors to arrive here and commence industries other than the garment industry, that would be of assistance to educated youth**'. The Deputy Minister also said that, the former President Ranasinghe Premadasa, was responsible for the 200 garment factory programme, but **due to unavoidable reasons and circumstances the private sector running the garment factories were finding it difficult to run with profit**. In fact, three of the garment factories in the district are on the verge of being closed down (ANCL 2002). The severity of the unemployment problem could be best comprehended by an analysis of the local situation. Figure 2.8 depicts the extent of unemployment in one of the District Secretarial Divisions in the Hambantota district – Okewela. It shows that in some of the Grama Niladhari Divisions almost 60 per cent of the total labour force is unemployed. But, will the international entrepreneurs invest in these peripheral districts? In fact, the objectives of the investors might result in a further intensification of industries in the core region. The primary objective of the international entrepreneurs is to earn a profit for their investment within the shortest possible time and, in order to achieve that they would prefer the areas with better infrastructure facilities to peripheral areas in locating their industries. In general, the growing international investment in developing countries has, in fact, resulted in reinforcing the position of large primate cities (Forbes and Thrift 1987).

The difficulties faced in capturing the attention of both local and overseas entrepreneurs, to invest in the periphery, would have debilitating effects on the

much-appraised Rural Economic Advancement Programme (REAP). The REAP strategy 'is basically concerned with a shift away ***from*** the welfare and infrastructure based development programmes of the IRDPs ***to*** programmes supportive of economic growth and employment generation. This is to be achieved by mobilising local potentials '***through enhanced private sector participation***' (Karunanayake and Abhayaratne 2002; emphasis added). In the context of changing economic strategies that admit the realities of the globalised world economy, REAP is a welcome change in the regional development thinking in Sri Lanka. However, in order to achieve success from the exercise a number of measures has to be adopted. The compilation of an accurate and complete database on physical and human resources available in the districts, a revolutionary change in the attitudes, efficiency, dedication and transparency in the public sector that would be conducive to private sector participation, the provision of a range of incentives to the private sector, creation of an efficient and effective information network not only of marketing, but also of production, producers, consumers and technology etc., strengthening of the banking service network, creation of a broad-based and diversified private sector, and more importantly, strengthening the current safety-nets that take care of the most vulnerable groups of people, are some of the areas that need attention of the policy-makers involved in rural and regional economic advancement programmes.

The non-availability or limitation of opportunities for a large number of people could be attributed to another factor, which has been gaining significance in the recent past: personalisation and extreme politicisation of development. The limited number of opportunities, through the creation of an intense competition among the contenders, may have in the first place acted as a contributory factor to the personalisation of development. In an in-depth field study carried out in the year 2000 in the remote villages of Hambantota district under a Regional Development Project it was revealed how development has been personalised to its extreme extent. In almost every village surveyed, the names of one or two politicians emerged frequently as the providers of employment, Samurdhi, electricity, water, roads, housing loans to name a few.[3] At the same time, personalisation of development has adversely affected the status and the roles played by officials who are in charge of development activities. Many respondents were of the view that the administrative authority and freedom of state officials in the implementation of development programmes have been severely limited by the importance placed on politicians. Yolanda Foster (2002), writing on a development activity in the North Central Province, has also commented on the plight of state officials.

According to Foster,

> *[A]s a result of the deep politicisation of the bureaucracy, some writers have noted that public servants have become more passive in reacting to what they are told to do rather than proactive in performing their managerial functions.*

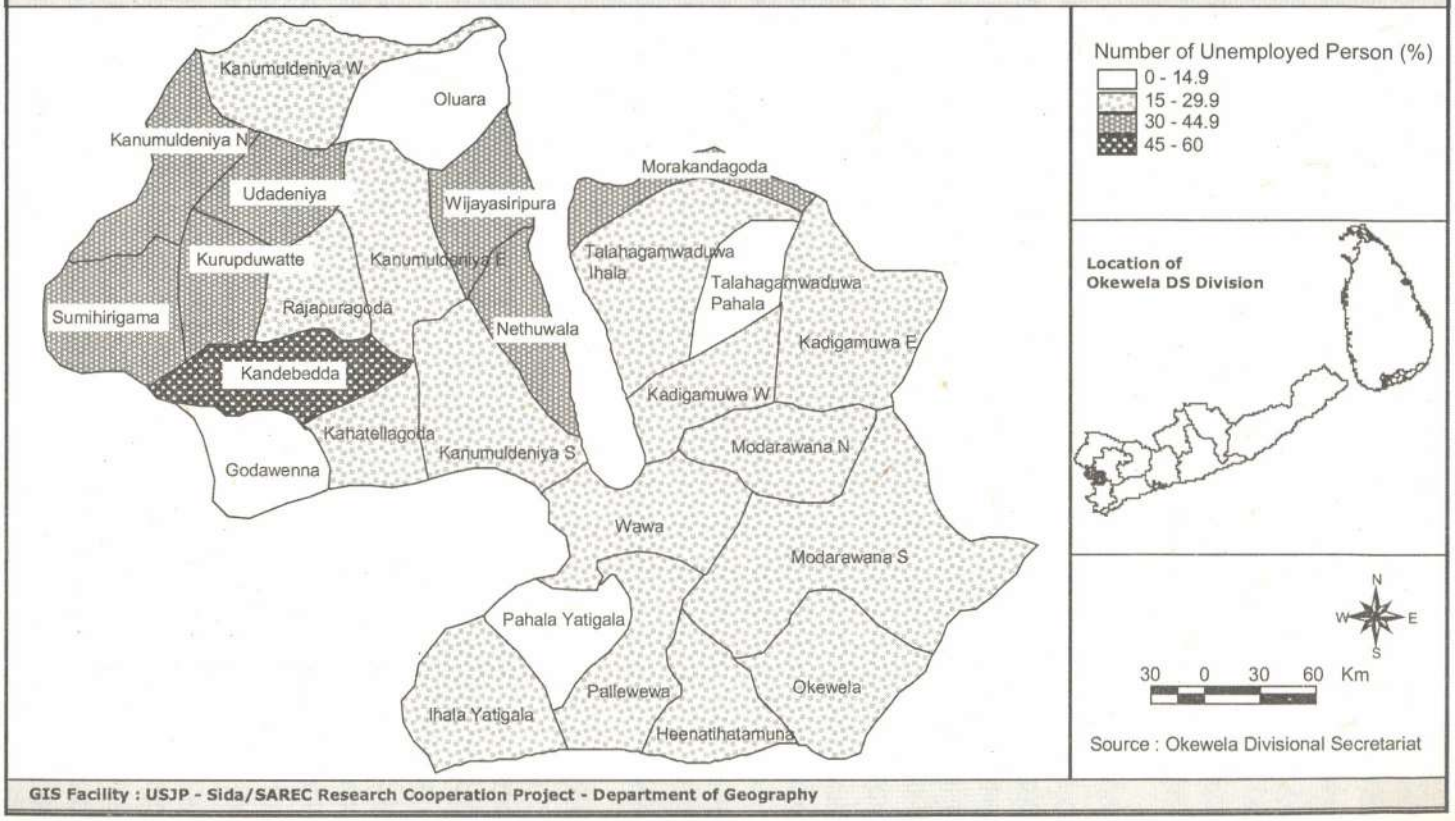
Ranugge (2000) has expressed similar sentiments. The studies carried out at the local level reveal how extreme politicisation has made it difficult to involve people in the development process. Although the planning machinery at the local (divisional) level has made available the framework necessary to incorporate the views of the people living in villages in plans and projects, in reality, it is not the people who come up with suggestions. It is the groups of political henchmen who set the development priorities for the area. So it is the views of local politicians and their supporters that emerge as needs and suggestions. Therefore, the bottom-up approach does not work although suggestions do come up from the village level.

Extreme politicisation creates a climate in which the poor find it difficult to utilize their capabilities. Such environments curtail the freedom of the poor to participate in the development process. Thus, as Stern (2000) says, current income level is not enough to determine a person's level of living but it is much more important to know '*whether, or to what extent, he or she has the capabilities and the environment for action and success. To put it another way ... do people enjoy opportunity, empowerment and security?* The above-mentioned HIRDEP report, too, had identified a number of institutional, political and social problems that exert an adverse effect on the economic and social development of the district. It complains that the national plans and programmes have been imposed upon them with very little participation from the people. The Hambantota experience is just one example highlighting the problems faced by the districts in the periphery.

According to many local level planners and administrators development in the regions has encountered a crisis. They are becoming increasingly aware of their helplessness in making decisions pertaining to their areas. According to them, even if they make attempts to incorporate the views of the people in their regions in development plans they will be lost in the implementation process. Instead, a different set of plans will be imposed on the regions and, in most cases they are not the most appropriate. As a result, there is a costly mismatch between what is required and what has actually been implemented. In a recent discussion the

Fig 2.8

Okewela Divisional Secretariat Division : Unemployed Persons as per cent of Total Labour Force by Gramaniladhari Division - 1996



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author had with these local level planners and administrators it was revealed that in one *Grama Niladhari* Division, eleven community halls have been constructed where only one community hall would have served the purpose easily. When people realize that their regional administrators are helpless and controlled by the politicians the officials become humiliated and frustrated. According to the local level planners, people are in a better position than them to express their dissatisfaction and disapproval, but being highly unorganised their voices do not emerge sufficiently to draw the attention of the policy makers.[4]

Another factor that adversely affects development is stakeholder conflicts. Not only are there differences in regard to priorities between the politicians and plan implementers, but also among plan implementers themselves, especially between those who are at the district centre and the officials in the divisions. Another conflict in the making could be observed between the newly established Regional Development Ministries and the Provincial Councils, especially the councils controlled by the Opposition. When the Vote on the Ministry of Southern Development was discussed at a Parliamentary Debate on the Budget it was argued by the members of the Opposition that the Government has established the Regional Development Ministries with a view to undermining the Provincial Councils. It was also pointed out that " what the Ministry is supposed to do is already being done by the Provincial Councils, the *pradeshiya sabhas*, the Agriculture Department and the Coconut Development Authority' (Divaina).

CONCLUSIONS

It is true that every government in Sri Lanka since independence has contributed to the enhancement of the capabilities of the people and, as a result, the country has attained a relatively high level of social development. At the same time, however, a question could be raised with regard to the utility value of those capabilities. Have such capabilities been accompanied by programmes that have increased the level of employability and adaptability of the people to enter the modern technological world? As is evident, the lack of economic growth has made it very difficult for people to exercise their acquired capabilities. At the same time, one might question the nature of those acquired capabilities and their immediate economic value in a country like Sri Lanka. Moreover, the utility value of these capabilities has been considerably reduced by an array of forces operating at the regional level. It is through these forces, which may be termed as 'intermediate variables' that the capabilities should 'travel' in order to utilize the available opportunities. Theoretically, the intermediate variables would act

positively or negatively. In the case of Sri Lanka, however, as was evident, these variables have often acted to deprive the people of their rights to enjoy the available opportunities. As discussed, these negative variables include, apart from the lack of economic opportunities, a host of socio-political factors such as the personalisation and politicisation of development, breakdown of the normal administrative procedures in the face of increasing pressure of politicisation, conflicts between the district centres and divisions resulting in the wastage of scarce resources, and lack of real expression of views of the people in planning, among others.

It should also be noted that the improvement in social development levels has taken place basically due to the government intervention programmes pursued under the policy of welfare and growth. However, once the government withdraws its social welfare interventions in order to be in line with structural adjustment polices recommended by the international development aid agencies, it would be extremely difficult to maintain the achieved levels of social development. Under such circumstances, especially the people in the periphery, whose level of vulnerability is already at high levels, would find it difficult to adjust themselves to the new situations and challenges.

Notes

[1] Shanmugaratnam (2001) is of the view that development itself has created a gulf between different ethnic groups.

[2] According to the Human Development Report 2001, Sri Lanka, with an HDI of 0.735, belonged to the medium human development group. The country's value was much higher than the average for medium human development, which was 0.684. The index for the developing countries as a whole was 0.647 and South Asia's score was 0.564.

[3] In 2000, an in-depth field survey was carried out in the villages of Muththettuhengoda, Heenhelawatte, Wattegoda, Yahangala West, Galwewa, Medaketiya, Rekawa, and Wigamuwa under a Project on Regional Development jointly implemented by the University of Kelaniya and Goteborg University, Sweden. In the survey, special emphasis was placed on the actors in development and their roles.

[4] These views, were expressed by local level planners and administrators at a meeting held in Hambantota in November 2002.

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REGIONAL DEVELOPMENT IMPLICATIONS OF THE ACCELERATED MAHAWELI DEVELOPMENT PROJECT

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INTRODUCTION

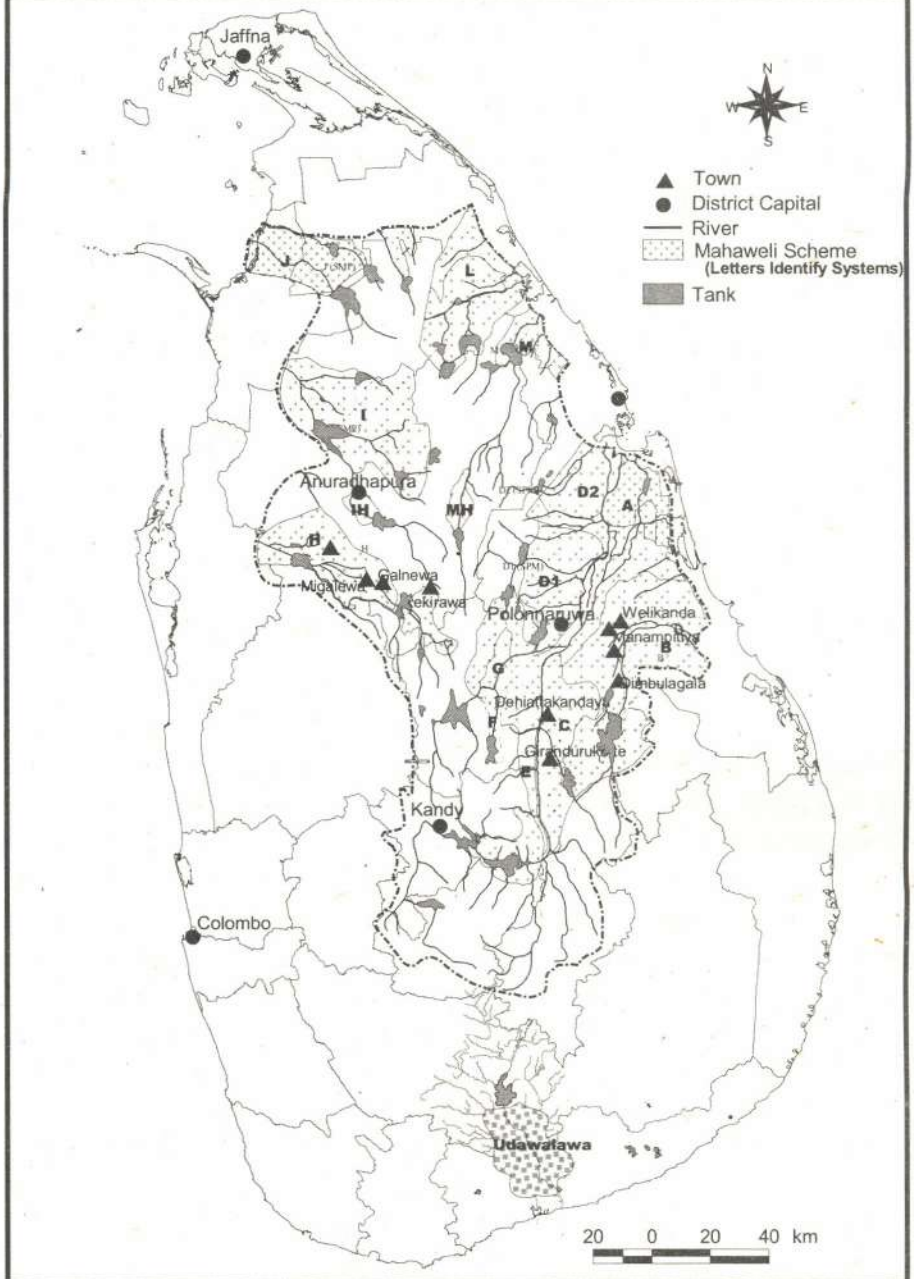
The Mahaweli Development Project is unique among the multi-purpose major irrigation schemes in the country. It opened up vast stretches of hitherto undeveloped land in the dry zone of Sri Lanka through trans-basin diversion of Mahaweli waters at Polgolla, Bowatanna and Minipe, while simultaneously improving the existing irrigation facilities. The Project also incorporated already commissioned irrigation and settlement schemes within its jurisdiction. Further, it established a number of upstream reservoirs to store water during the rainy season for the purpose of supplying the downstream areas during the dry season. The upstream reservoirs served both storage and hydro electricity generation functions while the downstream reservoirs were mainly for the supply of irrigation facilities. The Project also caused evacuation and resettlement of people on an unprecedented scale. Another unique feature of the Project was the establishment of many 'Systems' (development areas) in the overall programme (Fig. 3.1).

Mahaweli Development Project is the largest ever project attempted in Sri Lanka both in terms of financial commitment and the area covered. The Government of Sri Lanka (GOSL) conceived the project with a number of politico-economic considerations in view. There were vast stretches in the dry zone of Sri Lanka, which remained undeveloped yet with a considerable potential for development. Local land resources could easily be harnessed with planned water resource development for enhanced agricultural production. Further, Mahaweli waters could effectively be utilized to generate hydro electricity.

A noteworthy change in the original Master Plan for the Mahaweli Development took place in 1977 when the then newly appointed Government took a decision to accelerate the project. This meant that the Project, which was due for completion in 30 years, was to be completed within a much shortened six year period. Among the factors that contributed to this decision was the objective of making the country self-sufficient in rice requirements within a short period,

Fig 3.1

Mahaweli Development Project Area



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enhancing the generation of hydro electricity to cater to the ever-increasing demand and to meet the challenge of unemployment particularly among the youth.

The Accelerated Mahaweli Project (AMP) launched in 1978 combined the development of headworks planned for Phase II and III in the original Master Plan. Hence a number of projects (Maduru Oya, Victoriya, Kotmale, Randenigala and Rantambe) were undertaken simultaneously with bilateral and multilateral aid. The massive financial outlay for the Project was obtained through donor assistance. For instance, the Swedish Government funded the Kotmale Project while the Victoria project was funded by the U.K. Canadian Government was instrumental in financing Maduru Oya while the Federal Republic of Germany funded the Randenigala and Rantambe projects. Many other countries (e.g. U.S., Netherlands, Japan) contributed to feasibility studies. As noted by Wickramaratne, (1995) and Panabokke, (2000) construction, which is a mechanical process, could be accelerated according to schedule, but human settlement and agriculture could hardly meet the set targets.

Many studies have been done on the Mahaweli project from the time the 'Project idea' was conceived. Further, two seminars "Mahaweli After ten Years" (1986) and "A Quarter Century of Mahaweli: Retrospect and Prospect" (1998) were held by the Sri Lanka Association for the Advancement of Science (SLAAS) and the National Academy of Sciences respectively where a large number of papers were presented. Many aspects of the Project particularly those relating to settlement, agriculture, power generation, irrigation and farmer organizations had been studied in detail and documented. However, the implications of the AMP on regional development have not received much attention of the researchers. Hence, the objective of this paper is to fill this lacuna by focusing on the regional development implications of the Mahaweli Project. It examines the regional development implications of the AMP with reference to settlement expansion, introduction of service centres and townships, establishment of new physical infrastructure, agricultural development, social-infrastructure expansion and non-farm employment.

ATTEMPTS AT DEVELOPMENT OF REGIONS IN SRI LANKA

Uneven development of the country, specially the disparity between the core and the periphery has been a key issue, which attracted the attention of many researchers (Gooneratne 2000, 2001; Karunanayake 2001; Wanasinghe 2002) and planners in Sri Lanka. The response of the authorities to mitigate the ill

effects of regional inequalities manifested itself in numerous area development programmes launched particularly in the dry zone of Sri Lanka where undeveloped lands were available for settlement and expansion of irrigation facilities and agriculture. Among the noteworthy attempts at area development were river basin development schemes initiated with Gal Oya in1949 followed by Udawalawe in the 1960s; Anuradhapura Dry Zone Area Development Project (ADZAP) 1981-85, District Integrated Rural Development Programme (DIRDP) introduced in 1979; Accelerated Mahaweli Project (1978); Export Processing Zones (Katunayake 1978, Biyagama 1982, Koggala 1991); Urban Development Sector Project (UDSP) under which the Urban Development Authority provided infrastructure facilities to 17 small and medium sized towns; Rural Economic Advancement Programme (REAP); Participatory Rural Development Project in the Anuradhapura District and North Central Province Rural Development Project. Of the above AMP, Export Processing Zones and Urban Development were among the "Lead Projects" of the GOSL since late 1970s. Of the Lead Projects AMP was outstanding and it absorbed 30 percent of National Capital Development Funds (Wickramaratne 1995). The Lead Projects in particular were looked upon to contribute widely to poverty alleviation and employment generation. Although all the area development efforts indicated above led in particular to the development of physical infrastructure and social welfare of the people in selected 'areas', they cannot be ranked as systematic attempts at planned regional development. However, in contrast to the other projects the AMP covered a wider area and involved large numbers as beneficiaries.

MAHAWELI DEVELOPMENT IN RETROSPECT

It may be noted that no mention has been made of regional development under the objectives of the AMP. Nor was it planned and conceived as a regional development exercise. Nevertheless, as the AMP covers approximately 40 percent of the land area of the country under its non-contiguous Systems, its regional development implications are many.

It envisaged a vast settlement programme in hitherto 'undeveloped' areas of the dry zone of Sri Lanka with accompanied infrastructure development. Introduction of a hierarchy of service centers and townships has been a characteristic feature of the settlement programme. These centres not only cater to the settler demand for services but also link each system with the neighbouring areas and the major markets of the respective regions.

Another noteworthy contribution of the AMP to regional development has been the provision of irrigation facilities to new areas as well as improvement of irrigation in the existing farmlands through the newly introduced irrigation network. The Project also undertook expansion of other physical infrastructure such as roads, electricity supply networks and communication facilities with a view to promoting economic growth of the respective areas, which came under its purview. A wide range of social infrastructure too had been provided with the ultimate objective of catering to settler welfare needs and upgrading their quality of life.

The theories expounded by Myrdal during 1950s and later by others such as Romer (1986) Lucas (1988) and Krugman (1991) are of relevance here. These theories attempted to explain regional inequalities with reference to core-periphery polarization and 'backwash effects'. The response to this thinking manifested itself in large-scale investment in specific sectors of the respective economies or in selected geographical areas. The basic argument is that the benefits will spread and help promote growth of the other areas as well, through 'trickle down effects'. The approach adopted in Mahaweli development is clearly 'top down' with no involvement of the people in decision-making.

Numerous strategies were adopted in different countries to reduce regional inequalities. For instance, the centre dominant economies, both in the developed and the developing world, have pursued Growth Pole Policies to counter polarization and encourage industrial growth in the periphery (Wanasinghe 2002). Multiplier effects of propulsive or leading industries through which development in the periphery was to be achieved did not materialize as expected particularly in the developing countries. Stohr and Todtling (quoted by Wanasinghe 2002) have shown that multiplier effects have been 'upward and outward rather than downward and inward'. Empirical evidence from Mahaweli Systems points to a similar situation where a large proportion of agricultural production (85-87 percent of paddy and 90-96 percent of OFCs) move out of the region and farmer income from the production gains is highly skewed. Similarly the resource flows associated with the prevailing outward movement of agricultural commodities and inward flow of inputs are related to a dominant pattern of external leakage.

Despite the fact that there has been a strong bureaucratic control from the centre, no attempt was made to introduce Growth Poles to the Mahaweli Systems. It is also evident that the cumulative causation theories as advocated by Hirschman (1958), Romer (1986), Krugman (1991) among others, do not adequately explain the Mahaweli situation. According to Guild (1998) these theories stipulate that

'initial high returns to investment attract still more investment and regional advantages are reinforced by returns to scale and agglomeration economies'. Theoretical explanations postulate that infrastructure investment promotes regional development through 'positive externalities of transport and communication networks' thereby increasing returns to scale. Due to scale and diversity of opportunity social agglomeration economies in turn create further income and better access to health and education services (Guild 1998).

Although donor assistance has led to massive investment on physical infrastructure development by way of irrigation networks and roads together with social infrastructure such as education and health, in terms of economic development the Mahaweli Systems still remain restricted to agriculture. Scudder (1981) has shown that successful settlement projects should '*combine agricultural development with creation of commercial centres and townships with a strong service and manufacturing component*'. When land settlement is implemented primarily as agricultural production schemes they are prevented from '*realizing their potential simply because the non-farm is ignored*'. Despite the formation of the Employment, Investment and Enterprise Development (EIED) Division of the Mahaweli Economic Agency (MEA) and other service specific arrangements such as the Mahaweli Agricultural and Rural Development (MARD) Project the right environment and opportunities have not been created in the Mahaweli Systems to make a dent in employment generation. Therefore, attraction of private capital to promote integrated regional development is lagging behind. For instance, even the MASL interventions for many years in allocating land and providing other incentives for an industrial estate in Tambuttegama has not yielded results.

Despite the effort made by the Mahaweli Authority of Sri Lanka (MASL) to plan the infrastructure development in the component Systems, the overall regional framework and inter-system linkages have not been given due emphasis. It is evident that the services provided by the MASL has not extended to the neighbouring areas that together with the Mahaweli System form the constituent parts of the same administrative region. Similarly, the significance of the inter System linkages in the overall development scenario has been neglected. The comparative and competitive advantages of the respective Systems merit attention here. For instance, compared to System H, which is utilized to capacity, System C possesses vast undeveloped areas. Both Systems B and C are characterized by a vast potential for the development of eco-tourism, which is not found in many other Systems.

It should be noted that intra System linkages too have not been properly harnessed with a view to achieving overall development goals. This is exemplified by the uneven development within the Systems. For instance, the old colonies of Kagama-Katiyawa absorbed by System H of the Mahaweli lag behind the new settlements that are developed according to a hierarchical pattern. The situation has led to opportunities being lost and a reduction in the potential of regions. As Gooneratne (2000) has pointed out there is a growing tendency for many Mahaweli settlement areas to slowly turn into "*lagging sub-regions*". Most of these are older settlements absorbed into the Mahaweli Project.

ADMINISTRATIVE STRUCTURE OF THE MAHAWELI PROJECT

Management of the AMP is characterized by a highly centralized bureaucratic administrative system that was initially introduced under the Mahaweli Development Board (MDB). With the launching of the AMP, MASL was created with wide powers by Act of Parliament No. 23 of 1979. Different aspects of the Project were to be managed under the three agencies constituting the MASL viz., Central Engineering Consultancy Bureau (CECB), MDB and Mahaweli Economic Agency (MEA). CECB was responsible for the headworks while the MDB, later reconstituted as the Mahaweli Engineering and Construction Agency (MECA), was responsible for downstream development. MEA had under its wing land settlement and economic and community development (Wickremaratne 1995). Apparently regional development was not included in the agenda of activities of any institution that came under the MASL.

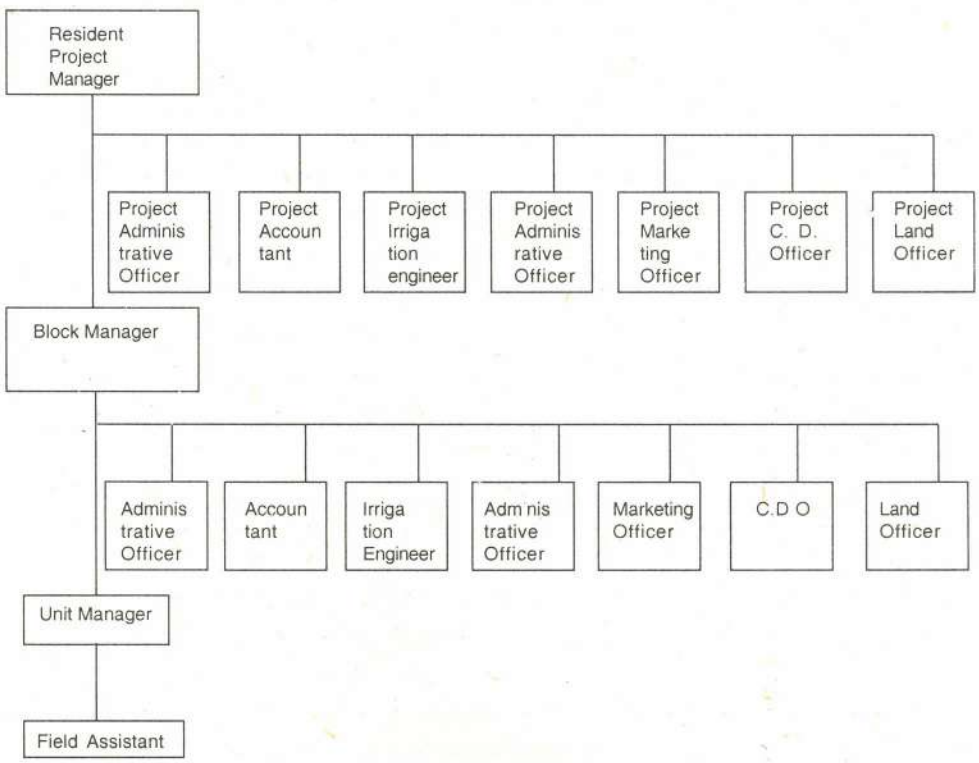
The MASL functioned under a four-member Director Board comprising the Director General (DG), two Secretaries of the Ministries of Finance and Mahaweli Development and the Executive Director. The Board functioned under the 'general and special directions' of the Mahaweli Minister while the DG had direct access to the President of the Democratic Republic of Sri Lanka. The MASL exerted a highly central control over all aspects of the Project with its large network of officials offering varied services to the settler community. However, lack of concern for beneficiary participation is clear from the following observation made by the then Secretary to the Ministry of Lands,

> *When the AMP was formulated, the emphasis was on setting up a centralized management structure, which would enable the initial phase of settlement and the physical development of downstream areas to be effected as soon as possible. It is noteworthy that in the detailed Project reports for System C (HUNTINGS) and System B (ACRES) as well as in the NEDECO Report, there was no articulated "vision" of the need for people's participation in social organizations or even in a narrower sense in the management of the community and economic services (Wickremaratne 1995)*

The different Systems of the Project also witnessed a highly bureaucratic administration where a Resident Project Manager (RPM) and his staff worked according to the instructions from the MASL that came under the Mahaweli Ministry. The existing administrative structure evolved through a process of experimentation. More responsibilities were given to the RPM to expedite administrative procedures as the necessity arose and attempts were made to follow a multi-disciplinary approach to development (Karunatilleke 1982). Under the Mahaweli Act the RPM wielded the powers of a Government Agent within the area of his administrative responsibility. Hence, the system was quite different from the general administrative structure of the neighbouring areas where line departments were active under the coordination of a Divisional Secretary accountable to the central Government. The administrative hierarchy below the RPM level also differed from the system of general administration in the country. Figure 3.2 shows the administrative structure within a Mahaweli System.

Fig: 3.2

Organization Chart for Mahaweli Systems



Both the RPM and the Block Manager (BM) were assisted by specialists from different disciplines such as land, irrigation, agriculture, marketing, community development and public relations at System and Block levels respectively. At the lowest level of the hierarchy of officials was the Unit Manager (UM) who carried out his duties with two field assistants, one for agricultural extension and the other for water management. The UM was expected to perform as a generalist who had to oversee all activities of the settler families in his unit. Further, UM was made the ex-officio President of the Unit-based Community Development Society (CDS) (that was expected to assist the settler community in agriculture and community development).

This situation was looked upon with much concern by independent observers at the time it was introduced. As Scudder states quoting one of his previous (1983) reports,

> *While the MASL is committed to increasing settler participation in theory, ...we view with alarm the decision to appoint the unit manager as the president of what are supposed to be participatory settler organizations (Scudder, 1995)*

However, subsequently CDS proved to be a failure. Among the reasons attributed to this failure were, the inability to provide services to the settlers, reluctance of the UM to share his authority and decision-making powers with settlers, non-encouraging attitude on the part of the UM towards farmer initiatives in irrigation and agriculture on the assumption that such initiatives would '*reflect badly on his own image with the superiors*' (Perera, 1995:187). As Weerawardena (1988) has noted '*The settlers never considered CDSs as their own organizations but just as another official institution of the Mahaweli Authority*'. Therefore it is pertinent to note that the CDSs never performed a developmental role either economically or socially.

On the whole, the management system has been highly 'paternalistic' and 'top-down' from the inception of the Project. There is a justification for such a system at the initial stages of settlement when people experienced the trauma of separation from the accustomed environment. As Scudder notes (1995)

> *Resettlement whether compulsory or voluntary, is stressful during initial years when settlers, even if they must move only a short distance, must adapt to new neighbours, new production techniques and crops and an increased government presence.*

Hence, at the initial stage they should be assisted in all their requirements such as land, water, housing and other services. Past experience of the Mahaweli Project points to the fact that the same system of rigid bureaucratic control continued throughout developing a dependency syndrome on the part of the settlers. In the circumstance, as noted by Gooneratne (2000) '*the bureaucracy and professionals have played the leading role while the farmers, the main actors played a passive and secondary role*'. Further, the management system has been more regulatory rather than facilitative and promotional, thus retarding the development of a self-reliant farming community. Further, the "*command economy approach*" adopted by the MASL has contributed to inhibit efficient functioning of private enterprise rather than promoting it (Silva and Dias 2000). The net outcome was the reduced private sector participation.

Settlement Expansion

The magnitude of the settlement programme associated with the AMP has been unprecedented in the history of colonization in Sri Lanka. The settlement programme in the Mahaweli started in 1975 in System H under phase I of the Mahaweli Master Plan was accelerated with the commencement of the AMP. A different settlement strategy known as "advance alienation" was introduced in the accelerated phase. However, it had to be abandoned within a short period owing to the poor quality of construction of irrigation infrastructure by the settlers brought in under the advance alienation programme, their unwillingness to stay in the camps without adequate facilities and disruption of family units, as only the males were brought in at the first instance.

By 1984 a total of 27,864 families were settled in System H and the target set for the system (31,631) was fulfilled by 1992. In fact the target has been exceeded in System H (Table 3.1). Settlements in System B and C started in 1982 in lands newly opened up by the AMP. Although considerable progress has been made in System C and the Left Bank of System B, settlement of farmer families in the Right Bank of System B has lagged behind because of the ethnic conflict. By the year 2000, some 90,222 families had been settled in the downstream Systems of B, C, G, H and L, while the total number of families settled in areas coming under the Project Administration (i.e., inclusive of Udawalawe and Upper Mahaweli) amounted to 131,640 (PMU 2000). The progress in land settlement from 1984 to 2000 in the downstream Systems of the Mahaweli is shown in Table 3.1.

TABLE 3.1
Settlements in the Mahaweli Downstream Systems (1984 – 2000)
(Cumulative)

System	Project Target	1984	1990	1995	2000
B (Left bank)	24,885	5,237	14,872	19,945	21,985
C	29,727	9,440	19,337	25,555	27,296
G	6,756	1,765	5,288	5,363	5,711
H	31,631	27,846	30,555	31,799	31,866
L	3,364	-	3,364	3,364	3,364
Total	96,363	44,288	73,416	86,026	90,222

Source: PMU (2000: 9)

Table 1 indicates that the settlement target is exceeded by a total of 235 families in System H while System L had reached the full capacity by year 2000. The other downstream Systems are yet to reach their full capacities.

The settlement process helped to ease the land problem of the dry zone to some extent. Of the settlers selected the majority were relocatees from the *purana* (traditional) villages that were absorbed by the Mahaweli Systems. There were encroachers of State land as well those who constituted a migrant population living on *chena* (shifting) cultivation in the areas that came under the purview of the Project. The other two categories of settlers were evacuees who lost their land owing to the construction work mainly in the upstream areas and the settlers selected on an electoral basis from among the land-poor households outside the Project area.

From a regional development perspective, Mahaweli settlements enjoyed physical as well as social infrastructure facilities together with opportunities to secure better incomes while the adjoining non-Mahaweli settlements comprising parts of the same broader region received a few spill over benefits only and stood in contrast to the former. Further, the Project exerted negative impacts on some surrounding localities as in evident in the agricultural sector.

The settlement programme contributed to a substantial increase in the population in hitherto undeveloped areas. For instance, the total population of the downstream of the Mahaweli (except Udawalawe) increased from 214,082 in 1984 to 465,512

in 2000 while the population in the total project area for the same period rose from 301,155 to 673,009. This indicates a resettlement programme involving approximately 3.5 percent of the county's population. The increase of population during 1984-2000 under each System is shown in Table 3.2.

TABLE 3.2
Annual Estimated Population by Mahaweli System

Downstream System	**1984**	**1990**	**1995**	**2000**
B (Left bank)	24,090	68,411	95,090	104,935
C	43,424	88,950	119,564	131,943
G	18,476	32,363	35,906	39,779
H	128,092	141,390	154,461	170,444
L	-	. 15,474	16,684	18.411
Sub Total down-stream Systems	214,082	346,588	421,705	465,512
Uda Walawe	87,073	95,666	141,428	170,595
Upper Mahaweli	-	24,454	33,440	36,902
Total	301,155	466,708	596,573	673,009

Source: PMU (2000)

The settlement programme under the AMP also led to a significant increase in population densities of the thinly populated rural areas of the dry zone where a vast change had taken place. Table 3.3 shows the increase of population and population densities under different Systems of the AMP.

TABLE 3.3
Population Increase in the Downstream
Mahaweli Systems (1984-2000)

Downstream System	Gross area	1984		2000		Increase 1984-2000	
		Population	Density for Sq. km.	Population	Density for Sq. km.	Population	Density for Sq. km.
B (Left Bank)	74,402	24,090	32.4	104,935	141	80,845	108.6
C	68,614	43,424	63.3	131,943	192.3	88,519	129
G	12,308	18,476	150.1	39,779	323.1	21,303	173
H	50,994	128,092	251.2	170,444	334.2	42,352	83
L	48,193	-	-	18,411	38.2	-	-
Udawalawa	55,700	87,073	156.3	170,595	305.9	83,522	149.6

Source: Compiled from the Mahaweli Statistical Hand Book, 2000.

The increasing population has created a demand for services and added to the labour force. Nevertheless, limited availability of non-farm employment opportunities has increased the population pressure on land leading to unauthorized fragmentation of allotments. Hence, the population increase in the Mahaweli Systems has not contributed to the expansion of the settler economy which would have created effective linkages generating overall regional development. As Gooneratne (2002) has noted the Mahaweli Systems have functioned as "enclaves" with no production linkages with the surrounding regions. However, the cluster settlement pattern introduced under the Project facilitated the provision of services to the settler community within the System. This stands in contrast to the linear settlement pattern adopted in many major irrigation schemes in the dry zone of Sri Lanka prior to the Mahaweli Project.

Service Centres and Townships

A hierarchy of newly planned service centres and townships emerged with the Mahaweli Project. Threshold population determined the spacing of the service centres. Townships such as Galnewa, Bulnewa, Meegalewa (System H); Girandurukotte and Dehiattakandiya (System C) and Welikanda (System B) were planned and established to provide higher order goods and services to the regional

population. According to the planners these townships were expected to contribute to regional development in many ways. First, they could cater to the service needs of the settler community. Secondly, they could facilitate linking the agricultural settlements with the outside world. Such a process would stimulate surplus agricultural production with markets in view. Thirdly, these centres could lead to the creation of untapped external business opportunities in the respective regions.

However, the ground situation reveals that they did not emerge as viable urban centres promoting urban oriented economic activities and the level of urban development in the settlement areas remained low (Silva and Dias 2000). The townships have failed to attract investment in order to promote medium or large-scale industrial and commercial ventures. Nor have they been successful in creating non-farm employment opportunities or promoting growth in the respective agricultural hinterlands. As Gooneratne (2000) has pointed out the Mahaweli townships were,

> *... not planned and located within the framework of a broader regional plan that included functionally linked areas outside the System and higher order centres in the regional hierarchy. Therefore, the anticipated development of these townships into viable and dynamic urban centres is unlikely to happen with the existing "limited" and restricted base.*

Further new townships established and fostered by the Project did not live up to the planners' expectations. As Wanasinghe (1987) has noted with reference to System H, the settlers from the remove area continue to maintain already established linkages with the older centres that were in existence before the establishment of the Galnewa township. Such centres (e.g. Kekirawa and Tambuttegama) though excluded from the service centre hierarchy of the Project, have attracted the settler community and grown at a faster rate. Similar examples can be cited from the other Systems as well. Selection of Girandurukotte in preference to Mahiyangana in System C and Aralaganwila in preference to Welikanda and Manampitiya in System B also can be considered as irrational (Gooneratne 2000).

Expansion of Physical Infrastructure

Physical infrastructure expansion could be profitably utilized to attain regional development goals particularly through effective use of available resources. Hence, investment on infrastructure helps to create employment opportunities, tends to enhance agricultural production, facilitates movement of surplus production to

external markets and enables better access to services relating to agriculture, education and health. The net outcome would be the development of the respective regions. As shown by Guild (1999),

> *Infrastructure has two positive effects on regional growth. First, its availability should increase the productivity of physical and human capital. To the extent that this results in lower production and logistics costs, demand and prices for the industrial and agricultural output of the region should increase. Second, infrastructure also serves as a direct or factor input. Higher levels of infrastructure provision should raise regional output. Both effects increase demand for labour and the wages paid to it.*

In the Mahaweli infrastructure development by way of establishing an irrigation network and road construction together with the provision of other services has raised agricultural production in the respective systems. Nevertheless, provision of infrastructure did not yield the expected results in attracting industries or specific service facilities. It is pertinent to note that provision of infrastructure alone has not induced overall development of the Mahaweli Systems.

A number of aspects of infrastructure provision matters in regional development. The quality of physical infrastructure and the extent to which the facilities are made available assume much significance in the Mahaweli setting.

It is evident that there has been a significant expansion of physical infrastructure under the AMP. The most conspicuous expansion has been in the field of irrigation. Downstream areas identified for development under the AMP have been System A (36,000 ha.), System B (48,000 ha.), System C (24,000 ha.), System D (16,000 ha.) and System G (2,800 ha.). This is in addition to 30,000 ha. of new land developed in System H. However, development has lagged behind in Systems A and B. It was not possible to proceed with the development of the former System owing to the civil war. Settlement in System B was restricted because of the frequent terrorist attacks. In the circumstance, the donors were reluctant to provide financial support to proceed with the planned development. Hence, it is evident that the factors relating to the political economy loomed large in the non-implementation of the AMP in the Eastern Province where three major ethnic communities, viz. Sinhala, Tamil and Muslim, co-exist. Different ethnic interests, particularly the 'Tamil homeland concept' and the Muslim interests in the Eastern Province, have paved the way to clashes among the groups regarding the development of the land resource. Give the uncertainties relating to the peace

process, it is not possible to anticipate how Systems B and L would be placed in the emerging regional development scenario.

The irrigation expansion in the other downstream areas proceeded without hindrance as the headworks under the AMP were completed on schedule. The Upper Mahaweli reservoirs of Kotmale, Victoria, Randenigala and Rantambe contributed to the generation of hydro electricity while enhancing the irrigation potential of downstream areas through water storage. In addition, Ulhitiya and Ratkinda reservoirs in System C and Maduru Oya reservoir in System B provided irrigation facilities to the respective Systems.

The extent of the irrigation canal network added by the Mahaweli Project to the downstream Systems is shown in Table 3.4.

TABLE 3.4
Irrigation Network of the Downstream Systems as at December 2000

Downstream System	Canals (Km)				
	Main	Branch	Distribution	Field	Total
B	53	72	630	1,680	2,435
C	29	125	552	1,275	1,981
G	-	5	89	281	375
H	152	100	660	1,505	2,417
L	-	-	12	10	22
Sub Total	234	302	1,943	4,751	7 230

Source: PMU (2000)

Of the total length (7230 km.) of irrigation canals, the largest extent (34 percent) is found in System B, followed by System H (33 percent). Expansion of the irrigation network had a direct effect on promoting agricultural growth. It not only brought new land under cultivation but also increased the gross cultivated area through multiple cropping. Gross area under paddy as well as OFCs during *yala* witnessed a sharp increase over the years. Expansion of the area under paddy and OFCs in each System between 1984 and 2000 is shown in Table 3.5.

TABLE 3.5
Gross Area Cultivated with Food Crops 1984 – 2000

(Hectares)

System	1984		1990		1995		2000		Increase 1984-2000	
	Paddy	O.F.C.	Paddy	O.F.C.	Paddy	O.F.C.	Paddy	O.F.C.	Paddy	O.F.C.
B(LB)	3,187	221	19,928	1,339	25,329	3,125	31,282	672	28,095	451
C	8,961	1,683	28,359	3,691	40,297	5,190	41,127	3,597	32,166	1,914
G	3,380	785	7,248	1,974	9,029	1,485	9,369	1,980	5,989	1,195
H	44,813	8,488	35,487	13,797	42,580	9,524	40,395	8,287	-4,418	-201
L	-	-	483	515	806	291	641	70	-	-
Sub Total	60,341	11,177	91,505	21,316	118,041	19,615	122,814	14,606	62,473	3,429
UW	22,342	1,411	21,347	3,064	19,820	10,903	18,530	10,864	-3,812	9,453
Total	82,683	12,588	112,852	24,380	137,861	30,518	141,344	25,470	58,661	12,882

Source: PMU (2000)

The expansion shown in Table 3.5 undoubtedly resulted in enhanced production and an increase in gross agricultural income. This is because the farmers were made less vulnerable to uncertainties of the weather as a result of expanded irrigation facilities.

The other physical infrastructure component next to the irrigation canal network in the Mahaweli Systems is the road network. A number of new roads such as Manampitiya-Aralaganwila-Maduruoya road, Dehiattakandiya-Aralaganwila road, Mahiyangana-Dimbulagala road (in Systems B and C) and Andarawewa-Balaluwewa road (in System H) have been built to serve the Project area. The new through roads linking the different Mahaweli Systems with the major cities of the country and roads within the Systems have contributed to promote surplus production for markets outside the region. The extent of different classes of roads developed through the Project is shown in Table 3.6.

TABLE 3.6
Different Classes of Roads by System as at December 2000

	Roads (Km)				
System	Class A	Class B	Class C	Class D	Total
B	10	69	66	73	218
C	67	42	146	63	318
G	-	-	10	-	10
H	-	63	153	30	246
L	-	-	-	-	-
Sub Total	77	174	375	166	792

Source: PMU (2000), Table 13.

The Class A roads are mainly through roads linking more than one System. Examples are roads running from Dehiattakandiya to Aralaganwila and from Mahiyangana to Dimbulagala. These roads are now maintained through the Road Development Authority (RDA), a government agency. Other categories of roads constructed through the Project funds are now handed over to the Provincial Councils and *Pradeshiya Sabhas* (Divisional Councils). The shift in authority has already affected road maintenance. The condition of roads coming under the purview of the local authorities is deteriorating. Poor condition of roads is one of the reasons that discourage private investment in enterprise development. Similarly, bad road conditions and inadequate transport facilities have (a) restricted the opportunities for non-farm employment (b) retarded social interaction beyond neighbouring villages (c) deprived seeking agriculture-related work in distant areas and (d) limited the ability to work longer hours away from home, thus depriving access to a diversity of income sources. It was revealed that in many areas of the Mahaweli public transport does not operate till late hours of the day. Poor transport facilities have also caused non-resident officers to come late and to leave work places early.

An overview of the physical infrastructure facilities in the Mahaweli Systems reveals that the quantity as well as the quality of infrastructure provided show considerable inter and intra-System variations. For instance, the inter-system canal (main, branch, distributory and field) densities stand at 4.74 km/sq.km. in System H, 3.05 in System G, 2.89 in System C and 2.13 in System B while the road densities are 0.48 km per sq. km. in System H, 0.46 in System C, 0.19 in System B and 0.08 in System G.

When viewed from a regional development perspective infrastructure provision in the Mahaweli Systems has exacerbated inequalities between the areas identified for development through the Project and areas lying outside. It is also evident that within the Systems benefits derived by the settlers vary depending on the (a) unequal distribution of infrastructure provision and (b) social stratification. The provision of electricity is a case in point. In this case, some cannot access electricity as it is not made available to them but still others are deprived, as they cannot afford it.

There is also evidence that infrastructure provision has benefited non-targeted groups and in particular outsiders. The exploitative nature of middlemen's activities is in evidence in extracting the agricultural produce of the farmers. On the whole, the average as well as the resource poor farmers of the Mahaweli Systems has failed to internalize the benefits to be derived from the provision of infrastructure by the AMP, to their own advantage.

Agricultural Development

Expansion of settlement and irrigation facilities in the dry zone of Sri Lanka for the purpose of increasing agricultural production has been an avowed objective of the AMP. The new lands brought under irrigated agriculture and lands where irrigation facilities were improved through the supply of Mahaweli waters have contributed to increase land use intensities. Table 3.7 shows the increased cropping intensities in the different Systems of the Mahaweli Project.

TABLE 3.7
Cropping Intensities in Different Systems

(percent)

Downstream System	1995	1996	1997	1998	1999	2000
B	161	150	165	177	182	190
C	197	199	198	198	199	208
G	190	138	167	158	197	211
H	160	123	135	133	157	152
L	110	90	21	77	41	82
UW	186	174	192	173	196	200
Total	175	155	165	163	179	183

Source: PMU (2000)

Compared to the national scenario and the situation of the other major irrigation schemes of the dry zone of Sri Lanka, Mahaweli areas show distinctly high cropping intensities. This in turn has led to increased agricultural production. Table 3.8 shows how the agricultural production increased over the years with the expansion of irrigation facilities.

TABLE 3.8
Increased Agricultural Production in Mahaweli Downstream Systems

(Metric tons)

Down-Stream System	1984		1990		1995		2000		Increase 1984-2000	
	Paddy	O.F.C.	Paddy	O.F.C.	Paddy	O.F.C.	Paddy	O.F.C.	Paddy	O.F.C.
B(LB)	12,855	320	72,758	3,496	87,093	8,784	131,244	2,306	118,389	1,986
C	16,413	-	110,341	7,113	158,172	21,428	173,978	12,906	157,565	12,906
G	10,145	935	26,993	2,888	38,989	4,978	36,810	8,983	26,665	8,048
H	146,377	10,104	162,075	28,879	186,777	30,373	175,783	32,343	29,406	22,239
L	-	-	1,430	1,110	2,002	834	1,801	131	1,801	131
Sub Total	185,790	11,359	373,579	43,486	473,033	66,397	519616	56,669	333,826	45,310

Source: PMU (2000)

The above Table indicates that paddy production in the downstream Systems has shown a substantial increase from 185,790 metric tons in 1984 to 519,616 mt in the year 2000. The overall contribution of the Mahaweli downstream Systems and Udawalawe amounted to about 20 – 25 percent of the national production. The average yields of the Mahaweli Systems are higher when compared with the national average. However, the yield levels of paddy vary between different Systems. For instance, the yield levels have stabilized around 5 mt/ha. in system H and 4 mt/ha. in Systems B and C, although there are no major variations in edaphic or climatic factors among these Systems. As Panabokke (2000) has shown this is an under-performance rather than an adequate performance. It is also noted that seasonal duty of irrigation water for System C is 50 – 60 percent higher when compared with that of System H. As the same author indicates, given the present level of technology and the high performance varieties the potential yield level should be around 7 mt/ha. The inability to command the benefits of technological improvements, fragmentation

of land and market imperfections largely explains this gap between the actual and potential yields.

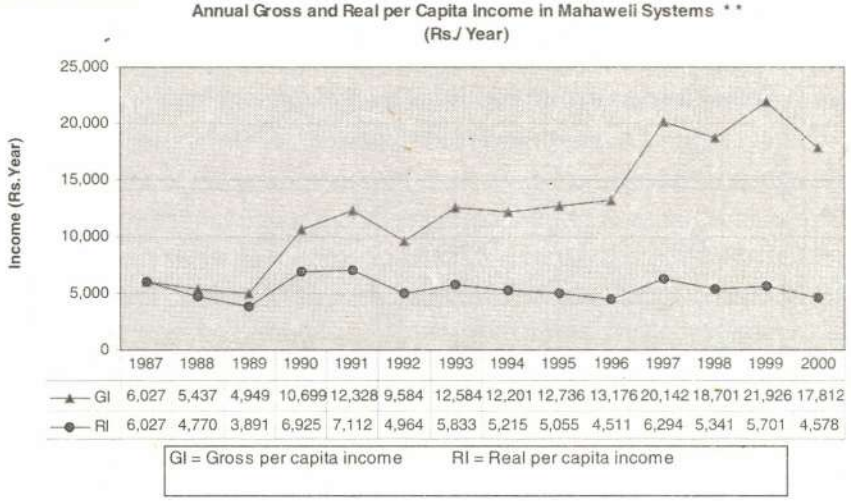
On account of low returns at existing yield levels of paddy, the MASL has encouraged agricultural innovations among the faming community. These innovations, particularly new cropping patterns with OFCs, absorb more labour in farming, create additional employment opportunities in allied activities such as trade and transport, save scarce water specially during *yala* (dry season) and suit well drained Reddish Brown Earth (RBE) soils which cover most of the irrigated agricultural lands under the Mahaweli Systems. However, the popularity of the OFCs varies between the different Systems.

On the whole, those who have adopted agricultural innovations have obtained high returns per unit area, resulting in higher farm incomes. Nevertheless, agricultural diversification in the Mahaweli Systems has shown slow progress as the majority of the farming community has a strong preference for paddy. Further, widely fluctuating farm gate prices of the OFCs also contribute to low adoption rates by the farmers who face financial constraints and have no ability to take risks (Wanigaratne 2000). Even in System H where OFC cultivation started in late 1970s the initially introduced crops such as chillies, which brought high cash returns to farmers, gradually declined because of the leaf curl disease and unfavorable market conditions. This is clearly shown from the decline of the Mahaweli share of the national chillie production from 58 percent in 1994 to 18 percent in 2000 (PMU 2000). Further, costs involved in cultivating the popular crops such as chillies and big onions in System H had been three times higher than the costs incurred on paddy under irrigated conditions (Abhayaratna 2002). Hence, the adoption of innovative cropping patterns is constrained by the cost factor.

It may be noted that the other avenues of diversifying household incomes are also not properly utilized. Untapped potential of inland fisheries and livestock that could be made use of to enhance settler incomes, can be cited as examples. At present livestock development is at an early stage and accounts for about three percent of income and two percent of employment in an average settler household (Wanigaratne 2000). Thus it is evident that no concerted effort has been made or plans under way for the integrated development of the overall resource base of the Mahaweli Systems.

On the whole, the efforts of the AMP at reducing poverty through enhanced agricultural incomes have not yielded the expected results. In fact, the real incomes of the farmers remained more or less stagnant during the last decade with possible signs of a decline towards the end of the period. Fig. 3.3 clearly shows that although the gross per capita incomes of the Mahaweli Systems (aggregate for downstream Systems inclusive of Uda Walawe) has increased from Sri Lankan Rupees 6,027/= (1987) to SLR 17,812/= (2000), the real per capita income has recorded a declining trend particularly since 1997.

Fig. 3.3



Notes : * Upward shift in the gross income curve between 1996 and 1997 is due to an increase in paddy and OFCs with banana production

** System B (only LB), C, G, H, L, UW
Colombo Consumer Price Index (CCPI) is used in real value calculation
CCPI Base Year 1987 = 100; 2000 = 389

Instead signs of poverty, declining real incomes of farmers and lack of economic opportunities for the succeeding generations of the original settlers have surfaced in the Mahaweli Systems. From a regional development perspective it is pertinent to note that the Project has exerted some negative impacts on the agriculture of the neighbouring areas. For instance, all agricultural programmes of the AMP do not show spill over benefits in the areas that adjoin the System boundaries. There is evidence that diurnal labour movements from the near by villages into the Mahaweli Systems take place to provide hired labour. The situation has led

to the neglect of agriculture in near by villages. Contrary to people's expectations, the Mahaweli has failed to augment the irrigation water supply of the surrounding villages. Further, there is an infrastructure densification in the Mahaweli settlements while available infrastructure facilities are minimal in the neighbouring areas.

Development of Social infrastructure

The main components of social infrastructure provided by the AMP constitute schools, health centres and other service centres such as post offices and cooperatives. The contribution of the Project to social infrastructure is summarized in Table 3.9.

TABLE 3.9
Social Infrastructure Facilities by System and Year
(Cumulative Progress)

Downstream System	Type	Project Target	Year		
			1990	1995	2000
B	Schools	161	67	70	70
	Health Center	45	24	27	27
	Post Office	29	19	21	21
	Co-operatives	61	44	47	47
	Schools	85	61	67	87
C	Health Center	70	43	45	45
	Post Office	29	18	18	30
	Co-operatives	76	33	33	33
G	Schools	24	24	24	24
	Health Center	15	15	15	15
	Post Office	11	11	11	11
H	Co-operatives	18	18	18	18
	Schools	88	88	88	88
	Health Center	76	54	76	76
	Post Office	34	34	34	34
	Co-operatives	64	59	64	64
L	Schools	10	7	7	7
	Health Center	5	2	2	2
	Post Office	2	1	1	1
	Co-operatives	7	5	7	7

Source: PMU (2000)

Table 3.9 regards that the physical targets set for the construction of schools and health centres, post offices and cooperatives in the downstream Systems have been realized. However, the quality of services provided particularly with reference to education and health is hampered by the dearth of trained personnel and limited availability of facilities. Further, the temporal distance to be covered by the settlers to reach the services seems to be prohibitive owing to transaction costs. Hence, the observation made by Guild (1999: 4) that social infrastructure by way of sanitation, education and health tends to increase personal welfare and produce important impacts on health which in turn affects labour productivity and incomes, has not been well proven in the Mahaweli settlements.

It should be noted that the Project share of schools and health centres in the encompassing districts show considerable variation. For instance, the share of schools and health centres in System B stood at 8 percent and 15 percent respectively of the total of the encompassing districts of Polonnaruwa, Batticaloa and Ampara while in System C the corresponding figures were 6 percent and 19 percent of the encompassing districts of Polonnaruwa, Ampara and Badulla. In System H that encompasses Anuradhapura, Kurunegala and Matale districts the Project share of schools and health centres stood at 5 percent and 10 percent respectively (PMU 2000). Despite the fact that the provision of these facilities is a welcome gesture their adequacy still remains a bottleneck. In addition to the services indicated above cultural centres and sports facilities provided through the Project for children are significant steps towards human resource development.

Non - Farm Employment

Absorption of second and later generations of settlers into non-farm employment (NFE) is crucial in the case of land settlement schemes where agricultural employment has got definite limits. Further, the growth of the non-farm sector provides a good yardstick to determine the level of diversification of the regional economy. The experience of the major settlement schemes in Sri Lanka clearly indicates that NFE increases with increasing maturity of the settlement when the succeeding generations of the original settlers have no option but to seek non-farm employment. This is exemplified from the old settlement schemes in Sri Lanka such as Minneriya and Minipe where NFE in the total employment structure amounted for around 50 percent by 1980. The corresponding figure for late 1980s in System H is about 21 percent (Bandaragoda 1988). Most of the enterprises in the Mahaweli areas are small and usually operated by one or two persons (Wanasinghe 1987). Hence, the overall employment generation capacity relating to NFE remains low.

The type of enterprise is also significant because of its link to employment generation capacity. Although industrial estates have been recognized as a strategy to promote non-farm employment, such ventures have not got off the ground in the Mahaweli Project area. The achievements in the field are limited to self-employment and micro-enterprises. Two Census Surveys of Enterprises undertaken in 1988 and 1992 have indicated that 99 percent of the total enterprises in Mahaweli areas belong to the categories of self, micro and small and are confined to basic consumables and services (including repairs) enterprises. As has been observed even the service sector did not grow and expand in desired numbers in anticipated places (Wanasinghe 1987). Some of the non-farm ventures can be classed as survival activities by the relatively underemployed taking the form of "distress adaptations" (Bandaragoda 1988).

Insignificance of processing and manufacturing is a characteristic feature of the existing setup. It should be noted that even the large surplus production of paddy moves outside the region to be processed elsewhere.

As in the case of many other activities in the Mahaweli Systems, plans for the promotion of non-farm employment are prepared at higher levels and pushed down for implementation. The arm of the MEA to promote off-farm and non-farm activities is the Employment, Investment and Enterprise Development (EIED) Division. A recent publication of this division has noted in an optimistic tone that '*a combination of low-cost, productive and an educated labour force has provided a very attractive proposition for the investors*'. It is also noted that '*the adaptability of the workforce allows the investors to introduce new crops and industries quickly, effectively and with relatively low set-up cost*'. However, past experience in the Mahaweli Systems shows that there have been only isolated efforts to introduce such activities. Contract farming in System B and establishment of a garment factory at Bulnewa in System H are some examples. In the case of the former attempts made to establish gherkin cultivation through an out-grower system for export purposes failed mainly because farmers could not meet the expected standards in the quality of products. Further, it is noteworthy that the private sector motives of efficiency, competitiveness and profit did not tally with the Mahaweli objective of increasing food production through sustainable farming systems. These abortive experiments have shown that although such initiatives are attractive on a short-term basis they face numerous problems in the long-term.

It is evident that the facilities provided have been inadequate to make a dent in private sector investment in the Project area. As Silva and Dias (2000) have noted even in the larger service centres, except for reserving land for the location of different economic activities including industry,

> *.....very little effort has been made to create an investment climate and an economic base that would generate non-farm employment or to establish a framework that would enable these centres to organize the economies of their hinterlands through supply, market and service delivery systems. As a result they have failed to function as main agents of spatial integration.*

It should also be noted that the efforts at development of the Systems were geared to lop-sided agricultural development rather than region-based integrated development. Panabokke (2000) has pointed out there are vast extents of un-irrigable land that are underutilized particularly in Systems B and C. These lands have a potential for plantation forestry and eco-tourism. Gooneratne (2000) has shown the untapped tourism and recreation potential of the area in relation to large reservoirs, nature and wild life reserves and archeological sites.

IMPLICATIONS FOR THE FUTURE

In view of the restricted availability of funds many changes could be expected in the Mahaweli Systems in the future. All aspects of land settlement and irrigation hitherto have been agency-managed. Hence, the development of both physical and social infrastructure depended on the government resources and donor assistance. As funds will not be forthcoming in the future farmers will be forced to perform a bigger role in the operation and maintenance (O & M) of the irrigation systems. Increased emphasis on FOs and their representation at System management level has already been mooted in view of a partial management transfer within Systems. This is a manifestation of the changed Government policy towards participatory and joint management of irrigation systems. Farmer participation is increasingly sought in rehabilitation and improvement of irrigation systems. But there are doubts as to whether the bureaucracy is ready to accept farmers as 'equal partners' in management.

Simultaneously a reduction in the number of officials has been attempted in stages. For instance, at the initial stage of the Project a Unit Manager was responsible for 250 families and a Block Manager for 2500 families. Subsequently, the areas coming under the respective officers were extended to cover 500 and 5000

families respectively. A 50 percent reduction of officers was announced by the Minister of Irrigation and Water Resource Management at the beginning of 2003. But it did not work out as expected.

Changes in the administration have also been underway during the last few years. For instance, many tasks handled by the MASL have been progressively handed over to the general administration, particularly to the line departments of the central government and the provincial administration. As pointed out in the section on infrastructure, roads are already handed over to the RDA and the respective Provincial Councils. Owing to the inefficiency with which the services are handled by these institutions at present and the limited capacity of the line agencies vis-à-vis the added burdens entrusted to them, it would be a matter for concern in the future.

Changes are also anticipated in the field of water utilization. As Silva and Dias (2000) have noted,

> *Demand for water will increase with the growing population, improvement in their living conditions and expansion of economic activities. As little has been done to enhance water harvesting capacity of the catchment areas and given the increasing demand for water in those areas, it is by no means certain that the present volume of water will be available in the future.*

In view of the above it will be vital to introduce stringent management practices for the efficient use of the scarce water resource.

Steps have to be taken to arrest the illegal sub-division of land. Undesirable impacts of underhand sub-division on agricultural production particularly in reducing agriculture into below-subsistence level could hardly be checked in the absence of a broad based off-farm and non-farm employment programme. Further, other forms of hidden tenancies and their adverse impacts highlighted by Siriwardane (1981) with reference to System H have continued unabated in all Systems and there is no reason to believe that this trend would be reversed in time to come. Added to this is the highly debated question of completely freeing the land market. The existing policy of granting deeds to allottees under the programmes such as *Swarnabhoomi* and *Jayabhoomi* exercised certain checks and balances to control outright land sales. However, suggestions have been made to lift the existing restrictions with a view to liberalizing the land market.

It is possible to surmise that more changes with reference to the administration of the Systems will take place in the future. With the introduction of the Provincial Councils and *Pradeshiya Sabhas* (Divisional Councils) local politicians too have entered the decision-making process. As a result the bureaucracy has had to adopt a consultative procedure in order to accommodate political opinion to the best possible limits. It is also pertinent to note that the Mahaweli Act is superceded by subsequent Acts, which could extend their control over the Mahaweli areas. Road Development Authority Act is a case in point.

With reference to the general administration the MASL has already taken steps to reduce the number of officers and to prepare for the taking over of the Mahaweli-Systems by the general administration of the country. It is now planned to end the present transition period by the end of 2005 thus effectively completing the handing over (vide Cabinet Memorandum presented by the Prime Minister on 04th July, 2003).

CONCLUSIONS

The strong bureaucratic administrative system adopted by the MASL helped developing the individual Systems as 'enclaves' by neglecting the possible regional linkages with the surrounding areas. The service centres and townships established within the Mahaweli Systems also did not fit into a broader regional development pattern. The physical infrastructure provision to the Systems placed emphasis more on quantity than quality and the surrounding areas did not get direct advantages except for a few spillover benefits. Instead they were further neglected making the disparities in development more obvious. The agricultural development within the Systems contributed to increase farmer incomes rather unequally depending on access to resources. Further, the provision of agricultural inputs and extension services were not extended beyond the boundaries of the Mahaweli Systems. A similar observation can be made with reference to non-farm employment as well. The little benefits realized by the Mahaweli settlers by way of small enterprise development did not have an impact on the wider regional economy. It may be noted that the further devolution of political power would have wide ranging implications for Systems B and L from a regional development point of view.

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PLANNED TOWNSHIPS IN THE DOWNSTREAM AREAS OF THE MAHAWELI PROJECT IN SRI LANKA: AN ANALYSIS OF THEIR CONTRIBUTION TO REGIONAL DEVELOPMENT

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INTRODUCTION

Townships have been established in the Mahaweli Development Project Area to act as rural service centres that would spread social benefits, promote economic growth in their hinterlands and play a catalytic role in regional development. Rural service centres can be defined as central places that are placed at the lower tiers of the Central Place hierarchy (ESCAP 1979). Their functions include collection, processing and sale of agricultural and other local produce to areas outside the region; the provision of a) agricultural inputs such as fertilizers, seeds and equipment, b) consumer goods purchased from larger urban centres c) basic health, educational, administrative and other services and d) specialized infrastructure facilities.

Among the measures introduced by the Government of Sri Lanka to develop less developed areas and thereby reduce regional disparities, the multi-purpose Mahaweli Development Project (MDP) located in the periphery, ranks as the most significant. The project aimed to provide irrigation facilities to 265,000 ha of new land and 100,000 ha of existing crop lands in downstream areas. Another objective of the project was to provide services and facilities to the new settlers and older residents through a system of service centres in order to stimulate and promote agricultural productivity, enable farmers to market their produce at competitive prices, generate non-farm employment opportunities and generally improve incomes and enhance the quality of life of the settlers.

The Mahaweli Development Project Area covers approximately 39 per cent of the country. The downstream areas are divided into 14 micro regions or irrigation systems. The irrigation Systems A to G are contiguous regions located on the lower reaches of the Mahaweli and Maduru rivers (see Fig 3.1). The remaining irrigation systems are separated from each other by developed and undeveloped land. System H, located on of the Kala Oya basin was the first to be developed.

TABLE 4.1

Services and Facilities in Irrigation Systems in the Downstream Areas in the Mahaweli Development Project Area, 1999

	System	No. in Operation 1999	Settler Families (farmer and non-farm)	Population	Settler Families	No. of Settlements			Facilities (No) in Villages/Homesteads				Gross Area Ha
						Hamlets	Village/ Area Centres	Townships	Houses	Latrines	Wells	Tube Wells	
H	Education Health Postal Co-operative	88 76 34 64	31,799	163,891	31,000	165	20	8	25,209	21,708	10,846	201	(H_1 to H_9) 50,994
G	Education Health Postal Co-operative	24 15 11 18	5,675	39,385	4,585	15	2	3	2,590	2,318	109	163	12,308
C	Education Health Postal Co-operative	68 45 18 33	26,529	130,637	21,039	65	8	2	23,854	19,343	11,212	23	68,614
B (LB)	Education Health Postal Co-operative	70 27 21 47	19,782	103,896	18,795	45	11	3	19,041	14,836	7,406	432	74,402

Source: Adapted from Mahaweli Statistical Handbook, PMU-MASL, 20

It incorporated approximately 14,170 ha of developed land under four previously established colonization schemes viz; Kagama-Kattiyawa, in 1946 (H 3); Kandalama, in 1954 (H 6 and 8); Usgala-Siyambalangamuwa, in 1954 (H 10) and Rajangana, in 1964 (H 11 and 12) as well as less developed areas with about 350 small tank villages or traditional ('*purana*') villages and small junction settlements. These less developed areas that comprised the irrigation blocks of H1, H2, H4, H5, H7 and H9 were provided with irrigation water from the Mahaweli project for cultivation. With the initiation of the Mahaweli Project, there was a rationalization of existing tank villages and the establishment of new settlements but it should be noted that as much as 70 per cent of the 'settlers' were not migrants but permanent residents of System H. By 1985, the total population (farm and non-farm families) in System H had amounted to128, 000 and by 1999, the number had increased to 164,000 (Table 4.1). After the project was launched, there

was an increase in the area under crops and settlement in the Irrigation Systems of B, C and G as well. By 1999, approximately 83,000 farm and non farm families had been settled in Systems B, C, G and H and the gross area cultivated exceeded 206,300 ha.

OBJECTIVES AND METHODOLOGY

This paper evaluates the extent to which recently established townships had contributed to the development of the MDP and focuses on the nature of the relationship that exists between rural areas and townships. It examines the factors that contributed to the growth of certain centres while others had stagnated.

Data for the study were obtained from primary and secondary sources. Primary sources included information gathered from townships as well as from village/ block centres and hamlets located in their hinterlands. The selection of the sample of townships was based on functional strength, growth trends and population size. The sample included higher order central places such as the fast growing Tambuttegama and the stagnating township of Galnewa, located at a lower level in the hierarchy. Information was gathered through questionnaires and semi-structured interviews with Committee members of the Traders' Associations, other entrepreneurs and a selection of consumers. In the study of periodic markets or '*polas*', emphasis was placed on discussions with market participants. Ratnayake's (2003) survey of Kothmalpura, Adiranigama and Siyambalagahagama was used to gain an insight into the rural perspective of townships and larger

towns. The study also utilized published and unpublished reports and other data available at the Mahaweli Development Authority, the Mahaweli Economic Agency and the Urban Development Authority.

THEORETICAL CONSIDERATIONS

Although Southall (1979, 1988) and Schatzberg (1979) have argued that small town and other service centres play a negative role, Johnson (1970), Rondinelli and Ruddle (1978) and Mathur (1982) have stressed the fact that they can make a positive contribution towards regional development (Wanasinghe 2003).

Policies for small towns and rural service centres have been formulated and implemented in a number of African (UNCHS 1993 Pedersen 1997) and Asian (ESCAP 1979, Rondinelli and Ruddle 1978, Douglass 1990) countries. Results of the study commissioned by UNCHS (Habitat) in 5 African countries, reported in 1993 that Malawi and Zimbabwe had implemented explicit national service centre policies at the time. The term 'rural service centre' referred to District capitals and other central places below that level which offered basic retail, administrative, transport services etc. In the United Republic of Tanzania, a framework for rural centre development was provided by regional physical development plans while in the Ivory Coast and Nigeria they were developed within a number of sectoral frameworks. The study maintained that rural service centres had been used

- as a mechanism for supporting agricultural production;
- as a vehicle for the provision of basic needs and for stimulating non-agricultural employment;
- for coordinating economic investment in newly opened regions;
- for redressing imbalances in infrastructure provision; and
- as a vehicle for promoting the decentralization of local government administration.

In the Urban Functions in Rural Development (UFRD) approach, rural service centres or lower order central places were used to foster rural development as advocated in Christaller's Central Place Theory. Good examples are provided by the Philippines, Bolivia and Upper Volta (Burkina Faso).

Douglass (1990) considered this approach as a 'one-sided urban view of rural development' because

> *without efforts directed to agriculture to generate rural income increases for a broad section of the rural population, and not just a few elites, the placing of a missing function in a rural town is unlikely in and of itself to generate either rural or urban growth in rural regions. In sum, in the absence of a careful integration of the small town development policy with a broader conceptualization of rural development and poverty, this component of a national spatial development strategy risks becoming merely a variation of the very model it seeks to counter, namely, trickle down and urban bias wearing a rural disguise.*

Douglass (1998) outlined other severe conceptual and practical problems encountered in '*mechanistically using the central place theory to construct a rigid set of functions for all towns at a given level of the urban hierarchy*'. One major issue is the assumption that all urban functions are developmental and would benefit rural households, irrespective of social or economic class. As indicated by Khan (1977) credit institutions in areas where there was an inequitable distribution of land, were biased towards the rural elites and richer farmers. Furthermore, outsiders who purchased rural produce generally by-passed small towns '*thereby limiting the local employment and related multiplier effects that could have been captured by the town*' (Douglass 1998).

Other criticisms leveled against the concept of service centres as summarized by Dewar et al (1986) include the following:

- it is static and inflexible and cannot respond to change
- it is costly to implement;
- the centres are not always located at an 'acceptable distance' from users.

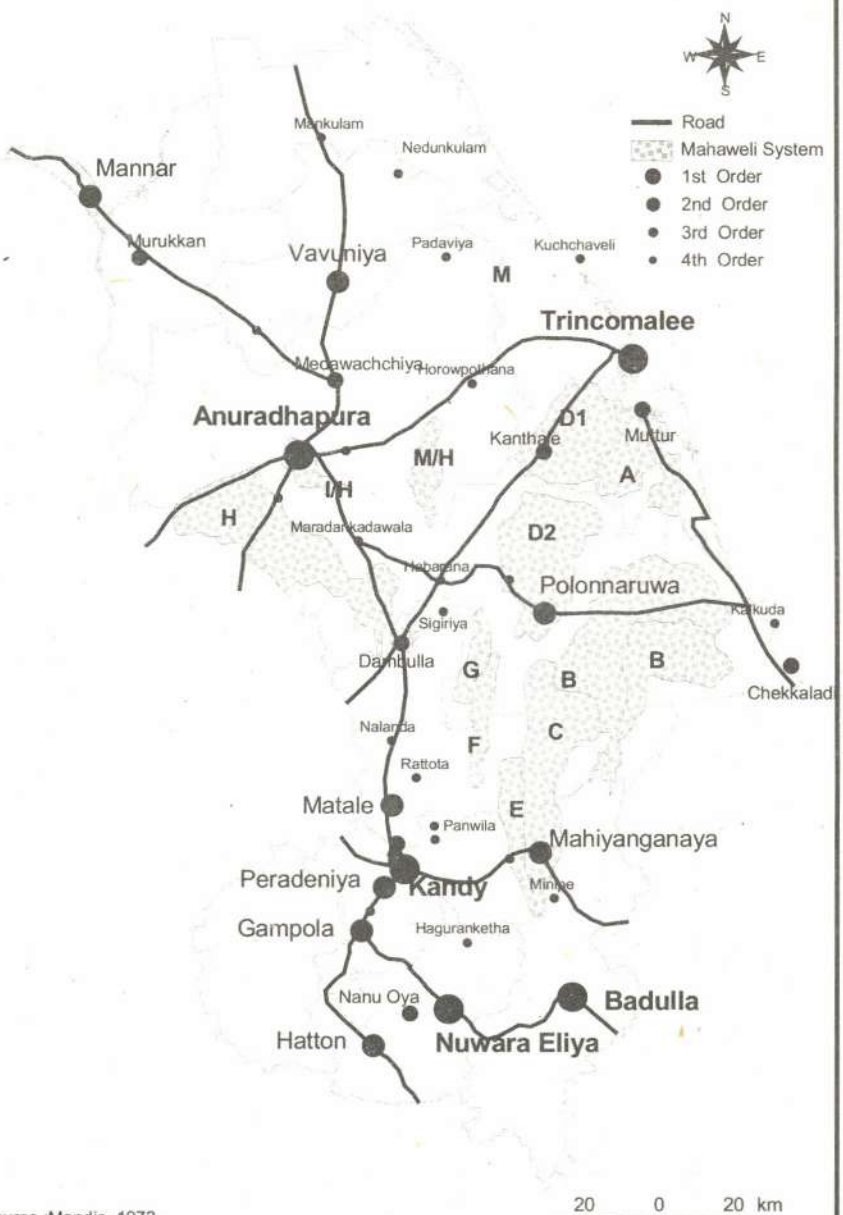
Dewar et al state that, sometimes, it was not the lack of service centres to supply goods and services but the insufficient demand that prevents self-sustaining growth.

SERVICE CENTRES IN THE MAHAWELI DOWNSTREAM AREAS: THE PRE-PROJECT SITUATION

Prior to the commencement of the project, the number of service centres in the region had not been adequate to provide a sufficient number and variety of services required by the local population. Further, the existing centres had been

Fig 4.1

Central Places in the Mahaweli Development Project Area (The Pre-Mahaweli Situation)



Source :Mendis, 1973

GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

poorly linked to the rural hinterland. Hence, residents of the majority of traditional tank villages and colonization schemes did not have easy access to middle or higher order services (Mendis 1973). As indicated in Figure 4.1, first order central places were few and were mainly located outside the proposed irrigation systems. Anuradhapura was located 25 km away from System H in the Kala Oya basin and Kandy was situated 75 km away from System C. Mahiyangana and Polonnaruwa were the only second order central places located within the proposed irrigation Systems of C and D.

Even the majority of third and fourth order central places were not situated within the Mahaweli irrigation systems. As much as 95% of the settlements within System H for example, were residential non-central places performing a few ubiquitous local functions. A few junction settlements such as Kekirwa, Talawa, Eppawela, Tambuttegama, Negampaha and Ipalogama were the only lower order central places that had served 4 large colonization schemes and hundreds of small tank villages in and around System H. Kekirawa was the nearest service centre for villages on the Eastern part of System H, known as the Galnewa region. The majority of its residents (nearly 6000) lived in "purana" or traditional tank villages. There was only one primary school while the sub-post office was located 5 km away from the furthest end of the block and medical facilities were non-existent. The nearest rural hospital was 8 km away and one had to travel on foot to reach it. The physical, economic and social linkages among villages and between villages and towns were extremely weak. Almost 70% of the road mileage in the less developed parts of system H was made up of cart tracks and footpaths. Although a motorable road existed near the Galnewa region there was no bus service. Hence without strong physical linkages it was difficult for the farmers to transport their produce to the permanent and periodic markets or *'polas'*.

The Feasibility Study of the Project (Mahaweli Development Board 1972) also highlighted the plight of the farmers in the Galnewa region who found it extremely difficult to sell their surplus paddy, chillies and vegetables due to the absence of an efficient marketing system. The village *'pola'* provided very restricted opportunities. Although the cooperative store offered a comparatively high price for the agricultural produce, owing to inefficient management and organization of purchases, delays in payment, dissatisfaction and the controversies that arose when grading the produce, the farmers had no alternative but to depend on private traders who purchased goods at a relatively low price. Another survey of selected villages and tracts of Colonization Schemes located within the proposed Mahaweli Project area conducted in 1974 (Central Bank of Ceylon 1975), revealed that

the majority of residents did not live within commuting distance of small towns. Approximately half the settlements in the sample were located more than 8 km from a garage, rural hospital or post office and 13 km from a tractor service centre.

THE HIERARCHY OF SERVICE CENTRES INTRODUCED INTO THE MAHAWELI SETTLEMENTS

In order to improve the quality of life of the settlers, to facilitate the production and movements of goods and people, to attract technical and professional personnel to the region and to provide off- farm employment opportunities, recently opened up areas had to be provided with

- Physical infrastructure such as roads, canals, public utilities, houses and other buildings.
- Social infrastructure such as education, health and postal services.
- Economic infrastructure such as facilities for the modernization of agriculture and the establishment of agro- industries, and
- Institutional infrastructure such as banks, cooperative societies, vocational training centers and government offices.

A three-tier hierarchy of service centers corresponding to the hamlet- village-town sequence was proposed for the region in order to provide services and facilities to the largest number of people efficiently and effectively at the lowest possible cost. The number of services, the size of the hinterland and the spacing of service centers in the hierarchy were determined by the size of the threshold population and the types of service supplied. The threshold population for health and education facilities at each level for example, was identified on the basis of accepted national norms and that for agricultural supporting services and functions was based on the recommendations of consultants.

In System H a hamlet, which is a nucleated settlement planned for 100-125 families, is at the lowest level of the hierarchy. The services and infrastructure at the hamlet level included a primary school, a cooperative depot, a post box and a few boutiques, which provided convenience goods or low order, low cost, frequently purchased goods that have a relatively low threshold and a short range. The most centrally located hamlet was selected as the Village Centre with adequate services to satisfy the requirements of a cluster of 4-6 hamlets. Townships were expected to provide higher order goods and services that require a larger threshold

population living in 4-5 such clusters. In system H, eight townships were established to serve 28,830 settler families. Galnewa (H1), Migalewa (H2) and Galkiriyagama (H9) were planned on "Greenfield" sites, as new towns. The settlement plan also fostered the strengthening of established service centers such as Eppawela (H4), Tambuttegama (H4) and Talawa (H5) into townships (Table 4.2). Most of the townships were to be provided with banks, post offices, police stations, hospitals, cooperative stores, schools and community centers (Tables 4.1 and 4.2).

When planning service centres for System C on the other hand, a larger size for service centres at each level was advocated, to enable them to develop as viable economic units. At the hamlet level (Unit Centre), basic services were provided for approximately 250 families while 7 Block Centres served 33 hamlets. It should be noted that if the model adopted in System H had been applied to System C, more than 10 townships would have been required to serve the region. In the modified model used in the region, only 2 new townships (Girandurukotte and Dehiattakandiya) were considered adequate to serve the farm and non-farm population. Three townships (Manampitiya, Welikanda and Aralaganwila) were established to serve the inhabitants in System B (Fig.4.2, Table 4.2).

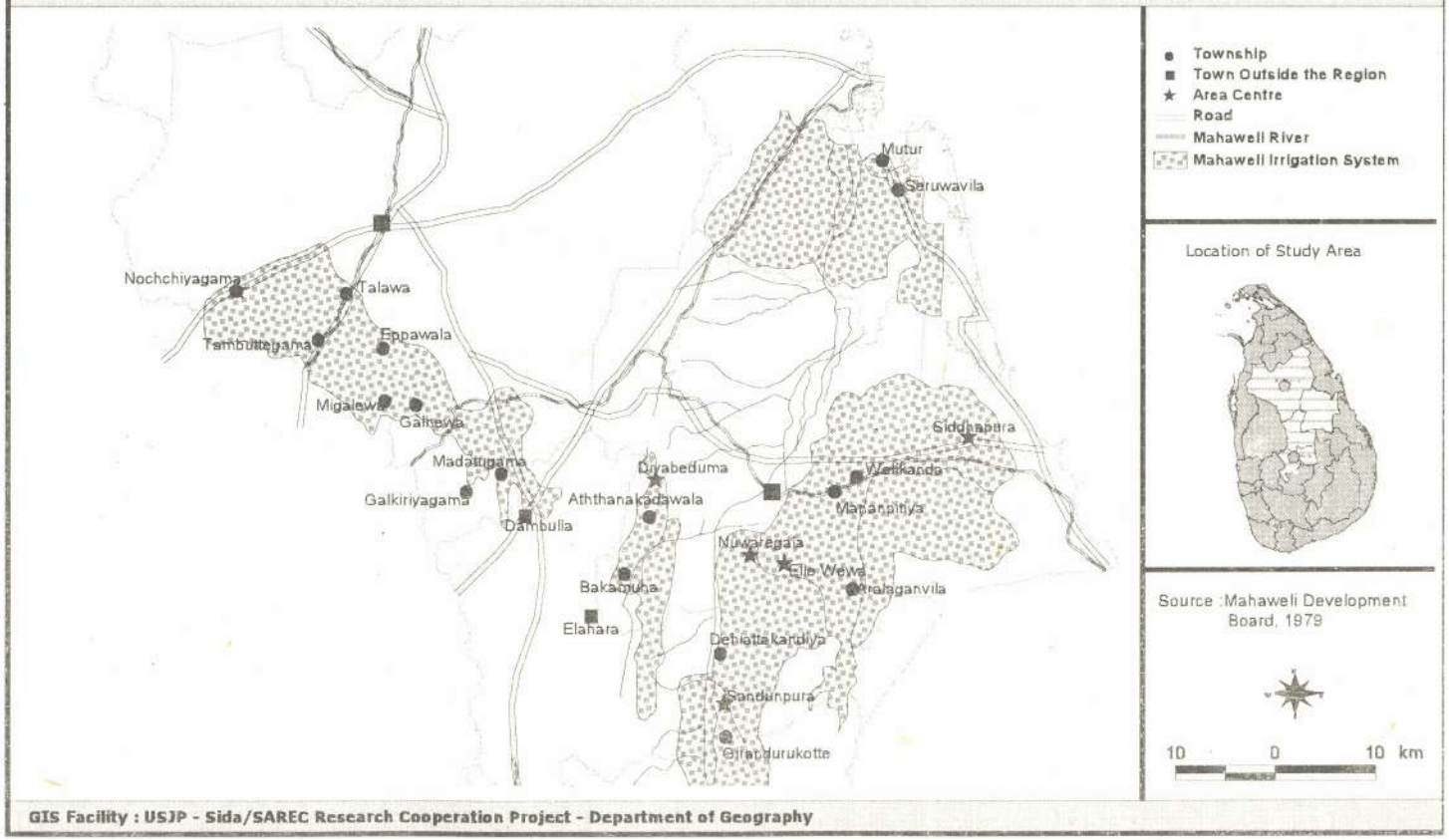
Land use planning was undertaken and land allocated for commercial, institutional, residential and other urban uses. Figs 4.3 and 4.4 illustrate the manner in which an existing small junction settlement was transformed into a planned Mahaweli township. Commercial activities and institutions are concentrated around the two main junctions and along the main roads, while residential functions are dispersed. Lands allocated for the townships of Girandurukotte and Dehiattakandiya were 100 ha and 140 ha in extent respectively. Approximately 12.5 percent of the land at Girandurukotte and 9.4 percent at Dehiattakandiya, are being used for administrative and other public sector functions. The proportions allocated for commercial activities at these two townships, were 3.3 percent and 4.6 percent respectively.

THE PERFORMANCE OF TOWNSHIPS AFTER 20 YEARS

Conditions appeared to be ideal for urban growth in the Mahaweli Development Project Area. The State had provided essential services and facilities to townships. It was expected that the equitable distribution of land -one hectare of irrigated farmland and 0.2 hectare of highland for a homestead garden- as well as

Fig. 4.2

Distribution of Planned Townships in Downstream Areas of the Mahaweli Development Project



GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

TABLE 4.2

Services, Facilities and Infrastructure at Each Settlement Level in System H, Mahaweli Development Area

General Functions	Hamlet (100-125 families)	Village Centre (400-500 families)	Township (2500-3000 families)
Transport and communications.	All weather roads, bus stop, regular bus service, postal service (post box)	All weather roads, bus stop and regular bus service, postal services (Sub Post Office)	All weather macadamized road to major urban centres, Main Bus stand and regular bus service or / and a Railway station. Automobile and machine repair shops, petrol station and postal service (Post Office).
Commercial	Cooperative depot, General stores	Branch of Cooperative society (purchase and sales) General stores	Periodic market, daily markets, sales outlets of Markfed, Multipurpose Cooperative Store, branches of Cooperative Wholesale Establishments, Retail outlets for consumer and household goods. Few consumer specialty shops.
Financial	-	Rural Bank	Branches of Bank of Ceylon, Peoples' Bank, Rural Banks.
Industrial	-	Small-scale industries, repair and maintenance of farm equipment	Agro-industrial facilities, service industries, repair and maintenance of farm equipment.
Education	Primary school	Junior Secondary School	Senior Secondary school and playground.
Health	Mobile Dispensary	Public Health Midwife, Dispensary.	Central Dispensary and Maternity Home, Public Health Centre, Rural Hospital.
Cultural	Land allocated for playground and religious institutions	Community Centre, Library or reading room, Religious institutions, Playground.	Community Centre, Multipurpose Hall, Library. Religious institutions, Cinema.
Administration	-	Grama Niladari's Office (Village Head Administrative Officer)	Police Station, Resident Project Manager's office.

Source : Settlement Planning Division, Mahaweli Development Board (1979)

TABLE 4.3

A Comparative Analysis of Services in Mahaweli Townships and other non-Mahaweli Towns in the North Central Province, 2001

Towns	Administration			Education	Health			Judicial & Security		Postal & Telecom				Transportation	
	Central Govt. Branch Offices	Pradeshiya Sabha	Divisional Secretariats	Senior Secondary School (Madya Maha Vidyalaya)	District Hospital(>50	Peripheral hospital (30 beds average)	Rural Hospital (22 beds average)	ASP Office	Police Station	Post office (Telephone Service)	Telephone exchange	Agency post office (IDD/ Fax/Telex)	Communication Centers	Railway Station	Regional Bus Terminal / CTB depot
Anuradhapura	●	-	●	●	-	-	-	●	●	-	●	●	-	●	●
Polonnaruwa	●	●	●	●	-	-	-	●	●	-	●	-	-	●	●
Hingurakgoda	●	-	●	●	●	-	-	●	●	●	-	-	-	●	-
Tambuttegama *	●	-	●	●	●	-	-	-	●	●	●	-	-	●	-
Kekirawa	●	●	●	●	●	-	-	-	●	●	●	●	●	●	●
Medawachchiya	●	●	●	●	●	-	-	-	●	●	●	-	-	●	●
Bakamuna *	●	●	●	●	-	●	-	-	●	●	●	-	-	-	-
Nochchiyagama *	●	●	●	●	●	-	-	-	●	●	●	-	-	-	-
Kahatagasdigiliya	●	●	●	●	●	-	-	-	●	●	●	-	-	-	●
Medirigiriya	●	●	●	●	●	-	-	-	●	●	-	-	-	-	●
Horowpothana	●	●	●	●	-	●	-	●	●	●	●	-	-	-	●
Padaviya	●	●	●	●	●	-	-	-	●	●	●	●	●	-	-
Mihintale	●	●	●	-	-	●	-	-	●	●	●	-	-	●	-
Galenbidunuwewa	●	●	●	●	-	-	●	-	●	●	●	-	-	-	-
Aralaganvila *	●	-	●	-	-	●	-	-	●	●	-	-	-	-	-
Kebithigollewa	●	●	●	-	-	-	●	●	●	●	●	-	-	-	●
Galnewa *	●	●	●	●	-	●	-	-	●	●	●	-	●	-	-
Talawa *	●	●	●	-	-	●	-	-	-	●	-	-	-	●	-
Habarana	●	-	-	-	-	-	●	-	●	●	-	-	-	●	-
Rambewa	●	●	●	-	-	-	●	-	-	-	-	-	-	-	-
Eppawala *	●	●	-	●	-	-	●	-	●	●	●	-	-	-	-
Manampitiya *	-	●	-	-	-	●	-	-	●	●	-	-	-	●	-
Thirappane	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-
Maradankadawala	●	-	-	-	-	-	●	-	-	●	-	●	●	-	-
Mahavilachchiya	●	-	-	●	-	-	●	-	●	-	-	-	-	●	●
Jayanthipura	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-

Source:UDA,Anuradhapura 2000. * - Mahaweli Townships

the provision of irrigation water, infrastructure facilities and basic services would improve the Physical Quality of Life, increase the marketable surplus and enhance incomes of settler families in the hinterland. This section attempts to assess the performance of townships after 2 decades, by using criteria such as the functional diversity or the number of services and facilities provided by each centre; number and type of secondary and tertiary activities; their rank in the regional hierarchy; the quality of services; the size of the hinterland (radius of the zone of influence) and benefits accruing to the hinterland population.

FUNCTIONAL DIVERSITY AND THE QUALITY OF SERVICES IN THE MAHAWELI TOWNSHIPS

Services Provided by the State

At the planning stage, the State expected to provide an equal number of middle order administrative, educational, health, judicial and security, postal and telecommunication services to all the townships (Table 4.2) but in practice not all the townships have been provided with the same number and quality of services (Table 4.3). Tambuttegama and Nochchiyagama in System H were provided with branch offices of the Central Government, Divisional Secretariats, Senior Secondary schools, Banks, District hospitals, Police Stations, Post Offices, Telephone Exchanges and communication centres. Tambuttegama has the added advantage of possessing the Resident Project Manager's Office for the System H and a Railway station (Figure 4.3 and 4.4). Hence Tambuttegama has reached a higher level in the central place hierarchy when compared to other townships in System H such as Talawa, Galnewa and Eppawala. Some of the higher order administrative functions are concentrated at Bakamuna in System B except for a Senior Secondary school and a District hospital.

Enterprises of the private sector

The townships have not succeeded in attracting an equal number of establishments that perform middle order functions. In 1992, Tambuttegama possessed the largest number of registered private sector enterprises (225) followed by Nochchiyagama with 208 (ISTI 1993). In townships such as Madatugama, Galkiriyagama, Migalewa and Galnewa, the number of enterprises ranged between 53 and 98. In the remaining Mahaweli Systems, only Aralaganwila and Manampitiya in

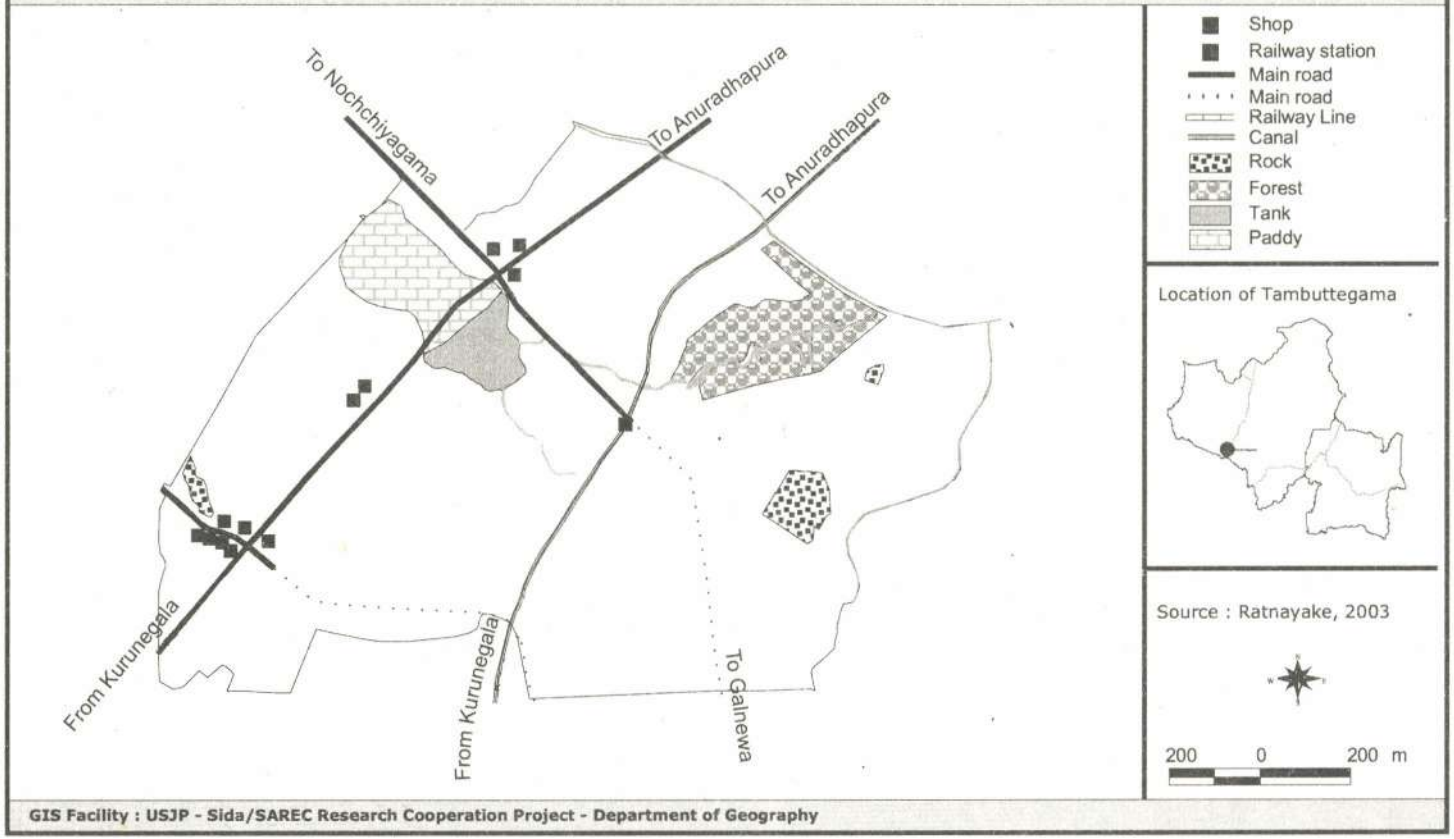
System B had a concentration of over 100 business units. Retail and wholesale trade (mainly lower and middle order functions) had become the most important activity (Table 4.4). On the average, the proportion of enterprises engaged in commercial activities ranged between 60 per cent and 74 per cent of the total in the townships established in Systems G and B respectively. However, in individual townships such as Welikanda in System G and Tambuttegama in System H, wholesale and retail trade accounted for 84 percent and 75 per cent respectively.

Even 10 years after the launching of the project, small townships such as Galnewa had not been able to attract a large number of specialized shops (Wanasinghe 1987). At the time, the majority of general stores at Galnewa had diversified the range of goods offered so as to spread their range of consumer demand. In other developing countries too such shops have a collection of different items that are generally sold in a number of specialized shops in larger towns '*so as to provide a variety of commonly purchased goods without allowing much consumer choice or catering to specialist or bulk demands*' (Bromley 1976).

The situation had changed appreciably by 1992 and in Galnewa and most of the other townships; not only the number and variety of general stores but the number of specialized shops had increased. Nevertheless, the rate of growth of business activities at Galnewa, Migalewa and Girandurukotte was relatively slow when compared to that of Tambuttegama, where the number of commercial, industrial and service enterprises had increased from 255 in 1992 to 386 by 2002 (Table 4.5). These enterprises include a wide variety of retail establishments such as vegetable, fish and meat stalls and specialized shops (including branches or agents of large city based enterprises) that meet the demand for middle order goods of town dwellers (mainly professionals in the Government sector) and villagers. Of special significance is the collecting centres of agricultural produce (wholesale traders who collect local produce for sale at outside markets) and shops that sell agricultural inputs (directly to farmers and indirectly via small village boutiques) hardware, electrical and electronic goods, tractors, motor spare parts and jewellery. Post harvest spending is comparatively high and Tambuttegama and towns outside the Mahaweli region such as Kekirawa and Anuradhapura are able to satisfy the demand for middle order and luxury goods, although some goods are sometimes mortgaged or pawned during times of hardship.

Fig. 4.3

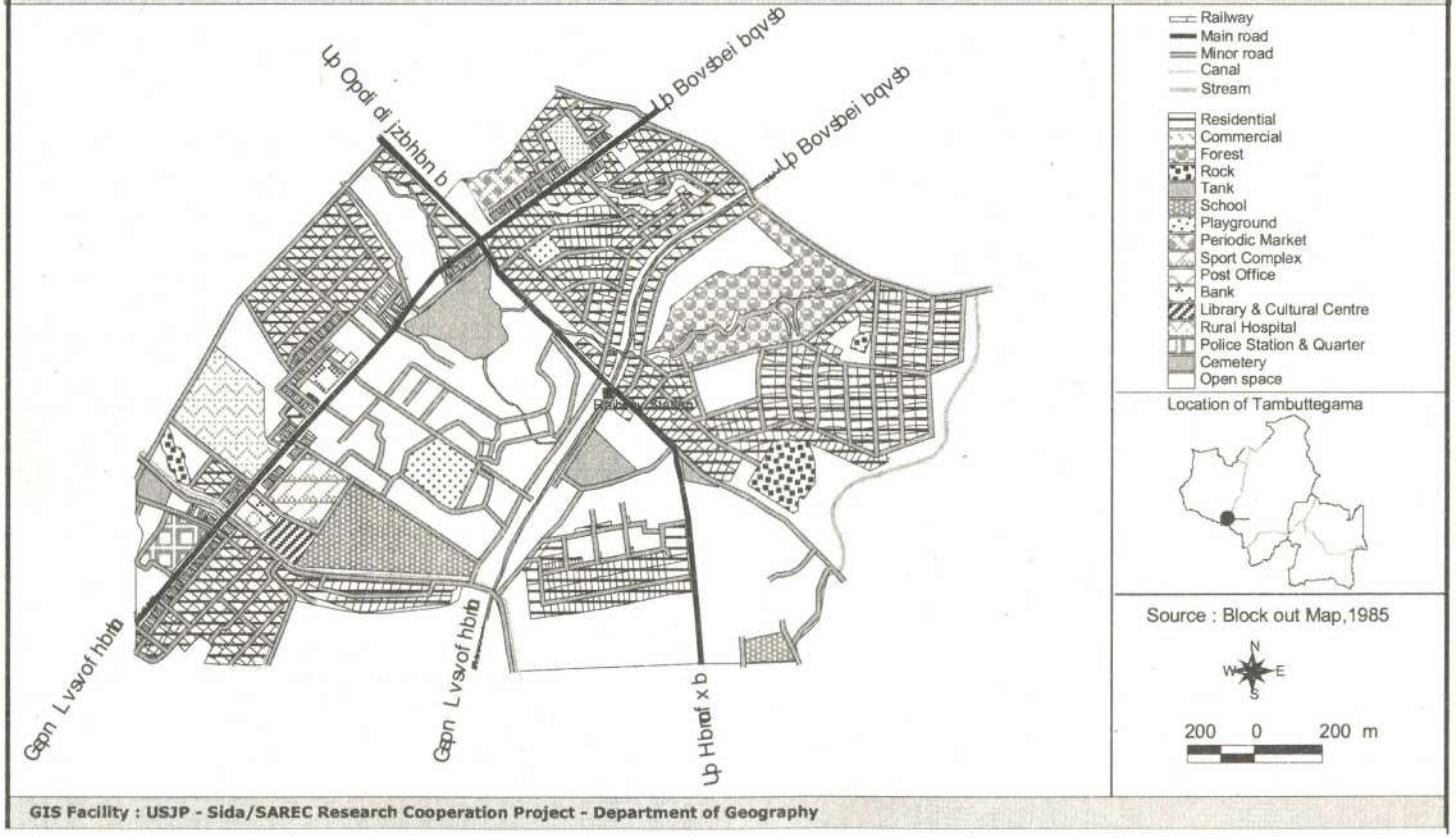
Tambuttegama Junction in 1984



GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

Fig 4.4

Tambuttegama Planned Township



GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

TABLE 4.4

Distribution of Enterprises in Townships in the Mahaweli Development Project Area, 1992

Townships and Rural	Number of Enterprises by Sector and by Block / System								
	Agriculture, Forestry & Fishing	Mining and Quarrying	Manufacturing	Construction	Wholesale & Retail Trade	Transport, Storage & Communications	Banking & Financial Services	Community & Personal Services	Total
System B: Rural areas	68	2	239	-	472	22	1	48	852
Welikanda (Township)	-	-	1	-	52	1	-	8	62
Aralaganwila (Township)	-	-	17	-	96	-	1	23	137
Manampitiya (Township)	-	-	12	-	74	2	2	13	103
Townships	-	-	**30**	-	**222**	**3**	**3**	**44**	**302**
Total for System B	**68**	**2**	**269**	-	**694**	**25**	**4**	**92**	**1,154**
System C: Rural Areas	**175**	**4**	**231**	**3**	**788**	**16**	**2**	**80**	**1,299**
Girandurukotte (Township)	03	-	4	-	60	1	2	12	82
Dehiattakandiya (Township)	01	-	8	-	57	1	5	7	79
Townships	**4**	-	**12**	-	**117**	**2**	**7**	**19**	**161**
Total for System C	**179**	**4**	**243**	-	**905**	**18**	**9**	**99**	**1,459**
System G: Rural Areas	**13**		**219**	**4**	**234**	**3**	-	**32**	**505**
Bakamuna (Township)	-	-	12	-	62	-	4	13	91
Diyabeduma (Township)	-	-	7	-	29	-	1	8	45
Attanakadawala (Township)	4	-	29	-	42	-	1	8	84
Townships	**4**	-	**48**	-	**133**	-	**6**	**29**	**220**
Total for System G	**17**	**4**	**267**	**4**	**367**	**3**	**6**	**61**	**729**
System H: Rural Areas	**87**	**10**	**426**	**1**	**1,002**	**10**	**1**	**128**	**1,665**
Madatugama (Township)	1	-	7	-	37	-	-	8	53
Galkiriyagama (Township)	-	-	10	-	26	-	-	7	43
Galnewa (Township)	-	-	12	-	67	-	4	15	98
Migalewa (Township)	-	-	7	-	44	1	3	16	71
Tambuttegama (Township)	1	-	30	-	180	1	5	38	255
Eppawala/Endagala (T'ship)	-	-	14	-	95	1	2	19	131
Talawa (Township)	-	-	14	-	77	2	2	20	115
Nochchiyagama (Township)	-	-	20	-	143	2	3	40	208
Townships	**2**	-	**114**	-	**669**	**7**	**19**	**163**	**974**
Total for System H	**89**	**10**	**540**	**1**	**1,671**	**17**	**20**	**291**	**2,639**

Source: GHK International et al (1993)

TABLE 4.5

Commercial, Industrial and Service Activities in Selected Townships in the Mahaweli Development Project Area, 2002

	Thambuttegama (Sys H)		Talawa (Sys H)		Galnewa (Sys H)		Nochchiyagama (Sys H)		Bakamuna (Sys B)		Aralaganwila (Sys B)	
	Tot	%	Tot	%	Tot	%	Tot	%	Tot	%	Tot	%
General Merchandise	91	24	85	36	29	22	75	27	14	26	120	42
Vegegable/Fish & Meat Stalls	23	6	9	4	8	6	21	8	-	-	1	1
Hardware Shops	5	1	9	4	4	3	-	-	-	-	1	1
Textiles/Apparel Products	18	5	8	3	9	7	7	3	3	6	6	2
Agro-equipment Chemicals and Fertilizers	18	5	6	3	1	1	8	2	-	-	11	4
Shoe Shops	4	1	-	-	3	2	4	2	-	-	3	1
Spare Parts	11	3	1	1	6	5	15	5	-	-	4	1
Eating Houses/Resturants and Snack Bars & Hotels	15	4	10	4	8	6	5	2	9	17	8	3
Pharmacy	4	1	3	1	2	1	5	2	-	-	1	1
Collection & Distribution of Local Produce	21	6	7	3	4	3	22	8	-	-	21	7
Electrical & Electronic Goods	5	1	3	1	2	2	10	4	-	-	3	1
Jewelary Shops	11	3	5	2	4	3	12	4	-	-	1	1
Furniture & Fittings	16	4	10	4	3	2	8	3	-	-	7	2
Other Commercial Activities	40	11	20	9	7	5	49	18	1	2	32	11
Manufacturing Industry	35	9	24	10	6	5	9	3	20	38	37	13
Service Industries & Services	69	18	36	15	36	27	24	9	6	11	30	10
Total	386	100	236	100	132	100	274	100	53	100	286	100

Source: Provincial Secretariat, Anuradhapura (2001) Trade Licenses Issued for Enterprises (Registered Establishments)

Note:

Other Commercial Activities include betting shops, florists and wine stores Manufacturing Industries include grinding mills and saw-mills Service Industries include repair of motor vehicles and agro – equipment

In all townships, periodic markets (*polas*) in which market days are staggered to enable the traders to reach a large threshold population, are patronized by town dwellers and villagers alike. *Polas* play a significant role as local exchange centres as well as markets that facilitate inter-regional exchange of goods (Karunanayake et al 2003, Rupasena 2003). Although the number of stalls and market participants fluctuates from time to time, on the average about 250 itinerant traders (predominantly males) congregate at the Tambuttegama *pola*

(held on Wednesdays) while the numbers range between 150 and 200 in *polas* located at Talawa (on Thursdays), Eppawela (on Fridays) and Galnewa (on Saturdays) (Table 4.6). The number of traders and consumers increase after harvest in March/April when there are sufficient funds to purchase commodities required for the Sinhala and Hindu New Year festivities. The Tambuttegama *pola* for example, had attracted 464 traders (in stalls and open spaces) and 4,200 consumers in a day (Menege et al 1998). These *polas* offer a wide range of goods including essential food items (fresh vegetables and fruit, rice, lentils, dry fish and condiments); urban mass produced goods such as textiles, garments, plastic and aluminium ware, fancy goods and locally produced earthenware utensils. Traders include part time retailers such as farmers and housewives from the surrounding villages who sell perishable vegetables and fruit and purchase their weekly requirements from the *pola* vendors and collectors from different parts of the country who visit four to six *polas* during the week (Table 4.7). On one day each week, townships acquire a higher status among the central places and attract buyers and sellers from a wider hinterland.

TABLE 4.6
Number of Traders in Periodic Markets (*Polas*) in selected Townships

Pola	Male		Female		Total
	No.	%	No.	%	
Tambuttegama	193	78	56	22	249
Talawa	175	88	24	12	199
Eppawala	126	84	24	16	150
Galnewa	134	84	26	16	160

Source: Ratnayake, 2003

The other economic functions in townships are not as significant as commercial activities, as reflected in Tables 4.4 and 4.5. Manufacturing industries, for instance comprised between 10 and 24 per cent of the total number of enterprises in Systems B, G and H. In 1992, industries were limited to processing of paddy, grinding of chillies and spices and to the fabrication of metal products. A new type of service industry has emerged in townships viz; the repair and maintenance of farm machinery, motor vehicles and electrical items.

TABLE 4.7

Visit to *Polas* by Itinerant Traders each Week (%)

n=400

No.of Polas	T'gama %	Talawa %	Eppawala %	Galnewa %
One	3	2	4	5
Two	10	15	6	9
Three	14	18	6	8
Four	24	28	24	26
Five	20	15	22	24
Six	21	15	25	25
Seven	8	7	13	3
Total	100	100	100	100

Source: Ratnayake, 2003

Other enterprises in townships include the provision of health, educational, financial and personal services by the private sector. The proportion of industrial and service activities in 2002 ranged between 12 percent in Nochchiyagama to 32 per cent at Galnewa.

OWNERSHIP OF ENTERPRISES

A significant feature of private sector enterprises in townships is the proliferation of single owner-operated, micro-enterprises (Table 4.8). In 1992, out of 161 enterprises in the townships of System C, only 7 had employed more that 25 full time employees and in System H only 2 out of 974 enterprises had a labour force, which exceeded 25 in each establishment. In all the Systems there was an abundance of units that were operated by the proprietors themselves, sometimes aided by unpaid family labour. In the townships of System H which had largest concentration of enterprises, the proportion of owner operated enterprises amounted to 63 per cent while 30 per cent belonged to the micro-enterprise category. Except for an increase in numbers, the ownership pattern at the present time remains the same.

TABLE 4.8

Type of Enterprises in Townships in the Mahaweli Development Project Area, 1992

Townships	Number of Enterprises by type of Entrepreneur				
	Owner/ Propr. Only	Micro Enterprises	Small Enterprises	Medium/ Large Enterprises	Total
		Propr. & 1-4 full time (or equi. in part time workers)	Propr. & 5-24 full time (or equi. in part time workers)	Propr. & over 25 full time (or equi. in part time workers)	
System G (Rural)	405	81	17	2	505
Bakamuna (Township)	57	29	05	-	91
Diyabeduma (Township)	34	11	-	-	45
Attanakadawala (Town ship)	70	13	01	-	84
Total for System G	**566**	**134**	**23**	**2**	**725**
System B (Rural)	682	150	15	5	852
Aralaganwila (Town ship)	98	39	-	-	137
Manampitiya (Town ship)	66	33	4	-	103
Welikanda (Town ship)	34	28	-	-	62
Total for System B	**880**	**250**	**19**	**5**	**1,154**
System H (Rural)	1,433	209	19	4	1,665
Madatugama (Town ship)	38	14	-	1	53
Galkiriyagama (Town ship)	30	13	-	-	43
Galnewa (Town ship)	59	33	6	-	98
Meegalewa (Town ship)	58	11	2	-	71
Tambuttegama (Town ship)	154	87	14	-	255
Eppawala/Endagala (T' ship)	78	45	8	-	131
Talawa (Town ship)	77	30	7	1	115
Nochchiyagama (Town ship)	123	77	8	-	208
Total for System H	**2,050**	**519**	**64**	**6**	**2,639**
System C					
Rural Areas	1,025	250	20	3	1,298
Giradurukotte	43	30	5	4	82
Dehiattakandiya	46	24	6	3	79
Total for System C	**1,114**	**304**	**31**	**10**	**1,459**

Source: GHK International et al (1993)

The Distribution Pattern of Enterprises

A unique feature in the distribution pattern of enterprises is that only a small proportion is concentrated in townships. Owing to the raw material and market oriented nature most of the processing activities are dispersed over a wider area. As much as 63 per cent of the enterprises in System H, for example, are distributed in hamlets and village centres. It was observed that 72 industrial units have been dispersed in the rural areas of Galnewa region (irrigation block) as opposed to 12 concentrated at the Galnewa Township. Similarly in the Madatugama region, the proportion of urban to rural industrial units was 1: 9 with only 7 industries located in the Madatugama Township. Only the larger Township of Tambuttegama had a concentration of nearly 50 per cent of the total.

The distribution of commercial enterprises follows the same pattern. In System G as a whole, only 133 wholesale and retail units had been located in the three townships whereas its rural areas were able to sustain 234 establishments. Some of these rural shops are located in residences and are owned and operated by members of farm households. When individual irrigation blocks (which include rural areas and townships) are taken into consideration, it is evident that except for Tambuttegama township in System H, the proportion of commercial enterprises concentrated in townships is relatively low. On the other hand, transport and communications, financial, health and educational services that require higher levels of investment, ease of access and a larger clientele, tend to concentrate in townships.

PERFORMANCE OF TOWNSHIPS AS CENTRAL PLACES

As explained above, not all the planned townships have developed at the same rate and do not perform equally important functions. Most of the townships are small in size with a population that range between 1000 and 3000 (Table 4.9). An excellent criterion that can be used to measure the relative importance of Mahaweli townships is their rank in the regional (North Central Province) hierarchy of Central Places. Among the townships, only Tambuttegama (population 7358) and Bakamuna (population 1576) had a relatively higher concentration of private and public sector enterprises that provide higher and middle order goods and services (Table 4.3). As a result, they have been elevated to the level

of third order central places on par with the old established small towns such as Kekirawa, Hingurakgoda and Medawachchiya (Fig.4.5, Table 4.9). Nochchiyagama, Aralaganwila, Galnewa and Talawa have emerged as fourth order central places in the hierarchy, surpassing older towns in the region such as Kahatagasdigiliya (UDA 2001, Wanasinghe 2003). The other townships have not developed as rapidly as expected.

INTERACTIONS WITH THE HINTERLANDS

The impact of townships on the surrounding region as well as the nature of rural-urban interaction can be assessed by the size of the hinterland or the zone of influence. The size of the hinterlands vary, depending on factors such as the quality and quantity of goods and services offered by each township, surplus of agricultural produce available for sale in rural areas, the purchasing power of the population, the availability of transport facilities and competition from other townships.

TABLE 4.9
Functions of Selected Townships in the Mahaweli Project Area

Name of Township	Centrality Values	Hierarchy (Order)	Population 1998	Radius of zone of influence (km)
Tambuttegama (Sys H)	63	3rd	7,358	20-29
Bakamuna (Sys B)	58	3rd	1,576	40-49
Nochchiyagama (Sys H)	57	3rd	4,177	40-49
Aralaganvila (Sys B)	52	4th	1,684	20-29
Galnewa (Sys H)	51	4th	2,611	20-29
Talawa (Sys H)	50	4th	2,327	10-19

Source: UDA, Anuradhapura, 2001

The radius of the zone of influence of Bakamuna and Nochchiyagama extends up to 40 km but along transport routes the impact is felt up to a distance of 49 km while Tambuttegama, Aralaganvila, Galnewa and Eppawela serve regions (both inside the Mahaweli Project and outside it), within a radius of 20 and 29

km (UDA 2001). Since the townships in System H are located in close proximity to each other, there is a tendency for the zones to overlap as illustrated in Figure 4.6.

The following empirical evidence from three hamlets in the hinterland of Tambuttegama (Kothmalpura, Adiranigama and Siyambalagahagama) on the complex consumption and marketing patterns reveals the extent to which services in townships are used by farmer households:

- Members of farm and non farm households avail themselves of the middle or higher order services and facilities such as hospitals, banks and government offices and higher order goods such as electrical items, jewellery and tractors from the larger townships or large towns outside the region generally, after harvest.

- Wanigaratna (1997) noted that distress sales accounted for 60 per cent of the marketable surplus in the Mahaweli. After harvest, as much as 77 per cent of the farmers in the sample villages sold their surplus paddy to village boutique keepers who had offered fertilizers, agro-chemicals etc., on credit, while 23 per cent was sold to visiting collectors some of whom are based in the townships (Ratnayake 2003); the village boutique keepers in turn sell the paddy to rice mills located outside the region, thus by-passing the townships;

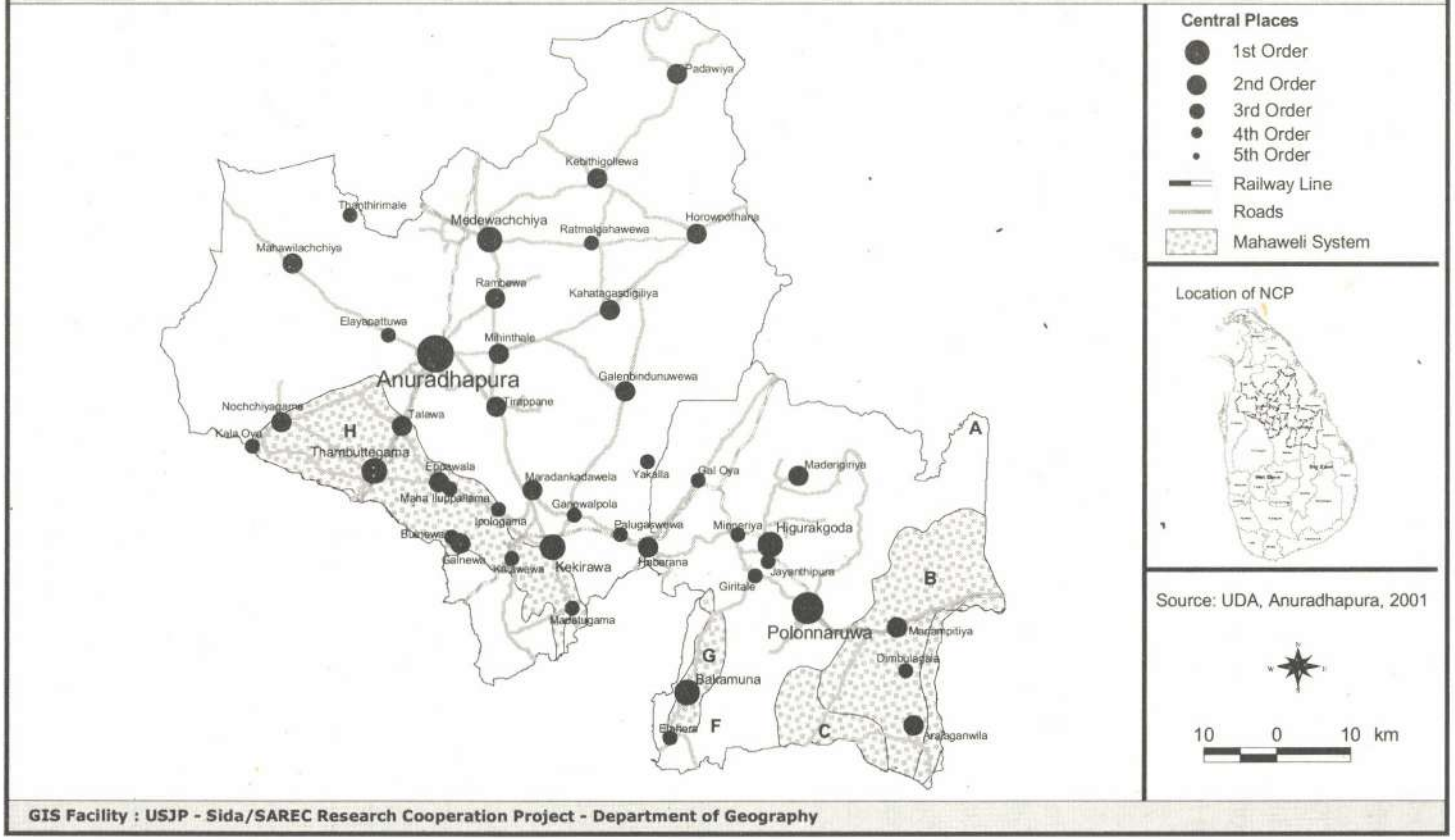
- Vegetables were purchased either by village boutique keepers who function as collectors or by visiting collectors for sale at the Regional Wholesale Centres (RWC) located outside the region such as the Dambulla Dedicated Economic Centre (DDEC) or other large towns and cities. Recently a RWC was opened at Tambuttegama to facilitate the sale of fruits and vegetables, by the farmers themselves (Ratnayake 2003)

- Due to seasonal poverty, the bulk of the daily requirements of poorer farmers was purchased from the village boutique on credit or from the nearest *pola* in small quantities. In times of hardship nearly 90 percent of the farm households at Adiranigama and 79 percent at Kotmalpura purchased their daily provisions from village boutiques (Ratnayake 2003).

- As much as 63 per cent of the farmers in the sample bought fertilizers, agro chemicals and other agricultural inputs from the village boutique while another 34 per cent purchased these from the nearest township (Ratnayake 2003)

Fig. 4.5

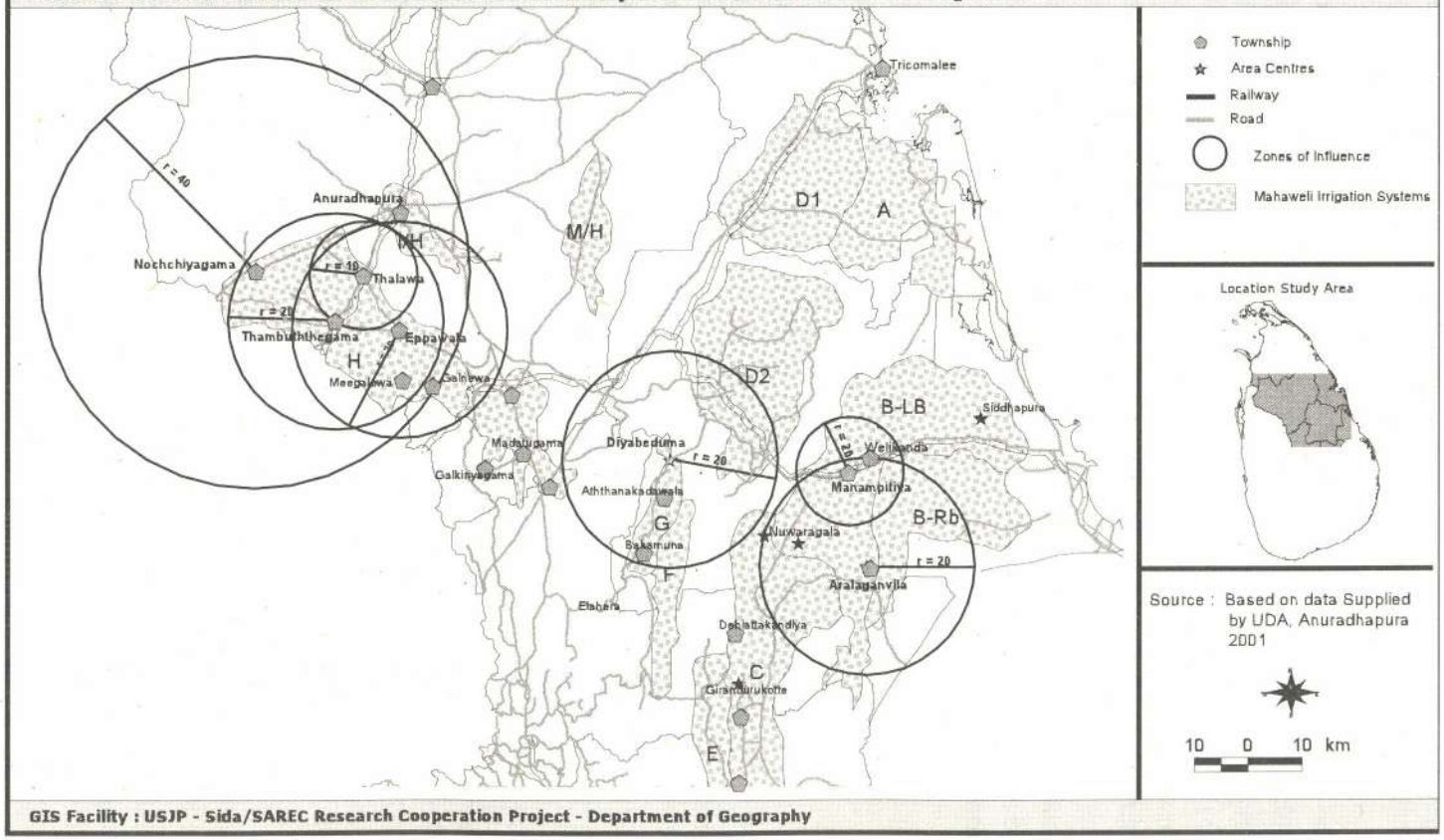
Hierarchy of Central Places in the North Central Province 2001



GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

Fig 4.6

Zones of Influence of Selected Townships in the Mahaweli Project



GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

- The richer farmers and village boutique keepers had more contacts with larger towns and cities and as a result bypassed the townships.

The above analysis indicates the extent to which village boutique keepers play a multiple role in the rural economy at present. During the pre-Mahaweli and the early settlement period too, they had performed a number of roles as highlighted by Lundqvist (1978), the MDB (1979) and Wanasinghe (1987). At the time, the advantages offered by the village boutique as opposed to other marketing channels and sales centres were numerous although the price of goods offered was not fixed and profits as high as 265 per cent had been obtained by village boutique keepers, recorded by Lundqvist in 1978. The following statement about the role of the village boutiques in the pre-Mahaweli period, is applicable to the current situation as well:

> *"(They) fulfill an insurance function and guarantee peasants a certain level of consumption in periods when they are short of money. This has a double effect: one is a kind of 'insurance' in the period between two harvests; the other is that this insurance should influence the spending pattern of the peasants immediately after the harvest...the boutique is a service for low income groups or low income periods. The latter is of great importance because it related the function of the boutiques to spending patterns developing in the area and also to the level of indebtedness one has at the moment of harvest" (Mahaweli Development Board, 1979).*

Dewar et al (1986) when discussing the role of such local trading outlets in other developing countries stated that the rural producers and consumers were being *'locked into the sphere of influence of single traders and are unable to break out of it'*. The reasons advanced by Dewar et al (1986) are highly relevant to the situation in the Mahaweli viz

- these conditions are entrenched in many areas through 'debt servitude' where the traders grant credit to farmers and control the distribution of the surplus;
- the considerable monopoly control exerted over transport by rural traders;
- control over movement is often reinforced by a control over storage facilities;
- middlemen or local traders can exert a considerable control over prices;
- there is little integration of local markets;

The growth rate of townships and their ability to contribute to regional development are closely related to the income generated by the rural population. Although the per capita gross income levels have increased over the years from Rs.3512/=in 1984 to Rs.21,927/= in 1999, the real per capita income for all the Systems which had amounted to Rs. 2607/= in 1984 had increased gradually to Rs.5701/= in 1999 (Table 4.10). In System H, the annual gross per capita income and the real per capita income in 1999 were Rs. 23,371/= and Rs.6,076/ = respectively. Similarly, there was a considerable difference between the gross and real incomes per households in all the other Systems. As Scudder and Wimaladharma (1985) and Bandaragoda (1986) rightly pointed out, the production level in the 1980's could only provide a subsistence income for the farmer families. Statistics in Table 4.10 emphasize the fact that the situation in the 1990's has not improved. Gooneratne (2000) point out that many Mahaweli regions are turning into lagging regions due to the excessive dependence on a monocrop (paddy), slow progress in agricultural diversification, small size of holdings and inadequacy of manufacturing and tourist industries.

Siriwardena's research (1980) in System H, proved that although there was an equitable distribution of land at the beginning, fragmentation and hidden tenancy had occurred within a relatively short period which had affected the income and purchasing power of farmer families. In System C, hidden tenancy was approximately 20 percent but in Systems H and G, the proportions were as high as 35 and 40 percent respectively. Another problem was the growing income inequality between the rich and the poor, although the income share gap between the lowest 60 per cent and the highest 30 per cent had declined from 23.7 per cent to 15.6 per cent between 1991 and 1997 (Wanigaratna 1997). Currently, the hinterland population of townships is faced with low income and an inequitable distribution of land. In addition to these factors, the inadequacy of off-farm and non-farm employment opportunities for second and third generation of settlers in the Mahaweli Development Project area, means that the number of dependents on the small landholdings has increased. As noted above, most of the establishments in the region are micro enterprises that have not created a large number of employment opportunities locally.

Another significant factor that has inhibited the growth and development of certain townships is that the hierarchy of service centers in each settlement system in the MDA was planned in isolation. As reiterated by Scudder in 1981,

> *the greatest single weakness of Mahaweli planning is the long-standing tendency to focus on separate areas under irrigation command (Mahaweli)*

as opposed to the integrated development of larger areas. Intersystem relationships tend to be ignored both in regard to the different Mahaweli systems and to other settlement areas as Minipe and Minneriya... Unless they lie within Mahaweli systems boundaries, existing commercial centers like Kekirawa (System H), Mahiyanganaya (System C) and Kaduruwela and Batticaloa (System B) continue to be ignored.

Scudder also noted that

not only are the new townships like Girandurukotte, very expensive to construct .... But their growth rates tend to be disappointing and their location near existing commercial centres may interfere with the development of either type as a regional town at the top of the urban hierarchy, the result being lesser order rural towns which do not realize the potential of the settlement area to initiate a process of integrated area development.

The above statement about Townships in System C, applies to System H too. The establishment of townships close to each other in System H and to older towns such as Dambulla and Kekirawa, located outside the region, had a detrimental effect on the grom 0 wth of Migalewa, Talawa and Galnewa. Other factors that inhibited the expansion of Galnewa were a) poor site selection by planners (located a few miles away from a road junction) and b) the shifting of the Resident Project Manager's office (the regional administration centre for the entire system). Attempts by the Government to diversify economic activities by establishing an Industrial Estate at Tambuttegama have not been successful. On the other hand, garment factories established under the 200- and 50 Garment Factory Programme have had a positive impact on the socio-economic development of farm households in the North Central Province but very few garment factories have been located in the Mahaweli settlements (Wanasinghe 2001).

TABLE 4.10
Annual Income in Downstream Mahaweli Irrigation Systems 1987 and 1999

Description	1987 (SLR)	1999 (SLR)
System B		
Gross Per Capita Income	3,753	19,578
Gross Income Per Household	17,265	102,824
Real Per Capita Income	3,753	5,090
Real Household Income	17,265	26,734
System C		
Gross Per Capita Income	4,388	24,745
Gross Income Per Household	20,187	121,852
Real Per Capita Income	4,388	6,437
Real Household Income	20,187	31,681
System G		
Gross Per Capita Income	6,573	20,103
Gross Income Per Household	30,237	139,516
Real Per Capita Income	6,573	5,226
Real Household Income	30,237	36,274
System H		
Gross Per Capita Income	12,927	23,371
Gross Income Per Household	25,960	124,044
Real Per Capita Income	12,927	6,076
Real Household Income	25,960	32,251

Source: Mahaweli Development Authority, Mahaweli Statistical Handbook, 1999

CONCLUSION

The establishment of townships in the Mahaweli project and the provision of essential services and facilities have had a positive impact on the population by contributing to uplift their physical quality of life. At the inception, economic conditions appeared to be ideally suited for urban growth and regional development because of the equitable distribution of land, the potential for diversification of economic activities and increasing incomes. It was expected that multy-functional townships would help to generate growth in both rural and urban areas. One objective of attracting entrepreneurs to townships was to reduce the grip of the monopsonistic middlemen by allowing the farmers a greater choice in the purchase and sale of goods and services. Empirical evidence proved that the bargaining power of the low-income farmers has not increased because of hidden fragmentation seasonal poverty, and growth of income inequalities.

Townships have not succeeded in providing non-farm employment opportunities to excess labour in rural areas since most of the enterprises are small-scale, owner-operated establishments. The focus of townships is on services trade and commerce rather than on industrial activities. Hence, they have become centres that provide middle order goods and services to town dwellers and the people in the hinterland.

Not all the townships are of the same population size and they have not grown at the same rate. Decisions made at the inception of the project with regard to number of townships to be established, distance between townships and towns outside the region, the sites selected and type and level of services and facilities to be provided by the Government, have had a profound impact on the rate of growth of townships. Among the townships, a few centres such as Tambuttegama have developed faster than others and serve not only the Mahaweli project area but also older colonization schemes and traditional villages outside the project area. The majority of townships has not prospered.

Thus the introduction of a hierarchy of service centres, particularly, the establishment of townships, has had the desired impact on social development but unless a concerted attempt is made to develop the capacity of the larger townships to provide non-farm employment opportunities and to improve the economic level of rural hinterlands, it is unlikely that townships would be able to contribute to regional development, as expected.

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BRIDGE OVER TROUBLED WATER – A STUDY OF PANGANI DISTRICT (TANZANIA) AND HAMBANTOTA DISTRICT (SRI LANKA)

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INTRODUCTION

This paper is intended to give some reflections on the need for closer analysis of development issues by researchers from the south. In that connection I feel an urge to make a reflection of a more personal nature. After being a researcher of African issues for 25 years I took my first uncertain steps into research in Asia some five years ago. Even if a large part of my work is still located in Africa, I can honestly admit that my recent influence from Asia, primarily Sri Lanka, has been essential in adding new dimensions to my understanding of development and what it constitutes. I am sure that new perspectives could be added to the perception of development processes in Asia by African researchers, and visa versa. It is also possible to make people of the North aware of specific development trends as seen by researchers from Asia and Africa. Generally, research on development ought to be a collaborative effort, based on various regional perspectives and cannot remain an exclusive European-American domain.

As geographers we often undertake studies of conditions in various parts of the World. Getting into the local areas, it is easy to see that there are important differences between one place and another. Even so, development geography could gain from bringing in an element of what we can term comparative local studies. It would be important to compare the ground level situation in regions on different continents, such as South Asia and Sub-Saharan Africa, particularly as Sen (1999) has characterised these as being the two areas of the World living under an acute state of poverty. Consequently, new aspects to poverty might be gained in a comparison of different local conditions in these two regions. This is essential if we would aspire to combine theoretical understanding to development practice.

This paper will take as a starting point two comparatively poor districts, one in South Asia (Hambantota) and one in Sub-Saharan Africa (Pangani). During the

last few years I have been visiting the two districts to carry out research on a number of occasions. To me there are many features that are similar, even if basic factors are also greatly different. In the research, a priority has been given to a qualitative approach, mainly through in-depth interviews and observations. This does not say, though, that we are not taking available secondary sources, reports and statistics, into account.

It has to be emphasized from the very beginning that an analysis of local conditions in the Third World cannot ignore the influence played by global and national strategies. In addition, we have to get closer into the mechanisms behind how specific policies are formed by various actors, partly following a concealed agenda. What is presently referred to as globalisation can be traced back to the time of the great discoveries, going back some five centuries? That was a start of a continuous exploitation and plunder, slave trade, colonialism and lately unfair trade. Of course, these strategies needed some kind of collaborators, which got different names like local elites, comprador etc. With the call for modernisation after Independence donors started to look for a bridgehead into the new countries that was constituted by the "modern man".

Development is certainly a very complex concept, even one of the most complicated words in the English language (Watts 2000). The difficulty is accentuated further as we are moving into cultures that might not even have a word to express the deeper meaning of development. In the approach adopted by Sen (1999) poverty is a central notion, arguing that even if income is the main capability deprivation there is a need to go beyond that in studying the broader social exclusion. Below we will look at some aspects of social development, primarily exemplified by education, We will see how grand plans formulated in global venues are brought down to the local level as nothing but broken promises. Somehow we have lost the count of which DD (Development Decade) that we are presently living in. Recently, the ambitious Millennium Development Goals were formulated, including the objective to reach Education for All (EFA) by the year 2015. However, it is obvious that a certain number of countries in Africa and Asia are far below the projections to achieve EFA on schedule. One reason for this is that the commitment of the donor community is not implemented in practical action. An intention now is to give some retrospective considerations on how the Third World expectations have been replaced by a deepening deprivation.

HIGH HOPES – GLOOMY REALITIES

When entering a new millennium (according to the Christian calendar) it was time to formulate a number of ambitions for the global future. A central position in the millennium goals was to reduce the rate of World poverty by half. Eradication of poverty cannot, of course, be a western strategy, as even the Christian Bible has said that the poor has come to stay with us for ever. To operationalise this goal it is said that in the year 2015 the rate of the global population living in poverty, measured as the ones surviving on an income of below one US$ per day, should decrease from 30 to 15 percent. In addition to that we can also note high hopes and aspirations for health and education. Health related indicators include life expectancy at birth, infant and child mortality rates, access to primary health care for all etc. May be it would be time to wonder how far we have gone, or even in which direction we are travelling, compared to Alma Ata 1968.

It can here be high time to make a new follow up of what has actually been the policy outcome of the Convention of the Child from 1995, or the Social Summit in Copenhagen the same year. In the case of Copenhagen, one pertinent question will always come back – was it meaningful to discuss social development if economics were not brought in as a key issue? To look back in a longer time perspective we can ask – what actually happened with the Universal Declaration of Human Rights from 1948, or Truman´s claim in 1949 that we now had the ability to do away with world poverty.

On education we are now to understand that by the year 2015 all children are to be provided with education. Once again a retrospective recollection will put strong doubts on this EFA (Education for All) programme. After all what happened with the regional declarations in 1961 on UPE (Universal Primary Education) in 1970 for Latin America declared in Santiago de Chile, or in 1980 as stated for Asia (Karachi) and Africa (Addis Ababa)? Or did the Jomtien conference (1990) do anything at all to bring the children of the World any closer to the objective of Basic Education for All? On the EFA we can already note that few African countries follow the trends needed to reach the objective now set for 2015.

Education has for long been seen as a basic human right, but also a factor for alleviating poverty. With that as a main rationale many Third World countries were able to expand their education sector in an impressive manner at

independence after years of colonial neglect, for South Asia initiated in the late 1940s and for Sub-Saharan Africa around 1960. Two outstanding examples of this were Sri Lanka and Tanzania.

However, in the 1980s the attention given to education by the World Bank was in reality the kiss of death to any aspiration of bringing all children to school. Looking at the writing by Psacharopolous and Woodhall (1985) talking of education as an investment choice, brings in the school as primarily a selection criteria. Equality is brought in as a side objective, but hardly in a serious manner. Structural Adjustment Policies (SAPs) and more so the cost benefit calculations in relation to educational provision featured prominently in the World Development Report 1980 (World Bank 1980) that has created a new lost generation of uneducated youth in South Asia and Sub-Saharan Africa. The Sector Policy Paper on primary education was just a way to stress the new character of schooling (World Bank 1990). School fees were masqueraded under the more dubious expression of cost diversification. At the same time it is well worth noting that according to the World Bank (1993) primary education was the main factor distinguishing the economic progress in Pacific Asia as compared to the "misery" of Sub-Saharan Africa.

It is also the World Bank that has f(F)ostered the idea that vocational schooling is something negative to the Third World, built on some scanty research from Ghana (Foster 1965), but with a much more, but concealed, policy determination. In the Sector Policy paper any kind of diversified (read relevant) education is not cost efficient (World Bank 1991).

Education, like any other social service, had been turned into a commercial commodity supposed to follow elaborate free market principles. Against this we can quote a former classical economist, turned Buddhist, in his critique of free market solutions, calling it an institutionalisation of individualism and non-responsibility (Schumacher 1975). King (1991) has commented on the World Bank dominance in educational thinking, saying that it is because of all the resource that the World Bank put down on research and not because of the funds allocated by the Bank. In fact, the cost sharing has limited the access to social service, not least education, considerably (Gould 1993; Adepoju 1993). UNESCO (1993) said that it meant no improvements, but was the reason for a deteriorating in key educational indicators.

Education is here given as an example on how global strategies are wielding an enormous influence in the way individual countries are formulating their national policies. The World Bank has taken an increasingly more dominant role as the ideological leader of western development. Modernisation and economic growth have been leading principles in these strategies that is supposed to be guided by free market actors. At the same time we have seen how prominent researchers have been able to illustrate convincingly that we live in a world of forces building their power on structural relationships and dependency. Imperialism is as much a part of the global system today as it was in the early part of the last century. It is high time we face the truth – we are not living in a world built on harmony and there is no trickle down effects from the rich to the poor.

It has been possible to find certain alternative concepts being proposed in the development debate. Individual contributions in all this has been taken up, deliberated on and finally adjusted to mainstream development thinking. My own proposition is that the original concepts coming from an alternative agenda should be taken up for a closer analysis, by researchers from the south. A brief, but far from comprehensive, historical review will be given below on some of this alternative thinking.

ALTERNATIVE DEVELOPMENT THINKING – AN OVERVIEW

In the midst of an intensive development debate in the late 1960s/early 1970s dominated by an uncritical promotion of modernisation it was very refreshing to hear the voice of Dudley Seers (1972). His simple question was what is it that we are trying to measure? This was in relation to the constant search of the time to find appropriate indicators for development, sometimes aggregated to some form of composite index.

Stöhr and Taylor (1981) formulated the simple new formula for development work – development from below. Previous thinking of formulating projects from the north and to transferring development to the target groups in the south was now challenged (Wisner 1988). However, soon it was enough to find some representatives from the South involved in development projects to establish participation. If we had taken this more seriously it would have been better to base alternative development thinking on the analysis given at independence in Tanzania by Nyerere (1967), or the political forces in the war of liberation in Guinea Bissau (Cabral 1969). A more general psychological discourse on Africa

when colonialism gave way to independence is given by Fanon (1963). At a macro scale NKrumah (1958) focussed on the neo-colonial forces in a way that could be a lesson to many African leaders up till this very day.

An important innovation in the alternative thinking was the way Chambers (1983; 1997) has been able to correlate power to poverty in his deprivation trap. The way the local elite, in collaboration with other elite structures, are brought in as an obvious obstacle to development needs much further analysis. In the case of both Pangani and Hambantota it has been important to get behind these developments to understand why poverty is so persistent. Reading the formal documents and development plans we could wonder why nothing is actually happening. One central point to explain this dilemma is that modernisation is normally followed by stratification, or the deliberate creation of a middle class, leaving out the most serious victims of deprivation. It is clear that while poverty is to the detriment of a majority, some will also benefit from others being poor. This has been obvious in both Pangani and Hambantota.

Power is the focus in the publication by Friedmann (1992). However, his empowerment concept can probably be ranked very high among the radical expressions that has been watered down to mean nothing whatsoever in the normal donor/NGO rhetoric. There is an obvious danger that the liberal approach to poverty taken by Sen (1999) will be used in a similar manner. Probably it is essential to find alternative uses for the theoretical framework that has been provided (Shanmugaratnam 2001). Otherwise the capability approach to poverty will be a basis for all kind of mainstream development programmes.

From the above, it has been obvious that even the alternative discourse of development has been injected from the North, with a few exceptions. This follows upon a perceived intellectual superiority felt among people in the North, exposed eloquently by Said (1994). The fact that it has been so difficult to accept any development alternatives is basically an effect of our unwillingness to grasp that something positive might actually be emerging from the Third World. It is high time that this challenge is seriously taken up by researchers in the South. One example on how this can be done is in an article by Singh (1999) addressing the issue on how to build basic moral values in development.

Singh has also brought in the increasingly more obvious alliance World Bank – NGOs. A critical analysis of NGO activities has also been taken up by Tandon (1991). To him NGOs are to a large extent working without any demand on

them to be transparent. To many NGOs/CBOs it would be natural to act, intentionally or unintentionally, in spreading a western way of development thinking that might often be detrimental to the incorporation of indigenous development understanding. In fact, the present African local realities have been described as a constant struggle between the forces of modernisation and post-traditionalism (Nabudere 1997). So far, external pressure has been to promote modernisation, but the result so far has never really been translated into a form of development to the advantage of the poorer sections in the Third World.

As this paper will use the example on education to illustrate social development it would be worthwhile to say something on how this can be viewed from the point of view of alternatives. Without elaborating further it can be argued that Africa has been introducing its own concepts of educational ideology. Educational relevancy to the local reality has been core issues in policies expressed by Nyerere (1967) and van Rensburg (1984). However, neither Education for Self Reliance nor Education with Production has ever been implemented the way it was first intended. In a way an intellectual follow up to this kind of thinking can be found in the work by Negash (1996). The need and content of adult education and learning have been elaborated on by Kassam (1978) and Wa Mirii (1979).

Considering the type of education given in many Third World countries today it would be high time to review some of the above discourse. It takes as back to a strong and highly relevant critique from the early 1970s lead by Illich (1971). His characterisation of education, as one combined with custodial care, sterile competition and indoctrination is still largely valid. In connection to Illich we also have to mention the crucial work done by Freire (1972). That has introduced a whole new thinking in relation to how education can be a critical instrument in developing knowledge among the poor.

With that as a background it is time to move into the practical examples. Initially something will be said about the educational policies is Tanzania and Sri Lanka, before going down to the local levels. Being two countries representing different world regions we can see how there are some similarities that bring them together. Both countries were a kind of symbol in the early 1970s, for promoting a strong policy of self-reliance. Both countries have adopted a policy to promote an indigenous national language, i.e. Kiswahili and Sinhala, in favour of the colonial English. However, as Kiswahili was seen as a unifying force, Sinhala can be regarded as a way to exclude the Tamils as the largest minority group. Another factor has been the strong promotion of educational development. What will be

obvious from the account below is how an ambitious policy in both countries was changed totally by the economic reforms, 1977 in Sri Lanka and the early 1980s in Tanzania.

SOCIO-ECONOMIC DEVELOPMENT AND EDUCATION IN TANZANIA

It has to be recognised that present-day Tanzania is a creation of African, European, Arab and Asian influences. Arabs were establishing themselves at the coastline and Zanzibar more then a millennium ago. One of their marks on the future development was an intensive slave trade, using Zanzibar as a base. In the early 1800s Indians were also brought in as traders. The Europeans made an impact first in the early 1500s in confrontation with the Arabs. Mainland Tanganyika was initially placed under German colonial rule, which after the First World War was turned into a British Mandate. Independent Tanzania was established as a result of the confrontation of external economic interests, but was still able to resist being made a willing partner for a continuous exploitation. Being located on the coastline Pangani is very much part of this legacy. Early policies were largely connected to the first President Julius Nyerere. His line of self-reliance has not being well received by the major donors, as well as the Bretton Woods organisations. A continued harsh treatment by external forces is still hampering Tanzanian development.

In terms of economic development Tanzania has for long been ranked among the five poorest countries in the World, as measured by GNP per capita. Against this, stands a substantially better position in a list based on HDI (Human Development Index). The country is known for its relative stability in a region of turmoil, Southern Africa, Great Lakes and the Horn of Africa. One exception to this is the insecurity of the partner in the union, i.e. Zanzibar. To a large extent the specific Tanzanian ideology of development, known as *ujamaa* or African socialism, is a legacy of the first President Julius Nyerere.

While most African nations have just simply followed mainstream educational trends as a direct follow up on the colonial conditions, Tanzania has introduced a number of innovative reforms. As mentioned above Nyerere formulated what came to be known as Education for Self-Reliance. based on the African local reality, in the particular on African extended family structures – *ujamaa*. Education was to provide a communal sentiment of co-operation needed for a majority rural population. Primary education and adult learning were the two pillars on

which to establish this education. From this follows that Tanzania soon reached high Gross Enrolment Rates (GER) at the primary level, while the secondary lagged considerably compared to most neighbours. In addition, the curriculum was supposed to include some practical biases. As such some form of vocational training was incorporated at all levels. Further, due to a combined effect of high GER and adult education the literacy figures in Tanzania was comparatively high. However, in 1999 literacy is given at 75 percent, which would be on the average in the region.

It is with a certain dismay that we can now look at what has happened to Tanzanian education up to the 1980s, which is a mainstreaming into a more general African situation – partly on external "advice". Like in neighbouring countries Tanzania introduced various systems of costsharing, such as fees and numerous contributions. This has made schooling very competitive and a matter of financial means. Equal opportunity as a moral value has been replaced by a policy favouring the economically most advantaged. In the early 1980s Tanzania was pressurised to follow the neo-liberal agenda (the Washington Consensus) set by the World Bank/IMF, which mainly consisted of economic reforms. However, what were basically economic strategies also touched on social guidelines, such as a sector policy paper on primary education (World Bank 1990). Even if fees are now formally abolished it is doubtful whether the commercialisation of schooling has ceased.

During most of the 1990s the Gross Enrolment Rate (GER) shifted slightly around the 75 percent mark nationally. However, these statistics neglect various educational deficiencies, such as repetition, drop out and a generally poor quality. A better representation on how well the educational sector is doing can be given by the Net Enrolment Rate (NER). In the decade between 1988 and 1998 this figure increased moderately from 54 to 57 percent. This means that Tanzania, like almost the whole of Sub-Saharan Africa, is far away from the objective of reaching Education for All in 2015. In addition to that there are substantial regional and social inequalities. Regionally the southern parts of the country have always been lagging far behind in socio-economic development. The present tendency has been described thus; *"...ongoing replacement of a system of equitable educational opportunity with one based on survival of the financially and socially fittest..."* (East African, November 2 1998). Similarly, the Express said that if parents did not send their children to school during the 1960s it was regarded as a crime against the universal basic human rights, but in the 1990s many parents could simply not afford this any more.

Of pupils enrolled in Standard 1 during the latter part of the 1980s it has been calculated that some 70 percent completed the seven years primary cycle of schooling up to the middle/late 1990s. It is on record that some 85 percent of the drop out was caused by truancy. In this case it can be assumed that this kind of drop out is closely connected to numerous interruptions due to an inability to pay fees and contributions to school.

The Structural Adjustment Programmes has also seen a considerable increase in the secondary school enrolment rates, but this has mainly been due to the introduction of private schools. Thereby, the way is paved for the more affluent ones to gain access to the kind of education that will qualify them for selection into the wage earning labour market, or higher education.

SOCIO-ECONOMIC DEVELOPMENT AND EDUCATION IN SRI LANKA

Sri Lanka was in early contact with people from South Asia and the Far East. Later on the Portuguese, Dutch and the British came to dominate the development process.

Like Tanzania there has been a strong priority on the social sector development in Sri Lanka. At one time the development ambitions were to create a fifth tiger on the model of Pacific Asia. This has not been realistic, not least due the war economy that has meant that military expenditure has taken a large share of the national budget. Still it has been possible to uphold an impressive level in terms of social service delivery, at least up to the end of the 1990s. However, there are marked variations in economic, as well as social sector, development in the country. A regionally unequal structure has been accentuated further due to the open economy entered into in 1977. We can observe a strong emphasis on regional development planning, taking different forms. Up till a few years ago assistance was given to most districts through what was known as IRDP (Integrated Rural Development Programme), which was strongly supported by various donors. Lately this has been replaced by what is called REAP (Regional Economic Advancement Programme), with a much stronger private sector bias.

The unique status of Sri Lanka can be given by a few quantitative indicators, such as literacy rates at 94 percent for males and 88 percent for females respectively. This is well above any comparative country in South Asia (with the possible exception of the Maldives), or Sub-Saharan Africa for that matter.

This positive development can to a certain extent be referred to the fact that Sri Lanka made UPE a priority as early as in the middle of the 1940s, long before many countries now termed as industrialised. One consequence of these ambitions was that enrolment was close to 60 percent as early as in the 1940s, and reached close to 75 percent in the 1960s (Jayaweera 1998). It is obvious that Sri Lanka had a very positive position at that early stage in educational development. According to Jayaweera (1998) these reforms initially benefited middle-income professionals and trading families. However, against mainstream development thinking, seeing modernisation as the ultimate goal, a trickle down effect has hardly reached the poor.

Literacy for the population of 5 years and above was as high as 82 percent as early as 1963. Since the middle of the 1970s the part of the adult population without any schooling was constantly at 15 percent or below, going even below ten percent in the 1990s. It is also noticeable that the share of population with post-secondary education was above 55 percent at that time. Already in 1978/79 this figure had reached above 40 percent. What is illustrated by these statistics is the basic fact that Sri Lanka is definitely a country that would seem to be in a very favourable position in the global attempts to reach EFA.

At the same time it is possible to find some indication of regional disparities, with the best figures on all accounts found in Western province (including the capital Colombo), followed by North Western and Southern provinces. Literacy rates in all these areas reached above 92 percent and only less that 8 percent of the adult population had no formal schooling at all. In the Western province even two thirds had been attaining post primary schooling. This can now be compared to Uva province with a literacy rate of 87 percent and 14 percent of adults whom have never been to school at all (Central Bank of Sri Lanka 2001). We can assume that the situation is even worse for the Northern and Eastern provinces, affected by the conflict up to 2002.

One crucial dilemma within education is the question of to what extent education is to be correlated to the labour market. With the statistics given here as a background it can be asked what happens when half of the population, or even more are enrolled for secondary education. What then will be the actual selection criteria for a job aspired to? In the mid 1990s it was found that close to one-half of the unemployed population had at least a secondary level education. Little (1997) has referred to a situation where there is an ever-increasing need for higher school qualification for a job now as compared to earlier.

Since the introduction of the open economy in 1977 social services have tended to continue increasing, even if at a somewhat slower pace. The total number of pupils in school (grade 1-13) was around 4 million in 1987, and went moderately up to 4.3 million at the end of the 1990s. However, this stagnation is partly due to a low population growth. Number of teachers increased from 150,000 in 1987 up to 195,000 in 1995. Thereafter there has been a slight decrease. At the national level we can note a relatively low drop out rate compared to neighbouring countries.

On a less positive note we can observe the high failure rate at higher-level exams. For example in 1996 the failure rate at the O level examination was not less than 80 percent– the larger share of the failures were from poor families (The Sunday Leader 24/11-96). To obtain various kinds of employment proficiency in English is a must these days. However, it is obvious that achievements in languages, as well as Mathematics, are poor in primary school. This weakness in turn follows the pupils continuing up to secondary level.

These factors are often missed out as we try to give only the actual enrolment, especially as what we find is normally only the Gross Enrolment Rate. We can note that UPE has never really been achieved and that the high national figures hide stark variations rural/urban, gender, and districts but also down to the local level. The National Education Commission found *"pockets of illiteracy exist in deprived areas such as plantations, remote villages and disadvantaged localities and fishing communities in the coastal belt"*. It is further noted that distribution of resources lead to limited financial means for remote rural schools. This leads to a decrease in quality, especially in comparison to urban schools. We find a situation in which the new middle class compete for prestigious schools for their children to give a better chance to be selected for wage employment afterwards. To a large extent the situation can be referred back to the ruling group itself and its inability to think nationally (see also Karunanayake and Närman 2002).

Even if there are numerous educational and training institutions at the tertiary level, many are not operative (Haq and Haq 1998). There are in no way an adequate supply of opportunities for drop-outs from the secondary level education. In actual fact there is a feared problem that what can be achieved might very well be an increasing number of diploma and certificate giving institutes, but they might not impart the kind of skills that are needed among the youth. There is a need for a closer integrated planning process to train in the sectors demanded. Further, if

pupils were offered a qualitatively better primary schooling the efficiency at secondary level could improve substantially.

THE LOCAL SCENE

As indicated in the introduction the intention of this paper is to give some comparative aspects on one district in Tanzania (Pangani) and one in Sri Lanka (Hambantota). Both are situated at the coastline, with a lot of external influence since ancient times. Both Pangani and Hambantota had early experiences of traders from Arab and Asian countries. European invaders, from Portugal, the Netherlands (Hambantota), Germany (Pangani) and England came to make a substantial impact on the regions.

Both Hambantota and Pangani are primarily rural and the majority of the population is depending on subsistence agriculture. In both areas coconuts are the major cash crop, while the principle subsistence crop in Pangani is maize and rice in Hambantota. Pangani has one large partly foreign owned plantation for sisal, while Hambantota has a few tea plantations. In none of the two areas is there any substantial processing of agricultural products. Not much manufacturing is to be found. Apart from agriculture, fishing is a main source of income, but on a fairly limited scale. Tourism might have a future in both districts, but is not exploited to any large extent so far. In both districts the idea to establish a major harbour has been high on the agenda for a potential more positive development, but it seems that external opposition in both cases has met this notion. There are powerful economic interests involved when major ports in the respective region are competing.

One substantial difference is the population density, with Hambantota well over 200 inhabitants per square km, against 30 for Pangani. The total population of Hambantota is above 500,000 on a slightly larger area than Pangani with less than 50.000 people. Urban population is living in one town in Pangani with the same name as the district, while there are at least three towns with some 10,000 people in Hambantota and some additional expanding urban areas functioning as service centres for the rural population. Hambantota is ethnically mixed (Sinhala and Muslim) though with a dominantly Sinhala population, while Pangani has a mixture of Arabs (Muslims), Africans and a few Indians.

The significant feature that brings the two districts together is the level of poverty. In both areas an absolute majority live under conditions of deprivation, while a

small elite has been able to use the situation for individual enrichment. In Pangani a substantial income can be made through smuggling of capital goods from the island of Pemba in Zanzibar. In Hambantota it is obvious how money lending, for smaller investment or simply to pay for health services or schooling has created a specific dependency relationship. However, these are only some of the more obvious symptoms of the considerably broader dependency structures, tying up national policies to the forces of globalisation and the local level to commands by the State.

Below some comments will be given to the specific education structure in the two districts to illustrate some basic features of poverty. A main assumption is that education would be the possibility to move up on the social ladder, but as will be seen this is not really an option that is possible for many of the less affluent children.

EDUCATION IN PANGANI DISTRICT

Initially, it was expected that we would find a low enrolment rate in Pangani District. However, the official NER was clearly above the Tanzanian average in 1995 – with close to 70 percent. This is among the highest figures for Tanga Region. Some doubts will be raised below as to the accuracy of this calculation, but it can be noted that there is at least one school in all of the 25 villages in the district. Still distance to school was often given as a reason for non-attendance, as found especially in field studies outside Pangani town.

Even if indicators for Pangani on primary school enrolment is fairly high there is a decreasing trend in literacy from the middle of the 1980s up to the end of the century. This is the kind of discrepancy that we have been faced with on many occasions when comparing data given from different sources. One such contradiction is found in the question of actual enrolment itself. With the school going age (7-13 years olds) making up a population of 9,000 it would seem that 7,000 attending primary school (or a GER of 78 percent) is at least satisfactory. However, when the Ministry of Education indicates an enrolment of 84 percent in Standard 1 it can be questioned if they know the actual number of seven years old. One piece of information given by a representative of a Pangani school was that he thought that there were only 50 percent of the children in town that attended school. According to him there would be a need for additional 3-4 schools in the town alone to meet the demand.

Enrolment figures have to be seen in relation to drop-out figures. In 1991-98 we find a total of 1,307 drop-outs recorded, of which 81 percent cases were said to be caused by truancy or absenteeism. Following up on the group starting in 1991 and 1992 we can see that only 46 percent had reached Standard 7.

As important as the enrolment is the actual attendance in school, which could be calculated to roughly 80-85 percent. Many reasons can be given for this, as we find a number of competing activities. Being a Muslim stronghold many children have a difficult priority between formal school and madras (Islam education). This is so even if the ministry has adjusted the school day to enable the children to attend both. In addition to this factor we also heard about children running away from school periodically, often to engage themselves in informal sector work to earn some money. At the same time we cannot disregard the fact that some parents keep the children away as they are needed at home to assist in a variety of duties. Often it is the girls that suffer because of this. It also seems as if members in a household that are not in the immediate family of the head might also suffer from unpaid fees. Children also work for the smugglers to carry goods at night to warehouses. Some are also making an income from child prostitution from an early age – both boys and girls.

Not being enrolled or not attending can also be caused by long distance, perception of the school as offering a low quality education, or high cost. From interviews in an isolated rural school we were told how the school committee put down a lot of effort to bring all children to school, but some ethnic groups living far away from the centre were difficult to influence. Even if the school committee has been rather successful in getting near 100 percent to school, at least from the near-by areas the drop-outs were a serious problem. *("All go to school here").* To start with, absenteeism is high and dropping-out before Standard 7 is as high as 50 percent, or even more. This was, it was claimed, because of initiation rites and involvement in informal practices to raise some money. In some cases non-enrolment and dropping-out has been referred to a low understanding of the value of education. This issue of value of school can be closely correlated to school quality.

It has been bluntly stated by educational officials that the knowledge of what goes on in individual schools is seriously hampered by a lack of finances. There are simply no funds to visit the schools for inspections. A general lack of financial means is a basic dilemma for educational development and the ability to offer

quality schooling in Pangani. Clearly the Government funding of schools was too insignificant, with no contribution to needed infrastructure upgrading – new classrooms, teacher houses, sanitary installations etc. Only teachers are given their salaries in reasonable time, even if the whole process of collecting the dues in Pangani town in person contributes to the educational inefficiencies.

School fees and contributions are supposed to alleviate some of the difficulties facing individual schools. When going round the schools we were given an account of a situation where the expected returns from fees and contributions were rather limited. One school estimated that 21 percent of what was to come in was actually paid, while another one estimated that only 11 percent was forthcoming. Even if it was claimed that the school could bring non-paying parents to court there was no example given when this has actually happened. As money paid was handled by school committees it was difficult for a headmaster to access it. We can assume that the Tanzanian Government, when facing strong external pressure primarily from the World Bank/IMF, without any proper assessment on the eventual benefits, took the ultimate decision on school fees.

On school quality we got different answers, some saying it goes down or it is improving. What can be easily observed is a serious lack of (formally qualified) teachers. Obviously, it is very difficult to recruit teachers to Pangani, which is connected to the general negative understanding of the district. Some teachers sent for upgrading are not likely to come back after attending various courses. Teacher transport is another dilemma. Sometimes it seems quite natural that they do not report to duty, as there is no regular communication system. It is often said that lack of qualified teachers is mostly felt in some generally deprived parts of the district, but at the same time the situation seems to be quite serious also in Pangani town. While seeing teacher qualification as an important matter in measuring school quality it also has to be said that teacher morale is essential for a good performance. After all the ideology of the day promoted macro-economic discipline. Overcoming poverty or inequality was of lesser importance.

Lack of proper localities, sanitary arrangements, as well as learning equipment all contribute to poor quality. One indication of school quality is the qualification to enter secondary school. Even if we heard that some were now able to go further for secondary education, provided the financial matters could be solved, it is still on a very limited scale. From the few local secondary schools we understand that it was next to impossible to recruit an expected number of

candidates from Pangani. At the same time there seems to be awareness that primary school on its own is no good on the labour market. To get formal employment there is a need to go to secondary education. Therefore, the claim to increase educational awareness must be seen against the perceived value of a completed primary school. Not least as secondary school is a matter of a substantially higher investment. From the few affluent people with children at secondary school we could understand that the cost was far above what most people in Pangani could ever be expected to afford. In addition to a limited access to secondary schools, the lack of vocational training is acute. Some attempts have been made, such as carpentry training at Pangani Primary School, but with very small financial contributions.

The individual perception between parents on the ability to pay school fees varies. It is natural that the more affluent ones had fewer objections, but among the poor different views appeared. Possibly, some claimed that they were paying even if they were not really able to. Still there does not seem to be some kind of systematic expulsion due to non-payment of fees. It can rather be assumed that not being able to pay makes school attendance erratic. The poor has no possibility to plan ahead for school expenses. Therefore, it often happens that a child has to wait for up to a month, possibly more to start, while the money is collected. Among the more affluent ones it was commonly said that school fees are something that it is necessary to plan for ahead.

In the statements made among the not so well-to-do respondents we can find many indications that schooling has been interrupted due to an inability to pay. It sounds like this: "*..stopped because of money*"- "*opportunities to earn an income are no longer there*"- "*because his father died*"- "*Now their father is sick they have been chased out of school*"- "*many school children do not attend because of lack of money*". In all this it is evident that as a family is struck by ill health the ability to pay goes down straight away and drop out is more or less a fact.

Statistical evidence seems to support the feeling that girls are not really prioritised by the parents to acquire education. Some might say that they do not give priority to the boys, but in one case a parent said that we should not care about the answers to this question, as the respondents merely wanted to please us. In many cases we also heard the parents referring to children not being motivated to go to school as a reason for dropping-out. In addition many performed miserably due to the fact that they went through a whole day in school without any real meal. In the final analysis schooling or not schooling has a lot to do with a general

situation of deprivation and poverty. Schooling might not be a first priority for the poor in a rural district such as Pangani. Why should it?

EDUCATION IN HAMBANTOTA DISTRICT

Education is distributed to most of the children in Hambantota district. In the late 1990s there were some 330 government schools and close to 150,000 pupils going to school in the district. The number of teachers was some 6,500, of which 68 percent were formally qualified. There are no large differences between the number of boys and girls in primary and secondary school.

Schooling, in itself, is not the issue in Hambantota, but rather the kind of education enrolled for. As education is regarded a way to improve on living standards for the poor it opens up opportunities for an increased commercialisation of schooling. A way of doing this is private tuition, at all levels, and it has created a mentality among both parents and students to devalue the school education system. It is said that private tuition has become a fashion and all do it. At the same time many parents pointed out that during their time there was no need for private tuition, because the teachers were much better.

Most people agree that without private tuition the chance to pass examinations is very limited. For that reason many are prepared to pay a substantial share of income or savings for private tuition. In some cases there are people borrowing money to make it possible for the children to participate. Sometimes private tuition is possible for the eldest child only and the rest have to do without. Subject-wise it is English, Mathematics and Science that seem to be regarded as essential for tuition. This is a reflection of what is considered important for the labour market in the future. What is not possible to manage in class is done during the private tuition. Some people expressed their concern that due to private tuition the gap between poor and rich widened.

One dilemma with private tuition is that some teachers will not work very hard at school as they concentrate fully on private tuition. It has also been claimed that some teachers do not really want children to succeed in class, as that limits the market for private tuition. One teacher said that private tuition is not of any value, but she was still engaged in the activity. Quality of private tuition is also different from one area to the next.

Apart from private tuition one strategy for education is to send the children to an urban school that is normally regarded to provide better teaching. However, this is also a question of financial means, as the urban school would be much more costly. It was claimed that the rich sent their children to urban schools, while the others remained in the village. Schools in Sri Lanka are divided between 1AB offering Grade 1-13 (including full science courses), 1C with Grade 1-13 (without a complete science course), Grade 2 giving Grade 1-11, and 3 for Grade 1-5. In Hambantota there are a total of 19 schools classified as 1AB, with a total of 14 percent of all pupils. More affluent families send their children to schools outside Hambantota, to Matara, Galle, or even Colombo. Normally teaching facilities, as well as teacher qualifications, are substantially better in the urban schools. It has been said that the edueational authorities have very little regard for the rural schools and their needs. One acute problem for many teachers was the serious lack of transport, even to get to school in time.

During the recent interviews in Sooriyawewa DS Division it was observed that there was a serious lack of teachers in school. Normally, there were only half of the required number, or even below. One headmaster claimed that parents are not even aware of the low quality of the education offered, because they still sent their children. Parents, on the other hand were expressing their feeling about the schools in the area, as of a very low quality. At the same time it was said that there were many unemployed youths that were willing to take up some teaching work. Even some were helping out as volunteers, but the Government argued that there were no funds to pay for their services.

One important remark to make is that the school environment is very competitive, and the exam functions as a very elaborate selection system. An absolute majority are failures, especially at the secondary level. Still the schools are very academic and tend little for traditional knowledge and skills. If the school was to offer more practical skills that would be a way to develop further. However, the vocational training/education sector is planned erratically, organised within different ministries.

It has been indicated that schooling is provided with a hope for a future working career, but it must be clear to many of the parents that it is not easy to get a job even with a fairly good education. Opportunities are few and the determining factor is often not only school, but even more so contacts. All seem to agree that to be successful after education it was important to master English properly. In the middle of the 1990s not less than 60 percent of the population had reached

grade 10 in school, but in spite of this the unemployment is considerable. This was a reason for youth unrest during the 1970s and 1980s, the Janatha Vimukti Peramuna (JVP) rebellions. In interviews we have heard that if the situation is not getting better the youth might turn to violence again.

One headmaster said that parents often kept children out of school for days, when they were needed for other activities, such as harvesting. Some children were said to be absent up to 75% of the school hours. He also said that children came to school crying for hunger, without getting any breakfast. It would seem that the school society largely is a reflection of normal society changes. A lot of investment is made, but still with limited opportunities. Increasing cost of education contributes to a widening gap between the poor and rich. To this also contributes the repeating (ten percent of all pupils are said to repeat), and a drop out.

It has also been noted that a main advantage in having children in school is that they do not get into drugs or some illegal activities. This corresponds exactly to what was said in Pangani District, and in studies from other parts of the Third World.

Obviously, Hambantota is an example on how a demand for school qualification is brought up, with higher enrolment at all levels. In Hambantota we can also see the role played by money to provide a good quality education. In addition, the resource allocation nationally is far from equally distributed, neglecting poor areas, such as Hambantota. In this case, just like in Pangani, education functions against a policy of equalisation, geographically or between individuals.

CONCLUDING REMARKS

Globalisation is the overall concept used today to express World development. A basic ideology in this movement is the idea of modernisation, which ultimately gives a status of superiority to industrialised countries – mainly in Western Europe and North America. However, with modernisation we can also see how this is intimately linked to inequality. What we have presented in this chapter can be seen as two case studies that give an illustration to the marginalisation that has followed on global development. It can also pose the question if this is out of default, ignorance or a lack of commitment.

We have in this paper given special attention to the social sector development, especially education. That is a good case to show how dominant neo-liberal thinking has largely taken over the agenda. Education is now a service, with a

price, while the humanitarian aspects are gradually forgotten. This is so irrespective of fees or no fees, as we can note an increasing commercialisation.

Both Sri Lanka and Tanzania were coming out of a common British colonialism with an initial policy of defiance. In both countries formal independence was to be given a meaning through a national self-reliant programme. In both case this was not regarded positively by the global centre powers and the strategy was changed. In Sri Lanka this was known as the Open Economy introduced in 1977, while Tanzania came to be drawn into the Structural Adjustment Programmes of the 1980s. This also had clear implications for the schooling system in both countries. In Tanzania Net Enrolment figures started to decline, while in Sri Lanka we can note a structuring of schools on basic quality criteria, coupled to pockets of illiteracy.

The people of Hambantota are trying to eke out a living on limited agricultural resources, especially lacking water. In Pangani we can see how the neo-colonial forces are still operating on the economic side through a large sisal plantation. Both areas are marked by a distinct deprivation. We can note that in the 1970s and 1980s this was in Hambantota met by armed resistance.

One basic difference is the variation in population density between the two cases. Still the way of living is to a large extent similar. Further, we can observe that in Hambantota the majority community is still following their traditional Buddhist religion while there are also areas of Islamic influence. In Pangani we have more of a mixture of Christianity, Islam and traditional religions. Even if we have not explored this fully in this paper we can assume that these factors would have an influence on the development pattern.

In both cases we can see education as a means of getting out of the present poverty trap. Further, it is widely recognised that in this context primary schooling is not enough. What we can see is a rather mixed impression in both cases. We can assume that the fairly positive image given by Gross Enrolment Rates is concealing the reality. This figure must be contrasted to the actual attendance rate. It is also possible to note the low quality of basic educational facilities, not least the lack of qualified and dedicated teachers. However, if you are financially affluent you can buy yourself out of that educational misery.

My final claim would be that the situation found in Pangani and Hambantota is simply not one of poverty, but a common process of marginalisation found in

many parts of Africa and Asia at the present stage. It would be high time to get the local research community in Africa and South Asia to find out how the respective population in these regions has been ignored by external financial and humanitarian interests. This would be a key task for south – south research networks. These issues must be looked at from a totally new perspective.

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IMPLEMENTATION OF GIS IN SOCIAL SCIENCES

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INTRODUCTION

This paper briefly discusses possibilities and limitations related to the implementation of geographical information systems (GIS) in a "non-technical" research area. Even if the examples presented below refer to the social sciences, most of the reflections are also valid for other areas, for example, different disciplines within the social sciences.

During the last few decades, GIS has become a widely used and popular tool for the handling and analysis of geographical data. A number of disciplines have invested large amounts of money in computers, software and training of staff. However, not all of these investments have been fruitful. In many places, GIS is not commonly used, despite up-to-date equipment and training. What is the reason for this?

In order to answer this difficult question, where there is of course no simple answer, we have to discuss the reason to use GIS, the demands we set on a GIS, as well as possibilities and constraints related to GIS implementation.

The main reason to introduce GIS in the research process should of course be to improve the outcome of the research. In GIS, we use tools that enable us to organise and analyse our data in an efficient way. GIS is here to help, and not to make things more complicated! Sadly, the outcome sometimes turns out differently. The computerised systems turn out to be so complicated that they can only be run and maintained by specialised technicians, who do not know how to maximise the use of GIS in a specific research area.

As stated many times, it is therefore crucial that the researchers have a certain level of knowledge about how the system is working, or could work. A theoretical background, including basic knowledge about possibilities and limitations, is extremely important if we want to maximize the use, and at the same time the

cost – benefit ratio, of the GIS investment. GIS is not only a tool for map making, but should also be able to help the researcher with a lot of other things. As stated below, we demand a number of things from a "computerised mapping system" before we can call it a GIS.

A GIS should be able to :

- handle input as well as output,
- store,
- structure,
- edit,
- analyse, and
- display

digital geographical data. Geographical data are both spatial data, like maps, and non-spatial data that carry some sort of information about the spatial objects. A spatial object can be a house, and the non-spatial data can be the size of the household in that house.

Even if most people know that a GIS can be used for analysis and data management, we commonly concentrate on the last point mentioned above, the map making. In this context, it has to be stressed that map making is absolutely one of the most important task for the GIS. However, it is not the only one and, most important, the success of the map making is heavily dependant on how data are imported, stored, structured, edited and analysed. If we only use the GIS as an extremely time-consuming copying machine, where we digitise maps and print them out, much cheaper and efficient tools can be found. To succeed in the GIS implementation we have to incorporate it in the research process, make it transparent and include all staff. Again, the GIS is not made for the technicians, but for the researchers.

Some of the most important things that have to be considered *before* starting using GIS are stated below. We have to discuss and plan:

- Data
- Hardware
- Software and analyses
- Staff
- Regulations (laws, policies and agreements)

DATA

Data are essential in all types of analyses. When using GIS, we are working with geographical data, divided into geometrical data (map data) and non-spatial data, often referred to as attribute data. The geometrical data consist of objects that can be drawn on a map (i.e. objects with x and y coordinates) while the attribute data are additional information about the geometrical data. Examples of attribute data are average income in a district, number of children per teacher in different schools and average distance to health care. The attribute data can also be non-numerical data, like photographs, graphs or video clips.

Before starting to use a GIS we have to assure that we get geographical data that are:

- accessible,
- relevant, and
- captured with an acceptable quality.

It is obvious that it is useless to build an analysis on data that are not accessible. However, it seems like quite a few "inexperienced" GIS users neglect the importance of accessible/existing data. This phenomenon is probably more common among the geometrical data than the attribute data. There is a long tradition of collecting e.g. statistics and interview data, while we know less about geometric data capture. This fact makes it even more important to stress the need for comprehensive data search and data documentation *before* other major steps are taken. If the data do not exist we can either collect it by ourselves or pay somebody else to do it, which is often both expensive and time consuming.

Another important thing to consider is the relevance and quality of the data. It maybe a greater risk for "data driven" research if we are using a sophisticated computerised tool compared to "manual" analysis methods. It has to be the research question that demands/decides data, and not the other way around. Also, the data quality is often forgotten, both by the data producer and by the user. The level of needed accuracy, in content, time and space, must be fulfilled by the datasets we are using. As Figure 6.1 illustrates, it does not matter how modern computers and software are, and how skilled we are in analysing the data; if the data itself are not good enough we do not get an acceptable result.



Fig. 6.1. The result of a GIS analysis is heavily dependent on data quality.

HARDWARE

The physical components that should be included in the GIS environment are totally dependent on what the system will be used for. If we want to use the GIS for less advanced operations (like map making and data structuring) a standard PC and a printer are probably enough. If we are to establish a comprehensive GIS unit, serving a large organisation, we probably need more powerful computers, more memory, file servers, digitising tables, scanners etc.

An important point regarding the design of the hardware (and also the software) is the demand on accessibility and security. Accessibility includes the possibility for all potential users to use the data, but also that the speed of communication is acceptable. This is often solved by using different kinds of networks, either locally (LAN) or connected to the Internet. In the latter case the risk for "intruders" increases. However, confidential material must be protected from non-authorised users, and the systems have to be designed to be able to solve this problem.

SOFTWARE AND ANALYSES

The standard of GIS software is continuously improving. More user-friendly programs are developed, that often give the user the possibility to carry out analyses that were impossible only a few years ago. However, there is still a

tendency that advanced computer software (like GIS programs) is made by technicians for technicians. Maybe this is most obvious if we examine the possibilities of analyses in today's GIS programs. It might be possible to carry out very advanced modelling, but often, even a less complicated statistical test demands technical skills (i.e. extensive computer experience) of the user. This is not least the case for analyses that could be useful within the social sciences.

In order to stress the GIS relevance within social sciences, a new statistical tool has been developed at the GIS Centre, Lund University, Sweden (Gullstrand et al 2002). During the construction of the software, the analytical capabilities presented below were considered most important in order to make it possible to increase the use of GIS in social sciences:

Initially, the GIS software should be used in order to visualise and analyse geographical data at different levels of detail (i.e. scale). It was stated that one of the major strengths of GIS within social science is the possibility to highlight spatial patterns (Pilesjö 1992; Pilesjö 2001). This is particularly valuable when selecting a study area and setting up research hypotheses. Within a project, the researchers then have the possibility to investigate irregularities between data on different levels. Quantitative data (mainly concerning education, economy and social science indices) can been gathered at different levels of detail and the new user-friendly statistical tool be used to analyse them. The visual and statistical analyses of e.g. education and social trends can, among other things, reveal inequalities and possible errors connected to level of detail of quantitative data.

Investigation of relationships between different variables is also identified as a useful way of using GIS in social science (Närman and Pilesjö 2001; Pilesjö and Närman 2002). Both single (e.g. between literacy and education) and multiple (e.g. between poverty and level of education, population density and employment) relationships can easily be investigated. The value of investigation of "geometrical" variables in the GIS environment is also stressed. Geometrical variables are defined as variables that can be estimated by the use of the geometrical data. Examples are distances to different objects (either Euclidian (straight) distance or distances following existing roads and/or tracks) and densities (e.g. road densities in different districts). Sometimes these variables are of great interest in the analysis.

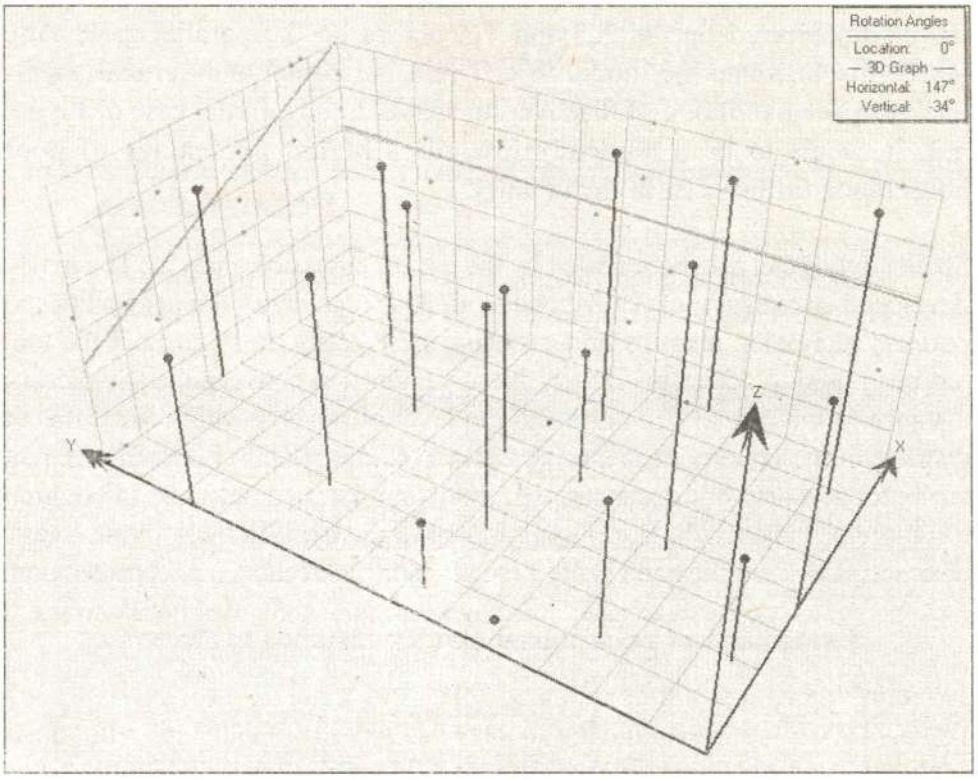


Fig. 6.2. Poor households in Sri Lanka 2001. The solid lines are a first order polynom based on the attribute values, indicating poorer households in the Eastern part of the country. Data source: Department of Census and Statistics, Sri Lanka. *www: http://www.statistics.gov.lk*

In Figures 6.2-8 we illustrate a number of spatial analyses/presentations that we think are relevant in Social Sciences. Most of these illustrations are based on standard software, while a few use the newly developed statistical tool. Also note that all illustrations and analyses demand all geographical data be adequately stored in a GIS database.

Almost all GIS software can be used to visualize spatial patterns and trends within a dataset. In Figure 6.2 the percentage of poor households in 17 (out of 25) districts in Sri Lanka have been visualised spatially in a 3D model. The x- and y-axis represent the dataset's spatial distribution (west - east, south - north), while the z-axis represents the value of the dataset (in this case the percentage of poor households). Each black dot corresponds to the centre coordinate for one of the 17 districts and the height of the staple consequently to the percentage of poor households in that specific district. The values and trends of the dataset

are also projected on the XZ and YZ planes on the parallel grids. The possibility to rotate the model in different horizontal and vertical angels increases the likelihood of discovering spatial trends. In the case of Figure 6.2, it seems to be a tendency towards a higher percentage of poor households further east in the country.

Spatial trends can also be revealed by the use of regression analysis. The newly developed statistical tool (Gullstrand et al. 2002) facilitates the possibilities to perform regression analysis and visualise these easily. In Figure 6.3 the tool has been used to determine if there is any connection between the (Euclidean) distance to the capital Colombo and the level of poverty within the different districts in the country. It is also possible to find a relation between different attributes and network distances, e.g. following the road network. In addition to Figure 6.2, the example in Figure 6.3 takes the trend in the x (west – east) direction, *as well as* the trend in the y (south - north) direction, into consideration.

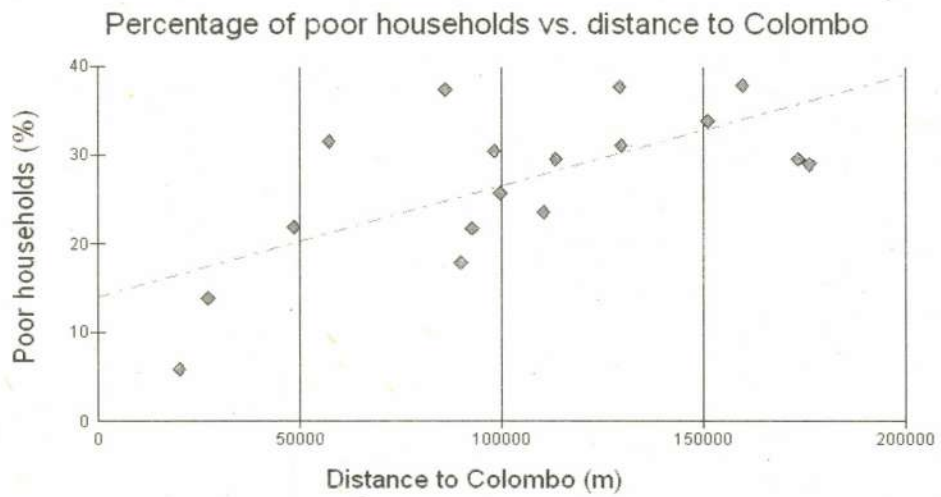


Fig. 6.3. Poor households in Sri Lanka 2001. The doted line represents a regression line where the independent variable is distance to the capital Colombo. The regression indicates that the percentage of poor households increase with the distance to the capital. Data source: Department of Census and Statistics, Sri Lanka. www: http://www.statistics.gov.lk

In many situations it is also interesting to investigate the "multiple dependence" in a dataset. Do many independent variables explain one dependent one? To do this is difficult and time consuming with most GIS software today. However, the new statistical tool makes it possible to perform multiple regression analyses with up to six independent parameters quite easily. The multiple regression analysis

presented in Figure 6.4 based on 17 districts in the southwestern part of Sri Lanka. The dependent parameter: "*Poor*" in the dataset is the percentage of poor households. The independent parameters are:

1: "*Household size*" corresponds to the average number of people living in each household.
2: "*Electricity*" is the percentage of households with access to electricity.
3: "*Population*" is the number of people living in each district.
4: "*Distance Colombo*" is the Euclidian distance, in kilometres, from the centre of each district to the capital Colombo.

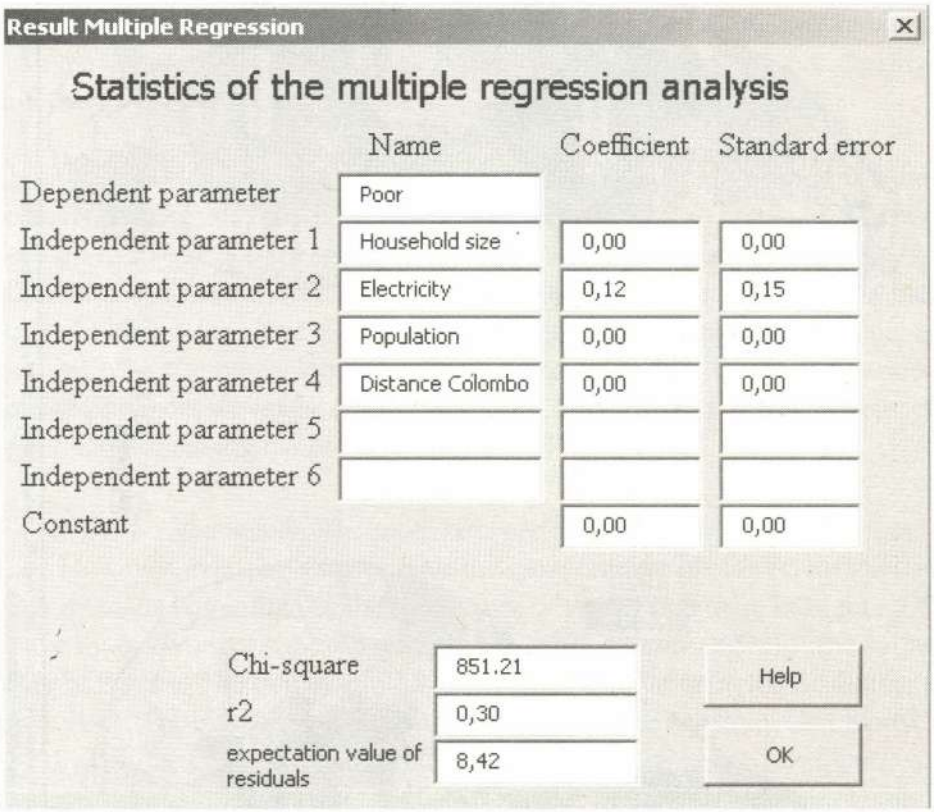
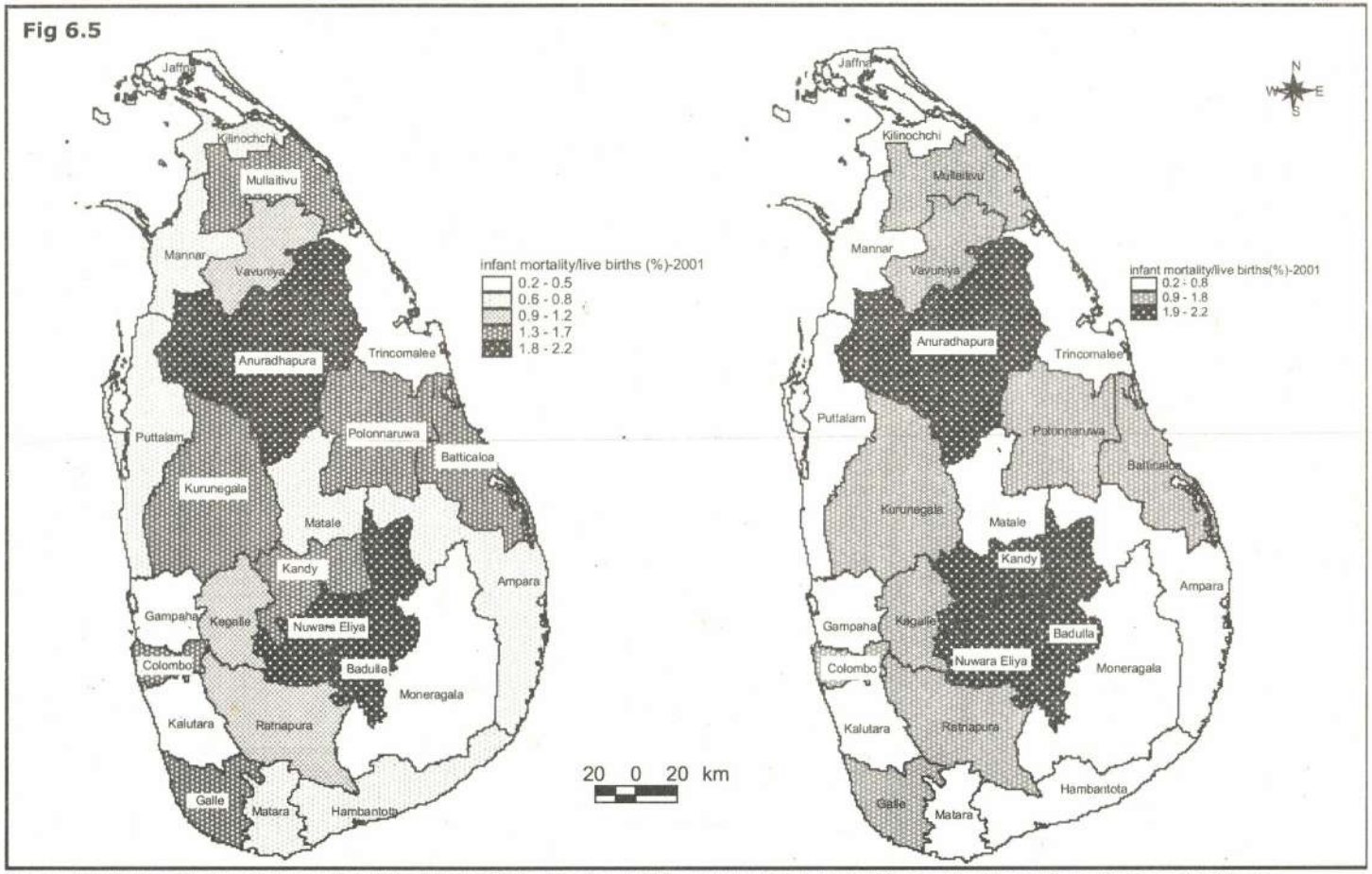


Fig. 6.4. The result of a multiple regression analysis between poor households and a number of independent parameters in Sri Lanka 2001. The result indicates that the only significant undependant parameter is "Electricity", explaining 30 % dependant parameter. Data source: Department of Census and Statistics, Sri Lanka. *www: http://www.statistics.gov.lk*

Map making is probably the most important use of a GIS. Visual interpretation of maps can reveal interesting spatial patterns, like irregularities and clusters. In many situations, a map is more easily interpreted than a numeric table of attribute values. However, maps can be made in different ways, an even maps based on

Fig 6.5



Two maps illustrating the spatial pattern of infant mortality/live birth in Sri Lanka 2001, Apart from the spatial difference indicated, it is obvious that different number of classes influences the interpretation of the map.
Data Source: Dept. of Senses and Statistics, Sri Lanka, www,http//www.ststistivs.gov.lk

the same data can look different and give different impressions to the viewer. The choice of colours and symbols are important, but also the number of classes that are presented and how these classes have been created. In Figure 6.5 we see two maps illustrating the ratio of infant mortality/live births in Sri Lanka 2004. Depending on the number of classes we get a slightly different opinion about the situation. When 5 classes are used we get the impression that there are large differences between the districts and we easily pick out districts with very high and low values respectively. If only three classes are used we get the impression that the values do not differ that much. Quite a few districts get the same class value/colour, and we judge them to be relatively equal in infant mortality/live birth. By using even more (or fewer) classes these differences can be more sharply distinguished

Even more important than the number of classes is the spatial resolution of the dataset. The higher the spatial resolution the more detail is revealed. This is illustrated in Figure 6.6 using population density as the mapped attribute. If population density is presented at the province level we have no idea about the variation within a province. Since we are using "bigger" units we also get a smoothing effect, suppressing differences due to averaging. By using districts instead of provinces we reveal differences within the provinces as well as getting a higher variation along the province borders.

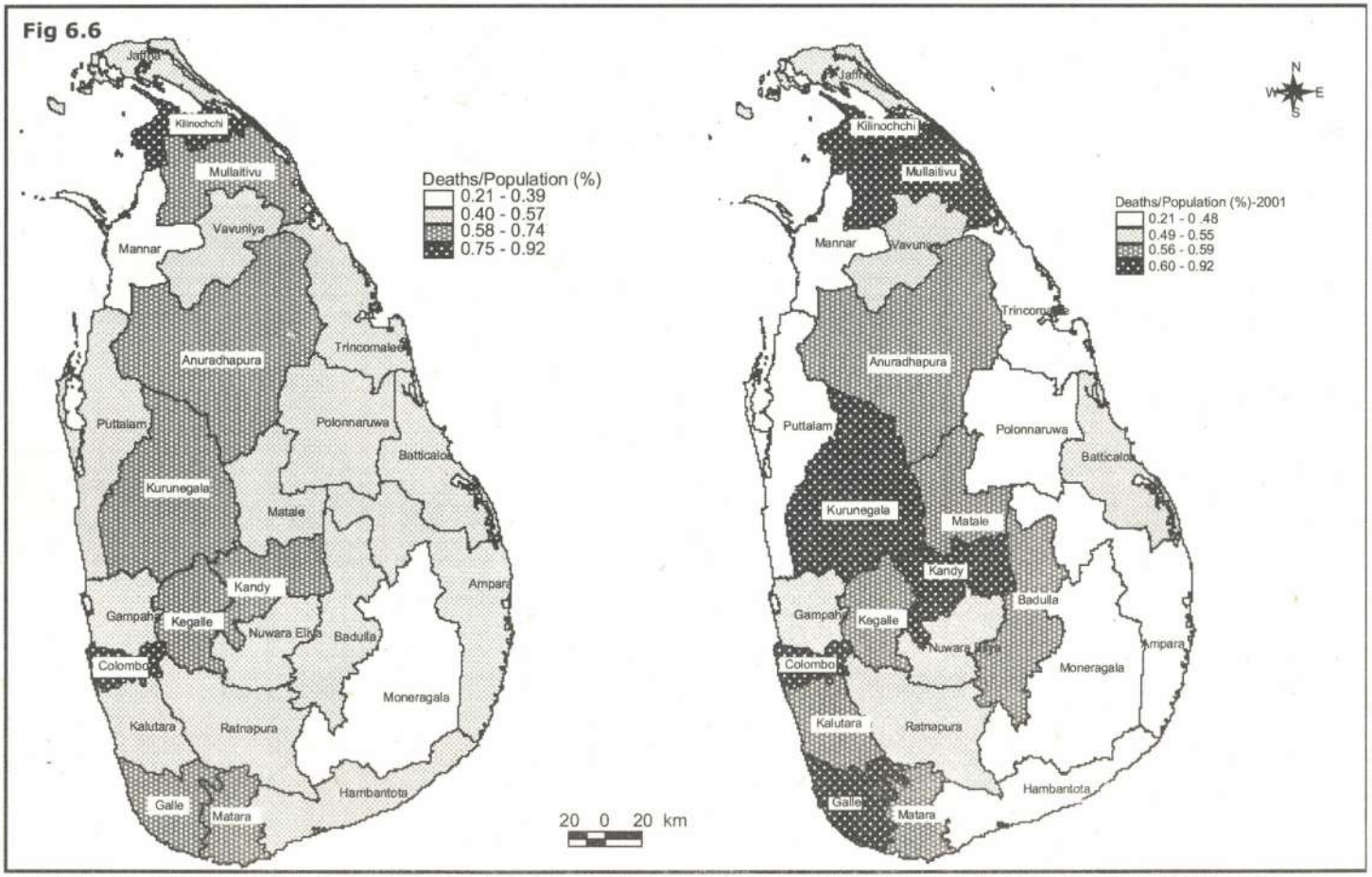
In Figure 6.5 we illustrated differences between maps with different number of classes. However, even if two maps have the same number of classes. the choice of class intervals will influence the appearance of the created map. In Figure 6.7 we have made two maps, both based on the same dataset and with the same number of classes. The two maps illustrate deaths/population in the Sri Lankan districts 2001. The class intervals in the map to the left are equally wide (approx. 0.17 %) while the class intervals in the map to the right are based on quartiles. Therefore, 25% of the given values (districts) fall in each of the four classes. The map to the left then gives the impression of a more homogeneous distribution, with a few "extreme" values. This is a good example how GIS can be used to "direct" us in a certain direction.

Instead of a statistical analysis like regression it is sometimes desirable to make a map showing more than one attribute. It's then possible to get an immediate impression of the relation between the attributes, and then judge if further analysis is of interest. In Figure 6.8 the attribute "electricity" has been mapped together

with "poor households". We then get an indication that there is a relationship between the two attributes; the poorer areas have less electricity.

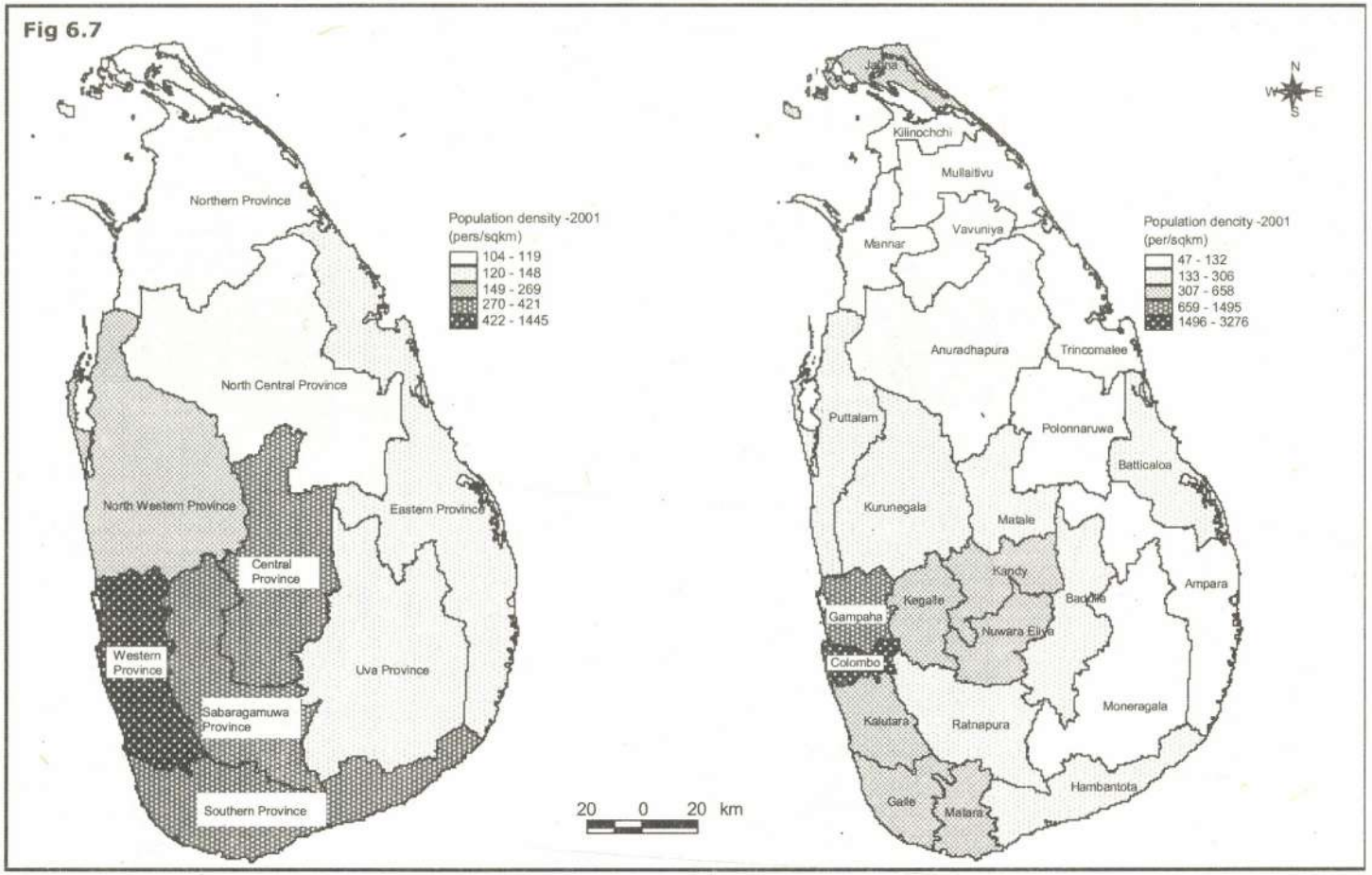
It is also often relevant to examine if certain attribute values are related in space, i.e. if there is any spatial trend in the material. Spatial trends of polygon (or point) attributes can be described as the equality between neighbouring, or closely located, objects. When this equality, or correlation, is investigated in space we name it spatial auto-correlation. The higher spatial auto-correlation we have, the better is the relationship between attribute values of closely situated objects. One way to get an idea about the spatial auto-correlation is a visual examination of a map. However, for many purposes a simple visual inspection may not be enough to reveal a trend, particularly if we are to examine a complex map. In such situations, quantitative measures are needed to reveal and prove spatial trends. One of these quantitative measures is named Moran's I (Goodchild 1986). When calculating the Moran's I value of a distribution we start by calculating the "equality" between the attribute values. These values are then weighted against the distances between the spatial objects (polygons or points) and summarized. This results in high Moran's I values for distributions where attribute values are changing gradually over small distances and low (often negative) values for distributions where the attribute values are changing considerably over short distances. In the examples presented above "electricity" and "population density" are highly spatially auto-correlated (with higher Moran's I values) while "poor households" and "deaths/population" are weekly related in space. We have to admit that this is not easy to reveal just by looking at the different maps.

It is of course very difficult to recommend any specific GIS software. Generally, one can say that the choice of software must be adapted to the activities of users and organisations. Even if both the variety of different programs and the prices are acceptable, today's GIS software often lack a user-friendly interface and have a tendency to make useful analysis more technically advanced than it has to be. It is not always true that the most expensive and advanced GIS program is the most appropriate. A large number of free GIS software packages and programs are already available on the Internet, and more are under development.



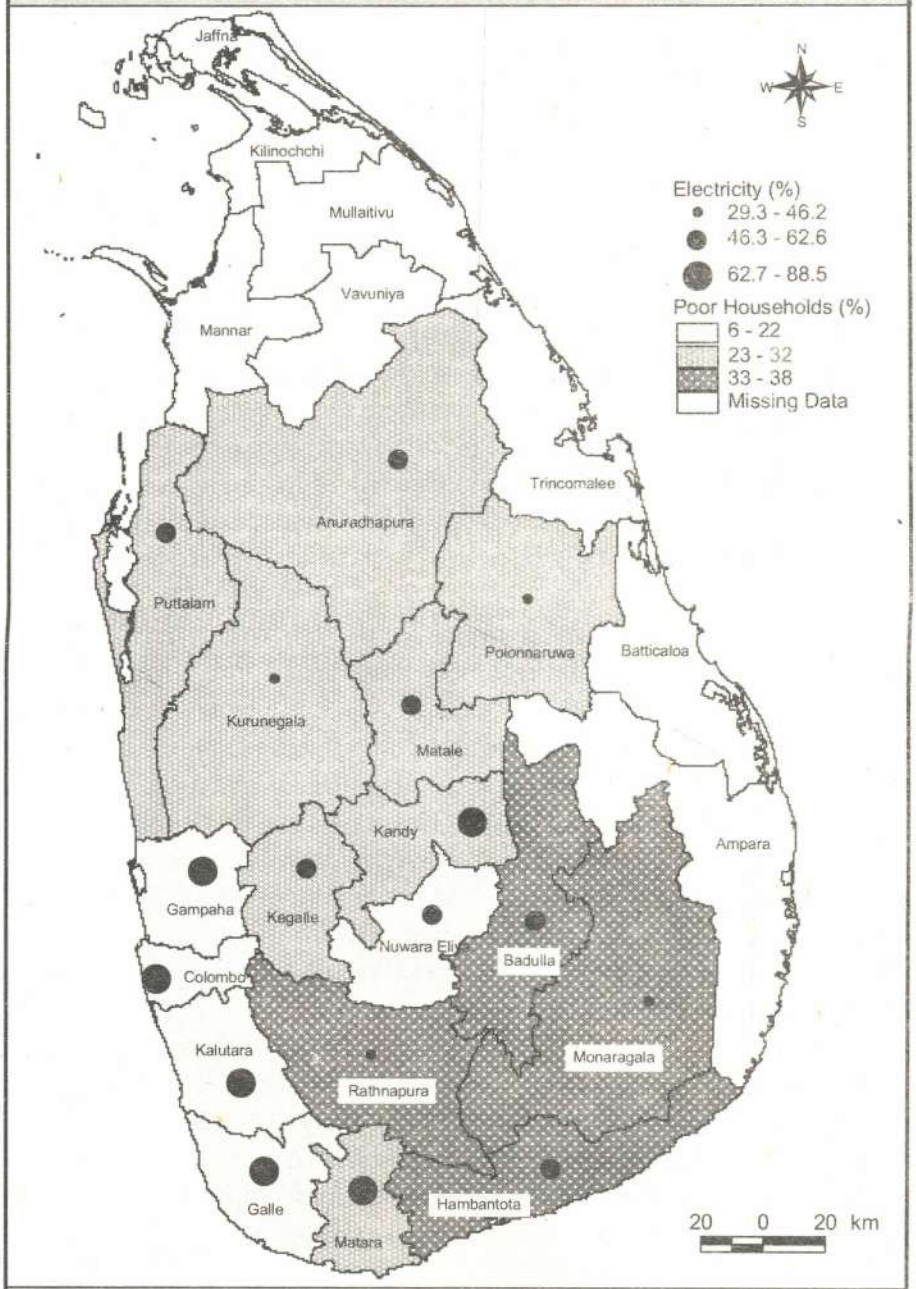
Two maps illustrating the spatial pattern of deaths/population in Sri Lanka 2001, Apart from the spatial difference indicated, it is obvious that the choice of class intervals (see text above) influences the interpretation of the map. Data Source: Dept. of Senses and Statistics, Sri Lanka, www:http//www.statistics.gov.lk

Fig 6.7



Two maps illustrating the spatial pattern of population density in Sri Lanka 2001, Apart from the spatial difference indicated, it is obvious that the spatial resolution, in this case province and district influence the interpretation of the map. Data Source: Dept. of Senses and Statistics, Sri Lanka, www:http//www.statistics.gov.lk

Fig 6.8



GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

The Two Attributes "Electricity" and Poor "Households" mapped together based on Sri Lanka statistics from 2001. The map indicates a (reverse) relationship between the two attributes. Data source. Department of Census and Statistic., Sri Lanka. www.http://statistics.gov.lk

STAFF

A crucial part of the implementation of GIS is also the staff. If staff is not interested in the use of the system it is doomed to failure. Even if we might have GIS specialists doing the most advanced analyses it is extremely important that staff is "part" of the new technology, and know the possibilities and limitations relating to the tool. Again, the analyses have to be driven by research questions.

The use of GIS can be divided into a number of steps, all demanding different skills and training. The "basic level", involving map making, search for attribute data by pointing at map objects and visualising attribute data spatially, demands a limited amount of training and has to be known by all staff. To reach this level, with a functioning system, the time of training could be limited to just a few days. Indeed, this level of technical skill, also including an idea of what is possible to do with a GIS, should be known by all members of an organisation. Again, it is important to stress that the main part of the GIS work is not technically advanced. Visualisation of spatial distributions and merging of maps are examples where relatively simple operations can be of enormous value, especially if all staff members can carry them out.

Apart from the basic use of GIS, a number of persons with special training in advanced analysis are needed. Preferably these are people familiar with the background and technical solution of the analyses. It is also of great importance that they at least have basic knowledge about the subject/processes to be handled by the GIS. If not, it is even more important that the "normal users" (see above) are aware of possibilities and limitations. The persons on this level need at least a couple of months GIS training. When carrying out more advanced GIS analyses, spatial thinking is a key word. We should not be limited to "straight forward" solutions and examples presented in the software manuals. A GIS offers possibilities to use creative thinking, e.g. by combining and relating events in time and space in a very large number of different ways.

The technically and mathematically most advanced GIS staff are the modelers and system builders. Depending on the size of the organisation these people are either employees or consultants. However, we have to be aware of the need for system builders. Without a properly designed database and a user-friendly GIS environment it is impossible for the users to take full advantage of the system. A user-friendly system design, including accessibility and a well-organized geographical database with relevant data, is a necessity for a successful GIS implementation.

The importance of transparency also has to be stressed. It is very important that most, if not all, staff, are aware of what is happening at the GIS unit. As mentioned above even limited training could assure awareness, and this is for sure important. Even if training difficulties are often related to money, it is possible to substantially improve the level of knowledge with limited funding. For example, a number of Internet based GIS courses are available, free of charge.

REGULATIONS

One important part of the GIS implementation, often neglected, is the role of regulations and ethical considerations. As stated below, both copyrights and security are important parts related to data accessibility. Often, proper data management, intranet solutions and/or high security can solve these problems. Standardisation and harmonisation are other important parts of database management. In order to be able to share data with other users there is an obvious need for standardisation. In this regard it is recommended to follow international standards.

Of course individual rights and ethical considerations are important parts of the GIS analyses and presentations. Even if we have the possibility to reveal household or individual disparities these are not always appropriate, or even legal, to publish. We always have to consider the following regulations:

- Copyright
- National and international security and law
- Standardisation and harmonisation of data
- Ethical considerations

CONCLUDING REMARKS

Maybe the most important thing is to be well prepared before launching a GIS program. We have to consider a large number of important questions before the actual implementation take place. Some of these are:

- Why do we want a GIS (data structuring, spatial analysis, map making etc.)?
- Will the staff use the GIS?

- Can we get suitable data?
- Can we afford data, hardware, software and appropriate training?
- Are we able to reallocate resources to let someone take care of the GIS facilities?

A GIS implementation is always a matter of costs and benefits. If we get positive answers to the questions raised above we are most probably ready to go on with the GIS implementation in the organisation. It is then time to discuss the issues presented in this paper more in depth and, not to forget, cooperate with national and international units that are, or have been, in the same situation. A lot of problems can be avoided by discussing expected difficulties with more experienced counterparts.

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INFORMATION AND COMMUNICATION TECHNOLOGIES FOR ENHANCING SOCIO ECONOMIC DEVELOPMENT AT THE LOCAL LEVEL IN SRI LANKA: ISSUES, CHALLENGES AND STRATEGIES

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INTRODUCTION

Information and communication technologies (ICT) have been growing rapidly in developed countries over the last five decades. ICT has revolutionised the way in which people in these countries live and conduct their work. Furthermore, ICT has brought about changes in administration, governance, education, business competitiveness and global operations in them. The developed countries consider ICT as a much-vaunted technology for increased socio-economic development and depend on the "knowledge economy" for wealth creation. However, many developing countries have not taken up ICT to the fullest possible extent as a means of reaching increased socio-economic development by entering the knowledge economy (Sofield 2000). In contrast to the developed countries that have been steadily capitalising on the rapid pace of ICT, a large number of developing countries, particularly low-income countries have failed in the adaptation of these technologies for socio-economic development thus contributing to the "digital-divide" between the developed and developing countries (Human Development Report 2001).

A significant progress has been made by Sri Lanka in the ICT sector during the 1990s. However, these technologies are limited to the Greater Colombo Region (Gunatunge 2002). Nearly, 80% of the population living in rural areas has neither access nor the means to use modern ICT because of their low-income. Although,

In this paper, the term 'local level' refers to communities living in villages such as Palamgammana in the Kotmale Divisional Secretariat Division. We interchangeably use other terms such as 'local communities ' and 'rual people' with the same meaning'

Sri Lanka has aimed at distributive justice in terms of national development, the majority, that comprise rural communities stand to be left aside in the nation's path to progress widening the "digital-gap" between the haves and the have-nots.

Therefore, as part of an on-going research activity, the Department of Geography of the University of Sri Jayewardenepura under the assistance of the Sida-SAREC Research Cooperation Project has initiated research to identify critical issues and challenges in the development of ICT for communities at the local level[1] . The object of this paper is to identify critical issues and challenges that are shaping ICT development, implementation and use in rural community development in the Kotmale Divisional Secretariat Division (KDSD) in the Nuwara Eliya District of Sri Lanka.

This paper is structured as follows. First, it briefly looks at the place of ICT in developing countries. Secondly, ICT in Sri Lanka is discussed. Thirdly, the research methodology used in the study is explained. Fourthly, a case consisting of issues and problems of developing, implementing and using ICT for rural community development in the KDSD is presented. Fifthly, the ways in which ICT could be used to overcome these issues and problems are discussed. Finally, challenges of ICT development in KDSD are brought into focus.

ICT IN DEVELOPING COUNTRIES

A prevalent belief that policy makers and managers in developing countries should focus on achieving pervasive ICT so that societal benefits will permeate to equivalent degrees of saturation as in developed countries (Talero and Gaudette 1995), has led many developing countries to increasingly adopt ICT for achieving enhanced socio-economic development (Waemer 1996). It is believed that there is a direct social and economic value of ICT (Kling 1996).

Most developing countries have used ICT to improve results in productivity, increase efficiency of operations and effectiveness, strengthen management and administrative functions, improve market performance and increase business competitiveness (Avgerou 1996). Therefore, ICT is recognised as a means to achieve more efficient socio-economic development in the developing countries (Meso and Duncan 2000). Moreover, ICT is often identified as the key to the re-invention of the governments in developing countries in a liberalised market economy, following failures in the state bureaucratic models of socio-economic

development (Samaranayaka 1999). For example, ICT can facilitate economic development by availing of information to make choice of development priorities easier and to plan and manage development activities better (Waema 1996).

Many developing countries such as India have made economic management their prime agenda and use opportunities provided by the ICT to overcome the problems of rural poverty, inequality, and environmental degradation (Bhatnagar 2000). In these countries, it is believed that development of information systems such as Document Management, Electronic Data Interchange, Group Ware for computer supported group work, and Internet and intranets can lead to innovative administrative information systems, improved service quality and more effective planning thereby becoming a means of empowering citizens (Bhatnagar 2000; Kiangi 1996; Traunmuller and Lenk 1996).

ICT in Sri Lanka

The use of computers in Sri Lanka began in the late 1960s and the early 1970s when certain state corporations and departments introduced computers at work for processing financial activities such as payroll, inventory, financial, and cost accounts on batch processing basis. The rationale for introducing computers to the state enterprises was the efficiency principle applied to the monitoring and controlling of government funds. Generally, during this period, information systems development (ISD) and practice was largely ad-hoc, with software vendors providing systems for state corporations and departments. These systems developed and produced in developed countries mainly the USA were promoted, sold, and served by agents in Sri Lanka.

The state organisations were mainly concerned with the reliability and accuracy of data maintained on their systems. Many of the state sector organisations, began their computerisation projects with little in-house capability (Samaranayaka 1989), and focused on hardware acquisition rather than on developing necessary information systems infrastructure in-house. A number of projects introduced in this way did not have a significant impact on the improvement of performance of government corporations and departments in Sri Lanka (Gunatunge 2002). However, the expansion of computer applications for commercial and administrative purposes in Sri Lanka began with the liberalisation of the economy in 1977, resulting in more computers being used for financial and business applications. For example, in the 1980s, service oriented organisations such as

banks and most of the private sector institutions introduced IT for commercial activities (Samaranayaka 1999).

IT Policy

In the mid 1980s, the need for a national computer policy for Sri Lanka was recognised. As a result the government established the Computer and Information Technology Council of Sri Lanka (CINTEC) by an Act of Parliament in 1984. The national IT policy objectives as stipulated by the CINTEC, involve the following:

(a) To harness computer technology in all its aspects, for the benefit of the people of Sri Lanka, and to further the socio-economic development of the nation;
(b) To promote and guide the development of computer-related resources and their application, to anticipate and meet the future needs of the national economy;
(c) To enhance and supplement manpower resources and increase the efficiency and productivity of management and employees at all possible levels;
(d) To improve the quality of life of the people of Sri Lanka, including the job satisfaction and working conditions of employees;
(e) To increase the flexibility and dynamism of Sri Lanka society to enable it to successfully meet the challenges of the future, arising from the ever-increasing pace of world wide scientific knowledge and technology.

These policies gave wide scope for ICT being used within both state and private sector organisations in the country. The apparent motivation was, and still is, the rationalisation of work practice by the use of ICT, rather than cost displacement (cost displacement is realised by substituting technology for people) (Davis 1992, p. 384). For example, in 1986, the Administrative Reform Committee of Sri Lanka recommended the extensive use of Management Information Systems (MIS) and ICT to ensure efficiency in the government sector organisations for rapid socio-economic development (Samaranayaka 1999). Recently, these policies have been further widened to include community development, e-business, e-learning, and e-governance and more openly trumpeted under the banner of e-srilanka. This program can be considered as the first ever attempt in Sri Lanka

to introduce ICT at the national level (Ministry of Economic Reforms, Science and Technology 2003).

ICT and Socio-Economic Development

In Sri Lanka ICT was, and still is, deployed in the context of enterprises striving for efficiency, productivity, and competitiveness in a liberalised market economy. It is conceived as one of the most significant forces of modernisation that provides a "technology push" for socio-economic development in the country (Samaranayaka 1988).

The development of the ICT sector occupies a very important element in the annual budget (Budget Speech 2001). The implicit assumption is that ICT will promote socio-economic development. For example, the Minister of Economic Reforms, Science and Technology recently stated that:

> *ICT has been revolutionising the ... way in which we live and conduct our work. ICT is quickly changing the rules of the game globally dictating who will win and who will lose in commerce, administration, governance and education. The future of our country is at stake. The Government cannot afford to continue to operate without incorporating ICT into the fabric of life of the nation. Otherwise, Sri Lanka will be left far behind, while other countries which have adopted ICT progress" (Parliament Handsard, 2003).*

In Sri Lanka, a significant progress was made in the application of digital technologies during the 1990s. Telecommunication infrastructure development through liberalisation has included an increase in land phone users (36 people per telephone), cellular telephone services organisations (currently 4 companies offer a combination of analogue and digital networks), paging services (5 operator companies), Internet service providers (28 companies), and implementation of modern communication technologies such as integrated services digital network (ISDN), Frame Relay, and very small aperture terminal (VSAT). There are five web site providers, who operate as resellers of licensed operators (Kularatna 1999).

Presently, there are about 17,214 e-mail and Internet subscribers (Central Bank, 1999). The development of telecommunication infrastructure signifies an indication of the "emerging digital economy" in Sri Lanka (Ranasinghe 1999). However,

these developments are limited to the Greater Colombo Region. Nearly 80% of the population living in rural areas have no access to modern ICT. They are neither aware of the benefits of ICT nor are they able to make use of ICT because of their low-income.

METHODOLOGY

The methodology used in this study was a qualitative one employing the case study methods. As such, a study was undertaken in the KDSD to reveal empirical and interpretive understanding of ICT development, implementation and use practices. Ontologically, this research lies within the subjective reality of the social world. Epistemologically, it is based on the replication of theory as against the generalization of the positivist perspective. Methodologically, it adopts a (de) constructionist position as against hypotheses testing in the positivist perspective to study social phenomena.

Research Method

The researchers used the case study method as described by Myers (1997) for the study. Case studies contribute in important ways to our knowledge about ICT development and practices (Yin 1994). Case studies arise out of a need to understand and explain complex phenomena (Remeneyi et al. 1998). The case study method is increasingly being used as a qualitative research method in information research to explain the contexts within which systems are being developed, implemented and used (Darke, Shanks and Broadbent 1998). Yin (1994 p. 13) defines the scope of a case study thus

> *a case study is an empirical inquiry that investigate a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used.*

Research Site

The research sites selected for this study are the Divisional Secretariat (DS) and the Palamgammana Village in the KDSD of Nuwara Eliya District (NED) in Sri Lanka. The DS is the main government organisation which implements and coordinates government socio-economic and administrative programs in the KDSD. It is located in the new town centre called 'Kotmale Nawa Nagaraya'

(KNN). Palamgammana Village (PV) is situated in proximity to both the DS and KNN and it is one of the oldest villages in the KDSD. Both the DS and PV were easily accessible to carry out the study.

Research Respondents

Several respondents were interviewed both at the institutional and village level to understand and obtain a balanced view of ICT development and implementation for rural community development within KDSD. At the institutional level, 12 respondents (employees) of the DS were interviewed to understand: (i) various services that the DS offers to rural communities, (ii) ways in which the present services are being provided to rural communities, (iii) manner in which the DS has developed, implemented and used ICT for rural community development, (iv) nature of employee perception of ICT development and implementation within the DS for rural community development, (v) critical issues that shape ICT development, implementation and use for rural community development, and (vi) challenges faced by the DS to develop and implement ICT for rural community development. The respondents included: Divisional Secretary, Administrative Officer, Accountant and three Clerks (responsible for preparing accounting reports using computers), Assistant Director in the planning division, two clerks in other divisions, two Grama Niladaries (GNs), and the Samurdhi Manager (SM).

Additionally, the former Dvisional Secretary of Kotmale DS, Additional Secretary and Chief Accountant in the Nuwara Eliya District Secretariat (NEDS), Senior Assistant Secretary (SAS) of the IT division in the Ministry of Public Administration, and Director of Training at the Institute of Public Treasury were also interviewed. In order to understand ICT education within KDSD, Senior Assistant Secretary (SAS) of the IT division in the Ministry of Tertiary Education, two teachers of two government schools (only two government schools in the KDSD have introduced computing for students) and four IT trainers in private IT training institutes and the Chairman of the "Harangama Pradesiya Sabhawa (HPS)" (Divisional Council) were also interviewed.

At the village level, twenty respondents (villagers) including school children, school leavers, government officers, and a few adults in the PV were interviewed to understand: (i) socio-economic and political context of the village, (ii) villagers' interaction with DS for their day-to-day service needs, (iii) the nature of the services provided by the DS to the villagers, (iv) villagers' perception of the value of

ICT for overcoming the socio-economic problems that confront them, and (v) the critical issues and major challenges of ICT development, implementation and use within the village.

DATA COLLECTION, DOCUMENTATION, AND VALIDATION

The principle data collection technique used in this study was the interview method. As such, interviews were conducted using a non-directive technique that allows respondents to focus on specific issues but permits them the freedom to expand on areas of personal interest and issues.

Interviews were documented. Each interview lasted one and half-hours to two hours. Interviews were mainly conducted using Sinhala language and these were paraphrased in English. Crosschecking was achieved by interviewing different respondents about the same issues, policy reports, circulars, observations, searching Internet webs, and attending a monthly progress review meeting at NEDS. In this way, the triangulation of data was obtained. Finally, a case description consisting of major issues, problems and challenges of developing, implementing and using ICT in the KDSD was prepared.

THE KDSD CASE

Introduction

KDSD is one of the four Divisional Secretariats (DSs) in the Nuwara Eliya District (NED). The four DSs are administered and controlled by the NEDS. KDSD has a plural, multi-cultural, and agricultural society. The population is about 96,280. There are three major ethnic groups (Sinhalese 51% Sri Lankan and Indian Tamils 42%, Moors 6.4%). (Resource Profile 2003). Employees in the Divisional Secretariat (DS) and villages in the KDSD use Sinhala and Tamil languages for every day communication.

The majority of Sinhalese are Buddhists. Farmers in the KDSD cultivate paddy, tea, coffee etc. in their own lands and the lands provided by the government. Few people (3.4%) are employed as teachers, drivers, security personnel and clerks in government sector organizations. Generally, the unemployment rate among the youth and adults is very high. About 11,392 (12%) people receive subsidiary benefits from the major welfare program *Samurdhi* launched by the government.

There are 25,642 families, 96 Grama Niladari Divisions (GNDs) and 117 Samurdhi Niladari Divisions (SNDs) in KDSD. Of the 25,642 families, 79% live in their own houses, 5.8% live in rented houses and 15.2% families have no houses at all. About 26.8% families have electricity. Only 577 land telephones lines (0.6%) and 52 mobile phones are available for public and private sector institutions such as DS, schools, hospital, banks, rest house, divisional council (*Pradesiyasabha)* etc. The possession of mobile phones by individuals is extremely rare.

The Divisional Secretariat in KDSD

NEDS oversees the Divisional Secretariat (DS) in the KDSD. The formal authority of the DS flows from the NEDS. The head of NEDS is the District Secretary who is appointed by the President on the recommendation of the Minister of Home Affairs. The present District and Local level administration emanates from the Colebrook Reforms introduced in 1833 (Wijeweera, 1998). It has undergone considerable change in the context of devolution of power to the provinces. At present the administrative structure is highly bureaucratised and politicized.

The head of the Divisional Secretariat (DS) is the Divisional Secretary. Within the Kothmale DS, there are 58 employees employed in several capacities to perform various activities of both the central government (25) and the provincial council (33). Some of these employees are employed as field officers such as the village development officer, social service officer, community development officer, sport officer, cultural officer, development coordinator, professional counsellor, peace advisor, environment development officer, youth services officer, science and technical officer. The DS is responsible to the central government and provincial councils for all the government activities executed within the KDSD via the DS of NEDS.

Functions and Activities of DS

DS is the only government organisation in the KDSD engaged in implementing and coordinating social and development programs of the various line ministries of the central government and the provincial council ministries. Its major role is to implement social, economic and administrative programs initiated by political leaders, central government, line ministries, provincial councils and divisional council (*Pradesiyasabha).*

These social and economic programs are implemented and coordinated through seven main sections established within DS. These sections are: administration and establishment, finance, planning, land, permit, *Samurdhi,* and registration.

The administrative officer coordinates general administrative work of internal staff, field officers and GNs. An accountant heads the finance section and coordinates all the accounting activities. These include: preparation of monthly and annual accounting reports, payment of salaries and pensions, issuing of vehicle licences, *Samurdhi* payments, payment of poor relief, land compensation payments, and all other payments done by the DS. An assistant director coordinates planning activities of the KDSD. These activities include: collection and maintenance of socio-economic data pertaining to the KDSD, preparation of monthly reports of all the social and economic projects being implemented within KDSD and sending of monthly progress reports to NEDS and providing socio-economic data to government institutions such as the department of census and statistics.

The Land section performs land distribution, acquisition of land, preparation of deeds, settlement of land disputes, and monitoring of the progress of land development under the direction of the Assistant Divisional Secretary (ADS). The permit section issues timber permits, timber transport permits, sand mining permits, liquor permits, and business registration permits under the supervision of ADS. Samurdhi section is organised under the supervision of DS. The planning section coordinates the activities. Additionally, a manager appointed by the Samurdhi Authority looks after daily activities of the Samurdhi section and 117 field officers are employed to assist the implementation of Samurdhi activities. Registration section is responsible for the registration of births, deaths and marriages and the issue of birth, death and marriage certificates to residents of the KDSD. Among these activities only the preparation of monthly and annual accounting reports, payroll, and pension in the finance section is handled using computers. All other activities are performed manually (Interview with the Divisional Secretary and employees, 2002).

Sources of Funds

The DS receives funds from several sources to coordinate and implement social and development programs within the KDSD. These sources include allocations from: (i) the decentralised budget provided by the central government to the DS

via the NEDS, (ii) Provincial Councils, (iii) the *Samurdhi* Authority to implement the *Samurdhi* program, (iv) allocations from line ministries, and (v) Divisional Secretary's vote via District Secretary for office administration such as payment of employees' salaries, wages, travelling, poor relief and pensions etc. (Interview with former DS, 2003).

Funds received under the decentralised budget, i.e. Rs. 3.5million for each Member of Parliament within the district is allocated among DSs at District Development Committee (DDC). A Member of Parliament representing the existing government usually heads this Committee. The District Secretary functions as the Secretary to the Committee. At these meetings, each Member of Parliament provides a proposal containing social and development programs to be implemented within the district. Some members provide proposals containing social and development programs to be implemented only within their chosen electorates. In both cases, each member informs the way that his or her money should be spent by the DDC. In this way, District Secretary allocates money from the decentralised budget among the respective DSs in the district. The DS implements and coordinates these social and development projects. Accordingly, monthly and annual reports are submitted to the treasury via the NEDS (Interview with Divisional Secretary, 2003).

The Members of Parliament decide the social and development programs that should be implemented by a particular DS. However, there are no genuine efforts to identify the needs of villagers and incorporate such felt needs in the development programs. Villagers pointed out that they do not actually participate in deciding on the social and economic development programs that concern them (Group interview with villagers, 2003).

Similarly, the Provincial Council Members decide on the social and development projects to be carried out within each DS Division without identifying the real socio-economic needs of the villagers. The Provincial Council funds these programs and the DS implements and coordinates them. Most of these projects are geared to benefit the politicians (by expanding the vote base) rather than the villagers (Group interview with villagers, 2003). These projects are, therefore, largely top-down than bottom-up. Because of the disparate manner in which projects are selected, there is no proper coordination between the projects initiated by the members of the central government and the members of the

Provincial Councils. This lack of coordination leads to the wastage and misuse of funds resulting also in the lack of transparency (Interview with former Divisional Secretary, 2003).

The GNs and field officers, collect socio-economic data for the planning division. These data are routine and structured. Data are collected annually and processed manually. This process has become a routine requirement rather than one that is required for the planning of socio-economic development within the KDSD. More importantly, data collected by the planning division are not related to the real social and economic needs of villagers in KDSD. In any case, some politicians do not use the information collected by the planning division and implement their own agendas in the villages (Interview with the Assistant Planning Director, 2002).

Additionally, there exist data duplication and redundancy leading to inefficiency and poor transparency. For example, different field officers such as *Samurdhi* Niladaries (SNs) and GNs collect similar information but they do not tally with one another. GNs and other field officers manipulate these data for their advantage (Interview with Assistant Planning Director, 2002). Similarly, information provided by some field officers is distorted and there is no feedback mechanism from the DS to the villagers and vice versa (Interview with Office Assistant, 2002). There is no proper system to correctly understand the socio-economic needs of villagers. But it is imperative that the socio-economic needs of villagers be properly taken into account in the implementation of socio-economic development projects for the welfare of rural people.

ICT Use in the Divisional Secretariat

In 1986, the Administrative Reform Committee of Sri Lanka recommended the use of Management Information Systems (MIS) and IT to ensure efficiency in the government sector organisations for rapid socio-economic development. As a result, in 1993, Sri Lanka Institute of Development Administration (SLIDA) had developed software compatible with disk operating system version (DOS) called "SIGAS" aimed at processing accounting information within government departments. Consequently, this information system was introduced in 1995 within the DS in the KDSD to process monthly and annual accounting data and to submit reports to the treasury through the NEDS.

In 1999, the National Institute of Business Management (NIBM) developed an information system, namely the Government Payroll System for processing the

pay roll. Subsequently, the GPS was introduced within the government sector organisations including the DS in the KDSD. Moreover, in 2000, the Pension Department also introduced another information system to prepare pension payment slips. These three types of information systems are installed in two computers located at the accountant's office of the DS and three different clerks working in the accounting section perform the computing activities. Other employees are not allowed to use these computers because of the fear of damaging the computers and therefore perform their routine work manually (Interview with employees, 2002).

One of the objectives of introducing computerised accounting information systems (CAIS) to the DS was to transform it into an efficient and an effective organisation. However, information systems have not made much impact on changing the working practices and the culture of the organisation. To date both manual and computerised accounting information systems co-exist. As explained by the three clerks working in the accounting division, no one has yet asked them to stop manual processing and focus only on computer processing (Interview with computer operating clerks, 2002). Apart from this lack of policy, auditors ask for the manually prepared reports rather than the computer-generated reports (Interview with accountant, 2002). More importantly, employees prefer to work with manual systems. As one clerk put it,

> *it is very easy to work with and understand manual systems than computerised systems because we can see how transactions are related and how they function, but with computers we don't know what is happening inside. Therefore, we check all the computer-generated reports manually too. This process is cumbersome because we have too much work to do with both manual and computerised systems. Apart from all these we use computers because we were asked to do so. Otherwise we wouldn't.*

Except for these barely trained clerks in the accounting section, other employees are not IT illiterate. This is very common not only within the DS in the KDSD but also within the NEDS (Interview with the accountant at the NEDS, 2002). This 'illiteracy' exists not only among middle and lower level employees but also among the senior officers (Interviews with District Secretaries, 2002). Therefore, the senior executives do not provide proper leadership to introduce IT related systems to improve administrative systems within departments (Interview with

the Senior Assistant Secretary, 2003). Even though, the government has recognised the importance of introducing IT within the government sector organizations for achieving socio-economic development (http//www.esrilanka), so far there are no such initiatives in respect of village level institutions. Administrators and other employees are incapable of developing computerised information systems to assist in village level socio-economic development.

More importantly computers have not been provided to perform other activities. Apart from the lack of computers, there are problems relating to the maintenance of existing computers. There is no technically trained person to attend to a computer breakdown. The procedure for repairing a computer is long and it should be undertaken by an approved organization. This process takes months and interrupts the internal data processing activities. The cost of repairing a computer is also very high. At times a new computer may be bought for the price paid for repairing a computer (Interview with computer operating clerks, 2002).

Because of the incompatibility of the different software, the three information systems are not integrated and operate independently. The clerks working with these systems too have not acquired the relevant skills to develop such an integrated system combining the three systems (Interview with computer operating clerks, 2002). They have been given training on an ad-hoc basis. However the knowledge gained from the training was barely sufficient to manage the day-to-day processing activities (Interview with computer operating clerks, 2002).

The need to implement accounting information systems emerged from the efficiency criteria and the accountability paradigm. In mid 1995, a tight financial controlling system was introduced within the government sector organisations (Interview with former Divisional Secretary, 2003). As a result, every DS should submit monthly accounting reports by the 5th of each month to the Treasury through the District Secretary. Accordingly, before the 5th of each month, a hard copy of the computer print outs of accounting reports with the signature of the relevant authorities is sent to the District Secretary. In addition, a soft copy, i.e. a floppy diskette is handed over to the District Secretary in person. Sometimes, email is used to send an electronic copy, but the District Secretary does not respond to information submitted until it receives the hard copy in keeping with government policy that requires authorised signature to authenticate documents (Interview with the Accountant, 2002). Therefore, email facilities are hardly used to improve administrative activities.

Generally, many employees in the DS do not like to change their existing work habits and culture. Most of the employees perform their duties according to the more conventional manual systems. They adhere to government rules and procedures and perform routine work. Some employees perform the same work rather mechanically over extended periods (ten to twelve years). When new tasks are assigned to these employees, they are reluctant to do so because they do not like to take up new challenges and risks (Interview with Administrative Officer, 2002).

Motivation to use ICT at work is lacking in the senior positions of the government sector organisations. Therefore, they do not provide active leadership to implement new changes via ICT. For example, the majority of officers of various departments who attended a monthly progress review meeting at NEDS was ICT illiterate and had a negative impression about the use of ICT in their work (Observation at the monthly progress meeting at NEDS, 2002). Therefore, they are unable to give proper directions and leadership to change the government sector organizations through the adoption of ICT to improve the social and economic programs (Interview with SAS, 2003).

Furthermore, they do not like to change mainly because of the fear of loosing their existing power relationship with the rest of the employees. The existing bureaucratic culture protects their political hegemony within as well as outside the organizations. For example, if on-line information sharing systems are introduced, the senior officers will lose their commanding position because they are not literate in ICT and have to depend on other employees to derive information from computerised information systems (Interview with SAS, 2003).

Some politicians do not have a positive attitude towards the introduction of ICT within the administration. They do not rely on the information produced by computerised systems. According to the accountant at the NEDS, he had prepared a database using MS spreadsheet to allocate election officers within the district at the last general election, which was not well received by the politicians. They did not trust this system and wanted him to revert to the manual system (Interview with accountant in the NEDS, 2003).

Palamgammana Village in the KDSD

The population of Palamgammna Village (PV) is 927 comprising 294 families. They belong to 288 households. The population is mainly Sinhalese (98%) and

Buddhist (99%). Most villagers fall into the category of either farmer or labourer. The farmers cultivate paddy, tea, coffee, etc. in their own land or government owned land. Thirty-five villagers are in permanent wage employment, 50 villagers are self-employed, 165 are engaged in temporary work and 68 villagers are unemployed. It is found that 190 families (65%) receive benefits from the Samurdhi program (Assistant Director's Report 2003).

Communication within the village is largely informal. In everyday communication, word of mouth communication is predominant. Hundred and eighty-four families (62%) do not have electricity. The modern day technology such as ICT is yet to reach the village. However, 150 householders have TVs and 275 householders have Radios (Assistant Director's Report 2003). In the evening, villagers without radios or TVs gather in places where they are available to follow various programs such as musical shows, news etc. This may generate exchange of information by the villagers. In this way, social interaction has become increasingly mediatised. Generally, villagers have a fair understanding of the social, economic and political context of the country. However, the media constantly pose a threat to the traditionally held values systems of the village (Interviews with youths in the PV, 2003).

Villagers in the PV are divided on the basis of party politics. Political power within KDSD shifts between the two major political parties namely, the United National Party (UNP) and the Sri Lanka Freedom Party (SLFP). Inter group rivalry resulting in damage to property belonging to the opposing party members are common when one or the other of the two factions form a new government. For example, some villagers in the PV stated that the division of villagers according to party politics has constrained socio-economic development of the village over the last five decades (Group interviews with villagers, 2003). As pointed out by many villagers, during the election period politicians visit the village and make promises but they do not come back to the village once the election is over (Group interview with villagers, 2003).

People in the PV often visit the DS seeking various services. However, according to some villagers the services they receive are not satisfactory due to delays in decision-making on the part of some of the DS employees. For example, some villagers state that they have to visit the DS several times to get something done (a land deed or a birth certificate). If a villager happens to know an employee working in the DS, his or her request will be processed quickly while others have to queue up (Group interview with villagers, 2003).

Generally, there exists a high level of motivation among youths, particularly school children and school leavers, to learn IT to secure a job to overcome their economic hardships. For example, some villagers stated that they send their children to private training institutes for training in IT mainly for the purpose of securing jobs. However, facilities at such as training institutes are not sufficient; e.g. there is a dearth of qualified teachers to impart IT related skills. Hence training provided at these institutions is not sufficient to develop IT related skills. Presently, a few youths who can afford the cost of training go to a few private institutes in major cities such as Kandy and Nuwara Eliya for IT related education. Few schools also offer computer training. The training provided by both government schools and private institutes is largely technical. It is also inadequate and largely ad-hoc and does not provide the technological know-how to educate students in IT.

The teachers in schools and instructors in private institutes only understood MS word, Excel and Power Point as IT tools. These teachers and instructors have not acquired proper training in IT to teach students. Their training is inadequate to cultivate technological innovations in the minds of youths. For example, one woman stated that she had sent her daughter to a private IT training institutes after paying Rs 3000 as the tuition fees for the course, but her daughter is still at home because she could not find a job due to lack of knowledge gained from the training course (Interview with a woman in PV, 2003).

Apart from the lack of facilities to learn computing, there is also the belief among village students that IT learning is an elite activity for the rich and those who could afford it (Interview with youths, 2003). For example, a youth who had made several visits to rich houses in Colombo to sell *Kitul jaggery* (a sweet made out of the sap of the *kitul* palm) stated that he saw how computer learning has become part of the everyday life of children in cities. He pointed out, that the youths and children in villages are left out of knowing and learning ICT. Majority of youths in this village have passed G.C.E (O/L) and/or (A/L) examinations. They are eager to learn English and ICT to find suitable jobs and contribute to the socio-economic development of this country, but they are prevented from the process of knowing and learning ICT.

Youths in this village have no opportunities to learn ICT and English and to make use of them as part of their everyday life. Therefore, many youths in this village are frustrated (Group interview with youths in the village, 2003). Generally, villagers wanted politicians and administrators to listen to their everyday social

and economic problems and address them through the social and economic programs. However, they are largely ignored as not of primary importance. Both the bureaucracy and the politicisation of the development process prevented any meaningful participation of villagers in social and economic decision making at the local level.

Emerging Issues

In the KDSD the DS under the direct supervision of District Secretary of the NEDS implements and coordinates all the social and development programs initiated by both the central government and the Provincial Councils. For this purpose, DS receives money from various sources. Except for the preparation of monthly and annual accounting reports, payroll and pensions, all the other activities are performed manually at the DS. From the interviews with officers it is assumed that ICT would improve the efficiency of social and economic development programs being implemented within KDSD. However, the ways of handling administrative, social and economic activities at present have raised several issues that lead to inefficiency, lack of transparency and thus accountability to the public.

The DS followed the formal bureaucratic and administrative procedures in the conduct of social and economic affairs within its realm of jurisdiction. Decision-making at the DS was guided by bureaucratic ideals that have been institutionalised as norms and normative structures within it. The senior administrative officers, being bureaucrats, did not want to see their power diminishing vis-à-vis the employees and villagers. This rigid bureaucracy severely restricted the socio-economic development at the village level.

Generally, the inability to develop ICT based information systems (CIS) within the DS to help the villagers was due to the existence of 'bureaucratic rationality' (Weber 1947). This bureaucratic rationality was rooted in the historical context of administration of government organisations in Sri Lanka (Wijeweera, 1998). As many other government sector organisations in Sri Lanka, the DS followed the ideal model of formal bureaucratic rationality to implement and coordinate social and economic affairs. While the state was acting as a provider of guidance and services to help villagers, the covert but highly institutionalised and politically manipulated apparatus hampered village level development. The politicians were effective in the manipulation of the declared objectives of government's socio-economic development for their own benefit and of their supporters.

The rigid bureaucracy, impractical top-down approaches in decision-making and communication, use of overly authoritarian power structures, and unrealistic intervention by politicians in the DS affairs constrained employees to engage in critical examination and self-reflection of their work. As a whole, many DS employees are not aware of the use of ICT in discharging their responsibilities. They have no capacity to develop information systems to improve their service delivery and thereby help villagers. Apart from the lack of awareness, the DS was not provided with the required infrastructure facilities to develop and implement information systems to improve the service being provided to the villagers. Instead, the DS officials have become myopic masters of the use of bureaucracy leading to a self-imposed ideology that bureaucracy is the ideal form of administration and control of organisations.

Another problem that contributed to the inefficiency of the DS was that the politicians are the exclusive preserve power for the control and access to resources. The politicians often arbitrarily influenced and changed the direction of DS activities, particularly that of social and development programs in their interest rather than that of the villagers. The senior administrators have minimal power or their power is weak as compared to the political power exercised by the politicians of the ruling government. They are unable to provide advice and guidance to the politicians. Hence the reverse is often true.

Co-existing bureaucracy and political domination has prevented the DS from becoming an efficient organization. Consequently, villagers have become objects of bureaucrats and politicians and their social and economic life mediated by them. Thus social and economic programs are not based on clear objectives agreed upon by the villagers. Many of the projects introduced in this way have served the partial interest of the politicians in power rather than serving the wider interests of local communities. Generally, the officials have minimal power to change the decisions of politicians and they are unable to make the DS an effective organization in the implementation and coordination of social and economic programs for local communities.

The above analysis and discussion raise several issues in relation to ICT development and implementation for community development at the DS in the KDSD.

First, how to overcome the all pervasive bureaucracy, corruption and politicisation of various activities making the administrative process more transparent and

accountable to the public through the development and implementation of ICT to benefit the local communities? Secondly, within a range of relationships, how could the officials become effective in helping villages through ICT development and implementation? Thirdly, how to change the attitudes of employees including that of the senior officials to embrace ICT in their everyday activities to improve the services being provided to the villagers? Fourthly, how to improve the level of ICT use among youths in villages to make them innovative? Finally, how to make use of the knowledge of local communities for the socio-economic development of the country by combining their experiential knowledge with ICT?

ICT LED SOCIO-ECONOMIC DEVELOPMENT AT THE VILLAGE LEVEL

Sri Lanka aims to achieve its economic development through the wide application of ICT in business, administration, health, education and other sectors. This is evidenced in the recent Information Act presented to the Parliament. Even though the new focus of attention is economic activity; improving government services, building of social infrastructure and human development will continue to be important areas of concern particularly in the rural sector to address the aforementioned issues. The application of IT would lead to innovative administrative systems which can enhance policy formulation, promote participation, improve service quality, make planning more effective, empower citizens, and improve transparency and accountability of government affairs (Traunmuller and Lenk 1996).

IMPROVING DS SERVICES THROUGH THE APPLICATION OF ICT: CHALLENGES AND STRATEGIES

The DS performs different but highly integrated activities such as general administrative work, accounting, planning and monitoring, land allocation and registration, issue of permits, *Samurdhi* implementing, receipts of funds, registration of births, deaths and marriages. The basic objective of building and implementing information systems is to expand the various services being provided while improving their efficiency. Computerization of these activities would lead to improved service quality. Using the network and Internet facilities DS can integrate various activities enabling DS employees to share information with various line and provincial council ministries operating at the District level. It would enable them to quickly share information with the DS and respond to the needs of villagers.

Information systems such as Decision Support Systems (DSS) would help the DS to plan and monitor various social and economic programs implemented within the KDSD. The use of Geographic Information Systems (GIS) can assist to identify location of development programs and disaster prone areas. Introduction of electronic document management (EDM) for land allocation and registration of land recipients, issue of permits, registration of births, deaths and marriages would improve the efficiency and quality of services being provided enabling the DS's employees to overcome unnecessary delays in the processing of activities. Provision of PCs for accounting and management of funds received from various sources would lead to improve the transparency and accountability to the public because information becomes recorded and online. Similarly, providing PCs to field officers would lead to accurate information, and to improve, coordinate and monitor socio-economic projects and consequently transmit information on line to the DS.

However, building such applications within and outside the DS is a highly challenging task because of the negative attitudes of employees towards using ICT at work. This is mainly due to the lack of awareness of ICT applications, lack of commitment to work, poor knowledge of English, illiteracy in ICT, and long established bureaucratic culture. Additionally, a misfit between socio-cultural values of employees and the values of ICT has resulted in little or no motivation to systems being developed, implemented and used. Moreover, successful application of ICT within the DS is constrained by the unavailability of physical infrastructure facilities such as computers, telephones, Internet facilities, maintenance facilities, and unrealistic rules, procedures and at times by outdated administrative and financial regulations that best suit a 'closed' but not an 'open economy'.

Successful application of ICT within the DS requires building consensus among the administrators and employees, as well as providing the required social and physical infrastructure.

At present, external experts dominate the ICT development and implementation activities in the organization where the actual users and affected parties are ignored. ICT should be developed taking into consideration the socio-cultural values and the needs of the users and affected parties. Systems should be culturally and socially amenable because ICT is developed, implemented and used within a wider socio-cultural context. It should be in conformity with the socio-cultural values operating within the DS. Any forced attempt to introduce ICT within the

DS will be defeated by the existing situation. Hence, an open, participatory approach would enable the DS to develop and implement ICT. That meets its requirements.

Development of social infrastructure includes organizing awareness and training programs in ICT as well as in English and bringing about changes in procedure. Building physical infrastructure involves provision of adequate physical resources such as PCs, telephones, maintenance and Internet facilities, and changing existing law and procedures of administration. A recent change of law in relation to electronic transmission of information is indeed commendable. A circular issued by the Secretary to the Prime Minister and Chairman/Administrative Reforms Committee (Administrative Reform Circular no.1/03, 2003) states,

> *It is necessary to introduce the electronic culture within government organizations to expedite government processes.*

It encourages the use of electronic communication for sharing of information. However, parallel to the change of law, other aspects in the social and physical infrastructure too should be developed to create an ICT culture within government organizations including those at the local level.

HUMAN DEVELOPMENT THROUGH THE APPLICATION OF ICT: CHALLENGES AND STRATEGIES

The basic objective of human development is to enlarge the range of people's choices and make development more participatory and democratic (Human Development Report 1991). It allows sharing of knowledge. It is only by allowing people to participate in the development process that development in its different manifestations can be achieved. This means that sharing of knowledge is an interactive process of making the right information available to people at the right time in a comprehensible manner to enable them to act judiciously- enriching the knowledge base in its entire mechanism (Nath and Scholar 2000).

ICT can improve the knowledge and awareness of villagers by providing information on social and economic programs, markets and employment opportunities. It could also provide information on medical, agricultural, educational and training programmes as well as weather and disaster warning. This can be achieved by establishing a "networked integrated centre" (NIC) within the village and integrating it to the DS. By linking the villagers with the social and economic

programs through the NIC, decision makers and policy planners would be able to include a range of needs as voiced by the villagers and make development a more participatory and democratic process.

Similarly, the DS can make use of NIC to share information with line and provincial council ministries, and disseminate information on receipts of funds, use of funds for various social and economic projects, distribution of state lands, and disbursement of *Samurdhi* and other social benefits. The NIC can be used to provide information on health practices, new methods and techniques of farming etc. Furthermore, NIC can also be used to raise awareness among youths, school children, women and other marginalized groups in the village. In this way, the knowledge base of the villagers can be improved.

However, the major challenge is how to build the NIC to benefit the villagers. Prior to introducing the ICT to the village, it is essential to develop the environment in which such technologies can be implemented. As stated earlier, the villagers cannot afford ICT because of their generally low economic situation. Hence, the intervention of the government or some collaboration with the private sector is essential to build the NIC within the village.

The development of social infrastructure involves creating awareness of ICT, developing competence in accessing computers and networks, developing the level of literacy in ICT, developing ICT systems compatible with the Sinhala language, providing training in English and generally educating the villagers on benefits of ICT use. The development of the physical infrastructure involves the development of NIC and provision of telephone, electricity, and other facilities. It is only through such an endeavour that the "digital-gap" between the haves and the have-nots could be bridged to benefit local and village level socio-economic development.

CONCLUSION

As a developing country, Sri Lanka is far behind in the application of ICT in government sector institutions. To date the development of ICT applications at village level include few mechanisms to ensure its ability to reach remote rural communities to confer on them the ensuing benefits. ICT can be developed and implemented within the state institutions in rural areas to improve administrative processes, increase transparency of activities to make such activities accountable to the public and deliver a better service to improve the socio-economic

conditions of villagers. ICT can also be developed and implemented within the villages to connect villagers with the socio-economic development activities of the central and provincial governments, improve their participation, increase their knowledge base and empower them. However, this can be achieved by building of consensus among the administrators, employees, and villagers and the development of the social and physical infrastructures within the government institutions such as the DS in the KDSD and in the villages such as Palamgammana.

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A SYSTEM OF DEVELOPMENT REGIONS FOR SRI LANKA MEETING THE NATIONAL AND GLOBAL CHALLENGE

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INTRODUCTION

Sri Lanka is confronted with three of the most serious problems faced by a developing country. The country still suffers from high levels of poverty. Unemployment, especially among the youth, is a serious problem. In addition, inequality in the distribution of benefits of growth has been growing both among social classes and among different regions of the country. The long-drawn ethnic conflict and the recent Tsunami devastation have further compounded this situation. Past experience has clearly shown that there are no quick and simple solutions to these complex problems. Overcoming them would require coordinated action to i) attain a high overall growth rate of the economy in order to generate higher levels of employment and incomes and alleviate widespread poverty, ii) ensure, as far as possible, an equitable distribution of the benefits of national growth among not only social classes but also among different regions of the national territory and iii) exploit and manage the natural resource base and the environment of the country in a sustainable manner.

In the past, attention has been focussed mainly on key sectors of the economy, thereby creating a highly polarised spatial development that has prevented the realization of the development potential and the comparative advantages of different regions for faster regional growth. More than ever before today it is

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necessary to build competitive and resilient regional economies to face the complex challenges of globalisation.

The unprecedented devastation caused by the recent tsunami disaster has added a further dimension to the need to create more resilient local and regional economies to mitigate and manage the impacts of natural disasters in the future.

The purpose of this paper is to argue the case for a system of development regions that are able to create the conditions for generating growth and resilience at the regional level.

Following a brief discussion on the nature of Sri Lanka's regional problem and the need for a regional approach to development, a case is made for a system of regions delineated for development purposes, outlining their main characteristics and role. The remaining sections of the paper discuss the main drivers of the new development regions and some of the key instruments of regional growth promotion.

APPROACHING DEVELOPMENT FROM A REGIONAL PERSPECTIVE

Sri Lanka is faced with a growing problem of regional inequality, which is manifested in several ways:

First, is the problem of increasing inequality among the regions. The most striking aspect in this is the increasing polarization between the Colombo Metropolitan Region (CMR) and other regions of the country. This is clear from several indicators such as the provincial GDP per capita its composition and growth rate, employment and poverty and access to social services. The gap is widening and certain provinces lag far behind the Western Province.

Second, in addition to the growing polarization, the country is also faced with the problem of excessive growth concentration in the CMR. This is evident from the high concentration of manufacturing and services, Foreign Direct Investment (FDI), the best schools and hospitals and recreation facilities within the CMR. The only airport and the major port are located here as well as the centres of political power. All these tend to further accelerate the growth concentration in this region. In addition, while vast amounts of capital are invested in the CMR to improve the business and investment climate, the outer regions languish for want of dynamic regional centres that can drive their regional economies.

Third, parallel to the growth concentration in the CMR, there are many rural/ peripheral regions with an entrenched inability to deal with persistent and widespread poverty, linked largely to their diminishing capacity to generate and sustain growth. The benefits of growth concentration in the CMR have not filtered down to the rural/peripheral regions for reasons now fairly well known. Rather, there have been more backwash effects in the form of large-scale transfer of population, especially the young and the educated, as well as rural savings and surpluses to the CMR.

Regional inequality has retarded and even blocked the optimum utilization of the development potential of the extensive peripheral and less favoured regions. This in turn has contributed to slow down the maximum utilization and capitalization of the national development potential (for more details on regional inequality in Sri Lanka (see UNDP 1998, Gooneratne 2001 and Wanasinghe 2001).

The implications of the above noted scenario for growth and stability of the country are clearly enormous. Persistent and growing regional inequality is not a good recipe for a stable society. Rather it is a recipe for discontent, dissension and even separation. Few would contest the fact that it is the long-term neglect of the North and the East of the country that eventually led to the destructive separatist war and the neglect of the South that triggered two violent insurgencies by the Sinhala youth in 1971 and 1989.

There are many people who still think that Sri Lanka's small and compact size does not require a regional approach to development. Even some experts have advised that it is not necessary to be overtly concerned with growing regional inequalities and the lagging or slow growing regions (Richardson & Guild 1995). The logic is that, with economic growth, regional convergence will eventually take place. But the danger is that there are grave social and political risks associated with a further worsening of regional inequality.

In addition to managing the growing polarization between the CMR and other regions of the country, and moderating the excessive growth concentration within the CMR, there are several other reasons that justify a regional approach to development in Sri Lanka. These are,

(i) To effectively manage the expected urban growth in Sri Lanka that has been projected to increase to nearly 60% of the population by 2020. The distribution and the degree of concentration of this urban

population is likely to have major repercussions on the country's economy and society, in particular the rural society. A regional approach to the management of urban growth can help to bring about a more balanced development in the country.

(ii) To benefit from the country's great diversity (natural, economic and cultural). A focused regional approach is needed to turn this into a major development asset.

(iii) To enable the efficient management of the environment and the natural resource base that is under severe threat, mainly due to uneven growth. Dealing with them requires long-term actions, both at the national and regional level. Indeed, concrete actions in these areas can be most effectively taken at the regional level. The recent tsunami disaster has now added another powerful reason to adopt a well conceived regional approach to development to mitigate and manage natural disasters more effectively.

INADEQUACY OF CONVENTIONAL APPROACHES

Past experience has clearly demonstrated the inadequacy of the conventional approaches and policies in promoting regional development. For example, the traditional concern of regional development has been with the reduction of disparities among different regions of a country by ensuring a greater territorial distribution of access to social, economic and political power across national space. There is no doubt that this is still a legitimate concern in every society. Yet, it is not a sufficient condition to promote regional development in to day's context.

It is also a fact that, regional policies adopted in many developing countries, including Sri Lanka, have relied too heavily on the welfare delivery systems and interregional fiscal transfers In the case of Sri Lanka the IRDPS provide an example of the former and the decentralized budget and the Provincial Council allocations of the latter. For a number of well-known reasons, these have not worked well in reducing regional disparity and promoting regional growth. Indeed, despite such programmes, both income distribution and regional inequality have increased.

The Sri Lanka experience itself clearly brings out the fact that the problems of poverty and unemployment are directly correlated to the performance of the economy. Most of the economic and social indicators have improved steadily with a higher growth rate of the economy, both at the national and regional level. This is clear from the indicators for the CMR. The experience of many Asian countries like India, China, and Thailand etc. clearly shows that growth generates jobs and improves the livelihoods of poor.

There is a need today to build regional economies that are competitive and are also at the same time internally resilient. In other words, regional inequalities have to be addressed more by promoting regional growth; that is by making the regional economies dynamic and competitive. This calls for not only new approaches but also new types of regional space. In other words we need regions delimited for development.

This is because the global, macro-regional, and domestic contexts affecting development in general and regional development in particular have changed dramatically during the last two decades. The emerging, but still evolving triple transitions of globalization, market liberalization and devolution of power have clearly altered the mechanisms underlying regional development. Hence these changes require new thinking in our approach to the subject.

Globalization has become a major trend in the world economy integrating national economies through increased trade and investment, increased mobility of capital and labour, and information. There is no escape from the adverse impacts of globalization other than by aggressively facing competition. Perhaps, the only sustainable way of doing this is to build competitive regional economies. Such regions would enable a country to

(a) tap the numerous opportunities that globalization opens up in numerous areas such as trade and investment and capital and labour mobility.

(b) prevent rural/peripheral regions from getting weaker. Globalization is rapidly altering the architecture of our space economy, making metropolitan regions like the CMR dominant regions of investment, economic growth, wealth creation and political power. In the process, most rural and peripheral regions, that are already poor and lagging, tend to get further marginalized due to their diminishing capacity, and

(c) face the likely damaging shocks of a volatile global economy by strengthening regional resilience. This is possible by *complementing competitiveness with a desirable level of economic completeness* in the regional economies. Resilient regions can make the national economy better positioned to face a volatile global economy (Douglass 1998b, Storper 1997).

In addition, regional growth is even more necessary to address the critical issues of unemployment and poverty, especially in the lagging regions. It is now clear that this could be best achieved by strengthening and diversifying regional economies, with reliance on internally generated growth. This is because the lagging rural/ peripheral regions exert a damaging effect on overall national growth. A policy that would assist in "levelling up" is the best way to generate regional prosperity, than welfare oriented redistribution measures.

ESSENTIAL ATTRIBUTES OF DEVELOPMENT REGIONS

It is a well known fact that the REGION continues to be an elusive concept. The quest to establish an overarching definition of the 'region' has remained a futile one. This is because regions can be defined differently for different purposes ranging from economic, to social political and even security, and for achieving certain long or short-term objectives. Regions can be defined by one or several criteria, such as strict natural boundaries like rivers or mountain ranges or administrative boundaries. Therefore, it is important to recognize that regions become definable only in relation to particular criteria. However, development regions are more complex because they take into consideration several inter-related characteristics.

Considering the major challenges confronting Sri Lanka globally, nationally and locally, any system of development regions for the country needs to have some of the following attributes:

- Large enough to permit the emergence of dynamic and competitive regional economies. This is important to enlarge the scale and scope of the economy of the region.

- Possess certain common characteristics in terms of development potential and problems. This is necessary to activate the development potential of the region and systematically address the problems that block development.

- Combine strong/weak and high potential/low potential areas. Very often, the solutions to the problems of one region are linked to the realities and potential of other regions. Greater benefits can be realized by combining the potentials and capabilities of different regions to strengthen complementarities. A good example is the emerging initiatives in East Asia through the now well-known "Growth Triangles".

  Be familiar or in some way connected to the local population. The development regions must provide some sense of territorial identity to the people of the region. However, in the long run, a competitive region will create its own regional pride and identity linked to regional excellence.

The need for larger territorial units for regional development is widely recognized today. In the context of a rapidly evolving global economy, the regions designated for development purposes require a certain geographical size to enable them to strengthen comparative advantage and achieve regional competitiveness. Recently, some countries in the European Union, including France, have recognized the need to redefine regions to better meet the emerging needs of an expanding economy. The Growth Triangles in East Asia are another example of an innovative attempt to create new territorial spaces in a global context (Chung-Tong 2001). China has also adopted a new concept of seven economic regions in her Seventh Five Year Plan (Wang 2001).

A larger territorial unit would provide the following advantages:

- Expand the overall resource base both physical and human; this is important to achieve certain scale economies at regional level in order to enlarge the production base, for example, for processing and value addition, creation of a larger regional market for local products, a large enough population for the emergence and growth of dynamic regional cities and urban centres, and the establishment and expansion of educational, research and training facilities.

  Increase the multiplier effects of capital injections into the local economy and enhance complementarities and growth linkages between rich/poor and high potential/low potential areas of a region.

  Enlarge the scope for building strategic partnerships among key stakeholders at regional level. This has a greater chance to succeed within a larger territorial unit, as the scope for mobilizing key partners and stakeholders is greatly

enhanced. For example, the district presently adopted as the unit for planning and implementing development activities in Sri Lanka has been at a distinct disadvantage in this respect.

- Create conditions for a science and technology-led regional development. A larger territorial unit comprising several administrative districts and provinces or parts thereof will be able to bring together the minimum bundle of institutions that are vital to launch and later expand science and technology support for the regional economy, providing region-relevant education and training, and R & D support.

- Evolve a territorial framework, going beyond established politico-administrative boundaries to create regional identities linked to regional excellence as opposed to regional identities based mainly on narrow ethnic or religious factors. In the long run, we must create regional pride based on regional performance and excellence. These would include among others the region's products, high quality services, cultural attractions and achievements. In the long run, this can re-mould the outlook of a society or region, making cooperation and coexistence meaningful and relevant.

REGIONAL DEVELOPMENT WITHIN EXISTING ADMINIS-TRATIVE UNITS

There has been considerable debate and discussion on the need for a new territorial unit to promote and accelerate regional development in this country. Several politico-administrative initiatives have also been taken in recent years to address this issue.

More recently, several writers on the subject have drawn attention to the need for a "*fundamental re-working of the regional development exercise...*" (RDD 2000), need for "*rethinking regional development* (Gooneratne 2001) and the need for "*redefining regional development*" (Karunanayake and Abhayaratne 2001).

During the last two decades or so there has been a growing recognition of the inadequacy and unsuitability of the administrative unit for purposes of organizing and promoting economic development. Both the District (used as the territorial unit for planning, coordination and implementation of development activities and

the central government programmes at sub-national level, in particular the Integrated Rural Development Projects [IRDPs]) and the Provincial Councils created in 1987, do not provide the optimum territorial framework for creating dynamic and competitive regional economies. This is because both are units that were created during the colonial administration for different purposes, such as strategic considerations, territorial consolidation, revenue collection and the enforcement of law and order.

The district is clearly too small as a territorial unit to generate sustained regional growth as the nearly two decades of district IRDPs have clearly demonstrated (Jerve et al. 1992; 2003). The Provinces, as they exist today, also do not offer any rational territorial framework for creating dynamic and competitive regional economies. For example, it has been recognized that the present Southern Province and the land-locked Uva and Sabaragamuwa Provinces are, by no means, meaningful territorial units from the point of view economic development (Economic Review 1990). The Land Commission of 1985 has expressed similar sentiments on the subject. As an alternative to the provinces, several proposals that suggest a system of regions for the country have been advanced by a number of academics, researchers and others. These are mostly based on agro-hydrological, historical and other considerations and have been proposed to bring about a solution to the ethnic problem (Dennis Fernando, Nanayakkara, Amarakone and Wickramanayake {Economic Review 1990} and Madduma Bandara 1991). These are not geo-economic or development regions that have been demarcated on the basis of present and future development needs of the country, potentials and comparative advantages of different areas and the socio-economic and geopolitical realities.

The new *Regional Development Programme Framework: A Strategy for Area-based Economic Growth in Sri Lanka,* introduced by the then Regional Development Division (RDD) of the Ministry of Plan Implementation, outlined an area-based strategy to promote rural economic growth (RDD 1997). The new policy was an attempt to reorient the IRDPs (that were by then fatigued by low rural dynamism) by focusing on private sector-led economic growth. It was expected to tap the development potential of different areas by going beyond district boundaries. The RDD subsequently further stressed the need for a fundamental reworking of the regional development policy in Sri Lanka (RDD 2000). These initiatives were forgotten with the disbanding of the RDD in 2001, following the establishment of Regional Development Ministries.

The more recent initiatives to create Regional Development Ministries by the previous United National Front (UNF) government as well by the present United People's Freedom Alliance (UPFA) government tend to demonstrate the recognition of the need to move beyond the administrative unit to promote regional development. The present Regional Development Ministries and those of the previous government went beyond a single Province in delineating units for regional development ministries, thus opting for a unit larger than a Province in most cases (Appendix 1). The reason for the creation of regional development ministries was, however, largely political than a desire to promote long-term regional growth. The initiatives were (and are) largely *ad hoc* and are not based on an in-depth analysis of regional issues.

The Southern Development Authority (SDA) created in 1995 to spearhead the rapid development of the southern region, defined Ruhuna to include the three districts of the Southern Province, the entire Moneragala District and the two Southern most Divisions of Ratnapura District, emphatically recognizing the need to have a *larger territorial unit* for regional development. SDA initiative could have made a difference in clearing the path for a new kind of regional development, but was aborted prematurely.

A more recent proposal to establish five Economic Zones as a framework for promoting industrial investment in the regions also recognized the need for a larger territorial unit and the need to go beyond present provincial boundaries (IPS 2002). However, this was a flawed proposal in more than one respect as it clearly failed to grasp the key elements that constitute regional growth promotion today (see Appendix 1).

What is clear from the above discussion is that all the regional development initiatives taken so far have been *ad hoc* exercises. They did not learn from past experience. They have also failed to take a visionary look at the emerging realties at local, national and global level.

There is growing recognition today on the futility of Sri Lanka continuing its efforts to address the disadvantages arising from isolation and peripherality of most regions outside the CMR by ensuring the widespread and continued availability of largely welfare oriented services and facilities. In general these efforts have failed to uplift the living standards of the vast majority living in the rural periphery simply because the reality of overcoming the entrenched disabilities in these areas is far more complex than generally understood.

CHARACTERISTICS AND FUNCTIONS OF DEVELOPMENT REGIONS

A key distinguishing characteristic of regions delineated for development purposes in a rapidly evolving global environment is flexibility in two important respects. First, it is not necessary for development regions to have rigid geographical boundaries. Second, their establishment need not be bared on a rigid time frame. Flexibility allows regions to make adjustments in their boundaries in relation to the changing economic and political realities, both internal and external.

A second characteristic is that even within a framework of devolved governance at sub-national and local levels (Provinces, Divisions and Urban and Local Authorities), development regions need not have administrative and political powers. They would only require political and perhaps constitutional recognition. The politico-administrative powers can remain in the hands of the devolved entities of governance.

A third characteristic, emanating largely from the first two is that development regions do not require formal and rigid institutional arrangements. What is required is a soft institution, but with a far-reaching mandate to road map and guide long-term regional growth. There are several institutional forms/arrangements that have been adopted in different countries (e.g. Appalachia Regional Commission in the US, Regional Development Conference in North Rhine –Westphalia in Germany and Regional Development Agency in the UK). The creation of such an institution is a take for key stakeholders of the region, supported by other relevant partners including state agencies.

Development regions with the characteristics noted above would play a qualitatively very different role than that played by the present regional development units.

The central role of a development region would be the elaboration of a long-term vision or comprehensive basic framework of development (development road map) for the area that it delimits. This is to create a bold and comprehensive agenda to expand *development capabilities* to enable the full exploitation of the development potentials of the region. In other words, its role would be to promote rapid and sustained economic growth, while ensuring judicious management of the environment and the resource base that ensures the resilience of the regional economy.

In addition to the elaboration of a development framework, the development regions will also have the important role of lobbying with the central government for its support for the envisioned long-term development strategy for the region. They have even a greater role to play in publicising and promoting the long-term regional development framework among the larger regional community. They also have to support the regional and local governments to translate the development framework into programmes and projects (short, medium and long-term) for implementation.

In many ways, the role of the development regions will be the promotion and advocacy of regional development strategies rather than in the actual planning and implementation of such strategies.

On the basis of the criteria outlined in the two sections on essential 'Attributes of the Development Region' and 'Characteristics and Functions of Development Region', six development regions on a rule of thumb basis are proposed for Sri Lanka (Figure 8.1 & 8.2). A brief description of their main characteristics is given in Appendix II.

We have already noted the need for flexibility in delineating development regions. The point has been made that such regions need not have rigid and permanent geographical boundaries. However, in the case of the regions that we have suggested, it would be possible to have the boundaries run closer or parallel to the established administrative boundaries of a mix of the provinces, districts or divisions. The actual delineation of the development regions must be done only after a careful analysis of the data/information pertaining to regional characteristics and the long-term development potentials of the regions.

NATIONAL DEVELOPMENT STRATEGY AND REGIONAL DEVELOPMENT

Eventually, all regions have to form a part of the national space. It is, therefore, necessary to have a national framework that provides the broad guidelines for regional development. This would be based on a comparative analysis of the needs and potential of the different regions in the context of overall national development goals and strategies. A strong national planning agency could

determine regional development priorities at the national level within the national development framework. Such an institution is necessary to identify the development priorities and investment needs of the designated development regions. It is a well-known fact that in the absence of a national regional development policy, regions can fall into the trap of unnecessary duplication of efforts and unhealthy and costly competition.

National development planning and regional development are very closely interconnected. In countries like the Philippines and Thailand these are closely linked within a national planning agency (National Economic Development Agency in the Philippines and the National Economic and Social Development Board in Thailand).

A system of development regions with their long-term development framework would also make a qualitative change in the role of the central state as a mediator of regional development. For example, a system of development regions can make the allocation of scarce resources efficient in many ways such as;

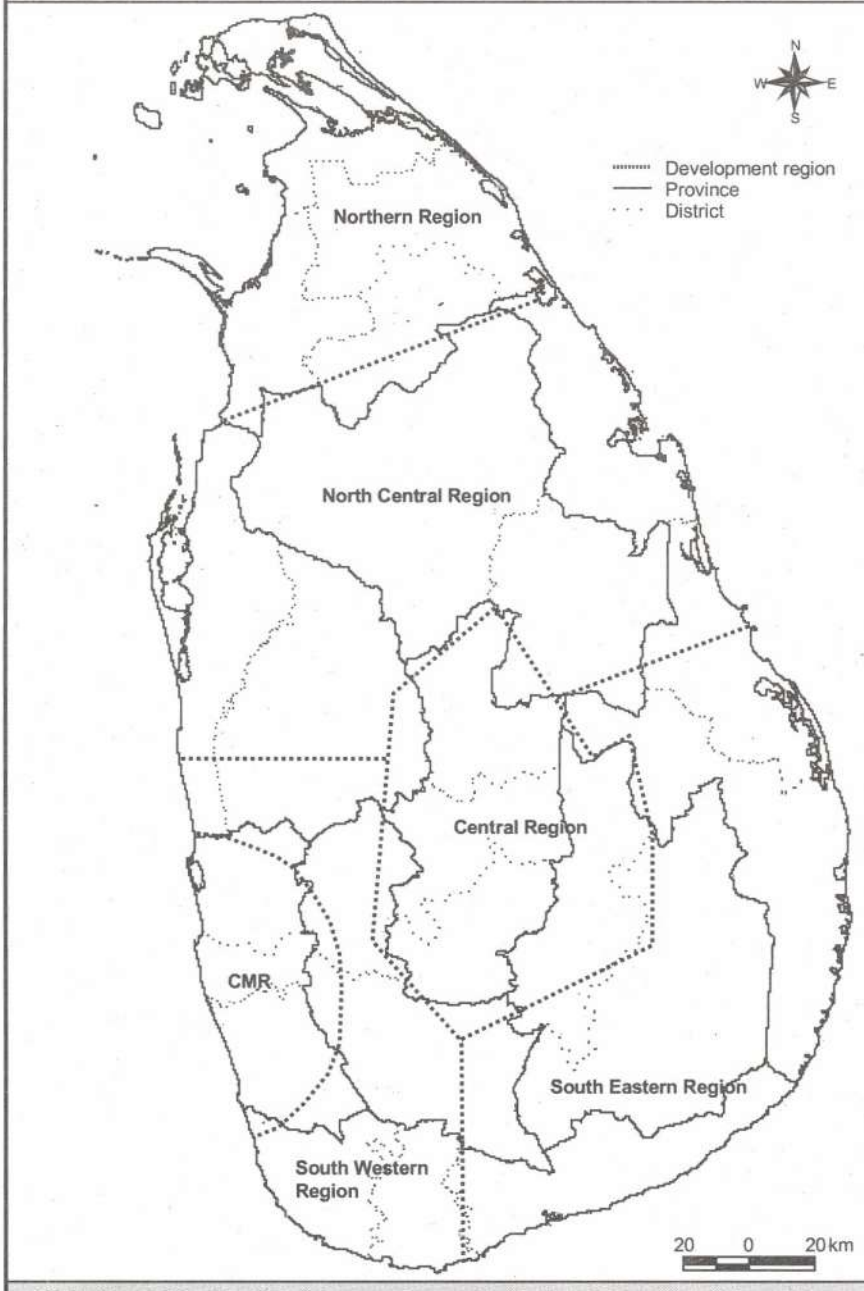
- Addressing the issue of inter-regional/provincial balance and equity. This is an area that can be addressed only with the direct participation of the central state, especially in the context of an increasingly market-led economy that favours investment in already developed and profitable regions.

- Enabling focussed and sustained interventions in the lagging regions so as to gradually overcome the entrenched structural rigidities that perpetuate their slow growth and slow transformation. The past experience has shown that small scale, intermittent and irregular interventions are not sufficient to overcome the long-standing structural problems of lagging regions.

- Activating the under-utilized potential of less developed regions, and supporting different regions to exploit their comparative advantages or create competitive advantages.

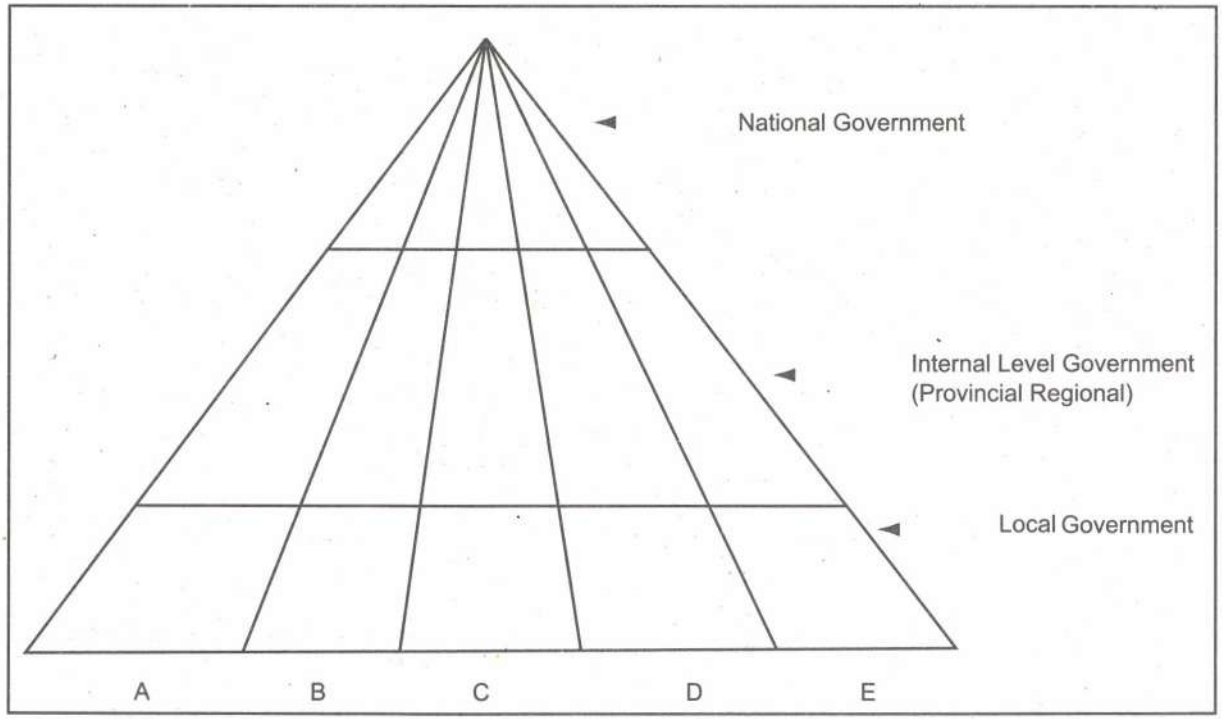
Fig 8.1

A System of Development Regions for Sri Lanka



GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

Fig 8.2. A Simplified Hypothetical Systems of Development Regions for Sri Lanka
Within a Devolved/Decentraized Structure



What this means is that without a national regional development strategy, no amount of allocations to the Provinces and local governments can have any radical impact on reducing regional disparity and creating growth dynamism at the regional level.

MAIN DRIVERS OF THE COMPETITIVE REGION

A region, to be dynamic and competitive in today's global economy, must be driven by two powerful forces.

First and foremost, regional development must be driven by endogenous effort. A region's ability to grow and prosper and, perhaps more important, sustain its prosperity is clearly a function of what the region itself can do, than what can be done from outside. External participation and investment and other forms of resource injections can become effective and sustainable only when they are internalised by the local economy. This can happen only when strong partnerships are built among the key stakeholders, consisting of local governments, private sector, educational institutions, civil society and the state. But it is the "committed stakeholders" who need to play a pivotal role. These are the stakeholders with a long-term commitment to the region. They are the people who would want to shape and reshape the future of the region unlike the people who are there for short-term profit with the likelihood of leaving when business and profits experience short-term down turns. The stakeholder partnerships improve the capacity for local self-organization as well as internal capability, which in turn helps to enhance the competitive edge of a region.

Strong partnerships at the regional level can lead to the emergence of new political and economic actors in the regions. They can contribute to political and economic pluralism and competitiveness. This will in turn improve the environment for local autonomy and local democracy.

Locally driven regional development can also create the best possible conditions for realizing two other objectives. One is the space it creates for harnessing the dormant and under-utilized local knowledge resources to support internally driven regional development. The other is that it enables better identification and optimum utilization of local resources.

It is seen that centrally conceived and centrally planned investments in the regions (in the form of highways, telecommunication systems, industrial parks etc.) and other incentives to attract investment have not helped in achieving sustained

regional growth. These are all exogenous development initiatives, where the local stakeholders play a passive, recipient and dependant role. They have not helped the regions to create "internal capability". It is a well-known fact that even in developed countries; central institutions are far too remote from local/regional realities and needs.

It is a fact that almost all the programmes aimed at regional development in Sri Lanka have always been conceived, planned and implemented and even managed by the centre. One of the most revealing examples is the Dry Zone land settlement schemes, including the more recent Mahaweli project. They have failed to create self-reliant, dynamic and diversified agricultural communities, not to speak of regional economies (Indraratne 2000). The Mahaweli project has been noted for creating a "dependency syndrome" or a "monstrous type of dependency" (Gooneratne 2000). The well-known IRDPs were similarly centrally planned and implemented, at times with centrally conceived programmes for ensuring local participation (Gunatilaka and Williams 1999). The regional industrialization programme of the government has always been a centre determined one. The establishment of industrial parks and estates and garment factories in outer regions is all centrally initiated and implemented (Business Today, April 2000). Even the responsibility for provincial industrial development is said to be in the hands of the central bodies (Lakshman et al 1998; Gooneratne 2002).

A second objective is to make regional development science and technology-led and eventually knowledge-based. This is because the creation of competitive regional economies rests on sustained increases in production, productivity and value addition. This is a function of a region's ability to innovate and create anew from existing and emerging activities and sectors. And, this is directly linked to technology and knowledge. Thus, technology has emerged as the driving force of regional growth.

In the context of Sri Lanka's emerging needs, technology has to be the key to the efficient management of the resource base (e.g. irrigation systems, forests, water bodies); diversification and modernization of agriculture, expansion of agro-processing and value adding to local produce; environmental management (e.g. waste management, pollution control), etc. This entails the acquisition, adaptation, development and diffusion of technologies and where necessary region-specific technologies. One of the major requirements for supporting technological progress is the strengthening of regional capacity for R & D.

Unfortunately, this is an area that has been neglected in Sri Lanka except in the case of agricultural research. Facilities and mechanisms for strengthening R & D at regional level to meet the demands of regional growth are still lacking. The national universities that are located in the regions are rarely linked to the regional economy. As discussed below there are hardly any R & D facilities at the regional level.

Sri Lanka's science and technology policies have been based entirely on the centralized model. Even today, not a single Provincial Council is in a position to lay claim to its own R & D policy or facilities.

Technology-based regional development rests on strengthening the capacity of a region to innovate. Regions that have acquired the capacity to innovate have been termed *Innovative Regions*. Such regions can emerge when several ingredients are present at the regional level such as

- local networks of industries and business (both private and state).
- strong R & D base, with a private/public research link.
- concentration of infrastructure, such as transport and communication,
- universities and research institutes, science parks etc.

How to adopt some elements of the "*Innovative Region*" concept to the Sri Lanka situation to create dynamic conditions for regional growth is a major challenge that merits serious discussion.

Innovative Regions in their mature stage are also called Learning Regions; regions that have created for themselves a sustainable economic advantage based on several things such as, knowledge creation, local technology development, building a regional business culture, upgrading local labour skills and strengthening production networks (Edington 2001, Asheim and Dunford 1997, Simmie 1997).

Innovation and innovative thinking are the keys to a *learning region*. Innovation is basically coming up with new ideas about how to do things better and faster. It is about making a product or offering a service that no one had done or thought of before. It is about putting new ideas to work in businesses and industries and having a skilled work force that can use new ideas.

However, if we continue to improve on our existing ways of doing things or look for simple incremental change, that would be detrimental to progress because then we avoid confronting bigger challenges and issues. It is said that thinking in the standard way is sure death to innovation in a rapidly transforming world. At the same time, it is important to guard against confusing innovation with invention.

Finally, a *learning region* forms part of the wider concept of the Knowledge Economy, where knowledge and information account for a high proportion of the economic activity. They are drastically changing the operation of the economy and transforming the basis of comparative advantage. It is important to recognize the fact that all economies, however simple, are based on knowledge. Knowledge economy is not about expanding frontiers of knowledge or about the e-economy only; it is about the effective and intelligent use of all kinds of knowledge in all kinds of economic activity. Of course, the transition to a real knowledge economy is not an easy task for a country like Sri Lanka, where even the transition to an industrial/services economy has been painfully slow. Yet, Sri Lanka urgently needs to radically improve productivity of agriculture and industry and other sectors of the economy through extensive knowledge inputs.

KEY INSTRUMENTS OF REGIONAL GROWTH PROMOTION

Industrial Clusters

The link between agglomeration economy and regional growth is well recognized to day. In this regard, industrial clusters that create agglomeration economies represent an important component of regional and local economic policy. It is now well known that industries and businesses tend to grow in clusters (Porter 1996, Krugman 1991; 1995, Nadvi and Schmitz 1998; 1995, Storper and Scott 1995).

Sri Lanka's experience in industrial decentralization to the regions and rural industrialization has been a disappointing one. It has clearly shown two things:

One is that small-scale rural industrial activities have little or no possibility to benefit even from available technology, information, training and skills when they are too dispersed in the rural areas and lack connectivity and access to urban centres. Their location has often been guided by political and equity considerations, including poverty alleviation. It is a well-known fact that these industries manage

to survive mainly due to government support and are largely supply driven distress industries (Ahmed 2003).

The other is that the location of many state-sponsored industrial ventures has ignored the benefits of industrial and urban agglomeration. They have not looked for locations with advantages of agglomeration. The isolated and dispersed industries, in general, have been deprived of the benefits of agglomeration economies.

Clusters are defined as a system of market and non-market links between geographically concentrated firms and institutions. The links enable cooperation among suppliers and competitors on business processes, purchases, investments, strategies and research. In other words, they represent critical masses concentrated in one place, of linked industries and institutions from suppliers and producers to universities and government agencies. The geographical proximity that clusters provide reduces search and transaction costs; create marketing externalities across industries and enable cost sharing of public goods such as training and R & D. Clusters give a competitive edge in three ways: i) productivity increase of companies, ii) driving the direction and pace of innovation, and iii) stimulating the formation of new companies, within the cluster.

Regional growth is a function of complex interdependencies. When outputs of one activity are the inputs of another activity, proximity reduces transfer costs. Attractiveness of a region as location of industry/business increases with the presence of or the ability to create such activities.

The process of territorial clustering of industries, economic activities and infrastructure can provide the most suitable context for the emergence of a competitive regional economy driven by technology and innovation.

In regions that are largely agricultural and rural, it is agricultural prosperity that can change the structure and organization of industries. For example, enterprises in smaller urban centres are generally linked to the agricultural hinterland, while enterprises and industries that exploit international markets require agglomerations in larger urban centres to achieve collective efficiency. Therefore, it is important to remove the disadvantages of being small and isolated through clustering and networking. This would be a more sensible approach to regional industrial development than the piecemeal approaches to help rural and micro enterprises. What is required is support to emerging clusters to improve their infrastructure, education and training, and access to information and technology (Ahmed 2003).

Developing countries like India and China are increasingly adopting cluster development as a strategy for industrial development in lagging regions. India's 10th five year Pan has explicitly adopted a cluster development approach in supporting and expanding small scale industrial development. In Malaysia, the 2nd Industrial Master Plan (1996-2005) recognizes the role of a cluster-based industrial development approach.

In Sri Lanka, we are yet to recognize the importance of this emerging approach in promoting industrial development in the regions outside the CMR, although there are already several clusters of industrial activity that have grown naturally, with out being nurtured. Examples include wood cluster in Moratuwa, tile manufacturing in Negombo, several tourism clusters in different locations. There are also many natural industrial clusters that are in the process of extinction due to government neglect. This is an area where good analytical studies and information are necessary to initiate appropriate action.

Regional Cities and Urban Networks

As in most other Asian countries, Sri Lanka's settlement system is highly unbalanced. There is clearly a primacy problem, absence of dynamic cities and intermediate and small urban centres at the regional level and lack of strong functional linkages between rural and urban sectors.

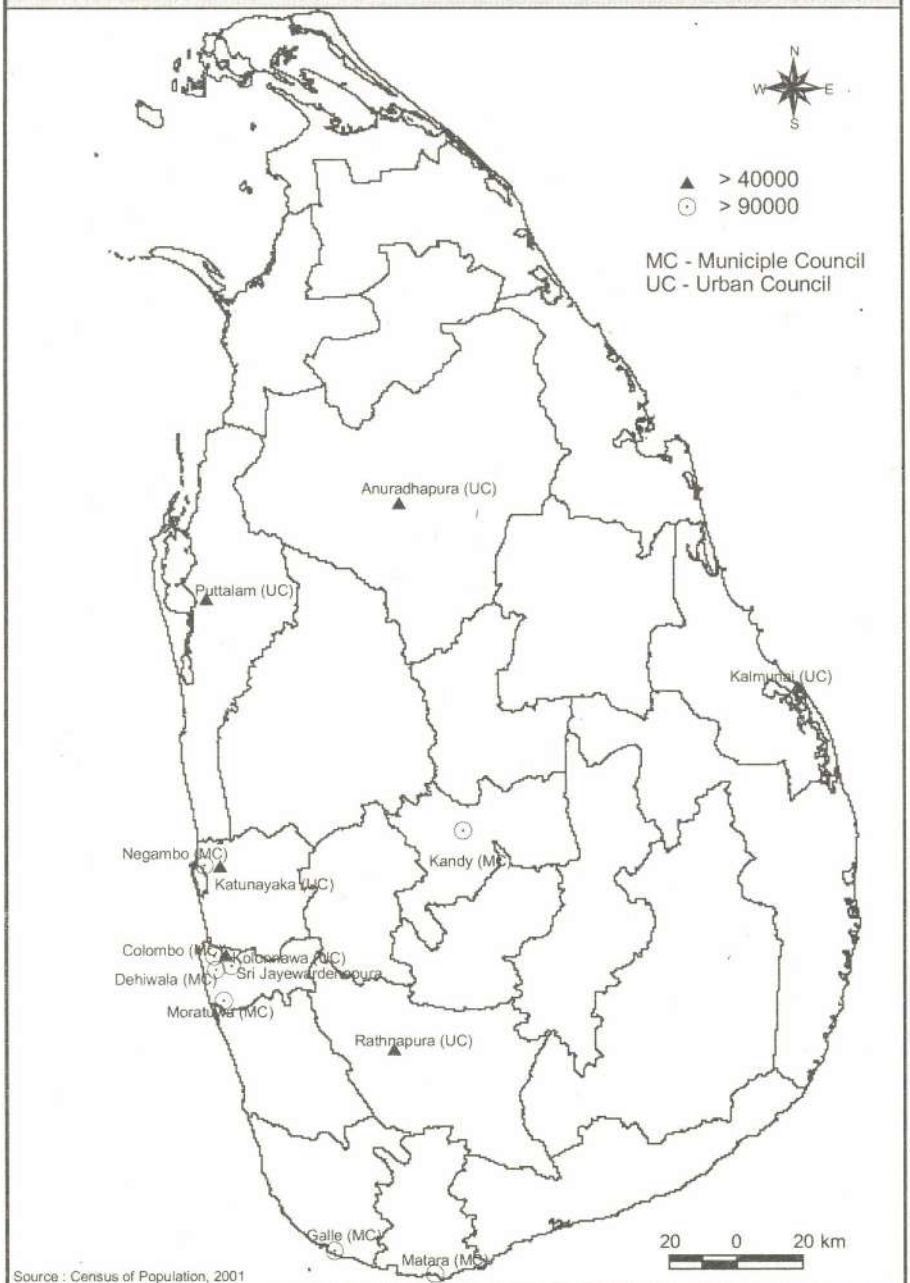
The urban deficit in the territory outside the south-west quadrant of the country has been a key factor perpetuating slow growth, low levels of diversification and lack of dynamism in the rural/peripheral areas of the country. Five out of six cities above 100,000 populations are found in the South West. The rest of the country suffers from a serious deficit of dynamic regional centres. By and large, urban development efforts in Sri Lanka have failed to address the needs of the regional economy (Figure 8.3).

The need for a dispersed pattern of efficient, manageable and sustainable regional cities and urban centres becomes clear when we recognize that a less polarized national space with competitive and resilient regions is an important goal to be pursued.

Regional cities serve as catalysts of regional economic growth in several ways. First, dynamic regional cities contribute to strengthen the competitiveness and the resilience of the regional economy by serving as incubators of innovation and industry and as production, distribution and financial centres. They also promote

Fig 8.3

Urban Population



Source : Census of Population, 2001

GIS Facility : USJP - Sida/SAREC Research Cooperation Project - Department of Geography

forward and backward linkages in the regional economy. Regional cities have to emerge as catalysts and brokers that capture opportunities offered by globalization. Note also that as industrialization proceeds, manufacturing activities start moving to smaller cities outside the capital, to avoid increasing costs arising from congestion. Regions need dynamic cities to capture such spill-over as well as new investments.

In the complex process of regional adjustment, regional cities can serve as the mediators and missionaries of development in the regions by serving as centres that accumulate capital, attract investment and spread innovations, including the cultural.

In the absence of such dynamic centres, most innovations from the centre are likely to be blocked at the periphery. The centre needs regional allies. Regional cities are the best candidates for the purpose.

Second, dynamic regional cities are even more necessary for retaining educated, skilled, talented and entrepreneurial people within the region and to attract such people from outside. This would be possible only when regional cities develop as centres with superior amenities in education, health, housing, recreation, entertainment etc. In the end, a region must emerge as an attractive place for residence and not only for investment. Regional cities can play this role by developing a regional image or identity, based on superior amenities and attractions.

Third, a devolved/decentralized system of governance, without a region-serving city (cities), the programme of devolution is reduced to a meaningless exercise. Genuine power sharing by the centre with the devolved/decentralized units could become a reality only when such units are able to sever the traditional *over-dependence* on the centre and the capital/primate city, even for routine activities. It is a well-known fact that the Provincial Councils after almost fifteen years of existence still continue to get their orders from the centre. A region should be connected to its own regional centres than to the distant capital city.

Thus, dynamic regional cities are necessary to de-link the regions from the hegemony of the capital/primate city and strengthen more productive internal links within the region. This is a prerequisite to create regional advantage.

Without regional cities, the peripheral regions are likely to remain 'backward', unable to emerge as active participants of the emerging global economy. In the

centralized state, growth concentration is encouraged in the primate city by keeping control over allocation of resources and licenses etc. It rarely creates a "level playing" field in a spatial sense. Therefore, there is no doubt that the emergence of a series of dynamic regional cities would be the only way to avoid the further growth of CMR that would lead to many disastrous socio-political and economic consequences.

The small and intermediate urban centres perform a vital role in rural areas by serving as marketing and service centres and linking the rural economy to the larger regional and national economy. The principal city (or cities) of the region and the connected centres (secondary towns) linked as central parts of the organism complement each other and link the rural areas.

The importance of the nature and quality of rural-urban linkages, more than the linkages *per se,* has been recognized now. In particular, a parasitic rural urban linkage is not in the best interest of promoting growth and development in lagging and peripheral regions (Karunanayake 2003, Pedersen 1997).

However, rural/urban linkages and their relationship to regional growth have been slow to recognize in Sri Lanka. The two have been generally taken as separate entities, independent of each other. This has been true in all our rural and regional development programmes such as the IRDPs, irrigated land settlement schemes in the Dry Zone and even the recent Mahaweli Project. For example, the small towns in the Mahaweli system were designed as mere service centres to serve agricultural communities, but not as centres catering to the growing and changing needs of the local economy and its population, especially of the youth for employment, recreation etc.

It is now well known that Growth Pole and Growth Centre strategies have failed to promote rural-urban linkages and integration in developing countries. This is because these strategies rely on vertical diffusion of development impulses through a downward or trickle down process. Experience has shown that such single horizontally unconnected growth centres generate few region-wide growth impacts and benefits.

A more efficient mechanism to promote wider rural/urban linkages would be a system of regional urban networks. These networks consist of a connected and interactive cluster of dynamic urban settlements. By strengthening these centres,

and linking them through good transport and communication systems, it is possible to integrate rural and urban development more efficiently and capture upstream and downstream multiplier effects in a region. The network concept emphasizes greater horizontal diffusion of impulses. Many countries have recently adopted the regional network strategy as a more efficient way of strengthening rural/urban and inter-regional linkages (Douglass 1998a).

Urban networks are two or more previously independent towns/cities linking together to establish functional complementarity. The aim is to achieve significant economies of scale and scope through closer cooperation supported by fast and reliable corridors of transport and communication infrastructure. Each urban partner would stand to benefit from the dynamic synergies of interactive growth via reciprocity, knowledge exchange and even unexpected creativity.

The adoption of the concept of urban networks has clear implications for infrastructure development. It is now clear that one of the major obstacles to regional industrial development and attracting investment to rural/peripheral regions has not been the mere inadequacy of infrastructure but the lack of good and concentrated infrastructure that is essential to strengthen agglomeration economies. In addition, the importance of high quality social amenities in regional development has further underscored the need for concentrated infrastructure that improves connectivity. In the largely rural regions, the potential growth linkages of agricultural development can be better induced when urban centres provide the critical infrastructure and amenities.

The largely dispersed, low profile and unconnected small scale infrastructure development, such as under the IRDPs and other decentralized programmes have not been sufficient to enhance the generative power of the regional economy by creating higher multiplier effects. This is why it is important for the settlement system and infrastructure networks to develop in a more integrated manner.

> *Sri Lanka's experience in urban development it self has been generally one sided. The urban territorial units, with their respective governance structures such as Municipal Councils, urban Councils, Town Councils etc. have been rarely concerned with their hinterland regions where they are located when planning and managing the development of these entities. The activities of the UDA are largely confined to the physical development of towns. In other words, urban development efforts in Sri Lanka have not been placed in the context of a broader regional development perspective" (Gooneratne 2001).*

Knowledge Infrastructure in the Development Regions

Today's global economy is a knowledge economy where science and technology have become, more than ever before, critical to economic growth, competitiveness, human security and better quality of life. At the regional level, it is by injecting extensive knowledge inputs to every possible sector of the economy that growth and transformation can be accelerated. It is then that a region can evolve into a *learning region.*

It would be clear from the previous discussion that adopting the concept of a *learning region* in whatever simple form would entail a greater role and engagement by the universities and reséarch and training institutions at regional and local level. Regions become active *learning regions* when they adopt principles of knowledge creation and continuous learning. Universities can support the regional economy; its firms and production systems to draw form their knowledge resources. In many ways, universities are located at the head of the supply chain that is devoted to the production of knowledge. Regions without high quality educational infrastructure (including research) are disadvantaged.

Technological innovation is increasingly a product of social innovation. It is a collective learning process involving strong inter-organizational links and alliances between business and industry, universities and research institutes, governments and the civil society of the region. Successful and innovative firms are seldom alone geographically. They are tied together by knowledge and production flows in a unique combination.

Universities can contribute to regional development in many different ways. However, the three major areas in which their contribution can have a direct impact on the regional economy are in research, human resource development and advisory and leadership support.

Research:

- assessment of regional potentials, possibilities and problems of a) the regional economy and b) regional competition.

- research support to improve productivity of the regional economy in industrial, agricultural, and other sectors. This is essentially the production of locally relevant knowledge or R & D.

Expanding the Stock of Human Capital within the Region

- produce relevant skills for the regional economy and not only for the national labour market.

- promote graduate retention schemes by linking with regional economic and other agencies and the business sector.

- cater to mature local students for undergraduate and post graduate programmes as well as further training.

Advisory and Leadership Support to the Region

- academic and research institutions to offer advisory services to regional institutions, such as local governments, chambers etc.

- provide leadership support to local governments and development agencies.

The potential role of the regional universities would be strengthened when they cooperate and network with local research and other training institutions. Regional universities form the ideal locations to establish science and technology parks that are increasingly becoming key players in regional development as mines and foundries of the new economy where innovation is induced by design, to create new industrial space, as seen in East and South East Asian countries (Castells and Hall 1994).

All universities in Sri Lanka are national universities. There is at least one university in each province, with the Western Province accounting for five of the largest, including the country's only Law College. The establishment of at least one university in each province has been guided by the principle of meeting the higher education needs of the periphery. However, the potential role that such universities could play in contributing to the development of the regions of their location has by-passed the attention of educational planners. Sri Lanka's experience in establishing universities in the provinces constitutes a fine example of how politicians and educational planners are blind to the emerging role of universities in a knowledge economy. Note also the fact that all science and technology policies so far adopted in this country have been based on centralized models without a regional focus.

Sri Lanka's universities need to prepare themselves to be active partners in the knowledge-led competitive economy, by championing regional growth and revival. Although, individual staff members do play an active role in contributing to regional development in several ways, the overall impact of these efforts is limited due to the fact that they are not "mainstreamed" within the university and regional economy involving business and industry. In the rural and more peripheral regions, where the overall human resource base is weak, universities and linked research facilities are required to play a more active role than their capital city counterparts.

CONCLUSION

The main conclusion to be drawn from this survey is that Sri Lanka has reached a stage where it needs to adopt a rationally determined system of development regions that are best suited to achieve sustained regional economic growth by enhancing their competitiveness and internal resilience. It has shown that the two most important drivers of the regional economy today have to be a) internally generated growth spearheaded by the key stakeholders of the regions to ensure sustainability of regional growth, and b) science and technology-led regional development to enhance regional competitiveness and pave the way for regions to become *learning regions*. The study has also identified the key role of industrial clusters, regional cities and urban networks and knowledge infrastructure as the three most critical instruments of regional growth. It has drawn attention to the need for a national level regional development strategy framework, as part of a national development strategy to guide and support development at the regional level to overcome spatial imbalances. The need for an autonomous system of devolved governance as an integral part of a regional development strategy has also been addressed.

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Appendix I

Five Economic Zones Proposed by the Institute of Policy Studies (2002)

Zone I	Kalutara, Galle, Matara, Hambantota, Ratnapura, Moneragala
Zone II	Kandy, Nuwara Eliya, Kegalle, Matale, Badulla, Ampara
Zone III	Jaffna, Killinochchi, Mullativu, Mannar, Vavuniya, Anuradhapura
Zone IV	Polonnaruwa, Trincomalee, Baticaloa
Zone V	Colombo, Gampaha, Kurunegala, Puttalam,

The 5 zones have been demarcated by using several criteria such as climatic conditions, natural resources, competitive advantage, access to oceanic resources and political sensibility. However, the identified zones do not reflect most of the above criteria and some of the zones (I, II and IV) appear too unfamiliar and unsuitable as territorial units to promote regional development.

UNF government's five regions, which formed Regional Development Ministries (2001)

Western	Gampaha, Colombo, Kalutara
Southern	Galle, Matara, Hambantota, Ratnapura, Moneragala
Central	Matale, Kandy, Nuwara Eliya, Badulla
Northern-Western	Anuradhapura, Polonnaruwa Puttalam, Kurunegala, Kegalle
North/North-Eastern	Jaffna, Kilinochchi, Mullaitivu, Mannar, Vavuniya, Trincomalee, Batticaloa, Ampara

Except for the North-East region, which includes the Northern and Eastern Provinces and the Western region which consists of the present Western Province, the other three regions included parts of other Provinces, enlarging the regional unit. However, these regional units have not been demarcated on the basis of their development potentials and problems and their ability to evolve as dynamic growth regions. For example, the inclusion of the North Central Province (Anuradhapura and Polonnaruwa districts) in the environmentally sensitive Central Region is not meaningful

Present UNFPA Government's Regional Units, which form Regional Development Ministries (2004)

Rajarata	Anuradhapura and Polonnaruwa districts
Udarata	Matale, Kandy and Nuwara Eliya districts
Uva Wellassa	Badulla and Moneragala districts
Wayamba	Kurunagala and Polonnaruwa districts
Eastern Region	Trincomallee, Batticaloa and Ampara districts

These regional units are definitely not based on any rational criteria. The first four regions cover the districts where donor-funded development projects are in operation. These ministries indeed appear to cover only such projects and are not concerned about the overall development of the designated region. The Eastern region ministry is responsible for the three districts of the East affected by the ethnic conflict. The Northern Province is not included in this programme. It is clear that the objective of the creation of the present regional development ministries is not to exploit the growth potentials of different regions and promote long-term regional growth and resilience.

Appendix 11

Distinguishing Characteristics of The Proposed Five Development Regions

South Western Region:

This is a region of high concentration of population, economic and social infrastructure. The national capital, the major airport and seaport as well as most of the largest towns in the country are located here. This is also the most industrialized region. However, growth is largely concentrated in the CMR and the coastal belt, while the interior areas, especially the present Sabaragamuwa province, remain less connected and lagging in many respects. Climatically, this region belongs to the Wet Zone and has considerable areas under tea, rubber and coconuts as well as the best gem-bearing areas. With Colombo as the national capital and the commercial hub and home to nearly half the universities, most of the best schools and hospitals of the country, it has the potential to grow as a dynamic region and as an important player in the regional and global economy.

South Eastern Region:

Climatically, this is a dry region and contains some of the poorest districts of the country. It is largely rural and agricultural and lacks good infrastructure and any dynamic urban centers. The region's high potential for agriculture, fisheries and tourism development is yet to be fully exploited. Historically, this region had some of the richest agricultural areas of the country. The proposed harbours at Hambantota and Oluvil would be key assets for spearheading growth in this region. Further, the development of several key urban centres like Batticoloa, Ampara, Hambantota and Tissamaharama as well as a major centrally located regional city, perhaps like Wellawaya (or Moneragala) are essential for accelerating growth in this region. It is clear that a good single university system that could play a key role in regional growth is a prerequisite.

Central Region:

This region serves as the source of most of the rivers of the country and is an environmentally fragile region due to its topography and agricultural and settlement expansion during the last 2 two hundred years. Hence it is a region where resource conservation and environmental management have to be the key development concerns. The region has a large potential for promoting conservation based eco-tourism, exploiting its special climatic and unique natural attractions

such as water falls. It is also the tea country of Sri Lanka, with an untapped potential for resource conserving productivity expansion and value addition. The well-established Peradeniya University, Gannoruwa research station and the Tea research Institute can play a more active role in the regional economy through better exchanges and cooperation.

North Central Region:

This is the region of best developed irrigation facilities and offers vast potential for further development of agriculture, livestock and inland fisheries. The potential for agro-based industrial development is yet to be exploited. The region's two coastal fronts offer vast marine resources and tourism possibilities. However, it is the rich historical sites and the living hydraulic civilization that offer major opportunities for tourism development. Trincomalee harbor is a major asset and the historic city of Anuradhapura can emerge as the main regional center, with other emerging towns such as Puttalam, Dambulla, Hingurakgoda, Kekirawa etc., developing as dynamic urban centres. The Rajarata University can assume the role of the major higher educational and R & D centre for supporting regional growth.

Northern Region:

This region boasts of fisheries and mineral resources such as valuable mineral sands, limestone, salt etc. and underground water for intensive agriculture and livestock development. The rich human resource, in particular the educated youth population, is a major asset for industrial and services development. The large expatriate Tamil population living and working in the developed countries would be a major asset for this region to tap resources, expertise and investment. The well-established Jaffna university with its Vauniya campus can provide the needed educational and research support for this region's development. Jaffna is the historic centre of the North and will continue to be so, but other towns like Mannar, Vavuniya, Kilinochchi and Mulativu can emerge as dynamic urban centres .

CMR Special Region:

This is the capital region and the dominant region in every respect, now experiencing diseconomies of growth concentration. With better management, it can emerge as an important city region in the global and regional economies, due to its strategic location. Given the need to manage this region in the most efficient manner as possible, and to make it a dynamic regional centre, it is important to take it as a special region within the SW region.

IN MEMORY OF ANDERS NÄRMAN (1947-2004)

Clas Lindberg

In the final stage of the work with this book we received the tragic news of the sudden death of our friend and colleague, Anders Närman, Associate Professor in the Department of Human and Economic Geography, Göteborg University, Sweden. On Monday 15th November, 2004 he passed away after suffering a severe stroke. His wife Chanel and his brother Lars were at his side. Anders leaves two children and his mother behind.

Anders had long experience of development work, research and lecturing when he came to Sri Lanka as a member of a Sida funded co-operation involving the departments of geography of Göteborg University, Kelaniya University, University of Sri Jayawardenepura and Uppsala University. His contribution to the project was more than substantial. His knowledge, experience and his personal engagement and enthusiasm became a driving force in our work.

In Sweden Anders was known both as a leading scholar in development theory, a devoted field researcher and an excellent lecturer – a rare and precious combination in the academic quarters. He was also well known for his energy and enthusiasm. When other people saw difficulties and huge workloads, Anders saw possibilities and challenges. Giving up was never an option for him.

His main area of interest in research was education, and he was indeed himself an excellent lecturer. Students and colleagues in East Africa, the Nordic countries, and other countries in Europe, and recently also in Sri Lanka were able to witness his passion for education and his personal skill as lecturer.

Anders was a main actor in the creation of important bodies such as the Centre for Africa Studies, Göteborg University, the Swedish and the Nordic Associations of Development Geographers, and the Department for Peace and Development in Göteborg University.

His devoted work for the eradication of poverty would not stop at the gates of any university. He travelled, lectured and debated near and far, met with many audiences, worked with NGO's, donor organisations, laymen and politicians. He will be missed by people from village councils to governments in East Africa, Southern Africa and the Horn of Africa, in Sri Lanka and in the Nordic Countries.

It was always fun working with Anders; it was lots of laughs, lots of humour and lots of inspiration and optimism. After a meeting with Anders one always felt that this can actually be done - and it will be fun doing it.

A big man with a big heart has left us. Let us remember his laughter and optimism, and let us cherish his memory by continuing to work in his spirit.

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Sida/SARC Research Cooperation Project that commenced in January 1999 deals with policy relevant studies on regional development and proverty alleviation.

The rationale for studies in regional development is derived by the need to rethink the regional development policy in Sri Lanka for the purpose of (a) establishing the relevance of a regional development approach to development; (b) refocusing attention on the development of the periphery to complement the present and future development of the 'core' region; (c) determining the ways in wihch the political and economic processes at the regional level have to converge for better spatial distribution of the benefits of social and economic development; (d) making regional development 'people' and 'place' foussed; and (e) utilizing regional planning as a tool for national integration.

Similarly, while there has been a concern for poverty alleviation, implementation strategies in Sir Lanka have often overlooked the deeper issues relating to poverty such as poverty derived destabilization of households, seasonal impacts of poverty, poverty thresholds, feminization of poverty, transfer of poverty related strees from men to women, poverty and its impact on environmental degradation and the cultural attributes of poverty as they shape the world view of th poor. The Project aims at investigating these issues at the micro level to help fine tune poverty alleviation strategies.

This publications aims to disseminate the findings of research among as wide an audience as possible, with interest in development issues.

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