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# PROCEEDINGS

Role of  
Market Towns in  
National Economic  
Development

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1990

**Proceedings**

# **ROLE OF MARKET TOWNS IN NATIONAL ECONOMIC DEVELOPMENT**

**Edited by**

**Dennis A. Rondinelli  
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## Table of Contents

INTRODUCTION .....	i
MARKET TOWNS AND ECONOMIC DEVELOPMENT by Dr. Dennis Rondinelli, Research Triangle Institute .....	1
MARKET TOWNS AND URBAN DEVELOPMENT IN NEPAL by Dr. Pitamber Sharma, Tribhuvan University .....	16
CASE STUDY PROFILES OF THREE MARKET TOWNS IN NEPAL by Raju Tuladhar, Management Support for Urban Development Project .....	37
AN APPROACH TO MARKET TOWN PROJECTS by Harry Garnett, Abt Associates .....	65
MARKET TOWN ANALYSIS FOR RURAL ECONOMIC GROWTH: APPLIED METHODS AND TECHNIQUES by Dr. Dennis Rondinelli, Research Triangle Institute .....	79
STRENGTHENING FINANCIAL CAPACITY IN MARKET TOWNS: LESSONS FROM RECENT EXPERIENCE by Dr. James McCullough .....	109
ANNEX 1 INAUGURATION PROGRAM	
ANNEX 2 WORKSHOP PROGRAM	

## INTRODUCTION

Governments in many Asian countries are giving increasing attention to the importance of small towns in marketing agricultural goods grown in rural areas and in providing off-farm employment for rural households. In September, 1989, the United States Agency for International Development (A.I.D.), in cooperation with His Majesty's Government (HMG) of Nepal, sponsored a seminar on "The Role of Market Towns in National Economic Development." The seminar explored ways of identifying market towns with economic growth potential, of identifying their economic functions, of strengthening the economic and physical linkages between the towns and their rural hinterlands, and of assessing investment needs.

The seminar, conducted by the Research Triangle Institute, involved government officials from Nepal, Pakistan and Indonesia and representatives of USAID missions in each country.

In opening the seminar, the Honorable Minister of Housing and Physical Planning of His Majesty's Government of Nepal, Dr. Prakash Chandra Lohani, emphasized the importance of rapid urbanization in what is still a largely rural society in Nepal. He pointed out the urgent need to plan for urbanization in a more deliberate manner before the inevitable force of events overtake the government's ability to influence the pattern of urban development. Dr. Chandra Bahadur Shrestha, the Honorable Member of HMG's National Planning Commission, described how small towns and cities in Nepal link urban and rural economies and provide markets for agricultural goods.

Participants were welcomed by Mr. Santa Bahadur Rai, Secretary of Nepal's Ministry of Housing and Physical Planning; Mr. David Painter, Director of the U.S. Agency for International Development's Regional Housing and Urban Development Office (RHUDO) for Asia; and Mr. William S. Rhodes, Acting Director of the USAID Mission to Nepal.

The papers that follow deal with both substantive and methodological issues concerning the development of market towns. Dr. Dennis A. Rondinelli provides an overview of the role of market towns in economic development and suggests policies and programs for strengthening urban-rural linkages to stimulate economic growth. Dr. Pitamber Sharma discusses the historical evolution of urbanization in Nepal and identifies the roles of market towns and cities in the country's physical and economic development. Mr. Raju Tuladhar examines the economic functions of three small towns in Nepal and assesses their marketing and production activities. Mr. Harry Garnett explores the economic feasibility of market town development and suggests an approach to assessing the costs and benefits of market town development projects. Dr. Rondinelli describes applied methods and techniques for identifying market towns, assessing their functions, identifying their investment needs and planning for their development. Finally, Dr. James McCullough traces the lessons of experience with projects to strengthen the financial capacity of market towns in Nepal.

Many people contributed to the success of the seminar and to the production of the proceedings. Special

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## MARKET TOWNS AND ECONOMIC DEVELOPMENT

by

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Market towns and small urban centers play crucial roles in agricultural marketing, in facilitating trade and in providing commercial and public services. They are likely to become even more important over the next two decades as Asian countries experience rapid urbanization and agricultural transformation. But international assistance organizations have not fully recognized the crucial roles that market towns play in agricultural and rural development. Nor are government investments in public services and infrastructure, or programs for expanding private enterprise, designed to stimulate and strengthen the economic and physical linkages between market towns and rural areas.

The rapid urbanization now taking place in Asia will influence the demand for food and the composition of agricultural production for the next quarter of a century. Rapid growth of the Asian labor force will require policies that expand private enterprise and stimulate job creation in small towns and cities as well as in large metropolitan areas.

Asian governments and international assistance organizations must recognize five basic points if they are to adjust their development policies and programs in the future:

- (1) Towns and cities in Asia structure the marketing network through which agricultural commodities are collected, exchanged and redistributed;
- (2) Without a strong network of market towns, agricultural and commercial trade is usually restricted to periodic markets in which subsistence farmers exchange goods among themselves or with intermediaries;
- (3) As agricultural productivity increases and farming becomes more commercialized, it depends more heavily on inputs, farm implements, irrigation equipment, storage facilities and transportation equipment that are produced in cities and distributed in rural regions through market towns and small urban centers;
- (4) Rising incomes from increased agricultural production create demand for a wide range of household and consumer goods that can be produced in market towns and small urban centers or distributed through them; and
- (5) The ability of market towns to perform important functions in economic development depends heavily on the diversity and quality of their

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infrastructure and facilities; on the planning, management and financial capacities of their local governments, and on the strength of private enterprises to provide necessary services and productive activities.

Market towns and small urban centers in many Asian countries are already playing a crucial role in providing the services, infrastructure and utilities necessary to support small- and medium-scale enterprises that generate off-farm employment. Many rural non-farm enterprises -- raw material processing, manufacturing, construction, transportation, retailing, wholesale trading, and personal and financial services -- are also located in market towns, serving both town residents and people from surrounding rural areas (Rondinelli, 1984).

But if market towns are to play a stronger role in expanding off-farm employment opportunities, facilitating agricultural development, providing employment and offering the conditions necessary for private enterprise expansion in the future, international assistance organizations and national governments will have to give much more attention to improving their physical infrastructure and public services. Investments in roads, market facilities, transportation, housing, storage, and utilities will be needed in those market towns that have growth potential. In addition, more attention will have to be given to strengthening the capacity of local governments to raise revenues and to manage infrastructure and services.

## URBANIZATION TRENDS IN ASIAN COUNTRIES

The number of people living in urban places in Asia will increase tremendously over the next 35 years. The United Nations (1988) estimates that between 1980 and the year 2000 the urban population of Asia will increase by about 500 million. In South Asia, the urban population will triple in size over the next 35 years, from about 524 million in 1990 to 1.5 billion by the year 2000. About 37 percent of the population in South Asia will be living in urban places by 1990, and by 2025 about 55 percent of the population will be urbanized.

Along with rapid urban population growth will be an explosion in the size of the economically active population. The International Labour Organization estimates that the economically active population in Asian countries will grow by 278 million people during the 1990s alone. The Asian labor force will increase from 1.4 billion in 1990 to nearly 1.7 billion in the year 2000. Over the 35-year period from 1990 to the year 2025, nearly 675 million people will be entering the labor force, increasing its size to 2.1 billion participants (United Nations, 1988).

At the same time, the occupations of the economically active population are changing rapidly. The percentage of those employed in the agricultural sector is dropping steadily. About 70 percent of the labor force in Asian countries was engaged in agricultural activities in 1970. By 1990, only about 59 percent, and by 2025 less than 38 percent, will be in the agricultural sector.

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Even in South Asia, a region in which countries have traditionally depended heavily on agriculture as a source of employment, the percentage of the economically active population in agricultural occupations will drop from 61 percent in 1980 to 38 percent in 2025. Creating off-farm employment in small towns and secondary cities is the only means of preventing large numbers of rural people from moving directly to the largest cities.

Cities and towns in all size categories are growing in number and population. Although the explosive growth of large Asian cities often receives the most attention, the number of people living in towns of less than 100,000 population in South Asia doubled from 41 to 84 million between 1950 and 1980.

Although cities and towns in Asia are growing rapidly, agriculture still plays a crucial role in the economies of all South Asian countries and will continue to do so for the foreseeable future. Agriculture contributes on average more than 28 percent of the gross domestic product in South Asian countries (World Bank, 1989). In the poorest countries, such as Nepal, a substantial portion of the labor force will find its livelihood in agriculture well into the next century.

#### **IMPORTANCE OF MARKET TOWNS FOR ECONOMIC DEVELOPMENT**

Given the rapidity of urbanization in South Asia and the continuing importance of the agricultural sector, market towns and small urban centers will play an increasingly crucial role in stimulating

economic growth by facilitating agricultural marketing and supporting small-scale enterprise. Governments in South Asian countries will have to deal more effectively with market town development in two types of economies: first, in regions where agriculture is still at a low-surplus or subsistence level; and second, in economically diversified regions or those in which agricultural activities produce surpluses.

#### **Market Towns In Low-Surplus Agricultural Areas**

In low-surplus and subsistence regions in which only a small portion of agricultural production is traded, as is the case in many of the Hill areas of Nepal, rural households do not participate extensively in market activities. Much of the traded surplus is exchanged through barter in small amounts in periodic marketplaces, or is collected by brokers or traders who resell it in larger lots in market towns and cities (GIC, 1984). Although intermediaries, brokers, and traders play a crucial role in the exchange process in low-surplus areas, farmers can easily be exploited by middlemen if they themselves do not have access to market outlets.

The marketing characteristics of subsistence agricultural regions differ drastically in different parts of Nepal and within other South Asian countries. Yet the spatial aspects of marketing have some common characteristics in nearly all subsistence regions. Among the common features are: 1) low levels of marketing interaction among low-income households, and weak trade linkages between rural areas and towns and cities; 2) strong dependence of most farmers on

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intermediaries and brokers to collect and market their surplus goods; 3) short geographical distances of market interaction for most rural families who trade primarily in periodic marketplaces; 4) long travel distances for most rural residents to towns and cities for purchases of specialized goods and services; and 5) relatively small numbers of towns with significant levels of market trade (Rondinelli, 1987). In subsistence regions, widely scattered and poorly connected towns function primarily as administrative or rural service centers (GIC, 1984).

In some subsistence regions, there are few market towns that can provide outlets for the sale of agricultural surpluses and for the distribution of inputs and consumer goods and services. Low-surplus agricultural regions such as the Hill areas of Nepal not only have a small number of market towns, but the settlements are not physically and economically integrated and their market schedules are not coordinated (Sharma, 1988). Small-town markets often are not linked to bulking and assembly centers in intermediate cities, and the intermediate city markets are not effectively linked to the larger urban markets. In many of the Hill towns of Nepal, much of the exchange is limited to government-subsidized food grains or imported goods from India that are purchased with remittances. Studies of settlements in the Kavre Palanchowk and Bara Districts in the Central Region of Nepal indicate that market towns have trade relationships only with a few other small towns in their immediate vicinity, rather than with larger towns and cities outside of the region (GIC, 1984). Nor are linkages between market towns and their surrounding rural areas strongly developed (Sharma, 1988). Thus, only

those people living in or very near to market towns usually benefit from their services and facilities. Those living in peripheral areas have little or no access to either markets or agricultural inputs; people must travel long distances to use services and facilities located in market towns.

Studies in other South Asian countries indicate, however, that subsistence farmers usually have larger marketable surpluses than agricultural experts expect (Bohle, 1985). Inefficient agricultural marketing systems and limited access to market towns have serious negative impacts on farmers' living conditions. Poor access to markets increases the proportion of marketing costs for all farmers, but has stronger adverse impacts on small and medium-sized farmers than on large-scale producers.

Lack of access to market towns in rural regions not only limits the ability of farmers to sell their goods and increases their transport costs, but also limits their access to the social services and consumer goods that provide important incentives for increasing production and household income (Epstein, 1985).

In the absence of accessible markets for selling agricultural surpluses and for purchasing goods and services with increased income, there is little motivation for subsistence farmers to increase output.

### **Roles of Market Towns in Agricultural-Surplus and Economically Diversified Regions**

Although marketing linkages between rural areas and small urban centers must

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be strengthened in low-surplus areas, in regions that are in transition from low-surplus to commercial agriculture the requirements for increasing production become more numerous and complex. When the demand for and the supply of agricultural goods begin to grow larger, increased production depends on modern farming technologies that raise both yields from existing land and the output per unit of human time. Modern agriculture depends not only on new technology and research and extension, but also on the production of manufactured inputs and on government policies and programs that support agricultural development (Mellor, 1967). The linkages that emerge between agricultural, commercial and manufacturing activities in towns and cities as development occurs take a number of forms.

First, as agricultural productivity increases and farming becomes commercial, it depends more heavily on inputs such as fertilizers, pesticides, farm implements, flood control and irrigation equipment, land clearance equipment, tractors, agricultural chemicals, storage and refrigeration facilities, and transportation equipment that are produced in cities and that must be distributed through a network of market towns if they are to reach farmers (Johnston and Kilby, 1975). Experience with projects to expand agricultural production in the Rapti Zone in Nepal indicates that difficulties with distributing fertilizers and other agricultural inputs to farmers arose in part from poor road and transport connections among rural service centers that made the towns inaccessible for many rural households (Baron et al., 1985).

Second, the economies of market towns and small cities also come to depend more heavily on increased agricultural output (Rondinelli, 1983). Agricultural products provide inputs for expanding agro-processing industries – those that mill grains and rice, process meat and dairy products, and refine sugar, for example – many of which are located in market towns in rural regions. Agriculture also provides inputs such as natural fibers and livestock by-products to nonfood processing industries (UNIDO, 1972). Where agricultural surpluses are produced in the Tarai regions of Nepal, towns such as Damak and Biratnagar offer locational advantages for agro-processing and agribusiness enterprises. Biratnagar has a variety of agro-processing cottage industries, including rice and oil mills, sugar and sugar cane mills, and tea packaging. Other cottage industries in Biratnagar depend on rural nonfood inputs such as cotton, jute, bamboo and leather. Small-scale industries in Damak produce furniture, cotton cloth, soap, woolen carpets, jute goods, bamboo articles and shoes; and all depend on raw materials grown or produced in nearby rural areas (Tuladhar, 1989).

Third, and equally important, rising rural household incomes from increased agricultural production create demand for a wide range of manufactured goods produced in cities. Where agricultural production increases beyond the subsistence level, demand usually increases rapidly among rural households initially for clothing, shoes, sandals, combs, brushes, cosmetics, plastic, light fixtures, wooden furniture, bricks and paint for home improvements, bicycles, radios, and electric fans. As incomes continue to rise,

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greater demand is created for consumer durables and motor vehicles (Johnston and Kilby, 1975). Although many of these items are now imported into Nepal, small-scale enterprises in market towns could produce some of them, and market towns and small urban centers can accommodate the shops and stores that meet growing consumer demand in rural areas as agricultural development proceeds.

In economically diversified or agricultural-surplus regions, market towns provide a wide array of small-scale commercial outlets. In the Western Tarai areas of Nepal, for example, towns such as Waling, Syangja and Naudanda with populations of 10,000 or less offer a variety of services and facilities. Waling has about 60 hotels, lodges, restaurants and tea shops, more than 140 cereal and foodgrain shops, 4 drug stores, 10 distilleries, 15 retail shops and 20 service shops. The town supports primary schools, a secondary school, health and family planning posts, a small post office, a bus stop and several medicinal stores (New Era, 1986).

Fourth, as agricultural productivity increases, market towns must play a more vigorous role in supporting small-scale enterprises and in generating off-farm employment. Increasing agricultural productivity frees labor from farming and pushes people from rural areas into towns in search of new employment and investment opportunities. Employment in towns and cities allows farmers in nearby rural areas to supplement household income. Remittances earned by migrants provide additional income for household members remaining in rural areas.

A growing number of studies conclude that the expansion of private enterprise in market towns and small cities is essential for rural development and for generating off-farm employment (Liedholm and Meade, 1986). The World Bank (1978) has found that increasing agricultural production and expanding employment in off-farm enterprises are both necessary to raise rural household income, retain population in rural regions, moderate the migration from rural areas to large cities, and diversify rural economies. Small and medium-scale enterprises are the base of economic activities in market towns and can provide the jobs that stimulate economic growth and raise household incomes (Steel and Takagi, 1983).

Fifth, market towns and cities can also facilitate agricultural and rural development in other ways. Market towns act as centers of innovation diffusion for new agricultural information, methods and technologies developed in larger urban centers or abroad. The population growth and economic diversification of these towns also influence the agricultural cropping patterns and land uses in surrounding rural areas (Wortman and Cummings, 1978).

Finally, the single most important function of urban settlements is that they form an essential marketing network through which agricultural commodities are collected, exchanged and redistributed (Gormsen, 1985). In nearly all agricultural-surplus regions, agricultural goods that are not retained for household consumption, feed, seed or in-kind payments, move through a complex network of public and private enterprises based in villages, market towns, and

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intermediate-sized and large cities (Rondinelli, 1986). (See Figure 1.)

Throughout South Asia, food and nonfood agricultural products are marketed by farmers in rural areas through cooperatives, itinerant traders, brokers, processors, or directly by farmers themselves in periodic markets. Food products are also sold in market towns to brokers and truckers, and government marketing agents, or directly to consumers in marketplaces. Often some portion of the agricultural products sold in villages and towns is bulked by traders, brokers and truckers, processors and assemblers, and commission agents for resale in regular markets and to wholesalers and retailers in larger towns and cities. Government marketing boards, wholesalers, and brokers often rebulk goods not sold in town and small city markets for sale in metropolitan areas to exporters, urban wholesalers, retailers, public institutions, supermarkets, informal sector vendors, restaurants and hotels, grocery stores and a wide range of other outlets. Thus, towns and cities not only facilitate the marketing of farm products, but are essential to the whole chain of exchange on which commercial agriculture depends.

In brief, where they function effectively, market towns and small urban centers provide outlets for agricultural goods and products of local cottage industries. They provide investment and employment opportunities for both town and rural residents in a wide range of agricultural processing and market-related trade activities. They function as agricultural supply centers, providing equipment, seeds, fertilizer, machinery, repair services, and information needed

for agricultural development. Many towns and small cities also offer an impressive array of economic, personal, commercial, and social services needed by rural households.

#### **POLICY IMPLICATIONS FOR DEVELOPING MARKET TOWNS**

Although international assistance organizations have provided marketing assistance for poor farmers and for small-scale enterprises involved in food distribution, they have not thus far focused their attention on ways of strengthening the systems of market towns on which increased agricultural production, employment expansion, and enterprise development so heavily depend. Much of the assistance that has been given by international organizations in the past has been for improving agricultural production technology rather than for expanding or improving marketing systems. Nor have most governments in Asia given serious consideration to locating their investments in agricultural support services, physical infrastructure, housing and social services and facilities more effectively in market towns. They have often ignored the opportunities to locate investments in ways that will strengthen the capabilities of towns to facilitate agricultural marketing and small-scale enterprise development.

Given the rapid pace of urbanization in South Asia, the urgent need to increase food production in rural areas and to expand employment opportunities in urban settlements, policies that focus on strengthening urban-rural linkages will become crucial to the economic progress of Asian countries over the next two decades.

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Governments in Asia can make an important contribution to solving their food production and employment problems by providing financial and

technical assistance that strengthens their marketing systems and the network of towns and cities in which markets are based.

### **Policy Dialogue and Policy Reform**

Governments in Asian countries must reassess and coordinate their national policies affecting urbanization and agricultural development. The problems of agricultural development, employment generation and enterprise development are inextricably related. If agricultural development and employment expansion programs are to be successful, national policies must help create five conditions (Mellor, 1986):

First, there must be an acceleration in the growth rate of agricultural production. In most Asian countries, increases in agricultural output will come through changes in technology and pricing policy.

Second, there must be widespread access to land ownership and secure tenure rights for small-scale producers.

Third, the expenditures from increased income derived from accelerated agricultural production must create demand for a wide range of goods and services produced by enterprises in towns and cities.

Fourth, the marketing system must be improved to lower food prices and to

encourage employment in nonagricultural sectors.

Finally, a well-integrated system of market towns with appropriate infrastructure and services must be available to provide agricultural inputs and technology, to provide consumer goods and services, to support small- and medium-scale enterprises that generate off-farm employment, and to provide market outlets for agricultural surpluses.

National policies can support or inhibit the creation of these conditions. The ability of market towns and small urban centers to perform their important economic functions depends on appropriate agricultural pricing policies. If government policies and pricing restrictions act as disincentives for increased agricultural production there is no reason to believe that market towns will grow or be able to provide incentives for increased output.

In regions with predominantly low surplus agricultural production or in which the private sector is weak, governments may have to take a stronger role in providing at least a minimum package of agricultural inputs. Governments may have to provide credit to cooperatives or private enterprises to supply farm inputs. In the short run, governments in some countries may have to provide inputs that farmers cannot easily provide for themselves individually or through cooperative activities, or that private enterprises cannot offer effectively or efficiently.

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## **Investment in Market Town Infrastructure and Services**

International assistance organizations can play an important role in helping Asian governments with the allocation and location of investments in infrastructure, services and facilities in market towns. Because investment resources are scarce in most developing countries, many projects that are needed to support agricultural development and off-farm enterprises cannot be scattered widely over the countryside. They must be concentrated in strategically located settlements with growth potential and that are accessible to people living in surrounding rural areas (Rondinelli, 1987).

The most important elements of an infrastructure and services investment program for market towns are:

- (1) Basic marketing support infrastructure, especially community storage facilities, adequate transportation facilities, and farm-to-market and inter-market roads that can increase the physical access of farmers to market towns and small urban centers.
- (2) Public services, facilities and utilities that support small- and medium-scale enterprise development in market towns. Public facilities are especially important for cottage industries providing basic consumption goods and agricultural inputs.
- (3) Basic health, education and social services that improve the productive resources of town dwellers and the rural population. Studies of rural service centers in several districts in India indicate that after these basic

social services were in place they created the preconditions that allowed private enterprises and nongovernment organizations to offer a wider range of personal and commercial services (Wanmali, 1985).

- (4) Investments in market facilities, credit and technical assistance for small- and medium-scale commercial, farm supply, agricultural processing, and food distribution enterprises in towns and cities.

In order to provide services and infrastructure effectively, South Asian governments must help improve the financial management capacity of municipal governments in market towns, develop new methods of raising local revenues, and improve municipal management capability to maintain local services and facilities. Donors can play a crucial role in helping national governments in Asia to decentralize appropriate services to the local level, and create decentralized financial and management capabilities in local governments and nongovernment organizations.

## **Investments in Urban-Rural Physical Linkages**

Although most governments in South Asia allocate inadequate resources to agriculture and marketing, significant changes in rural-urban marketing systems can be brought about without massive new investment. Careful locational analysis and planning of current investment to promote a pattern of "decentralized concentration" of market facilities, infrastructure and services in existing towns can begin to strengthen the

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capacity of these places to facilitate economic interaction. Strengthening the marketing functions of towns and cities must be done carefully, incrementally, and strategically. Not all towns in a region can or should have a full range of marketing services, facilities and infrastructure. One of the benefits of having a well-developed and integrated hierarchy of towns is that it provides access to a wide range of functions for a large number of people without each settlement having to provide all of them.

Applied methods of regional analysis, such as the Research Triangle Institute's "Urban Functions in Rural Development" (UFRD) approach, can identify the market towns that perform important production and support functions and indicate their investment needs (Rondinelli, 1985). Incremental changes in the allocation and location of already-planned investments can be the basis for building a stronger network of market towns.

For market towns to perform their functions effectively, however, they must be linked together physically in a network that forms an integrated market system. Investments are needed in roads, telecommunications, and rail transportation. Roads and railways have been among the strongest forces affecting the growth of market towns in Nepal. Most market towns in Nepal are located at "break of bulk" points--that is, at strategic locations along roads, highways or railheads at which goods can be bulked, exchanged and distributed. Growth has occurred primarily where transport accessibility allowed towns to serve their rural hinterlands. Sharma (1988) points out that "almost all of the

Tarai urban centers have proximity to Indian railheads, but only those strategically located with respect to the Tarai and hill hinterland evidence substantive commercial, trade and functional significance" (p. 91).

Many of the major Tarai towns -- Biratnagar, Janakpur, Birganj, Sidharthanagar and Nepalganj -- act as primary gateways for exchange and trade among each other and with hill areas. All are strategically located in relation to Indian railheads and trade routes leading to the hills. Roads linking smaller towns, such as Dharan in the Eastern Tarai, Butwal in the Central region, and Hetauda in the Central Inner Tarai, to hill areas allowed them to develop as "secondary gateways" (Sharma, 1988).

Studies of road investments in developing countries indicate the pervasive impacts these physical linkages can have on both agricultural and urban development (Anderson and Vandervoort, 1982). The opening of a seasonal road link between Dipayal and Dhangardi in the Far-West region of Nepal in 1986, for example, brought significant changes in Dipayal, a town of about 2,000 residents (Shepherd, 1989). After the road was opened:

- (1) Transportation costs fell sharply--the transport rate by truck was 80 percent lower than the former rate by pack animal.
- (2) Transportation time for bringing goods into Dipayal dropped from 5 to 8 days to less than 2 days.
- (3) The retail prices of many goods decreased substantially within two

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years of the road's completion. The price of rice decreased by 40 to 50 percent, of salt by 50 percent, and of kerosene by 150 percent, for example. The price declines were a result of both lower transport costs and increased competition resulting from the opening of new small-scale enterprises.

- (4) A number of new shops were opened in the town and in the new market that emerged across the river from Dipayal to accommodate increased trade.
- (5) Perishable goods such as fruits, eggs and vegetables became available in Dipayal markets during the dry season. These and large bulk items previously were only available if local residents travelled long distances to larger towns.

The construction of new roads generates many changes in market towns and in rural regions. The extension of road systems can facilitate the spread of agricultural processing activities in rural regions, increase land values along the roads, and stimulate new and more effective marketing patterns. Roads can increase the access of rural households to social and public services located in urban centers (Anderson and Vandervoort, 1982).

## CONCLUSIONS

In brief, development programs for market towns that improve urban-rural linkages and that strengthen regional marketing systems can make important contributions to increasing agricultural production, expanding employment, and

promoting private enterprise.

Of course, market town development is not a panacea, nor can it be effective without conducive economic policies, improvements in agricultural production, and programs to ensure access for the poorest households to new opportunities for production, marketing and employment. Before market town development programs are initiated, however, much more needs to be learned about rural-urban food marketing and input-supply systems in rural areas. Also, serious attention must be given to selecting for investment those towns that perform important economic functions, that have economic growth potential, and that have strong linkages with their rural hinterlands.

Market town development programs must be based on a solid understanding of the social and economic changes that result from expanding markets in subsistence agricultural regions. Some of those changes can have adverse impacts on the poorest rural households. In Nepal, the extension of roads among market towns has resulted in the growth of some towns, mostly in the Tarai, and the decline of others, especially in the Hills. In some areas of Nepal, the completion of new roads linking towns and cities has led to the decline of local cottage and small-scale industries and increasing dependence on imports (New Era, 1986). Moreover, at least initially, the growth and expansion of market towns often benefits middle- and upper-income groups, or outsiders, who have disposable income and investment capital, more than it benefits the local poor (Shepherd, 1989).

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Careful analysis of market towns should identify potentially adverse impacts that must be addressed in program and project design.

Despite these constraints, however, policies and programs for developing market towns and strengthening urban-rural marketing linkages can provide governments in South Asia with a challenging opportunity to facilitate agricultural development and guide urbanization in mutually beneficial ways. The success of those policies and programs may well determine the success of national economic development efforts in Asia during the next decade and the early years of the next century.

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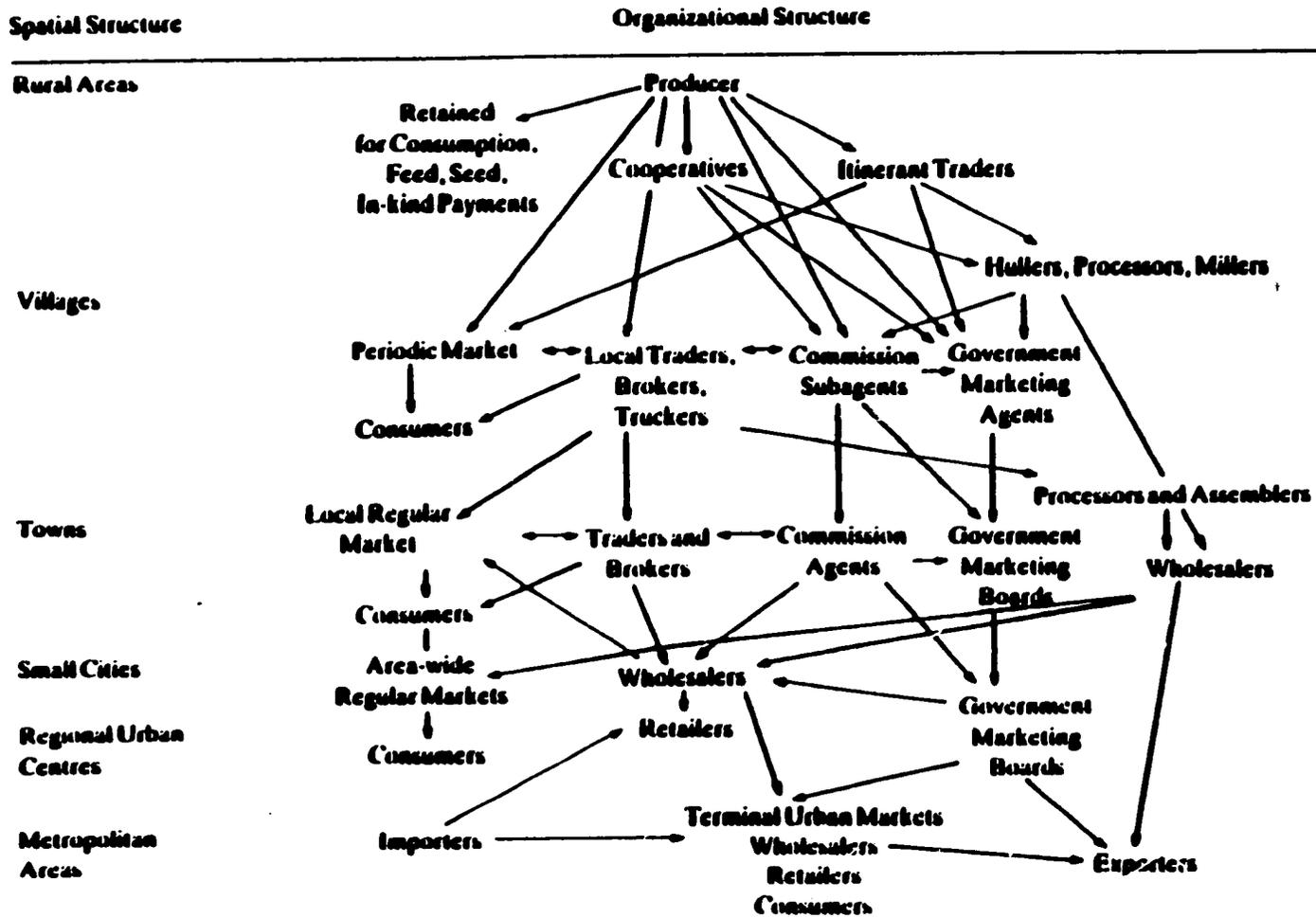
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**Figure 1. Model of a Simplified Food Marketing System in Developing Countries**



Source: Rondinelli (1986).

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## MARKET TOWNS AND URBAN DEVELOPMENT IN NEPAL

by

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Nepal is one of the least urbanized countries in the world, and perhaps because of it, the urban data base is fragmentary and poor. In 1981, when the last census was undertaken, there were 23 designated urban areas, or "town panchayats" in the country. The total urban population was 956,721, or 6.4 percent of the total population of Nepal. At present the number of designated urban areas in the country is 33. The 1981 population of these urban areas was around 1.1 million. The latest estimates show that the 1987 population of the 33 designated urban areas was 1.574 million.

Although the 1961 census formally defined an urban area or a town (*sahar*) as "an area with a population cluster of 5,000 and over with an urban environment such as high school, college, judicial and administrative offices, bazaar, communication facilities, mills, factories etc.," this definition appears to have been largely ignored by successive censuses. The Town Panchayat Act of 1962 stipulated that a town panchayat should have a population of "not less than 10,000." This, however, turned out to be a generally necessary but not a sufficient condition for an urban settlement to receive municipal status; four areas designated as urban or town panchayats in 1971 had a population of less than 10,000. In 1976 the minimum population size of a town panchayat was

fixed at 9,000. Because neither contiguity of built-up area, occupational structure, density, nor functional characteristics was ever used as a specific criterion for the designation of town panchayats, the definition of urban area or town in Nepal has remained far from clear. In Nepal, a panchayat (local-level administrative unit) with municipal status is regarded as an urban area or town panchayat. Town panchayats are designated through a political-bureaucratic process by the Ministry of Panchayats and Local Development. Further, town panchayats do not always refer to a settlement unit *per se*. After the introduction of the Panchayat System in 1962, the country was divided into panchayats; the number and areal extent of the panchayats has been subject to change from time to time. The different concepts of a panchayat -- as a political, administrative, and census enumeration unit -- has therefore made the identification of settlements as functional units extremely difficult in Nepal (Sharma, 1989).

As indicated above, the definition of "urban" in Nepal is restricted by the population criterion as well as the politico-administrative process involved in the designation of town panchayats. While all regional administrative and most zonal administrative headquarters have been accorded the status of town panchayat, the

small towns, market and trade centers along transportation routes, and centers of religious and cultural importance performing intermediate and lower-order central urban functions are effectively excluded from the urban category. Nepali censuses do not provide information on such localities. The areas designated as urban do not, therefore, reflect the total distribution of functional urban places or market towns in Nepal. Even in designated urban areas, the lack of regard for contiguity, density, occupational structure, and similar characteristics makes it extremely difficult to appreciate the characteristics and role of urban centers in Nepal.

Census data indicate the trend and magnitude of urbanization, but do not capture the range of "urban plans" in Nepal. The information on the role of market towns, per se, therefore, has to be gleaned from sources other than the census.

With this note of caution, the present paper reviews (1) the trends in urbanization in Nepal and (2) the existing literature on the role of market towns in regional development.

## TRENDS IN URBANIZATION

The process of urbanization in Nepal first evolved in the Kathmandu Valley -- a structural trough with enormous agricultural potential and bounded on all sides by the foothills of the Mahabharat range. It was in this valley that the first signs of urban growth became evident. By the eighteenth century, the three cities of Kathmandu, Lalitpur, and Bhaktapur had developed a distinct urban character distinguished by a complex division of labor, organization of space, growth in

crafts and petty manufacturing, and thriving trade and commerce based on Kathmandu's entrepot functions as the only major route of long-distance trade between Tibet and India.

Other localities in the hills and mountains had neither the locational advantage of the valley nor the control over substantive long-distance trade. In fact, until the first decade of the twentieth century, the only places with market-commercial and trading activity were either administrative centers or places along the traditional trade routes leading from the southern Terai to the mountains and beyond to Tibet. Places such as Tansen, Pokhara, and Bandipur in the central hills; Banepa, Dhulikhel, Dhankuta, Chainpur, Bhojpur and Dolakha in the eastern hills were either administrative centers, strategic garrisons, or nodes in a commercial trade network. Most trade and market centers in the hills evolved as a result of the spread of Newar traders and petty manufacturers westwards and eastwards from Kathmandu (Blaikie et al., 1980, pp. 123-124). Trading marts such as Hetauda and Butwal in the foothills and a number of smaller trading posts along the border such as Rangeli, Gograha, Janakpur, Jaleswor, and Nepalganj subsisted on Indo-Nepal trade. These trading marts did not have sizeable populations. Seasonality of trade was an important aspect of these trade marts. The Terai region as a whole was a zone of endemic malaria and, therefore, the growth of large permanent market settlements was inhibited.

The extension of the Indian railroad along the Nepal border in the last decades of the nineteenth century and the growth in Indo-Nepal trade after the

Treaty of 1923 led to the gradual evolution of a number of "land ports" at break-of-bulk points along the Indo-Nepal border. By this time the Terai, in spite of malaria, had attracted migrants from across the border as well as the Hills because of its tremendous agricultural potential. This led to the growth of a number of market towns such as Biratnagar, Janakpur, Birganj, Bhairahawa, and Nepalganj. By the late 1950's, when the malaria eradication program was underway, urban growth was a distinctly recognizable feature along favorably located border as well as foothill settlements.

In 1952/54, when the first scientific census was taken, 10 settlements with a population of more than 5,000 were recorded. The Terai had five such settlements, namely, Birganj, Biratnagar, Janakpur, and Malangawa in the Eastern Terai and Nepalganj in the Western Terai. The other five were in the Kathmandu Valley. These were Kathmandu, Lalitpur, Bhaktapur, Thimi, and Kirtipur. The Kathmandu Valley had 82.6 percent of the country's urban population. All five Terai towns were situated across the border from India with nearby access to Indian railroads. With the exception of Malangawa, these towns by the 1950's were emerging as gateways through which Indian manufactured goods entered the Nepalese Terai and Hill hinterland and through which forest-based Hill produce and agriculture based Terai produce entered India. Because of the accessibility to the Indian market and the agricultural potential of the region, incipient agro-based industrialization was also becoming evident in the eastern Terai, particularly Biratnagar.

The 1950's were a watershed in Nepal's political, economic, and demographic history. In 1951, the Rana Oligarchy, which had ruled Nepal for over a century, came to an end. Nepal opened her gates to the outside world. After 1951, trade with India began to grow rapidly. The success of the malaria eradication program unleashed a phenomenal amount of hill-to-Terai (highland-to-lowland) migration that had hitherto remained relatively inhibited. Exploitation of the agricultural potential of the Terai gradually became a major developmental concern in Nepal. Foreign aid began to contribute to the relatively rapid expansion in infrastructure, particularly roads, mainly in the Terai and selected corridors in the hills. The concern with "development" led to the rather rapid expansion in state bureaucracy and public services such as schools and health facilities, particularly in centers of district and zonal administration. All these processes have influenced the process of urbanization evidenced in Nepal since the 1950's.

#### **Features of Nepalese Urbanization 1952/54 - 1961**

Some general features of urbanization in Nepal that can be derived from Nepalese censuses are as follows:

(1) *Distribution of designated urban areas.* The 1952/54 census noted 10 prominent settlements with over 5,000 inhabitants. In 1961, 16 towns were recorded as designated urban areas. In 1971 also, 16 designated town panchayats were recorded. However, between 1961 and 1971, five designated towns (*sahar*) were declassified and five new areas were inducted as town panchayats. A total of 23 town panchayats was recorded in the 1981 census.

Since the 1950's the total as well as urban population in the Terai and Inner Terai has been steadily increasing. Kathmandu Valley is still the most urbanized region in the country but the percent of total urban population living in the valley towns has declined considerably from 82.6 percent in 1952/54 to 38 percent in 1981. The eastern Terai in particular is emerging as a dynamic region with considerable potential for urban development. In 1981, 12 of the 23 designated urban areas were in the eastern Terai (Exhibit 1). Also in 1981, the level of urbanization as indicated by the percent of total population living in urban areas was only 6.4 compared to 2.9 in 1952/54.

As indicated earlier, major Terai and Inner Terai towns are located at break-of-bulk points along the Indo-Nepal border, at the crossroads of the East-West Highway and north-south highways, or at the foothills of the Mahabharat range. The location in many cases has been dictated by the traditional channels of north-south trade. The expansion of the road network has increased the importance of traditional land ports in the border and foothill towns. Growth in social infrastructure and expansion of bureaucracy has made these areas into higher-order centers in their own right. The East-West Highway has contributed to the growth of a number of smaller urban areas along the route.

Hill towns are mostly administrative centers performing administrative and service functions. Pokhara alone among the Hill settlements is a higher-order center whose importance has been enhanced as a result of road linkages.

(2) *Growth Features.* Because of the

lack of defined criteria in the designation and definition of urban places, the intercensal growth rates show considerable fluctuation. The urban growth rate during the 1971-81 decade was 7.55 percent. During the decade, the highest growth rates were experienced by Inner Terai and Terai towns (Exhibit 2). The rather high growth rates for Inner Terai and Hill towns were also a result of the low base population and overbounding of urban areas. During 1971-81, towns that had a growth rate higher than the national average were Pokhara and Dhankuta in the hills; Hetauda, Bharatpur, Tribhuvannagar, and Birendranagar in the Inner Terai; and Mahendranagar, Dhangadhi, Birganj, Janakpur, Lahan, and Biratnagar in the Terai.

(3) *Occupational Structure.* Census information shows that 70.7 percent of the economically active population in 1981 urban areas was engaged in primary activities. This, however, appears most unlikely in most urban areas. Other surveys (Household Budget Survey of Nepal Rastra Bank, 1988; and Demographic Sample Survey, 1986) show that only around one-third of the economically active male population in urban areas depends on primary activities. About 16 percent depends on secondary and 46 percent on tertiary activities (Exhibit 3).

Detailed and reliable town-specific information is not available except from the census. Town-specific information from the 1981 census indicates that 7 of the 23 towns (Tansen, Bhaktapur, Hetauda, Birganj, Janakpur, Rajbiraj, and Biratnagar) had manufacturing activities above the urban average. Similarly, Pokhara, Dhankuta, Kathmandu, Lalitpur, Nepalganj, Mahendranagar, Butwai, Siddharthanagar, Lahan, and Dharan had

commerce and trade activities above the urban average. In general, among non-agricultural occupations, service-related occupations were predominant in almost all towns of Nepal, indicating that tertiary activities distinguish the process of urbanization in Nepal.

(4) *Migration.* At lower levels of urbanization, migration is often the major contributor to urban growth. The 1981 census shows that 16.3 percent of the total urban population consisted of internal lifetime migrants (Exhibit 4). The percent of internal migrants was high in the Inner Terai and Terai towns compared to Hill towns or towns of the Kathmandu Valley. In foothill towns in particular, other surveys have shown that the proportion of internal migrants is as high as 60 percent of the urban population. Butwal is an example (New Era, 1986). Other cases are Bharatpur, Hetauda, and Dharan.

Although the 1981 census shows only 3.7 percent of the urban population to be foreign-born, evidence of higher rates of immigration, particularly in the border towns of the Terai, has been reported by other surveys (National Commission on Population, 1983).

Urban migrants in the 1981 census cited agriculture as the major reason for migration to Terai towns (Exhibit 5). Urban-based but land-dependent migration appears to characterize migration to these towns. In contrast, over 36 percent of the migrants reported a desire for better trade and services as the major reason for migration to Kathmandu Valley and Hill towns.

Nearly 63 percent of the migrants to Terai towns and about 78 percent of the

migrants to Inner Terai towns originated from the Hill region. Overall, about two-thirds of the migrant population in the urban areas in Nepal were Hill migrants (Exhibit 6). Urbanization in Nepal has therefore been a corollary of the process of highland-to-lowland migration which appears to be slowly but steadily transforming Nepal from a hill-rural society to a plains-urban society.

#### **Update on Urbanization**

Attempts to create an urban data base useful for planning have been made in the past few years by the Management Support for Town Panchayats (MSTP) Projects. As a result, we have estimates on the 1971 population of the 1981 area of designated town panchayats as well as estimates for the 1987 population and prevailing and projected growth rates of the population in designated town panchayats. These estimates are based on field surveys and a number of assumptions regarding the future role (and therefore the growth) of these town panchayats. We do not, however, have information on the number of areas that could (in a functional sense) be termed urban areas but were excluded from the urban category in the 1981 census. Also, information on areas that could potentially become functional urban areas in the future is nonexistent.

The MSTP results show that in 1981 the population of existing town panchayats was 649,717 as opposed to 461,938 recorded for 16 town panchayats in 1971. Between 1971 and 1981, the boundaries of almost all panchayats in the country were redrawn. As a result, many town panchayats were overbounded and considerable tracts of rural areas were included within the town panchayats. An idea of

this overbounding can also be inferred from MSTP surveys.

The estimated 1987 population of the existing 33 town panchayats was approximately 1.6 million. Of this total 1987 "urban" population, 50.7 percent was in the Terai, 9.0 percent in the Inner Terai, 29.3 percent in the Kathmandu Valley, and 10.8 percent in the hills. Thus, the share of the Terai and Inner Terai towns in the total urban population was around 60 percent (Exhibit 7).

An interesting feature of the MSTP data is the estimates of "urban" population (Column 4, Exhibit 7) in town panchayats. These estimates are based on the criteria of density, proximity and road access to town centers, and type of housing. The data show that only 81.3 percent of the total town panchayat population, or approximately 1.28 million, lived in "urban" areas in town panchayats. The proportion of "urban" population was low in the Inner Terai (57.8 percent) and Hill (67.5) town panchayats and was highest in the Kathmandu Valley (98.7 percent).

Among the 33 town panchayats in the country, a total of 10 (4 in the Hills, 1 in the Inner Terai and 5 in the Terai) had less than 50 percent of the town panchayat population in "urban" areas. All of these town panchayats, with the exception of Ilam, were reclassified after 1975. Mahendranagar, which was ranked the sixth largest town in terms of population size in 1981, had only 14.8 percent of its population living in "urban" areas. Population size of town panchayats alone does not therefore reflect the nature of urbanization in Nepal.

MSTP data also reveal that only 13.2 percent of the total area of the 33 town

panchayats was actually built-up area in 1987 (Column 5, Exhibit 7). Built-up area was less than 10 percent of the total area in 7 of the 8 Hill town panchayats and 7 of the 22 Terai and Inner Terai town panchayats.

Urbanization of the Terai has been proceeding at a relatively rapid rate compared to other regions in Nepal. Exhibit 7 shows that between 1981-87 the 18 Terai town panchayats grew at an average annual rate of 7.48 percent compared to 4.08 percent in the Kathmandu Valley town panchayats. Certain town panchayats in the Terai, such as Birganj (14.6 percent), Janakpur (10.1 percent), Butwal (9.5 percent), Dharan (8.25 percent), and Biratnagar (8.0 percent), experienced relatively high growth rates. Pokhara (9.3 percent), in the Hills was the only town panchayat showing a growth rate exceeding 8 percent per annum in the 1981-87 period. While the urbanization of the Terai is likely to continue, the projected growth rates for Terai towns in the future are likely to be influenced by the arrangements in Indo-Nepal trade. The economies of most of these towns are based on trading activity.

The size-class distribution of "urban" areas by geographical region for 1987 is shown in Exhibit 8. The MSTP project's definition of "urban" population has been used for this purpose. It shows that 35 percent of the "urban" population lives in town panchayats with a population of over 100,000. Kathmandu and Biratnagar are the only two such town panchayats in Nepal. Town panchayats with an "urban" population of between 50 and 99,999 harbor 32.5 percent of the urban population. About 15 percent of the "urban" population lives in town panchayats with

less than 20,000 people. Ten of the 19 such town panchayats had an "urban" population of less than 10,000.

No agency in Nepal has undertaken studies regarding the growth characteristics of settlements that are not now designated town panchayats, but that are rapidly expanding their service functions and becoming functional urban areas. Inferences on the process of urbanization in Nepal therefore have to be based on data already available for town panchayats.

It is clear that in the last 30 to 35 years, the focus of urbanization has shifted from the Kathmandu Valley to the Terai and eastern Terai in particular. The eastern Terai is the most dynamic region in the country, in terms of both agriculture and industrial production. The urbanization of the Terai has been facilitated by:

- (1) Increasing trade and commercial contacts with India through the major break-of-bulk points along the open international border;
- (2) Enhanced production potential of the Terai and concentration of development investment on major development projects;
- (3) Creation of physical infrastructure, including the construction of the East-West Highway and major north-south roads; and
- (4) Increased Hill-to-Terai migration and immigration from across the international border.

Urbanization of the Hills is proceeding at a much lower rate than in the Terai. The factors inhibiting urbanization in the

hills are:

- (1) The poor resource base of the hinterland;
- (2) Problems of access and transportation, and
- (3) The limited potential for generating off-farm employment.

Steady expansion of the state bureaucracy and the creation of physical infrastructure in selected corridors have contributed to the urbanization that has occurred in the Hills to date.

Kathmandu Valley, in its role as the political, financial, and cultural capital of Nepal is, however, likely to remain the major urbanized region in the country in the foreseeable future.

A defined system of urban areas, in terms of the growth of an integrated hierarchy of urban settlements, is far from emerging in Nepal. The eastern and central parts of the country are evidence of such a system, but in an embryonic state.

The eastern urban system has Biratnagar at its apex; Dharan, Dhankuta, and a number of smaller market centers in the Hills and the Terai are part of this system. The central urban system has Kathmandu at its apex. Birganj, Hetauda, and Bharatpur are part of this system in the Terai. Towns like Banepa, Dhulikhel, Bidur, and a number of smaller Hill market centers also are part of the Kathmandu system.

In the center-west, the only system that appears to be emerging is the one with Pokhara at its apex. Siddharthanagar,

Butwal, Tansen, and a number of smaller market centers both in the Terai and the Hills are part of this system.

In the west and the far-west, a discernible system of urban places is still far from emerging.

## REVIEW OF STUDIES ON THE ROLE OF MARKET TOWNS IN NEPAL

### Role of Market Towns

Small towns and market centers have received considerable attention in the urbanization and development literature in the past decade (Rondinelli and Ruddle, 1978; Friedman and Douglas, 1978; Taylor 1981; Mathur 1982; Rondinelli, 1983). The case for the planned promotion and development of small towns has been made on several grounds. The major theoretical justification is anchored to the premises of central place theory; namely, that a hierarchically ordered and integrated system of settlements provides the most rational and efficient spatial system for the organization of population, economic activities, services, and marketing networks. Small towns have been seen as effective and generative links between the larger towns and the vast rural hinterlands.

Recent literature has highlighted a number of roles that small towns can efficiently perform in bringing about balanced regional development. First, small towns have been regarded as desirable locations for the concentration and provision of a number of public services, namely, education, health, and extension services. In countries like Nepal, the role of small towns in rationalizing the distri-

bution of population by initiating a process of settlement agglomeration has been highlighted. In situations where essential public services cannot be provided to all dispersed villages, the idea of locating such services in centrally placed settlements with a minimum threshold population has been intuitively appealing (NPC, 1985). Small towns can become the focus of such attention.

Second, small towns have also merited attention as the marketing links between the larger urban centers and dispersed and often disorganized local markets. While small towns have the potential to provide goods and services from larger urban centers, at the same time, they can also act as bulking points or collection and distribution points for the agricultural and other products from the surrounding rural areas (Rondinelli, 1984; Taylor, 1981). In this sense, small towns link rural and urban areas and function in a manner that is complementary to rural development. Small towns have also been considered as spatial nodes that facilitate the diffusion of ideas and technology naturally flow to these towns from urban centers. As marketing small towns can induce in development in productive sectors countries like Nepal, the market of small towns has a significant on the evolution of an integrated market system in the vast rural periphery. Small towns can induce the process of monetization of the rural economy and bring such areas into the network of the larger national economy. Small towns therefore help as mediators between the big city and rural areas, and facilitate social, economic, and political communication within the national space.

Small towns, particularly along highways in a predominantly rural setting, are in a good location to produce a solid return on investment in secondary activities such as industry. Small towns can also promote a more dispersed pattern of industrial location. Such towns are therefore seen as an essential part of the strategy to avoid industrial congestion in already overcrowded cities where the diseconomies are becoming evident.

The third major role of small towns is their function in the process of rural-urban migration, which normally moves toward large urban centers. In Nepal, where the ever-increasing pressure of population in rural areas has resulted in large-scale migration from the rural highlands to rural lowlands, small towns could be countermagnets to absorb at least some fraction of the migration stream. In many rural areas of Nepal the signs of ecological strain are already becoming painfully apparent. Small towns are therefore seen as potential centers for the creation of off-farm employment, particularly for poor and marginal households. The flood of migration from rural highlands to rural lowlands, which is now in its third decade now, can not possibly be sustained. The destination areas are gradually becoming saturated. The only alternative destinations are the large urban centers of the Terai and Kathmandu Valley. Small towns therefore have a meaningful role to play in redirecting the flow of migration.

Implicit in the arguments mentioned above is the dynamic role that small towns can play in the evolution of a hierarchically integrated regional and national settlement system; in organizing the productive potential of Nepal's vast rural hinterland in the Hills and the

mountains; and in mobilizing rural resources for regional development. From a national planning perspective, the evolution of small towns serves the objectives of welfare, territorial justice, and decentralization. Indeed, these were among the implicit objectives of Nepal's regional development strategy proposed during the Fourth Plan, for 1970 to 1975 (NPC, 1970). A total of 21 "growth points" were tentatively identified and proposed to be developed as poly-functional settlements catering to the diverse needs of the hinterland as marketing and services centers, as centers of agricultural transformation and as locations for industrial development wherever feasible (Gurung, 1969). The Fourth Plan strategy visualized the eventual construction of major east-west and north-south highways that would create an altogether novel locational matrix in the country. Such a locational matrix, it was hoped, would induce the process of deliberate urbanization that would complement the objective of balanced regional development. Although the ideas inherent in the regional development strategy were never translated into operational programs, the ongoing Seventh Plan for 1985-90, has the same theme, i.e., the need to develop a series of "development or growth centers" in each of the development regions (NPC, 1985). The centers would basically be small towns planned to grow as development-cum-service centers and linked to higher-order "regional development centers" on the one hand and lower-order "service centers" on the other. The problem in Nepal has been that none of these policy pronouncements has been backed by region-specific studies and operational programs. The current plan is no exception.

In spite of the theoretical justifications for planning the growth of small towns, there is no explicit operational strategy to induce such growth in the development literature on Nepal. The extent to which small towns are performing the expected role is also very little understood. One school of thought is that in situations of subsistence and very low levels of production, small towns cannot act as alternative destinations for migrants because the capability of such centers to generate off-farm employment remains stunted. Monopolized marketing structure, unfavorable agricultural pricing, and a number of structural issues (concerning access to, control over, or participation in resource use) tend to limit the role of small towns as potential agents for bringing about balanced regional development. The argument has been that spatial policies by themselves cannot transcend the structural problems facing developing countries such as Nepal (Blaikie, 1981).

### **The Notion of Market Towns in Nepal**

Market towns (towns performing trade, service and some petty manufacturing functions) in much of the Hill region in Nepal evolved as an "outgrowth not of any urbanizing tendency within the local peasantry but of the military and administrative needs" of an expanding state (Caplan, 1975, p. 3). Market towns were implanted in an otherwise rural economy as administrative centers, strategic garrisons, or nodes in a transportation network. In the initial stages, such centers attracted Newar traders and artisans from the valley who engaged in trade and petty manufacturing. The service functions of an institutional nature were performed by existing administrative institutions. The towns that evolved

served the administrative and military personnel and local/regional population. The spatial extent of towns was limited; the town itself mostly consisted of a number of shops lining the main street. The occupations of the bazaar population were for the most part nonagricultural. With the passage of time, the migrant traders began to acquire land and agricultural pursuits became as important as nonagricultural pursuits. Most of the market towns in the Nepalese Hills still owe a great deal of their sustenance to their administrative function because this function assures a steady flow of people and therefore the prospects for trade and related services. The increase in the volume of trade with India and the ensuing penetration of cheap, manufactured goods has contributed to the gradual decline in petty manufacturing. Market towns therefore have tended to become centers for the distribution of imported goods.

The construction of roads leading to the Hill hinterlands has altered the fate of many market towns. While towns that were bypassed by the new roads have tended to decline, those along the new alignment have prospered. Indeed, many new market settlements have evolved at the junction of traditional trails and the new roads. Trading activity has increased in such towns.

The population of functional market towns and the number of economic activities in such towns varies a great deal. In most of the Hill region, a market center with a population of 1,000 or even less might be performing important trade and service functions to the hinterland. In general, a market center with over 100 economic activities is regarded as rather large. Even those

with only about 20 economic activities are often considered significant by the local population.

The paucity of data makes it difficult to estimate the number of what could be termed market towns in Nepal. If the current literature on small towns is any guide, most town panchayats of Nepal (with the possible exception of Kathmandu Valley towns -- Biratnagar, Birganj, Pokhara, Dharan, Nepalganj, and Siddharthanagar) could be termed small towns. Unless an arbitrary lower limit of "critical threshold population" is set, it will be impossible to indicate the number of small towns in Nepal. As mentioned earlier, no agency in Nepal collects population figures for market towns. What we have are panchayat population figures only.

The Suspension Bridge Division of His Majesty's Government (HMG) and the Swiss Aid Agency (SATA) have done some preliminary studies on all major settlements and centrally located market centers for all of the Hill and Inner Terai districts of Nepal. The studies covered 58 of the 75 districts in Nepal. Market centers were graded by taking into account 12 types of central services as well as panchayat population density. Grade I contained the largest urban centers, those with a population greater than 100,000; Grade IV contained the smallest, those with a population of less than 20,000. The exercise shows that there were 8 Grade I centers, 73 Grade II centers, and 189 Grade III centers in the 58 districts. Town panchayats are also included in this grading scheme. The grading was based on a weighting scheme that accounted for the number and type of central services and population density. The weighting was somewhat arbitrary.

If all localities in Grades I and II were taken as small towns, the number of small towns in 58 districts would be 270. This number, interestingly, approximates the number of localities with more than 20 shop units in the 58 districts.

### **Review of Studies on Market Towns in Nepal**

Very few comprehensive studies have been undertaken in Nepal regarding the role and function of market towns. Some of the relevant studies and their findings are discussed in this review.

Shrestha's doctoral thesis "The System of Central Places in Arniko Rajmarg Area" (the field work for which was done in the early 1970's) was one of the early attempts to understand the evolution/decline and the nature of market centers in and along the Kathmandu-Lhasa (Arniko) highway. A hierarchy of central places ranging from settlements with more than 10 economic activities to over 300 economic activities was discerned for the study area. In the area (4,350 km<sup>2</sup>), 33 central places in 5 different orders were identified. Settlements with more than 10 economic activities qualified as central places. It was found that retail outlets in smaller market centers served mainly nonlocals while retail outlets in larger (i.e., market centers with over 100 economic activities) market centers served mainly local population. Larger market centers were mostly multi-functional centers with over 50 percent of the economic activities devoted to retail activity. Ruggedness of terrain and the significance of the locality with respect to long-distance trade often determined the number and order of the central places. Transportation, not the marketing principle, appeared to condition the distri-

bution pattern of the central places. The role of market centers was seen mainly as the distribution of imported goods. These centers functioned less as collection centers. Also, the research found no agreement between the order of the centers and population size, particularly in the lower ranges of the hierarchy. The road appeared to have significantly influenced the function of a number of market centers. Those along the highway showed signs of growth while those bypassed by the road had declined in importance (Shrestha, 1973/74).

Caplan's (1975) study of the district headquarters of Dailekh is a pioneering anthropological study of a market town (pop. 941) and its role as an administrative, political, and service center. The role that a small town plays in the political and economic life of the remote regions of Nepal is very vividly highlighted in this study. The administrative-cum-market towns function as extensions of the center's political and economic power. The dynamics of the town basically are contingent on the financial resources (and therefore employment) made possible through grants from the center. This injected "outside resource" provides vitality to such market towns (Caplan, 1975).

Studies on the impact of roads on the settlement system along it have led to investigation of the evolution of new market towns or the decline of old market towns. Such an investigation was carried out by Blaikie et al. in the mid 1970's in west-central Nepal. They show that the expansion of bureaucracy, increase in trade, and construction of highways are the three major motivators in the growth of market centers in Nepal in recent decades. The study highlights the decline in petty manufacturing as a

result of the opening of roads in many of the market towns. Roads have led to the growth in trading activity. In the area covered by the study, only 7 out of the 25 market centers in the region were business centers before the construction of the Sunauli-Pokhara highway. On-road market centers, particularly in the foothills, function as intermediate bulking points for Hill exports and distribution of imported manufactured goods. Most businesses in these market towns, the study notes, are subsistence businesses; the lack of integration between production and marketing is a major problem. The study notes that while commerce is the mainstay of on-road towns, there is also a continuing concentration of resources in the hands of the entrenched merchant class who, in collaboration with the local bureaucracy, have been able to derive effective advantages from these towns. Agricultural productivity has stagnated in the absence of capitalist development and market towns have not been able to transform the economic base of the surrounding rural areas (Blaikie et al., 1976; 1980).

On the subject of the impact of roads the study by Messerschmidt (1980) also deserves mention. The construction of the Prithvi Raj Marg (Kathmandu-Pokhara) Highway has led to the decline of a historically important town, Bandipur, because the road alignment bypassed the town. Bandipur, which was a principle "gateway" to the northern hinterland, lost its gateway function, which was taken over by Dumre (along the road). The road also contributed to the total demise of the textile industry/crafts at Bandipur. Dumre is now the "gateway" to the region along the Marsyangdi. Here the bulk is broken and transshipped by human porters or pony train to the northern

hinterland. As the road towards Besisahar is completed for perennial traffic, new "gateways" will develop (and in fact are in the process of developing) as important bazaars that, with a little administrative attention, can become central places or primary or secondary gateways in their own right.

Market towns along the Pokhara-Sunauli highway have also been the focus of another study by New Era (1986). Three of the four market towns studied (Waling, Syangja, and Naudanda, with Butwal the exception) owed their status to the road. All towns had developed as break-of-bulk points, service centers, and centers for the distribution and transaction of food grains and other goods. Trade was found to be the dominant activity in all towns. Trade in convenience goods and catering was found to be the main function. Over 60 percent of the total active population in these towns was engaged in business, services, wage labor, and petty industrial activities. Over 90 percent of the economic activities had been established in these towns after the construction of the road.

The market towns had also attracted considerable migrant population (65 percent in Butwal, 35 percent in Syangja, 24 percent in Waling, 48 percent in Naudanda) from areas around it. The study, however, noted that development of the secondary sector has been very sluggish and scope for future development is quite limited. Lack of regional resources was posited as the major reason for this state.

A study explicitly dealing with the role of small towns in national development was conducted by a team from the Department of Geography (GIC, 1984).

The study included only those towns that had between 20 to 200 economic activities in two districts (Kavre in the Hills and Bara in the Terai). Accordingly, 10 such towns in Kavre and 6 in Bara were identified for study. The major findings of the study were as follows (GIC, 1984):

- (1) The location of small urban centers was found to be conditioned by modern roads or traditional trade routes.
- (2) There was no hierarchic structure of small urban centers in the study districts.
- (3) The main economic base of the small towns was agriculture. This was more true of the Hill district of Kavre than in the Terai district of Bara. Catering was an important function in small towns located along the road.
- (4) Population size was found to be positively associated with a larger variety of functions.
- (5) In the Hills, even small urban centers had large spheres of influence. This was not the case in the Terai. In the Terai the spheres of influence were confined to a narrow strip along the road.
- (6) While market centers in the Hills provided some employment in non-agricultural occupations for the native population, in the Terai, small urban centers provided employment mainly for migrants.
- (7) The role of the market centers in integrating local production and marketing was not visible, partly because of the low income level and

purchasing power of the majority of the population.

- (8) The study noted a very low level of social interaction in small urban centers. The process of national integration (in terms of the familiarity with national symbols) was also found to be much lower than expected.

Recently, an exploratory study on the inter- and intra-regional flows in 51 market towns of Nepal was conducted by the Center for Economic Development and Administration (CEDA). The study included all the 33 town panchayat and 18 market towns without town panchayat status. Towns from all ecological regions and subregions of the country were included in the study.

The study showed that the inter-regional flows (i.e., trade and population movement and flows between the hills and mountains and the Terai) were predominant. The trade picture of urban centers revealed that the traded goods were imported from the Terai (in case of Hill and mountain urban centers) or from India and surrounding regions (in case of the Terai). With the exception of small towns coming under the influence of Kathmandu and Pokhara, all other Hill towns were completely dependent on the Terai. Hill towns rarely acted as bulking points and the mobilization of local resources through these towns was at a minimal level. The study also noted a lack of hierarchic structure in the distribution of small towns (CEDA, 1989).

The review of the studies on market towns in Nepal shows that meaningful, comprehensive and detailed studies on the role of market centers and small towns in regional development are lacking in

Nepal. The studies that are extant show that small towns are not performing the role they are expected to perform in Nepal. The studies, however, fail to adequately highlight the spatial, economic, and other impediments that have inhibited small towns from performing the role expected of them.

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## EXHIBIT 1

Table 1. Urbanization Trend in Nepal 1952/54 - 1981

Regions	1952/ 54			1961			1971			1981		
	Total Population	Percent Urban	Percent of Urban	Total Population	Percent Urban	Percent of Urban	Total Population	Percent Urban	Percent of Urban	Total Population	Percent Urban	Percent of Urban
West	1,483,946	-	-	1,698,083	-	-	1,748,305	-	-	2,011,868	-	-
Central	1,753,116	-	-	1,946,502	0.5	3.1	2,260,314	1.2	5.8	2,647,508	2.3	6.2
East	1,708,816	-	-	1,886,722	0.3	1.7	2,053,757	0.3	1.6	2,287,173	1.0	2.5
Mountain and Hill	4,945,878	-	-	5,531,307	0.3	4.8	6,062,376	0.6	7.4	6,946,549	1.2	8.7
	(59.9)			(58.8)			(52.5)			(46.2)		
Kathmandu Valley	410,995 (5.0)	47.9	82.6	459,990 4.9	47.4	64.9	618,911 5.4	40.3	54.0	766,345 5.1	47.4	38.0
West	123,150	-	-	98,607	-	-	272,753	-	-	432,589	8.0	3.6
Central	181,558	-	-	226,412	-	-	347,410	4.7	3.5	502,982	12.4	6.5
East	189,228	-	-	193,666	-	-	260,031	-	-	343,510	-	-
Inner Terai	493,936 (6.0)	-	0.0	518,685 (5.5)	-	0.0	880,194 (7.6)	1.8	3.5	1,279,081 (8.5)	7.6	10.1
West	235,189	4.6	4.5	271,551	5.6	4.7	425,242	5.5	5.1	831,243	12.6	10.9
Central	364,578	-	-	418,181	-	-	595,110	5.1	6.5	957,969	5.6	5.6
East	1,806,049	1.7	12.9	2,213,282	3.9	24.7	2,974,150	3.6	24.5	4,241,652	6.0	26.6
Terai	2,405,816 (29.1)	1.7	17.4	2,903,014 (30.8)	3.5	30.3	3,994,502 (34.6)	4.0	35.1	6,030,864 (40.1)	6.8	43.2
Nepal	8,256,625	2.9	100.0	9,412,996	3.6	100.0	11,555,983	4.0	100.0	15,022,839	6.4	100.0

Source: P. Sharma (1989), Urbanization in Nepal.

## EXHIBIT 2

### Growth Rates of Urban Population 1971-81

Urban Area	<u>Average Annual Growth Rate</u>
1. Hill Towns	9.27
2. Kathmandu Valley Towns	3.83
3. Inner Terai	19.59
4. Terai Towns	<u>9.52</u>
NEPAL URBAN	7.55

Source: Sharma (1989).

## EXHIBIT 3

### Occupational Structure of Male Population in Urban and Rural Areas, 1986

<u>Occupation</u>	<u>Percent Urban</u>	<u>Percent Rural</u>
1. Agriculture and related	34.3	73.9
2. Production and related	15.6	16.3
3. Professional	3.2	1.4
4. Administrative	0.3	0.1
5. Clerical	1.3	2.2
6. Sales	18.6	0.1
7. Services	0.2	2.2
8. Services not classified	23.3	3.9
9. Not stated	3.1	2.1

Source: CBS (1987) Demographic Sample Survey, 1986

Note: Totals do not add to 100.0 because of rounding.

#### EXHIBIT 4

##### Foreign-born and Internal Migrants in Urban Areas (as percent of total population), 1981

<u>Urban Area</u>	<u>Internal Migrants</u>	<u>Foreign-born Migrants</u>
Hill Towns	12.0	1.2
Kathmandu Valley Towns	10.2	0.9
Inner Terai Towns	27.1	1.7
Terai Towns	19.9	7.2
Total Urban Population	16.3	3.7

#### EXHIBIT 5

##### Percent Distribution of Lifetime Migrants by Reasons for Migration, 1981

<u>Reasons</u>	<u>Hill Towns</u>	<u>Kathmandu Valley</u>	<u>Inner Terai</u>	<u>Terai Towns</u>	<u>Total</u>
Agriculture	4.4	3.5	24.0	17.8	14.5
Trade/Commerce	19.8	21.5	10.9	8.4	12.7
Services	16.3	19.5	12.3	15.2	15.8
Study	5.9	7.7	5.9	5.9	6.3
Marital Relation	14.4	13.8	10.7	16.0	14.5
Others/Unstated	39.2	34.1	36.2	37.1	36.3

## EXHIBIT 6

### Regions of Origin of Internal Migrants to Urban Areas, 1981

	Percent of Migrants Originating from		
	<u>Mountains</u>	<u>Hills</u>	<u>Terai</u>
Hill Towns	27.4	52.1	20.1
Kathmandu Valley Towns	32.5	55.8	11.7
Inner Terai Towns	13.0	78.1	8.9
Terai Towns	17.9	62.7	19.4
NEPAL URBAN	21.2	63.0	15.9

Sources: Census, 1981; Sharma (1989).

## EXHIBIT 7

Table 7. 1971, 1981 and 1987 Population and  
Growth Rates of Areas Designated Town Panchayats by 1987  
(MSTP Project)

Towns	POP 1971	POP 1981	POP 1987	(Percent urban)	Percent Built-up Area	Growth Rates		
						71-81	81-87	Projected 87-2002
Dipayal	7,213	9,694	11,794	41.5	4.8	3.0	3.3	3.3
Tansen	6,434	13,125	22,403	78.9	8.8	7.4	9.3	3.0
Pokhara	20,611	46,642	70,984	82.5	28.0	8.5	7.2	5.5
Bidur	10,615	13,369	15,354	47.7	8.0	2.3	2.3	2.4
Banepa	7,636	10,446	12,607	85.0	6.6	3.2	3.2	3.5
Dhulikhel	8,442	9,761	10,650	48.2	4.2	1.5	1.5	2.7
Dhankuta	9,150	13,231	14,949	94.2	1.6	3.8	2.1	2.1
Ilam	7,299	9,773	12,118	24.5	5.9	3.0	3.6	2.9
<b>Hill Total</b>	<b>77,400</b>	<b>112,810</b>	<b>170,859</b>	<b>67.5</b>		<b>3.8</b>	<b>7.1</b>	<b>4.1</b>
Kathmandu	150,402	235,160	308,000	99.3	61.9	4.6	4.6	4.1
Lalitpur	59,049	79,875	97,336	98.9	52.0	3.1	3.3	4.0
Bhaktapur	40,112	48,472	56,741	94.7	27.7	1.9	2.7	2.7
<b>Valley Total</b>	<b>249,563</b>	<b>363,507</b>	<b>462,077</b>	<b>98.7</b>		<b>3.8</b>	<b>4.1</b>	<b>3.9</b>
Birendranagar	-	13,859	22,054	56.0	8.7	-	8.0	5.1
Tribhuvannagar	8,680	20,608	29,316	25.1	4.1	9.0	6.0	4.0
Bharatpur	15,108	27,602	38,494	66.5	27.7	6.2	5.7	5.7
Hetauda	16,194	34,792	52,507	70.0	14.6	7.9	7.1	5.0
<b>Inner Terai Total</b>	<b>na</b>	<b>96,861</b>	<b>142,371</b>	<b>57.8</b>		<b>na</b>	<b>6.6</b>	<b>5.0</b>
Mahendranagar	23,088	43,834	55,464	14.8	3.6	6.6	4.0	4.0
Dhangadi	11,757	20,542	29,140	36.0	4.1	5.7	6.0	6.0
Nepalganj	23,523	34,015	42,916	100.0	30.9	3.8	3.9	6.0
Taulihawa	9,352	12,374	14,552	65.9	6.6	2.8	2.7	3.5
Butwal	12,815	22,583	38,910	100.0	11.6	5.8	9.5	5.8
Siddharthanagar	17,272	31,119	48,429	84.9	13.4	6.1	7.6	5.0
Birganj	12,999	43,642	98,858	85.4	23.3	12.9	14.6	8.0
Kalaiya	9,897	15,006	19,159	87.9	16.2	4.2	4.2	4.0
Janakpur	14,294	34,840	62,059	88.2	29.5	9.3	10.1	6.5
Jaleshwar	10,651	16,322	21,086	48.1	7.8	4.4	4.4	3.5
Malangawa	8,241	14,642	20,672	92.8	10.7	5.9	5.9	4.0
Lahan	9,114	13,775	17,938	33.7	6.0	4.5	4.5	4.5
Rajbiraj	24,272	33,255	43,334	80.9	22.3	4.5	4.7	5.0
Inaruwa	8,312	16,463	24,809	50.4	10.8	7.1	7.1	4.0
Biratnagar	45,100	93,544	148,855	95.4	19.9	7.6	8.0	5.5
Dharan	20,503	42,146	67,832	100.0	56.4	7.5	8.2	5.0
Damak	13,993	20,285	30,344	32.9	4.5	3.8	6.9	4.6
Bhadrapur	74,992	9,761	14,150	100.0	27.9	2.7	6.8	4.0
<b>Terai Total</b>	<b>282,772</b>	<b>518,148</b>	<b>798,507</b>	<b>83.2</b>	<b>6.2</b>	<b>6.2</b>	<b>7.5</b>	<b>5.5</b>
<b>Nepal Urban</b>	<b>649,717</b>	<b>1,104,557</b>	<b>1,574,174</b>	<b>81.3</b>	<b>13.2</b>	<b>5.4</b>	<b>6.1</b>	<b>4.9</b>

## EXHIBIT 8

### Distribution of "Urban" Population in Nagar Panchayats by Size Class by Geographical Region 1987

Size	No. of Places	% of Urban	No. of Places	% of Urban	No. of Places	% of Urban	No. of Places	% of Urban	No. of Places	% of Urban
I (> 100,000)	0	0	1	23.9	0	0	1	11.1	2	35.0
II (50,000-99,999)	1	4.6	2	11.7	0	0	3	16.2	6	32.5
III (20,000-49,999)	0	0	0	0	2	4.9	4	12.3	6	17.2
IV (> 20,000)	<sup>a/</sup> 7	4.4	0	0	<sup>b/</sup> 2	1.5	<sup>c/</sup> 10	9.3	19	15.2
<b>TOTAL</b>	<b>8</b>	<b>9</b>	<b>3</b>	<b>35.6</b>	<b>4</b>	<b>6.4</b>	<b>18</b>	<b>48.9</b>	<b>33</b>	<b>100.0</b>

Source: MSTP Project, 1989

Note: "Urban population of Nagar Panchayats includes population living in an "urban environment defined on the basis of density, proximity or access to town center and house type. It does not include all the population of Nagar Panchayats.

- a/ Five of these Nagar Panchayats had "urban" pop. of less than 10,000.
- b/ One Nagar Panchayat had a "urban" pop. of less than 10,000.
- c/ Four Nagar Panchayats had "urban" population of less than 10,000. Percent totals may not add up to 100.0 because of rounding.

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## CASE STUDY PROFILES OF THREE MARKET TOWNS IN NEPAL

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There are 33 towns in Nepal that have the official status of a town panchayat (an urban settlement). The size of these towns ranges from 10,000 to 336,990 inhabitants. Their area coverage ranges from 531 ha (Banepa) to 19,261 ha (Mahendranagar). Area alone, however, does not necessarily reflect the urban characteristics of the towns.

While the major qualification for an urban settlement to attain the official status of town panchayat is population of the settlement (a minimum of 9,000 inhabitants), other criteria (e.g., its economic role in the national context, the area's resource base, location, etc.) are also taken into consideration. One of the common salient features of these Town Panchayats is the role they play as "market centers" for different regions of the country.

Besides the already existing town panchayats, there are several other settlements throughout the country that do not have the official status of town panchayat, but serve as important market centers for certain areas of the country -- e.g., Krishanagar, Banglung, Shyangja, Damauli, Birta Modh, and so on. These settlements do not have the status of a town panchayat because they do not meet the other criteria such as population,

physical infrastructure, and administrative roles.

Following is a set of profiles of three selected town panchayats (Biratnagar, Bharatpur and Damak) that are significant market centers in Nepal. Biratnagar and Damak are both located in the Eastern Development Region in the Terai belt to the south, while Bharatpur is an Inner Terai town in the Central Development Region. These towns have been selected not because they are the most important towns but because:

- (1) They are different in terms of population, physical area, revenue base of their local governments (indicating their overall resource base), etc.
- (2) They are important market towns with somewhat different market functions - - e.g., Biratnagar is one of the larger towns and a major industrial and administrative center; while Damak is a smaller, agriculture-based town with trade (agricultural products and cattle) as one of its main economic activities.
- (3) Data related to the economic activities of these towns are readily available.

The following descriptions focus on the major types of services in the towns,

their principal economic activities, types of market activities, and linkages with rural areas and other towns. (See Map, Exhibit 1.)

### **BIRATNAGAR TOWN PANCHAYAT**

Biratnagar is located in the southeastern part of Nepal in the Morang district of the Koshi Zone (Exhibit 1). Its 1987 population was estimated to be nearly 150,000. Between 1971 and 1981, the population of the town grew by 7.6 percent per year. A large share of this growth was due to an expansion of the town boundary in 1978, when three neighboring villages were absorbed into the town. Adjusting for this annexation, the true population growth is estimated to be about 3.4 percent per year. The urban population within the town accounts for 57 percent of the total population, the remaining 43 percent being rural.

Biratnagar is one of the largest towns in Nepal in terms of land area. It covers 5,990 ha (almost 60 km<sup>2</sup>). Built-up urban land covers 1,185 ha (20 percent of the total town area). About 70 percent of the built-up area is residential and commercial; industrial uses take up about 15 percent of the built-up area.

Besides being the country's second largest town and a government administrative center, the town is also the country's principal industrial and business center. The town also serves as an agricultural market center for a large hinterland. Because its southern border is an international boundary with neighboring India, the town is an outlet for Nepalese exports and an inlet for imports. Biratnagar is well-connected by highways, both national and regional. It has, therefore, understandably been

christened "The Gateway of Eastern Nepal." Biratnagar has several important advantages as a major economic center: a high concentration of industries and supporting facilities and services; import and export functions; a large number of government offices; and the continuing presence of long-established trading organizations with good national linkages. Because of its status, Biratnagar forms the nucleus for development of the surrounding regions.

### **Economic Characteristics**

Biratnagar is considered the country's oldest industrial center. Its industrial base initially was jute processing and later diversified into many other types of agro-processing and manufacturing. Jute, the main export item, was shipped via the railhead at Jogbani, located immediately across the Indian border from Biratnagar. Access to the railhead was the reason that industry clustered in the Rani Mills area on the border.

The Excise Office of Biratnagar has 98 (Exhibit 2) industries registered. Only 11 of the excisable industries are rice and oil mills. The remaining 87 industries are a diversified mix of manufacturing enterprises. In addition, there are 677 registered cottage industries (Exhibit 3), 98 of which are mills. Biratnagar has fewer grain and oil mills, which suggests that it is not particularly strong as an agro-processing center but is industrially diversified with many manufacturing industries (metal, matches, plastics, soaps, chemicals, wood products, assembled products). Town panchayat officials and businessmen report, however, that new industries are not locating within the town's jurisdiction. New plants have been built to the north along the Dharan

Highway up to Itahari. The main reasons cited for this are high land prices and a desire to avoid the town's trade tax (*octroi*).

Although Biratnagar is the leading industrial center of the country, agriculture has long been the principal occupation. The town area consists predominantly of undeveloped agricultural land devoted to the cultivation of rice, pulses, sugar cane, jute, and medicinal herbs and spices. Because Biratnagar is also known as an administrative center (zonal and district headquarters), some of the population is also engaged in civic services. The town's economy is considerably strengthened by the presence of 62 government offices (Exhibit 4) and the offices of various public banks and corporations.

### Trade and Commerce

Biratnagar is the major food grain and vegetable trading center of the Eastern Development Region. Traders in Biratnagar bring surplus paddy, mustard, wheat, linseed, and pulses from most of the Eastern Development Region and sell them nationwide and to the border towns in India. Occasionally, some agricultural products come in from the Janakpur area (to the east). The Hill areas near Biratnagar produce almost no surplus agricultural products. A decade ago, jute production and export trading were a major market activity in Biratnagar, but today, the jute market is depressed because of substitution by other synthetic fibers, and the town's role in export trading has declined considerably. Nevertheless, Biratnagar remains an important import and export center, mainly for the Eastern Development Region.

In 1987, the Biratnagar Town Panchayat had in its registry 2,327 commercial establishments, almost three times as many as Birgunj, a similar town. The establishments included 1,643 retail shops; 522 services (tailors, repair shops, photo studios, etc.); and 166 hotels, restaurants, and tea shops.

The commercial sector appears to be quite highly developed in Biratnagar. In addition to the registered establishments, there are also innumerable "informal" enterprises not registered with the town. Exhibit 5 shows the profile of the commercial markets in the town. The major local retail and wholesale markets are centered in two main areas of the town: the Doom Toli Market, selling mostly vegetables, food grains, and grocery items; and the Boudh Haat Chowk area, selling vegetables and fruits, consumer goods, and imported goods. Other small community markets (mostly vegetable and food markets) that are weekly (open only on a certain day of the week) are scattered around the town as shown in Exhibit 6.

No reliable data exist to estimate the actual volume of trade that takes place within the town. However, one can analyze the *octroi* collection by the local town government to estimate the volume of imports into the town. In FY 1988/89, the local authorities collected Rs. 9.4 million by way of the *octroi* at the rate of 1 percent. Thus, a total of Rs. 940 million worth of goods was imported for consumption in the town. However, this figure represents a grossly underestimated volume of trade in the town as the tax base is generally undervalued and the figure does not account for locally produced goods.

## Existing Infrastructure and Service Levels

### *Urban Roads*

Biratnagar has an economically strategic location with good access to the rest of Nepal via road (the East-West Highway) and air. The East-West Highway and Dharan Highway connect the town with Dharan (a "foothill" town only 45 km away) in the north; Damak and Bhadrapur Town Panchayats, 58 and 94 km to the east, respectively; Jogbani (Indian border town), only 5 km to the south; and several other towns and villages along the Highway in the west. The town area is served with about 12 km of highways, 13 km of arterial roads, 75 km of residential roads, and 39 km of minor residential roads.

### *Bus and Truck Parks*

There are three bus parks with a gross total area of 11,000 m<sup>2</sup>. Total bus parking capacity is estimated at approximately 100 buses. Nearly 200 buses are served daily.

### *Airports*

A domestic air service operates from the Biratnagar airport linking the town with different regions of the country: Kathmandu, Bhadrapur Town Panchayat, Tumlingtar, Bhojpur, Lamidanda, Rumjatar, and Janakpur.

### *Water Supply*

The major source of water in Biratnagar is ground water and, overall, service is widely available. Supply capacity from the three wells is estimated to be approximately 15,000 m<sup>3</sup>/day. There are three elevated storage tanks

with a total capacity of 1,450 m<sup>3</sup>. Length of existing reticulation lines is 63 km, and there are 3,212 service connections -- 2,995 residential, 193 industrial and commercial, and 24 public standpipes. The municipal piped water system is estimated to reach about 16 percent of the urban population. The residents rely significantly on private wells -- almost every house is reported as having a private well.

### *Drainage*

There are approximately 9 km of curbside drains. Biratnagar is sited approximately 70 m above sea level. It suffers inundation and flooding from the two rivers that border its eastern and western boundaries. Areas within the city core area suffer inundation because of inadequate street drainage system rather than direct river flooding.

### *Sanitation and Solid Waste Disposal*

The town panchayat authority maintains a reasonable amount of resources for solid waste collection and disposal. The solid waste service involves street sweeping and collection from collection depots, but not door-to-door service.

### *Electricity Supply*

Electricity supply is quite widespread, although the supply is reported as being inadequate and sometimes prone to power failures. Biratnagar is connected to the national grid via an 11 kV transmission line from Dubi substation to the city substation. Maximum consumption is reported as 4.5 MW plus another 0.5 MW exported to India. There are 7,475 service connections and about one-third

of the urban population is estimated to have electricity.

### *Health and Education Facilities*

There are three hospitals in Biratnagar: Koshi Zonal Hospital, Maternity Hospital, and Golcha Eye Hospital. Biratnagar's ratio of hospital beds to population is estimated to be one bed per 1,261 persons.

There are 46 Department of Education schools in Biratnagar. Existing school enrollment (primary to senior secondary schools) is 18,983, representing approximately 62 percent of the school-aged population. There are 182 primary, 86 junior secondary, and 105 senior secondary classrooms, i.e., an average of 50 students per classroom; whereas the ratio of all school-aged children -- including those not enrolled -- to existing classrooms is 170 to 1.

### *Communications*

Biratnagar is served with 1,889 telephone connections, 12 telexes, and one public wireless. These connections include 49 telephones operated by the Telecom Office and two public telexes. The exchange is automatic digital.

### **BHARATPUR TOWN PANCHAYAT**

Bharatpur Town Panchayat is located some 144 km southwest of Kathmandu on the bank of the Narayani River and at the important junction of the East-West Highway and the road to Mugling (leading to Pokhara and Kathmandu); see Exhibit 1. The town serves as the main trading, service, administrative, and transport center for Chitwan District. It is also considered a gateway to Kathmandu

because the Kathmandu-Narayan Ghat and Pokhara-Gorkha-Narayan Ghat roads connect with the East-West Highway at this point. In addition to good road access, Bharatpur has regular weekly air service with Kathmandu, while Megghauli (some 30 km south and with reasonably good road access to Bharatpur) has daily tourist flights to Kathmandu.

Bharatpur is a medium-sized town, with about 41,000 population in 1988 and an estimated population growth rate of 5.7 percent per year. This growth rate is comparable to rates for other towns in Nepal with good economic bases. The town covers an area of 5,522 ha, of which 700 ha are built-up areas (about 13 percent of the total area). About 388 ha of the total built-up area (55 percent) consists of residential or mixed residential and commercial areas. About 281 ha are under institutional use, and the largest area, 1,850 ha is forest.

### **Economic Background**

Bharatpur enjoys an economically advantageous location in the Central Development Region. Its economic hinterland covers most of the Western Development Region (most of the hilly areas as well as the whole of Nawalparasi district in the Terai). The town has long been an important trading center. Until 1927, it imported Indian finished goods via Bhikhnathori, which lies some 60 km south near the Indian border railway station. Most of the imports were transported on horseback or bullock carts along the jungle road, which was the only available means of transport.

With the opening of the Birgunj-Hetauda railway-road link in 1927, goods started to come to Bharatpur via

Raxaul-Birgunj-Hetauda. The distance between Hetauda and Bharatpur used to be covered on motor vehicles along a fair-weather track, which was reconstructed every year in the bed of the Rapti River. This movement was further facilitated in 1959 with the opening of the 80-km-long Hetauda-Narayangarh gravel road constructed with U.S. assistance.

With the opening of the Butwal-Narayangarh road in 1975, the trade of Bharatpur found another opening via Butwal and Siddharthanagar. However, the impact of this new road was limited by the lack of a bridge across the Narayani River connecting it to Bharatpur-Narayangarh proper. The situation changed dramatically in 1983, with the construction of the all weather Narayani bridge, the significant improvement of the Mugling-Narayangarh road, and the opening of Mugling-Narayangarh road. After 1983 the town had road linkages in all directions, to Kathmandu, Pokhara, Birgunj, Butwal, Siddharthanagar, and all of the Terai from east to far west. Its central position at the crossroads of major roads in Nepal enabled it to increase its wholesale trading function and to diversify into retail-cum-wholesale trade.

As an administrative center, the town accommodates some 52 (Exhibit 7) government offices, including corporation offices covering almost all public functions. The high concentration of government offices provides a very significant economic base for the town. Also, because of the presence of the Narayani River along its western border and the Devghat religious site in the northern area of the town, Bharatpur is a pilgrimage spot for Hindus. Chitwan National Park to the south and the

Narayani River make the region attractive for tourists, rafters, and outdoor enthusiasts. All these considerations make Bharatpur a town with good potential for trade, industry, services, and administration.

### Trade and Commerce

Available records suggest that Bharatpur accommodates 60 to 70 industrial establishments (Exhibit 8). At least two-thirds of them are agriculture-related, such as mills and food processing. Other industries (Nepal Paper Industry, Lumbini Gas, and Lumbini Match Factory) have established sites on the western side of the Narayani River just outside the Nagar Panchayat boundary to be closer to needed raw materials and to avoid high land prices and the town's trade tax. A Coca-Cola Plant has recently been established in the town. It supplies all of Nepal except the Kathmandu Valley. More manufacturing industries are expected to open in the near future. In general, Bharatpur's central location and favorable road linkages give it high potential as an industrial center.

Although Bharatpur (or the Chitwan district as a whole) has been very productive in the agricultural sector because of its fertile land, the economy of the region started gaining momentum only after 1983 when the town had road linkages in all directions. Its location at the crossroads of major roads in the country has transformed the town into a major trading center. Surplus cereals produced in the whole Chitwan district are all processed in the town and sold in adjoining areas -- in Kodari, Gorkha, and Pokhara in the north and Birgunj and Siddharthanagar in the south. Locally grown oilseeds are distributed by

Bharatpur throughout Nepal's Terai region and towards Pokhara and Kathmandu.

Earlier, the traditional market was Bandipur, some 50 km northwest of Bharatpur. Because goods were brought in via Bharatpur only, there used to be vigorous activity only during the winter months (malaria was widespread during the warmer months). Enough supplies for consumption during the whole year had to be brought in. Supplies were imported through Thori, an Indo-Nepal railhead. Bharatpur acted as an entrepot for the supplies. With the improvements of road connections to and from Bharatpur, the market functions of Bandipur gradually shifted to Bharatpur. Initially, Bharatpur developed only as a wholesale market catering mainly to Pokhara and Kathmandu. With the development of roads, the type and magnitude of trade has changed. The historical import point of Thori was given up in favor of Birgunj. Siddharthanagar then began competing with Birgunj in import functions. Finally, Krishnanagar's emergence as an import center has caused Bharatpur to be served by three import points.

The 1,342 registered commercial establishments (Exhibit 9), can be divided into categories as follows:

Cloth shops	43
Food stores	221
Lodges and hotels	143
Tea shops	212
Hardware stores	21
Workshops	33
Cereal/grain shops	39
Others (foreign goods: wine, paan, etc.)	630
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Total	1,342

One notable feature is the large number of lodges, hotels, and tea shops that cater to the travelers making short stops in Bharatpur. In addition to those shown above, there are many unregistered commercial establishments in the town.

There is no fixed market building or area in the town. The two main areas where daily market trade is carried out are at the bus station and along open areas by the roadsides at the main Narayanghat road junction. Most of the traders operate from temporary huts or stalls.

Because no reliable data exist, the volume of trade that takes places in the town cannot be estimated. However, the *octroi* collection by the local government on goods imported for consumption in the town gives some indication of the volume of imports into the town. In FY 1988/89, the local authorities collected Rs. 3.31 million in the form of the *octroi* at the rate of 1 percent, suggesting a total import volume of about Rs. 331 million. This amount is definitely underestimated, as the tax base is often undervalued and does not include locally produced or traded goods and services.

#### Existing Infrastructure and Service Levels

Following is a brief summary of the different infrastructure service levels available in Bharatpur:

##### *Urban Roads*

The main road system in the town seems adequate for circulation and access. There are 111 km of roads in the town (1987), of which 11 km are main highway, 9 are arterial, and 91 are residential. HMG's Department of Roads maintains

some of the major roads in the town and the local town government is responsible for the rest, which are mainly gravel.

### *Water Supply*

Water is supplied from the Jugedi Khola, some 10 km north (and uphill) of the town. Piped supply connections to consumers number 1,236, which represents only about one-third of the urban population of the town. About 100 of these connections are for commercial use. Many households depend on private wells, but ground water is apparently not an easily accessible alternative source.

### *Drainage*

The town is served with approximately 4 km of roadside drains, including 2.7 km of masonry street drains. The street drains are not built adequately or with correct drain sizes and outlet discharge points. The main problem is in the central Narayanghat market. Despite inadequate drainage, the town does not suffer from flooding problems as in the Terai towns because the topography of the town includes moderate to good slopes.

### *Sanitation*

Bharatpur is one of the few towns that has records of the number of septic tanks or latrines existing in the town. The records show that there are 1,622 houses with septic tanks or latrines, plus two public toilets. Assuming 8.7 persons per house, this statistic means that approximately 30 percent of the urban population has access to a toilet or latrine. There is no waterborne sewerage system in the town.

### *Solid Waste Disposal*

The local government has very few solid waste disposal resources. It has a number of manual dumpers and employs approximately 16 street sweepers but does not have any trucks or tractors designated specifically for solid waste collection.

Total collection volume is reported as 8 cu m per day. The services involves only street sweeping and collection from a few collection depots in the main market areas.

### *Electricity Supply*

Bharatpur is connected to the national grid from Hetauda via two substations with 8 MW and 2 MW capacities, respectively. Electricity is supplied to most of the town but there is insufficient substation capacity (and at times power) to meet the town's demand. Demand is estimated to be at least 11 MW. There are 3,270 service connections; total consumption is approximately 1 GWh per month. Although electricity is supplied by Nepal Electricity Authority, the local government has played an important role in making the service available to the town's population.

### *Health and Education Facilities*

There is one (district) hospital and one health post in Bharatpur. An eye clinic is under construction and is nearing completion.

The district hospital has a capacity of 50 beds. It serves approximately 130 outpatients daily and (on an average) 20 inpatients. However, the facilities are very basic and the hospital suffers from a shortage of potable water, electricity,

and equipment. The hospital has a professional staff of 23 plus 5 doctors.

The health post serves the town area. Services provided include inoculations, tuberculosis testing and treatment, and general medical checkups. Five professional staff serve an average of 50 outpatients daily. The overall level of health service in Bharatpur is very low, mainly because of the lack of adequate equipment, staff, and municipal services.

There are 20 Department of Education schools in the town. The existing school enrollment (primary to senior secondary) is 10,331. The school-aged population is 9,030, which indicates that most of the school-aged population has access to education. However, the schools in Bharatpur also serve areas outside the town area. There are 112 primary, 24 junior secondary, and 38 senior secondary schools, for an average of 59 students per classroom.

#### *Bus and Truck Parks*

The town has two bus stations and is planning an additional bus park. The main intercity terminal (area 0.6 ha) has, on the average, 30 buses. It has few facilities; the surface is gravel pavement. The minibus terminal (area 0.4 ha) has a capacity of 30 buses. Improvements to the bus park are under way. The town is adding shopping stalls and resurfacing the pavement.

#### **DAMAK TOWN PANCHAYAT**

Damak emerged as an important settlement only recently. Historically, about 25 years ago Damak consisted of small settlements mainly dominated by the

Dhimal ethnic group, and there were only five shops in the whole Damak area. Madhumalla, in Morang district across the Mawa Khola 5 km northwest of Damak, was the leading trading settlement in the area. The completion of the East-West Highway through Damak in 1972 has transformed it into a significant trading, commerce and transport center. Damak only became a town panchayat (urban municipal government) in 1982. It is located in the western part of Jhapa District (eastern part of Nepal -- Exhibit 1) between the Ratuwa River to the east and the Mawa Khola to the west. The Damak bazaar area is on the East-West Highway near the eastern border of the town.

After the effective malaria eradication program of the 1960's, people from the hill areas were encouraged to settle in the Dumsha Jhora area in the northern part of the present Damak Town Panchayat. In 1975 the settlers were forcefully evacuated from the Dumsha Jhora area. Quite a number of people were killed in the process, which created political problems. Later, the Dumsha Jhora area was reforested. Political controversies continued, and in 1983 the Damak town government was dissolved, and a local election was held after 1 year.

Despite the political problems, development has been rapid in Damak over the past 16 years. The population of Damak has grown from about 14,000 in 1971 to over 30,000 in 1987. The population of the urban bazaar of the town is estimated to have been growing at 7 percent per annum while the rural population of the town seems to have been growing at about 3 percent per annum. This yields a combined overall growth rate of 4.56 percent per annum.

Damak is now the largest urban center in the Mechi Zone. Available records suggest that there were 151 shops in the town in 1972; by 1978 the number of shops had grown to 336. Today there are 781 commercial establishments in the town. The town covers an area of 7,513 ha, of which the urban area covers about 891 ha -- only about 12 percent of the total area. About 33 percent of the town's population is estimated to live in the urban bazaar area.

### **Economic and Market Activities**

The town's economy is characterized by agriculture and trading. Because of the transportation access of the East-West Highway, wholesaling and retailing have developed quite strongly in Damak, overshadowing the nearby Madhumalla settlement.

The town's trading hinterland includes large parts of western Jhapa and Panchathar Districts and southwestern parts of Ilam district. The area around Damak is agriculturally productive. The main food grains produced in the hinterland are paddy, maize, and wheat. The leading cash crops of Damak and its hinterland are jute, tea, and oilseeds. These agricultural products are usually processed in Damak and marketed in other parts of the country. Because of the town's proximity to the foothills of the Chure range, hill products like fruits and ghee are brought to Damak from Panchathar and southwestern parts of Ilam Districts for marketing. Damak is also an important center for distributing manufactured and consumer goods to the hinterland areas.

The cattle market in Damak is probably the biggest in the country. The

cattle market is usually held on Wednesdays, and about 10,000 to 12,000 cattle, goats, and buffaloes are brought to the Damak market for sale each year. About 700 to 800 animals are sold each market day. The cattle market is managed by a contractor who pays a yearly lump-sum fee to the town government (Rs. 600,000 in 1987/88). Cattle sold in Damak market are even exported across the border to India and Bangladesh. Besides the cattle market, two other important markets serving the town and the hinterland population are:

- (1) Sabji Bazaar, which takes place in an open area on vacant but private land. It operates once a week for trading of vegetables and agricultural products.
- (2) Kapada Bazaar, which takes place along the roadsides. This general, open-stall type market operates daily, selling mainly consumer goods.

The urban bazaars lie at the eastern side of the town. Most of the commercial establishments are also located in this part of town. A total of 781 such commercial units are registered with the local town government (Exhibit 10). Grains, vegetables, other foodstuffs, manufactured articles, and consumer goods are sold in these market areas.

Damak is also emerging as an agro-industrial center. There are 61 industries registered with the town government. Of these, 53 are rice mills, 2 are sawmills, 1 is a tea plantation, and 5 are other types. Damak's locational advantage on the East-West Highway provides favorable prospects for continued growth of agro-based and forest-based industries. According to available records, Damak had 103 small and cottage

industries in 1988. These registered industries altogether employed about 1,125 laborers (Exhibit 11).

The Himalayan Tea Plantation is the largest and best-known economic enterprise in Damak. It is a private undertaking. Established in 1962, it is one of the leading tea plantations in Jhapa District. The plantation employed about 308 permanent and 84 temporary laborers in mid-1988. Its tea products are sold mainly within the domestic market.

Damak is not an administrative center. However, in recent years a number of offices of public corporations, projects, and government agencies have been established. These include zonal and district offices of the Roads Department and branches of several banks. The total number of such agencies in the town as of mid-1988 was 18 (Exhibit 12).

Because of its economically favorable location on the East-West Highway and its large and productive hinterland, Damak's role as a center for agro-processing, trade, commerce, and services is likely to continue growing.

### **Existing Level of Infrastructure Services**

#### *Roads*

Damak is a fairly large town covering an area of about 7,500 ha and serviced with 130 km of roads, of which 8 km are highway, 30 km arterial, 51 km residential, and 42 km minor residential. The Department of Highways maintains the East-West Highway and provides some assistance for urban roads, particularly for applying asphalt. The local town government supplies gravel and earth and

looks after most of the urban roads.

#### *Water Supply*

Damak does not have a municipal water supply scheme. This may be partly because of its rapid growth following construction of the East-West Highway and partly because it was classified as an urban settlement only recently. Water is supplied mainly by individual shallow ground wells; typically each house has its own well, or a number of neighboring houses share the same well. In effect, this is a typical village water supply system. It is estimated that 50 percent of the households have their own wells.

#### *Drainage*

There are no street drains in the town; some of the roads have side ditches but they are not interconnected to provide any form of drainage network. The total length of these side ditches is estimated to be approximately 44 km. Because of the lack of a proper drainage facility, Damak faces occasional flooding problems from the main river (Ratuwa River) and a smaller stream, the Mawa Khola.

#### *Sewage*

The town does not have any form of wastewater disposal. The town government estimates that approximately 15 percent of the households have a workable latrine facility with a septic system. The rest rely on simple pit latrines where these exist.

#### *Solid Waste*

Solid waste is being collected using handcarts and sweepers; 7 sweepers are



employed to sweep the main streets daily. The level of service provided seems far from adequate.

#### *Other Services*

There is no electricity connection to the town. Current plans indicate that Damak will be connected to the national grid within 1 or 2 years.

There is a health post in Damak, but no hospital. It is staffed by 25 technicians and treats approximately 80 patients per day. Services at the health post include basic medical checkups, malaria checkups, family planning, nutritional support, and an EPI clinic.

There are 13 registered government schools in the town, out of which 4 provide a union high school curriculum

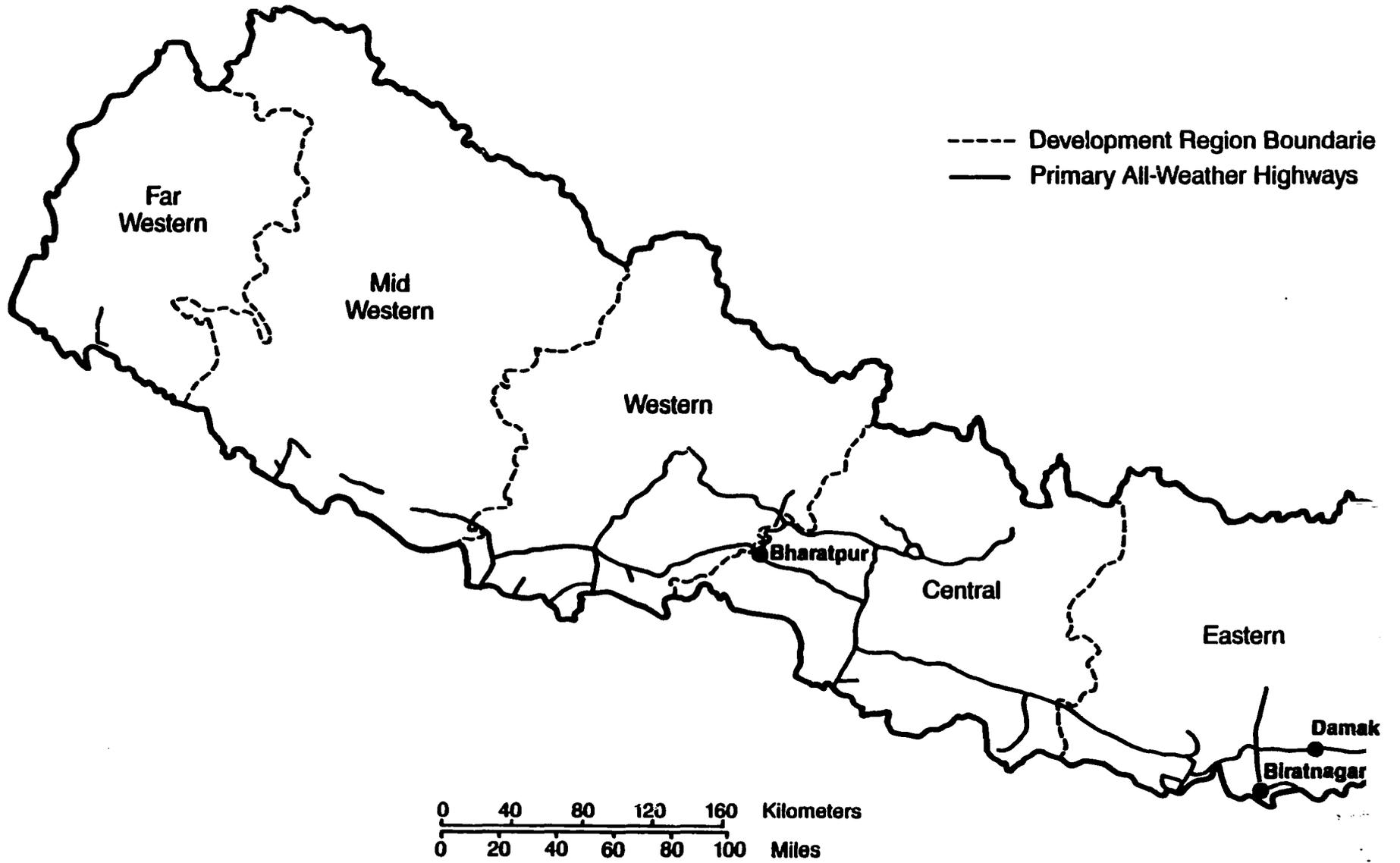
and 2 provide a senior high school curriculum. Total school enrollment is 8,777 (5,416 primary, 1,335 junior high school, and 2,026 senior high school). The total number of classrooms is 189, giving an average student-to-classroom ratio of 1 to 63. The estimated school-aged population is 13,150; i.e., 66 percent of the children of school age are enrolled in government schools. It is further estimated that nongovernment schools absorb an additional 1,463 students.

Damak does not have a fixed bus park; buses use open areas at the main highway roadsides for parking and collecting and dropping off passengers. Vehicular traffic along the town roads is very light, with only occasional buses and agricultural machinery plying the town's central and outer roads.

# Nepal

Market Town Profiles

49



## EXHIBIT 2

### Industries in Biratnagar 1987

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<u>Type of Industry</u>	<u>Total No.</u>
Bidi factory	3
Rice, oil mill	11
Metal works	4
Metal furniture factory	4
Jute mill	2
Match factory	5
Plastic and polyethylene manufacturer	12
Maker of shoes/thongs	1
Soap/chemical plant	5
Chemical plant	2
Sugar processor	1
Solvent manufacturer	1
Tea packager	3
Textile manufacturer	3
Tanner	1
Plywood producer	1
Cassette assembly plant	1
Zipper factory	1
Distillery	1
Cosmetics maker	2
Hosiery mill	8
Battery/dry cell maker	2
Confectionery	4
Asbestos tile/pipe manufacturer	3
Plastic container producer	5
Producer of electrical goods	1
Lumber/sawing mill	11
<b>Total</b>	<b>98</b>

Source: District Excise Office

### EXHIBIT 3

#### Cottage Industries in Biratnagar 1987

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<u>Type of Industry</u>	<u>Total No.</u>
Dhaka cotton industry	33
Printing press	7
Electrical goods producer	16
Iron workshop	30
Rice mill	97
Battery factory	24
Confectionery	29
Chemical producer	30
Furniture maker	75
Stationery factory	64
Garment industry	51
Knitting workshop	26
Pickle preparer	3
Metal grill workshop	15
Art, painting, signboards producer	2
Steel furniture maker	7
Ice factory	6
Mosaic tiles manufacturer	12
Match factory	5
Bamboo furniture maker	2
Chicken feed processor	1
Sugar cane mill	1
Dari handloom maker	1
Dalmoth and Bhujiya (snacks) mill	9
Slate factory	1
Candle factory	3
Plastic bag producer	1
Brick and tile maker	4
Shoe industry	9
Perfume maker	8
Ayurvedic	2
Rickshaw workshop/Assembler	103
<b>Total</b>	<b>677</b>

Source: Biratnagar Town Panchayat

## EXHIBIT 4

### Government Offices in Biratnagar 1987

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1. Agriculture Development Bank (2 offices)
2. Agriculture Inputs Corporation
3. Assistant Public Prosecutor Office
4. Auxiliary Nurse and Midwife Training Center
5. Biratnagar Custom Office
6. Biratnagar Nagar Panchayat
7. Department of Roads
8. District Cooperative Association
9. District Office Agriculture Section
10. District Office Cooperative Section
11. District Education Office
12. Morang District Office (CDO)
13. District Panchayat Office
14. Eastern Electricity Corporation
15. Eastern Regional Directorate of Irrigation
16. Eastern Regional Directorate of Post
17. Excise Office
18. Forest Office
19. Fuel Corporation
20. Irrigation and Hydrology Science Department
21. Morang Jail Section
22. Jute Development and Trading Corporation
23. Koshi Zonal Hospital
24. Labor Office
25. Land Reform Office
26. Mehendra Morang Adarsha Multipurpose Campus
27. Maintenance Survey Section
28. Metric Weights and Measurements Office
29. Morang District Court
30. Morang District Post Office
31. National Trading Limited
32. Nepal Bank Limited (4 offices)
33. Nepal Electricity Authority
34. Nepal Family Planning Association
35. Nepal Food Corporation
36. Nepal Industrial Development Corporation
37. Nepal Oil Corporation
38. Nepal Oil Corporation Depot Airport
39. Nepal Rastra Bank
40. Nepal Red Cross Society

Government Offices in Biratnagar (cont.)

41. Nepal Tea Development Corporation
42. Nepal Telecommunication Corporation
43. Nepal Transport Corporation
44. District Police Office
45. Eastern Regional Police Training Center
46. Rani Police Station
47. Traffic Police Office
48. Public Work Section
49. Rastriya Baniya Bank (3 offices)
50. Rastriya Bima Sansthan (Insurance Office)
51. Regional Directorate of Agriculture
52. Royal Nepal Airline Corporation
53. Salt Trading Company
54. Small Hydel Development Board
55. Sunsari Morang Irrigation Project
56. Tax Office
57. Trade Promotion Center
58. Treasury and Accounts Controller's Office
59. Regional Veterinary Hospital
60. Vocational Training Center
61. Water Supply and Sewerage Corporation
62. Zonal Commissioner's Office

**EXHIBIT 5**  
**Commercial Establishments in Biratnagar**  
**1987**

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<u>Type of Establishment</u>	<u>Total No.</u>
General store	622
Clothing store	176
Trading store	160
Export company	88
Tea shop	91
Tobacco shop	70
Cosmetics store	107
Bookstore	48
Foreign goods store	65
Tailor shop	71
Sweets shop	42
Bhat Hotel (restaurant)	32
Hotel restaurant	17
Lodge	22
Workshop (electrical/mechanical)	29
Tire repair shop	30
Cycle shop/repair	30
Hardware store	62
Oil kerosene shop	20
Bakery	17
Goldsmith	33
Furniture dealer	22
Dealer agency (appliance/other)	32
Aluminum (pots and pans) shop	26
Small appliance repair (stove/lighter) shop	65
Pharmacy	35
Truck transport office	21
Photo studio	11
Laundromat/dry cleaners	4
Shoe shop	16
Printing press	21
Haircut salon	9
Cold store	83
Iron smith	45
Petrol dealership	7
Movie house	3
Pushcart businesses	<u>95</u>
Total	2,327

Source: Biratnagar Town Panchayat

## EXHIBIT 6

### Existing Vegetable Markets in Biratnagar

Type of Market	Location	Land Ownership
1. Weekly (Wednesdays)	Haat Khola Ward #11	Town Panchayat
2. Daily	Doomtoli Ward #14	Town Panchayat
3. Daily (Fruit Market)	Ward #14 Boudh Haat Chowk Plot 4	Town Panchayat
4. Daily (Wholesale)	Ward #13 Boudh Haat Chowk Plot C	Town Panchayat
5. Daily	Ward #19	Roadside
6. Daily	Ward #22	Roadside
7. Daily	Ward #17	Roadside
8. Weekly (Mondays)	Ward #17	Roadside
9. Weekly	Ward #5	Public Land
10. Weekly (Mondays)	Near Janla School Ward #3	Public Land
11. Weekly (Saturdays)	Near TP Office Ward #12	Public Land

Source: Field Survey

## EXHIBIT 7

### Government Office and Insatutions in Bharatpur

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1. Chitwan District Office
2. Chitwan District Court
3. Chitwan District Panchayat Section
4. Chitwan District Postal Office
5. Chitwan District Forest Office
6. Chitwan District Roads Office
7. Chitwan District Land Revenue Office
8. Chitwan District Education Office
9. Chitwan District Public Works Section
10. Chitwan District Public Health Section
11. Chitwan District Police (D.S.P) Office
12. Chitwan District Agriculture Office
13. Tax Office
14. Excise Office
15. Chitwan Treasury and Accounts Controller's Office
16. Chitwan District Land Reforms Office
17. District Malaria Eradication Office
18. Nepal Electricity Authority
19. Bharatpur Aviation Office
20. Royai Nepal Airlines Office
21. Nepal Family Planning and Mother/Child Welfare Project
22. Maintenance Survey Section
23. Bharatpur Nagar Panchayat
24. Veterinary Hospital
25. Central Jail Unit
26. Rastriya Banijya Bank
27. Nepal Bank Limited
28. Agriculture Development Bank
29. Cottage and Rural Industry Bank
30. Nepal Telecommunication Office
31. Water Supply and Sanitation Project
32. Agriculture Tools Factory, Sales Depot
33. Sahakari (Cooperative) Development Section
34. Janak Education Materials Center
35. Agriculture Inputs Corporation
36. Timber Corporation of Nepal
37. Cottage and Rural Industry Office
38. District Sajha (Cooperative) Association
39. Chitwan Irrigation Project
40. Rastriya Samachar Samitee (National News Agency)
41. Gobar Gas (Animal Waste Gas)

**Government Office and Institutions (cont.)**

42. Firewood Corporation
43. Army Barracks
44. Janakpur Cigarette Factory Office
45. Nepal Paper Industry Office
46. Birendra Multipurpose Campus
47. Institute of Medicine
48. Nepal Red Cross Society
49. Nepal Chamber of Commerce and Industries
50. Public Prosecutor's Office
51. District Soldiers Board (Indian Pension Camp)
52. Tuberculosis Eradication Project

**Source: Bharatpur Town Panchayat**

## EXHIBIT 8

### Industries in Bharatpur 1987

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1. Ashis Rice Mill
2. ABC Pvt. Ltd.
3. Kalyan Rice Mill
4. Kumar Chhapakhana
5. Kamal Agriculture Tools Udyog
6. Kalika Oil Mill
7. Khanal Rice and Oil Mill
8. Khoplang Annapurna Rice Mill
9. Gorkha Mankamana Rice Mill
10. Gautam Khadya Udyog
11. Ganesh Type Resoling
12. Chirnjibi Rice, Oil and Flour Mill
13. Chitwan Sellar Mill
14. Chitwan Baraf Udyog
15. Chitwan Feed Industries, Barghare Lanku
16. Chitwan Tile Private Ltd.
17. Chitwan Construction
18. Chitwan Egg Farm
19. Jayalaxmi Rice Mill
20. Tilak Khadya Udyog
21. Durgesh Rice, Oil and Flour Mill
22. Durga Rice and Oil Mill
23. Narayan Laxmi Rice Mill
24. Narayani Salad Oil Udyog
25. Nepal Agro Engineering Private Limited
26. Narayani Noodle Udyog
27. Narayani Agro Industries
28. Narbada Thread Udyog
29. Piya Construction
30. Pradhan Sutter and Grill Udyog
31. Piya Dresses Industries
32. Prajan Chiwura Udyog
33. Piya Rice, Oil and Flour Mill
34. Pashupati Rice, Oil and Flour Mill
35. Bhakhat Janaki Rice Mill
36. Bijaya Confectionery Udyog
37. Bhattarai Diary Udyog
38. Bhatta Rice Mill
39. Bhatta Rice Mill
40. Mohan Oil Udyog

Industries in Bharatpur (cont.)

41. Rupi Construction
42. Rashmi Bakery
43. Rabi Rice Mill
44. Rina Oil Udyog
45. Lal Rice Mill
46. Laxmi Rice, Oil and Flour Mill
47. Laxmi Rice Mill
48. Laxmi Rice, Oil and Flour Mill
49. Shrestha Rice, Oil and Flour Mill
50. Shanti Oil Mill
51. Super Food Product
52. Sashi Rice Mill
53. Surya and Pushpa Khadya Udyog
54. Suraj Khadya Udyog
55. Satyadip Construction
56. Sampurna Bhagawati Rice Mill
57. Super Food Production
58. Shanti Khadya Udyog
59. Shyam and Krishna Mill
60. Suryodaya Rice, Oil and Flour Mill
61. Himali Modern Khadya Udyog
62. Himalaya Oil Udyog
63. Hari Oil Mill

**Source:** Nepal Chamber of Commerce and Industry, Bharatpur

**Note:** Besides these 63 industries, there are other industries such as the Cement Factory and the Coca-Cola Plant that apparently are not registered with the local Chamber of Commerce and Industry. According to Nagar Panchayat records, there are 80 mills; per the wardwise town data, there are 160 industries.

## EXHIBIT 9

### Registered Commercial Establishments and Mills<sup>a</sup> In Bharatpur (1988)

Ward No.	Cloth	Food-stuff	Lodges-Hotels	Tea Shops	Hard-ware	Work-shops	Cereals	Others	Total	Mills
1	5	28	36	4	1	2		51	127	4
2		16	25	11	1	2		51	106	13
3	32	63	58		13	14		306	486	3
4	5	32	9	36	6	10	39	80	217	35
5		6		8		1		4	19	2
6		3		6		1		2	12	3
7		5		22		1		11	39	3
8		9		9				8	26	4
9		3		7				3	13	1
10		32	15	51				65	163	4
11		10		34		1		3	48	5
12	1	14		24		1		46	86	3
<b>Total</b>	<b>43</b>	<b>221</b>	<b>143</b>	<b>212</b>	<b>21</b>	<b>33</b>	<b>39</b>	<b>630</b>	<b>1,342</b>	<b>80</b>

<sup>a</sup>Mills (grains and oil) are listed by the Nagar Panchayat as commercial establishments, but they should actually be considered small-scale industries.

Source: Bharatpur Nagar Panchayat

## EXHIBIT 10

### Commercial Establishments in Damak Town Panchayat

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<u>Type of Establishment</u>	<u>Total No.</u>
1. General store	119
2. Cloth shop	82
3. Salon	22
4. Hotel (5 large, 152 small)	157
6. Tailor shop	49
7. Photo studio	7
8. Medicine shop	28
9. Food and cash-crop store	34
10. Repair shop	23
11. Utensil shop	21
12. Gold and silver shop	43
13. Meat shop	9
14. Bookshop	3
15. Iron goods shop	12
16. Washerman shop	6
17. Shoe shop	12
18. Watch and radio repair shop	30
19. Framing shop	2
20. Fruit shop	13
21. Movie house	2
22. Oil store	2
23. Vegetable shop	23
24. Others	82
Total	<hr/> 781

Source: Damak Town Panchayat, 1988

## EXHIBIT 11

### Cottage and Village Industries in Damak Town Panchayat, 1988

S.No.	Types of Goods Produced	Total No. of Industries Producing Goods	Total No. Laborers
1.	Baked goods	5	49
2.	Furniture	10	167
3.	Grill and iron products	3	20
4.	Stationery	5	23
5.	Cotton cloth	9	108
6.	Rickshaw bodies	6	44
7.	Tailored goods	5	77
8.	Soap and detergent	3	24
9.	Tin boxes	1	6
10.	Utensils	13	122
11.	Mashala (spices)	1	6
12.	Woolen carpets	3	23
13.	Brick and tile	9	240
14.	Jute goods	2	17
15.	Confectionery	4	26
16.	Chalk	2	9
17.	Woolen sweaters and covers	8	71
18.	Noodles and chow chow	1	4
19.	Dhup and Agarbati	1	6
20.	Batteries	1	7
21.	Candles	1	6
22.	Bamboo articles (doko and chitra)	1	13
23.	Sport materials	2	18
24.	Shoes	2	12
25.	Caps	3	21
26.	Cotton beds and covers	1	4
27.	Sign boards	1	2
		103	1,125

Source: District Cottage and Village Industry Office, Bhadrapur, May 1988

## EXHIBIT 12

### Government Offices and Agencies in Damak Town Panchayat, 1988

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1. Zonal and District-Level Roads Departments
2. National Commercial Bank
3. Nepal Bank Limited
4. Agriculture Development Bank
5. Post Office
6. Agriculture Input Corporation
7. Jute Development and Trading Corporation
8. Sub-branch of Janakpur Cigarette Factory
9. Sajha Sansthan Limited
10. Damak Health Post
11. Nepal Malaria Eradication Office
12. Nepal Family Planning
13. Nepal Telecommunications
14. Drinking Water Project
15. Livestock Development Sub-branch
16. Area Police Office
17. Traffic Police Office
18. Jhapa Commerce Association

Source: Damak Town Panchayat, May 1988

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## AN APPROACH TO MARKET TOWN PROJECTS

by

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### INTRODUCTION

The current interest in market town projects is based upon a stronger awareness of the need for government and donor organizations to support policy reforms and programs in the urban sector and in the economy as a whole. In the case of most low-income countries, this means that urban sector programs should support agricultural development. In poor countries, agriculture employs the great majority of the labor force but is almost invariably less productive than it might be. The proponents of market town programs argue that efficient market towns are a vital component of agricultural marketing systems.

Given the international interest in market town projects, and the need to argue their case before governments and donor agencies, this paper presents an approach for assessing whether, and how, such projects should be planned. It identifies some of the key problems that market town programs should address, discusses the public sector's role in market town projects, reviews some of the problems faced in the economic justification of market town programs, and describes a market town assessment

process now being developed. A subsequent section discusses how we might learn from "rapid rural appraisal" techniques for the design of market towns programs, and another describes a successful market town project. Finally, a case study highlights the role of infrastructure improvements in a town concerned with improving agricultural marketing systems.

### KEY PROBLEMS FOR MARKET TOWNS

Market towns already have a number of problems that could be addressed by well-planned market town projects.

1. *Market towns are an important but neglected link in the food system.* The U.S. Agency for International Development (USAID) and other donors have identified agricultural marketing as a particularly weak link in the food system and one that needs more attention. Until now, attention has tended to be focused on agricultural production. Market towns could link the urban and rural sectors of the food system in the following ways:

- (a) A high proportion of farm output is sold in market towns, to consumers or wholesalers.
- (b) Farm credit organizations tend to locate in market towns.
- (c) Distributors of farm inputs usually have warehouses in market towns. These distributors provide seeds, chemicals, equipment, and other inputs that farmers need to increase the quantity and quality of what they produce.
- (d) Processors tend to locate in the towns.
- (e) Extension advice is made available in town shops run by farm retailers.
- (f) Dealers in towns act as sources of market information for growers. For instance, they advise on market conditions (prices, volume of arrivals) and on when and how much farmers should ship to the town on a given day.

Strengthening the system of market towns should strengthen this system of food production and supply.

*2. Market towns are centers of off-farm employment.* Even countries that are highly dependent on agriculture, with agriculture employing 90 percent of the labor force (as in Nepal), cannot absorb the entire labor force growth in their principal economic activity.

First of all, the increasing fragmentation of farm holding in countries with rapid population growth rates is resulting in a higher incidence of uneconomic farming units. The owners of these units are often finding it

profitable to sell these farms and move into towns. For example, it has been estimated by USAID that at best two-thirds of the increase of one million persons per annum in Bangladesh's labor force can be accommodated by agriculture, even assuming quite dramatic improvements in agricultural methods and profitability.

Second, many farm households living reasonably close to market towns supplement their farm incomes with wage labor in the town or even by setting up businesses in the town. A major source of funds for improving farming methods is the income earned in this way by farm households. This has been well documented in the Kutus Study in Kenya, and many other studies around the world.

Employment creation is particularly important in Nepal. Although the rural population growth rate is much less than the urban population growth rate of 8 percent or so, it still outstrips the capacity of the land to support population. The productivity of the land is declining in the Hills and Terai, and arable land is being lost to erosion. The population density in the Kathmandu Valley is similar to that of some of Asia's most densely populated deltas. The difference is that those deltas have much more fertile soil and a climate that permits up to three crops per year. The loss of productive land exerts a powerful "push" effect from rural to urban areas. It may be that if there were employment opportunities in nearby towns, people would be able to remain on their land longer. Seddon refers to "landless peasants" who depend upon "additional sources of income from remittance or from small businesses." The Asian Development Bank's (ADB) study of the agricultural sector estimated that about

150,000 to 200,000 jobs need to be created per annum to provide employment for surplus agricultural labor.

3. *Market towns have been neglected in public sector investment programs.* Very often, urban development programs have tended to be concentrated in the major cities, or even just the capital city. In many countries in Asia there has been almost total neglect of urban infrastructure investment (and, worse still, maintenance). Infrastructure rehabilitation projects have been introduced in recent years in many low-income countries, but they have tended to focus on agriculture, villages, and main and feeder roads, ignoring the market towns. Bangladesh's *pourashavas* (municipalities) were allocated less than \$3 per capita under the FY 89 Annual Development Program and Revenue (recurrent) Budget. Where there has been such obvious neglect, it is reasonable to conclude that some attention, at least to maintenance and rehabilitation, would bring good economic rates of return. The economic rates of return tend to be high on rehabilitation projects since they benefit businesses and households that already exist. In contrast, new infrastructure projects, since they have to anticipate demand, suffer from net disbenefits in the benefit-cost calculus in the early years.

4. *Market towns are poorly administered.* In many instances this poor administration occurs simply because there is not much to be administered. The administrations of market towns are usually allocated very small proportions of the development and recurrent budgets. They fail to raise much additional revenue locally (partly because families and businesses in their hinterlands are so poor). And often the least qualified civil

servants are assigned to local governments in market towns. It is common for there not to be a single qualified accountant in any secondary town in some low-income countries. Few administrators have had training in management or planning. Engineers are in short supply. Revenue collection is in arrears. Improved administration would bring high financial returns through better maintenance of services and therefore a stronger willingness to pay (and capacity to collect charges and taxes).

5. *Poor administrative performance is often accompanied by wasted resources.* Some local administrations are overstaffed and are still unable to perform any useful services. This is sometimes simply because too many people have been hired, given the volume of work to be carried out. Departments may be full of unproductive friends, relations and fellow tribal or party members. There may even be nonexistent people on the payroll. More often the problem is that the staff are unproductive because personnel and "other supplies" budgets are poorly matched. During budget cuts, the personnel budget tends to be protected and the other budget reduced, in some instances to zero. This results in maintenance departments without tools or even without trucks to maintain, typists without typewriters in working order, or even paper, and drivers without any driving to do because there are no funds for fuel.

6. *Market towns are not mobilizing resources as well as they might.* Numerous studies and projects in low-income countries have demonstrated that much more revenue could be raised from property and business taxes. For example, a study in Ghana estimated that property

tax revenue could be raised by between three to five times in the country's five largest towns, by revaluing property that, in some instances, had last been valued in 1960 and by improving collection procedures. Stallholders in markets have been found to pay high "rents" to informal market leaders but very little to the local authority that built and maintains the market. Many studies have shown a far higher willingness to pay for services than is assumed by infrastructure supply agencies. In Tanzania, for example, the poor actually pay private vendors as much for water as the water supply authorities charge the rich for piped water. Those lucky enough to own land that has been serviced by municipal authorities rarely pay to the local authority any but a small proportion of the "betterment" that land has received. Encouraging local authorities to mobilize more resources locally would reduce the burden on hard-pressed central government budgets as well as providing the resources needed to improve local services.

7. *Businesses in market towns are not as productive and profitable as they might be.* Almost everyone in a market town is employed in the informal sector (usually in very small-scale unregistered businesses). Although informal-sector businesses are, almost by definition, perfectly responsive to local needs (their activities are totally demand driven, not undertaken because of a central government directive), they often do not produce at low cost or grow as rapidly as they might, because they have poor access to infrastructure, services, and credit. For example, informal businesses are often sited on undrained, flood-prone land, without potable water and without legal access to electricity. They can rarely

borrow from commercial banks. Since they have to rely on their own or their friends' negligible savings, financial intermediation is weak. This inhibits even a modest division of labor and stockbuilding.

Some low-income countries now have successful programs to supply credit farmers and rural microenterprises. Bangladesh, the home of the Grameen Bank, is a notable case. Yet, these same countries rarely have credit programs market-town-based microenterprises. Such programs would help market town businesses to serve urban and rural dwellers and farmers better. Indeed, Nepal would benefit from a grassroots credit system. Nepal's Agricultural Development Bank is already responding to part of the need for rural credit.

8. *Market towns face social problems as well as financial ones.* For instance, poverty, disease, inadequate potable water, illiteracy, unemployment, and destitute women and children can all be found in market towns, just as in larger towns and in rural areas.

## SHOULD THE GOVERNMENT ACT OR RESPOND?

There are two somewhat contrasting views on how governments and donors should try to deal with these problems. One view is that governments should invest in market towns in order to promote development not only in the towns but also in the rural hinterlands (and in settlements lower down the "hierarchy"). This view treats market towns as having a relatively active role.

An alternative view is that governments should prepare market towns to be able to respond to the most urgent needs of their own residents and business people and the farming households in their hinterlands. This view treats market towns as "responsive."

In practice, these different approaches mean the following:

The "activists" would say that it may be more important to invest in towns to further development, even agricultural development, than to invest in agriculture. Urbanization, they argue, is synonymous with development. Countries become richer as they urbanize. Agriculture should respond to urbanization. And in fact, agriculture can be helped if governments invest in towns, the markets for agricultural output. Activists advocate higher levels of investment in market towns than is normally the case in low- and middle-income countries in Asia today. Proponents of this view of the urban sector recommend studying what all settlements actually do, assessing which functions each should but often does not perform, and drawing up an investment and administrative reform program accordingly.

The "responsive" school believes that the urban sector should be driven by other more dominant sectors, in particular, agriculture. They take this position partly because resource limitations are often so severe that only very modest investment programs are possible. In fact, so little funding may be available from central government budgets that governments of market towns are barely able to maintain existing services, let alone raise levels of service. The towns must therefore be prepared to

respond to the most urgent needs.

The two schools may disagree on which facilities should be provided by the public rather than the private sector, especially in cases in which such facilities could cover their costs by charging fees.

The planners in the activist school first analyze which settlements should perform various functions on the basis of their position in the settlement system. They may conclude that town "X" should have a better marketplace or a rice mill or better transport services. The activists may then recommend that the public sector construct and even operate those services if the private sector has, apparently, shown no interest in doing so. The responsivist would conclude that if the private sector has not found it profitable to build and operate such facilities, then the facilities should not be constructed, since there is no demonstrable demand for the services they could offer. At best, the responsivists would say that if the public-sector planners really do believe such facilities should be provided, they ought to try to persuade the private sector to build and operate them. However, in many low-income developing countries, probably including Nepal, it might be inappropriate to expect the private sector to build marketplaces and bus parks, for example, and certainly not water supply systems. This is also the case in Kenya, which is featured in the example of a small market town project discussed later in this paper.

Although it may be wise for urban policymakers to aspire to the active role, perhaps when the financial crises of the next few (perhaps many) years are over and the country concerned is more

prosperous, for the moment, policymakers have little choice but to operate in a low-level responsive mode. Resource problems are far too severe for the administrations of market towns to be in any but a "catching up" and "keeping up" mode for many years. These resource constraints apply to human as well as financial resources. Local administrations will be allocated only very small proportions of central government budgets, and even if they manage to increase revenue from local resources many times over, they will barely be able to maintain minimal service levels for their rapidly growing populations. Existing staff will require considerable training just to achieve this minimal level.

However, governments should not be too overwhelmed by the resource problems. Studies have shown that even the very poor not only are willing to pay for simple infrastructure, but also actually do pay often as much as the middle classes for essential business and household services. If there is a strong economic case to upgrade roads or extend the power supply system, the private sector will usually be willing to make the necessary payments.

Fortunately, the two schools agree on many components of market town projects:

- (a) Local resource mobilization should be improved;
- (b) Local administration should be improved;
- (c) Care should be taken to find out what is really needed locally (the need will, of course, vary by location); appropriate standards should be

implemented;

- (d) Cost-recovery performance should be improved;
- (e) Operation and maintenance performance should be improved; and
- (f) The public sector should "facilitate" the development of the private sector.

This common ground has the merit of not requiring large outlays of public expenditure. In fact, a major thrust is to concentrate on spending funds raised locally as cost effectively as possible. The key to this step is to improve the quality of local government.

Both schools believe that policies and programs must be "demand driven." This means that those making decisions must be able to respond to local demand, measuring demand by what people will and can pay for. It also means leaving as much as possible, but not necessarily all services, to the private sector and decentralizing as many decisions as possible to local rather than central government. Those designing the programs should carefully listen to the local people.

Local rather than central governments are likely to be most aware of local needs. Whether local governments are able to respond effectively is a matter of organization and resources. Almost all developing countries have decentralization policies that aim to make decision-making responsive to effective local demand. Some countries have recently introduced locally elected officials into local government; examples include the *upazilas* (subdistricts) in Bangladesh and the districts in Ghana. However, few

decentralization policies have yet managed to substantially reduce local dependence on central government.

It is the challenge of market town programs, and local government reform in general, to make decentralization work.

The key to making decentralization work is to focus on the resources problem. Almost all low-income countries are either cutting back public expenditure or allowing it to grow very slowly. This is partly because the public sector has become inappropriately large, stifling private sector growth. Many of these same countries are cutting back increasingly on allocations to local authorities, while at the same time claiming to be decentralizing government. Since there is little prospect of more central government resources being allocated to local governments, local authorities will have to learn to depend more on local resources, as well as thinking very carefully about what they really need to do to facilitate development. Effective decentralization requires the careful use of public and private resources.

## JUSTIFICATION OF MARKET TOWN PROJECTS

Market town projects have to be justified at least in terms of helping to solve the problems outlined earlier.

In reality, the donors and governments that are responsible for putting together national economic development programs require still more. Countries applying for assistance have to make a convincing economic case that the administrative reforms, the improved resource

mobilization, and such investments that are undertaken in the town (marketplaces or upgraded roads, to take two types of investment) clearly benefit the national economy, mainly through improving public finances and assisting in improving agricultural performance.

The most difficult task is to justify investments in market towns in terms of benefits to farmers. It is difficult to estimate the farmers' economic rate of return from urban investments, or even from administrative reforms, because improved farming performance can be attributed to many factors. The net market town impact tends to be overwhelmed by factors such as price liberalization, privatization of fertilizer distribution, better feeder roads, better market information, and so on.

Some analysts have justified market town projects by demonstrating that there are strong linkages between market towns and economic and household activities in their hinterlands. The Kutus Study in Kenya is one of the best attempts to show this linkage. The study argues that if the economic linkages are strong, then investment in the town is bound to have an impact on farmers.

The argument would be more convincing, however, if the economic rate of return of market town investments for farmers (as well as for local households and businesses) could be estimated. A summary of a recent such study is given in the next section.

## ASSESSMENT PROCESS

The two main steps in the design of a market town program are: (1) select

the towns and regions, and (2) decide what the program should consist of in those towns and regions and in the country as a whole (since there may be some nationwide interventions such as a general reform of local government, including training).

The process should work as follows:

1. A team of planners will draw up a list of regions in which there might be market town programs. The list may include all the regions in a country. Regions that are declining or stagnant with little hope of recovery should probably be excluded.

2. Working in the capital city, the team will seek opinions from key informants, and collect economic development and commercial data that will help to draw up a short list of regions where private sector growth is now stronger than average. There may be a case for including a region that is beginning to take off because of some dramatic change in its business environment (including farming): for example, the region is about to be connected to the national power grid, or to benefit from a major pest eradication scheme, or from a much higher proportion of the price of an agricultural export being given to the region's farmers, or from a devaluation that would similarly benefit the farmers. Commercial data should be used in drawing up this short list: bank lending; soda, soap, battery, or cigarette sales; and rail, air, or bus passenger receipts, for example. There will not usually be much hard economic data disaggregated by region, but it should be possible to obtain population data, including migration, and data on the production of key crops and other exports.

3. Then the team will visit the short-listed regions. More detailed information will be collected on the regional economy, particularly the private sector, its performance, and its needs. The discussion will begin with the private business sector to show that the private sector should be the driving force behind any new development initiative -- that is, a driving force in the sense that market-town programs should aim to respond to private-sector needs.

In all the discussions, the procedure will be to ask: What do the towns need and how are they going to pay for it (even if projects may be initially funded by the public sector)? The team should examine public services to see if they could be provided by the private sector with full cost recovery, as with private-sector contracts for solid waste collection, or for the maintenance of public vehicles, for example. The team should also investigate policy changes that would make it easier for the private sector to grow -- that is, make it easier to register a company; liberalize collateral requirements for bank lending; improve land titling procedures. Most of these policy changes would have to be made by the central government. The team will also examine the efficiency of local government and the locally based infrastructure agencies, and in general the regional offices of central government. Some of the members of the private sector visited will of course be farmers, and the traders linking the farmers to the towns. The team will try to understand the farm produce marketing systems and how urban-based activities fit into such a system and will informally examine the flows of funds, including savings, to help to establish these linkages.

4. The team will then return to the capital and work with the government and the donors in drawing up a list of interventions for each of the selected towns and regions and for the policy changes or programs that are needed there (but are also needed in all or most other towns and regions). The locally based studies may result in one or more of the towns being dropped.

## RAPID APPRAISAL TECHNIQUES

It will be useful to borrow from "Rapid Rural Appraisal" (RRA) techniques in the design of market towns programs. These techniques have been applied to the very agricultural marketing systems to which we want market town programs to contribute effectively. In addition, these techniques are very cost effective and strongly emphasize collaboration with local experts and key informants.

To quote one expert in the application of rapid appraisal, "While eschewing formal surveys, rapid appraisal relies heavily on structured, informal interviews with key informants in commodity subsystems, including producers, input suppliers, agricultural credit agencies, collectors, wholesalers, retail dealers, research and extension agencies, policy-makers and others." One of the lessons of RRA, as pointed out by Honadle (1982), is that we should not focus on entirely on cost-effective tools for external actors. Instead we should pay attention to "the generation and use of data by local organizations to improve their capacity and performance." Effective reconnaissance requires an interactive,

participatory style of data collection. One danger with informal data is that it is often biased; most informants have ulterior motives. This bias has to be uncovered during the interview. An informal delphi technique can be used to examine policy and program options. This involves pursuing a narrowing series of "what if" questions. In the process, a consensus can be achieved.

RRA is not always a substitute for more formal surveys, but it can help identify the problems that become the focus for research. Survey research can only be carried out once the problems are sufficiently understood to articulate the questions. The key to rapid appraisal is to move quickly and surely to the main problems, opportunities and actions.

Some proponents of RRA believe that it is better to focus on exploiting opportunities than on identifying problems, because not all opportunities begin as problems.

Robert Chambers characterizes RRA as "fairly quick and fairly clean." He argues that the greatest single blockage in the design of rural projects is "the hegemony of statisticians." Chambers advocates the following general principles: take time (do not rush interviews); offset biases (be aware of any biases in the information collection and opinion seeking process; be unimportant (self-effacing); listen and learn; and use multiple approaches (do not rely on single sources of information; look at different ways to solve problems). He recommends that investigators carry out a "guided interview" armed with a checklist of questions.

## A SUCCESSFUL MARKET TOWN PROJECT

This example of a successful market town project, although it has been taken from another continent, will serve to demonstrate an approach that could probably be applied to good effect in Nepal. The key ingredients for the success of the Karatina project in Kenya were a local rural and urban economy with considerable growth potential and strong local administration.

Karatina is a town with rapidly growing population of about 8,000 in the heart of a fertile agricultural region. Karatina is on the main road between Nairobi, Maranga and Nyeri. The town has had a market for over 100 years. The main export crops from the region are tea and coffee. More recently French beans and avocados have been grown for export.

The local authority, Karatina Town Council, participated in USAID's Small Towns and Community Development Project. Under the project, loans were channeled through the Local Government Loans Authority for a new marketplace, a new bus park, and urban road improvements. Staff of the Town Council also benefited from attendance at USAID-sponsored training courses.

The new market has 288 stone stalls, 200 wooden stalls, and space for about 700 sellers on the ground. The bus park has space for about 30 buses and *matatus*. Eight kilometers of urban roads have been improved.

The purpose of a current study is to assess the impact of these investments on farmers and traders, and Karatina's

business community, market traders, users of the bus park, and households.

A team of 8 interviewers applied structured questionnaires to 80 farmers, 30 market sellers, 30 bus drivers, 30 bus passengers, 20 business people in the town, and 40 householders in Karatina. "Key informants" in and around the town were also interviewed informally. These key informants included many of the same kinds of people who participated in the formal surveys.

The new marketplace is financially viable. Revenue from market fees since the market was opened is shown below. Revenue for 1988-89, Ksh (Kenyan Shillings) 2.1 million, was almost twice 1987-88 revenue and is much more than enough to cover the loan repayments of Ksh 1.2 million and operating cost of about Ksh 350,000. The market not only is financially viable but also returns a surplus that helps to cover other Town Council costs.

### KARATINA MARKET AND BUS PARK REVENUE

	<u>Market</u>	<u>Bus Park (Ksh Million)</u>
1986-87	1.287	0.225
1987-88	1.873	0.638
1988-89	2.070	0.580

Under current "administrative" procedures, the bus park is not financially viable, but it should be. Its 1988 revenue was Ksh 580,000, which is less than the loan repayment of Ksh 700,000. Revenue fell between 1987 and 1988. The main

reason for the low and falling revenue is the widespread evasion of the monthly fees. The original plan had been to charge on a per entry basis, but this was thought to be administratively too expensive. Per entry fee collection is practiced in other bus parks, and car parks, in Kenya. Such a practice could and should be applied in Karatina; a collection turnstile is located right next to the park's single entrance. The bus park should be financially viable since it is full of *matatus* and business most of the time. In fact, it is overcrowded much of the time, with up to 50 vehicles occupying the spaces designed for 30. "Touts" operate a black market for the limited space.

Although we do not yet have all the data needed to make the calculation, the investment in the market is probably economically viable. The only real economic cost not included in the financial viability analysis is the land. The land occupied by the market, and many of the properties around the market, was and is owned by the council. The land occupied by the market was probably worth about Ksh 1 million when the market was opened. The market's revenue surplus would probably be sufficient to cover that cost on an annual rental basis.

The bus park is not economically viable on the basis of the revenue actually received, but it probably would be if all those who used the bus park paid monthly or daily fees that reflected the economic value of the bus park to them.

Do farmers in Karatina's hinterland benefit from the new market and bus park? The farmers certainly believe that the market, bus park and upgraded roads are beneficial: the survey returns show this to be the case. However, the real

question to ask is: Has the project improved farming in the region and increased incomes?

Although the full analysis remains to be done, the answer to the question is probably yes. The interviewers were repeatedly told by the traders who buy produce from the farmers to sell in the market that horticultural production has increased greatly since the new market was opened: increases of 50 to 100 percent were often quoted. Visits to the farms themselves confirmed that farmers now grow more vegetables and fruit than before and that they identify the opening of the new "mud free" market as a major incentive.

However, there are many forces at work here. Karatina is a very prosperous and fast-growing town in a prosperous and fast-growing region. Even without the new market facility, the town would have been a growing market for horticultural produce. Poor coffee prices have provided another incentive for farmers to switch to vegetables. We met farmers who had actually, and illegally, torn up coffee bushes to plant vegetables and cattle fodder.

Nevertheless, the new market and the bus park have clearly helped farmers. Interviewers were told that the new facilities are now attracting many more traders from distant towns. More produce than ever before is being bought in the Karatina market to be sold in Nairobi, Mombasa, Eldoret, Meru, and Embu, for example. The interviewers met farmers who had grouped together to benefit from this growing demand, and market women who had grouped together to buy from the farms. Many farmers said that horticultural crops were less risky than

coffee or tea, or any export crops. (Some had been encouraged to grow avocados for export, only to see the market vanish this year. Their avocados are now for sale in the Karatina market.) The response to the depressed coffee prices seems to be first to allocate more land to vegetables for the farmer's own use and then to extend the acreage to grow fruit and vegetables for sale in Karatina market.

The market even provides a useful function for farmers who do not ever sell any produce there but rely entirely on coffee or tea for their cash income. These farmers have, in part been encouraged to move out of subsistence farming because they know that they can meet their families' food need from the market in Karatina.

Farmers may find it more profitable than used to be the case not to go to the market but to sell to the traders. The number of traders using the market is reported to have increased greatly since the new market opened. Many of these traders are farmers themselves or represent a group of farmers. Most of those who now occupy the market space are middlemen, or more precisely, middlewomen.

This evolution of the agricultural marketing system is probably to the benefit of the farmers and the economy as a whole. Few Western farmers sell directly to the public.

In fact, the whole produce marketing and distribution system based on the new market has become more complex and specialized. Karatina is becoming a market increasingly dominated by traders who specialize by product and region of

origin and sales. Some examples may help to illustrate.

Interviewers spoke to a farmer-trader who specializes in green peppers. He brings a bullock cartload of peppers from 15 km away to Karatina. The farmers are paid about Ksh 300 and he sells to wholesale market for Ksh 300 to 400. The market entry fee of Ksh 5 and the transportation cost is Ksh 6 per bag. The wholesale price of peppers to Nairobi and Mombasa of the peppers are exported.

Interviewers also talked to a trader from Meru (on the other side of Mount Kenya from Karatina) who brought in beans and pigeon peas to sell to wholesalers in Karatina who apparently then took the produce to Muranga, Nyaharuru, Nanuki, and Nairobi. Initially, in the marketing process, the Meru area farmers bring in single bags of their produce to local markets. Local traders then ship the produce to Meru market to be bought by this trader. The local traders pay the farmers about Ksh 480 per bag for the beans and the wholesalers in Karatina buy from the trader we talked to for about Ksh 600. The beans retail for about Ksh 800 in Karatina and up to Ksh 1,000 in the other towns.

Another group of Karatina market women specialized in the Meru trade. They too buy beans from Meru market (hence represent competition for the above trader), enough to fill a lorry. Their costs include payment along the way to the police since it is illegal to move this produce without a license. Some of the beans are sold to wholesalers and some retailed by the women themselves in the market.

The truck driver for this group of market women worked for another group of women on the way back to Meru, carrying bananas, oranges and other fruit purchased in Karatina's market.

Businesses in the town have also benefited from the infrastructure investments. The market is the most important economic activity in the town. Businesses have responded to the market's growth, to the larger numbers of final consumers and other buyers coming to the market, and to the increasing incomes of farmers and traders. In the past year, new licenses have been granted to 6 hotels and 25 retailers, and to many other new businesses. All banks report rapidly growing business, with many of the new accounts being market traders, *matatu* and bus operators and, of course, farmers. The town and its market are even tourist attractions. Every morning and afternoon, tour buses stop at the Tourist Lodge for refreshments and a visit to the market.

## CONCLUSION

A project along the lines of USAID's Small Towns Project in Kenya could help to improve Nepal's agriculture and promote employment in the small towns. The Karatina Study shows, as do many other similar urban-rural linkage studies, that market towns are or can be vital links in efficient agricultural marketing systems. Karatina's new "mud free" market and orderly bus park are essential components of the complex marketing systems that have developed with the town as their focus. These facilities have also generated high levels of related economic activity in the town itself. The investments are also sustainable because the local authorities have proved that,

with suitable training and motivation, they can collect sufficient fees to cover capital, operating, and maintenance costs, certainly for the market, and eventually for the bus park.

If such a project were to be implemented in Nepal, care should be taken to select towns that do have real, demonstrable growth potential, that are not economically stagnant or in lagging regions. The project should also include training programs for those responsible for operating and maintaining the projects, and planning and implementing future projects.

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## **MARKET TOWN ANALYSIS FOR RURAL ECONOMIC GROWTH: APPLIED METHODS AND TECHNIQUES**

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Governments in Asian countries can help to promote rural economic growth and diversification by investing in the services, facilities, and infrastructure that are needed to allow market towns to perform their functions as centers of exchange, employment and production.

In the past, however, sectoral ministries in Asian countries gave little attention to the question of how investments should be located in the most efficient pattern to stimulate economic growth in small urban centers. Ministries and agencies concerned with rural development in most Asian countries lack adequate information about the spatial distribution of services and facilities among market towns or the patterns of economic interaction between rural areas and market centers. Thus, they do not know how new investments could be located in market towns to maximize efficiency, equity, and production.

Over the next decade the financial resources available for providing local services and infrastructure will become more scarce in all Asian countries. As a result, more efficient and effective distribution and location of investment projects will become more important.

Few Asian countries now have sufficient resources to provide the basic services and facilities that are needed for economic growth everywhere at the same time. In the poorest Asian countries, many services and facilities that are essential for rural economic growth cannot be provided economically or efficiently to widely dispersed populations. To be economically feasible, investments must be located in those towns that have growth potential.

Thus, it will be crucial to locate investments in a pattern of "decentralized concentration," that is, in selected market towns that have growth potential and that serve a large population. In order to carry out such a strategy, government and private sector investors need information that will help them to identify market towns with growth potential and to assess their investment needs.

An analysis of market towns must, therefore, become an integral part of formulating rural economic growth strategies. This paper describes one approach to analyzing market towns that has been applied successfully in more than a dozen developing countries.

## **THE URBAN FUNCTIONS IN RURAL DEVELOPMENT APPROACH TO MARKET TOWNS ANALYSIS**

The "Urban Functions in Rural Development" (UFRD) methodology for analyzing market towns was developed for the U.S. Agency for International Development (USAID) during the 1970's and modified by the Research Triangle Institute during the 1980's (Rondinelli 1979, 1980a, 1985). It has been extensively tested in pilot projects in the Philippines and Bolivia (Rondinelli and Evans, 1983). Aspects of the methodology have also been tried in other countries in Africa and Latin America (Fass, 1981; Girhing, 1986; Carroll, Lentnek, and Wilkie, 1984).

The UFRD process was derived in part from analyses of settlement systems in India (Shah, 1974; Roy and Patil, 1977), Indonesia (Fisher, 1975), and Ghana (Grove and Huszar, 1964), and in part from new methods tested in pilot projects sponsored by USAID.

The UFRD approach emphasizes the importance of analyzing market towns in a regional context. Market towns participate in a system of exchange that usually ranges over a larger geographical area than that of the legal boundaries of any single town. Moreover, the trade functions of the most dynamic market towns are linked with those of rural areas surrounding them and with larger and smaller towns nearby. Methods that analyze individual market towns in isolation from their interactions with their rural hinterlands or with other towns provide distorted results or information of limited usefulness.

The UFRD approach is based on research that shows that urban centers in the form of market towns, rural centers, and intermediate cities--and services, facilities, infrastructure productive activities located within them--can and do play important roles in facilitating rural development (Rondinelli and Ruddle, 1978). Towns and cities that act as agricultural markets, that provide basic social services and public facilities for rural people, and that are linked to each other and to their surrounding rural areas can serve as the physical base for rural and regional economic growth (Rondinelli, 1983b).

UFRD is a process of analysis through which planners and policymakers can quickly assess the spatial distribution of social and economic functions in market towns to address the following questions:

- (1) What types of services, facilities, infrastructure, and productive activities (urban functions) do market towns within a region now have?
- (2) How well do these existing services and facilities in market towns serve their residents and those of surrounding areas (that is, how accessible are those market towns and their functions to people living in the region)?
- (3) Which areas in a region lack services, facilities, and infrastructure that are important for agricultural development and employment generation?
- (4) How can new investments needed for rural economic growth be distributed so that they reduce geographical disparities by serving better the areas

and groups of people that do not now have access to basic market functions?

One purpose of the analysis is to identify strategically located towns and cities that have sufficiently large populations and volumes of market trade to accommodate new investments efficiently. Another purpose is to identify the investments in economic services, facilities and infrastructure that will increase the access of the rural population to market towns.

Research indicates that the growth of market centers strongly influences the decisions of farmers living in surrounding areas about the kinds of crops they grow, and about the uses of agricultural land (Rondinelli 1984). Secondary cities and market towns also provide jobs in service, commercial, and processing activities for rural migrants and give workers the opportunity to send some of their income to their families living in rural villages. Market towns of various sizes can provide different combinations of social, economic, educational, health, and public services needed by rural households. Market towns provide infrastructure and utilities that reduce the costs of agricultural production and distribution. Many are nodes of transportation and communications that can link smaller towns and cities with larger urban markets and export outlets. Some act as centers of innovation diffusion for new agricultural methods and techniques (Rondinelli, 1983a).

Although market towns can play important roles in the economic development of rural regions, in many poor countries the system of market towns is neither well articulated nor integrated sufficiently to facilitate rural development (Johnson, 1970; Rondinelli and Ruddle,

1978). Many regions lack market towns of adequate population size to support functions needed to promote rural growth.

In other areas, inadequate public investment prevents market towns from offering many of the services, facilities, and infrastructure that they could support. And in some rural regions market towns are not linked physically and economically to each other, to their rural hinterlands, or to larger cities. Only the people who live in these towns benefit from their services and facilities. In each of these cases, the lack of access for rural households keeps them in poverty and reinforces geographical and social inequities.

Of course, not every market town in a region can have a full range of services, facilities and infrastructure. One of the benefits of a well-developed and integrated hierarchy of market towns is that it provides access to many functions for a large number of people without each town having to provide all of them.

## THE PROCESS OF MARKET TOWNS ANALYSIS

UFRD is a process for quickly assessing the system of market towns in a region. It can provide the information needed to locate new investments in services, facilities, infrastructure, and productive activities more efficiently and more equitably.

### Basic Principles of UFRD

The UFRD methodology for market town analysis is based on five principles (Rondinelli, 1985):

- (1) The analysis should focus on identifying the economic, social, physical, and human resources of market towns in a region, and the services, facilities, infrastructure and productive activities they need to develop their existing or potential comparative economic advantages.
- (2) The analysis should be part of an ongoing planning process rather than merely produce a spatial development plan. Analysis of market towns should be integrated with sectoral, budgetary, project, and capital investment planning in a region.
- (3) The analysis should use research methods and techniques that can be applied easily by planners who do not have extensive technical training in regional development and that can be understood easily by local and national public officials. The methods used, therefore, are primarily descriptive and graphic; analytical techniques should be kept as simple as possible.
- (4) The analysis should use as much existing data as possible and limit new data collection to areas where significant information gaps appear.
- (5) The analysis should use a combination of applied research methods that are suitable to the area under study, make extensive use of local planners' knowledge of the region, and draw heavily on the knowledge of people who live in the region.

Because the UFRD approach is primarily a descriptive analysis of market towns and marketing interactions in a region, it must be refined and supplemented with more detailed social, technical, and economic studies before specific

location decisions can be made. provides a profile of a region to technical and sectoral planners to investments more effectively and efficiently in market towns with great potential. For that reason its important role is to help planners more refined and more detailed questions about alternative locations for investment rather than to provide comprehensive detailed prescriptions for market town development.

### **Stages of Market Town Analysis**

The UFRD approach to market town analysis consists of the following stages or phases (Rondinelli, 1985):

- (1) Regional resource analysis
- (2) Analysis of the system of market towns
- (3) Analysis of the economic and physical linkages among market towns and between market towns and rural areas
- (4) Analytical mapping
- (5) Accessibility analysis
- (6) Analysis of gaps in urban functions
- (7) Formulation of market town development strategies
- (8) Identification of investment projects and programs for market town development
- (9) Monitoring and evaluation
- (10) Institutionalizing of market town analysis in regional development planning.

Each of these stages of analysis is described in more detail below.

1. *Regional Resource Analysis.* Market town analysis begins with an assessment of the spatial distribution of population and of economic, social and natural resources in a region. This aspect of the analysis provides baseline data and a profile of the region that can help planners determine the potential for economic growth.

The purposes of the initial phase of the analysis are:

- (a) To describe the strengths and weaknesses of the regional economy by assessing the types, characteristics, and distribution of human and physical resources;
- (b) To compare the level of development of the region with that of others in the country in order to identify possible causes of underdevelopment;
- (c) To identify areas within the region with particular economic, social, or physical strengths and weaknesses for development; and,
- (d) To compare levels of development and the social, economic, and physical resources of localities within the region.

A variety of methods and techniques can be used to organize and assess the information, depending on the amount and reliability of data available and the skills of local planners. These techniques include regional income measures, shift-share analysis, location quotients, measures of spatial concentration, association and distribution, and indices

of economic development (Rondinelli, 1985). Exhibit 1 shows a descriptive analysis of comparative strengths and weaknesses of a region in Bolivia where the UFRD analysis was applied.

2. *Analysis of the Market Town System.* This phase of the analysis (a) identifies market towns by size and location, (b) examines the types of services, facilities, infrastructure and productive activities now located in them, (c) describes the hierarchy of market towns based on the number and types of market functions they offer, and (d) determines the spatial distribution of, and association among, functions within the region.

The most useful methods of analysis at this stage are Guttman scales and the "scalogram." The scalogram, illustrated in Exhibit 2, is a graphic device that ranks market towns in an area by the number and types of urban functions located within them. The inventory of market towns' functions can be scaled to indicate levels of development. The scale scores are drawn as isopleth lines on a map. (See Exhibit 3.)

The scalogram, together with a map showing the location of market towns, provides a clear view of the hierarchy of market centers. Exhibit 4 shows the levels and major characteristics of the settlement system in the region. Exhibit 5 provides a profile of market towns and the concentration and dispersion of functions among settlements.

Data from the scalogram can also be used to develop a distribution of functions among market towns that indicates how widely distributed different types of services, facilities, infrastructures, and productive activities are among towns or

how highly concentrated they are within a few towns in a region. This feature is illustrated in both Exhibits 5 and 6.

Although this information is useful for describing levels of development in individual market towns, policymakers also need a better understanding of the dynamics of economic interaction, trade, and exchange in a region.

**3. Market Town Linkage Analysis.** Linkage analysis describes the patterns of physical, economic, social, and organizational interactions among market towns as well as those between market towns and the rural areas surrounding them. Exhibit 7 lists the types of linkages that can be analyzed within a region. Linkages are the means through which people who live in rural areas obtain access to services, facilities, infrastructure, and productive activities located in market towns.

This aspect of the analysis is concerned especially with the flows of agricultural commodities and other farm-produced goods; patterns of exchange for cottage industry, small-scale manufacturing, and commercial goods; flows of labor, credit, and other resources; the service areas for public and social services; and the dynamics of social interaction. This aspect of market town analysis is usually more complex; it requires more primary data and depends more on trained researchers than do other phases.

Two kinds of studies are the most useful in providing a profile of economic linkages within a region:

- (a) Marketplace studies that attempt to trace the flows of goods into and out of market centers; and
- (b) Transport origin and destination studies that show the flows of people and goods among market towns and rural areas.

The marketplace studies (a market town may have more than one marketplace where goods are traded) often provide the most extensive information on economic, physical, and institutional linkages. Bromley's (1975, 1983) approach to market town analysis involves four major activities:

- (a) Compiling a list of marketplaces and market days;
- (b) Mapping marketplaces and classifying them by their size and the frequency with which they operate, i.e., daily, weekly, bi-weekly;
- (c) Measuring market activities through data on volumes of trade estimated from marketplace records or through site surveys;
- (d) Determining the marketplaces' geographical service area through studies of the distances over which goods flow into and out of each marketplace.

Analysts can use this method to trace the flows of agricultural goods through the system of market towns in a region, as illustrated in Exhibits 8 and 9. The marketplaces studies also show the volume of trade among market centers for all agricultural goods or for specific commodities, as depicted in Exhibit 10.

The analysis provides a systematic profile of marketing and distribution activities within a region and clearly shows geographical disparities in development resulting from different levels of access to market centers.

Marketplace studies can provide a clear picture of the areas in which the most economic interaction occurs, usually along the major transport routes. They also provide information on the structure of marketing in a region and the relationships of different-sized markets with each other, as shown in Exhibit 11.

Transport origin-and-destination studies along roads, paths, and waterways can provide information about the volume of traffic among different towns and cities, the movement of people and goods from one town to another, and distribution of agricultural commodities produced in rural areas among towns of different sizes.

Travel patterns indicate patterns of exchange and trade among towns in various parts of the region and with towns outside of the region, as depicted in Exhibit 12.

The marketplace studies identify the strength of economic linkages between rural areas and market towns. They also indicate which areas of the region are unserved by markets and where rural households have little or no access to the social services and facilities located in market towns.

The marketplace and origin and destination studies can be supplemented by others that trace the service areas of major educational, health, and other public facilities and that trace the market areas of selected productive activities, as

depicted in Exhibit 13. They show the distances from which people were willing to travel to obtain services located in towns and the distances over which the goods produced in towns are traded. Planners can also survey networks of social interaction within the region--such as marriage and visiting patterns--and political, administrative, and organizational linkages represented by formal government transactions and informal processes of decision making. All these studies help analysts identify areas where inequity might arise because of a lack of access to market towns with urban functions.

4. *Analytical Mapping.* As information is collected from phases 1 through 3, it is placed on base maps and transparent acetate maps so that information can be combined through overlays to help planners determine the service areas of market towns in the region and their patterns of linkage. Distribution maps are prepared for those services, facilities, infrastructure, and productive activities that are particularly important for rural development (Dickenson, 1973). Special map overlays can provide quick profiles of areas within the region and information on the spatial distribution of different combinations of functions (Dick, 1979).

The analytical maps are used to delineate patterns of economic interaction among market towns and to determine the accessibility of towns for people living in surrounding rural areas. Accessibility maps show areas of the region that can be reached easily by various types of transport, the volumes of goods flowing through the markets, trade relationships among market towns, and the markets' service areas. Combinations of transparency maps are also used to

interpret and describe the distributions of social services and facilities and compare them with distributions of population.

5. *Accessibility Analysis.* With the information available from the regional resource, market town system, and linkage studies, together with information from household sample surveys, analysts can delineate areas within the region where people have little or no physical access to town-based functions. (See Exhibits 14 and 15.)

The analysis can help planners to determine where linkages among market towns are weak or nonexistent, and where important functions that could facilitate economic growth are missing.

Although physical distance is not the only factor that influences people's access to market towns -- certainly income is crucial -- the location of infrastructure and facilities plays a strong role in determining which groups of people can make use of the services located in towns and cities. Accessibility analysis can help planners to examine the time-distance factors that determine the frequency with which rural households can use services and facilities located in market towns.

Accessibility analysis gives planners a better idea of which areas are lacking important functions needed for rural development.

6. *Functional Gap Analysis.* Information from the analyses described earlier also can be used to assess whether existing functions are adequate to achieve regional development objectives (Morrill and Symons, 1977). Using service criteria that are appropriate to the region, planners can identify gaps in the

distribution of specific services, facilities, and infrastructure and identify the linkages that must be strengthened in order to increase the rural population's access to market towns.

The analysis shows the clusters of market towns and the rural areas in which significant social, physical, and economic interactions take place, as well as the rural areas where people have little or no access to market towns' services and facilities. (See Exhibit 16.)

Of course, not all gaps in services and infrastructure should be filled through new investments. Some towns may not have some types of functions, such as a hospital or a secondary school, because they are located close to other towns that already have the function, or because they are too small to provide the economies of scale required to support such a function. Gap analysis provides information that can be studied more thoroughly to establish the need for services and productive activities in particular market towns or areas within the region.

7. *Formulation of Spatial and Sectoral Development Strategies.* The information from the market town analysis can be used together with other economic, social and physical studies to help planners formulate investment strategies for promoting widespread economic growth. (See Exhibit 17.) Alternatives might be (Oberg, 1976):

- (a) To strengthen existing functions in towns with growth potential and that serve a large hinterland;
- (b) To invest in new functions in existing towns;

- (c) To strengthen existing linkages, by upgrading roads or improving transportation, for example;
- (d) To create new linkages among market towns;
- (e) To stimulate the growth of new market towns in areas that lack sufficient numbers of towns; or,
- (f) To change policies affecting nonphysical access (for example, regulations affecting transportation costs).

Market town analysis helps planners to give a spatial dimension to sectoral development plans. Usually investment programs for agriculture, mining, industry, transportation, tourism, infrastructure, and other important sectors are made without taking into consideration the locational implications. The market town studies introduce a spatial dimension to regional planning, allowing planners to identify the most efficient locations for rural development investments.

**8. Identification of Sectoral Investment Projects and Programs.** The UFRD methodology can also help policymakers to identify and integrate sectoral projects into investment programs for various areas and market towns within the region. In addition, the information can help set locational priorities, sequence the timing of projects, and develop budget and investment estimates for projects in each area of a region, as depicted in Exhibit 18.

Using the results of market town studies and sectoral analyses, planners can develop specific investment programs for each market town in a region, based

on its productive potential and comparative advantages.

**9. Monitoring and Evaluation.** In order to assess the impact of investments on the market town system it is necessary to create an evaluation system for monitoring the implementation of projects. Planners can use various types of analyses described earlier to monitor changes in the distribution of functions, in the strength of linkages among market towns, and in agricultural production, employment, and economic growth in different areas of the region.

**10. Institutionalizing Market Town Analysis in the Regional Planning Process.** The objective of market town analysis is not to produce a comprehensive regional plan, but to integrate the information about market towns with sectoral and economic planning in order to improve investment location decisions. Therefore, once a preliminary market town analysis is completed, regional planners may never go through the entire 10-stage process again. Instead, some types of analyses, like the scalogram or market town linkage studies, might be repeated at appropriate intervals -- say, every 3 or 4 years. Such studies would be timed to generate the information needed to revise rural development strategies.

## CONCLUSIONS

In sum, the UFRD approach to market town analysis can help policymakers to promote widespread economic growth by giving them the information needed to identify investment needs in market towns with growth potential.

The UFRD approach to market town analysis offers a process through which planners can describe and assess the spatial distribution of functions that are important for social and economic development, and can evaluate the degree of physical access that groups living in different areas of a region have to these functions. Improving the physical access of rural households to services, facilities and productive activities located in market towns can increase their incomes and raise their living standards.

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## REGIONAL RESOURCE PROFILE

### A. Selected Characteristics of Departments in Bolivia

Department	Population (000s)	Percent of Population in Rural Areas	Average Annual Population Growth	Percent Annual Average Migration	Regional Product Per Capita	Annual Growth Rate of Regional Product Per Capita	Per Capita Gross Regional Product (in Pesos)	Regional Product As Percent of National Product
<u>Potosi</u>	<u>657.7</u>	<u>71.0</u>	<u>0.99</u>	<u>-0.64</u>	<u>458</u>	<u>2.3</u>	<u>2,884</u>	<u>10.3</u>
Chuquisaca	358.5	87.4	1.23	-0.59	515	5.8	3,092	6.0
La Paz	1,465.0	52.4	2.07	-0.11	619	5.6	3,872	31.1
Cochabamba	721.0	62.3	1.79	-0.12	694	7.1	4,312	17.0
Santa Cruz	710.7	47.3	4.09	+1.49	767	8.0	4,683	18.6
Oruro	310.4	48.9	1.84	-0.51	802	6.0	5,049	8.6
Tarija	187.2	61.1	2.28	+0.74	681	11.7	4,099	4.2
Beni	168.4	51.8	3.28	-0.61	595	13.0	3,601	3.4
Pando	34.5	89.4	2.88	+0.96	698	12.8	4,421	0.8
<b>Bolivia</b>	<b>4,613.5</b>	<b>58.3</b>	<b>2.05</b>		<b>637</b>	<b>6.3</b>	<b>3,951</b>	<b>100.0</b>

Source: Hugh Evans, Urban Functions in Rural Development: The Case of the Potosi Region in Bolivia, Washington: USAID, 1982.

### B. Socio-Economic Profile of Provinces in the Department of Potosi, Bolivia

Province	Population	Percent of Department	Pop. Per Sq. Km.	Income Per Capita	Percent Annual Net Migration	Percent Annual Population Growth	Percent of Workforce Fully or Partially Employed
Bilbao	9,683	1.5	15.1	678	-0.51	0.15	93.0
Ibanez	22,635	3.6	10.9	609	-0.30	0.27	96.0
Charcas	32,302	4.9	10.9	861	-0.54	0.52	94.0
Bustillos	91,418	13.9	40.9	688	-0.47	1.61	91.0
Chayanta	88,969	13.5	12.7	580	-0.51	1.10	96.0
Frias	122,810	18.8	35.9	410	-0.28	1.86	93.7
Seavedra	54,113	8.2	22.8	389	-0.17	0.64	96.0
Linares	53,481	8.1	10.4	156	-1.10	0.55	97.0
Quijarro	38,723	5.9	2.7	231	-0.85	0.26	92.0
Nor Chichas	47,965	7.3	5.3	207	-0.23	0.02	95.0
Sud Chichas	51,115	8.4	6.5	270	-0.76	1.38	94.0
Omiste	20,651	3.1	9.1	473	+1.22	0.70	94.0
D. Campos	5,567	0.8	0.5	384	-0.85	0.80	97.0
Nor Lipez	9,162	1.4	0.4	217	-0.89	0.95	90.0
Sud Lipez	4,149	0.6	0.2	191	-0.33	1.28	84.0
<b>Department</b>	<b>657,743</b>	<b>100.0</b>	<b>5.6</b>	<b>--</b>	<b>-0.64</b>	<b>0.99</b>	

Source: H. Evans, Urban Functions in Rural Development: The Case of the Potosi Region in Bolivia, Washington: USAID, 1982.

C. Social Indicators for Provinces in the Department of Potosi, Bolivia

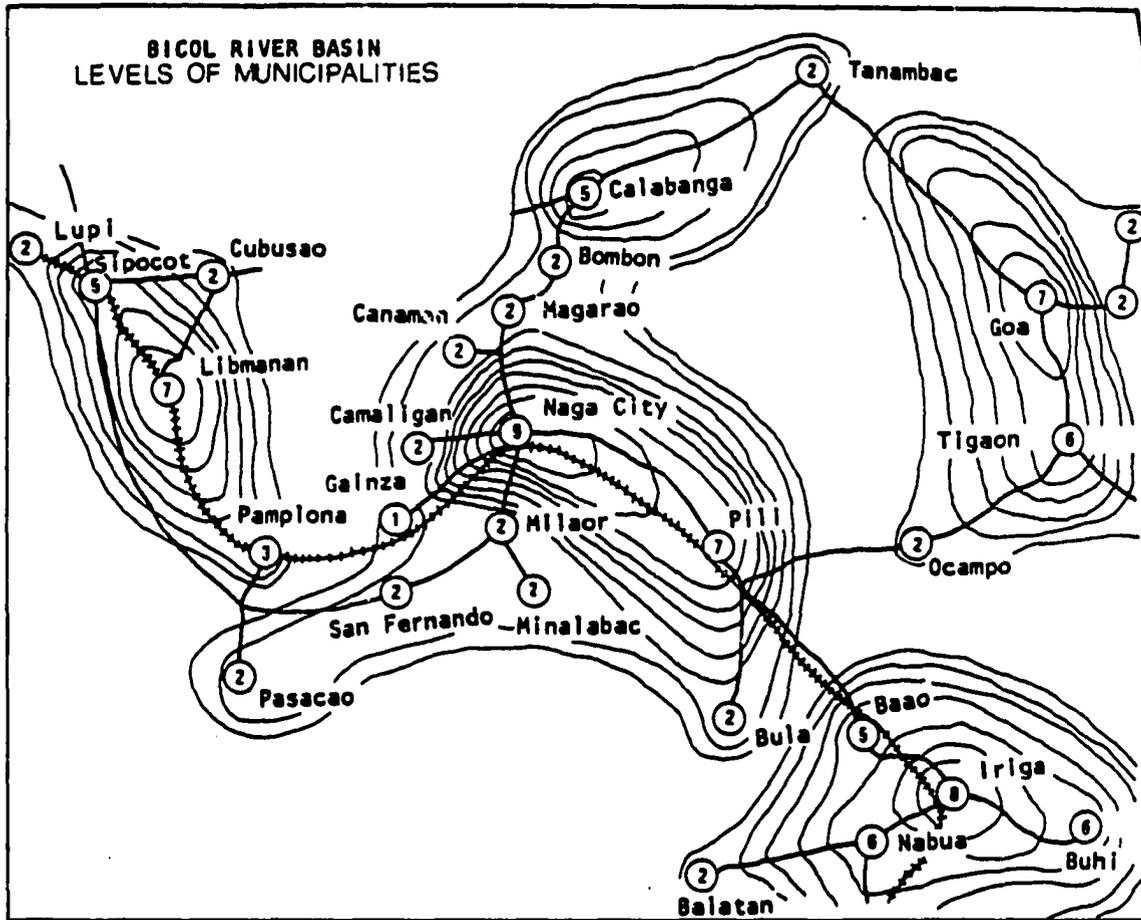
Provinces	Housing				Education			Health			
	A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	C4
Frias	59.2	29.5	48.9	67.4	65.9	55.7	20.5	13.15	0.8	2.4	8.0
Bustillos	53.1	8.2	42.6	63.0	60.6	54.5	15.0	6.71	0.7	4.0	11.0
Saavedra	9.6	1.0	5.4	36.1	34.0	35.1	1.9	6.31	0.1	0.5	10.9
Chayanta	7.2	0.4	3.5	12.0	25.0	28.0	1.5	0.85	0.1	0.8	4.5
Chercas	2.8	0.1	0.9	7.0	26.0	35.0	1.7	0.34	0.0	0.0	10.8
Nor Chichas	16.1	1.5	12.9	28.0	50.0	47.0	4.3	1.34	0.3	3.0	19.2
Ibanes	4.1	0.2	0.1	7.0	36.7	35.4	2.8	0.92	0.0	0.8	11.2
Sud Chichas	48.1	8.7	42.5	59.0	70.4	30.7	14.4	0.82	1.1	7.1	14.8
Nor Lipex	25.2	1.8	1.5	21.0	72.7	52.0	5.8	0.34	0.2	3.5	11.8
Sud Lipex	0.0	0.5	8.8	15.8	68.0	43.8	4.0	0.05	0.0	0.5	18.7
Linares	4.8	0.9	2.8	26.0	43.0	43.6	3.0	1.36	0.1	1.1	11.7
Quijerro	39.0	7.0	26.0	40.0	67.4	55.0	11.0	1.01	0.5	3.3	13.2
Bilbao	60.0	0.8	0.5	13.0	43.5	42.0	1.3	1.60	0.0	0.0	15.4
D. Campos	43.0	4.5	18.0	43.0	88.0	64.0	17.0	0.41	0.2	0.9	24.5
Omate	42.0	22.0	34.0	52.0	69.0	54.0	14.0	3.10	0.1	1.5	9.7

- A1 = % households with direct connection to water  
A2 = % households with direct connection to sewer  
A3 = % households with electricity  
A4 = % homes with at least 2 of 3 elements (wall, floor, roof) build from permanent materials  
B1 = % population that is literate  
B2 = % school age children attending school  
B3 = % population with some high school education  
C1 = # of health facilities per 1000 square kms  
C2 = # of doctors per thousand inhabitants  
C3 = # of hospital beds per thousand inhabitants  
C4 = infant mortality, measured as % live births ending in death within first year  
D1 = % workforce employed full or part-time

Source: COMBPO, Funciones Urbanas en el Desarrollo Rural: Resultados del Estudio en Potosi, Vol. 1, COMBPO, Potosi, 1981; Hugh Evans, Urban Functions in Rural Development: The Case of the Potosi Region in Bolivia, Washington: USAID, 1982.



EXHIBIT 3



FUNCTIONAL ATTRIBUTES OF SETTLEMENTS AT EACH LEVEL OF THE HIERARCHY, POTOSI, BOLIVIA

Level	Function Range	Index Range	Typical Functions	Average Population	Percent of Departmental Population
I Regional Center	56	657	Prefecture university air service television station newspaper office	7,334	11.7
II Sub-regional center	35-46	209-381	rail service long distance telephone daily market hospital manufacturing industry banks farm supply stores	1,252	9.5
III Rural center	20-28	87-156	inter-urban bus service newspaper delivery radio communication weekly market health center pharmacy vehicle repair workshop gas station	3,238	5.4
IV Local	13-23	46-92	post and telegraph office doctor's clinic high school clothes store	1,371	5.2
V Villages (non-central places)	0-12	0-84	junior school grocery store drinking water	457	4.8

Source: H. Evans, *Urban Functions in Rural Development: The Case of the Potosi Region in Bolivia*, Washington: USAID, 1982.

EXHIBIT 5

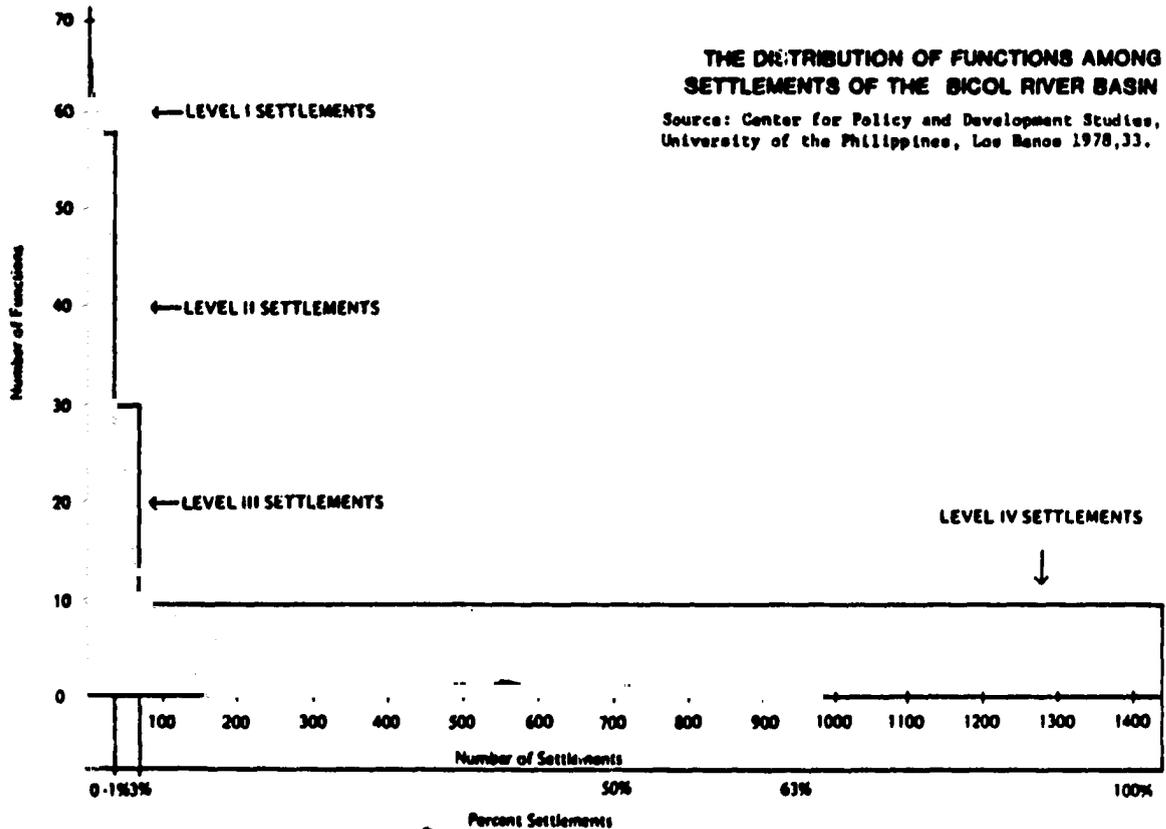


EXHIBIT 6

DISTRIBUTION OF FUNCTIONS IN THE BICOL RIVER BASIN

Range of Settlements with Functions	Number of Functions	Type of Functions (Percent of Settlements with Function)
80 - 100%	0	--
60 - 79%	0	--
40 - 59%	1	Agro-Processing Facility (41.1)
20 - 39%	3	Farmers Association (38.9) Cottage Industry (26.7) Civic Organisation (26.7)
10 - 19%	3	Sports Association (13.6) Paved Basketball Court (13.5) Piped Water Supply (12.5)
5 - 9%	2	High School (7.8) Agricultural Extension Station (6.1)
2 - 4.9%	18	Photo Studio (4.8) Ministry of Local Government Office (4.1) Professional Organization (4.1) Animal Industries Extension Office (3.9) Plant Industries Extension Office (4.3) Auto Repair Shop (4.1) Private Medical Clinic (3.8) Cockfighting Pit (3.6) Farm Supply-Agro-Chemical Store (3.4) Construction Supply Store (3.4) Regular Public Market (3.2) Hardware Store (3.1) Farm Equipment Repair Shop (2.9) Playground with Facilities (2.9) Rural Bank (2.8) Housing Subdivision (2.8) Labor Union (2.3) Cooperative Organization (2.2)
1 - 1.9%	19	Drugstore (1.8) Police Constabulary Station (1.8) Restaurant (1.8) Nightclub or Bar (1.7) Credit Union (1.8) Surveyor (1.7) Train Station (1.7) Gymnasium/Auditorium (1.6) Appliance Store (1.6) Private Hospital (1.5) Bus Station with Repair Facilities (1.5) Vocational School (1.3) Lodging Place (1.3) Power Plant or Station (1.2) Telecommunications Station (1.1) Bank or Financial Establishment (1.1) College (1.1) Optometry/Optical Shop (1.1) Funeral Parlor (1.0)
Less than 1.0%	18	Telephone Exchange (0.9) Xerox Copy Service (0.9) Cinema with Daily Run (0.8) Paluwagan (Welfare Society) (0.7) Operational Government Hospital (0.7) Fire Station with Trucks (0.7) Shopping Center (0.6) Cinema with Less than Daily Run (0.7) Cemetery (0.6) Port or Pier (0.5) Radio Station (0.4) Nursing School (0.4) Newspaper Publisher (0.3) Security Agency (0.3) Red Cross-Office (0.2) Hotel (0.3) Airport (0.1) Bowling Alley (0.2)

EXHIBIT 7

MAJOR LINKAGES IN SPATIAL DEVELOPMENT

TYPE	ELEMENTS
Physical Linkages	Road Networks River and Water Transport Networks Railroad Networks Ecological Interdependencies
Economic Linkages	Market Patterns Raw Materials and Intermediate Goods Flows Capital Flows Production Linkages--Backward, Forward and Lateral Consumption and Shopping Patterns Income Flows Sectoral and Interregional Commodity Flows "Cross Linkages"
Population Movement Linkages	Migration--Temporary and Permanent Journey to Work
Technological Linkages	Technology Interdependencies Irrigation Systems Telecommunications Systems
Social Interaction Linkages	Visiting Patterns Kinship Patterns Rites, Rituals and Religious Activities Social Group Interaction
Service Delivery Linkages	Energy Flows and Networks Credit and Financial Networks Education, Training and Extension Linkages Health Service Delivery Systems Professional, Commercial and Technical Service Patterns Transport Service Systems
Political, Administrative, and Organizational Linkages	Structural Relationships Government Budgetary Flows Organizational Interdependencies Authority-Approval-Supervision Patterns Inter-jurisdictional Transaction Patterns Informal Political Decision Chains

EXHIBIT 8

MARKET CENTERS AND MARKET LINKAGES IN POTOSI, BOLIVIA

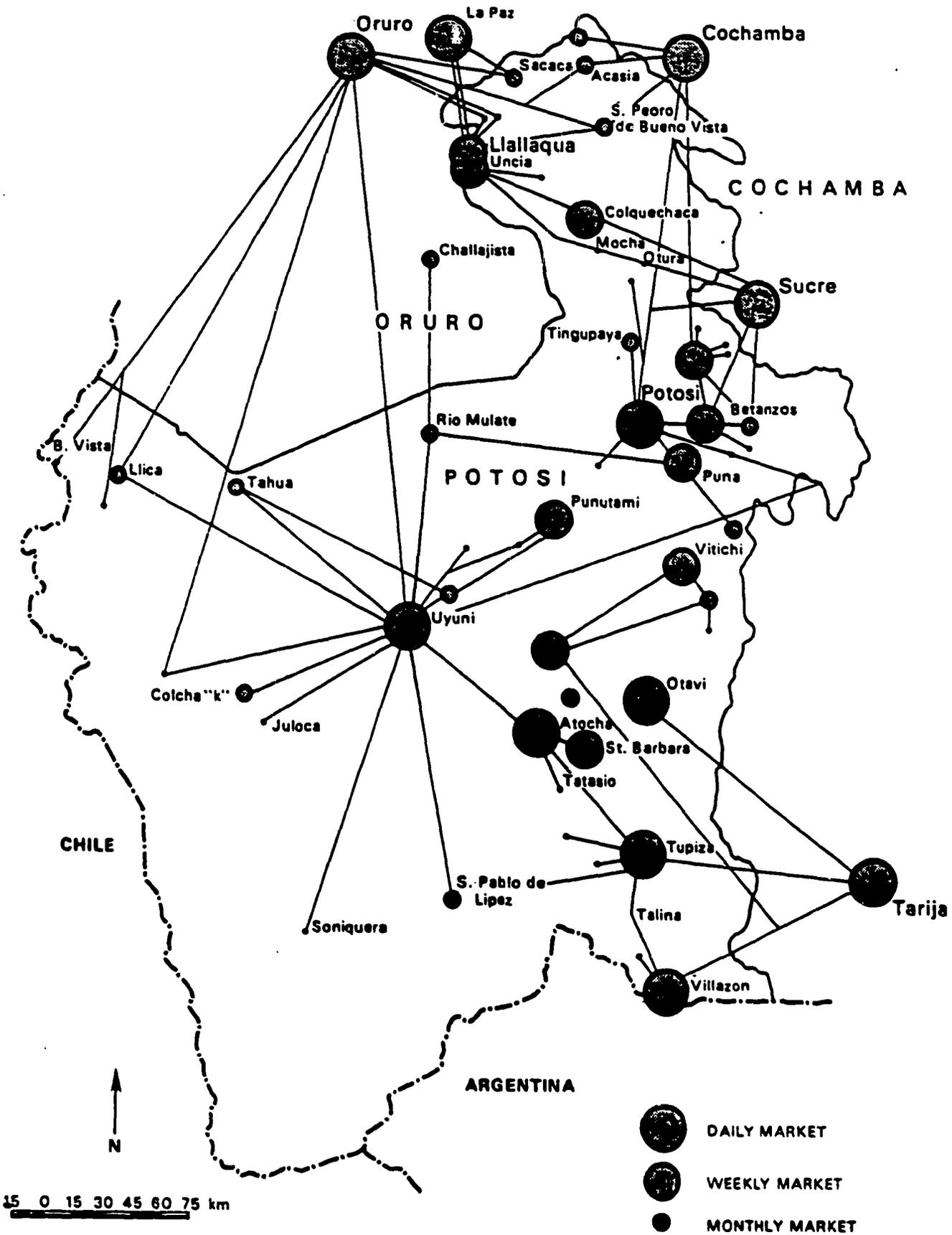


EXHIBIT 9

INTERCITY FLOWS OF AGRICULTURAL GOODS FROM TOWNS IN AMBATO REGION OF ECUADORIAN HIGHLANDS

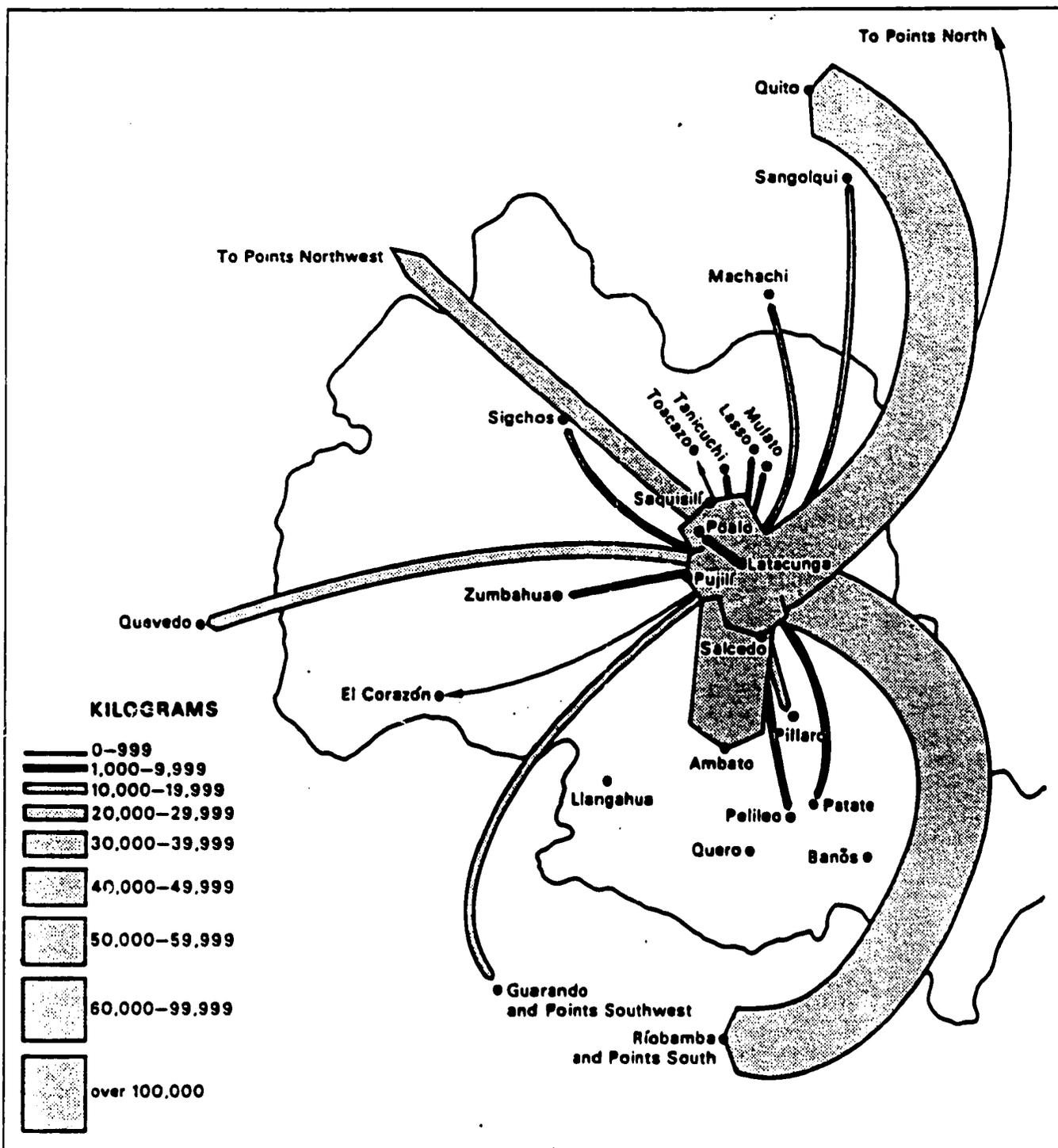


EXHIBIT 10

MARKET AND TRADE LINKAGES OF MAJOR MARKETS IN BICOL RIVER  
BASIN OF THE PHILIPPINES

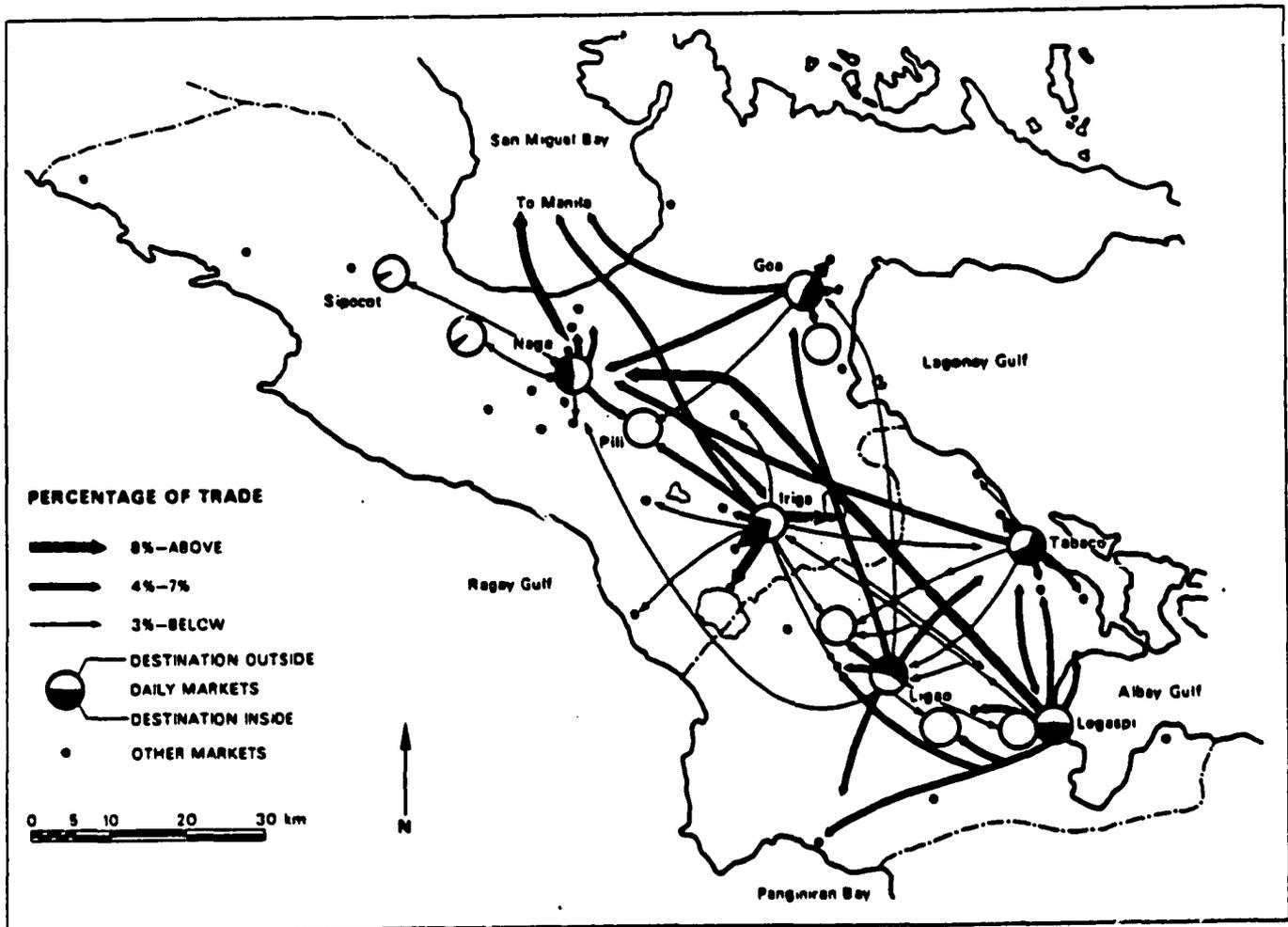
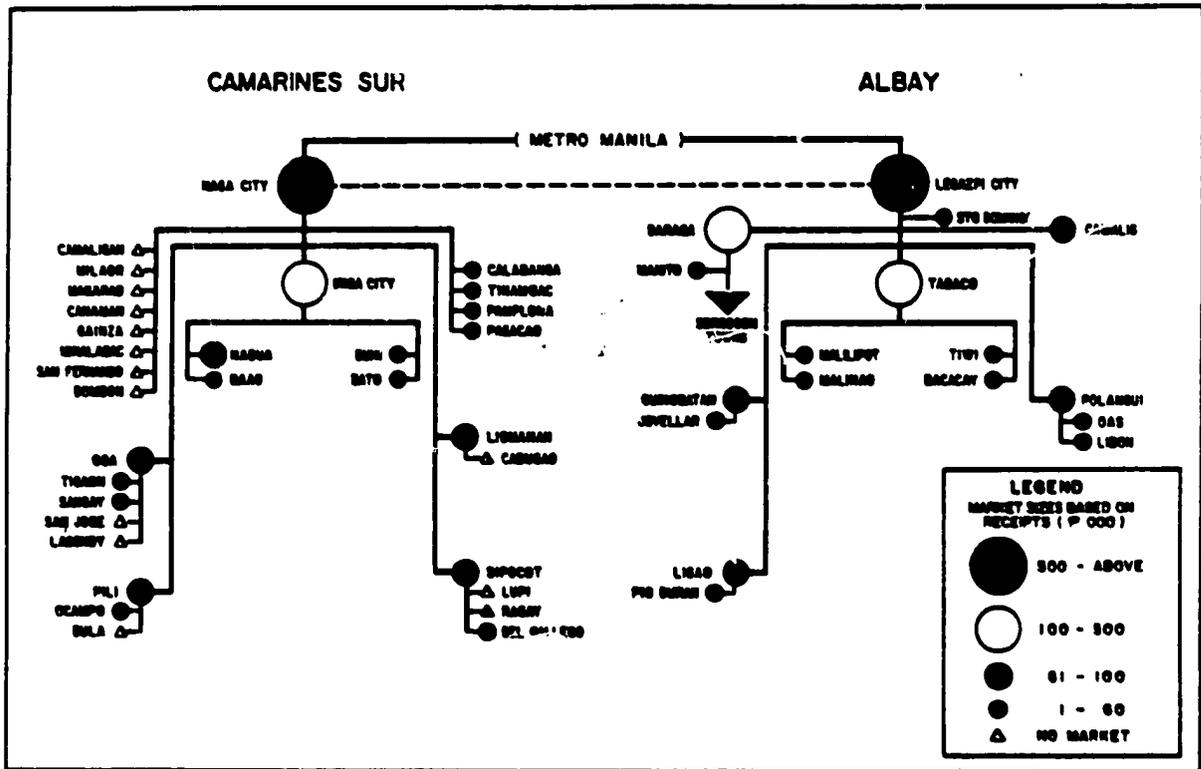


EXHIBIT 11

STRUCTURE OF MAJOR MARKET CENTERS IN BICOL RIVER BASIN



Source: Center for Policy and Development Studies, University of the Philippines, Lee Bano 1978,39.

EXHIBIT 12

MAJOR TRAVEL PATTERNS IN THE BICOL RIVER BASIN

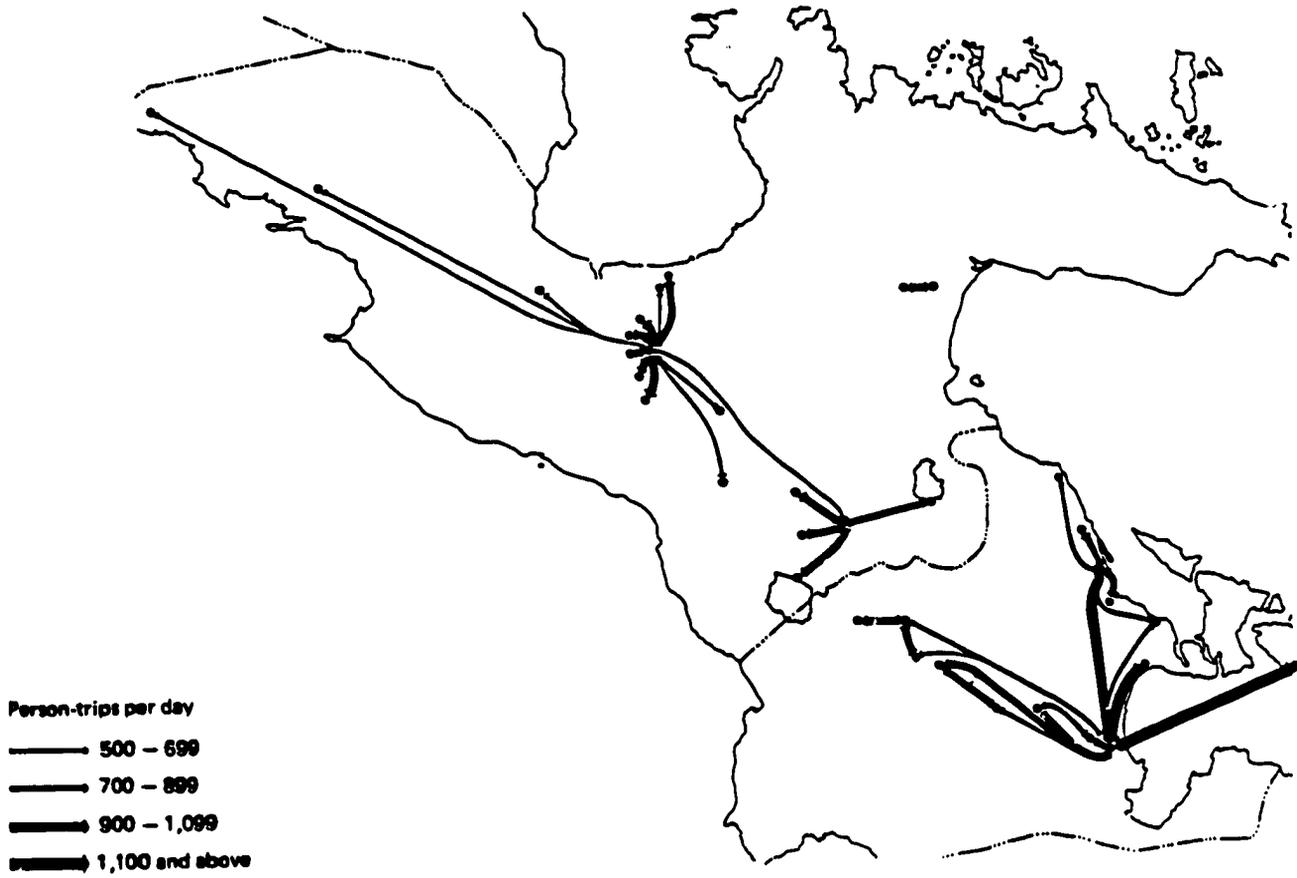


EXHIBIT 13

SERVICE AREAS OF SECONDARY AND TECHNICAL SCHOOLS  
IN THE BICOL RIVER BASIN, PHILIPPINES

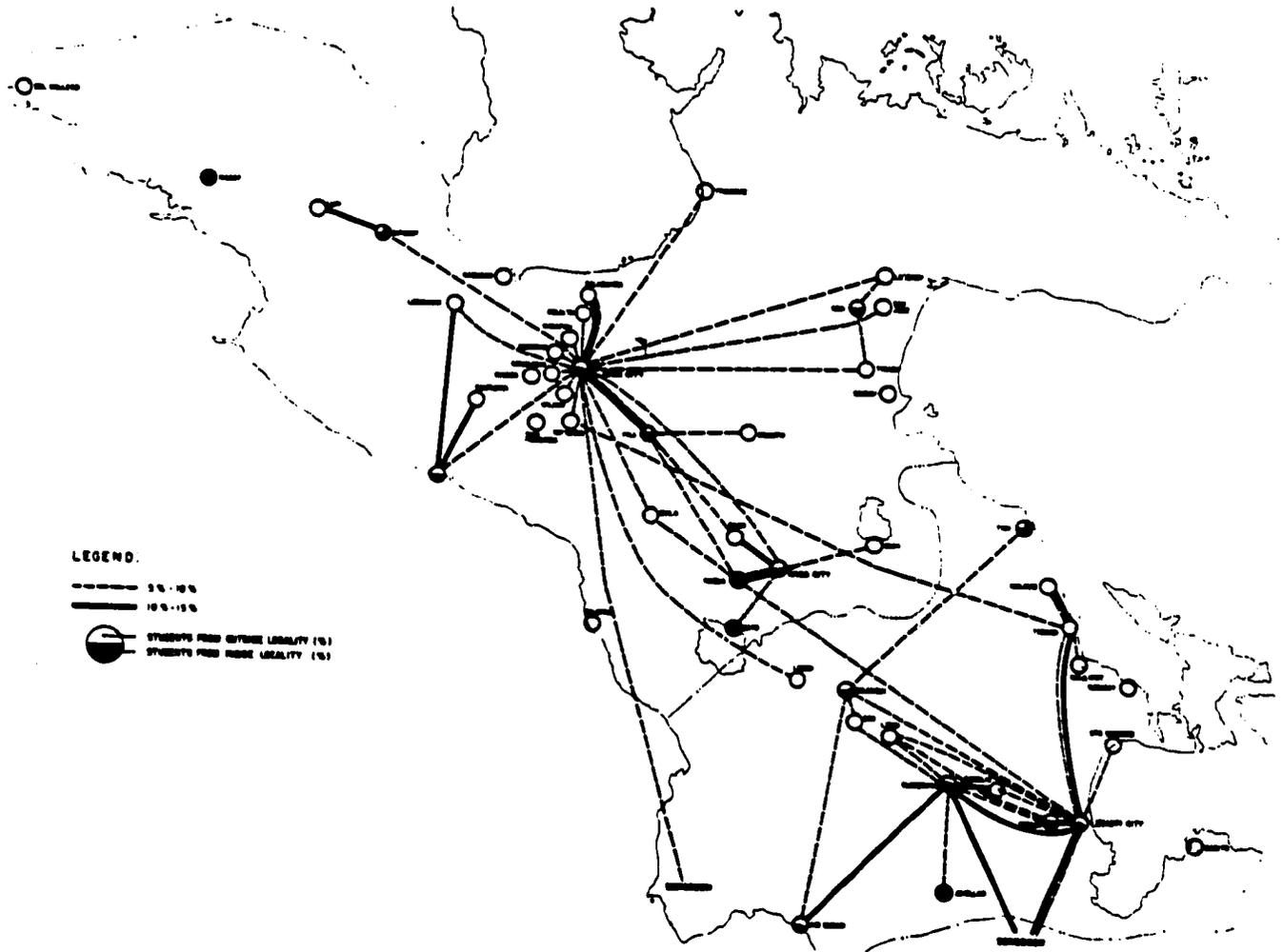
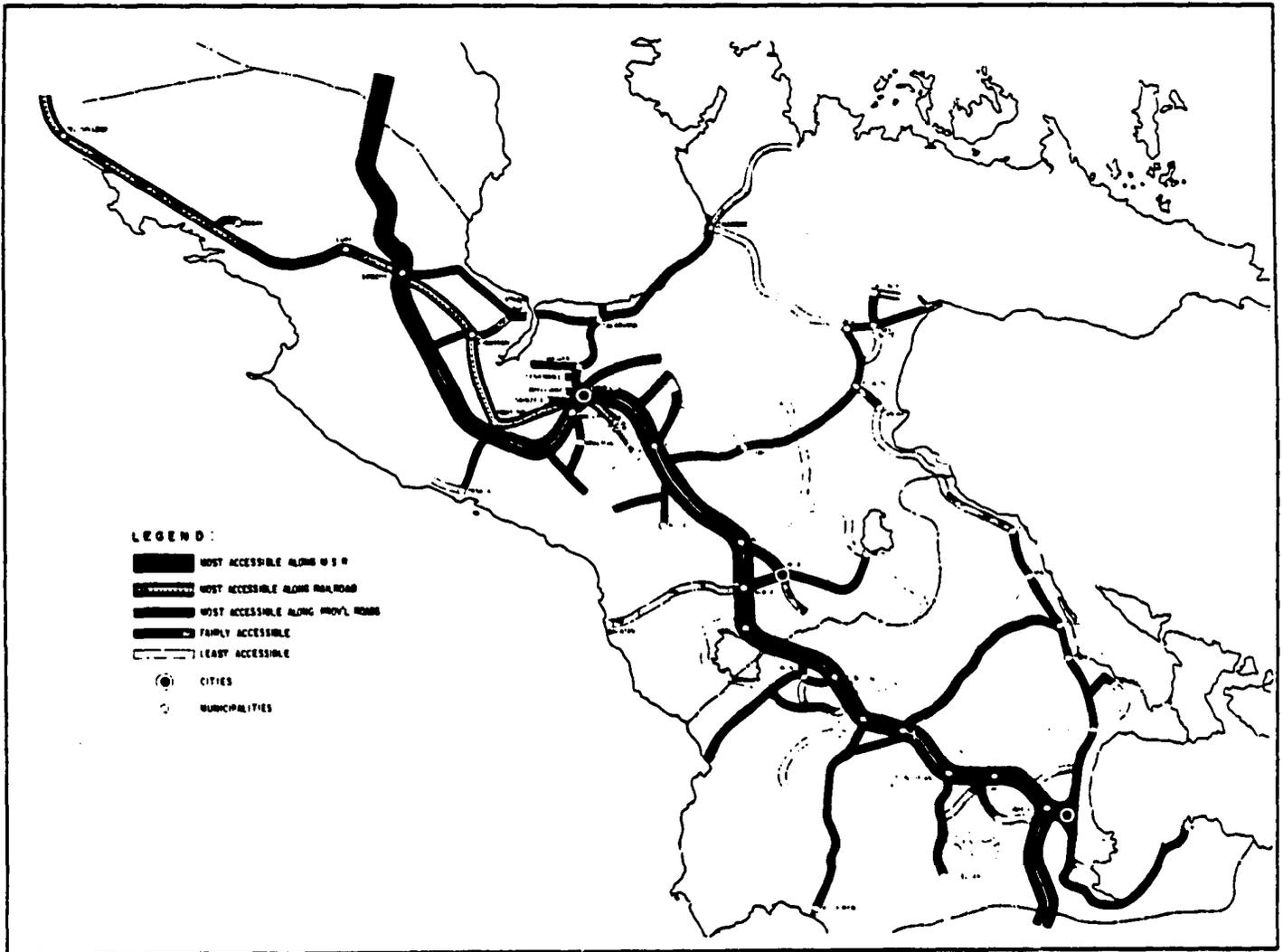


EXHIBIT 14

ZONES OF TRANSPORT ACCESSIBILITY IN BICOL RIVER BASIN



**PERCENTAGE OF POPULATION WITH ACCESSIBILITY TO URBAN FUNCTIONS**

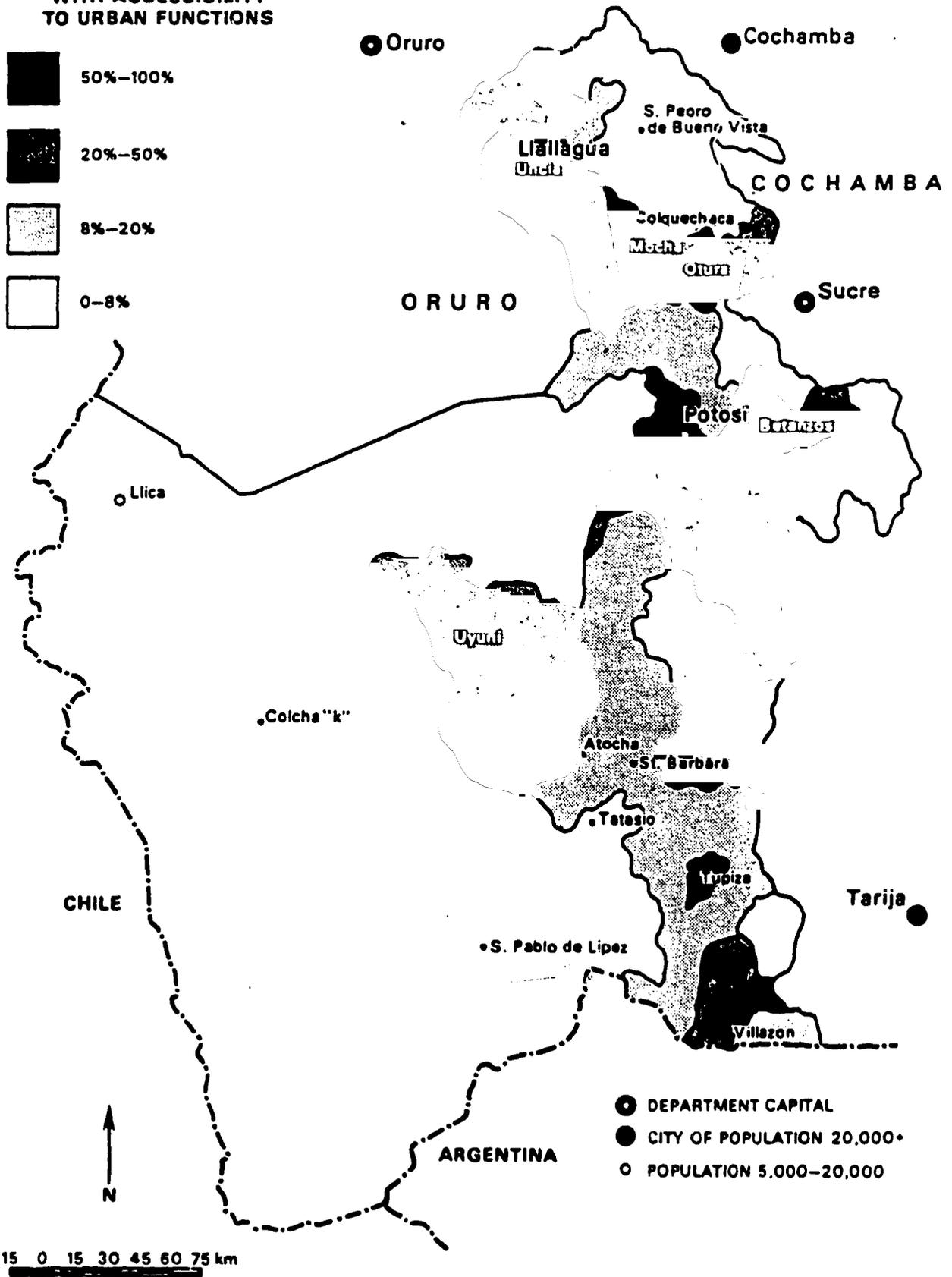
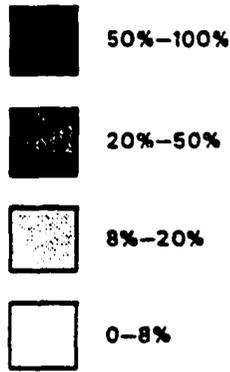


EXHIBIT 16

FUNCTIONAL SUBSYSTEMS IN THE BICOL RIVER BASIN

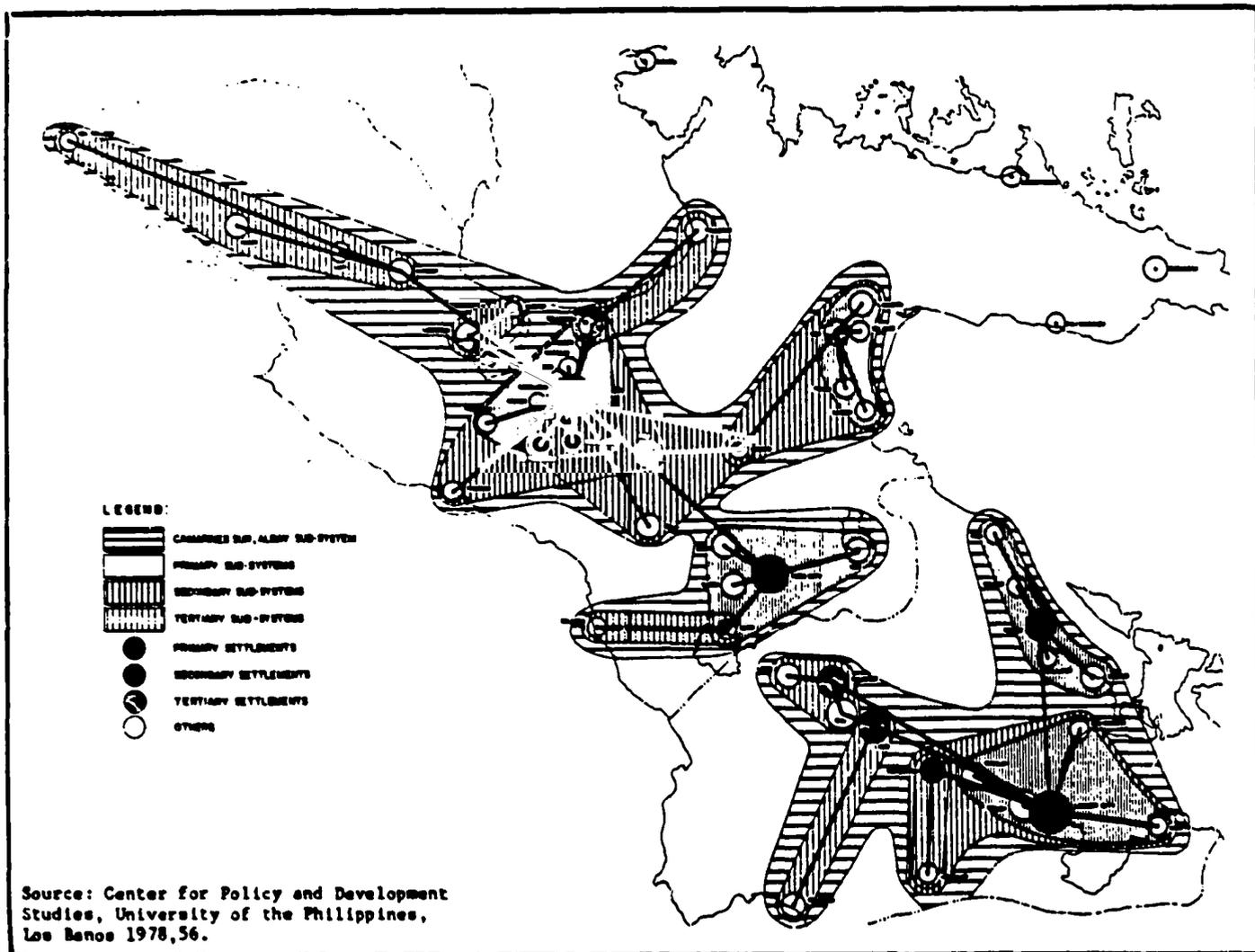


EXHIBIT 17

ALTERNATIVE SPATIAL DEVELOPMENT STRATEGIES FOR REGIONAL GROWTH

	Area A	Area B	Area C	Area D
Strengthen Functional Capacity of Existing Settlements				
Strengthen Existing Linkages Among Central Places and Rural Areas		PROGRAMS AND PROJECTS		
Create New Linkages				
Create New Central Place Settlements				
Change Policies Affecting Non-Physical Access				

EXHIBIT 18

PROPOSED PROJECT PORTFOLIO FOR "NORTE DE POTOSI" AREA OF THE  
DEPARTMENT OF POTOSI, BOLIVIA

Project	Location	Source of funding	Implementation schedule: Year				
			1	2	3	4	5
<b>Agriculture</b>							
Irrigation	RC and LCs	CORDEPO	_____				
Extension svc.	RC and LCs	National gov't.		_____			
Credit pgm.	RC	National gov't.	_____				
Farm supplies	RC	CORDEPO, national gov't.		_____			
Wheat	Arapampa	CORDEPO, national gov't.		_____			
Corn	RC, Arampampa	CORDEPO, national gov't.		_____			
Potatoes	RC, Arampampa	CORDEPO, national gov't.		_____			
Sheep raising	Sacaca	National gov't., CORDEPO			_____		
<b>Mining</b>							
Machinery hire	RC and LCs	CORDEPO, national gov't.		_____			
<b>Industry</b>							
Mill	RC	National gov't., CORDEPO	_____				
Animal feed plant	RC	National gov't., CORDEPO		_____			
Dried oca plant	RC	National gov't., CORDEPO			_____		
<b>Tourism</b>							
Resource survey	RC and LCs	National gov't., CORDEPO		_____			
Craft workshop	San Pedro de Buena Vista	National gov't., CORDEPO		_____			
<b>Transport and communications</b>							
Highways	Uncia to Anzaldo	National gov't., CORDEPO	_____				
Feeder roads	RC to LCs	Local gov'ts., CORDEPO	_____				
Telephones	RC	Telephone corporation	_____				
Post office	RC	National gov't.		_____			
<b>Electricity</b>							
Grid extension	RC and LCs	National gov't.	_____				
Local generators	RC and LCs	CORDEPO		_____			
<b>Education</b>							
High schools	RC and LCs	National gov't., CORDEPO		_____			
Training center	RC	National gov't.		_____			
Literacy program	RC and LCs	National gov't.		_____			
<b>Health</b>							
Health center	RC	National gov't., CORDEPO		_____			
Clinics	LCs	National gov't., CORDEPO			_____		
<b>Infrastructure</b>							
Drinking water	RC and LCs	CORDEPO		_____			
Sewerage	RC	CORDEPO			_____		
Market	RC	CORDEPO	_____				
<b>Institutions</b>							
Producers coop	RC and LCs	Cooperative associations		_____			
Marketing coop	RC	Cooperative associations			_____		
Field office	RC	CORDEPO	_____				

RC = Rural center = Acasis

LC = Local center = Arampampa, Sacaca, Toro Toro, and San Pedro de Buena Vista

CORDEPO = Development Corporation of Potosi

Source: Adapted from Evans (1982).

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**STRENGTHENING FINANCIAL CAPACITY  
IN MARKET TOWNS:  
LESSONS FROM RECENT EXPERIENCE**

by

**James S. McCullough**

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Only recently have urban and regional planners seriously taken up the issues of financial resource mobilization. In the past, planners have been much more concerned with deciding which services should be provided than with how to pay for those services. It has only been in the past several years that resource mobilization has become a legitimate component of town planning.

The situation is now changing rapidly. In the 1980's, governments in developing countries discovered that they simply did not have the financial resources to make the necessary investments in urban areas. As urban populations in developing countries continue to grow rapidly, the gap between available resources and needed investment is getting larger. This resource scarcity is having four significant impacts on urban and regional planning:

- (1) "Affordability" is becoming a central theme in urban investment planning; we are developing techniques to determine what sizes and types of investments towns can really manage before developing plans.
- (2) "Cost recovery" is being integrated into urban investment planning and the

management of urban services; this means that planners must now balance their traditional concern with meeting certain standards of urban services with the need to generate income in order to pay for those services.

- (3) "Privatization" of some services is becoming necessary as governments find they cannot afford, or cannot justify, supplying all municipal services.
- (4) Institutions to mobilize investment capital are becoming a focus of development efforts. In particular, funds must be mobilized on a large scale to supplement those available from central governments and international donors. A recent study by the World Bank estimates that less than 5 percent of the capital needed for urban investment can be provided by international sources such as the World Bank and regional development banks.

These four themes are becoming central to urban and regional development planning in all developing countries and are changing the planning process. The following case study shows how these emerging themes are shaping Nepal's

efforts to meet investment needs in urban areas.

### **Financial Policy Toward Urban Development in Nepal**

Every country is facing the issue of resource mobilization for urban investment. Nepal is fortunate that its cities and towns are not so large that the problems are already overwhelming. Moreover, Nepal's cities and towns have had a long tradition of self-reliance in local revenue generation and comparatively little dependence on central government grants for financing town investments and operating budgets. On the other hand, Nepal is a relatively poor country with a limited economic base and limited financial resources.

The local tax base in Nepal is not large and there is not much scope for the central government to transfer more resources to urban governments. Currently, His Majesty's Government (HMG) provides only about 20 percent of the total revenues of town governments through central government grants. This is a much lower proportion of central government support than is found in most countries in the region.

The government's policy is that urban areas have the economic potential to be largely self-sufficient and central government interventions should focus on giving urban areas the authority to generate more resources locally rather than providing more direct financial aid. This increased authority includes both access to credit in order to finance large infrastructure investments as well as increased funds for operations. His Majesty's Government has essentially reserved the major financial aid for those

urban areas where local economic resources are poor and where local revenue generation is consequently limited.

### **Translating Policy into Action: The Management Support Program**

By the early 1980's, it had become clear in Nepal that urban areas, although relatively small in terms of total population, were growing very rapidly. The out-migration from the hill areas, coupled with high natural growth rates, gave some towns population growth rates of up to 8 to 10 percent per year. While the total population sizes were not overwhelmingly large, it was clear that urban services and infrastructure were not keeping up with growth.

It became clear that HMG would have to take action to address this need for stepped-up investment. At the same time, HMG did not have the resources for a massive investment program in the towns. What was needed was a program that would enable the towns to mobilize their own resources to finance investment. In this effort, HMG could play a facilitator role, but not a major funding role.

In 1985, His Majesty's Government, with support from the United Nations Development Program and the World Bank, initiated a new program to strengthen both the financial capacity and the management capabilities of the town panchayats (governments). The long term goal was to make the towns capable of generating resources to finance investment and service delivery and to manage those urban services efficiently. While the program goal was clear, how to go about implementing the program was not clear.

Up to the mid-1980's, there had been relatively little attention devoted to the urban areas of Nepal since the country was over-whelmingly rural and national economic development was viewed as primarily a rural issue. As a consequence, very little was known about the urban areas, the state of their municipal services, or their financial conditions.

The program initiated by HMG was named the Management Support for Town Panchayats (MSTP) Program and was initially designed as an experimental effort to see whether or not the town panchayats had the potential to generate significant revenues to finance urban infrastructure and services. Since it was not clear at that time what the outcome would be, the program started as a small pilot project working with a sampling of towns.

The pilot project used the "management strengthening" approach to improving local resource mobilization. This approach holds that significant improvements in local resource mobilization in most countries can be made through appropriate training and technical assistance without having to change the structure of local government finances. That is, most local governments have revenue-generating authority that is underused. What is required is assistance in how to use that authority.

The "management strengthening" approach was selected over an alternative one that holds that structural changes should be made first, mainly in rewriting tax legislation, revising civil service regulations to attract better staff to the local level, and providing incentives to improve performance (e.g., grants and loans.) The "structural change" approach

assumes that local government officials are not motivated to improve performance and that the existing structure prevents much improvement. This approach, in requiring legislative change and civil service reform, normally requires a long time to implement.

Since the "management strengthening" approach aims to improve existing performance, it needs a starting point for measuring that performance. A major tenet of the approach is that the best models for improving local revenue generation within a given country are usually found within the country itself. That is, there are almost always some towns that are doing a good job of raising local revenues (collecting taxes and fees). Those towns that are performing well can be used in two ways:

- (1) Their experience can be used to estimate how much local revenue realistically can be generated by the towns (often referred to as "revenue potential"); and
- (2) These better-performing towns provide case studies on how to go about generating increased local revenues.

A third tenet of the "management strengthening" approach is that the true needs for structural changes in local government finance are best identified in the course of carrying out the training and technical assistance that comprise the management strengthening. In this regard, management strengthening becomes a type of needs assessment for identifying the structural changes.

The MSTP pilot phase was designed to last for 1 year (later extended to 18 months) and to work with eight town

panchayats. The sample towns were chosen to be representative, including geographic distribution (ranging across all five regions of Nepal), different ecological zones (Terai, Inner Terai, and Hills), different population sizes, and economic bases.

The MSTP pilot phase was intended to answer four basic questions:

- (1) What is the current situation in terms of financial resource mobilization and management of urban services in the towns?
- (2) How much can the towns improve their local resource mobilization?
- (3) How much can the towns afford to finance in terms of new investment if given access to credit?
- (4) What structural changes in financial authority would be needed to improve the financial conditions of the towns?

#### **MSTP Pilot-Phase Activities**

The pilot phase started with a set of financial assessments in the eight sample towns. The assessment focused on the performance of the towns in generating local revenues, controlling current operating expenditures, and making capital investments in infrastructure expansion or renovation. Information was collected from the accounts of the town panchayats over the previous 5 years to develop trend analyses of revenues and expenditures. Exhibit 1 shows a graph of one of the sample towns that was typical of the towns at the time the MSTP Program started. The exhibit shows that the revenues were increasing, but at a rate slower than the current operating

expenditures. This meant that the town was steadily reducing the funds available for capital investment.

The first set of financial assessments across the eight sample towns revealed several important findings. First, the assessments produced an accurate picture of the structure of local town finances. Exhibit 2 shows the percentage breakdown of revenues and expenditures of the town panchayats. The MSTP financial assessments produced the first truly accurate appraisal of the financial conditions of the towns and changes in that financial condition over the past 5 years.

The financial assessments also found that there was great variation among the towns in the amount of revenues collected per capita. Exhibit 3 shows the comparisons among the towns. This result suggested that there was room for improvement in increasing yields of local revenue sources in most of the towns. The MSTP team used the "Revenue Potential Model" developed by the Research Triangle Institute to estimate how much additional revenue could be generated by each town if it were as efficient at revenue collection as the better-performing towns in Nepal.

The importance of the trade tax (*octroi*) and secondarily, the vehicle tax, stands out in the analysis of revenue potential among Nepalese towns. Clearly, if the towns are to substantially increase revenue, these are the major targets. It was discovered during the financial assessments that some of the towns contracted the right to collect the *octroi* and vehicle taxes to private contractors while others used town employees to collect those taxes. Generally, there was

no objective criterion given for the decision about whether to contract out, and no basis, other than past collection amounts, as to the yield amount expected.

Another important finding in the financial assessments was that there was a great deal of difference in the current expenditures per capita and in the staffing ratios (number of employees per 1,000 population). It also became clear that personnel costs were the main factors driving up the current operating expenditures. The great variation in current operating expenditures per capita suggested that there was also scope for controlling the current expenditures of towns that were found to be out of line.

Taking together the findings about revenue potential on the one hand and potential for current operating cost controls on the other, it became clear that there was much room to increase the level of resources that could be devoted to capital investment. This implied not only that capital expenditures could be increased fairly quickly but that there was potential for servicing future debt as well. Furthermore, this potential existed within the current taxing authority of the town panchayats.

The MSTP financial assessments were conducted by teams of three to four professionals working with the local officials and staff in each of the sample towns, usually over a period of about a week. To improve the responsiveness of the town officials, much of the analysis of the data was done by the MSTP team on site in the towns and discussed with the local officials. This procedure accomplished two things. First, it provided immediate feedback to the local officials and made them active participants in the

process. Second, the analysis often turned up odd patterns in the financial data (e.g., a sudden jump in one revenue source in one year) that required additional explanation; conducting the analysis on site allowed those questions to be explored.

After the fieldwork was completed on the assessment, a formal *Financial Assessment Report* (FAR) was prepared by the MSTP team in Nepali and English and sent to the participating town. The FAR included an analysis of the current situation and trends; identification of problems identified; and suggested actions. The FAR's are fairly simple documents, prepared immediately after the fieldwork and sent to the towns with a few weeks of the end of the fieldwork. The FAR forms the basis for subsequent training and technical assistance with each town.

From the set of financial assessments conducted with the eight sample towns, several immediate needs became apparent across the towns. First, there were no uniform accounting systems across the towns. Second, there were no good tax records systems. Third, there was no systematic basis for the towns to decide on whether to collect themselves, or to contract with someone to collect the trade and vehicle taxes; and what yields should be expected. Fourth, there were no real controls on spending and on staff hiring.

Technical assistance and training activities were organized to help the towns address these issues. The MSTP team worked with each of the eight towns to draw up "Management and Finance Plans," which identified financial targets for revenue collections and expenditure controls for the succeeding 3 years. Each plan was negotiated with local officials

and then approved by the town assembly. The plan identified the financial targets and the specific steps that would be undertaken to reach that target. For example, if the target called for the professional tax collections to be tripled, the plan would describe how the tax rolls would be updated, new collection procedures undertaken, and the tax record system managed. Linking the management improvements to specific targets clarified the reasons for such changes in management procedures for local staff and officials. (Often such management assistance fails to take hold because the target group fails to see the rationale behind it.)

By using financial targets, the Management and Finance Plans also made clear the measures of performance. One goal of the MSTP program was to determine if the towns could manage their finances adequately to justify setting up a loan fund. Since the central government could not afford to finance more urban investments through grants, new investments in the towns would have to be self-financing. This factor put the burden of proof on the towns to show that they could generate surplus funds (capital investment funds) to repay loans. The targets set in the Management and Finance Plans constituted the test of this capability.

This approach to setting up a municipal loan fund is unusual in that it requires towns to demonstrate proof of debt management capability in advance of commitment of funding. The World Bank indicated that it would be willing to capitalize the loan fund only if the towns could meet the targets. In similar urban lending programs in the past, the Bank has committed the funds first and

then applied technical assistance to help the towns manage debt. Most of the programs created in this way have not succeeded and central governments have been forced to bail them out. The MSTP Program, by applying technical assistance first and setting performance targets to justify creation of the loan, represented a radical departure for the World Bank and is being followed very closely as a model for other countries.

The MSTP pilot phase results were very encouraging. The participating towns adopted a number of measures to increase local revenue collections. Total local revenue yields for the pilot towns were up almost 70 percent over 2 years. The growth in current expenditures had been reduced to less than 10 percent (lower than even the inflation rate) so that funds available for capital investment had dramatically increased.

The results of the pilot phase were sufficiently encouraging to move HMG to request that the project be extended to all of the town panchayats and to begin to design the town loan fund. To help the towns identify projects to be financed, a physical planning component was added to MSTP to provide help in project identification and project engineering. The second phase was designed to serve as the main test period for measuring the towns' ability to qualify for the loan fund. It was not expected that all towns could qualify to participate in the loan fund. Indeed, there are a number of towns with such a poor economic base that they will continue to be dependent on HMG grants for the foreseeable future. Such towns should not be encouraged, or even allowed, to take on debt.

The second phase of the MSTP program lasted 2 years, ending in the Spring of 1989. The training and technical assistance activities were greatly expanded. Much of the training was an extension of programs initiated with the eight pilot towns, focusing on budgeting, accounting, improved revenue collection practices, expenditure controls, and staffing analysis. It also became clear during this phase that the success of the program depended on support of community leaders in the towns, so mobile training teams were set up to conduct workshops with local leaders in all the town panchayats. Over 1,800 people attended these workshops throughout the country.

This second phase established that the towns, as a group, could improve their financial management and performance. Exhibit 4 shows the changes in financial condition for the 29 town panchayats in Nepal from the period 1981 through last fiscal year. The exhibit shows a stagnant level of local revenue generation before the MSTP program with rising current expenditures and falling amount of capital surplus for investment. Once the MSTP Program was introduced nationwide, revenues rose rapidly and operating costs were controlled, resulting in a substantial increase in funds available for investment.

On the basis of these trends, HMG decided to move ahead with the loan fund but with the provision that only towns that demonstrated an ability to generate surplus funds from local revenue collections would be allowed to participate. In this way, access to the loan fund became an incentive for local officials. It also enabled them to take occasionally unpopular measures, citing

the need to "prove" to HMG and the World Bank their ability to raise revenues and control operating costs.

One outcome of the constant monitoring of financial performance of the towns was the creation of a computerized data base on financial indicators at the town level that is unmatched anywhere in the developing world. The data base receives detailed information on revenue collections and expenditure breakdowns every 6 months and has end-of-fiscal-year data from all towns usually within 6 weeks of the close of the fiscal year. Most other countries do not have this level of information within a year and none have it so organized and ready for analysis.

This data base allows the staff to closely monitor the performance of individual towns and detect problems quickly. During the current economic blockade crisis with India, the data base allowed rapid analysis of the impact of the blockade on town revenues. It enabled HMG policy makers to examine alternative strategies for assisting the towns through the crisis.

Another outcome of the first two phases of MSTP has been some important structural changes to the system of town finances. A study of town finance legislation was undertaken and has resulted in revised legislation to grant the towns more revenue-generating authority and, at the same time, to simplify the structure of taxes and fees that are to be collected at the local level. The revised legislation also envisions the tax base of town panchayats being shifted gradually to a greater dependence on direct taxes (especially property-based taxes and user fees) and a lesser dependence on indirect

taxes such as the *octroi*.

The second phase has been followed by a program called Management Support for Urban Development (MSUD), which focuses on institutionalizing the MSTP process and setting up the municipal loan fund. One of the main activities of the MSUD has been to help set up the operating procedures for the loan fund and to assist the towns in qualifying for loans.

### **Qualification for the Loan Fund**

The data base developed on the towns' financial performance enabled the MSTP team to monitor performance against the financial targets of the towns and to project the amount of funds that towns would have on hand to service any future debt. Estimating the debt-carrying capacity of each town was critical for two reasons:

- (1) To determine which towns were qualified to participate in the loan program and at what level of borrowing; and
- (2) To determine the total level of borrowing demand across all the towns to set the total size of the loan fund.

The MSTP team developed a simple computer model to project the level of capital surplus that would be available to service debt. A conservative estimate was used, based only on the increased amount of capital surplus (local revenues minus current operating expenditures) generated over the life of the MSTP Program (3.5 years). These estimates were used to set parameters for the size of projects, which would be designed with MSUD technical support and submitted to the loan fund for financing. These estimates were also

used to develop the capitalizational plan for the loan fund, to generate the cash flow analysis for the fund, and to determine some of the key financial parameters -- i.e., administrative operating cost ceilings, interest rates, level of retained earnings, etc.

The analysis of debt-carrying capacity indicated that 12 towns should be qualified to be the initial borrowers from the loan fund. Although these 12 towns are "pre-qualified" to borrow, their loan requests must still undergo strict technical and financial appraisals. For each proposed project, a separate financial solvency test will be applied, examining both the financial feasibility of the project and the impact of the project on overall financial solvency of the town. It is important that the loan fund not just provide additional financing to the towns in the near future, but develop into a sustainable financial institution.

### **Resource Mobilization in Small Market Towns**

In applying the lessons learned from the Management Support to Town Panchayats Program to market towns in general, there are a number of important points:

- (1) The main economic activity in Nepalese market towns is trade in goods imported into and exported from the town. Therefore, the main source of revenue has been a general levy on the trading of goods and on the vehicles that transport goods and buyers (and that use town roads).
- (2) Nepalese market towns can stimulate and facilitate trading by providing some of the "trading infrastructure"

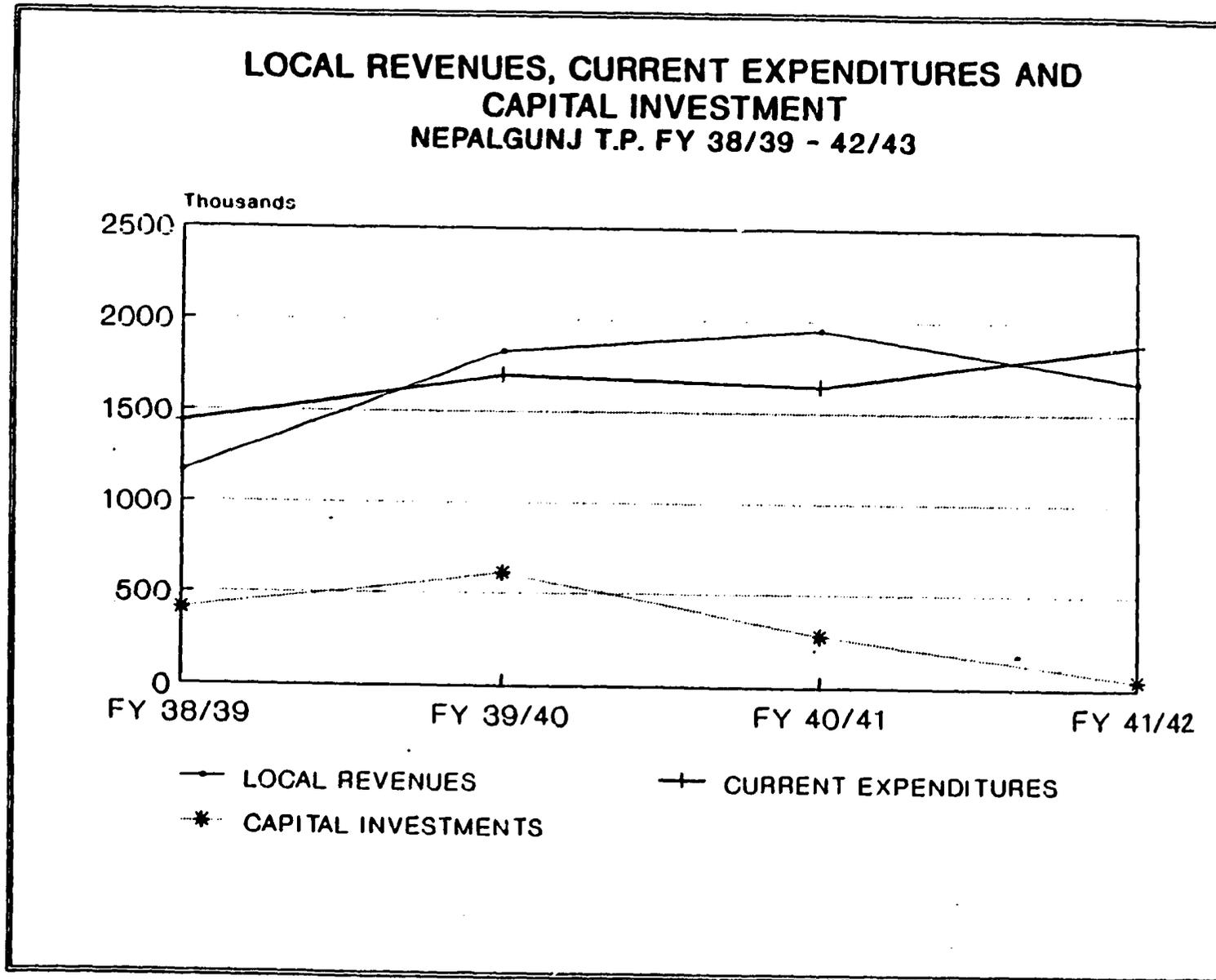
such as marketplaces and stalls, bus and truck parks.

- (3) "Market infrastructure" should be provided on a full cost-recovery basis, since it enables the users to generate cash income.
- (4) Nepalese towns often have sizeable amounts of land owned by the town panchayat. These are normally not exploited by the town panchayats to generate revenue in any systematic way. Town property may be leased at rates well below market prices, providing a hidden subsidy to the users. In Nepal, as in many countries, there are severe restrictions on how government-owned land can be used. Generally, it cannot be sold, making it difficult to fully exploit its value.
- (5) Town panchayat officials often think that they can create revenue-generating enterprises where the private sector has feared to tread. But experience in other countries has generally showed that local governments are ill-equipped to run commercial businesses. Therefore, their role must be carefully circumscribed (e.g., develop market areas but lease out space).
- (6) In getting into market-related activities, local governments run the risk of both losing money and hurting the local private sector. An example is the building of industrial estates which are often poorly located. Such estates almost always lose money for the town and induce local industries to make bad locational choices.
- (7) Local town officials are eager to develop revenue-generating projects

but usually do not have the expertise to make informed decisions. The MSTP and MSUD projects have provided considerable technical assistance to Nepalese towns through feasibility studies on markets and bus parks. These studies include realistic marketing analyses and financial impact studies.

- (8) The reliance on the trade tax as the main source of revenue for Nepalese towns should change as towns develop broader economic bases beyond just trading. The system of local revenue generation must evolve as the economic base changes. In the case of Nepal, trade taxes will eventually be replaced by more direct taxes and user charges.

The MSTP Program has demonstrated that even small towns have the potential to generate significant revenues and to manage them efficiently. Indeed, one of the lessons of the MSTP efforts is that size, and even economic base, is not the final determinant of the ability of local governments to manage their finances. It has much more to do with local leadership and community organization. At the same time, the program in Nepal has shown that the right kind of assistance focused on local governments can help them improve performance and acquire both the financial and managerial resources to develop through local initiative.



**EXHIBIT 2**  
**Percentage Breakdown of Revenues and**  
**Expenditures of 29 Town Panchayats**

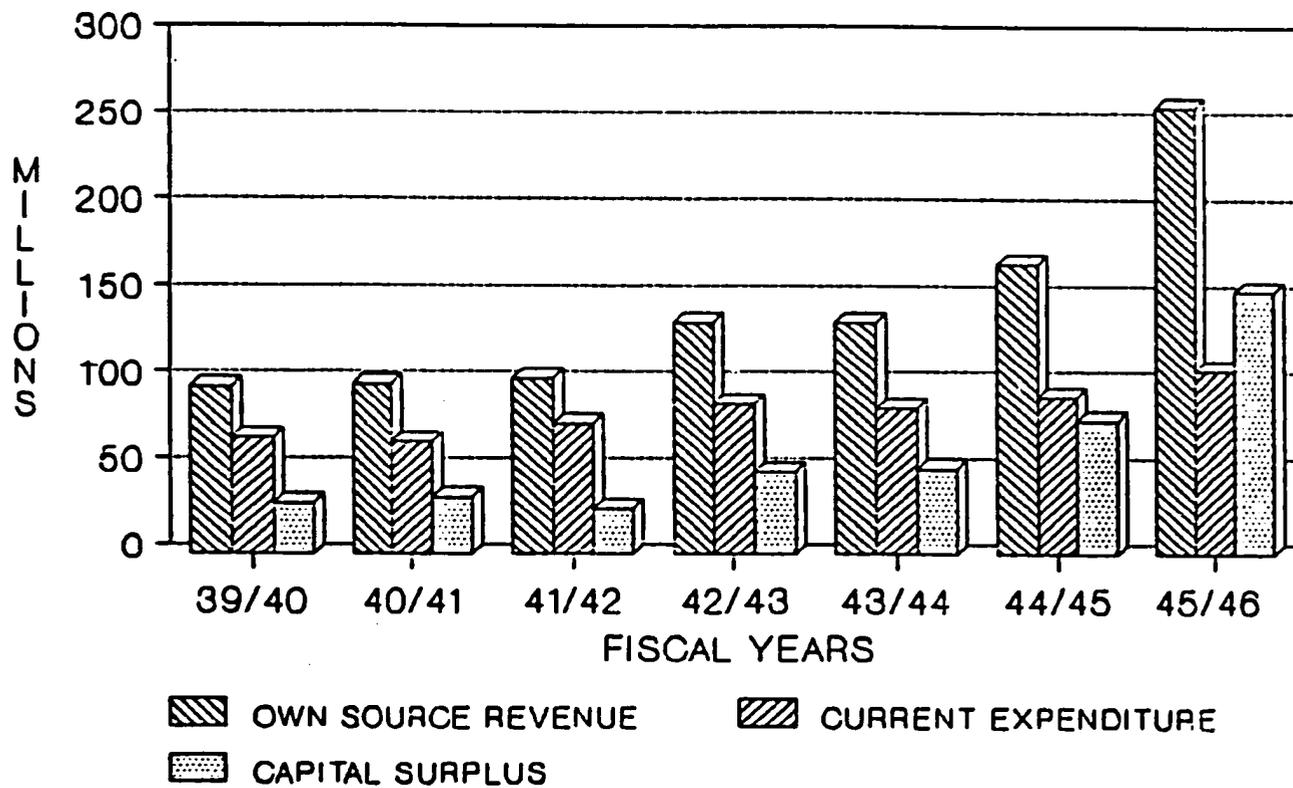
Revenue Expenditure Items	FY84/85
<b>Current Revenues</b>	<b>89.37%</b>
Balance Forward	9.73%
Own Sources	67.61%
Trade Tax	33.95%
Vehicle Tax	3.01%
Professional Tax	1.86%
Other Taxes	2.71%
Fees and Fines	7.41%
Property Rentals	3.94%
Other Revenues	1.63%
Miscellaneous Incomes	1.44%
HMG/Administrative Grants	5.51%
Interfund Loans	5.09%
<b>Capital Revenues</b>	<b>10.63%</b>
Capital Grants	10.41%
Loans	0.22%
<b>Total Revenues</b>	<b>100.00%</b>
<b>Current Expenditures</b>	<b>56.63%</b>
Salaries	29.95%
Allowances	6.51%
Other Personnel Exp.	1.60%
Office Supplies	3.48%
Operation and Maintenance	6.43%
Financial Assistance	3.01%
Contingencies	4.55%
Debt Payment	1.10%
<b>Capital Expenditures</b>	<b>43.37%</b>
Social Programs	4.46%
Ordinary Capital	2.55%
Capital Investment	36.36%
<b>Total Expenditures</b>	<b>100.00%</b>

### EXHIBIT 3

#### Comparison of Highest and Lowest Percapita Revenue Collection Among All Towns in FY 1983/84

Revenue Source	Highest	Lowest
Trade Tax	110.83 (Birgunj)	1.29 (Dipayal)
Vehicle Tax	11.21 (Tansen)	0.11 (Dipayal)
Professional Tax	6.94 (Tribhuvannagar)	0.00 (Dipayal)
Other Local Revenues	50.98 (Bhadrapur)	0.38 (Birendranagar)
Total Local Revenues	131.24 (Bhadrapur)	6.13 (Dipayal)
HMG Grants	77.05 (Dipayal)	0.48 (Kathmandu)
Total Revenues	166.42 (Bhadrapur)	16.61 (Mahendranagar)

### AGGREGATE FINANCIAL PERFORMANCE 29 TOWN PANCHAYATS (total amounts) (in constant Rupees at 45/46 prices)



MSTP PROJECT

**ANNEX 1**

**THE ROLE OF MARKET TOWNS  
IN NATIONAL ECONOMIC DEVELOPMENT**

**INAUGURATION PROGRAM**

**September 12, 1989  
Shangrila Hotel**

**Chief Guest: Dr. Prakash Chandra Lohani  
Honorable Minister  
Ministry of Housing and Physical Planning  
His Majesty's Government of Nepal**

**Chairman: Dr. Chandra Bahadur Shrestha  
Honorable Member  
National Planning Commission  
His Majesty's Government of Nepal**

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**Singing of the National Anthem of Nepal**

**Garlanding Ceremony by: The Chief Guest and Chairman**

**Welcome by: Mr. Santa Bahadur Rai,  
Secretary, Ministry of Housing and  
Physical Planning**

**Objectives of the Seminar: Mr. David L. Painter  
Director, AID Regional Housing and  
Urban Development Office, Bangkok**

**Remarks by: Mr. William S. Rhodes  
Acting Mission Director  
USAID Mission to Nepal**

**Inauguration Address by: The Chief Guest**

**Vote of Thanks by: Mr. Shanker Man Pradhan  
Director General, Department of  
Housing and Urban Development**

**Closing Remarks by: The Chairman**

**ANNEX 2**

**Market Towns in National Economic Development**

**Workshop Program**

**Shangrila Hotel, Kathmandu**

**Monday, September 11**

**6:00 - 8:00 pm      Reception for Participants and Guests  
Shangrila Hotel**

**Tuesday, September 12**

**10:00 am            Inauguration of Workshop  
(See Special Program)**

**Tea Break**

**Keynote Address: Market Towns in Economic Development  
Dr. Dennis Rondinelli, Research Triangle Institute**

**Keynote Response: Applying the Market Town Concept to  
Nepal's Urban Development Strategy  
Mr. Shankar Man Pradhan, Director General, Department of  
Housing and Physical Planning, Ministry of Housing and Physical  
Planning**

**Organization of Workshop and Formation of Participant Panels  
and Working Groups**

**Lunch                Garden Buffet  
Shangrila Hotel**

**2:00 pm             Market Towns and Urban Development in Nepal  
Dr. Pitamber Sharma, Tribhuvan University**

**An Approach to Market Town Projects  
Dr. Harry Garnett, Abt Associates**

**Commentary and Discussion: Participants Panel**

**Tuesday, September 12 (cont.)**

5:00 pm                      Tour to Swyambu Temple

**Wednesday, September 13**

9:00 am                      Case Studies of Regional Development and Market Towns:

**Rapti Regional Development Program**

Dr. Charles Strickland, USAID Rapti Project Director

**Market Town Profiles**

Mr. Raju Tuladhar, Management Support for Urban Development Project, Ministry of Panchayat and Local Development

Commentary and Discussion: Participants Panel

Tea Break

**Market Town Analysis for Rural Economic Growth: Applied methods and Techniques**

Dr. Dennis Rondinelli, Research Triangle Institute

Commentary and Discussion: Participants Panel

Lunch

1:00 pm                      Depart Hotel for Banepa Market Town

Visit to Historic Town of Baktapur on Return

6:00 pm                      Arrival at Shangrila Hotel

**Thursday, September 14**

**9:00 am**                    **The Strengthening of Financial Capacity in Market Towns:  
Lessons from Experience**  
**Dr. James McCullough, Research Triangle Institute**

**Commentary and Discussion: Participants Panel**

**Tea Break**

**Formation of Participant Working Groups and Discussion of  
Working Group Agenda**

**Working Group Sessions**

**Lunch**

**Working Group Sessions Continue**

**3:30 pm**                    **Presentation of Working Group Findings and  
Plenary Discussion**

**7:00 pm**                    **Closing Dinner  
Bhanchha Ghar Restaurant**