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Photo from Visitor's Guide - Nepal

Executive Summary

NEPAL Urban Development Assessment

United States Agency for International Development

N E P A L
URBAN DEVELOPMENT ASSESSMENT
EXECUTIVE SUMMARY

Prepared for
Office of Housing and Urban Programs
Agency for International Development
Washington, DC

and

USAID/NEPAL
KATHMANDU, NEPAL

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GLOSSARY

ADB	-	Asian Development Bank
CDO	-	Chief District Officer
CDR	-	Central Development Region
CEDA	-	Center for Economic Development and Administration
CSP	-	Crop System Program
DHBPP	-	Department of Housing, Building and Physical Planning
DP	-	District Panchayat
DWSS	-	Department of Water Supply and Sanitation
EDR	-	Eastern Development Region
FWDR	-	Far Western Development Region
GDP	-	Gross Domestic Product
GNP	-	Gross National Product
GTZ	-	German Bilateral Assistance
HMG	-	His Majesty's Government
IBRD	-	International Bank for Reconstruction and Development
IDA	-	International Development Agency
ILO	-	International Labor Organization
IRD	-	Integrated Rural Development
ISC	-	Industrial Services Centre
K-BIRD	-	Karnali-Bheri Integrated Rural Development
KHARDEP	-	Koshi Hills Integrated Rural Development
KSK	-	Karmachari Sanchaya Kosha (Provident Fund)
LDC	-	Least Developed Country
LDO	-	Local Development Officer
MPLD	-	Ministry of Panchayat and Local Development
MWRD	-	Mid Western Development Region
MWT	-	Ministry of Works and Transport
NEC	-	Nepal Electricity Corporation
NGO	-	Non-governmental Organization
NIDC	-	National Industrial Development Corporation
NPC	-	National Planning Commission
RD	-	Road Department
RIRD	-	Rapti Integrated Rural Development
Rs.	-	Rupees
SADP	-	Small Areas Development Program
SATA	-	Swiss Agency for Technical Assistance
TAG	-	Technical Assistance Group
TFM	-	Task Force on Migration
TP	-	Town Panchayat (Council)
TPIC	-	Town Planning Implementation Committee
UDA	-	Urban Development Assessment
UNCTAD/ESCAP	-	United Nations Conference on Trade and Development/Economic and Social Commission for Asia and the Pacific
UNDP	-	United Nations Development Program
UNICEF	-	United Nations Children's Fund
USAID	-	United States Agency for International Development
USM	-	Urban Sector Memorandum
WDR	-	Western Development Region
WHO	-	World Health Organization
WSSB	-	Water Supply and Sanitation Board

People and Places



Bhaktapur



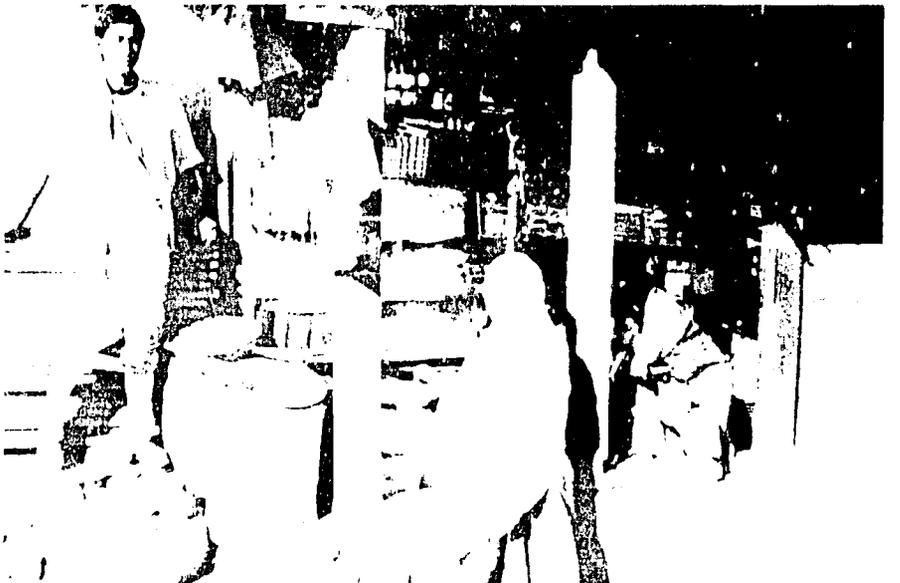
Kathmandu: Durbar Square



Kathmandu



Kathmandu: Durbar Square



Tansen



Lahan Market



Bhaktapur:



Kathmandu

PREFACE

The essential purpose of this Urban Development Assessment mission to Nepal was to broadly investigate at the national level the future prospects and problems that will be associated with continued urbanization.

From the outset, the team was aware of the serious capital resource constraints in Nepal, the necessity of improving performance in the agricultural sector as the first priority, and the serious development problems to be addressed at the national level.

The team was impressed with many aspects of HMG's efforts at guiding urbanization and, hopefully, the identification of problems and the recommendations suggested here will be viewed in the light of furthering these objectives as opposed to criticism of what has been attempted to date.

The preparation of an Executive Summary such as this presents many difficulties to the authors. It is essential to keep the Executive Summary short so that busy officials can find time to read it but, at the same time, it is hard to express the underlying analysis and justification for the conclusions reached. It is hoped therefore that many persons concerned with urban issues in Nepal will find the time to review the much more extensive documentation which constitutes the full report with its associated appendices.

The UDA team wishes to thank the many officials in HMG ministries and agencies that gave so generously of their time to meet with us. The team also benefitted enormously from the full cooperation and support of USAID/Nepal.

Duane Kissick
Team Leader
February 28, 1984

The Production Cycle



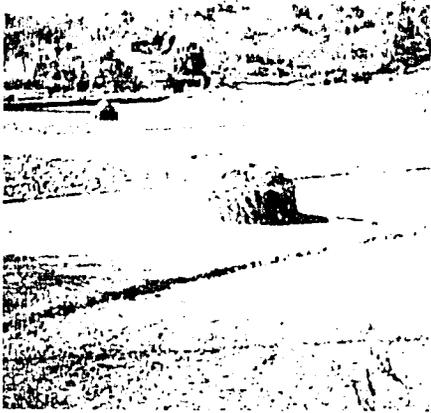
Appropriate Technology: Terai



Terai Harvest



Fish Pond: Near Lahan



Kathmandu Valley



Foodgrain Production: Terai



Pokhara-Butwal Road



Bhaktapur



Kathmandu

I. COUNTRY CONTEXT AND DEVELOPMENT ISSUES

Nepal's physical setting and geographical configuration must be understood to comprehend its historical and future development potential. A foldout map provided in a pocket to this report is a useful reference.

Nepal is a landlocked country which is necessarily closely tied to India for trade, transport, and communications. Because Calcutta serves as the principal port of entry and exit for Nepal third country trade, its physical orientation to the southeast has led to the development of the eastern and central portion of Nepal more rapidly than the western regions. Figures I.2 to I.4 show the nature of Nepal's physical configuration and its development regions.

A. POPULATION TRENDS

Nepal's rapidly rising population is a matter of major development concern. Nepal's economic growth and per capita income has been unable to keep pace with the increase in population. The national population increased at rates of 2.1 and 2.7 percent per annum during the periods 1961-1971 and 1971-1981 respectively. However, during the period 1976-1981, a rate of 3.2 percent per annum was registered. On the other hand, annual GDP growth during this period was only 2.1 percent per annum. Thus, standards of living have actually been declining despite sustained development efforts.

Nepal's dramatic rise in population began from a relatively stable population of six million in the 1930s. As Figure I.5 indicates, population growth has been steadily accelerating, reaching a population of 15.02 million in 1981. Furthermore, at current rates of growth, Nepal will reach a population of approximately 25 million by the year 2000.

The Terai has been the principal reception area for migrants from the Hills. This was brought about by malaria eradication and deforestation for agriculture that began in the 1960s. In 1964, about 5.4 percent of the Terai's forests had been cleared, and by 1977 this had increased to 65.7 percent. Densities in the Terai increased from 140.5 to 212.8 persons per square kilometer between 1971 and 1981. The second popular choice of Hill people is for emigration out of Nepal.

The HMG has given population programs high priority. The goal of the National Planning Commission is to attain a growth rate of 1.2 percent per annum by the year 2000. This would mean a year 2000 population of 21 million.

FIGURE I.2

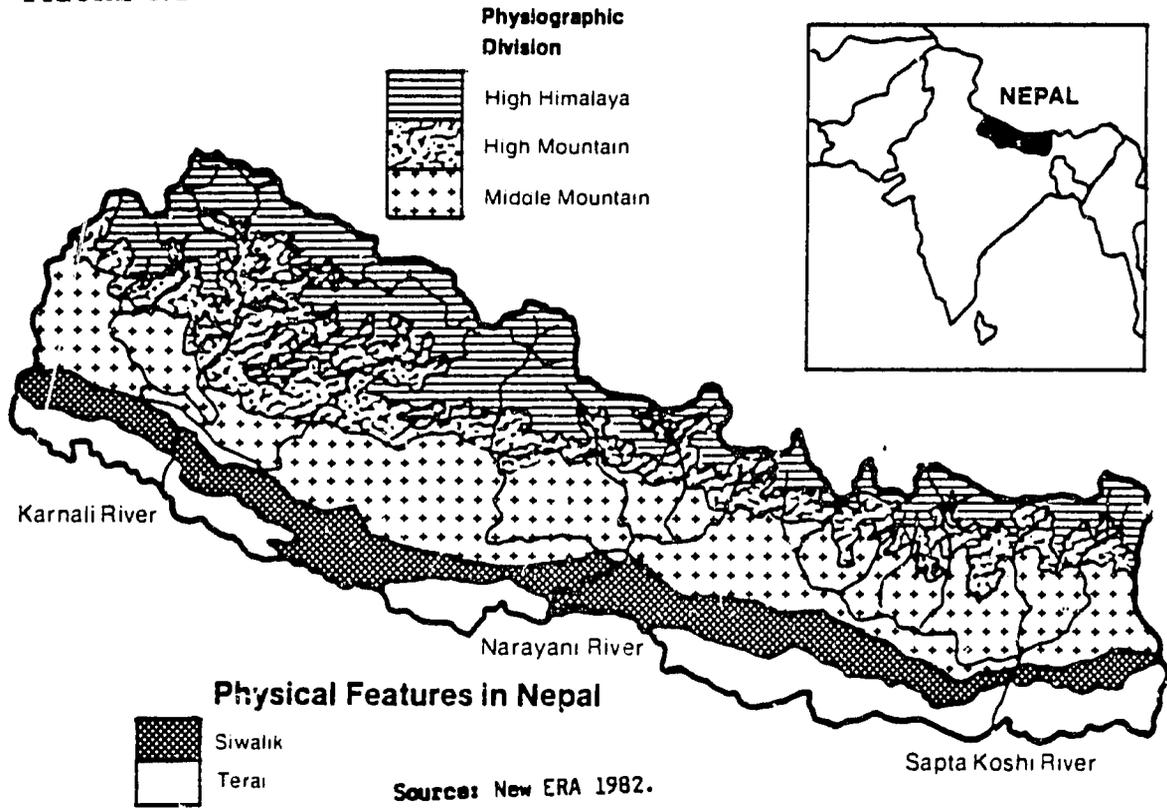


FIGURE I.3

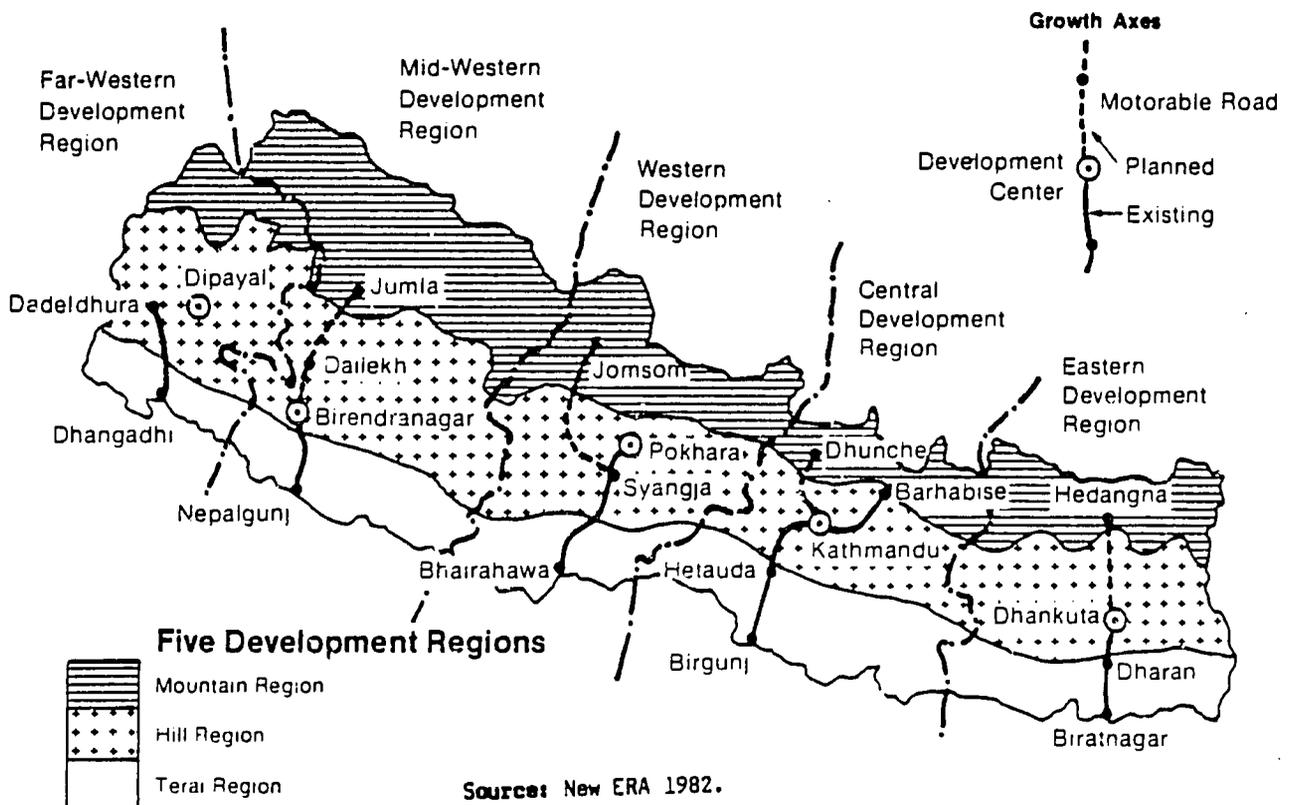
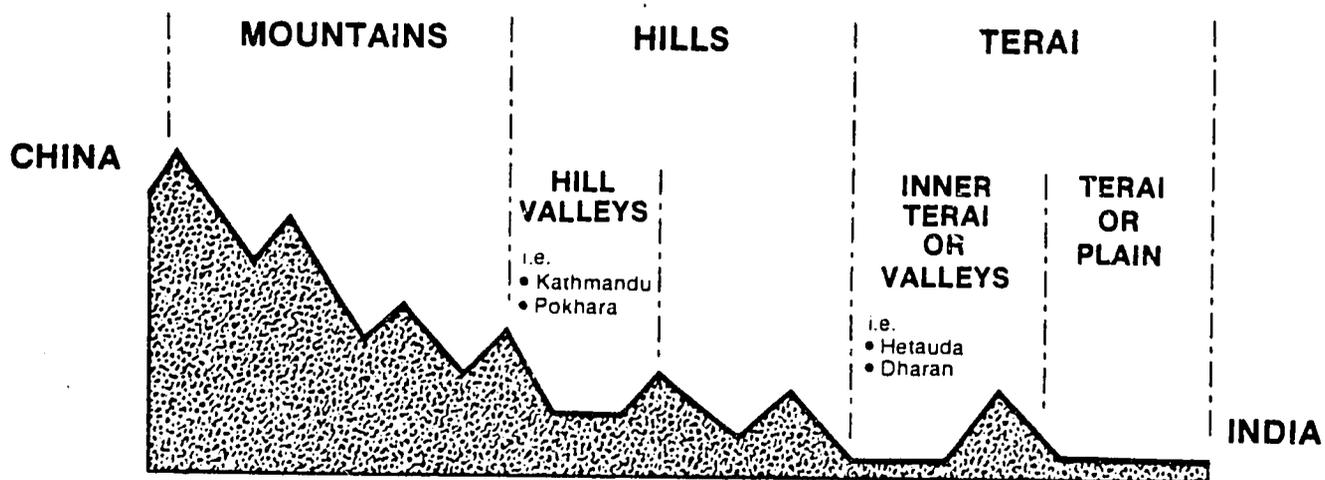


FIGURE I.4

KEY PHYSICAL CHARACTERISTICS



POPULATION: (1981)		
1.3 Million	7.4 Million	1.3 Million - 5.8 Million
Area: (Km ²) 34,000 Km ²	88,000 Km ²	25,000 Km ²
Percent of Total Area: 23%	60%	17%
Density: 10 - 150 p/Km ²	50 - 300 p/Km ²	50 - 300 + p/Km ²
Altitude: 2,000 - 9,000 Meters	600 - 3,000 Meters	750 - 1,500 Meters
Width: 25-60 Kilometers	60 - 80 Kilometers	25 - 40 Kilometers
Climate: Tundra	Temperate	Tropical

Source: PADCO

B. ECONOMY

Economic development in Nepal is constrained by its physical setting and characteristics, rapid population growth, narrow resource base, and the dependence of agricultural performance on good weather conditions. Nevertheless, agriculture, which contributes about 57 percent of GDP and employs 93 percent of the labor force, is the mainstay of the economy.

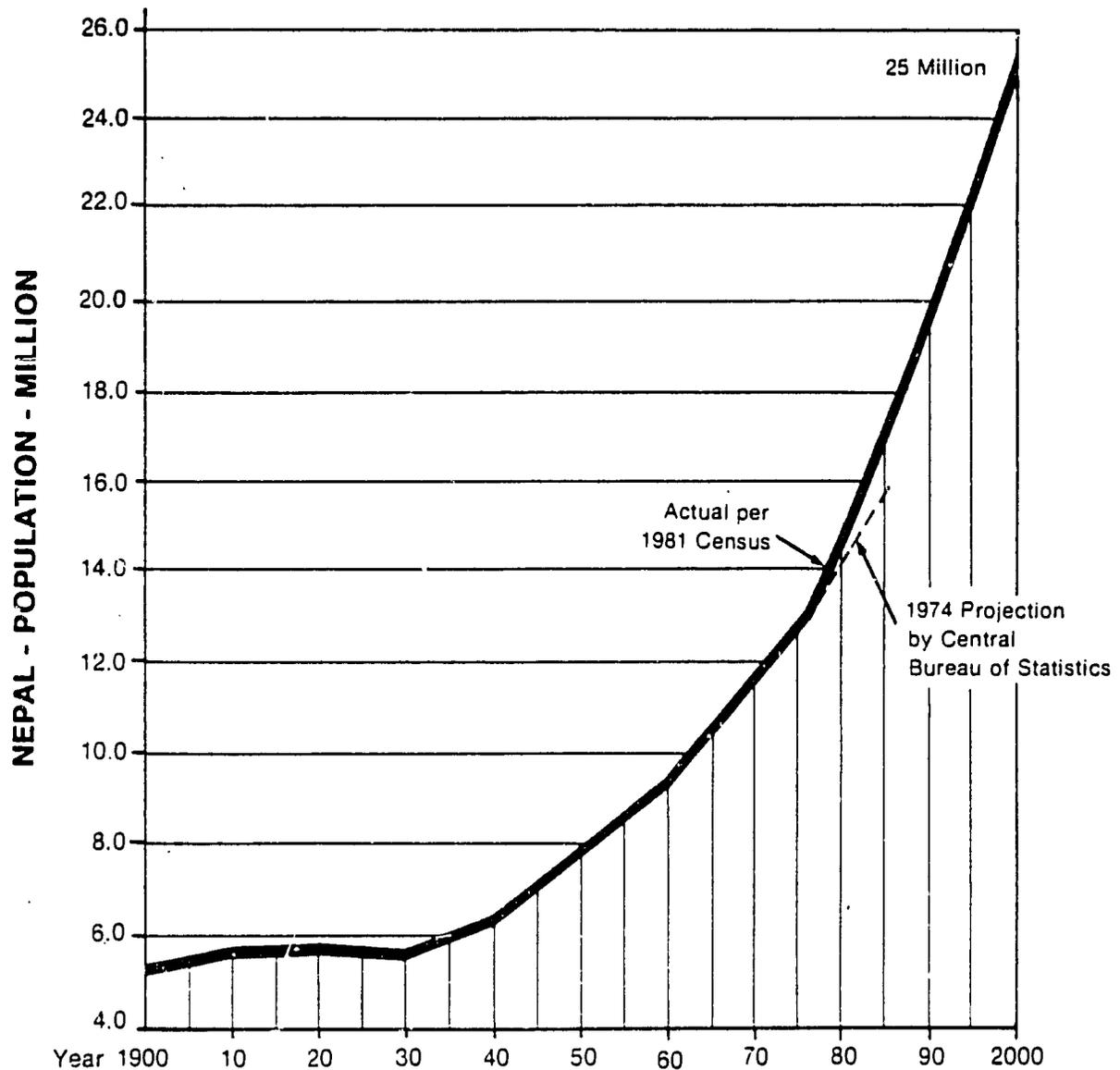
Development prospects are beset with troubles. Nepal's rising population has increased demand for arable and grazing land and led to large-scale deforestation of the Hills and Terai. In the Hills, this has led to general environmental degradation and a loss of agricultural productivity. The Terai has served as a "safety net" for excess Hill population and provided an opportunity to increase agricultural output and income. Recently, however, surplus production of food and grain in the Terai (that traditionally has met Hill deficits and permitted exports) has been eroding as the Terai reaches its carrying capacity. There is a danger that the Terai will no longer be able to support food deficits, and already low levels of consumption may further decline.

Industrial development in Nepal is severely handicapped by its own narrow market, lack of raw materials, and dependency on the Indian transportation network for imports and exports. Proximity to the large Indian market is an advantage that Nepal has difficulty in exploiting. Nepal's comparative advantages over India's larger and more efficient industrial sector is largely related to inadequate Indian industrial incentives and bureaucratic entanglements rather than identifiable economic factors. Future industrial growth is largely dependent on gains in agriculture. About 70 percent of manufacturing industries in Nepal are agro-based.

C. DEVELOPMENT PLAN OBJECTIVES, POLICIES AND TRENDS

The HMG has prepared six development Plans and will soon embark on its seventh. Despite some changes in sectoral priorities during each of the Plans, first priority overall was given to transport and communications (34.8 percent of total Plan outlays), agriculture has been the second priority (29.2 percent of total Plan outlays), and industry and social services have been given less priority with total outlays of 18.3 percent and 17.7 percent respectively. Investment outlays generally equalled or exceeded the Plans projections, but the output targets were consistently under-achieved though some important sectoral gains have been made. Per capita income in 1975 was on the order of Rs.1,302, but by 1980 it had declined to Rs.1,298. During the Fourth and Fifth Plans, development expenditures increased at an annual rate of 15.8 and 19.4 percent respectively. To do so, the HMG increased domestic savings but also came to rely heavily on foreign assistance (which increased by more than three-fold).

FIGURE I.5
National Population Growth and Projection

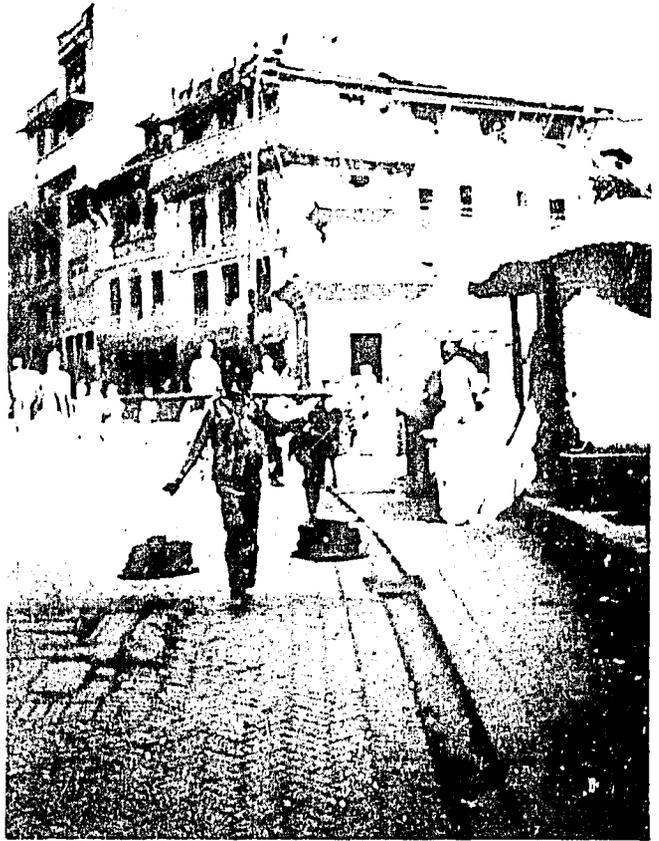


Source IBRD/WSSB 4th Water Supply Project PADCO

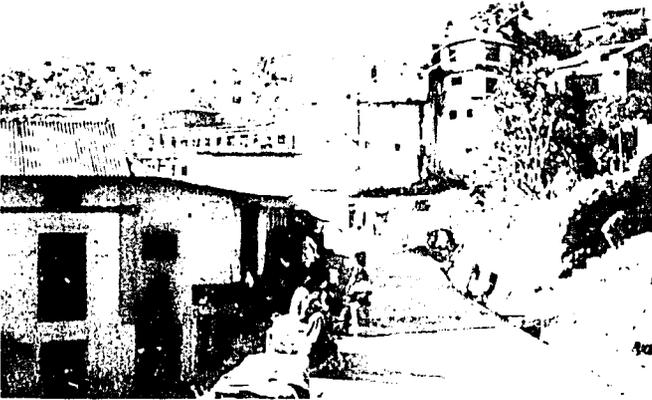
Urban Landscape



Kathmandu



Bhaktapur



Tansen



Kathmandu



Kathmandu



Pokhara



Bhairawa

II. THE URBAN SITUATION AND PROSPECTS

Between 1971 to 1981, the number of Nagar Panchayats (towns) officially designated by the HMG was increased from 16 to 23. Since 1981, an additional six Nagar Panchayats have been designated making the 1984 total 29.

A. URBAN POPULATION

The 23 Nagar Panchayats in 1981 represented only 6.4 percent of the national population, however, all settlements over 5,000 population represented nearly 20 percent of the total population. The urban population was increasing at the rate of 8.6 percent per annum between 1971-1981. If these trends continue, the 23 Nagar Panchayats in 1981 will have 20 percent of the total population alone by the year 2000.

While urbanization is a recent phenomenon in Nepal, all indications are that the process is now firmly underway and will continue. In part, this is a direct response to the overcrowding of the Hills and the fact that the Terai can no longer support surplus rural population in agriculture.

B. URBAN INCOME

Analysis of the National Planning Commission incomes data gives a median urban family income in 1977 of Rs.6,053 per annum vs. a rural median income of Rs.3,556 per annum. Urban median income was over 40 percent greater than the rural. The average income of urban areas is 56 percent higher than rural which indicates an uneven distribution of income.

Incomes vary by development and geographical region also. Urban per capita incomes are higher in the Eastern Region (represented by the Terai towns of Bhadrapur, Biratnagar, and Rajbiraj). Second highest is the Central Region which includes Kathmandu.

If urban income data is updated from 1977 to 1982/3 according to the rise in the Consumer Price Index (urban areas), the monthly urban median income would be Rs. 807. The current daily wage for construction workers in Kathmandu is Rs.30 per day, or Rs.780 per month, therefore a current urban median income in the Rs.700 to Rs.800 range is probably not an unreasonable assumption.

Nepal Urban Development: Assessment

TABLE II.1
 URBAN POPULATION (23 TOWN PANCHAYATS) AS PERCENT OF
 TOTAL POPULATION OF GEOGRAPHICAL REGIONS - 1981

	Regional Population*	Percent National Population*	Town Panchayat Population	Percent Urban
Mountains Hills	1,058,269 5,892,252	7.04 39.22	- Pokhara 46,642 Dhankuta 13,836 Ilam 9,773 Tanaen 13,125 Total 83,376	- 8.7%
Kathmandu Valley	766,820	5.10	Kathmandu 235,160 Lalitpur 79,875 Bhaktapur 48,472 Total 363,507	
Total Hills	6,659,072		446,883	38.0%
Hills and Mountains	7,717,341	51.30		47.0%
Inner Terai	1,278,774	8.51	Hetanda 34,792 Birendranagar 13,859 Bharatpur 27,602 Ghorahi 19,271 Total 95,524	10.0%
Terai	6,035,926	38.29	Mahendranagar 43,834 Dhangadi 27,274 Nepalgunj 34,015 Butwal 22,583 Birgunj 43,642 Janakpur 34,840 Lahan 13,775 Rajbiraj 16,444 Dharan 42,146 Biratnagar 93,544 Bhadrapur 9,761 Bhairahawa 30,084 Total 411,942	43.0%
Total Terai and Inner Terai	7,314,700	48.70	507,466	53.0%
			Total Urban 954,349	
TOTAL			15,020,451	

* (From Preliminary 1981 Census Results - Dr. Hanka Gurung)

C. EXISTING SETTLEMENT SYSTEM

Nepal has a widely dispersed settlement system which has developed in response to its physical setting and economic requirements. The settlement system has only recently begun to experience rapid growth. While Kathmandu dominates the settlement system, it does not show the potential for "primacy" at levels experienced in many other countries.

In effect, the principal settlements of the Terai serve as "land ports" and their respective growth is closely related to the location, access, and quality of these transportation networks. The Foothill and Inner Terai towns are serving primarily as marketing and distribution centers for the Hill regions, as well as service centers. Several Hill towns (including Kathmandu and Pokhara) have been designated as regional "administrative" centers.

The creation of districts and Nagar Panchayats throughout the country and related Government employment and investment in construction have stimulated development in smaller settlements and provided a wider network for administration and services. However, rapid population growth in these settlements is likely to subside when construction and Government employment requirements have been met due to limited economic growth potential.

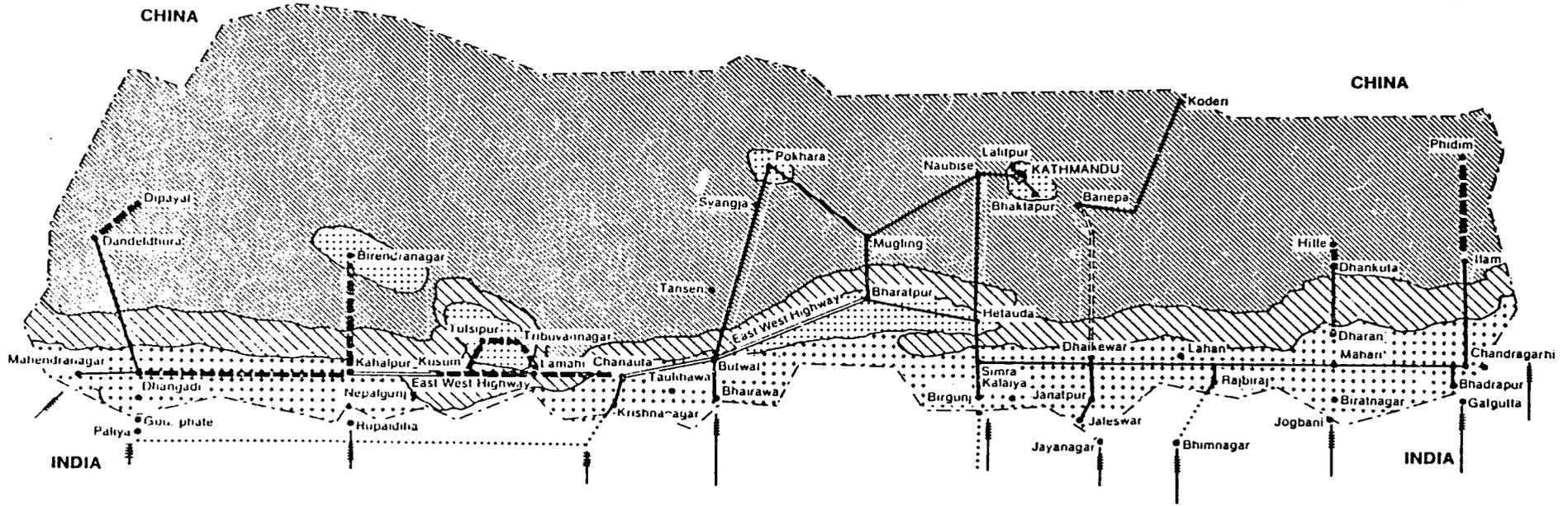
Figure II.1 indicates the present settlement system and road network.

D. URBAN SERVICES AND CONDITIONS

Urban services are generally inadequate in most settlements in spite of their present limited size:

- Water Supply service is intermittent with average consumption in those towns with systems of about 50 liters per capita per day. However, water supply (and sanitation) represent one of the few comprehensive urban development efforts supported by the donor community.
- Sanitation provided by waterborne sewerage systems covers only about five percent of the urban population in the Kathmandu Valley. Most households have no sanitation facilities at all.
- Drainage is poor because of poor road design, and lack of clear administrative responsibility.
- Solid waste disposal is generally inadequate though recent pilot projects with German Bilateral assistance have been promising.

FIGURE II.1



SETTLEMENT SYSTEM & ROAD NETWORK

Legend

- | | | | |
|-------|------------------------------|--|-------------------|
| —=— | East West Highway | | Hills & Mountains |
| — | All Weather Road | | Foothills |
| —+— | Fair Weather Road | | Plain |
| | Roads in India (All Weather) | | Valleys |
| — — | Railway | | |
| - - - | International Borders | | |

Source: PADCO

- Urban roads are not based on planning criteria but often follow existing property lines with narrow rights-of-way making future use and access difficult. Principal urban roads are frequently constructed above grade leading to infill by adjacent property owners and poor drainage of inner block areas.
- Electric power is only reasonably adequate in the Central Region.
- Telecommunications are available for major centers, but further service expansion is needed.

There is a general weakness of the Nagar Panchayats to address their own urban service requirements. In most cases, they do not have the staff or resources to do more than general maintenance, street cleaning, and administration. They must depend on the line ministries for the provision of many vital services and public works. Ways to enhance the Nagar Panchayat's capacity to provide and expand their own urban service delivery systems should be sought.

E. HOUSING CONDITIONS

There is little recent information concerning housing conditions in Nepal. The Household Budget Survey of the Nepal Rastra Bank based on 1973-1975 data is the most recent comprehensive source. Figures II.2 to II.4 summarize this data (as prepared by Haruaiko Ando). It is generally believed that housing conditions amongst low-income groups have deteriorated in recent years with increased overcrowding in the core areas of the larger urban centers and with the start of squatter communities now appearing on the urban fringe.

There are no housing finance institutions in Nepal at present. The largest source of formal credit is the Provident Fund and some loans by commercial banks. For most households, housing finance needs are met out of personal savings and loans from relatives or friends.

HMG views housing, correctly, as primarily a private sector concern. The Sixth Plan provides funding for only a very modest number of civil servant housing.

F. URBAN LAND POLICY

The Constitution of Nepal guarantees the right of Nepalese citizens to "acquire, use and sell property." Current laws limit the maximum urban land holding in single ownership to 25 ropanis (approximately .84 hectares), and give the "actual tillers" rights to permanent tenancy providing for payment to the tenants of 25 percent of the market value for any land converted to non-agricultural use at the time of sale. The HMG has eminent domain rights, but procedures are cumbersome.

Housing and Places



Dharan



Dhankuta



Kathmandu Old City



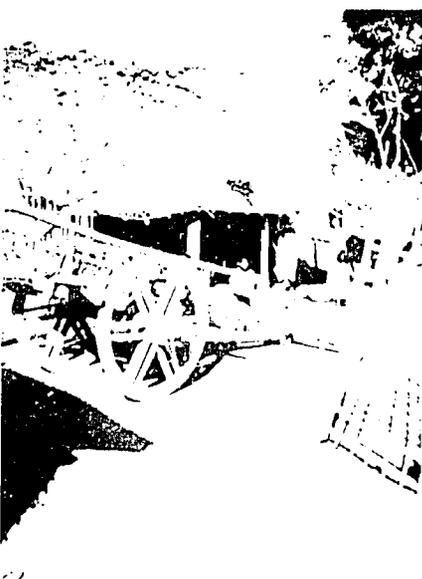
Hill Hamlet



Pokhara Valley



Biratnagar



Terai Hamlet



Kathmandu

FIGURE IL2

Housing Conditions in Nepal (1973-75)

(From "Household Budget Survey" By Nepal Rastra Bank)

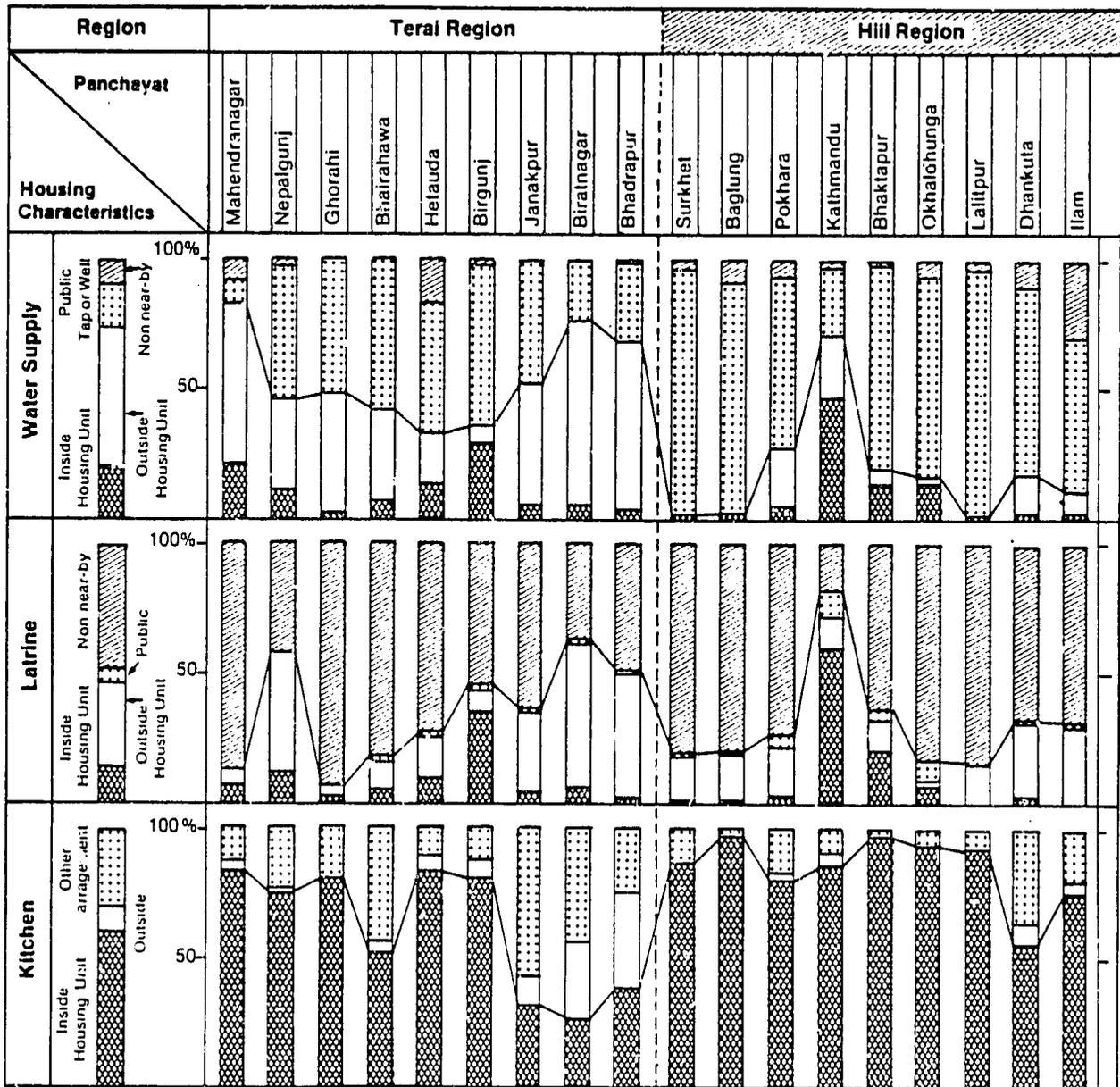


FIGURE II.4

Housing Conditions in Nepal (1973-75)
 (From "Household Budget Survey" By Nepal Rastra Bank)

Housing Characteristics Panchayat		Average Household size (Person)			Number of rooms			Person per sleeping room	
		1	3	5	1	3	5	2	4
Hill Region	Ilam	5.2			2.7			3.1	
	Dhankuta	5.7			3.1			2.8	
	Okhaldhunga	5.3			3.1			2.9	
	Bhaktapur	5.9			3.0			2.9	
	Lalitpur	5.8			3.7			2.7	
	Kathmandu	5.7			3.6			2.4	
	Pokhara	4.7			2.8			2.9	
	Baglung	5.3			3.6			2.5	
	Surkhet	5.3			3.1			2.9	
	Average	5.4			3.2			2.8	
Terai Region	Bhadrapur	5.3			2.3			2.9	
	Biratnagar	5.3			2.4			2.8	
	Janakpur	4.1			2.3			2.5	
	Hetauda	5.3			2.4			2.9	
	Birgunj	5.4			2.8			2.8	
	Bairahawa	4.5			1.5			3.4	
	Ghorahi	5.9			2.4			3.0	
	Nepalgunj	5.3			3.0			2.5	
	Mahendranagar	5.4			2.8			3.0	
	Average	5.2			2.4			2.9	
Total Average		5.3			2.8			2.8	

Land values are reported to be rising at around 20 percent per year in the Kathmandu Valley. Land is looked upon as a particularly attractive investment by the wealthy. There is no tax on vacant land nor instruments for collecting part of increased values due to public improvements. There is a land transfer tax applied at the time of sale.

The conversion of valuable arable land to urban uses is a serious problem in the Kathmandu Valley and could grow to be of concern in other urban centers in the future.

G. URBAN PLANNING AND IMPLEMENTATION

Under the overall policy guidance of the National Planning Commission, urban planning is the domain of the Department of Housing, Building and Physical Planning (DHBPP) which is an arm of the Ministry of Works and Transport. Ten of the 19 ministries have responsibilities for the management and supply of social and physical services in urban areas. Coordination of planning and provision of infrastructure is the responsibility of the newly created Urban Planning Central Coordination Committee, chaired by the Minister of Works and Transport. The overall system is diagrammed in Figure II.5.

In Nepal, many elements contribute to the physical state of urban development and planning which are primarily problems of a political, organizational and legal nature. These include:

- Lack of priority for urban development (in general)
- The lack of planning and investment coordination amongst key public sector agencies
- The lack of political will and administrative capacity to enforce planning guidelines and regulations
- Lack of effective use and integration of taxation in guiding the urban development process
- Lack of effective urban development planning capacity (as opposed to simple land use planning concepts)
- Inadequate data base for planning and urban management
- Insufficient or inappropriate development standards
- Failure to consider the full potential opportunities and problems associated with urban investments (for example, the Kathmandu ring road as a transportation solution vs. the objective of preserving arable land).

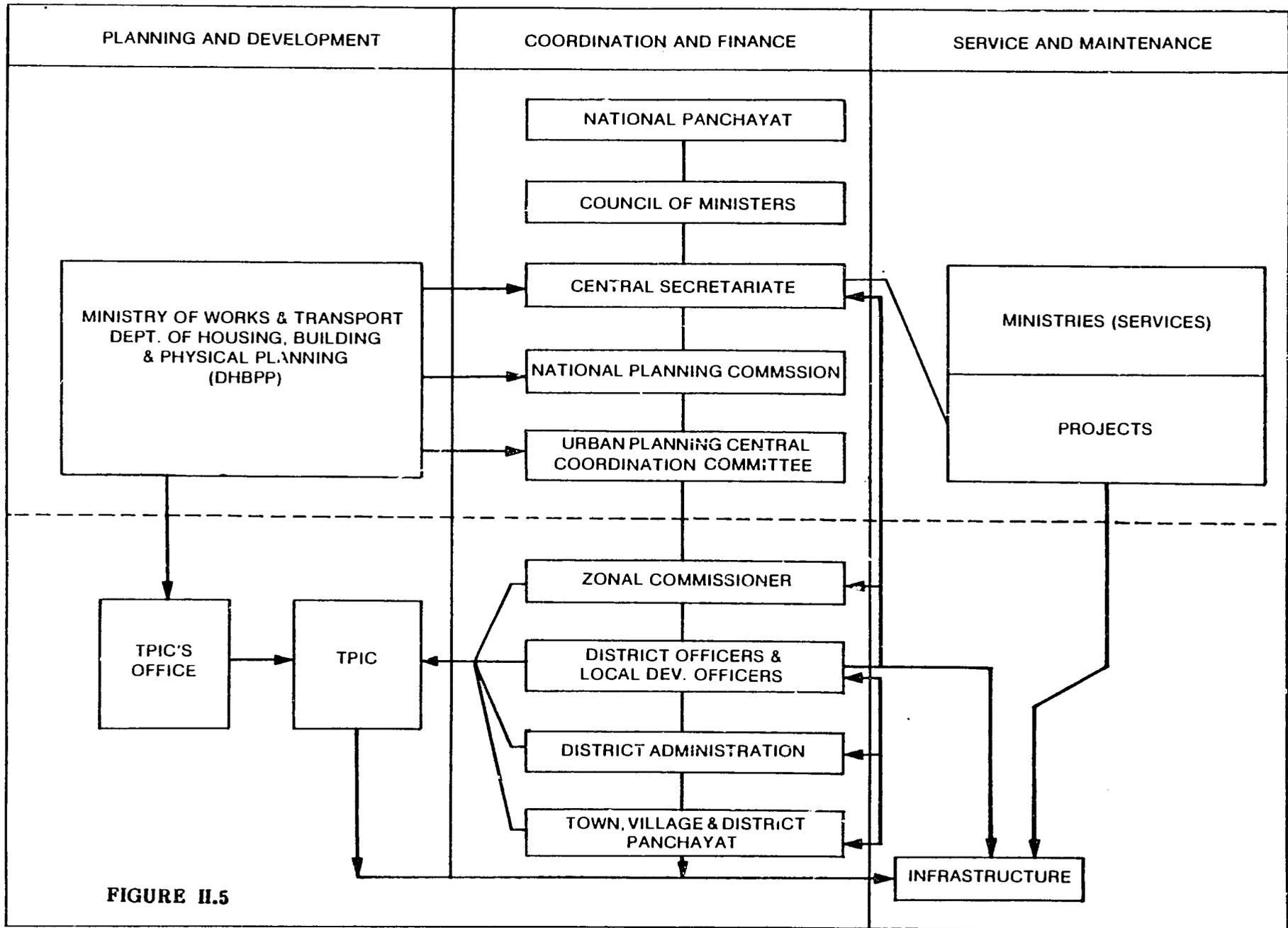


FIGURE II.5

Source: DHBPP

Urban Infrastructure and Places



Kathmandu



Dhankuta



Kathmandu



Bhaktapur Upgrading



Biratnagar School



Hand pump in Birgunj



Biratnagar Squatter Area



Transport in Birgunj



Janakpur

III. RECOMMENDED URBAN STRATEGY CONCEPTS

The Urban Development Assessment team recognizes that it is beyond the scope of its mission and time and resources available to specifically outline the kind of urban development strategy needed in Nepal. This should, however, be a task to which the National Planning Commission gives full consideration during the preparation of the Seventh Development Plan.

All of the data and analyses points directly to the conclusion that Nepal is on the threshold of rapid urban population growth which is unavoidable given the overpopulation of the Hills and the limited capacity for continued rural development and agriculture in the Terai. The opportunity exists, because urbanization is just starting, for Nepal to adopt a positive urban policy and strategy which can overcome many of the enormous problems faced in other developing countries which did not focus on their urban problems until they had reached crisis proportions.

The need is for a dynamic strategy which will both encourage and guide urban development in the national interest and facilitate the transition of the rural to urban migrants in their adoption of new lifestyles and skills.

This opportunity in urban Nepal is, however, constrained by the present development realities which include:

- For the immediate future agricultural expansion and productivity must be given the highest priority in investment (though recognizing that agricultural output is the major source of industrial growth in urban areas which means the growth of the agricultural sector will have a positive economic effect on urban development as well).
- The continuation of the development of national networks of transportation, power, and telecommunications which is essential for both urban and rural development and therefore also requires priority.

This means that Nepal's urban policy and investment strategy must be capital resource conserving and such investments as are made must be targeted carefully by both location in the settlement system and by sector. The role of the HMG should be primarily that of the facilitator of sound urban development through private initiative and responsive public regulation and planning. The guiding principles of an urban strategy of this kind might include:

- The adoption of a positive national urban policy which will encourage urban growth and rural/urban migration in response to the overpopulation in rural areas (particularly the Hills).

- Assist potential rural/urban migrants to adopt to urban life styles and learn urban skills. The specifics of such a program require further study, but are likely to include establishing equitable procedures for selling rural land holdings (when sub-marginal in size) and obtaining urban plots, job skill training programs, literacy training, and essential basic health care (including family planning and nutrition).
- Encourage urban job creation through the private sector (particularly the small-scale private sector). It will be much more efficient to seek the "non-farm" employment creation (called for by most observers) in urban centers rather than rural places. Credit programs could usefully be expanded to small-scale entrepreneurs tied to skill training and the use of Nepali labor. The construction sector (not studied in any detail by the UDA team) is in particular need of technical assistance in order to improve efficiency, conserve materials, and develop Nepali skills (construction jobs are particularly well-suited for the introduction of unskilled rural people to the urban job market under planned conditions).
- Facilitate private sector and individual development of the housing stock of Nepal. The HMG is correct not to attempt any kind of mass public sector housing program, but a much more efficient system of providing urban plots with basic infrastructure is needed given the recent poor experience in several projects.
- There is no alternative to Government providing the basic infrastructure required in cities and towns. The first priority should be on water supply and sanitation (wherever possible using technologies which do not depend on waterborne sewage systems). Selective investments in infrastructure at appropriate minimum standards should be focused on those settlements which have the highest potential for sustained economic growth.
- Urban land issues should be addressed through legislation, regulation, and improved public management procedures in order to ensure an adequate supply of non-arable urban land for expansion at prices which are affordable to the majority of the population. Means should be sought to increase Government recovery of increments in land value increases caused by related public investments (such as roads, water supply, etc.) and improved land tax policy.
- As part of the overall decentralization effort now underway, a specific task should be to fully recognize the role and function of the Nagar Panchayats in urban development by ensuring that they have the appropriate powers (including taxing and revenue mobilization power), administrative capacity, and ability to take on much more of the urban development burden than they now absorb. The Kathmandu Valley should be studied as to the suitability of adoption of a Kathmandu Valley Development Authority based on the work already underway.

- ' A revitalized urban planning capacity should be developed in the DHBPP which can effectively provide planning direction for the urban development strategy. This should include much more stress on detailed plans for specific sections of cities, new sites and services projects, and the build-up of a more substantial data base and analytical approach.

A. THE NATIONAL URBAN SPATIAL STRATEGY

The key elements of the national spatial strategy were spelled out in the Fourth Plan. The spatial strategy is essentially sound in principle and, with further development along the lines suggested below should provide the base for the Seventh Plan proposals.

In summary, the spatial strategy aims at the economic and social integration of the five development regions through the establishment of an East-West transport and communications network in the Terai, and North-South corridors to selected locations in the Hills. Each North-South corridor is to culminate at a regional "growth pole" in the Hills. These poles were originally identified as follows:

- Dhankuta (Eastern Development Region)
- Kathmandu (Central Development Region)
- Pokhara (Western Development Region)
- Birendra Nagar (Mid-Western Development Region)

Dipayal was defined as a fifth regional pole in the Far Western Development Region at a later date.

Considerable progress has been made in implementing this strategy and the major development projects in transportation, power, and telecommunications are underway.

Other urban centers were selected to be "development models" in their respective regions. There has not yet been any real effort to provide functional definitions of the roles of various centers and establish a development hierarchy of cities and towns. In fact, there appears to be some confusion that an administrative hierarchy (which is well-established) is somehow the same as a development function hierarchy. This needs to be clarified.

B. UDA TEAM'S PRELIMINARY SUGGESTIONS FOR A REVISED NATIONAL SPATIAL STRATEGY

Settlement systems maintain a high degree of inertia regarding their functional characteristics and the roles of individual settlements. By the year 2000, no radical changes in the structure can probably be envisaged. The principal tools that Government has at its disposal to bring about desirable changes in the settlement system include investment in industry, administration, social services (particularly major health

and education facilities such as hospitals and campuses), and inter-urban infrastructure such as bulk water, transport, and power.

In addition, the Government can use a variety of techniques and incentives to influence locational choices for investment by the private sector. However, the private sector's investment choices will be governed by economic considerations. Private sector investment can generally be stimulated in places where economic growth potential exists through provision of adequate services. But, if there is no economic justification for private investment, incentives and provision of services will be of no avail. Thus, the HMG will have a greater chance of success by facilitating private investment through the provision of services in places where the private sector has already demonstrated interest.

A functional definition of settlement roles within the settlement system will help clarify investment priorities for urban and regional programs.

Nepalese planners have indicated a need for role definition along the lines of growth poles, growth centers, growth points, market centers, and service centers. The UDA team feels it is premature for it to attempt a definition along these lines. Furthermore, on the basis of a single short-term visit to Nepal, and secondary source research, there is too much room for error. Nevertheless, on the basis of a review of the current settlement system, the national spatial strategy, analyses of Nepalese planners, and the results of PADCO's urban investment model, a schematic functional structure of the settlement system was developed as shown in Figure III.1. The principal elements of this structure include:

- Treatment of Kathmandu and Pokhara as special regional centers within the Hill area (though Kathmandu has an obvious national role).
- Treatment of the Principal Terai settlements as the urban economic motors of the settlement system.
- Treatment of Foothill and Inner Terai settlements as "transition areas" between the Hill and Terai economies and population.
- Treatment of tertiary Hill settlements such as Dhankuta, Ilam, and Dipayal as regional public administration/service centers with some trading and marketing functions. These are not viewed as major growth points.
- Treatment of secondary Terai settlements (i.e. Rajbiraj) as secondary economic centers with related service and market functions.
- Treatment of tertiary Terai towns as primarily rural service centers and market towns.

Thus, conceptually the principal Terai settlements would provide the economic foundation of North-South corridors; between the Hill and Terai; Foothill settlements

would serve as transition areas; and Hill settlements; with the exception of Kathmandu and Pokhara, would serve primarily as administrative, service, and trading centers for the Hills. The principal Terai settlements would continue to dominate their respective regional economies in the Eastern and Western Terai.

This conceptual structure is not radically different from what exists, nor from proposals made by Nepalese planners. Furthermore, it does not imply that urban growth and employment should only be created in selected settlements.

Unlike many countries, Nepal has a unique opportunity for a decentralized settlement system. However, given the higher costs of job creation and supporting infrastructure in the Hills, the HMG will be more successful in fostering urban growth in the Terai and Inner Terai towns.

During this study, the UDA team concentrated on Nagar Panchayats, and was thus unable (due to time constraints) to gain an appreciation for the functional relationships of village and towns. This issue merits further consideration.

The following provides more specifics regarding the proposed functional roles of settlement types:

Kathmandu Metropolitan Area

The Kathmandu Metropolitan Area will continue to serve as the penultimate center of Government and related functions and as a specialized service center. Its primacy and role as an industrial center is expected to decline but certain types of light industry to serve its important urban market is appropriate. Much greater attention needs to be given to the Kathmandu Metropolitan Area as a functional unit unto itself and its regional (rather than national role). Key areas of concern are preservation of the Valley, historical monuments, and more compact and orderly development.

Principal Terai Settlements

The principal Terai settlements of Biratnagar, Janakpur, Birganj, Bhairawa, Nepalgunj, Dhanghadi, and (Mahendra Nagar) are in varying degree economic centers that have demonstrated growth potential. These settlements have (or will have) locational advantages with respect to:

- Transport linkages with India, Hill areas on a North-South axis, each other on an East-West axis, and their own agricultural hinterlands.
- Access to power (though Biratnagar and Nepalgunj will not be served by the national grid until 1988, and Mahendra Nagar and Dhangadi until a later date).
- Access to skilled and unskilled labor force (including national, regional, and international sources).

In addition, they have existing internal service networks which, though inadequate, are being upgraded (i.e. water supply networks, power, telecommunications, etc.).

Every effort should be made to ensure that these centers are provided with the support (particularly planning and infrastructure) they need in order to blossom into organized urban centers.

The HMG is understandably concerned with large urban development so close to the border, but the narrowness of the Terai suggests that the "in-land" displacement of economic activities would serve no particular purpose. Rather, it is important to take advantage of the possibilities of agglomeration which these existing settlements provide.

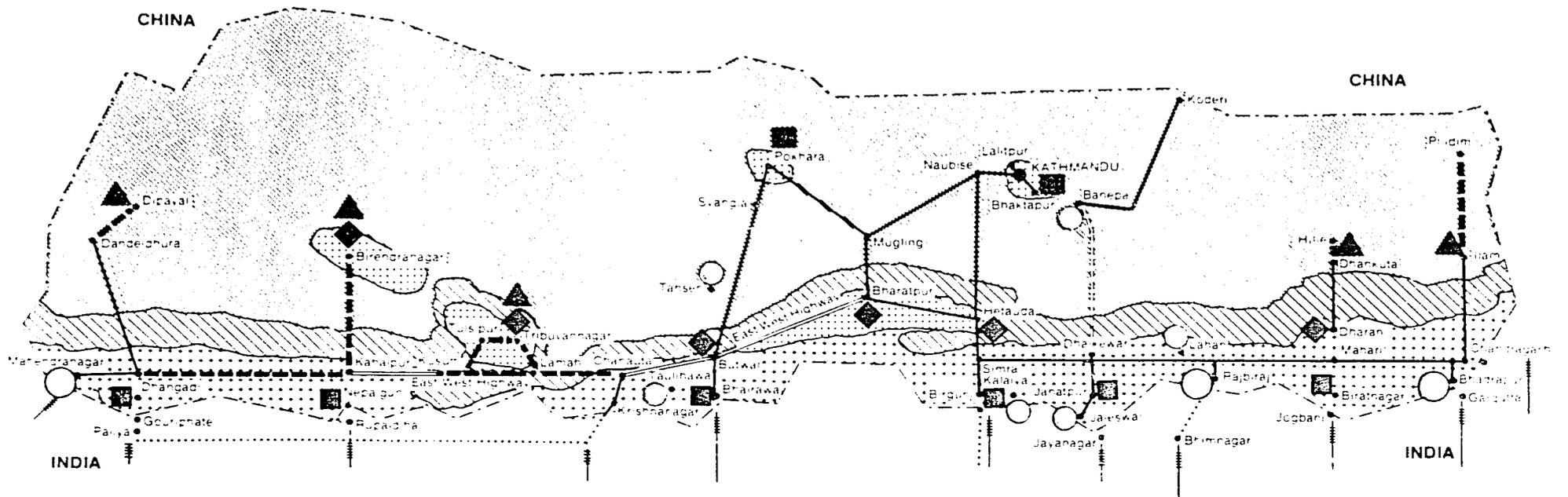
Foothill and Inner Terai Settlements

There is some differentiation between Dharan and Butwal as Foothill settlements and the Inner Terai settlements in the Central and Mid-Western regions. In keeping with a Hill/Terai transitional role the settlements of Dharan, Hetauda, Bharatpur, Tribuvan Nagar and Birendra Nagar are good candidates for such functions as major social service centers such as regional education and health facilities. In keeping with a principal strategy recommendation, vocational training centers should be located in each of these settlements. The location of labor supply centers in Hetauda and Butwal are indicative of the need for such facilities. However, the scope and quality of training should be increased substantially. The transition centers, should also serve as the principal marketing, distribution, and service centers of their "Hill" hinterlands. Potential for this activity is already demonstrated in Dharan, Hetauda, Bharatpur, and Butwal. The transition centers generally have demonstrated important economic growth potential. Birendra Nagar and Tribuvan Nagar have indicated less growth potential and are consequently also considered as Public Service Centers.

In general, job creation and infrastructure costs are higher than in the principal Terai settlements but substantially less than in Hill settlements. Thus, there is also scope for substantial urban growth. Water supply is a constraint as ground water is not known to exist in these areas and surface water would require expensive treatment.

Tertiary Hill Settlements

Settlements such as Dhankuta, Ilam, Tansen, and Dipayal cannot realistically become economic growth centers. Furthermore, within their respective development regions, they are likely to be superseded by the "transition" centers as principal marketing and distribution points for their respective Hill regions. Dhankuta, Dipayal, and Ilam have been designated as primarily public service centers. Other tertiary settlements such as Tansen and Banepa are indicated as primarily trade and marketing towns. But Tansen does have some regional and administrative functions.



UDA SETTLEMENT SYSTEM PROPOSAL: NAGAR PANCHAYATS

TERAI

- Principal Economic Centers
- Secondary Economic Centers
- Tertiary Centers

INNER TERAJ & FOOTHILLS

- Transition Centers
- Joint Public Service & Transition Centers

HILLS

- Special Regional Centers
- Public Service Centers
- Tertiary Centers

Legend

- East West Highway
- All Weather Road
- Fair Weather Road
- Roads in India (All Weather)
- Railway
- International Borders
- Hills & Mountains
- Foothills
- Plain
- Valleys

Secondary Terai Settlements

These settlements include Dhanghadi, Rajbiraj, and Bhadrapur. Each of these settlements could become important in their own right as they are situated on North-South corridors. However, they have not reached sufficient size to be considered "principal" Terai settlements and they are likely to be superseded by the larger Terai settlements in regional functions.

Tertiary Terai Settlements

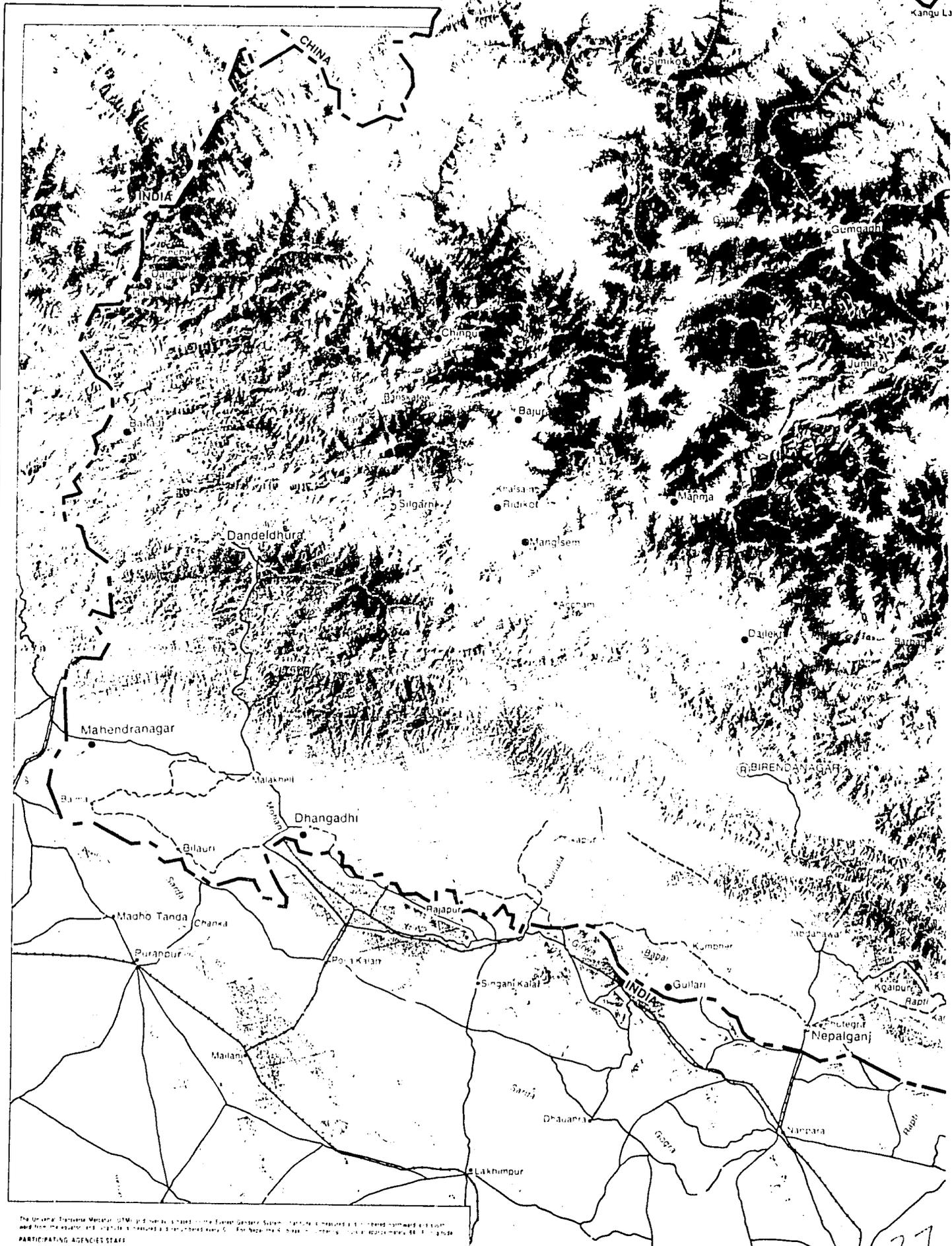
These settlements include Lahan, Taulihana, Jaleswar, and Kailaiya. These settlements are expected to remain rural service and marketing centers. Lahan is somewhat of a special case because of its location on the East-West Highway.

C. CONCLUDING THOUGHTS

Nepal must be seriously concerned with the future of its towns and cities and seek to maximize their contribution to national economic and social development. The opportunity exists that, with timely planning and action, many of the most serious urban problems can be avoided and capital resources conserved through efficient prioritization. Nonetheless, the capital resource constraints facing the nation and the priorities of agriculture and national networks must be recognized. This means the early stress of national urban policy should be focused on planning and urban management capacity buildup, the facilitation of the widest possible private sector involvement in the urban economy and shelter construction, and the selective improvement through public investment in the urban infrastructure networks (with cost recovery).

The critical issue will be the mobilization of the needed political will to address these difficult urban problems now before they get out-of-hand.

Available Document



The Universal Transverse Mercator (UTM) projection is based on the Everest Spheroid. Latitude is measured as it would be measured in a straight line from the equator and longitude is measured as it would be measured on a sphere. For Nepal the UTM zone is 48Q. The UTM grid is shown at approximately 1:50,000 scale. PARTICIPATING AGENCIES STAFF

NEP

SYMBOLS

- Ⓡ Regional Development Centers
- Ⓢ Zonal Headquarters
- Ⓣ District Headquarters
- Towns; ○ Villages
- Towns outside Nepal
- ▲ Mountains over 8,000 meters



