UNDERSTANDING NEPAL’S DEVELOPMENT
(CONTEXT, INTERVENTIONS AND PEOPLE’S ASPIRATIONS)

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Preface

Nepal entered the modern era only after it was declared a democratic country in 1951. Nepal became a member of the United Nations in 1955. Nepal’s first five-year plan was introduced in 1956, and, at present, it is running its ninth five-year plan. Friendly countries since then have liberally assisted Nepal’s development, both in cash and kind.

Both scholars and the critics have attempted to understand Nepal’s past development. Blakie, Pierce, Cameron and Seddon’s Nepal in Crisis (1980); Bista’s Fatalism and Development (1994); Shrestha’s In the Name of Development (1997) and Panday’s Nepal’s Failed Development (1999) are to mention a few.

These books are extremely helpful in understanding Nepal’s development, but there is an even greater need to put Nepal and the Nepalese in context so that development and/or underdevelopment is better explained and understood. In doing so, we have attempted to put Nepali society in perspective. The book thoroughly narrates the social structure and the various developmental interventions designed to improve the quality of life of the Nepali people. We have also attempted to make an assessment of Nepal’s performance. Unlike other books, “Understanding Nepal’s Development” describes and explains the readers Nepal’s sociocultural and geopolitical milieu, documents Nepal’s achievements towards meeting people’s aspirations and establishes a path for desirable new directions urgently needed for the new millenium.

This book is intended to help native and foreign students and scholars who want to learn about Nepali society, culture, government, bureaucracy, politics, development interventions and performance. We do not claim to have included all the contemporary issues in Nepal’s development, nor do we claim that this is totally a new and undisclosed area. In particular, the book focuses more on Nepal’s rural and political economy and the society and culture. It also provides an analysis of natural resource management practices and critically reviews the bureaucratic practices and governance in Nepal.

This book is the outcome of an immense and diverse experience accumulated over years by the authors in various roles including university professors, researchers, outreach persons, trainers, administrators and bureaucrats.

The insights provided by the practitioners of development inside Nepal and the United States; by colleagues, friends and university students; by critics and admirers of Nepal alike were exceptionally helpful in putting ideas and themes together. We would like specifically to acknowledge the thought-provoking discussions on various topics included in the book by the students of the Michigan State University’s Study Abroad Program in Pokhara and the Cornell Nepal Study Program in Kirtipur and the master’s-level students in the Department of Sociology and Anthropology at Tribhuvan University, Nepal.

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Introduction

Understanding Nepal’s Development is predicated on the knowledge of a mixture of native and alien perspectives on development. This piece of work is different from others because the interpretations are blended with cross-cultural richness and the context is narrated with a fully native rigor. We believe that interpretations become more meaningful if the context is well set. The state of Nepal’s development is more governed by multiple factors, and endogenic and exogenic factors simultaneously have played their roles in shaping the nation’s destiny.

The book is divided into three parts. The first part contains three chapters, one on the society and culture; another on the people, the land and the economy; and the third on contemporary issues.

The society and culture are important not only because they embody and reflect values, beliefs and norms of the Nepali people but also because they shed light on how the society is regimented and stratified. Because this has implications for development, we argue that the typical practice of grouping the Nepali people into two categories - as caste and ethnic groups – leads to a misunderstanding. All Nepalese can be grouped within one or the other ethnic groups, and the caste system has a varying influence on these ethnic groups. They are to be seen as mutually inclusive and not exclusive constructs.

Another social institution that influences human life on a day-to-day basis is religion. Because Hinduism and Buddhism are the two prominent religions in Nepal, the key features of these religions are presented in this book. Nepal is unique in the world in that an ideal harmony can be seen between Hinduism and Buddhism. This harmony is manifested by the mutual respect and religious practice followed by the Hindus and the Buddhists. These religions attach higher values to morality rather than the material growth and commercialization, so an explanation of the present state of development of Nepal may be inherent here.

Festivals and rituals help promote group cohesion and solidarity. Their practice perpetuates one’s traditions and maintains cultural heritage. An attempt has been made to describe some of the main festivals of Nepal and life cycle rituals to offer a bird’s-eye view of Nepal’s culture.

The second part is devoted to the land, people and economy. We believe that all socio-economic and cultural weaknesses and/or constraints can be converted into opportunities if proper strategies are developed. But Nepal’s geopolitical situation until now has been more an obstacle to change and development than a strength. There is a pervasive mindset in Nepal that it is a small country and that unless it is aided and abetted by India and China, it is destined to perish. So most of Nepal’s development practice is governed by this feeling of inferiority and full to partial surrender. The donors, too, are convinced of this and have exerted enough pressure on Nepal to make its policies relevant to these neighbors, particularly India.

Nepal is a plural society with a plethora of rich cultural diversity. Within an area of 55,000 square miles, this rectangular shaped country has spectacular ecological variations. It is a multicultural, multilingual and multireligious country. It has flat plain land most suitable to agriculture and mid-hills with tremendous potentials for horticultural enterprises, forests and water resources. The majestic mountains are unmatched anywhere in the world. They attract
hundreds of thousands of tourists and mountaineers. Much of the potential still remains to be exploited.

The economy has not gained any momentum because the rate of population growth almost equals the poor rate of agricultural growth. There has been similarly poor performance in the areas of trade, industry and public finance.

Within this context, we have identified the socioeconomic, political, environmental, and women’s and gender-related issues as the important ones that merit immediate attention. These contemporary issues are described in part three of this book.

Unplanned migration (hill to Tarai, rural-urban and international) has created significant social problems, such as environmental degradation, pressure on social services and loss of job opportunities. The adoption of liberal economic policies without adequate preparation has hindered native industries, which are still at the embryonic stages. Half of the population is under the poverty line. Women are one of the most disadvantaged segments of the population. They are not in the mainstream of development. Their life expectancy is less than that of the male population. The average life expectancy of the Nepalese is also one of the lowest in the world. Unchecked population growth has a tremendous negative impact on forest resources and the environment. Landslides, forest degradation, and water and air pollution are prodigious problems. Political stability was assumed to be a precondition to economic progress, but three decades of the Panchayat system did not result in any economic progress. The progress made after the introduction of the parliamentary multiparty democratic system in 1990 is also not noteworthy. There has been a gradual erosion of ethics and morality among the majority of the politicians in the country, and people at large have lost their faith in the politicians. This chapter concludes with a section on ethnicity and nation building. It has been argued that ethnic and caste groups are mutually inclusive constructs, not mutually exclusive constructs. It is debated that the conventional ethnic-caste paradigm of understanding the Nepali society is a faulty and unscientific approach.

The fourth part of the book highlights the current state of development intervention in Nepal. Our analysis includes development intervention and performance in the areas of forestry, agriculture, water resources, health and education.

Most of the people in Nepal are engaged in agriculture. This sector has been a major area of focus in most of the country’s five-year plans. However, the conditions of the majority of the farmers have not improved nor has this sector significantly helped in improving the economy of the country as a whole. Nepal was an exporter of food grains until recently, but after the mid-1980s, it became a food-importing nation. Farming is subsistence in nature, and the yields of important food crops have either remained constant or declined. The land distribution is skewed, and the average size of land holdings is very small -- less than a hectare for an average family size of six.

Community forestry has had some positive impact on the management of forests, and it has been found that the more the beneficiary farmers participate in forest management, the better the
The national parks have been able to conserve biodiversity, but a much needs to be done to secure the participation of the people surrounding the national parks.

The status of forests in terms of the crown percentage has declined. The Nepali government is hesitant to commercialize the forest resources. It is fair to say that the government is probably losing more by not scientifically harvesting and managing the forest resources than by preserving most of the over-matured forest resources, including the hardwood timber.

Water resources have not been harnessed properly. Progress irrigation development has been very slow -- most of the farming in Nepal is still dependent on monsoon rain. Though farmer-managed irrigation systems have been found to be more effective and efficient, the government has yet been unable to modify its larger-scale irrigation efforts to achieve similar effectiveness. Unfortunately small-scale farmer-managed irrigation schemes cannot really fulfill the vast need for irrigation water.

The poor situation in the natural resources arena has had a tremendous deleterious impact on the majority of the people. They are mostly poor and illiterate, and health care is not within the reach of the majority of the population.

The last part of the book deals with people’s aspirations and critiques of Nepal’s achievements and makes an attempt to understand development in Nepal.

Political change was thought to be the panacea for all sorts of human misery in Nepal, because the multiparty parliamentary democratic system would empower the Nepalese people. But, in spite of the political change a decade ago, and ultimately to their great despair, the majority of the people have remained untouched; they are still not partners in development. People’s aspirations have not been realized and the pace of development has been very slow. Corruption and greed tend to be globalized, and Nepal has been a fertile land for their nurturing. The externalities have been instrumental in helping a new rich class evolve that is loyal to foreign concepts and ideas and is readily prepared to experiment in Nepali soil without bothering to test first and modify. It is this group of people who are politically and economically dominant in Nepal while the majority of the Nepalese have been left behind. If this trend continues, people could unite and revolt against what is happening for greater justice and peace.
Part One

Society and Culture

The Concept of Caste and the Caste System in Nepal

“Caste” defines certain groups in a hierarchy of ritual purity and pollution and prescribes intergroup behavior in certain spheres, particularly marriage and commensality (Bennett, 1983). Kroeber defined caste as an endogamous and hereditary subdivision of an ethnic unit occupying a position of superior or inferior rank or social esteem in comparison with other such divisions (Kroeber, 1930). This definition assumes caste systems as systems of social stratification—i.e., an aggregate of ranked people that is unusually rigid and birth ascribed and permits no individual mobility. A caste system can be said to occur, says Berreman (1965) when a society is composed of birth-ascribed, hierarchically ordered and culturally distinct groups (castes).

Social stratification occurs in every society. Citing from Sorokin, Klauss (1980) mentions that social stratification means differentiation of a given population into hierarchically superposed classes. It is manifested in the existence of upper and lower layers. Its basis and very essence consist in an unequal distribution of rights and privileges, duties and responsibilities, social values and privations, social power and influences among the members of a society. Stratification is a system by which adult members of a society enjoy differential rights of access to basic resources. These resources may be the physical things needed to sustain life, either directly (air, water and food) or indirectly (things that can not themselves be consumed but are required to obtain other things). Outstanding examples of the latter are land, raw materials for tools, water for irrigation and materials to build a shelter. The presence or absence of differential access to basic resources can be obvious from the fact that either such resources are free to all or certain persons or groups have control of them and all others must apply to the controllers for access.

Membership in castes is determined by birth. A common means of guaranteeing this status is by prescribing endogamous marriage in the caste and ascribing to the child the caste affiliation of its parents. That a caste system is a hierarchy implies that it is a system of differential evaluation—differential power and rewards, and differential association; in short, a system of institutionalized inequality. Castes are ranked ultimately in terms of the shared “intrinsic worth” that is ascribed by birth to the individuals who constitute them. This criterion of rank may be defined and expressed in many idioms such as purity (as in India), honor (as in Swat) or genetically determined capabilities (as in the United States), but always those who are high regard themselves as more worthy than those who are low (Berreman, 1965).

We view a caste system as different from a class system. Unlike the caste system, a class system defines the rank of its members according to their individual attributes and behavior. A member in a particular caste exhibits attributes of that particular caste because he is a member of it. In a class system, one is a member of a class because he displays the attributes of that class. Individual mobility is theoretically impossible in a rigid caste system, but it is not so in a class system.
Nepal is well known to the world for its majestic mountains and heroic people, the Gorkhas. It has nurtured two great religions of the world, Hinduism and Buddhism, and maintained the religious and ethnic/caste coexistence. It is in Nepal that the Hindu and Buddhist civilizations dovetail and merge. Nepal is an ancient civilization; so are its society and culture. Though religion has always been a central feature of Nepali life, in fact we have never encountered any religious fanaticism in Nepal (Bista, 1994). On the contrary, Nepalese celebrate colorful festivals, observe various rituals, and respect and accommodate diverse religious traditions. Prominent are Shamanism, Shaivism, Buddhism, Trantrism and Vaishnavism.

In the past Nepal’s socio economic situation and, more so, the South Asian socio economic situation were characterized by the absence of stratification and the presence of equalitarian social groups that became transformed, over time, into a complex, stratified caste system (Klass, 1980).

In ancient Nepal, the society was equalitarian. The caste concept was introduced in Nepal in the beginning of the Lichhavi era in the form of Vaishnavism, and when it did arrive it had to adapt itself not only to Shamanism and Shaivism but also to Buddhism (Bista, 1994). The Nepali people appear to have preferred an open social order rather than one based on caste principles as is prevalent in India, where there is much emphasis on the dialectics of the pure and impure (Dumont, 1970).

Hindu caste culture has a varied presence in Nepal, in terms of its prevalence and its significance.

It was during the 14th century that king Jayasthiti Malla introduced caste principles and conduct in Kathmandu valley (Bista, 1994). But native people in the Kathmandu valley continued their own ways of religious practices, unlike the Hindu code of conduct. Kathmandu valley was effectively closed toward the latter part of Malla period. During the 15th century, in king Pratap Malla’s period, the people of Kathmandu valley came to be known as Newars and the land as Nepal (Acharya, 1952; Doherty, 1978; Malla, 1981; Bista, 1994). During the 18th century, when the country expanded and several smaller states were merged into Nepal, the Newar people were treated as a separate ethnic group. Jang Bahadur, the first Rana prime minister in the 19th century, to raise his own status succeeded in introducing caste system to a much greater degree than the Malla kings who did this 400 years before him. All Newari-speaking people were put into a single caste category at the lower level, known in local parlance as Matwali, meaning liquor drinkers. But during that time, among the Newars a complex caste system developed. The classical Varna model, as prescribed in the ancient codes as the Manusmrtri (Brahmin >Khatriya >Vaishya >Shudra (Touchable and Untouchable) does not exist in Nepal and has been modified to suit the local situation. Nevertheless, discrimination based on caste was legally abolished in 1963.

Ram Shah (1606-33), the king of the ancient kingdom of Gorkha, Nepal, introduced a comprehensive legal code for the first time outside the Kathmandu valley in the Gandaki region. Prescriptions of regulation of behavior according to caste hierarchy were largely ignored. King Prithvinarayan Shah, the descendent of Ram Shah, considered Nepal a garden of four castes and 36 ethnic groups, which he called “Chhattis Varna”. Stiller (1968) maintains that
Prithvinarayan Shah had soldiers from four different peoples-- Magars, Brahmins, Thakuri and Khas. Ram Shah’s code appealed to all Nepalese, who responded to its innate egalitarianism, a sense of justice for all, unlike the Manusmriti codes, which promised legal discrimination and institutionalized social oppression.

People along the mid hills of Nepal were gradually influenced by the Brahmanic culture, and to achieve social status, most of the Khas people coveted the title of Thakuri Chhetri (Matwali Chhetri or simply Matawali) (Sharma, 1971).

Dor B. Bista (1994) maintains that Bahun rituals involved frequent bathing in fresh water. It became difficult to adhere to such practice in the high mountain regions with cold water. The northern Himalayan region was inhabited by the people of Tibetan origin who followed the Tibetan form of Buddhism –Lamaism.

In Tarai, the southern belt of Nepal, three distinct cultural groups practice three different religions. In the eastern Tarai, among most of the Maithili-speaking people, the caste system is intact. In the western Tarai, Tharus are the native people, and they practice Shamanistic religious practices. The third group who moved into the parts of Tarai (east and west) is the Mohammedan people who adhere to Islam.

Most of the Kirat people in the eastern hills practiced the Kirat religion with its gods and goddesses, priests and spirit mediums. The Hindu caste system was less successful in the east than the west. Caplan (1970) maintained that the real practitioners of Hinduism were taken by the Kiratis as attempted political and cultural intrusion by the Kathmandu authorities and were resisted as a politically subversive force. Those high caste Hindus who entered the eastern mountains and hills rather considerably modified their own lifestyle.

The Nepali version of a caste system is not simple. It encompasses not only the Nepali-speaking hill people or the hill Hindu castes but also the numerous Newari-speaking castes of all ranks, the many Tibeto-Burman ethnic groups, the Tibetan-speaking Bhote groups from the high mountain regions, and the Muslim, Hindu and indigenous populations of the southern Tarai belt (Hofer, 1979).

The caste system in Nepal is of recent origin. Within a few centuries of its introduction, there was a realization that it was doing more harm than good and so it was abolished. Strict adherence to the formal code of conduct in any real sense was never observed among the greater segment of the Hindu population in Nepal. Nepal’s pluralism and diversity were recognized and respected by the rulers of the country. Social interaction between the caste and non-caste groups of the Nepali population has shaped the Nepali society as a mosaic of diverse cultures where caste and non-caste groups have partially or fully internalized one another’s ways of living.

Unlike in any fanatic society, in Nepal there has been a vertical mobility among castes and there is no sanction to it. This has been generally possible due to education, migration and intercaste marriage practices. More recently, we have observed that people who make good business are economically better off, and the economic factor has much stronger influence on social status.
with a bearing in upward caste mobility. As the caste system is getting weaker and weaker, the trend towards a less discriminatory society is obvious.

No one should be misled, however, that caste has no bearing at all in influencing sociopolitical and economic decisions. In caste societies, the dominant caste(s) have exercised the power in an attempt to maintain the *status quo*, just as the dominant group in a plural society.

Caste and ethnic affiliation have influenced the division of the people during election times in Nepal. During social conflict, people have partitioned along caste/ethnic lines. There has always been tension and conflict of various degrees, which become not only obvious but at times subversive. After each conflict, the caste/ethnic power balance changes and in some cases, an improvement in caste/ethnic relations occurs.
Religion

Religion in contemporary Western thought has been increasingly considered a matter of belief and individual intellectual commitment, specifically opposed to ritual conformity, which is often considered empty of meaning and "not compatible with the full development of the personality" (Douglas, 1970). Religion is understood in two ways. The substantive definition entails religion as a system of communally experienced beliefs and practices (institutions) oriented toward a culturally defined supernatural, transcendent realm/beings. It defines what religion is. The functional definition (defines what religion does for individuals and social groups) assumes religion as a system of symbols that acts to establish powerful, pervasive and long-lasting moods and motivations in people by formulating conceptions of a general order of existence and clothing these conceptions with such an aura of factuality that moods and motivations seem uniquely realistic.

Within Nepal, religion, which in the Nepali language is known as Dharma, has a broader meaning. It also means duty, ethics, morality, rule, merit and pious acts. In Nepal's context, people speak of Dharma as something one does (or at least should do), rather than something one believes in. In Nepali usage, Dharma encompasses the performance of specified rites and ceremonies and obedience to ritual prescriptions appropriate to one's place in the social structure, as well as general ethical behavior covering individual actions of compassion, honesty, etc. (Bennett, 1983). Religion has always been a central feature of Nepali life, and Nepal has been a meeting ground for diverse religions. Religious fanaticism is unknown in Nepal. On the contrary, the Nepalese have traditionally observed colorful rituals of various caste and ethnic groups. Though Nepal is constitutionally a Hindu kingdom, the Nepalese adhere to various religions. Hinduism and Buddhism are the two major religions practiced by the majority of the Nepalese.

Hinduism

Hinduism is believed to have started with Sruti, which literally means "which is heard". The great philosophers, called Rishis, perfected themselves by meditation and are said to have heard in their hearts Eternal Truths, taught to their disciples telepathically. Vedas and Upanishads were in Sruti form for a long time. The original name of Hinduism was Sanatana-Dharma, meaning "righteousness forever". The word “Hind” originated from the root word "Indus". Some say, the word originated from a Persian word meaning "river people". Hindu scriptures are written in the Sanskrit language.

The term “Hinduism” has been derived from "Hindu". The non-Muslim people of the south Asian subcontinent called Hindu had no precise word for religions. They were into hundreds of communities and ethnic groups, each having its own religious beliefs, rituals, modes of worship, etc. Finding it difficult to get the names of the religions of these communities, British writers gave them the word “Hinduism” to be used as a common name for all the religions in about 1830. No one actually could be credited to the founder of Hinduism. Some historians trace the beginning of Hinduism to the third millennium B.C. Long before Jesus Christ, nomadic tribes came to India and settled on the banks of the rivers Indus, Ganga and Brahmaputra. The tribes were called the Aryans. After their settlement, a thinking process started that became known as Hinduism.
Hinduism is the religion of the Hindus, a name given to the universal religion that hailed supreme in India. It is the oldest of all living religions. It is not grounded by any prophet. Hinduism is also known by the names of Sanatana-Dharma and Vaidik-Dharma.

Sanatana-Dharma means “eternal religion”. Hinduism is as old as the world itself. Hinduism is the mother of all religions. Hindu scriptures are the oldest in the world. Sanatana-Dharma is so called, not only because it is eternal, but also because it is protected by God and because it can make us eternal. Vaidika-Dharma means “the religion of the Vedas”. The Vedas are the foundational scriptures of Hinduism. Hinduism is the dominant religion of the vast Indian subcontinent, and since the beginning of its history, it has profoundly influenced the lives and thoughts of countless millions. It has left an indelible impression on the entire culture of Hindus, on philosophy, art, architecture, politics, social activities. It is believed that religion gives to a Hindu equanimity of mind in prosperity and adversity, courage to face the problems of his life and a vision of his ultimate spiritual destiny.

Hinduism is not a set of abstract theories unrelated to life or a pile of religious dogmas to be accepted with blind faith, and it promises to its devotees a direct insight into reality and the grounds for the acceptance of that insight. Philosophy saved the Hindu from religious intolerance, and religion save him from the ivory-tower attitude of cold intellectualism.

In the Hindu tradition, religion saves the aspiring devotee from avoidable errors and pitfalls, work purifies his heart, meditation creates concentration of mind and thought process, love gives him the urge to move forward, faith supports him with courage in the hours of despair and the grace of God bestows upon him the final fruit of liberation.

The Pantheism of Hinduism

Orthodox Hindus have believed in every kind of theism (belief in the existence of a god or gods), polytheism (many gods) and pantheism (worship of all gods of different creeds, cults or peoples indifferently). They have worshipped any object that they preferred, or practically none. They followed any standard of morality or almost none. Yet they have been recognized as Hindus in good and regular standing as long as they have not flagrantly violated the rules of caste or for that offence been out-cast.

It is to be noted that Hindus worship goddesses, too. Saraswati is the Goddess of wisdom, Kali is the goddess of strength, and Laxmi is the goddess of wealth. They are worshiped by all the Hindus.

Partial Amalgamation and the Concept of Incarnation (Avatara)

With a view to unifying this mushrooming pantheon, the monotheistic philosophy that was propagated here is one God, one supreme reality (Brahman) and various personified gods, goddesses and animistic objects of worship are incarnations of gods. While God himself was indestructible, the various incarnations in which He descended to Earth in the form of an ordinary mortal had to go through the cycle of birth and death. The incarnation idea helped to
partially unify the plethora of deities as different manifestations of a single divine entity. It also facilitated the absorption of deities from other religions and tribal cults, which had been outside the pale of Hinduism.

Many deities are themselves the results of amalgamation of more than two deities. For instance, we have Hari-Hara, who is an amalgamation of Hari (Krishna who is an incarnation of Vishnu) and Hara (Shiva). This amalgamation of the two recognized principal deities Vishnu and Shiva was undertaken to ease out the dualism in the Hindu religion due to the existence of the two principal sects, Vaishnavism (worshippers of Vishnu) and Shaivism (worshippers of Shiva), who were frequently at loggerheads with each other.

**Hindu Artifacts**

One can’t find a Hindu temple without an idol. Any object to be worshipped has to be personified. Propitiation of the gods takes place through the chanting of hymns (mantras) by a priest. But as mentioned elsewhere, the blending of different religions over generations has given rise to significant exchange of customs, traditions, beliefs, rituals, etc., among the various religions. Purification is highly valued, and it is usually done after sprinkling holy water with hands and legs properly washed and prayers properly performed. River bathing in the morning among the Hindus is an auspicious act. Fire plays a pivotal role in consecrating religious ceremonies, marriages, etc. The vermillion (red powder) and saffron/white Tika, in the case of a widow, on the forehead and along with the tuft of hair as the pigtail (Tupi) and the sacred thread (Janai) are the external symbols that proclaim a person’s adherence to high class Hinduism. Saffron is thought to be an auspicious color. Ascetics (Sadhus and Sanyasis) also wear clothes of this color. A flag is placed on the top of a temple. Hindus greet each other with two hands (palms) joined together and by saying “Namaskar”.

**The Key Features of Hinduism**

**The Four Ashrams (stages of life):** Traditionally the life of a person (100 years) was divided into four stages: Brahmacharya (childhood and celibate youth), Grihasthram (householder), Vanaprastha (devotion to spiritual pursuit) and Sanyas (ascetic).

The first 25 years for a Hindu youth was for acquiring education, during which he would observe sexual abstinence. After this stage, he would marry and become a householder and discharge his familial and social obligation. By 50, he gradually detaches himself from worldly activities and engages in meditation. At 75, he would renounce the world and become a recluse and concentrate upon the spiritual quest. The external signs of a person becoming a Sanyasi were the unshorn hair and beard, the growth of fingernails, the forsaking of normal ablutions, living on donated food and having one meal a day.

A Sanyasi was supposed to rise above the requirements of normal material life and devote himself to the seeking of truth. Persons of any caste and ethnic group could become Sanyasi.

**Rebirth (Punarjanma) or transmigration of souls--Karma and Moksha:** Hindu religion believes in rebirth and its goal is Moksha, or salvation. When a person dies, his soul passes into
another body and again into another body until the soul can be freed from all kinds of imperfections (sin) done in the previous life periods. Moksha is the liberation from rebirth and union with the Supreme Soul.

**The Four Purusarthas or goals of life:** Dharma, Artha, Kama and Moksha constituted the four goals of life. Dharma stands for religion as well as morality, righteousness and duty. Artha means attainment of wealth; Kama, sexual pleasure; and Moksha, release from the birth cycle, the final goal that an individual has to strive for.

**The Three Paths to Moksha:** The attainment of knowledge (Gyan Marga), devotion to god (Bhakti Marga) and the path of action (Karma Marga) are the ways to the real attainment of Moksha, the union of the individual with the Supreme Soul.

**The concept of Avatar or incarnation:** In Hindu religion, the Trinity or three gods—Brahma, Vishnu and Maheshor (Shiva) are very important. Brahma is the creator, Vishnu is the preserver and Shiva is the selective destroyer. They are regarded as the supreme being. The concept of 'Avatara' or descent of God in human form is another aspect of Hindu thought. When problems arise, the god takes the form of a suitable creature (another god, a prophetlike being) and solves the problem and then disappears.

**Religious Leadership and Intellectual Standpoints**

**Adi Guru Shankaracharya** is the only Hindu spiritual leader who is almost universally accepted in this religion. His philosophical standpoints of *Vedanta* were effective in overshadowing Buddhism on the philosophical and intellectual levels. Shankaracharya hails from a south Indian Brahmin family and is said to have lived around the eighth century. He seems to have had his basic education in a Gurukula, a traditional monastery where education was imparted in ancient times. Shakaracharya continued his studies and discourses, for which he traveled throughout India. On the way to institutionalizing Hinduism, he established monasteries (Mutts and Matha) under the charge of bishops (Jagatgurus). He established four such Mutts in different parts of India. Although these institutions could not institutionalize Hinduism on the scale of other religions such as Christianity or Buddhism, they left a lasting mark on the Hindu ecclesiastic organization.

The adherents of the Hindu religion follow various rituals and festivals. In the rural villages of Nepal, local priests help perform these rituals and festivals. Usually the priests learn to conduct various festivals and rituals from their fathers and pass the knowledge to the next generation. There does not exist any institution where people could get formal academic training in religion. Religion is seldom taught in colleges, which have no departments of religion. However, the only Sanskrit University in the district of Dang, Nepal, and some Sanskrit secondary schools, offer some courses on the practice of Hindu rituals.
Buddhism

Lord Buddha was born in Lumbini, Nepal in 623 BC. His personal name was Siddhartha, the son of King Suddhodana of the Shakya dynasty. His mother was Queen Mayadevi. The young prince was raised with every luxury at his command until he left his palace.

The beginning of Buddhism traces back to the birth of Buddha. During that time in the bordering towns of India, the Indian society and its religion were undergoing several transitions. The texts known as the Upanishads reflect the changing religious and philosophical thought of the time. This period was marked by the emergence of a powerful royalty, rich merchants and the growth of monasteries, where men and sometimes women could dedicate themselves to a life of meditation and spiritual thought. The factors that influenced the growth of Buddhism the most were:

1. The shift from the performance of sacrifice to personal renunciation.
2. The growth of monasteries supported by wealthy kings and merchants.
3. A questioning of the superior position of the priests in the society.

Siddhartha, confronted with the reality of life and the suffering of mankind, decided to find a solution--way out of this universal suffering. During the early period of his life, after a few years of marriage (he was married at the age of 16 years) and the birth of his first child, Rahul, the 29-year-old Siddhartha left the palace and became an ascetic in search of solutions for all kinds of miseries.

There are four major events in the life of the Buddha: his birth, renunciation, enlightenment and attainment of eternal bliss (nirvana) after his death.

For six years, the ascetic Siddhartha wandered in the valley of the Ganges, meeting famous religious teachers, studying and following their systems and methods and submitting himself to rigorous ascetic practices. They did not satisfy him. So he abandoned all traditional religions and their methods and went his own way. It was thus that one evening, seated under a tree (since then known as the Bodhi-or Bo-tree, “the Tree of Wisdom”) on the bank of the river Neranjara at Buddha-Gaya (near Gaya in Bihar, India), at the age of 35, Siddartha attained enlightenment, after which he was known as the Buddha, “The Enlightened One”.

After his enlightenment, Gautam Buddha delivered his first sermon to a group of five ascetics, his old colleagues, in the Deer Park at Isipatana near Benares, India. From that day, for 45 years, he taught all classes of men and women--kings and peasants, Brahmins and outcasts, bankers and beggars, holy men and robbers--without making the slightest distinction between them. He recognized no differences of caste or social groupings, and the way he preached was open to all men and women who were ready to understand and to follow it.

At the age of 80, Buddha passed away in Kusinara in Uttar Pradesh, India.

As time passed, Buddhism developed several schools. Today there are only two main schools of Buddhism. One is Theravada or the system or school of the elders, considered to be the orthodox
and original form of Buddhism as accepted and followed mainly in Sri Lanka, Burma, Thailand, Cambodia, Laos, Chittagong (Bangladesh) and Assam (India), and reintroduced in Nepal about a century ago. This school is also known as *Hinayana* which means “Small Vehicle,” a term coined and used by the Mahayanists. The *Mahayana* or “Great Vehicle,” is a form of Buddhism that developed later. Now it is mainly followed in China, Japan, Korea, Tibet, Vietnam, Mongolia and Nepal. Buddhism is also followed in the United States, Europe, Australia and the Soviet Union to some extent.

**Buddhism as a Practicing Religion**

Profit is the ultimate goal of development in the so-called modern era. Profit involves *greed* and *ill will* that foster *ignorance*. In Buddhism, these are known as the triad of evils. The goal of Buddhism is the eradication of the triad of evils.

Development certainly involves change. But in the name of development, we have lost our pride, dignity and culture. For example, while trying to improve agricultural practices, we have been gradually losing soil fertility. Mechanization has adversely affected our traditional labor system. Mutual help and respect have drastically declined. These are the social repercussions of “development”. Development focuses on the economic or material aspects, whereas religion emphasizes the moral and spiritual aspects of societal development.

Self-help is the foundation of sustainable development. Buddhism helps only those who help themselves. As has been very rightly said, Buddha is like a doctor who diagnoses the disease and prescribes the medicine. But it is the patient who takes the medicine. It is entirely up to the patient to obey or disobey the doctor. Therefore Buddha says, one is the master of himself--who else could be the other master? Man is his own master and no higher being sits in judgment over his destiny. Buddhism teaches self-respect. According to Buddha, man’s emancipation depends on his own realization of truth, not on the benevolent grace of a god or external powers as a reward for his obedience and good behavior.

It is generally assumed that physical development will automatically lead to spiritual development, which is in most cases not true. Does quantitative growth automatically lead to peace and fulfillment? Buddhist philosophy says that one’s livelihood should be honorable, blameless and harmless to others. If this is so, one could question whether the present day development is leading us to a harmless, peaceful and harmonious society. Development should require an abstention from earning a living in any way that harms others.

Furthermore Buddha guides us in the proper use of our income in the following way (Sugandha, Class Note, 1997):

1) One-fifth of one’s earning is used to make oneself, one's parents, children, wife, and workmen happy and live in comfort.
2) One-fifth is used to share this happiness and comfort with one's friends.
3) One-fifth is used to make oneself secure against all misfortune.
4) One-fifth is used to make the fivefold offering:
   - To relatives by giving help to them.
   - To guests by welcoming them.
   - To the departed by dedicating merit to them.
To the king--i.e., to the government--by paying taxes and duties and so on.
To the deities--i.e., those beings who are worshiped according to one's faith.
5) One-fifth is used to support those monks and spiritual teachers who lead a pure and
diligent life.

One must make a note from these teachings that Buddha's main focus is sharing or *dana.* The
concept of sharing, which could be in the form of material, physical or spiritual, is pivotal for the
modern concept of co-operation and development.

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**Development and Morality: Buddhist Point of Development**

*Challenging the modern world and the social problems associated with development, religious
authorities in many Buddhist countries are speaking out on a variety of contemporary social and
economic issues. It included the increasing gap between the rich and the poor in the developing
world, the exploitation of women in the workplace and as prostitutes, the scourge of AIDS, and
the destruction of the natural environment. In a practical sense, the monastery served local
communities as school, orphanage, nursing home for the elderly, bank, pharmacy, and
counseling center.*

*Looking at all these developments based on Buddhism it is obvious that Buddhist way of
development emphasizes the principle of Sammajana or good individual which will lead to
Sammasamaj or good society. Development from a Buddhist perspective visualizes equality,
love, freedom, and liberation as the ultimate goals. A Buddhist community--be it a village or a
nation--would work for harmony and for awakening, by getting rid of selfishness of any kind--be
it greed, hatred, or delusion. Such development would entail truth, beauty, and goodness--be it
big or small. Definitely the material development will succeed only with moral development as
its foundation. Development without morality is achievement without meaning. Morality
provides us with a balance, in order to counter the undesired roots of development which are
confusion and madness.*


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**Buddhism in Nepal**

In Buddhism, Buddha was considered mortal. The primary goal was Nirvana. It could be
achieved by extinguishing avarices. As the means to this end, the Buddha prescribed a
disciplinary eightfold path: to be followed in company with other disciplines. In the third century
B.C., the Theravada communities in the Kathmandu Valley joined the adherents of a new
doctrine, Mahayana (Great Vehicle) Buddhism. Tantric Buddhism was known in the Kathmandu
Valley by the seventh century A.D. (Lichchavi inscriptions). By the end of the 12th century, a
change came to Buddhism, and monasticism started to decline. Hindus and Buddhists were
slowly becoming a single caste-oriented community that conformed to Hindu social tradition.

Then another change came into these societies. Highly respected Brahmin priests, Vajracharya
and Sakya-bhiksu, began to marry. The Vajracharyas commanded the highest rank in the
religious aristocracy if they confirmed their status by the observance of the proper initiation rites. The Buddhist community essentially became a formally caste-structured counterpart of the Hindu one, with caste automatically conferred by heredity. Shakya assisted the Vajracharya and both of these groups gained hereditary castelike status. The destruction of viharas in India by Muslims made people move to Kathmandu and to shelter in viharas. About the mid-14th century, under state coercion, the Buddhist community began to drift progressively into the Hindu fold. The exception was King Siddhinarasimha Malla (A.D.1619-1661), who did not sanction repression of the Buddhist faith. He himself built new viharas, offered homage to Buddhist divinities and was an ardent devotee of Avalokitesvara in the form of Rato Matsyendranath. Buddhism survived in the Kathmandu Valley until the end of the Malla period because of the benign influence of Tibetan Buddhism. By the 17th century, Tibet had become the holy Buddhist land. During the king Pratap Malla’s rule, Newar traders from Kathmandu Valley began to travel regularly to and from Lhasa and to even settle there and in Kuti. The majority of the traders were of Manandhers, Tamrakars, Tuladhars, Chitrakars, Kansakars and so on, who were traditionally lay Buddhists. Their casteless structure in Tibet had an influence in Kathmandu. This homecoming revitalized the doctrine and almost-forgotten ideas respecting casteless social organization and the Buddhists’ respected role in society. This operated as a powerful brake and deterrent to the Buddhist drift into Hinduism. They also brought with them Tibetan artifacts. Throughout the Malla period, new viharas and stupas were constructed, and the new Buddhist cult rose and flourished. Even Siddhinarasimha Malla moved, rather than destroyed, a vihara in the path of his expanding palace. During the Malla period, in the late 16th century, two-thirds of the Newars were Buddhists (Regmi, 1999). Tantric manifestations were already in practice. Jamuna Guvaju was the great Tantric of this era.

**Buddhist Philosophy in a Nutshell**

**Teachings of Buddha**

There are **four noble truths**. They are: there is suffering; there is a cause of suffering; there is a cessation of suffering; and there is a way to bring about for the cessation of suffering.

The **eight folds paths** to the cessation of suffering are: right faith; right resolve; right speech; right action; right living; right effort; right thought; and right concentration.

There is the doctrine of **dependent origination**. Buddhism believes in a theory of cause and effect. We see an effect only because something has happened. That is to say, an act gives rise to an effect. This doctrine seeks the cause of suffering and the way to stop suffering. Buddhist philosophy believes that, ultimately, ignorance is the cause of suffering. And knowledge is the way to end ignorance.

**School of Buddhism**

There are mainly three schools of Buddhism. Their key features are given below. **Hinayana (Smaller Vehicle):** Saying of elders is duly regarded. The main scripture is the tripitaka. Its goal is nirvana (salvation). The ideal saint is Arhat. There should be a personal effort for liberation. There is a concept of God. And there are rules for the followers.
Mahayana (Greater vehicle): There is a concept of the greater vehicle or big ship. Nirvana is not the cessation of misery but a state of bliss. Budhisatwa is the ideal saint. Budhisatwa works for others and teaches compassion, love and kindness. Lord Buddha is worshipped. In this school, there is a concept of God and incarnation. It is spread in Tibet, China, Korea, Laos, Vietnam.

Vajrayana (Vehicle of thunder bolt): This school was introduced in the 10th century in India. Vajra stands for symbol of power (Shakti). Tantra and mantra are practiced. There is a belief in magical power. Tara (spouses of Budhisatwa) is the main divinity. The way to salvation is relatively easier.
Festivals of Nepal

**Buddha Purnima**

Date: Buddha Purnima or Buddha Jayanti, the birth anniversary of the Buddha, is widely celebrated in Nepal, on a full moon night in the month of Baisakh (April/May). The Buddha achieved enlightenment as well as nirvana on the same date. Prince Siddharth or Buddha was born in the month of Vaisakh in 563 B.C. It is also believed that Yashodara, Siddharth's wife, his charioteer, Channa, and even his horse, Kantaka, were born on the same day.

Legend: Prince Siddhartha was born in Lumbini, in the Rupandehi district of western Nepal after his mother dreamt of a divine light entering her womb. Siddhartha was sheltered from the trials and pains of life by his father, but one day the prince went out of the palace with his charioteer, Channa, to see the world outside. He saw poverty, disease and death and was deeply moved by these sights. He became restless and tried to seek the truth behind this eternal cycle of life and death. He left his palace, his wife and child and became an ascetic. He searched for the truth and the reason for the misery of mankind. He attained enlightenment under a banyan tree in Bodh Gaya, a small town in Bihar, India.

Practice: On this day, Buddhists offer prayers in their temples and monasteries. Lumbini in Rupandehi, Swayambhunath and Bauddha in Kathmandu, Nepal, are the main centers of celebration. Though this is a festival of the Buddhists, it is invariably celebrated by the Hindus too.

**Maha Shivaratri**

Date: Maha Shivaratri is celebrated generally in the month of February/March.

Legend: On a moonless night in February every year, occurs the night of Shiva, the selective destroyer. This is the night when he is said to have performed the Tandava or the dance of creation, preservation and selective destruction.

Practice: Devotees of Shiva fast during the day and maintain a long vigil during the night. In temples all across the country, bells ring, sacred texts are chanted and traditional offerings of leaves of the margosa tree (*Bel*) and milk are made to the Shiva linga (phallus), Shiva’s sexual organ of heavenly grandeur. According to ancient scriptures, Shiva manifests himself in the form of a huge flaming linga known as Jyotirlinga on Shivratri. It is the duty of every worshipper to worship this linga with at least one *Bel* leaf. Shiva is worshipped as the god of reproduction represented by the phallus. On this day, hundreds of thousands of Sadhus and other devotees also come to Kathmandu to make a pilgrimage to Lord Pashupatinath Temple, which is one of the holiest temples of the Hindus. They make a bonfire and pass a sleepless night praying to Lord Shiva. On this day the devotees smoke marijuana as a blissful gift of Lord Shiva. Devotees of the Shaiva sect believe that they get to a holy place in Kailash (heaven) after their death.
**Holi or Fagu (Festival of Colors)**

Dates: Fagu, also known as Holi, is celebrated on the day after the full moon in early March every year.

Legend: Originally a festival to celebrate good harvests and fertility of the land, Holi has several traditional links with legends. According to one popular legend, the word “Holi” is derived from the demoness Holika. She was the sister of Hiranyakashyap, a demon king who, having defeated the gods, proclaimed his own supremacy over the universe. Enraged by his son Prahlad’s ardent devotion to the god Vishnu, Hiranyakashyap decided to punish him. He took the help of his sister, Holika, who was immune to damage from fire. Holika carried Prahlad into the fire but a divine intervention destroyed her and saved Prahlad. Thus Holi is celebrated to mark the burning of the evil Holika. It is a celebration of the triumph of good over evil and is commemorated by burning huge bonfires on the eve of Holi as its symbolic representation.

This exuberant festival is also associated with the immortal love of Krishna and Radha. The young Krishna would complain to his mother, Yasoda, about why Radha was so fair and he so dark. Yasoda advised him to apply color on Radha’s face and see how her complexion would change.

According to an ancient legend, Shiva was deep in meditation, oblivious to Parvati, the daughter of the Himalaya, who sought his love. Kama (the Indian version of Cupid) shot an arrow towards Shiva, thus disturbing his meditation. Shiva was enraged and destroyed Kama, reducing him to a heap of ashes. Kama was later resurrected by the intercession of Parvati. Yet another legend holds that Holi is the same as the female demon Putana, who tried to kill the child Krishna by making him suckle her poisoned breasts. Krishna however, sucked very hard and drained the life out of Putana. Popular legend adds that the body disappeared and the cowherds of Mathura burnt her with an effigy. Since then, Mathura has been the main centre for Holi.

Practice: Holi announces the arrival of spring and the passing of winter. Young and old alike are drenched with colors. On Holi, people are suddenly caught unawares with colors being poured from the terraces and roofs of houses, bursting balloons, or long pistons squirting colored water. People in small groups are seen singing, dancing and throwing colors on each other. They also eat food laced with bhang, an aphrodisiac that leaves one feeling light and happy.

Holi is celebrated throughout Nepal but it is more predominant in Tarai, southern Nepal. Preparations for the festival begin a week ahead. Houses are given a fresh coat of color, beautiful floral designs are drawn at the entrance, and powdered colors and spraying pistons are bought. In earlier days, the colors were extracted from a flower (Palas tree) that blossoms only during this festival. And the pistons were made of bamboo sticks. But now colors are made artificially and pistons made of different materials are available in various designs. Usually people burn the Holika tree on the eve of Holi. A bonfire is lit in the evenings, with an effigy of Holika. Brahmins circle the fire seven times, reciting religious verses. Folklore and dances are performed around the fire to welcome the new season. On the morning of Holi, people have fun with colored water. Men, women and children all participate in this merrymaking. In the evening, youngsters play with dry colors and seek elders' blessings.
Apart from the usual fun with colored powder and water, Holi is marked by vibrant processions, which are accompanied by folk songs, dances and a general sense of abandoned vitality. The color, noise and entertainment that accompany the celebration of Holi bear witness to a feeling of oneness and sense of brotherhood. No other festival brings home the lesson of spiritual and social harmony as well as the festival of Holi! Nepal government declares a legal holiday on Fagu Purnima/Holi.

Teej:

Date: This festival falls in the month of Bhadra (September).

Legend: Parvati or Uma, the daughter of Lord Himalaya, learns from her girlfriends that her father had arranged her marriage to Vishnu. Parvati is distraught because she had always wanted to marry Shiva. Shiva was her husband in one of her previous incarnations as Sati Devi. On her friend’s advice, she runs away to a hidden spot by the banks of a river where she makes a sand phallus, Shiva’s symbol, and worships it. Shiva notices her devotion and, pleased, grants her a boon. She asks for Shiva as her husband, and her wish is granted (Bennett, 1983).

Practice: Teej is practiced by fasting and worshipping Lord Shiva. All married mostly Hindu women observe fasting, aspiring to a blissful conjugal life, progress and prosperity for their husbands, a good future for themselves, and purification of body and soul. Young and unmarried women also fast and worship Lord Shiva, aspiring for good husbands. For an unmarried woman, compliance with the age-old tradition ensures a good, loving, and caring husband. The fasting women wear red sari and blouse and visit the Shiva temple. It is customary in Nepal that daughters and sisters are invited by their parents and brothers in their homes for a good feast on the eve of Teej. All those who fast the next day usually eat good food locally known as Dar Khane until the midnight on the eve of Teej.

Early in the morning of Teej, they take baths, worship and fast. Usually those who fast do not even drink water for 24 hours. On Teej the high spirits, flirtatiousness and the sexuality that women must ordinarily suppress are released at Shiva’s temple. During the daytime, women visit the temple and dance. The songs are usually related to the uncordial relationship between daughters-in-law and mothers-in-law. The daughters-in-law describe all sorrows and sufferings that they had faced all the year. Traditionally, Nepali women used to get married at a very early age and Teej would be a rare and good opportunity for them to open the heart. In present day Nepal, there is a tendency among the educated rural women to sing politically oriented songs. Either they expose the misdeeds of the government or the political system or describe how exploitation is being nurtured in the feudal society. They also chant religious hymns, recalling the ordeal that Parvati, Shiva’s consort, had gone through to win the heart of all living beings. On the second day, usually they take a simple bath, make offerings to a Brahmin and worship before they break their fast. They eat a very simple and purely vegetarian meal. On the third and the last day, which is also known as Rishi Panchami, women who had undergone the fast pay homage to various deities situated on the banks of a sacred river. Bathing on this day is of a special type. They tooth brush with 360 twigs of a special religious plant locally known as Datiwan. They also rub all parts of their body with red mud and dip their bodies in the holy water 360 times. It is assumed that this ritual cleans the body and soul from whatever sin they
might have committed for the whole year. Women believe that fasting on Teej makes their husbands’ lives long. The Teej fasting (Brat) concludes after they perform Rishi Puja (worship of Rishi) with the help of a Brahmin priest.

**Dashain**

Dates: Dashain, also known as Vijayadashmi, is celebrated on the tenth day, of Durga Pooja (Nauratha), sometime in October.

Legend: King Rama of Ayodhya, India killed King Ravana of Lanka on this day and hence it is celebrated as the day of victory. Rama invoked the blessings of the divine mother, the goddess Durga, before actually going out to battle.

Practice: Dashai is one of the most important festivals for all the Nepalese and it is celebrated with much joy throughout the country. The first day of Dashai is known as Ghatasthapana. On this day, a holy water vessel representing Durga is established and oat seed is sown for its seedlings to be used as “Jamara” on the 10th day. On the eighth day, known as the Kalratri, animal sacrifices are done at Durga temples. Countless buffalo are sacrificed, which also represent the demon Mahishasur. The ninth day, the last day of Navaratri, is known as Maha Navami. For the nine days of Navaratri, the goddess of power--Durga/Kali/Nava Durga--is worshipped. People go to the Kali temples to worship. They also worship in the home. In many houses in the prayer room, barley seeds are sown in an earthen pot or a plate made of leaves on the first day. The seeds are covered to arrest any light. In nine days, they attain a height of about 5 to 6 inches and develop yellow color. This is known as Jamara. The tenth day is a day of joy and celebration. This was the day when Rama killed Rawana. This is also taken as a victory of virtue over sin. On this day, people pay visit to the elderly for Tika and blessing. The tika is made of vermilion powder, rice grain and milk curd (yogurt). The elders bless the youngsters with tika on the forehead and Jamara on the head.

This is the biggest festival for all Hindus of Nepal. It has a great social significance, too. Family reunion is an important part of this festival. Children and adults wear new and fancy clothes on this occasion. They enjoy good food, too. Government offices are closed for 10 days and most of the schools and universities are closed for 15 days. Employees get one-month salary as a bonus to celebrate this festival.

In several southern districts of Tarai, for 10 days processions depicting various facets of Rama's life are taken out and scenes from his life enacted out in a popular form of drama called Ramlila. On Vijayadashmi day, colossal effigies of Ravana, his brother, Kumbhkarna, and son, Meghnath, are burnt in vast open spaces by Rama (usually the actor who plays Rama in Ramlila). His consort, Sita, and his brother, Lakshmana, who shoots arrows of fire at the effigies, which are stuffed with crackers and fireworks, accompany him. In burning the effigies, the people are asked to burn the evil within them and thus follow the path of virtue and goodness, bearing in mind the example of Ravana, who despite all his might and majesty was destroyed for his evil behaviors.
**Diwali/Tihar/Bhaitika (Festival of Lights)**

**Date:** A family festival, it is celebrated 15 days after Vijaya Dashami, on the 13th day of the dark fortnight of the month of Ashwin/Kartik (October / November).

**Legend:** It is a festival of lights symbolizing the victory of righteousness and the lifting of spiritual darkness. The word “Deepawali” literally means “rows of clay lamps”. This festival commemorates Lord Rama's return to his kingdom Ayodhya after completing his 14-year exile. Another view is that Deepawali is meant to celebrate the destruction of the arrogant tyrant Bali at the hands of Vishnu when the latter appeared in his Vamana (dwarf) avatar.

**Practice:** Tihar is celebrated for usually five days. Worship of crows, dogs, oxen, cow, the goddess of wealth and the brothers takes place during this period. The third day is one of the important days. Twinkling oil lamps, or *diyo*, light up every home and fireworks displays are common all across the country. The goddess Lakshmi (consort of Vishnu), who is the symbol of wealth and prosperity, is worshipped on the third day. This festive occasion also marks the beginning of ancient Nepal’s new year. Houses across the country are scrubbed until they are spotlessly clean and whitewashed with fresh white paint. To enhance their new look, they are decorated with bright paper lanterns, electric lights and flowers, while the girls of the house embellish the Aangan (courtyard) and walls with traditional aesthetic designs and patterns. New clothes are bought and the family gathers together to offer prayer, distribute sweets and light up their homes. Crackers and fireworks illuminate the sky and people pray for prosperity. On this third day, girls in the groups visit their neighbors in the evening, sing and give blessings to the visited. The playing of songs is known as *Bhaiło Khelne*. In the evening, the goddess of wealth is worshipped. In every house, usually the woman head of the household puts all ornaments (jewelry) and a new bundle of currency in front of the goddess and all worships together. All the pathways are cleaned and lights and doors are kept open, hoping that the goddess of wealth will visit the home and bless it with lot of wealth. On the fourth day, groups of boys visit their neighbors and sing the songs and bless the visited. The song is locally known as *Deusiri Khelne*. Among the Newar community, the fourth day of Tihar has a special significance. On this auspicious day, all the family members sit together, wear clean clothes and worship themselves. This is known as *Ma Puja*, meaning worshipping of oneself.

The fifth and last day is known as Bhai Tika. “Bhai” in Nepali stands for “brother.” On this day, all sisters worship their brothers and brothers and sisters bless each other. The brothers offer gifts to their sisters. Tihar is also called *Panchak Yama*. Yama is the god of death. According to one of the Hindu legends, a queen had brought back the life of her king by worshipping Yama. Similarly, sisters on that day while worshipping make their brothers sit together and make a boundary line of oil with doob grass. There is a belief that no one, even death, can cross the boundary line and thus the sisters guard the life of their brothers. During the five days, they will be offering good food to all those who are associated with Yama--i.e., the dog, crow, oxen and the cow. The sisters’ worship is for the longevity and prosperity of their brothers. This is an exceptionally joyful occasion for the married sisters to express their love and affection for their natal home. They usually invite their brothers into their own homes turn by turn to eat during the other days.
**Id-Ul-Fitr (Ramazan Id)**

Dates: Coming with the new moon, this festival marks the end of Ramazan, the ninth month of the Muslim year, and is celebrated in April/May.

Legend: It was during this month that the holy Koran was revealed.

Practice: Nepali Muslims keep a fast every day during this month, and on the completion of the period, which is decided by the appearance of the new moon, Id-ul-Fitr is celebrated with great eclat. Prayers are offered in mosques and Idgahs, and elaborate festivities are held.

**Muharram**

Dates: Muharram is not a festival in the celebratory sense--it mourns the Karbala tragedy when Imam Husain, grandson of Prophet Muhammad, was martyred in the 61st year of the Hijra (A.H). It takes place during the first month of the Muslim calendar in August/September. It is observed in different ways in various parts of Nepal, but the theme of mourning is constant throughout.

Legend: After the death of the Prophet, questions of succession arose. There could be no successor of the spiritual head, because Islam believes in the finality of Muhammed in the prophetic tradition. After him, the Koran was considered the final word in revelations and settlement of disputes and conflicts. However, a successor to the position of caliph was needed. Muhammed had named no successor and had only one daughter, Fatimah, who was married to Ali, and had two children--Hassan and Hussein. One camp believed that succession should remain within Mohammed's family, while another disagreed. Finally, Abu Bakr, a loyal follower of Muhammed, was elected caliph. His reign was peaceful, as was that of his successors. However, during the reign of Ali, there was major opposition from the masses, and as a result of the aggression, Ali was assassinated. His son Hassan was poisoned, while his other son Hussein was killed in the battle of Karbala. This tragic circumstance divided the Muslim community into sects - the Shiahs and the Sunnis. The Shiahs consider Ali, Hassan and Hussein the rightful caliphs and publicly mourn their death during Muharram.

Practice: Profusely decorated taziyas (bamboo and paper replicas of the martyr's tomb), embellished with gilt and mica, as well as green alams (standards of Hazrat Imam Hussain's army) made of silver, copper and brass, are carried through city streets. A horse is led in the procession in memory of Hussain's horse Dul Dul. Wrestlers and dancers enact scenes depicting the battle at Karbala. Every day, marsiyars (mourning verses) are recited in honour of the martyred, as young men beat their breasts, crying "Husain! Husain!" in collective sorrow. On the 10th day, the processions carrying the taziyas and alams are called Ashura. They terminate in open spaces called Imambaras, where the taziyas are buried, or in the local burial ground known as the Karbala.

This historical event is observed with great passion, particularly in the western districts of Nepal, as it is the center of Shia culture and religious activities, and accordingly a large number of taziyas and the alams are taken out all over the villages and towns. In the villages, people even wear black and celebrate the festival with grandeur. It has been usually found that taziyas are made and brought in this occasion from those houses where there had been a death within one year. Sometimes Hindu neighbors also follow this practice in Nepali Tarai villages where the Muslim population is significant.
Life Cycle Rituals of Hindus

The life cycle rituals in Nepal may be translated as Samskara. Turner’s (1931) Nepali dictionary describes samskara as “the round of birth and death”. There are mainly five stages in the life cycle of a person: birth, navaran, pasani, bratabandha, marriage and death. When a child is born, he comes to sansara. Sansara is the phenomenal world. Any kind of opposites such as joy and sorrow, wealth and poverty, laughter and weeping, difficult and easy, trust and betrayal, pleasure and pain, birth and death, and the likes are cast as sansara. When a person is born in this earth, the facing of all these kinds of contradictions/opposites becomes obvious. Birth, the first stage of the life cycle, provides an individual an opportunity of visit to this world, then enjoy or perish. By death, which is the final stage of the life cycle, an individual can attain salvation or release from sansara into the transcendent reality. But salvation is dependent on the individual’s karma in the previous as well as the present life. So all throughout one’s life, the society attempts to instill its own samskara so that an individual achieves a virtuous life.

Janma (birth): A birth (of generally a son) is a moment of joy in the home. A son is supposed to maintain and continue family samskara when he is grown up, but a daughter marries a man of another clan and gets detached from the natal lineage.

The period of birth pollution begins just after the cutting of the cord and extends until the eleventh day. During this period, all the patrilineal relatives within seven generations are forbidden to do any auspicious ceremonies. The birth pollution is known as “sutak”. On the sixth day, it is a belief that Bhabi, the goddess of fate, will come and write on the child’s forehead its fate. On that day it is customary that a pen, a book, a sword and a lamp are placed beside the sleeping child. The light must be lit throughout the night so that the goddess could come any time and write the fate of the child. An astrologer is requested to study the stars of the child at the time of birth and prepare a China (lifelong horoscope).

Nwaran (name giving): This is the first formal ritual of name giving. The presence of the child’s father is mandatory in this occasion. The ceremony is performed on the 11th day. The priest gives the child a secret name known as, nwaran ko nam, which is based on the position of the stars at the time of the child’s birth. The child also gets the clan as an exogamous agnatic unit whose members claim to be the decendants of one of the seven mystical sages or rishis. The mother and the immediate family members are purified from the birth pollution (sutak) after nwaran.

Nwaran is performed with the assistance of a priest. He performs a Vedic fire ceremony (hom) and calls upon various gods to bless the child. This may be the day for preparing the child’s horoscope. Nwaran makes the child a member of the father’s patriline.

Pasni (first rice feeding ceremony): Pasani is performed in five months for a girl child but in six months for a boy child. Pasni is performed in the home or a temple with the help of a priest. The seniormost person in the house, usually the grandparents or the parents, feed the child first. Some rice pudding is put in a plate and it is scooped with a coin and fed to the child. Then all relatives, first from the father's household and then from the mother's household, feed the child turn by turn. Gifts, usually clothes, are also given to the child. This is the first time that children
usually are allowed to wear the new clothes. These days pasni has become a ceremony to socialize. The guests are not limited to close relatives--friends are also invited for dinner or a good meal to celebrate.

**Bratabandha (secret thread wearing ceremony):** For boys of higher castes--i.e., Brahmans and Chhetries--this *sanskara* is very important. The main part of the ceremony is receiving the sacred thread, a loop of six strands of cotton tied together, that hangs over the left shoulder and goes down to the right hip. The initiate will wear the thread for the rest of his life, changing it only for special occasions. This ritual is usually performed between the ages of 7 and 13 years.

After this ceremony the boy is considered a man. He has been twice born--once, his physical birth, and the second, his spiritual birth that occurred via this initiation into Hinduism. The boy will now begin his study of scriptures and take his place in Hindu society. From the cultural point of view, this is the most important sacrament. The most striking feature of *Bratabandha* lies in the belief that by its performance the initiate is given a cultural and spiritual rebirth. Receiving the loin-cloth and the girdle, investiture with the sacred thread (*Janai*), initiation with *Gayatri* mantra, going round the symbolic fire (*Jagge*) and begging for alms (*Bhikshya magne*) from those who are visiting the ritual constitute some of the essential aspects of the ritual. This ritual is not done for the Hindu girls.

As in *Pasani,* in this ceremony, too, the parents invite guests for a grand feast.

Usually a Brahmin boy is not allowed to consume any meat for a year after this ceremony. He is also forbidden from other polluting things such as going to the kitchens of lower caste people and eating food with them. Since he gets caste from this ceremony, he is supposed to strictly observe all the *Brahmanic* religious rules. But we see many changes in the customs in Nepal these days. High caste Hindus have relaxed the age limit for initiation. Similarly, food pollution is also less observed.

If a Hindu dies before the initiation, he is not cremated but buried because he has no caste until that time. Similarly, this ceremony is also a prerequisite to a Hindu marriage. A Hindu man must have his *Bratabandha* done first before he is married.

**Bibaha (marriage):** There are several kinds of marriage practices in Nepal. The important ones are the arranged marriage, the love marriage and the marriage by capture. In the arranged marriage, the guardians look for suitable brides/grooms and once found, move the marriage plan ahead, usually through a family priest or someone who is dependable and honored by both the parties. In love marriages, the girl and the boy decide their marriage themselves without the consent of their parents. Sometimes, they inform their parents about their love affair and get their approval later. In the marriage by capture, the boy and the girl elope away from their parents for few days. The girl’s guardians try to find out. If they find they will try to bring back their daughter to the home. The boy might have to fight back against the girl’s party and physically win. In case they do not find the couple, after few days the couple appears and the boy approaches the girl’s parents with some gifts, mostly locally brewed beverages. If the father of the girl accepts the gift, this means that the marriage is approved; if he doesn’t accept (this is
rare), the couple has to wait. Generally, after the birth of a first child, the girl’s parents accept the grandchild as well as the son-in-law (of course, the daughter, too).

Usually arranged marriages are held among the people of same castes/ethnic groups. Love marriages cross-cut ethnic/caste boundaries and as such help caste mobility. Marriages by capture prevail between members of the same hill ethnic groups.

Of all the Hindu sacraments, marriage is considered to be the most central one. It is also perceived as a major expression of the value of fertility and conventional religion in continuing Hindu ideals (Bennett, 1983). It is essentially a fellowship between a man and a woman who seek to live creatively in partnership for the pursuit of the four Purusarthas. A Hindu marriage is considered too sacred to be dissolved. So besides the two parties, the bride and the groom, there is a third party, Dharma, (their joint religious duty) through which they have been united.

The most important steps in an arranged Hindu marriage are: Agreeing on the match (kuro chhinne), choosing a husband (swayambar), departure of the groom’s party (janti jane), gift of a virgin (kanya dan) and the bride’s departure (dulahi bida garne).

a. Kuro Chhinne: After the boy and the girl reach a marriageable age (for boys usually around the mid-20s and girls in early 20s), the parents begin looking for a desirable match. Proposal details such as the appearance, family background, educational attainment, moral character, etc., are reviewed secretly or even with informal interviews from both the sides. When the proposal is agreeable to both the parties, the priest matches the horoscope of both the bride and the groom. If the horoscopes match, an auspicious day is identified for a formal decision for marriage commitment. On that day, a procession of the groom’s relatives and friends, together with the groom, come to the bride’s home. The groom’s father asks the bride’s father to allow his daughter to marry his son. Red Tika is placed by the bride’s father on each of the groom’s party members and every one gets a token monetary gift (Dakshina). An auspicious date is fixed on that day for the marriage, giving enough time for both parties to shop and extend invitations to the friends and relatives. With all the witnesses present, this is also a commitment to marry. After this ceremony, the boy and the girl can make phone calls and visit each other.

b. Swayambar: This is the next step, which is usually done one or two days before marriage. The bride’s father writes a beautifully decorated letter to the groom, asking him to join in the ceremony by specifying the auspicious time and the date. It is said that this system was introduced after the style of Ramayana’s Sita’s betrothal to Rama. On that particular time and day, the groom’s procession comes to the bride’s home and all of them are well received. A priest recites religious hymns. Garlands are exchanged between the bride and the groom. The groom places the wedding ring on the bride’s third finger and a gold chain on her neck. Similarly, a gold ring is placed on the groom’s finger and gold coins and a chain are also offered to the groom. Again, all those who joined in the procession get Tika and Dakshina. All of them are given a good feast. There will be guests from the bride’s side, too. All socialize for a while and the groom’s party leaves.
c. Janti and Kanya Dan: Janti is a marriage procession. The number of persons in the procession depends on the social and economic status of the groom’s father. The higher his status, the more people will be brought. After the procession reaches the groom’s house, they are welcomed with a warm heart. The groom is taken to the sacred fire podium for completing various rituals and after a while the bride is also brought to the same place. Simultaneously a feast is served to the procession. In rural villages, all members of the procession stay overnight. In urban areas, only close relatives of the groom stay overnight. In the Jagge there is a ceremony known as Kanya Dan. In English, the equivalent translation is the “gift of the virgin”. The bride and the groom sit on a specially decorated bed, and the bride’s parents and other near kin wash the feet of both the groom and the bride with appropriate prayers, and thus the bride is formally given to the groom.

d. Dulahi Anbhaune (bride’s departure): The next day is the time to say good-by to the bride. The parents and the relatives and those who stayed overnight sit together. The bride’s parents place Tika on everybody’s forehead and give some Dakshina to each of the groom’s party members. The groom’s party makes three circles around the Jagge and depart. The groom’s party comes with a music band and also departs with the music band. But the moment of Dulahi Anbhaune is actually a sad moment, particularly to the bride’s mother. She is the one who is affected most. Most of the relatives including, the groom weep, while being departed.

Mrityu (death): This is the last life cycle rite of a Hindu. In Nepal, Hindus are cremated after the death. When a person dies, his body is washed and wrapped in a special white or saffron-colored cloth. Flowers, yellow powder, kus grass and tulsi leaves are sprinkled over the body and it’s tied to bamboo poles so that it can be carried to a river for cremation. If a women dies when her husband is still alive, she is wrapped with red cloth. Only male can join the funeral procession and no one can wear shoes during the procession. A Hindu consecrates his entire life through the performance of various sacraments at suitable stages, so at his death, his survivors consecrate the event by death rites for his future good and spiritual felicity. Though performed after a man’s death, this sacrament is no less important, because for a Hindu, the value of the next world is higher than that of the present.

The body is put on a specially prepared funeral pyre called Chita. All sons cleanly shave their heads. The entire funeral procession is supposed not to touch any polluted things, including a dog or a person belonging to a lower caste. The family priest recites mantra invoking the fire god Agni to burn the corpse. The eldest son bathes in the river and taking the fire brand (dagbatti), walks around the funeral pyre three times counter clockwise and puts it into the mouth of the corpse. He lights the bundle of wood to fire the corpse, and after the deceased is well burnt, the ashes are thrown into the river. All those who were in the funeral procession take a dip in the river and return home. From this day onwards for 13 days, it is a Jutho (mourning period during which auspicious ceremonies are forbidden) for all the relatives of seven generations from the father’s side and five generation from the mother’s side.

All the sons will sit in a purified room. They will not touch anything. Each morning they will take a bath and eat rice with some lime and butter once a day. For 12 days they do not consume
any salt. On the 12th day, an important ceremony known as *pinda shraddha* is performed. This is one of the very important rituals in which the dead person is transformed from an unauspicious ghost to an ancestral spirit.

All those who had joined the funeral procession are also invited for a feast on the same day and this ends the first phase of mourning and pollution. Many families observe one year of mourning. This period is known as *Barakhi*. They also perform rituals for their ancestral spirit each month. But there have been shortcuts now a days. Many mourners get exemptions after the 13th day/12th day via special rituals performed by the family priest, known as *Barakhi Phukaune*. 
Part Two

Land, People and Economy

Nepal is located along the south slopes of the Himalayas between the Tibetan region of China in the north and the Gangatic plains of India in the south. The country has an area of 147,181 Km$^5$ and it lies between longitude 80° 4’ to 88° 1/2’ east and latitudes 26° 22’ to 30° 27’ north.

**Geopolitics of Development:** Nepal is situated between the two giant nuclear powers: India and China. It is rectangular in shape and extends about 800 kilometers from the east to the west and stretches to about 160 kilometers from north to south. Though small in area, it has drawn enough attention of its neighbors in the past and thus continues to remain important.

Nepal’s psyche of smallness and weakness can be traced back to its founder King Prithvinarayan Shah, who said Nepal in his *Dibyaupadesh*, “a yam between the two hard stones”. This notion of smallness and weakness has further implications. Many Nepalese believe that unless Nepal is helped by India, it can not develop. In other words, Nepal can never develop independent of India. So Nepal must be very loyal and always supportive to India. This has had political implications, too. Both the larger political parties in the late 1990s, the Nepali Congress Party and the Nepali Communist Party (United Marxist-Leninist), believe that they must get India’s support to win in the general elections. The use of Indian resources by both the parties in the April 1999 general election is an indication of this state. The visit of Indian political leaders and their moral support were also instrumental in motivating the people’s movement to throw down the Panchayati regime in 1990.

In the past Nepal has been approached for various kinds of help by countries other than her neighbors on various occasions when lobbying and support were needed, either for a candidacy for the UN or to multinationals such as the World Bank or the Asian Development Bank. But Nepal, shackled with the idea of “yam and the stones,” has not been able to independently exploit such opportunities.

The geostrategic location of Nepal is noteworthy. Its Tarai (flat land strip on the south) opens to the Indian heartland and it is also closer to the Himalayan range of West Uttar Pradesh, which is demanding for an independent statehood. There have been incidents of foreigners illegally entering Nepal from other south Asian countries such as Pakistan and Sri Lanka for various political reasons. Similarly, people from Tibet also sheltered in Nepal in the past to act against China. Moreover, passage to Indians is easy in Nepal, so there would be chances for Indians and Tibetans to share with each other, which may not be desirable to the Chinese. In these circumstances, Nepal’s geopolitical position becomes one of the determining factors in Nepal’s development.
Land

The Land Resources Mapping Project (LRMP) has divided the country into five physiographic regions: High Himal, High Mountains, Middle Mountains, Siwaliks, and Tarai. Though this does not correspond with the conventional division into three regions: mountains, hills and Tarai. The major land uses according to the LRMP classification are given in Table 1 below. The proportion of agricultural land is the lowest (0.26 percent) in the High Himal region, obviously because much of the area is covered with snow and rangelands. Nearly a quarter (26.0%) of the area in this region is grazing land and two-thirds of the area falls under the “other” category. The high mountain region has 13 percent of the total land under agriculture. The Siwalik region has a slightly higher proportion (16.6 percent). Tarai is the most important agricultural region--64 percent of the land area is under agriculture, followed by the middle mountains (42.5 percent).

Major Land Uses of Nepal (Area in ‘000 ha)

<table>
<thead>
<tr>
<th>Physiographic Regions</th>
<th>Cultivated</th>
<th>Non-Cultivated</th>
<th>Total</th>
<th>Grazing</th>
<th>Forest</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Himal</td>
<td>8 (0.2)</td>
<td>2 (0.05)</td>
<td>10 (0.26)</td>
<td>884 (26.0)</td>
<td>221 (6.6)</td>
<td>2234 (67.0)</td>
<td>3349</td>
</tr>
<tr>
<td>High Mountains</td>
<td>245 (8.1)</td>
<td>147 (5.0)</td>
<td>392 (13.1)</td>
<td>510 (17.2)</td>
<td>1813 (61.2)</td>
<td>245 (8.3)</td>
<td>2960</td>
</tr>
<tr>
<td>Middle Mountains</td>
<td>1222 (27.5)</td>
<td>665 (15.0)</td>
<td>1887 (42.5)</td>
<td>293 (6.6)</td>
<td>2202 (49.6)</td>
<td>61 (1.4)</td>
<td>4443</td>
</tr>
<tr>
<td>Siwaliks</td>
<td>259 (13.7)</td>
<td>55 (2.9)</td>
<td>314 (16.6)</td>
<td>21 (1.1)</td>
<td>1477 (78.3)</td>
<td>74 (3.9)</td>
<td>1886</td>
</tr>
<tr>
<td>Terai</td>
<td>1234 (58.5)</td>
<td>117 (5.5)</td>
<td>1351 (64.0)</td>
<td>50 (2.4)</td>
<td>593 (28.1)</td>
<td>116 (5.5)</td>
<td>2110</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2968 (20.1)</td>
<td>986 (6.7)</td>
<td>3854 (26.8)</td>
<td>1758 (11.9)</td>
<td>6306 (42.8)</td>
<td>2730 (18.5)</td>
<td>14748</td>
</tr>
</tbody>
</table>

* These are non-cultivated inclusions within the mapped agricultural land. Figures in parentheses represent percentages.

Accordingly, the mountains account for less than 7 percent of the total agricultural land, with much of the region being covered under snow and rangeland. The Tarai serves as the food basket of the country and this region has the largest share (about 53 percent) of the total agricultural land. The hill region has about 40 percent.

Distribution of Agricultural Land by Region, 1991/92 (in thousand hectares)

<table>
<thead>
<tr>
<th>Region</th>
<th>Arable</th>
<th>Non-arable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountains</td>
<td>162</td>
<td>15</td>
<td>177 (6.8)</td>
</tr>
<tr>
<td>Hills</td>
<td>872</td>
<td>175</td>
<td>1,047 (40.3)</td>
</tr>
<tr>
<td>Terai</td>
<td>1,290</td>
<td>85</td>
<td>1,375 (52.9)</td>
</tr>
<tr>
<td>Nepal</td>
<td>2,324</td>
<td>275</td>
<td>2,599 (100.0)</td>
</tr>
</tbody>
</table>

Note: Figures in parentheses are percentages.

Over generations, land has remained the principal resource for the sustenance of the subsistence-bound rural communities, as well as for generating revenues for the rulers. As Stiller (1993) states: "Land was the central value in these communities. The whole of society was organized around land, not money. Land was productive. Money was not. To own or control land gave far
greater status within the community than money-wealth. This explains the Nepalese hunger for land. It also explains in part the emergence of small principalities or mini-states” (p.7). Land and what it can offer in terms of food and revenue has been of central importance all throughout history. Economic historians of Nepal explain that, before the unification of Nepal around the mid-18th century, there were numerous tiny principalities whose viability and survival were determined mainly by the area and quality of land they could command against their competing neighbors. The surplus generated by severely squeezing the peasants went to pay for the military campaigns for the unification of the country that began in the mid-18th century and ended with the signing of the Sugauli Treaty with the British in 1815 (Regmi, 1971, 1978; Stiller, 1993). Later during much of the Rana Rule (1846-1951), land became the principal means of enriching the ruling elite and their collaborators, while the peasantry generally languished in poverty and deprivation.

Land and land-based resources have thus been the principal source of economic surplus generated by the ruling classes. Concentration of land in the hands of a few elite classes and severe exploitation of the peasantry through the excessive expropriation of labor and land revenue have been the principal policy adopted by the rulers through much of the nation’s history.

The country was under the iron-fisted family rule of the Ranas for over a century. This period witnessed extreme pauperization of the peasantry through excessive expropriation of economic surplus from land.

The People

Settlements: In the past, Nepal witnessed two major migratory movements. The first migratory movement came from the Inner Himalayas, the Mongoloid race of the Tibeto-Burman-speaking people to inhabit the uplands and the slopes of the Himalayan range from which they gradually traversed to the midlands of the Kathmandu and Pokhara valleys. They were basically the animal herders, the yak, sheep and goat keepers. They rarely moved except during the winter to relatively warmer places to avoid cold.

The second migratory movement began as early as the first and second centuries. They came in subsequent waves originally from India and particularly from the neighboring Bihar and Uttar Pradesh states. This obligatory migration was partly due to invasion by powerful enemies and by natural calamities such as floods and famines in northern India. On the other hand, the harassment of Muslim rulers of India during medieval times had obliged a large number of Indian Hindus to seek refuge in the far north. The migrants from India got settled in various parts of Nepal from the far west to the far east, with higher concentration in the fertile valleys and plains, especially in the Tarai. They co-existed with the indigenous people, including people of different racial origin. Gradually, but very slowly, integration and assimilation of various races began to take place after the unification of the country under King Prithvinarayan Shah.

Traditionally, the regions of Nepal were identified by the names of its various caste/ethnic clusters. The eastern hills beyond Sunkoshi river were known as the Kirat Pradesh (Kirat Region). The area was further subdivided into three subregions: Wallo Kirat, Manjh Kirat and the Pallo Kirat. Similarly, the region in the west of the Kathmandu valley, all the way to Kali
Gandaki, was traditionally known as the Gandaki Pradesh. The area west of this, to the Karnali, was called the Magrat - i.e., the region of Magars - and the region along the Karnali and beyond was called Khassan--i.e., the land of Khas people.

The high altitude area, inhabited by people speaking dialects of the Tibetan language, was traditionally known as Bhot Pradesh. The lower region is the Madhesh, Tharuwan--the land of the Tharus, or the Tarai (Bista, 1994). (See map).

The population of Nepal is overwhelmingly rural. Only 12 percent of the total population lives in urban centers (Nepal Human Development Report, 1998).

The mountains, though constituting a quarter of the total land area, are sparsely populated - about 25 persons per square kilometers and only about 5 to 7 percent of Nepal’s total population. Only no more than 3 percent of the total cultivated land lies in this region. The population here is unable to survive from farming alone and they supplement their income from other sources. To escape from cold in severe winter, most of the people go for long distance trade or else migrate south to the hills and plains for at least part of the year.

**Demography:** The first population census of Nepal was taken in 1911, and it was repeated every subsequent decade up to 1942. The purposes of these earlier censuses, as mentioned in the literature, were basically to assess the number of soldiers available for recruitment and collecting revenue (Mabuhang, 1999). It was only beginning in 1952/54 that the enumeration was done in a scientific and systematic basis. In the 1911 census, the population of Nepal was 5.6 million, which grew by nearly 50 percent by 1952/54 (Basnet, 1997). During this period, both fertility and mortality rates were very high. This period witnessed some major events, such as the heavy casualty rate of the Gorkha troops in the First World War (nearly 20,000), the high incidence of mortality due to the influenza epidemic in 1917, the threat of war between Nepal and Tibet and the great earthquake of 1934 (death toll of 8,591 persons) (ibid., 1997).

Population growth from 1952/54 to 1961 was 1.65 percent. It was 1.07 percent between 1961 and 1971, 2.06 percent between 1971 and 1981, and 2.08 percent between 1981 and 1991. The average regional growth rates of population in 1981/91 ranged from 1 percent in the Mountains to 2.8 percent in the Tarai. The growth rate of population in the Hills remained 1.6 percent during the 1970s, and the population growth of Tarai reached 4.2 percent. Besides natural growth, migration was an important factor for high population growth particularly in the Tarai. People from the hills and the mountains came down to Tarai. Ridge to valley migration and rural to urban migration were also responsible for regional variation in the growth rate of population.

The increasing population density on limited land surface has increased the human-land ratio. For example, the arithmetic density of population in 1971 was 78.5 percent persons per square kilometer which had increased to 125.6 persons per square kilometer in 1991. The density is very high in Tarai and the Kathmandu Valley. In terms of agricultural density, the Hill and the Mountain regions fall on densely populated regions. The average density of the country is 7.8 persons per hectare; it is 9.6 persons in the Hills and 8.8 persons in the Mountains. The Tarai region is still in favorable position in totality, but the increasing family size and decreasing land-holding size distribution have forced the Nepalese farmers to intensify agriculture and to bring
marginal and unfavorable lands under cultivation in their own rather primitive way (UNESCO, 1975; Eckholm, 1976).

**Caste/Ethnic Groups**: Nepal is a mosaic of diverse caste and ethnic groups. Racially, most of the Nepalese are Caucasoid and Mongoloid. They speak languages of Indo-Aryan and Tibeto-Burman origins. The following table gives the caste/ethnic distribution by ecological regions.

Distribution of caste/ethnic groups by ecological regions, 1991.

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Caste/ethnic group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>1</td>
<td>Himal</td>
<td>138,293</td>
</tr>
<tr>
<td></td>
<td><strong>Ethnic group</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bhoite</td>
<td>12,463</td>
</tr>
<tr>
<td></td>
<td>Sherpa</td>
<td>110,358</td>
</tr>
<tr>
<td></td>
<td>Thakali</td>
<td>13,731</td>
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<tr>
<td></td>
<td>Other</td>
<td>1,741</td>
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<tr>
<td>2 A</td>
<td>Hills</td>
<td>12,420,157</td>
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<tr>
<td></td>
<td><strong>Caste group</strong></td>
<td>7,457,170</td>
</tr>
<tr>
<td></td>
<td>Badi</td>
<td>7,082</td>
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<tr>
<td></td>
<td>Bahun</td>
<td>2,388,455</td>
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<td></td>
<td>Chhetri</td>
<td>2,968,082</td>
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<td></td>
<td>Damai</td>
<td>367,989</td>
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<tr>
<td></td>
<td>Gaine</td>
<td>4,484</td>
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<tr>
<td></td>
<td>Kami</td>
<td>969,655</td>
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<tr>
<td></td>
<td>Sanyasi</td>
<td>181,726</td>
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<tr>
<td></td>
<td>Sarki</td>
<td>276,224</td>
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<tr>
<td></td>
<td>Thakuri</td>
<td>299,473</td>
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<td>2 B</td>
<td><strong>Ethnic group</strong></td>
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<td></td>
<td>Jirel</td>
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<td></td>
<td>Lepcha</td>
<td>4,826</td>
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<td></td>
<td>Limbu</td>
<td>297,186</td>
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<tr>
<td></td>
<td>Magar</td>
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<tr>
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<tr>
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</tr>
<tr>
<td></td>
<td><strong>Ethnic group</strong></td>
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<tr>
<td>Bote</td>
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<td>4 Tarai</td>
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<tr>
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<td>Brahman</td>
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<td>Dhobi</td>
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<td>Dusadh</td>
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<td>Khatwe</td>
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<td>Kumahar</td>
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<td>Kurmi</td>
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<tr>
<td>Kushbaha</td>
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<td>Mallaha</td>
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<td>Mushar</td>
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<td>Rajbhat</td>
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<td>Gangai</td>
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<td>Tharu</td>
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<td>C Other</td>
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<tr>
<td>Bangali</td>
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<tr>
<td>Musalman</td>
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<td>3.5</td>
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<tr>
<td>Sikh</td>
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<td>Other</td>
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<tr>
<td>D Other/unspecified</td>
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<td>Unspecified</td>
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<td>TOTAL</td>
<td>18,491,097</td>
<td>100.0</td>
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Unregistered caste and ethnic groups:
Tarai caste groups: Badhai, Dom, Halkhor, Koiri, Lohar, Mali, Pasi, Tatma, etc.
Tarai ethnic groups: Jhangad, Mech, Satar.
Hill ethnic groups: Byansi, Dura, Hayu, Khambu, Mech, Pahari, Yawakha.

After the reintroduction of the multiparty parliamentary system of democracy in 1991, various ethnic groups have been raising their voice for greater participation and share in national resources. Recently the government of Nepal has recognized 61 ethnic groups of Nepal, which appear below. The census had missed several of them in registering.

Distribution of 61 ethnic groups according to ecological regions (National Census, 91).

<table>
<thead>
<tr>
<th>Ecological region</th>
<th>Ethnic groups mentioned in census</th>
<th>Numbers</th>
<th>Ethnic groups not mentioned</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Himali</td>
<td>Bhote, Sherpa, Thakali</td>
<td>3</td>
<td>Dolpo, Lhapa, Siyar, Brhagaunle, Holung, Tangbe, Marphali, Chintan, Chhairotan, Lhomi, Larke, Mugali, Manage, Thudum, Topkegola, Thimtan, Syangtan, Byansi</td>
<td>18</td>
</tr>
<tr>
<td>Hills</td>
<td>Chepang, Jirel, Limbu, Newar, Sunuwar, Thami, Gurung, Lepcha, Magar, Rai, Tamang</td>
<td>11</td>
<td>Dura, Chhantyal, Pahari, Kusundo, Baramo, Kushbadia, Hayu, Hryolmo, Bhujel, Surel, Fri, Bankaria</td>
<td>12</td>
</tr>
<tr>
<td>Inner Tarai</td>
<td>Bote, Kumal, Majhi, Raute, Danuwar, Darai, Raji</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarai</td>
<td>Dhanuk, Dhimal, Gangai, Koche (Rajbansi), Tharu</td>
<td>5</td>
<td>Meche, Kisan, Satar, Jhangad, Tajpuria</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>26</td>
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<td>35</td>
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The Economy

**General Description:** Nepal is a landlocked country with an estimated current population of 21 million (growth rate 2.5 percent).

There are three physiographic regions: high mountains (35 percent of total area), mid-hills (42 percent) and the flat Tarai plain (23 percent). In the high mountains, there are 50 peaks above 7,000 meters including Mount Everest (8848 meters). The mid-hills area is characterized by several microenvironments, including the fertile river valleys. Tarai is the granary of Nepal.

Water is the greatest resource of Nepal. There are three major river systems: Koshi, Gandaki and Kamali, with their respective networks of several tributaries. The hydroelectricity generation potential is estimated at 83,000 MW.

Climatologically, the altitudinal differences among physiographic regions produce subtropical to alpine climate from south to north. Major precipitation occurs during the monsoon period from June to August.

Politically, Nepal has always remained an independent country, even during the period of colonial aggravation. But within the country, we have gone through a period of family autocracy for over a century, the king-led party-less Panchayat system for over three decades and the current multiparty democracy, which is now nine years old. The country seldom had the share of fair politics, which has serious repercussion on the overall economy.

Politically, there are five development regions, 75 districts, 36 municipalities (9 percent urban population), and 3,995 village development committees, each with nine wards. The electoral constituencies are 205.

People of Nepal are a diversified bunch of caste and ethnic groups, each with its unique culture and languages/dialects.

Though the growth rates in infrastructure development appear high, these are due to an extremely low base. The road length has just recently reached 10,000 km, of which only 40 percent is blacktopped. In electricity generation, only 0.5 percent of the potential has so far been utilized. Nepal has two four-wheel vehicles per thousand people, compared with 6.5 in India. The bulk cost of long-route transportation by truck in Nepal is Rs. 2.50/mt/km as against Rs. 1.10 in Bihar, India. In telephones, Nepal has three lines per thousand people.

Economically Nepal is a poor country, with per capita income of only $220. The gross domestic product (GDP) at 1984/85 constant price is 76 billion (1994/95) and growing at a rate of less than 2.9 percent. The average per capita income masks the pervasive poverty in the country, which is estimated at 49 percent (absolute poverty based on the minimum consumption requirement of 2,250 calories per day). Targeted poverty alleviation programs such as SFDP and PCRW have been underway based on the group approach.
**Agriculture**: Farming is the major economic activity in the country, with more than 80 percent of the people involved in it. Of late, there has been a gradual shift away from agriculture. The total cultivated land is about 26 million hectares, with an average of less than 1 ha per farm. Because of smaller holdings, farming is basically subsistence oriented. The agricultural sector accounts for 41 percent of the GDP.

Rice is the dominant crop – it’s grown on 47 percent of the cropped area. The average yield of rice is 2.4 mt/ha (in the form of paddy). Other major crops are maize and wheat. A little over 15 percent of the agricultural GDP is contributed by the livestock subsector, dominated by cows, buffaloes, goats, sheep, pigs and poultry.

This predominant sector’s performance is not satisfactory which is because of inadequate resource allocation and several input and output policy problems. Recently, an agricultural perspective plan (APP) has been formulated with a vision to increase agricultural GDP growth six fold. The feature of APP is its emphasis on a small but critical number of inputs and output. Poverty alleviation in Nepal is not possible without a quantum jump in agricultural performance. The APP, if implemented in its spirit, aims to bring down the absolute poverty level from the current 49 percent to 14 percent in two decades.

**Tourism**: In 1995, 363,000 tourists visited Nepal, an increase of 11 percent over the previous year. The average stay per tourist has been decreasing and stands at 10 days. About half the tourists come here for pleasure and about a quarter for trekking and mountaineering. Almost 90 percent of them come by air. The majority of tourists are from western Europe and India. Foreign exchange earnings from tourism were estimated at about Rs.9 billion in 1994/95, which is nearly half the value of the country’s total merchandise exports, 17 percent of total FE earnings and 4.3 percent of the GDP.

**Industry**: Industry’s share of the GDP is 11 percent. The fastest growing industry is footwear manufacturing (up 12-fold since 1986/87) and the sluggish one is wood and wood products (an 85 percent decline from the 1986/87 level). The highest amount of industrial loans is in the manufacturing sector (68 percent). The capacity utilization is low, ranging from 51 percent in cement to 98 percent in sugar. Because of the low capital base, most industries are cottage type (some 5,500 registered).

**Trade**: Nepal exported about Rs. 18 billion (fob) worth of merchandise and imported Rs. 66 billion (cif) in 1994/95. Major export items are carpets and garments, which make up 97 percent of total exports in 1993/94. The third is hides and skins. Major export to India are pulses and jute goods. Major import items are classified materials and machinery and transport equipment. Trade diversification is taking place such that India’s share in total Nepal’s trade has dropped from 52 percent in 1984/85 to 29 percent in 1994/95. There is a significant trade deficit (32 billion in 1994/95), but the balance of payment position is favorable because of dollar earnings from remittance, tourism and foreign aid. We now have gold and FE reserve (Rs. 45 billion in 1994/95) that could sustain eight month’s import. This is highest among SAARC countries.

**Government policy and Finance**: Nepal’s government has initiated structural adjustment in its economy since 1984 with the support of International Monitory Fund. With the advent of a
multiparty democracy in 1990, the policy thrust has been economic liberalization and the greater involvement of the private sector. The currency has been made fully convertible in current accounts. This is believed to aggravate poverty problems in the short run and correct them in the long run. So, targeted transfers are needed in the short run.

The annual budget figure for FY (1996/97) was Rs. 57.6 billion (about $1 billion) broken into 25 billion under regular expenditure and the rest under development expenditure. Interest payment allocation for external loan is Rs. 1.4 billion. In social services, it is 8.2 percent on education, 7.6 percent on health and 7 percent on drinking water. On agriculture, it is only 8 percent; 18 percent if irrigation is included. During 1999/00 fiscal year, the annual budget was Rs. 69.69 billion of which Rs. 31,952.2 million was for regular expenditure and Rs. 37,741.1 million for development expenditure.

The economy of Nepal is best summed up by the Agricultural Perspective Plan which rightly says, “Nepal is growing but not developing”. Yet, the unused potential is very high, and therefore there is an element of optimism for the future.
Part Three

Contemporary Development Issues

Socio-Economic Issues

Population and Migration: The mid-term population study conducted in 1997 estimated an average growth rate of population in Nepal during 1990-1996 as 2.4 percent per annum (NPC, 1998). However, an International Labor Organization report (1997) mentions that the labor force in Nepal is growing at a rate of 2.7 percent annually and is expected to stabilize, if the present pace of fertility transition continues, only around the middle of the next century. Thus, unless the pace of fertility transition can be quickened, Nepal will face the problem of generating employment at a high rate for a long time to come. This prognosis underlines the importance of a sound population policy.

The review of plan documents reveals that a coherent population policy was first formulated in the five-year plan (1975-1980). Before this, there were only family planning and maternal and child healthcare programs. The fifth plan intended to reduce the birth rate through various direct and indirect measures; control immigration; regulate the Hill to Tarai and rural to urban migration; redistribute population so as to raise density in the Tarai, particularly in the western Tarai; and develop new urban centers in feasible areas for regional development. During this period, the Nepal Fertility Survey was carried out in 1976 and the Vital Registration System was introduced in 1977.

There was a policy shift in the sixth plan period. A national commission on population (NCP) was formed in 1978, which gave a new push toward a population policy and planning in the country. It was recommended that control of immigration should be the main objective of the national population policy and proposed a registration and entry permit system as the initial steps in this direction. The recommended policies were adopted as the population policies for the seventh plan period. However, assessing past performance, the eighth plan document notes that the immigration problem remained unchanged because of the inability to restore cordial relations with the neighboring country with an open border and the failure to recognize the problem in an international perspective. The other aspects of population control ended in failure for lack of complementary programs (ILO, 1997).

The key objectives of the population policy remained unmet. The 1991 census reported a total fertility rate of 5.8 percent against a target of 4 percent for 1990, and the population size of 20.6 million targeted for the year 2000 had already been exceeded by 1995. All measures announced for controlling immigration not only failed but also added fuel to the deteriorating relationship with India in the late 1980s. Major features of the population problem remain unchanged. The ninth five-year plan (1997-2002) has set a target of bringing the population growth rate down to around 1.5 percent in the next 20 years.

Rapid growth of population in relation to food production at the prevailing technological development and resource utilization level has raised the problem of population pressure in
developing countries. This is more intense in Nepal, where the high population growth rate and the predominance of agriculture in economy have accelerated the processes of environmental degradation (Basnet, 1972). In the past four decades, Nepalese people were forced to bring even unfavorable sites of fragile hill slope and dense Tarai forests under cultivation to meet their food demands. This has raised the problems of deforestation, land degradation and loss of biodiversity in the local environment. These problems are linked to misuse of land, whereas air and land pollution and water contamination are related to urbanization (Thapa, 1992). The root cause of environmental degradation is the rapid growth of population and the limited resource base of the country (Eckholm, 1976; MacEarlane, 1976; Poffenberger, 1980).

Improvements on health services have resulted in a decline in the mortality rate. The declining mortality rate, coupled with the high fertility rate, has resulted in rapid population growth. The control of malaria and other epidemics and the expansion of medical and public health facilities also reduced morbidity and mortality in the country.

Migration is another reason for the population growth. The proportion of migrants to total population growth during the period from 1952/54 to 1961 was recorded as 1.65 percent - 1.07 percent between 1961 and 1971, 2.06 percent between 1971 and 1981, and 2.08 percent between 1981 and 1991, respectively.

The average regional growth rates of population during 1981 to 1991 ranged from 1.0% in the Mountains to 2.8% in the Tarai. The growth rate of population in the Hills was 1.6% in the decade of 1970s, whereas, for Tarai, it was 4.2%. These figures clearly show that the high population growth is not only accounted to the natural growth but migration is an important variable. People from hills and the mountains were coming down to Tarai. Ridge to valley migration and rural to urban migration were also responsible for regional variation in growth rate of population.

Within a confine of 147,181 Km$^5$ the high growth rate of population in the last four decades has considerably increased production pressure on resources (Blaikie, 1988). The increasing population density on limited land surface has increased man-land ratio. For example, the arithmetic density of population in 1971 was 78.5 persons per Km$^2$ which was increased to 125.6 persons per Km$^2$ in 1991. The density is very high in Tarai and Kathmandu valley. In terms of agricultural density the Hill and the Mountain regions fall on densely populated regions. The average population density of the country is 7.8 persons per hectare whereas it is 9.6 persons in the Hills and 8.8 persons in the Mountains. Tarai region is still in favorable position in totality, the increasing family size and decreasing landholding size distribution have forced the Nepalese farmers to intensify agriculture and to bring marginal and unfavorable lands under cultivation in their own rather primitive way (UNESCO, 1975; Eckholm, 1976.)

The geographical distribution of population is dictated not only by the physical topography but also by the opportunity for economic betterment. For obvious reasons, these benefits have mostly been discerned in agriculture, which dominates the labor market. Most of the agricultural activities take place in the Tarai, which accounts for 56 percent of the total cultivated area, and to a lesser extent in the fertile valleys. The Tarai has 47 percent of the total population with an estimated growth rate of 3.4 percent per annum over the past census decade and a labor force
growth of 4.2 percent per annum. The declining soil fertility and land degradation in the hills and heavy man-land pressure pushed the hill people to migrate to the relatively fertile Tarai. The origins of the early migration streams had invariably been the hilly areas of the country, where population growth and growing pressure on scarce land progressively undermined livelihoods. Initially, the favored destination was essentially the Tarai, but in recent years major movements towards the urban areas are also noted.

There is a dearth of reliable data related to international migration. We do not have authentic information on how many Nepali migrant workers are in foreign countries and the foreigners in Nepal. The population census provides only a general picture of trends and the magnitude of migration, and the manufacturing establishment survey has its own limitations in scope and coverage. The third source is the data on industrial workers provided by the Ministry of Labor, which are also based on a small and narrow coverage.

The issue of migrant workers in Nepal is basically related to migration between Nepal and India, which is facilitated by traditional ties, geographical proximity and an open border. Most migrant workers in agriculture, industry, construction and informal sector trades are Indians. No substantial program addressed toward migrant workers exists. In the 1980s, the national population strategy contained a proposal to control immigration through a registration and entry permit system. These policies were put into practice for a period, but they were withdrawn during the eighth plan period. Before the recent economic liberalization, a substantial rise in the number of Indian workers occurred, especially in the garment industries. The following tables shows that nearly 10 percent of the workers in the manufacturing sector in Nepal are foreigners, mostly Indians (ILO, 1997).


<table>
<thead>
<tr>
<th>Description</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nepali</td>
<td>184,266</td>
<td>58,210</td>
<td>242,476</td>
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<tr>
<td>Foreigners</td>
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<td>1,299</td>
<td>25,258</td>
</tr>
<tr>
<td>Total</td>
<td>188,225</td>
<td>59,509</td>
<td>267,734</td>
</tr>
</tbody>
</table>

Source: ILO, Employment in Nepal, 1997, p.103

**Globalization:** Globalization refers to the free flow of ideas, goods and services throughout the world. It is also viewed as a process by which product and capital markets, economies and cultures are getting progressively integrated on a global scale. It is closely associated with a number of policies — privatization, liberalization, denationalization, marketization and deregulation. The most important components of globalization are economy, technology and information, which function independent of the control of the nation-states and regions. Economic liberalization is a process whereby control over the processes of production,
distribution and resource allocation is getting shifted to the globally integrated market controlled by a few players, with vast wealth and resources.

During the 1980s, a slowdown in economic growth led to a severe macroeconomic instability in Nepal. The country was faced with growing fiscal deficits and declining international reserves. International financial institutions such as the International Monetary Fund and the World Bank, as well as the major donor countries, began to set Nepal’s development priorities and prescribed to a weak government a market-based economic growth that was to come via unrestricted international capital flow. The government adopted a stabilization program in 1985, sponsored by the International Monetary Fund (IMF), and a structural adjustment program (SAP) financed by the World Bank and by the IMF Structural Adjustment Facility for 1987-90. Some of the main reasons for Nepal to adopt stabilization and adjustment were the following:

a) GDP growth was almost stagnant and the fiscal deficit increased because of accelerated public expenditure and a low internal revenue mobilization.

b) Inefficient public sector enterprises were heavily subsidized and corruption was rampant; about half of such enterprises incurred loss (World Bank, 1997).

c) State-owned financial institutions faced high delinquencies.

d) Agriculture and industry sectors performed poorly.

e) A wide gap existed between the imports and exports-imports outpaced exports of goods.

f) Poverty, inequality, unemployment and massive underemployment increased.

All of these programs were introduced to improve on these imperfections. In 1992, Nepal entered into another phase of the enhanced structural adjustment facility (ESAF) of the IMF with the objectives of a 5 percent annual increase in the GDP growth in the next three years; a 5 percent reduction in annual inflation; limiting the current account deficit to 9.6 percent of the GDP; and reducing the fiscal deficit to 7.8 percent of the GDP by the end of 1995 (Dahal, 1998).

The first elected Nepali Congress enacted the Privatization Act and accompanying regulations and guidelines with the objectives of reducing the burden on the government and releasing resources to other sectors; generating operational efficiency and productivity of the enterprises; and encouraging private sector involvement in business and industries. Liberalization assumed reforms, improvements, de-bureaucratization and privatization (also denationalization of some).

The structural adjustment measures were expected to promote exports, diversify trade, attract foreign investment, accelerate the rate of growth and generate more employment and income for the people in Nepal. But statistics do not reflect these objectives. The volume of exports to India trebled between 1984/85 and 1996/97 but the volume of imports increased 6 ½ times, increasing the trade gap immensely. Exports, overseas in Rupee terms during the same period were up by 14 times and imports by 20 fold, once again putting much pressure on the balance of payments (Acharya, 1998).
In a plural and diverse society like Nepal’s, where development is uneven, the globalization process has intensified the rich-poor, urban-rural gaps, notwithstanding its positive contribution to renewed consciousness about universal rights, international cooperation, gender issues, environmental ethics and a move towards demilitarization of development (Dahal, 1998). It is interesting to note that all political parties in Nepal that have supported the constitution and believe in coming to power through election have in one way or another supported liberalization and privatization. But they also believe in the role of the state in dispensing its services to the people. However, confusion seems to remain among the political parties on delineating the role of the state and the private sector.

Liberal Economy Cannot Alleviate Poverty

Open Economy Can’t Alleviate Poverty- Minister for Agriculture, Chakra P. Bastola said an open and liberal economy can’t alleviate poverty. Addressing the farmers’ workshop organized by the Nepali Congress, Sarlahi district unit at Malangawa on Saturday, Minister Bastola said that as the Finance Ministry has already decided to privatize the Agriculture Input Corporation (AIC), farmers may not get fertilizers for the coming farming season. “Go and ask the Finance Minister to make fertilizer available at a cheaper rate as it is he who has decided to privatize the AIC,” Minister Bastola told the local farmers. Addressing the meeting, former Speaker and Nepali Congress leader Ram Chandra Poudel said that Nepal had become poorer by taking foreign debt in a haphazard way. “International lending organizations are playing the role of local money-lenders and take back 75 percent of their loans in the name of consultancies.”

Kantipur daily reported on Sunday. (Kathmandu Post, October 4, 1999)
Political Issues

Political History: Nepal was divided into different principalities before 1768. There were nearly 12 clusters, each of which was controlled by different ethnic and caste groups.

Prithbi Narayan Shaha, the King of Gorkha, gradually conquered integrated the principalities into the present-day Nepal. From 1768 to 1847 for 79 years, the king was the dominant figure in ruling the country.

In 1847, the then prime minister Janga Bahadur Rana took over all power, military as well as administrative, and made the position of the prime minister most powerful - even more powerful than the king, and made it hereditary.

The oligarchic Rana family regime ruled the country for 104 years, from 1847 to 1951. Nepal was kept isolated from the external world until 1951. The people organized and revolted against and overthrew the Rana regime, and Nepal was declared a democratic country in 1952.

There were no constitution and no elections, so the king was the head of the state and restored all power, which remained under shadow during the Rana regime. During 1951-59, the king formed several governments from various political parties, which were active during that period.

In 1959, the first general election was held and the Nepali Congress Party secured a two-thirds majority and thus formed its government. This government could remain in office only for 1 1/2 years.

The parliamentary system was criticized by the king as being unable to make their leaders responsible to the people rather than their own parties. All political parties were banned by the king in 1961, the parliamentary system was dismissed and the partyless Panchayati political system was introduced by the King in Nepal.

This system ran for three decades from 1961 to 1990, and political stability prevailed. However, Nepal's economic conditions deteriorated and Nepal became one of the three poorest countries of the world. Nepal was an exporter of food grains until the early '80s but began importing food grains since then. Poverty was rampant.

The majority of the Nepalese were unhappy and poor, unemployment was wide spread and for most of the people life was miserable. The people revolted against the existing system and in 1990/91 overthrew the Panchayati system. A multiparty parliamentary democratic system was introduced.

The first general election after the end of the Panchayati regime gave a simple majority to the Nepali Congress Party with a total of 112 seats in the parliament. People had high expectations from their leaders and the parties, but the party faced internal trouble and a midterm poll was declared. In this second general election, none of the parties had a clear majority and it was a hung parliament. Minority single-party government and coalition party governments were
formed and experiences gathered. In the third general election of May, the Nepali Congress obtained the clean majority and is in the government. The details follow.

**Revolution of 1950-51 and its consequences:** The century-old (104 years) autocratic Rana regime was overturned through the revolution of 1950 with the Delhi Compromise, which was basically mediated by India. The Delhi Compromise was a tripartite pact between the King, the Nepali Congress Party and the Ranas. The major concepts of the pact were:

- An election based on adult franchise would be held within 1951 to form a constituent assembly and to draw up a constitution for the country.
- An interim cabinet consisting of 10 members, five of whom would be representative of the people and five including the prime minister, from the Ranas.
- King Tribhuvan should continue as king of Nepal.
- An amnesty for all political prisoners.
- Rana-Congress coalition government.

But against the spirit of revolution and the Delhi pact, the Rana prime minister and the Ranas attempted to sabotage the government and peace and order, and made the situation worse and the coalition was short-lived. Eventually, the NC resigned and asked the king to form a one-party government for fulfilling the aspirations of the people and the spirit of the revolution. This coalition worked for only nine months.

The Interim Government of Nepal Act 1951: As a consequence of the Delhi Compromise, the Rana- Congress coalition government took decision on the Interim Government of Nepal Act 2007 (1951). The prominent features of this constitution were:

- The king was acknowledged as the father of the nation and also as a real executive head of the state; executive, legislative and judiciary wings of the government were created.
- A collective sharing of power by the king and the council of ministers was designed.
- All executive actions of the government were to be taken in the name of the king.
- The role of the monarchy was restored but norms of parliamentary democracy were also initiated.
- A long list of directive principals of the state and fundamental rights of citizens were also mentioned.

In between the interim constitution (1951) and the constitution of the kingdom of Nepal 1959, popularly known as the Parliamentary Constitution, various advisory assemblies and royal councils were formed both by King Tribhuvan and his successor, King Mahendra. The interim constitution was also amended six times to increase Royal power, to consolidate the monarchy rather than fulfilling the objective of the revolution.

Eventually, all political parties were maneuvered out by the king, and King Mahendra, who had ascended the throne in 1955, under people’s pressure decided to hold a general election for the parliament under a constitution awarded by the king himself. This was a major departure from the spirit of the Delhi Compromise, as the issue of a constituent assembly to be duly elected by the people was given up in view of the expanding royal power.
The first parliamentary constitution and government of Nepal (1959-60): King Mahendra accorded the constitution of the kingdom of Nepal on February 12, 1959. The preamble to the constitution underlined ... the establishment of an efficient monarchical form of government responsive to the wishes of the people. The most dubious features of this constitution were the juxtaposition of two power centers: the king and the cabinet headed by an elected prime minister. Apart from other details of parliamentary process, the constitution provided a wide range of discretionary and emergency powers to the king.

In Nepal’s first ever parliamentary election, the Nepali Congress Party obtained an overwhelming majority by winning two-thirds of the seats in the lower house of parliament. But using the emergency powers under the constitution, King Mahendra dismantled the 18 month-old elected government and arrested the prime minister and his colleagues along with a large number of party activists, alleging that the government was antinational.

The era of the Panchayat system (1960-1990): The Panchayat system began with the royal announcement on January 5, 1961, that banned all political parties, curtailed essential freedom. Politicians not endorsing the new regime were imprisoned. The structure and function of the Panchayat system were coterminous with the spirit of the royal regime. Thus the new political model innovated after the 1960 coup was tailored to absolute monarchy. Ultimately the mass movement of 1990 brought about the downfall of the partyless Panchayat System in favor of a true constitutional monarchy and a multi-party system in Nepal.

The constitution of Nepal, 1962, promulgated by the king, regulated his direct rule as an absolute monarch. The constitution incorporated the provision of Hindu state with the active and dynamic royal leadership. It declared the Panchayat system as a partyless system with class coordination and a mixed economy. However, the Panchayat constitution was amended three times in order to meet challenges due to poor economic growth.

The constitution of the kingdom of Nepal, 1990: The year 1990 was a historical watershed for Nepal. The 30-year-old Panchayat regime collapsed under the weight of a mass movement launched under the joint leadership of both the democratic and left forces. The movement not only legitimized the parties but also brought in a major restructuring of the political system. The authoritarian monarchical rule and the partyless Panchayat polity were replaced by a multiparty democracy based on principles of popular sovereignty and constitutional monarchy. The parliamentary system thus became the accepted political system of Nepal.

The new democratic constitution of Nepal accepted in its preamble as the fundamental principles of democracy (which cannot be revoked by way of amendments to the constitution) the sovereignty of people, a constitutional monarchy, a multiparty system and the fundamental rights of the people.

Constitution, administration and bureaucracy

According to the constitution of the kingdom of Nepal (1990), Nepal is a multiethnic, multilingual, democratic, independent, indivisible, sovereign, Hindu and constitutional monarchical kingdom.
A. Legislature: There is a legislature, called the Parliament, consisting of the king and two houses of parliament - the House of Representatives (HOR) and the National Assembly (NA).

The House of Representatives has 205 members, who are elected for a term of five years. The election is direct on the basis of one man, one vote through secret ballots. Nepalese completing the age of 18 years are entitled to vote.

The National Assembly consists of 60 members chosen according to the following manner:

The king nominates 10 members. Twenty-five members (including at least three women members) are to be elected by the HOR according to the proportional representation system by means of a single transferable vote as provided in the law. Fifteen members—three members from each development regions are elected by an electoral college consisting of chairmen and deputy chairmen of village and town level local authorities, and chairmen, deputy chairmen, and members of district level local authorities, by means of a single transferable vote, as provided in the law. The term of office for the members of the National Assembly is for six years.

Parliamentary committees: There are committees on finance, public accounts, human rights, foreign policy, natural resources and assets, protection of environment, population and other subject matter committees as required by the parliament.

There is provision for a joint committee (consisting of not more than 15 members from the House of Representatives and the National Assembly at 2:1 ratio).

Passing of a bill: A bill is registered for discussion in the House of Representatives. They are first sent to the respective parliamentary committees, discussed, and then forwarded to the HOR. It is then forwarded to the NA. The NA sends the bill back to the HOR after necessary modification/suggestion. The HOR then sends it to the King for final approval.

B. Judiciary: The courts of the kingdom of Nepal have three tiers: the Supreme Court, the Appellate Courts and the District Courts.

All the courts except the Military Court are under the Supreme Court. The king appoints the chief justice for seven years on the recommendation of the Constitutional Council and other judges of the Supreme Court on the recommendation of the Judicial Council.

Constitutional bodies:
Abuse of Authority Investigation Commission
Auditor General
Public Service Commission
Election Commission
Attorney General

C. Executive: The structure of the government is democratic and comparable to many others in the world. It has a parliament, a constitutional monarch and a Council of Ministers with joint accountability to the parliament. The government is formed by the party (parties) which
commands the majority in the parliament and functions at the will of the latter. So the
government is always seeking to maintain its majority in the parliament.

A cabinet minister heads the ministry, who is often assisted by a state minister or assistant
minister(s). The head of the bureaucracy in a ministry is the secretary, who receives his authority
from the written authorization from the minister and delegates as needed to the heads of various
departments and divisions under him and so on.

A ministry is generally a policy formulation entity; the departments within it are the
implementing agencies. They implement specific programs through their district-level offices.

An independent Public Service Commission recruits civil servants based on objective and
rational criteria.

Within a ministry are five levels of decision-making officials: section officer, under secretary,
joint secretary, special secretary, and the secretary. Necessary staff assists each of them. All
administrative actions are initiated by the section officer, who makes a professional analysis of
the issue at hand and forwarded to his/her immediate superior, the undersecretary. Final the
decision is made at the appropriate and authorized level.

Annual plans are first initiated at the district level, and these are forwarded to the central level.
The ministries coordinate, synthesize and send them to the National Planning Commission,
which approves all plans. This is coordinated with the Ministry of Finance, and finally the annual
plans (program budget) are passed in the parliament.

**District Level:** Except the new ones such as the Ministry of Population and Environment, the
Ministry of Science and Technology and the like, most ministries are represented at the district
level with a representative of the home ministry acting as the chief of the district bureaucracy or
chief district officer.

A Representative system also exists at the local level. Based on adult franchise, five persons,
including a woman and a ward president are elected at the ward to form ward committee. The
11-member village development committee (VDC) consists of the nine ward presidents and the
VDC president and the vice-president elected from all the wards. The members of all the wards
together constitute the village council, which is a village parliament and approves the programs
and budgets of the VDC.

All the VDC members constitute the electorate for the election of the district development
committee (DDC). A district is divided into nine to 13 Ilakas or district wards each of which
returns one member to the DDC. The chairman and the vice-chairman elected by the entire
electorate. The VDC presidents and vice presidents in the district constitute the district council--
i.e., the district parliament--which approves the annual programs and budgets of the DDC. The
representative of the local development ministry, the local development officer is the executive
secretary of the DDC, and other line officials of the development-related ministries are
answerable to it. Together they formulate the annual district development plan, which is the
multisectoral program of action for the district development discussed and approved by the district council.

In spite of a well established government with a modern administrative system and a multiparty parliamentary democratic political system, the parliamentarians at large have lost the respect of the people today in contemporary Nepal. Most of these representatives are often perceived to be more concerned about their own prosperity and personal interests. Irrespective of what divergent political ideology they adhere to, in the past they readily formed coalitions and jointly agreed to continue exploiting the common people and make money. There is an extreme political interference in the day-to-day administration. The secretaries were mostly transferred at each government reshuffle. The bureaucracy thus is working at a very low morale.

The Nepalese people have struggled long and hard to gain democratic statehood for their land. But the government is yet to satisfy its people and the desire for good governance is still there. Theoretically the people of Nepal have what they wanted. In practice and in reality, democracy and democratic government, even after nine years, still seems to be struggling as if to establish its legitimacy and stumbling from one crisis to another. However, it is expected and hoped that the process of institutionalization and democratization will strengthen the democratic system of governance and satisfy the people and their need in the future.

There is no doubt that people in Nepal have suffered much during the past nine years. The leaders distributed sweet dreams and high aspirations but the people were never considered seriously by the leaders and were left alone to face all kinds of sufferings. Bureaucracy did not change with the change in the political system. Center is still powerful and continues to decide for the poor at the grass-roots level. Following are some specific issues that have emerged in the present-day politics:

- Centralized system of governance.
- Misuse of political power.
- Common goals unidentified.
- Lack of consensus on a national agenda.
- Political agenda narrowly defined, political parties non-accommodative.
- Crisis of confidence among the political parties.
- Politicians and politics are being negatively perceived.
- Autocratic behavior is demonstrated in a multiparty democracy.
- Poor people are still marginalized; no structural changes.

The emergence of a new class-- "rich opportunists"-- also known as Bhui Futa Barga - who have raised their income in nights and days with all kinds of malpractices.

Intellectuals are getting indifferent, the poor are uninformed, the visible political parties are playing unhealthy games for power and the revivalists are getting the upper hand. The combined effect creates a situation that is unhealthy for democratization.

Massive abuse and erosion of democratic norms and values in nine years. Whether this should be interpreted as a "democratic practice" or "political instability" is open for debate, but it can be said that mostly it is due to the absence of a civil society in this country.
Environmental Issues

Environmental Conservation: Nepal, although small in size, is quite rich in geoclimatic and ecological diversity. The country’s rural population constitutes the predominant group (88 percent) and it is scattered across five physiographic regions. The natural and ecological endowments are often threatened by the pressure of population growth, as well as frequent occurrence of natural hazards such as erratic monsoon, landslides, seismic activities, forest fires and flash floods.

Much of the ecological degradation in the rural areas is associated with poverty, which in turn is closely associated with declining average agricultural productivity and lack of alternative energy resources. Economic development in the rural areas has been sparse and slow, and developers have paid little or no attention to protection, conservation and sustainable use of natural resources. In urban areas and growing market centers, unplanned development and ad hoc industrial growth have led to deterioration in the quality of air, water and land, and increasing noise levels.

Adventure tourism is also affecting environmental resources in regions sustaining high rates of visitation, such as the Sagarmatha National Park and Annapurna Himal.

The intricate relationship and interdependence among poverty, population and the environment are typical of most developing countries, and Nepal is no exception. Their interaction is manifest in worsening environmental conditions such as deforestation, loss of soil fertility and soil erosion, decline in agricultural yields, reduced employment opportunities, and problems of overcrowding and pollution.

Thus, over the past few decades, Nepal's fragile ecosystem has been undergoing a severe strain.

Main Environmental Problems

Sustainable Management of Natural Resources: Agriculture is the main occupation of about 80 percent of the population. Land and land-based resources are critically important in providing food, forage and energy. The sources of environmental problems can be categorized as follows:

(a) Land Resources

Soil fertility management: Soil fertility is declining because of improper plant nutrient management and expansion of cultivation on fragile lands.

Forest and rangelands: Forests constitute 37 percent of the total land area; rangelands, 12 percent. They are badly degraded. Forests are important as providers of fuelwood, fodder, timber and non-timber forest products.

(b) Water Resources

Watershed protection: Nepal's watersheds are not being properly managed for their sustained use.
**Hydroelectric power development**: Nepal boasts of possessing the second largest hydroelectric potential in the world. Large hydro projects are associated with several environmental risks, including geological stability, alteration in the ecosystem due to inundation of land by reservoirs, effect on aquatic life, and relocation of human settlements.

(c) **Population, Health and Poverty**

**Population growth** at 2.1/2.5 percent is considered high. This puts heavy pressure on the available resources, leading to their further degradation.

**Drinking water**: About 75 percent of the urban population and 35 percent of the rural population has access to drinking water supplies.

**Sanitation**: No urban areas outside the Kathmandu Valley have proper sewerage systems.

**Solid waste management**: Grossly inadequate in all major cities in Nepal.

(c) **Poverty Alleviation**

**Poverty** is both a cause and a consequence of environmental degradation. Cases of degraded forests, declining soil fertility, poor quality of life have been documented throughout the country.

(d) **National Heritage**

**Biodiversity**: National parks and protected areas make up 14 percent of the land area.

**Management issues**: Park-people conflict. Inadequate representation of all the ecological regions of the country.

**Cultural heritage**: Mostly decaying and degrading; improper policy and poor management are the culprits.

**Tourism**: About 400,000 tourists visit Nepal every year. They are concentrated in certain areas and seasons, and contribute to several environmental problems.

(e) **Urbanization**

**The urban population** is about 10 percent and increasing rapidly. The total absence of effective urban planning means that old and newly emerging urban centers are severely stretched in basic amenities and services. The Kathmandu Valley is a case in point.

Solid waste management, sewerage, storm drainage, and air pollution due to vehicular traffic and industrialization are increasingly becoming serious problems.

(f) **Cross-cutting Issues**
Legislation and regulation: These are inadequate in some cases to address the emerging environmental problems such as in setting and enforcing pollution standards, and penalizing the violators. In other cases, there are conflicts and contradictions. This is mainly due to the sectoral approach followed in formulating these instruments.

Enforcement: Enforcement of environment-related legislation and regulation is almost non-existent. Lack of serious commitment to public welfare, the absence of powerful advocacy groups outside the government, and lack of proper institutions and manpower are the causes of non-enforcement.

Decentralization for local initiative: Most environmental problems are better resolved at the local level. This requires adequate empowerment of local bodies and decentralization of authority. But Nepal’s governance system thus far is very centralized.

Role of NGOs and the private sector: NGOs can play a big role as co-partners in public sector efforts and as pressure groups as is the case in the west.

Role of the government: Should be limited to that of a facilitation and promoter. It should take enabling measures to enhance local capacity and resources. Public resource allocation should clearly reflect these strategies.

Status of women: Women contribute more economically in agricultural and rural activities. They have traditionally been treated less favorably. Yet, they play a crucial role in local resource management.

Efforts to Address Environmental Issues

During the past decade, and particularly following the popular movement of 1990 restoring multiparty democracy, Nepal has made significant strides in the environmental field. The National Conservation Strategy (NCS) of 1988 signified the first serious attempt to formulate a national environmental policy framework for the country. This document was instrumental in paving way for a series of policy pronouncements and program interventions that followed.

Protection of the country’s environment is enshrined in Nepal’s constitution (1990) under the guiding principles and policies of the state.

The Nepal Environment Policy and Action Plan (NEPAP) was formulated in 1993 as a further refinement of the National Conservation Strategy. NEPAP covered the major sector areas such as natural resources (land, forest and rangeland, water), health, education, natural and cultural heritage, urban and industrial development, and the cross-cutting issues of population, poverty, legislation, institutions and public resource management.

National EIA guidelines were endorsed in 1993, followed by sector-specific guidelines for forestry and industry in subsequent years. Finalization of similar guidelines for other sectors are in progress.
Existing Institutional Resources

In accordance with the spirit of the constitution and in recognition of the growing concern for addressing environmental issues as the country forges ahead on the development path, a number of institutions have been created to address the multifaceted issues related to the overall national environmental health and environmental consequences of sectoral development efforts.

Several ministries, departments and parastatals are now equipped with environmental cells to specifically incorporate preventive and mitigatory measures in their respective development programs and projects. Analytical and implementation capacity is also growing in the non-governmental and private sectors.

The following institutions are directly related to policy formulation, planning and program implementation related to the environment:

--Parliamentary Committee on Natural Resources and Environmental Protection (PCNREP).
--Environment Protection Council (EPC).
--National Planning Commission (NPC).
--Ministry of Population and Environment (MOPE).
--Sectoral Ministries.

Following are some of the chronological events to address environmental issues.

1980 : World Conservation Strategy prepared by IUCN.
1985-1990 : EIA mentioned in the sixth five-year plan.
1982 : Environmental impact study project was launched in the Ministry of Forest and Soil Conservation.
   : National Commission for Natural Resources was formed under the chairmanship of the minister of Forest and Soil Conservation.
1983 : IUCN prepared a prospectus for a natural conservation strategy.
1985-1990 : A separate chapter on environment appeared in the seventh five-year plan.
1987: The National Conservation Strategy (NCS) and the National Council for the Conservation of Natural and Cultural Resources (NCCNCR) proposed.
1989 : NPC started working on it.
1990 : Interim government formed a task force for the conservation of forests, and the task force submitted a report containing short - medium - and long - term strategies.
1991 : The constitution of Nepal 1991 included environmental protection under the directive principles and policies of the states.
   : The Committee on Natural Resources and Environmental Protection was constituted in the House of Representatives.
   : RIO Word Summit on Environment and Development.
1993: The Environmental Protection Council was formed and the Ministry of Forests and Soil Conservation was renamed the Ministry of Forests and Environment.

: Nepal's Environmental Policy and Action Plan (NEPAP-1) was prepared.

1995: A task force was constituted by the NPC/IUCN for NEPAP-II to update environmental concerns and determine forestry, water resources and industry projects to be undertaken.

: A separate Ministry of Population and Environment was created.

1996: NEPAP-II was completed and awaited government's endorsement.

: Environmental Protection Act passed by the parliament.

**Deforestation in the Middle Hills of Nepal**

The Middle Hills (Pahad) extend across central Nepal from east to west and occupy about 43 percent of the total land. The region consists of the southern foothills of the Himalayas and (to the north) with valleys and the northern range of the Siwaliks (to the south). This area is about 60 to 100 km. wide and has an altitudinal variation ranging from 500 to 3,000 m and is dissected by large north-south drainage systems.

Approximately 95 percent of the population in the Middle Hills depends on agriculture and forestry for a living. Communications in the region are poor. Farmers can rarely afford to use artificial fertilizers and considerable amounts of fuel are required for both cooking and heating. Mixed farming systems have therefore developed that rely on local resources. Forest resources provide a range of benefits for this subsistence agriculture, such as consistency of water, stability of the land and a wide range of products - e.g., firewood, fodder, timber, poles, leaf litter and grass, compost, medicinal and food plants, and fruits. The interdependency of forest and agriculture in the hills is far greater than most nonforesters are prepared to recognize. Forestland has become an integral part of the farming system, but deforestation is a serious problem in this region. Deforestation in the Middle Hills is leading to a spectacular deterioration of a fragile environment. The growing population and its need for fuelwood are usually cited as the main cause of deforestation, though more recently greater attention has been drawn to the dependence on forests for animal fodder (Wyatt-Smith, 1982). Others have cited the role of land clearance for agriculture as the main force behind deforestation (Bajracharya, 1982).

**Population growth:** The present rate of population growth per annum is 2.5 per cent. If the present trend continues, Nepal's population will exceed 25 million by 2001 (Goldstein et al., 1983). The population density on arable land in the hills has already reached more than 1,500 per km². Some districts in the Middle Hills have even higher densities. Increasing population has increased the demand for food, firewood for cooking and heating, and timber for house construction. All these needs have directly or indirectly increased pressure on forestland.

**Agricultural Expansion:** Land clearance for agriculture is another force behind deforestation (Bajracharya, 1982). In the Middle Hills, the traditional agrarian technology practiced is unable to keep pace with population growth. The yields of major crops have been nearly stagnant or declining over time. Therefore, the extension of the agricultural areas has been the principal means of increasing food production in the hills (Pant and Jain, 1972); this has resulted in terraced agriculture being taken to almost impossible levels.
During 1975-1980, the cultivated area in the hills increased by 34 percent and forest area declined by 15 percent (Asian Development Bank, 1982). However, the clearance of forestland for cultivation to meet the ever increasing food demand is likely to continue unless soil fertility is conserved and crop yields are considerably increased.

**Demand for Fuelwood:** Fuelwood is the principal energy source in the hills, where nearly 100 percent of rural households depend on it for cooking and heating. Apart from domestic use, it is the principal energy source for many rural industries such as potteries, brickworks, tea processing, handmade paper, distillation of alcohol (Raksi) from grain, making of brown sugar, fish and meat smoking, etc. Increasing demand for fuelwood by the increasing population is said to be the main cause of deforestation and environmental degradation in the Middle Hills of Nepal (Earl, 1975; Revelle, 1978). Campbell (1983a) has reported the average annual consumption of fuelwood in the Middle Hill to be 640 kg per person in addition to the use of agricultural residue and dung. In the survey report of Tribhuvan University (1976), it was shown that the availability of fuelwood on a sustained basis is only about 78 kg per capita, whereas the consumption in 1974/1975 was about 546 kg per capita. These figures suggest that there is heavy pressure on forest resources for fuel in the region.

In the Middle Hills, more than 95 percent of the population still lives in the countryside. Despite the fact that Nepal has great hydroelectric potential (equivalent to that of Canada, the United States and Mexico combined), much less than 1 percent of this latent energy has been tapped. Even if sufficient electricity were generated, most villages would not be in a position to utilize it because of the prohibitive cost and formidable problems of laying out transmission lines. The majority of villagers will therefore have to depend on fuelwood for cooking and heating for the foreseeable future. Therefore, the increasing demand for fuelwood seems likely to continue and cutting of the forest will not cease in the near future.

**Demand for Timber:** Timber is used for housing and furniture. Though the demand for timber is relatively low compared with the demand for fuelwood, it is increasing with the need for housing for the growing population. Wood for construction purposes in the Middle Hills is taken carelessly and unthinkingly. It is mostly large stems that are used and the method of converting logs into timber is very inefficient. The only tool available is the axe with which rough-cut square timbers are hewn out of the stems. The process is an extremely wasteful one and the forest floor becomes littered with chips. Another damaging activity is the way in which roofing shingles are obtained. Felled trees found to have appreciable spiral grain are not used in making roofing shingles and are left to rot. Only the easy-to-split portions of large stems are used; the wastage in this process exceeds over 10 times the end use. Mauch (1976) has reported that for each 1m$^3$ of construction timber used, about 10 to 20m$^3$ of wood is felled.

**Fodder and Grazing:** Livestock is an integral part of the agricultural system and the rural economy. It provides draught power, produces the manure required for soil fertility, and is a source of milk, meat and cash income. This dependence on livestock has led to a high livestock population density in the hills. In the eastern hills, the livestock density has reached as high as eight livestock units (cattle) per hectare of arable land (Hopkins, 1984). This exceeds the carrying capacity of the land. The feed for livestock is inadequate for most of the dry season and people rely on forestlands for fodder material. Wyatt-Smith (1982) has summarized a
considerable literature relating to fodder availability and consumption in the various seasons of the year in Nepal. On data derived from the Phewa Tal and Tinau watersheds near Pokhara, he has estimated that 3.5 ha of accessible unmanaged forest is required to provide a necessary amount of fodder for the livestock owned by a family. Many authors now agree that reliance on forest resources for satisfying the increasing demand resulting from high livestock density in the hills is one of the major causes of deforestation in the Middle Hills (Pandey, 1982; Wyatt-Smith, 1982; and Hopkins, 1984).

Animal grazing and browsing freely in the forest is another cause of forest destruction in the Pahad. This practice kills the young seedlings and saplings, so it can prevent forest regeneration (FAO, 1974; Rieger, 1976; Pereira, 1980).

The pressure for more and more arable land and exploitation of forest for fuelwood, fodder and timber are leading to widespread forest degradation, which in turn is triggering soil erosion, landslides, shortages of forest products, a decline in agricultural production, degradation of living standards and migration.

**Soil Erosion and Landslides:** Landslides, earth and mud flows, and rock slides are all common phenomena in the Middle Hills, and serious losses of life and property occur every year. Much of the blame for this has been attributed to the loss of forest cover (Bhattarai, 1979; Gurung, 1981). It is estimated that the Middle Hills region loses 1.7 mm of soil from its surface each year. Because of the slipping away of the fertile soil from the hills, the productive capacity has declined: in the country’s most densely populated region, the Eastern hills, as much as 38 percent of the total land area consists of abandoned fields (Eckholm, 1976). It is apparent that the continuation of present trends in soil erosion may lead to the development of a semi-desert type of environment in the hilly region. Donner (1972) has forecast that within the next 50 years many areas of the Middle Hills will resemble that of desertified areas of Afghanistan and northwestern Iran.

**Floods and Sedimentation:** Sediment carried by rivers and streams from the hills is causing riverbeds in the Terai to rise 15 to 30 cm annually (Joshi, 1981). This has led to more frequent flooding and meandering of rivers in the Terai, resulting in the destruction of homes and farmlands. In 1979, Nepal and India suffered more than $1 billion dollars in damage to property and numerous lives were lost because of flooding in the Ganges valley. This flooding is said to be due to the cutting of forests in the hills of Nepal (Cultural Survival Quarterly, 1982).

**Decline of Crop Production:** Deforestation in the Middle Hills, increased severe soil erosion and scarcity of fuelwood. This has led to a gradual decline in soil productivity, and declining crop yields. Unavailability of leaves and litter for compost making has also reduced soil productivity. Scarcity of fuelwood resulting from forest destruction has forced farmers to burn animal dung and fodder for cooking and heating, thus further depriving soil of desperately needed manure. Livestock population, the main source of manure and draught for crop production, has been threatened by the scarcity of fodder arising from forest degradation. Scarcity of fuelwood, fodder and water has led to a greater labor requirement for the procurement of these basic needs. This has reduced the labor available for agricultural activities and reduced agricultural production.
In the survey report of the World Bank (1978a), it was shown that in most villages of the Middle Hills, households may devote an average of 15 man days per month to fodder collection, 11 man days for fuel collection and eight man days for water collection.

**Migration:** Population pressure, lack of employment possibilities, food shortages and degraded living standards in the hills have led to the uncontrolled migration of people from the Middle Hills to the Terai to find employment. This is changing Nepal from a rural mountain society to a lowland urban one. It has been estimated that the migration rate of people from the hills to the Terai increased from approximately 0.7 percent in 1961 to 56 percent in 1981 (ADB, 1982). Migration from the hills to the Tarai demonstrates the involvement of push and pull factors. The push factor is the deterioration in economic conditions resulting from population growth and environmental degradation in the hills. The pull factor is the opportunity for off-farm employment and the opening of lowland in the Tarai. Spontaneous, unorganized encroachment into the Tarai by hill migrants has converted more than 100,000 ha of prime forest cover into agricultural land in recent years (ADB, 1982). If the environment of the Middle Hills is not improved and migration is not checked, the whole Tarai forest may be reduced to marginal agricultural land in the years to come.
Women and Gender Issues

Bachofen in his book Mutterrecht (Mother Right), 1861, describes the development from “Hetaerism” to monogamy and from mother right to father right in earlier times. He provided abundant indications in ancient classical literature of a state prior to monogamy among the Greeks and Asiatics when not only did a man have sexual intercourse with several women, but a woman with several men, without offending against morality. The descent could originally be reckoned only in the female line, from mother to mother, and women had a higher social status in the society.

Morgan, in his book Ancient Society (1877) rediscovered the primitive matriarchal genes as the earlier stage of patriarchal genes of civilized peoples.

Pushpa Lal (n.d.) refutes the earlier idea of the settlement of Kathmandu valley by Manju Shri from China and Ne Muni from India. Instead, he opines that Kathmanduites’ preceders were the Bajrayogini. Bajrayogini is a Goddess. Gopal Singh Nepali, in his book on “The Newars”, mentions matriarchy among ancient Newars of Kathmandu valley, where the status of women was high. However, by the passage of time all around the world, the situation changed, women were victimized and gradually their status was lowered.

Sex and Gender Relations: Sex is a biologically determined characteristic. It has an attribute quality, in that a person usually is “either” a man “or” a woman. Genetically speaking, the humans have 22 pairs of Otozome (non-sex chromosome) and one pair of sex chromosomes. The male has a genome with XY chromosomes and the female with XX combination. In other words, XX and XY chromosomes determine the sex of a child. If the male/father contributes an X chromosome, which gets fused with X chromosome of the female, the child is a female. But if the male contributes a Y chromosome to the X chromosome of the female, she gives birth to a male child. Thus, it is actually the male who is responsible for child’s sex.

Gender is a social construct - it generally relates to the expected role or role performance of a woman/man. Gender role is socially and culturally determined. It has variable attribute, which means that gender roles are different over time and across societies.

Both men and women create and maintain the social shaping of what women and men are and do. Societies after all, are composed of people. Men and women do, however, benefit and suffer unequally from the current situation. Therefore one needs to portray both men and women as responsible and capable of changing themselves and society while recognizing that women have a greater interest in organizing for change.

Gender Gaps: There is no question that significant improvements have been made across the world in women’s education, health and access to labor market opportunities. Compared with men however, women remain at a disadvantage in nearly all socioeconomic spheres.

Education: School enrollments of both boys and girls at all levels have increased, but girls still lag behind. A report published by the World Bank in 1993 revealed that in the developing countries in 1960, there were 67 females per 100 males enrolled in primary school; in 1990, there
were 86 females per 100 males. Trends were similar for secondary and tertiary enrollments: 53 females per 100 males in secondary schools in 1960, and 75 in 1990; and 36 females per 100 males in tertiary education in 1960 compared with 64 by 1990 (WB, 1993).

**Health:** As in education, health data reveal that over the past two decades, life expectancy at birth has risen for men and women in all regions of the world. However, life expectancy in South Asia and sub-Saharan Africa is less than 60 years, compared with 71 years in Latin America and the Caribbean. In industrial countries, the average life expectancy for women is five to eight years longer than for men. But in South Asian countries - Bangladesh, Bhutan, India, Nepal and Pakistan - men either outlive or have the same life expectancy as women, notwithstanding the biological advantages that females enjoy.

In some countries, females die at an earlier age than males. The following table compares age at death by gender.

<table>
<thead>
<tr>
<th>Country/Regions</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>52</td>
<td>53</td>
</tr>
<tr>
<td>India</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Nepal</td>
<td>53</td>
<td>54</td>
</tr>
<tr>
<td>Pakistan</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>74</td>
<td>66</td>
</tr>
<tr>
<td>High Income economies</td>
<td>80</td>
<td>73</td>
</tr>
<tr>
<td>Middle East &amp; N. Africa</td>
<td>65</td>
<td>63</td>
</tr>
<tr>
<td>South Asia</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>52</td>
<td>49</td>
</tr>
<tr>
<td>Sri Lanka (1990)</td>
<td>73</td>
<td>69</td>
</tr>
</tbody>
</table>


**Employment**

During the past two decades (1970-1990), the percentage of economically active women declined in Sub-Saharan Africa, South Asia and East Asia.

Percentage of economically active females, aged 15 & above.

<table>
<thead>
<tr>
<th>Country/Regions</th>
<th>1970</th>
<th>1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Africa</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>West Asia</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>South Asia</td>
<td>26</td>
<td>23</td>
</tr>
<tr>
<td>Latin America &amp; the Caribbean</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>49</td>
<td>47</td>
</tr>
<tr>
<td>East Asia</td>
<td>57</td>
<td>58</td>
</tr>
</tbody>
</table>

The percentage of economically active females, aged 15 & above, rose in most developing countries between 1970 and 1990.

Working women earn less per hour, on average, than working men in most countries - the wage for women is 20 to 30 percent less than men’s wage rate. Legal barriers and discriminatory hiring practices also explain observed gender differences in earnings.

It is true that improvement in education and health helps enhance women’s participation in development. In some countries however, an improved human resource base is positively associated with improved gender parity, but in other countries, no relationship was found - i.e., a general progress in human resources did not lead to improvement in gender parity. Closing the gender gap requires positive public action to ensure that the average gains at the national level translate into gains for women as well as men.

**Women in Development, Women and Development and Gender and Development**

**Women in Development:** During the 1960s and 1970s, development theorists assumed that interventions designed to bring about positive changes would have trickle-down effects on all the segments of a population, including the women equally. It was found however, that women’s condition and position were not changed. Specifically, during the 1970s, after the publication of Boserup’s work, Women’s Role in Economic Development, it was revealed that those assumptions were erroneous - i.e., development interventions did not lead to equal impact on men and women, women’s conditions were even weakened. The women in development (WID) was introduced as a strategy to address this situation. Critics have indicated that the WID approach did not question the existing division of labor based on sex, emphasized only on production role of women, and this approach accepted the existing social structure (i.e., patriarchy).
**Women and Development (WAD):** The main concern of this approach was to examine why women have been systematically assigned to inferior or secondary roles. It questions the sexual division of labor and socially assigned roles. Like the WID approach, the main policy implication it draws is on the income generation activities and to improve on structural inequalities in the class system.

**Gender and Development (GAD):** This approach emerged in the 1980s. It carefully examines why women have lower status and their work is devalued. Proponents of the GAD approach (socialist feminists) find patriarchy and its value system to be the main source of women’s subordination. It stresses on the fundamental shifts in our ideological value system in a way we perceive men and women. It requires commitment to structural changes and power shifts.

**Women’s Practical Needs and Strategic Interests**

**Conditions** of women and their position in society: “Condition” refers to the kinds of work she does, the needs she sees for her family (clean water, food, education), the house she lives in and maintains.

“**Position**” refers to women’s social and economic standing relative to men. It is measured, for example, by male/female disparity in wages and employment opportunities, participation in legislative bodies, vulnerability to poverty and violence. It refers to the status enjoyed by women.

Conditions are similar to **practical needs** and position to **strategic interests**.

<table>
<thead>
<tr>
<th><strong>Practical needs</strong></th>
<th><strong>Strategic interests</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tend to be immediate, short-term.</td>
<td>Tend to be long-term.</td>
</tr>
<tr>
<td>Are unique to particular women.</td>
<td>Are common to almost all women.</td>
</tr>
<tr>
<td>Relate to daily needs: food, housing, income, healthy children, etc.</td>
<td>Relate to disadvantaged position: subordination, lack of resources and education, vulnerability to poverty and violence, etc.</td>
</tr>
<tr>
<td>Are easily identifiable by women.</td>
<td>Basis of disadvantage and potential for change not always identifiable by women.</td>
</tr>
<tr>
<td>Can be addressed by provision of specific inputs: food, hand pumps, clinic, etc.</td>
<td>Can be addressed by: consciousness-raising, increasing self-confidence, education, strengthening of women’s organizations, political mobilization, etc.</td>
</tr>
</tbody>
</table>
Addressing practical needs
a) Tends to involve women as beneficiaries and perhaps as participants.
b) Can improve the condition of women’s lives.
c) Generally does not alter traditional roles and relationships.

Addressing strategic interests
a) Involves women as agents or enables women to become agents.
b) Can improve the position of women in society.
c) Can empower women and transform relationships.

More than half of the 21.5 million people in Nepal are women. Women are less educated, have a shorter life expectancy and are more unemployed than men. Women are also confined to less productive and less remunerative jobs (Nepal South Asia Center, 1998). Moreover, the historically dominant patriarchal structures that promote female subordination and submission are still the dominant relationships between men and women in Nepal.

The ninth five-year plan targets women to achieve its overall aim of poverty alleviation and human resources development. The plan states that:

a) It will involve women actively in various sectors of development for building egalitarian democratic society.
b) It will increase the access of women to political, economic and social sectors, and promote reforms in legal provisions to ensure women’s rights and so make that access more effective.

The plan mentions policy implementation strategies. These policies are more related to recording and recognizing the important role of women in household and development-related activities and strengthening various organizations related to women’s development.

The plan envisages a review of all discriminatory laws and regulations, their reduction, and mobilization of governmental and non-governmental organizations to control all kinds of crimes and violence against women.

The plan aims to empower women by adopting special legal policies, arranging special training to enhance their earning capacity, creating more job opportunities for women and generating improved agricultural technologies to reduce the drudgery of women in farming (NPC, 1999).

These objectives and policies look less impressive in the face of the patrilineality and patrilocality that continue to contribute to an extremely unequal level of life opportunities and achievements between men and women in Nepal.
Ethnic Issues

Background: Nepal has been a common place for peoples of various racial origins and cultural backgrounds. After the principalities were integrated into a single Nepal in 1768, attempts were made to keep its territory intact. Nepali rulers seemed to be more alert to foreign interventions specifically during the British rule in India. Simultaneously, from 1846 until 1950 under the Rana regime, the rulers were more interested in accumulating personal wealth. All except the ruling class were subject to utter exploitation and suppression.

After 1950, though the country was declared a democratic nation, most of the time until 1990, the people of Nepal could not ventilate their grievances with the state because this was taken as a potential threat to national integration. This was more true during the Panchayat period (1961-1990).

In 1990, a multiparty parliamentary democratic system was restored in Nepal. Its people have begun asking for greater socioeconomic and political roles. More conflicts have surfaced and different worldviews have been presented on the ways of understanding the Nepali society. The earlier social norms and values have been repeatedly questioned. It is generally believed that in the past, most of the Nepali norms and values were greatly influenced by the high caste Hindu code. Those who do not adhere to the Hindu caste system have more explicitly opposed the existing practices and state laws, which, according to them favor the already advantaged high caste Hindus and perpetuate the century-old tradition of exploiting non-Hindus. As a result, a kind of social movement has been launched in Nepal that has political aims. This movement may be labeled an “ethnic movement”.

On the way to achieving equality among the Nepali population, the movement has followed a self-defeating route of possible interethnic division and conflict. Nepali scholars, political activists, technocrats and bureaucrats have also followed the same path in looking at Nepali society as made of two distinct and mutually exclusive categories of people -- the caste groups and the ethnic groups. We think that this movement may achieve some political goals, but it would help refine the concept of ethnicity nor shed light in the understanding of ethnic group relations vis a vis the caste system in Nepal.

Explanation and critique on the notion of ethnicity and ethnic group: A quick review of literature on ethnicity and ethnic groups guides us toward definitions. Ethnicity could be defined as the degree of feeling or identity with a particular ethnic group (Pyakuryal, 1982). It is marked by symbols of shared heritage, including language, religion and customs; awareness of similar historical experience; a sense of in-group loyalty or “we” feeling associated with shared social position, similar values and interests; often but not inevitably, identification with a specific national origin (ibid, 1982).

On the other hand, an ethnic group is made up of its members tied together by some important attributes such as shared heritage, similar historical experience and similar racial origin.

Ethnicity has the characteristics of a variable that can be expressed in terms of lesser to higher degree whereas an ethnic group is a discrete thing. A person can be ranked on a continuum, that
measures the degree of ethnicity from low to high. A person either belongs to a particular ethnic group or doesn’t.

The authors view ethnicity and ethnic groups as two different but related subjects of discourse and want to pursue the discussion further because these terms have been mostly used interchangeably by contemporary Nepali scholars.

**Discussion:** Using the national census, of 1991, scholars (mostly the demographers and/or the geographers) have grouped the Nepali people into two categories: the caste groups and the ethnic groups. To date national censuses have usually been led by either the demographers or the geographers, so it is no wonder that such framework would influence state institutions such as the Central Bureau of Statistics. Until now, Nepali scholars have taken a more simplistic approach to viewing the Nepali society. According to them, the Nepalese belonged either to a caste group or an ethnic group. Thus, for them ethnic and caste groups are mutually exclusive.

We think that this is a misleading way of viewing the Nepali society, both by foreign and Nepali scholars. The unscientific notion propagated by such “social scientists” has had an influence on the state machinery and the Bureau of Statistics. The government’s recent decision to identify 61 ethnic groups of Nepal is an example. For those scholars, caste groups are almost a synonym to the privileged and ethnic groups the oppressed.

Referring to the main report prepared by the Working Committee of the National Committee for Development of Nationalities, May 1997, Subba (1999) mentions that all who do not fall within the Hindu caste system are the ethnic groups (p. 63). We argue that any Nepali who has all or most of the attributes (mentioned earlier) inherent in a particular ethnic group should qualify for that particular ethnic group. Following this framework, Brahmins, Chhetries, Damai, Kami and Sarki all could be grouped in one ethnic group. They have the same historical experience, they adhere to similar customs and religion, they have the same racial origin and they speak the same language. The same is true of the Gurungs or the Thakalis. The Gurungs have their own language, adhere to their own customs, practice their own religion, and observe their own festivals and rituals. They have similar historical experience and are of Mongolian origin. Thus they qualify for a distinct ethnic group. This is equally true of the Thakalis, who also have their own cultural heritage. They, too, form a distinct ethnic group.

It is to be noted, however, that after the caste system was introduced in Nepal, it influenced most of the ethnic groups living in Nepal, some to a great extent and others to a lesser extent. Brahmins from southern Nepal came to Kathmandu Valley and influenced the Newar kings to introduce and adopt the caste system. As a result, Newars developed a caste system comparable to that of any typical conventional Hindu society. The Gurungs also did not remain unaffected. Four types of Gurungs (*Char Jaat*) are lumped into one group and the remaining belonged to the other group. Similarly, four types of Thakalis (Bhattachan, Sherchan, Gauchan and Tulachan ) have a higher status than the other types.

Thus an ethnic group may have one or more castes or it might not have even adopted the caste system. Chepangs and Magars might be examples of some least influenced by the caste system and thus least stratified.
Ethnicity is different from belonging to an ethnic group. A person belonging to a particular ethnic group may or may not be significantly ethnic. A Magar with a distinct ethnic identity may or may not necessarily be ethnic if he does not have strong feeling of being a Magar. Being a member of a particular ethnic group is a **necessary condition for being ethnic** but it is not a **sufficient condition**. Persons with stronger ethnic attachments and awareness are relatively more ethnic than those who usually dissociate with their ethnic group.

We think ethnic issues are going to take a major role in shaping contemporary Nepal and that a good understanding of the issues and a concerted effort to resolve different worldviews and are merited.

Most Nepalese accept the fact that there are intra-and interethnic discrepancies. However, some ethnic groups are more privileged than others. Similarly, the quality of life also varies. The existing gap is also big among ethnic groups, either in using national resources or occupying power positions. We are also aware that there are other equally important dimensions of disparity besides ethnicity, such as regional variations. In the Far Western and the Midwestern Development Regions of Nepal, people belonging to any ethnic groups are more underprivileged than the people of other development regions of Nepal.

We are deriving to the theses that the Nepalese combinedly are much stronger than seen in pieces. All ethnic groups have contributed to making the nation of Nepal. The diverse and plural nature of Nepal must be respected and promoted. The ethnic-caste paradigm is an incomplete, faulty, self-defeating and potentially suicidal approach to understand the Nepali society. The larger issue should include the ways to pave the way for weaker segments of population to participate and empower them so that they can equally compete and excel like any other group(s).
**Forest Resources Development**

**The Coverage and the Condition of Forest Resources:** The forest area of Nepal is 5.5 million hectares or 37.4 percent of the total surface area of the country. In addition, another 15.7 percent under shrubland, grassland and non-cultivated inclusions has good potential for forestry. The potential land area that is suitable for forestry, according to the Master Plan for the Forestry Sector (MPFS), is given in Table 1. The table shows that most of the forests lie in the hills and mountains. There is a great diversity in forest type and vegetation because of the climatic and topographical variation due primarily to a great elevational range.

<table>
<thead>
<tr>
<th>Region</th>
<th>Forested &amp; Plantation</th>
<th>Shrublands</th>
<th>Grasslands</th>
<th>NCI*</th>
<th>Subtotal</th>
<th>% of total area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ecological Zones</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Himal</td>
<td>155</td>
<td>67</td>
<td>109</td>
<td>1</td>
<td>332</td>
<td>10</td>
</tr>
<tr>
<td>High Mountains</td>
<td>1,639</td>
<td>176</td>
<td>364</td>
<td>104</td>
<td>2283</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>1,811</td>
<td>404</td>
<td>281</td>
<td>601</td>
<td>3097</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>1,438</td>
<td>29</td>
<td>17</td>
<td>53</td>
<td>1537</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>475</td>
<td>30</td>
<td>58</td>
<td>31</td>
<td>594</td>
<td>28</td>
</tr>
<tr>
<td><strong>Mid Mountains</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siwaliks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terai</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Development Regions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FWDR</td>
<td>991</td>
<td>52</td>
<td>159</td>
<td>89</td>
<td>1291</td>
<td>66</td>
</tr>
<tr>
<td>MWDR</td>
<td>1,641</td>
<td>76</td>
<td>304</td>
<td>141</td>
<td>2162</td>
<td>51</td>
</tr>
<tr>
<td>WDR</td>
<td>900</td>
<td>142</td>
<td>180</td>
<td>192</td>
<td>1414</td>
<td>48</td>
</tr>
<tr>
<td>CDR</td>
<td>1,063</td>
<td>238</td>
<td>80</td>
<td>185</td>
<td>1566</td>
<td>57</td>
</tr>
<tr>
<td>EDR</td>
<td>923</td>
<td>198</td>
<td>106</td>
<td>183</td>
<td>1410</td>
<td>49</td>
</tr>
<tr>
<td>Nepal</td>
<td>5,518</td>
<td>706</td>
<td>829</td>
<td>789</td>
<td>7842</td>
<td>53</td>
</tr>
<tr>
<td>%</td>
<td>70</td>
<td>9</td>
<td>11</td>
<td>10</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: MFSC, 1989. NCI = non-cultivated inclusion
All forests, excluding private forests, are called the national forest. The national forest, which includes grassland, can be divided into several management options: protected forest (within the protected area system, PAS), government-managed forest, community forest, leasehold forest and religious forest.

The land under the PAS is controlled by the Department of National Parks and Wildlife Conservation (DNPWC), which includes the national parks, wildlife reserves, hunting reserves and conservation areas. All national forest outside of the PAS is under the jurisdiction of the DOF. About 61 percent of the total national forest within the DOF (5.5 million ha) is considered to be the potential community forest, of which more than 55 percent is forested; the rest is non-forested. As of December 1995, more than 270,000 hectares of national forests have been handed over to about 4,500 forest user groups (Kanel, 1996). This comes to about eight percent of the total potential community forest area of the nation.

Both the coverage and the quality of forest in Nepal have been declining over the past decades. More and more forestland has been cleared for agriculture, especially in the Tarai. However, in the hills some positive signs are already in place with the increased number of trees in private lands and improved condition of community forests.

It is commonly assumed that the forest resources of Nepal are dwindling fast and that without trees to hold back the heavy monsoon rains, there is a chance of heavy soil erosion. This view represents an easy and perhaps false generalization of a complicated and little known issue. Only a few studies examine the issue (WECS, 1986; MFSC, 1989). These studies show that the rates of change of forestland in the hills and mountains have been very low. But the change in forestland in Terai and Churia is significant (-2 to -3.9 percent).

What has been changing is the quality of the forest, as measured by its crown cover. Today less than 20 percent of the forest has more than 70 percent crown cover. It was more than 40 percent in the 1960s (Subedi, 1996). Theoretically all forestlands are capable of supporting a full crown cover, so forest areas with less than 70 percent crown cover are considered to be overused and degraded.

**Protected Areas and National Park**

Protected areas in the tropical realms now number 1,420 and conserve 174 million hectares of land and water. It is in this region, where the world’s biological diversity is concentrated, that we have a special responsibility in ensuring maintenance of this rich natural heritage.

It is in the tropical realms, too, that most of the world’s human population is to be found and where people’s use of the land is intensive and longstanding. Management of protected areas under these circumstances is especially challenging and requires innovative approaches that cannot always be borrowed from the temperate world.

But protected area management is a relatively new field and one that involves a wide range of subjects from law and administration to public relations, ethics, sociology and all of the biological sciences. Few managers can be expected to be both generalists and specialists in all of these fields.
As the World Conservation Strategy notes and as the Bali Action Plan underlines, protected areas cannot be viewed as islands. They must be managed within the context of their regional setting. It is essential to integrate protected areas into regional land use programs and the concern for local people within the vicinity of protected areas.

Concepts of Protected Areas

The modern concept of conservation - i.e., the wise maintenance and utilization of the earth’s resources - is no more than the combination of these two ancient principles: the need to plan resource management on the basis of accurate inventory, and the need to take protective measures to ensure that resources do not become exhausted.

Protected areas, when designed and managed appropriately, are now recognized as offering major sustainable benefits to society. They play a central role in the social and economic development of rural environments and contribute to the economic well being of urban centers and quality of life of their inhabitants.

Establishing and managing of protected areas is one of the most important ways of ensuring that the world’s natural resources are conserved so that they can better meet people’s material and cultural needs now and in the future. It is only on Earth that we know that life can be sustained. Yet human activities are progressively reducing the life-supporting capacity of the planet while rising human numbers and consumption make increasing demands on it. The combined destructive impacts of a poor majority struggling to survive and an affluent minority consuming a disproportionately large share of the world's resources are undermining the very means by which all people can survive and flourish.

Humanity's relationship with the biosphere - *the thin covering of the planet that contains and sustains life* - will continue to deteriorate until a new environmental ethic is adopted and sustainable modes of development become the rule rather than the exception. The World Conservation Strategy (WCS) prepared by four of the world's leading conservation agencies - the International Union for Conservation of Nature and Natural Resources (IUCN), World Wildlife Fund (WWF), the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environmental Program (UNEP) - launched in 1981, demonstrates how the conservation of living resources is essential for sustaining development by:

a) Maintaining the essential ecological processes and life support systems on which human survival and development depend.

b) Preserving genetic diversity on which depend the breeding programs necessary for the protection and improvement of cultivated plants and domesticated animals, as well as much scientific advance, technical innovation and the security of the many industries that use living resources.

c) Ensuring that people’s utilization of species and ecosystems and major industries are sustainable.
These objectives can be met only if governments, industries and the public support this strategy of protecting species and ecosystems within an overall program for development. In general terms, the maintenance of species and ecosystems requires that the use of living resources within a healthy environment must be done on a sustainable basis. Among other more specific actions, it requires the establishment of networks of natural protected areas for the conservation of species and ecosystems in wild environments. Protected natural areas are essential for the conservation of the nation’s living resources, thus ensuring that:

- Representative samples of important natural regions are retained in perpetuity.
- Biological and physical diversity is maintained.
- Wild genetic materials are conserved.

Protected areas also contribute to the conservation of living resources and to sustainable development by:

- Maintaining the environment stability of the surrounding region and thereby reducing the intensity of floods and droughts, protecting the soil from erosion and limiting the extremes of local climates.
- Maintaining the productive capacity of ecosystems, thus ensuring the continuing availability of water and plant and animal products.
- Providing opportunities for research and monitoring of wild species and ecosystems and their relationship to human development.
- Providing opportunities for conservation education for the general public and for policy-makers.
- Providing opportunities for complementary rural development and the rational use of marginal lands.
- Providing a base for recreation and tourism.

In view of rapid development and population increases in many tropical areas of the world and the great speed with which natural resources are being depleted, there is considerable urgency in establishing adequate protected areas if we are to achieve the objectives of the World Conservation Strategy. In addition, the increasing pressure for land for agriculture and other uses forces conservation managers to review existing protected areas, clarify the justifications and objectives for each reserve, increase management efficiency to use these natural resources wisely for conservation, and make increasing efforts to accommodate other forms of utilization if these are compatible with the protection requirements.

The first national park - Yellowstone, in the United States - was established in 1872. This was a milestone in the evolution of the concept of national parks as we know them today. At this point, parks became for all people, rather than the preserves of elitist groups as, for example, royal hunting grounds had been. Since Yellowstone’s establishment, most governments have recognized the value of protected areas to their people. To date, there are more than 2,600 protected areas in the world covering nearly 4 million square kilometers established by 124 countries. During the 1970s, the number of protected areas increased by 46 percent and the total area protected increased by over 80 percent (Tamang, 1997). Many of these recently created protected areas lie in newly independent and tropical countries.
For most countries, the subject of protected area management is still new. The first contemporary international conference on the subject was held as recently as 1962 in Seattle, Washington. The second conference was held in 1972, appropriately in Yellowstone National Park on the occasion of its 100th anniversary. The third, the World Congress on National Parks and Protected Areas, was held on the island of Bali, Indonesia, in October 1982. It was the first of these congresses to be held in a tropical country, in itself a significant tribute to the role of many developing countries in allocating land for protection.

Most tropical countries have established protected areas. Even the most densely populated parts of the tropics have significant areas under protection. Java, for example, an island the size of Greece or the state of New York and inhabited by 90 million people, has more than 100 protected areas, which cover more than 650,000 ha. Large mammals such as the Javan rhinoceros (*Rhinoceros sondaicus*) and leopard (*Panthera pardus*) still survive there though the Javan tiger (*P. tigris javanicus*) has become extinct in the past few years.

The total of 174 million hectares seems quite respectable, especially since virtually all-major countries are represented. But is this area really adequate to conserve the species, ecosystems and ecosystems functions that the areas are established to protect? Leaving aside the question of how effectively the existing areas are managed, biogeography and population genetics suggest that the answer is still a clear ‘no’.

How much land should nations allocate for protected areas? This is a vital question. Allocating too much may deprive the nation of urgently needed production, but not protecting enough could ultimately mean a lowered capacity to produce at all for many countries. Ten percent of the total land area would seem a realistic target figure, but even this figure is regarded as too low to protect some habitats. Some scientists have suggested that countries should aim to protect 20 percent of boreal ecosystems (Tamang, 1997). Nine countries of over 20,000 square kilometers (including seven new African nations) already have over 10 percent of their land area established as national parks of other reserves. But less than half of the countries listed by the United Nations as developing, most of which lie in the tropics, have properly established protected area systems.

It is of little use to stress the importance of nature conservation and the need for protected areas in developing countries without understanding the problems facing their governments. The international community must be prepared to provide effective assistance where needed. Many countries, including some in the lowest per capita income group, are expanding their protected area systems at a rapid rate and will need appropriate resources to finance this expansion. Areas, that are really worthy of establishment as protected areas are part of the heritage of the whole world as well as of the country concerned. Many of the countries most urgently in need of protected areas to conserve their rich and unique natural resources are among those least equipped with manpower, expertise or cash to do so. This section aims to offer some realistic solutions to these problems by drawing on present scientific knowledge and practical experiences relating to protected areas.
Challenges of Managing Tropical Ecosystems
There are a number of major biophysical differences between temperate and tropical regions, which dictate different management approaches.

a) Climatic conditions: Though the ranges of diurnal and annual temperatures found in tropical habitats are generally less than experienced in temperate regions, overall climate conditions are more severe. Rainfall in the tropics is much heavier (when it does rain), while the tropical sun makes conditions hotter and drier. These factors make tropical soils highly prone to erosion and the vegetation susceptible to wildfire. Tropical soils are far more fragile than temperate soils and generally far less fertile.

b) Susceptibility to degradation: Natural tropical ecosystems are often very susceptible to degradation. Fire, overgrazing and cultivation make it difficult for the original vegetation ever to return. The weakness of tropical soils and their inability to support intensive agriculture and pastoralism further threatens remaining natural areas. Shifting agriculture is practiced in many parts of the tropics not only because fertility drops fast on newly cleared lands, but because weeds choke out the fields to the point that the labor needed to keep them open is intolerable. The land is soon abandoned and left to return to its natural state but the period of agriculture leaves a permanent scar. Topsoil is lost and under some conditions (e.g., lateritic soils) the exposed soils become a hardpan, that cannot easily be recolonized by desirable natural vegetation.

c) Species richness: Most tropical ecosystems are very species-rich, particularly those in rain forests and savannas. This means that most species occur only at very low density so that the area needed to conserve viable populations is large. In temperate regions, forest reserves of a few thousand hectares can be highly species stable, and even a stand of a few hectares may be a valuable wildlife refuge. This is rarely so in the tropics, where such island patches would quickly lose most of their constituent species, as indeed occurred on Barro Colorado Island in Panama, where over 20 per cent of breeding bird species vanished within 50 years of the reserve’s creation (Tamang, 1997).

When setting up a national system of protected areas, it is important to choose the right categories according to the objectives of management. The appropriate category of protected area depends on the following considerations:

- Those features, that the area is designed to protect, based on an evaluation of its biological and other features and the protection objectives thereby established.
- The degree of manipulative management needed for, or compatible with, the established protection objectives.
- The degree of ecological tolerance/fragility of the ecosystem or species concerned.
- The degree to which various types of utilization of the area are compatible with the established objectives.
• The level of demand for various types of utilization and the management practically of accommodating these.

A protected area may be established to protect a wide variety of features, such as:

• Characteristics or unique ecosystems, e.g., lowland rain forest, endemic island faunas, tropical alpine systems.
• Special species of interest, value, rarity or threatened status - e.g., rhinoceros, vicuna, quetzals.
• Sites of unusual species diversity.
• Landscape or geophysical features of aesthetic or scientific value - e.g., glaciers, hot water springs, waterfalls.
• Hydrological protective functions: soil, water, local climate.
• Facilities for nature recreation tourism - e.g., lakes, beaches, mountain views, wildlife spectacles.
• Sites of special scientific interest - e.g., areas of long-standing research.
• Cultural sites - e.g., temples, shrines, archaeological excavations.

The relative value and importance of each feature will need to be considered, together with the compatibility of or even the need for combining protection with various levels of manipulative management and utilization.

Compatibility of protection objectives with management and utilization options: In any protected area, the degree of disturbance from management for utilization that can be accommodated will depend on the species or system that the area is supposed to protect. Some species = populations, communities and ecosystems are fragile and can tolerate almost no disturbance, while others are relatively adaptable or ‘robust’.

Management actions for a given area could include a range of options:

• Maintaining trails, watchtowers, hides or cleared look-out points for management purposes or visitor use.
• Planting food plants or creating artificial water holes, salt licks, etc., to encourage selected wildlife species.
• Maintaining open feeding areas or clearing trailside vegetation to render wildlife more visible to visitors.
• Controlling predators, pests or competitors of species to be conserved.
• Culling or restricting the movements of wildlife considered to be too numerous, or for reasons of stock health or to limit damage by wildlife.
• Cutting, burning or grazing of vegetation to maintain a certain vegetation stage - i.e., open savanna.
• Introducing, reintroducing or translocating (for genetic exchange) wildlife.

According to the status of the protected area, some of the following types of utilization may be compatible with protection objectives. These activities are listed in approximate order of increasing disturbance to the ecosystem:
• No visitors permitted entry, only vital protective management allowed - e.g., catching poachers, putting out wildfires.
• Scientific research involving only measurements, counts and observation - e.g., behavioral studies of primates, census counts of migrating ungulates.
• Scientific research involving small-scale manipulative experiments and collection of specimens for identification.
• Controlled use by visitors on a simple trail system.
• Public access routes traverse protected area.
• Heavy use by visitors but a ban on all activities that threaten or disturb the natural setting.
• Collection of eggs, young or breeding stock for wildlife rearing industries or restocking of denuded habitats.
• Collection by villagers of dead wood for firewood, also fruits, honey and other minor forest products.
• Visitors fishing in waterways.
• Traditional hunting and fishing practices.
• Controlled seasonal hunting.
• Habitat management to increase the number of animals for hunting, fishing or wildlife viewing by visitors.
• Traditional human groups living inside reserve in close harmony with their ecosystem.
• Grazing of domestic animals within the reserve.
• Selective logging of timber.
• Small enclaves where mining or quarrying may proceed inside reserve.
• Agricultural mosaic landscape only preserved.
• Clear felling followed by reforestation.

Practicability of Management: Some types of utilization that may be compatible with the protection objectives of a given reserve are simply not practicable from a management point of view. For instance, it might be decided that small-scale harvesting of dead wood as firewood from the reserve would not threaten its biological integrity, but this is not true and should not be allowed because there is no way to control such collection and make sure it is ‘small scale’, and the presence of firewood collectors in the reserve would threaten other objectives.

On the basis of management objectives as identified above and considering the selection of protected area categories available in that country, the protection agency should allocate the proposed protected area to the reserve category best suited for its protection and appropriate utilization. Correct allocation is very important so that maximum benefits compatible with protective needs are achieved. In case of doubt, areas should be allocated to the strictest or most protective option. It is comparatively easy to permit greater levels of use at a later date but not always possible to reduce levels of utilization, nor repair the damage from overuse.

A review of the potential of all reserves in the country will reveal whether the national system of categories is flexible enough or other categories are needed. The allocation of protected status category to the individual reserve forms a basic part of reserve management.

International System of Categories
The Commission on National Parks and Protected Areas (CNPPA) recognizes that the number of different names describing protected areas in different countries is confusing, but there are really relatively few basic objectives for which areas are established and managed. The World Conservation Union (IUCN) has proposed a system of 10 management categories classified according to objectives for management.

Categories and management objectives of protected areas

I. Strict Nature Reserve/Scientific Reserve: To protect nature and maintain natural processes in an undisturbed state so as to have ecologically representative examples of the natural environment available for scientific study, for environmental monitoring education and for the maintenance of genetic resources in a dynamic and evolutionary state. Examples include the Yala Strict Nature Reserve in Sri Lanka, the island of Barro Colorado in Panama, and the Gombe Stream National Park in Tanzania.

II. National Park: To protect outstanding natural and scenic areas of national or international significance for scientific, educational and recreational use. These are relatively large natural areas not materially altered by human activity where extractive resource uses are not allowed. Example include the Royal Chitwan National Park in Nepal, the Etosha National Park in Namibia, the Iguasu National Park in Argentina and Brazil, and the Volcan Poas National Park in Costa Rica.

III. Natural Monument/Natural Landmark: To protect and preserve nationally significant natural features because of their special interest or unique characteristics. These are relatively small areas focused on protection of specific features. Good examples include Angkor Wat National Park in Kampuchea, the Petrified Forests Nature Monument in Argentina, and Gedi National Monument in Kenya.

IV. Managed Nature Reserve/Wildlife Sanctuary: To assure the natural conditions necessary to protect nationally significant species, groups of species, biotic communities or physical features of the environment where these may require specific human manipulation for their perpetuation. Controlled harvesting of some resources can be permitted. There are many good examples of the category of reserve in India, including Manas Wildlife Sanctuary. Most of the national reserves in Kenya also fall in this category, as do the biotope reserves in Guatemala.

V. Protected Landscapes and Seascapes: To maintain nationally significant natural landscapes that are characteristic of the harmonious interaction of man and land while providing opportunities for public enjoyment through recreation and tourism within the normal lifestyle and economic activity of these areas. These are mixed cultural/natural landscapes of high scenic value where traditional land uses are maintained. Examples include Pululahua Geobotanical Reserve in Ecuador and Machu Picchu Historic Sanctuary, Peru. The national parks of England are also classified under this category.

VI. Resource Reserve: To protect the natural resources of the area for future use and prevent or contain development activities that could affect the resource pending the establishment of objectives based on appropriate knowledge and planning. This is a ‘holding’ category used until
a permanent classification can be determined. Few countries have yet applied this category, but several resource reserves exist in Kenya, including Kora and South Turkuna National Reserves. Other examples include Brazil’s Forest Reserve and Tahuamanu Protected Forest, Bolivia.

VII. Anthropological Reserve/Natural Biotic Area: To allow the way of life of societies living in harmony with the environment to continue undisturbed by modern technology. This category is appropriate where reserve extraction by indigenous people is conducted in a traditional manner. The Gunung Lorentz nature Reserve, Indonesia, the Xingu Indigenous Park of Brazil and the Central Kalahari Game Reserve of Botswana are all occupied by indigenous people and are classified as Category VII areas. Many protected areas in the South Pacific islands also fall in this category.

VIII. Multiple Use Management Area/Managed Resource Area: To provide for the sustained production of water, timber, wildlife, pasture and tourism, with the conservation of nature primarily oriented to the support of the economic activities (although specific zones may also be designated within these areas to achieve specific conservation objectives). The most famous example is the Ngorongoro Conservation Area of Tanzania. Other examples are the Kutai National Park of Indonesia, the Jamari and Tapajos National Forest, Brazil, and the Von Humboldt National Forest, Peru.

Two additional categories are international labels that overlay protected areas in the above eight categories:

IX. Biosphere Reserve: To conserve for present and future use the diversity and integrity of biotic communities of plants and animals within natural ecosystems, and to safeguard the genetic diversity of species on which their continuing evolution depends. These are internationally designated sites managed for research, education and training. Good examples of this category include Sinharaja Forest Reserve of Sri Lanka, Mt. Kulal in Kenya and the Rio Platano Reserve of Honduras.

X. World Heritage Site: To protect the natural features for which the area is considered to be of outstanding universal significance. This is a select list of the world’s unique natural and cultural sites nominated by countries that are Party to the World Heritage Convention. As of 1985 there were 62 natural properties on the World Heritage List, including the Simien National Park of Ethiopia, the Darien Reserve in Panama, and the Great Barrier Reef in Australia.

Biodiversity Conservation through Protected Areas in Nepal

Biodiversity conservation through a protected area system has been reexamined in Nepal through various conservation models where interests of resident people in or around protected areas are duly addressed. Tourism has become a significant contributory factor in foreign exchange earning, and this factor has to be incorporated in protected areas planning as well as in development planning of the country.

1. Categories of Protected Areas in Nepal
   (a) National Parks
An area set aside for conservation management and utilization of animals, birds, vegetation or landscape together with the natural environment.

- Entry of restricted without a permit.
- Guarded by army.
- Managed by Department of National Parks and Wildlife Conservation (DNPWC).

(b) **Wildlife Reserve**
* An area set aside for conservation and management of animal and bird resources and their habitats.
  - Guarded by army.
  - Managed by DNPWC.

(c) **Hunting Reserve**
- An area set aside for the management of animal and bird resources for the purpose of sport hunting.
- Guarded by army.
- Managed by DNPWC.

(d) **Conservation Area (1989 Amendment)**
- Area managed with an integrated plan for the conservation of the natural environment and the sustainable use of natural resources.
- No army.
- Annapurna Conservation Area is the only existing one in this category. It is managed by an NGO King Mahendra Trust for Nature Conservation.

(e) **National Park cum Conservation Area**
- The Makalu-Barun National Park and Conservation Area includes national park and a conservation area which fulfills the concept of buffer zone. The buffer zone is the area at the peripheral zone of national park or reserve which provides privilege to the local people for the sustainable use of natural resources and for the sharing of revenue generated from the protected area.
- No army.
- Managed by DNPWC.

2. **World Heritage Sites:**
   **Royal Chitwan National Park**
   - The park protects the unique terai ecosystem which consists of wide varieties of tropical and subtropical flora and fauna.
   - It is the habitat of endangered species such as tiger, rhinoceros, wild elephant, gaur, gharial, mugger, etc.
   - The park represents an area of great cultural interest associated with the Tharu community.
   - Bikram Baba and Balmiki Ashrams are other religious assets of the park.
Current Problems

- The park faces a severe problem of encroachment.
- Rhino poaching is another serious problem.
- Increased numbers of tourists have caused disturbances in the natural harmony of the park environment.
- Effluent from Bhrikuti Paper Mill contains high levels of BOD, silica and sodium and threatens the wetlands of the park.
- The proposed East Rapti Irrigation Project will have a significant impact on the park.

Sagarmatha National Park

- Sagarmatha is the world’s highest peak and the park represents the highest terrestrial ecosystem of the world.
- It represents the evolution of geological formations.
- It protects the Himalayan mountain ecosystem.
- It is the habitat for threatened species such as the Himalayan black bear, musk deer and snow leopard.
## National Parks and Wildlife Conservation in Nepal

<table>
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<tr>
<th>Items</th>
<th>Area covered (in Sq. km)</th>
<th>Date of Establishment</th>
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<tr>
<td><strong>a) National Parks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Royal Chitwan National Park</td>
<td>932</td>
<td>1973</td>
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<tr>
<td>2) Sagarmatha National Park</td>
<td>1,148</td>
<td>1976</td>
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<td>3) Langtang National Park</td>
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<td>1976</td>
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<td>4) Rara National Park</td>
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<tr>
<td>5) Shey-Phoksundo National Park</td>
<td>3,555</td>
<td>1984</td>
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<td>6) Khaptad National Park</td>
<td>225</td>
<td>1984</td>
</tr>
<tr>
<td>7) Royal Bardia National Park</td>
<td>968</td>
<td>1988</td>
</tr>
<tr>
<td>8) Makalu Barun National Park</td>
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<td>1991</td>
</tr>
<tr>
<td>9) Kanchanjanga</td>
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<td>1998?</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td><strong>b) Wildlife Reserves</strong></td>
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<tr>
<td>1) Royal Shukla Phanta Wildlife Reserve</td>
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<td>1984</td>
</tr>
<tr>
<td>2) Koshi Tappu Wildlife Reserve</td>
<td>175</td>
<td>1987</td>
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<td>3) Parsa Wildlife Reserve</td>
<td>499</td>
<td>1994</td>
</tr>
<tr>
<td>4) Dhorpatan Hunting Reserve</td>
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<td>1992</td>
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<td>5) Shivapuri Watershed and Wildlife Reserve</td>
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<td><strong>Total</strong></td>
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<td><strong>c) Conservation Area</strong></td>
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<td>2) Makalu Barun Conservation Area</td>
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<td><strong>Buffer zones</strong></td>
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<td><strong>Total</strong></td>
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Protected area as a % of Nepal’s area: 18%
Wildlife Management in Nepal

Policy: Conservation policy is broadly guided by the National Conservation Strategy (1987) and is implemented through periodic five-year plans. The government of Nepal has adopted the Nepal Environmental Policy and Action Plan (1993) to integrate environment and development.

Its main efforts in biodiversity conservation have involved extensive networks of national parks and protected areas developed over the past two decades, covering more than 20,000 square kilometers. The protected area network includes eight national parks, four wildlife reserves, two conservation areas and one hunting reserve. Sagarmatha and Royal Chitwan national parks have been included in the United Nations World Heritage List because of their outstanding natural values, and the Koshi Tappu Wildlife Reserve has been included in the list of wetlands of international importance under the Wetland Convention.

Protected areas of Nepal are managed under the National Parks and Wildlife Conservation Act, 1973, with periodic amendments. Recently the government has made provision to invest 30-50 percent of park revenue to the people of the park vicinity to mitigate park and people conflict.

The program related to protected areas and wildlife conservation was included in the Master Plan for the Forestry Sector, 1988. The master plan establishes conservation of ecosystems and genetic resources as one of the primary development programs to meet the long term and medium term objectives. In support of the primary program, the supportive six development programs are:

- Policy and legal reform
- Institutional reform
- Human resources
- Research and extension
- Resources information and planning assistance
- Monitoring and evaluation

At the broader level, the constitution of Nepal, 1991 and the eighth five-year plan (1992-1997) formally recognize the need to preserve the environmental and to use natural resources wisely. Approved government policy toward conservation in general and the protected areas system in particular are outlined in the National Conservation Strategy (NCS).

The NCS (HMG/IUCN, 1988) gives a long-term perspective on natural resources management. It highlights the need to draft park and reserve management plans through a consultative process involving both local communities and concerned government agencies. It also stresses the need to designate zones for different intensities and types of use, the early development of policies and regulations relating to tourism policy decision on wildlife culling, further consideration of parks along national borders, interagency coordination and the leading role to be played by the DNPWC. The NCS does not give details of the actions needed to implement these policies.

The Nepal Environmental Policy Action Plan (NEPAP), which was adopted by the Environmental Practices Council (EPC) in August 1993, also identifies the severe constraints facing the national parks and protected areas system. It identifies the need to involve local
people in the management of parks and to better manage the parks through the preparation and implementation of management plans that help to conserve biodiversity while providing for people’s basic needs. It also stresses the need for developing a mechanism for benefit sharing with people whose livelihoods are adversely affected by the parks.

**Legislation:** The National Parks and Wildlife Conservation Act, 1973, is the main act related to the conservation of wildlife and protected areas in Nepal. It provides for the establishment and administration of protected areas and the conservation of animals and birds and their habitats. The act stipulates that the primary objective of such areas is the protection of sites and landscapes of geological formations of scientific or aesthetic importance, together with their associated flora and fauna. A secondary objective, providing it is compatible with the first, is the development of such areas for tourism. The act was amended in 1975, 1983 and again in 1989 to allow for the establishment of conservation areas. In 1993, a provision for buffer zone management was incorporated in the act. Buffer zone regulations were published recently.

Hunting is regulated by the National Parks and Wildlife Conservation Regulation (1974) made under the act. Other regulations include the Royal Chitwan National Park Regulations (1974), the Wildlife Reserve Regulations (1977), the Himalayan National Park Regulations (1979) and the Khaptad National Parks Regulations (1987). Regulations for the Royal Bardia National Park and Makalu-Barun National Park and Conservation Area and the Annapurna Conservation Area have been prepared.

The district development committee and village development committee acts of 1993 enable the local bodies to work closely with the national government in buffer zone management, community development and income generation activities.

By the fourth amendment of National Parks and Wildlife Conservation Act in 1993, a concept of buffer zones was introduced in the network of parks and protected areas and surrounding agricultural land. The act defines the buffer zone as an area set aside around a national park or reserve for local people to use for forest products on a regular basis. After its declaration, the buffer zone will come under the jurisdiction of the warden of the concerned parks or reserve. All the activities relating to conservation and management of the buffer zones are to be undertaken by the warden in close consultation and with the participation of the community. The land ownership of the local residents is not affected in any way by activities relating to conservation and management of the buffer zones.

**The Institutional Framework:** The Department of National Parks and Wildlife Conservation is a small and structurally simple organization within the Ministry of Forest and Soil Conservation. It is the primary government agency responsible for conservation of ecosystem and genetic resources.

Recently, the number of DNPWC staff members was reduced from 1,060 to 880 in accordance with government policy of personnel reduction and cost cutting. About 835 of these staff positions are in the field. A large proportion of the field staff (259) are assigned to the elephant camps (hatisars) and the elephant breeding center on the Tarai (each elephant requires a permanent staff of three). Actual staff numbers are well short of the approved positions.
Each park or reserve is the responsibility of a warden, who is directly responsible to the director general. The wardens are assisted by a team consisting of an assistant warden, veterinary officers, rangers, game scout and administrative staff members. They can also call upon a total of nearly 100 elephants for patrolling, though most elephants are used for tourist game viewing.

Activities outside the boundaries of the parks and reserves are coordinated with other line agencies such as the Department of Forests and district administrations. Wildlife conservation outside gazetted protected areas is mainly the responsibility of the Department of Forests, since this department manages virtually all Nepal’s land not in private ownership. Currently, local communities have no formal role in the management of any of the parks or reserves under DNPWC control.

The warden is overall responsible for managing and protecting the parks and reserves. However, specific park protection jobs are carried out by the regular units of the Royal Nepal Army stationed in the parks. This system was introduced in 1974 by replacing armed park guards in Chitwan. The army units are not answerable to the wardens for any of their activities, and receive no specific training on park protection work.

The DNPWC generates income from a number of sources, such as entry fees, permits for grass cutting, elephant rides concessions and penalties. Recently, the government decided to redirect 30 to 50 percent of park revenues back to the areas and communities from which they were generated.

Management plans for wildlife resources in protected area are outdated and most areas have no management plans.

Wildlife Management Strategies

1. General strategy: The wildlife strategy is based in the National Parks and Wildlife Policy and the National Parks and Wildlife Act with the broad objective of contribution towards the long-term management of wildlife resources and rational use of wildlife and protected areas for sustainable development of the country.

2. Inventory and monitoring of wildlife resources including endangered species: Regular inventory and monitoring of population structure and dynamics of wildlife species in protected areas and forest reserves are necessary to facilitate planning and management. The aims are to determine the status and trend of wildlife populations in any given area to make appropriate management decisions, to evaluate effectiveness of management being followed and to determine future courses of action.

3. Identification of key areas in and outside of protected areas: Based on the information from inventory and regular monitoring, key parks and reserves can be identified where immediate management measures can be taken to alleviate problems related to certain wildlife species, minimum viable population size or habitat needs.
4. Management plans for management of wildlife populations: Manage the populations of wildlife in national parks, wildlife reserves and their habitats with adequate protection, ensure the survival in sufficient (viable) numbers of any one species, preserve representative samples of biotic communities and ecosystems in the country, and implement policy, legislation, regulations related to National Parks and Wildlife conservation. Community management of wildlife outside protected areas should be encouraged. Other mammals outside protected areas can be managed by community programs.

5. Utilization of wildlife: Harvesting of wildlife species and products should be allowed in certain areas on a sustainable basis after proper inventory of wildlife populations and determination of allowable surplus that can be removed without damaging the populations. This will include the game harvested under the various categories of licenses issued according to the provisions made in the National Parks and Wildlife Act 1973.

The further development of wildlife-based tourism such as game viewing has tremendous potential as is evident from the tourists already visiting parks and reserves. Improved access facilitates such as road and transport, competitive prices and promotion by adequate tourist marketing abroad can contribute substantially to the revenue.

6. Research and training: Since the responsibility of the department to implement needed management requirements is huge, research and training of professional and other categories of staff should be given priority.

The purpose of research is to generate data for analysis and to enable appropriate management decisions. Monitoring on the status of large mammals will provide essential feedback to allow control and guidance for priority actions. Research should also contribute toward improving methods/techniques for inventories of wildlife; identifying key areas; determining effectiveness of controlling methods, such as fencing, against damage by wildlife pests, especially adjacent to protected areas and reserves; determining levels of allowable utilization of wildlife species in specific areas; and determining public attitude toward wildlife conservation in general.

Lack of sufficient trained personnel is a major constraint in wildlife management. The DNPWC is working under severe budgetary constraints and with inadequate manpower. Training of professional and other levels of staff members and provision of fellowships and studies are needed to strengthen the department.

7. Extension services: Dissemination of conservation messages to the people and through schools will increase public understanding of wildlife, national parks and other conservation areas. Advice and assistance can also be provided to rural communities in realization of sustainable wildlife utilization and pest control. This effort in extension services may be better in close cooperation with the existing network in addition to the DNPWC area offices in national parks and wildlife reserves. Community involvement in wildlife conservation and management should be encouraged.
Community Forestry in Nepal

The Community Forestry Program in Nepal has proved to be a very encouraging endeavor in the development of a constructive partnership in forestry between farmers and the government. The essence of the community forestry philosophy in Nepal, from its inception, has been the establishment of a partnership between local communities and the staff of the DOF for the management of locally accessible forests. The people's participation in forest management is a natural outcome of decentralized planning. People living near the forest largely depend on the forests for their livelihood and put heavy pressure on forest resources. With the introduction of community forestry as a strategy to jointly manage forests, people who earlier threatened the forest resources become their savers. The government's property, which was regarded as anybody's property, became their own property, which they wanted to protect on their own interest.

Community forestry today forms one of the central themes of all rural development programs in Nepal. The origin in Nepal of this promising approach to effective forest management can be traced back to only a few experimental village communities of the Chautara Forestry Division, Sindhupalchok and Kabhre districts. Here it was realized by early 1973 that technical forestry solutions alone could not reverse the severe degradation of the forests of the two districts and the related demoralization of local communities heavily dependent on local forest, trees and other woody perennials. With this modest and experimental beginning in the village communities of Chautara Forestry Division, the theory and practice of community forestry has developed rapidly in Nepal. The concept of community forest was incorporated in Nepal's National Forestry Plan of 1976 and its related forest legislation of 1977. This legislation and the rules and regulations under it and their further modifications have made it possible for the development of community forestry in Nepal.

We can operationally define community forestry as an interactive system between users and the government on a forest area within a specified boundary allotted by the government to the user group(s) for management and use for their own benefit but with ownership retained by the government.

The forests in Nepal have represented an important land use. In the past, government revenue derived mainly from the sale of timber in sal log form was the principal consideration for forest management. However, a direct link exists between the welfare of the local communities and the use of forests, tree stands and other perennial woody resources. They sustain the local farming systems by supporting crop production and livestock husbandry.

Community Forestry Initiatives

By the mid-1970s, the government of Nepal (HMG/N) had become aware of the costs of deforestation and its inability to respond. The realization on the part of the MHG/N that protection, maintenance and development of forestlands scattered all over the kingdom are neither possible nor practical through government efforts alone (MOF, 1978) brought about a significant change. The Panchayat Forest Rules, 1978, and Panchayat Protected Forest Rules,
1978, were enacted in the year 1978. This progressive legislation provided authority to the Department of Forests (DOF) to hand over national forestlands to local communities.

Since then, community forestry has become a major thrust of the Department of Forests (DOF) and of the various bilateral, multilateral and NGO forestry development projects. Considerable progress has been made in developing strong forest policies supporting community forestry. The Rules for Panchayat and Panchayat Protected Forests, 1978, and their amendments of 1980; the Decentralization Act, 1982, and its several amendments; the National Conservation Strategy for Nepal, 1988; the Master Plan for the Forestry Sector, 1989; the Forest Act, 1993, and other relevant rules, regulation and guidelines are some important ones. The government has also come to appreciate the importance of the people's participation in forest management.

The term “forest management” encompasses both technical and social arrangements involved in the management of forests, including the planting, protection, harvesting and distribution of forest products.

The emphasis on community forestry is a radical change of direction for forestry in Nepal. As a result, a further shift in policy took place allowing forest user groups (FUGs), which were smaller than the Panchayats (now VDCs), to be the social unit for managing community forests. The Forest Act, 1993, further strengthened the FUGs by providing them with legal status and more autonomy to mobilize their funds and resources. Because of these changes, requests for handing over the forests are increasing rapidly where the support from the DOF staff and NGOs is good. The current data show that some 4.123 million households organized in 4,100 forest user-groups are involved in managing 3,00,000 hectares of community forests in Nepal (DOF, Community Forestry Division, 1997).
Agricultural Development

Agricultural Perspective Plan (APP): Agriculture is the way of life for more than 80 percent of the Nepali people and the backbone of country's economy - its share of the GDP is 40 percent.

During the past two decades, agriculture grew only at 3 percent a year against a population growth rate of 2.5 percent. Thus it could do very little to boost overall per capita income or to promote economic transformation. Per capita food production decreased from 376 kilograms in 1974/75 to 277 kilograms in 1991/92. Similarly, poverty incidence increased from 40 percent in 1976/77 to 49 percent in 1991/92.

The generally poor agricultural record is particularly evident in paddy, maize and wheat production, which occupy more than 70 percent of the total cropped area and contribute around 35 percent to the agricultural GDP.

The yields of paddy and wheat were higher in Nepal than yields in all the other south Asian countries in the early 1960s but were considerably lower than yields in those countries by the early 1990s (Table 1).

Yields in Nepal as percent of south Asian countries by crop & yield.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Paddy</td>
<td>Wheat</td>
</tr>
<tr>
<td>India</td>
<td>129</td>
<td>146</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>116</td>
<td>198</td>
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<tr>
<td>Pakistan</td>
<td>146</td>
<td>150</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>101</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Agriculture Perspective Plan (Main Report), Chapter 1.

In absence of a growth strategy with clear priorities, the donor community, whose role in Nepal's development efforts has progressively increased in terms of resource mobilization and program selection, has similarly dispersed its efforts.

Though some rational polices and programs were introduced in the past, they were weakly implemented owing to inimical administrative and personnel policies. The greatest deficiencies in agricultural development lie in four specific areas:

- Fertilizer policies, which in recent years have held fertilizer growth below its potential and failed to satisfy effective demand.
- Irrigation investment overlooking the possibility of achieving high productivity through year-round well controlled water supplies which are essential to high agricultural growth.
- Poor road infrastructure, seriously limits the practice of high productivity agriculture.
- Agricultural technology system is ill-prepared to respond to the demands of high growth agriculture.
Agriculture as practiced in Nepal remains primarily subsistence oriented. Only a small proportion of farms use modern production inputs. Fertilizer use in Nepal is unbelievably low - on the average, 20 nutrient kilograms per hectare of cropped area in 1991/92. Only 18 percent of the arable area is commanded by well controlled year-round water supplies. Most major crops and other enterprises have low yields. The average per capita income is one of the lowest in Asia, and nearly half the population falls below the poverty line.

The APP stipulates that a dynamic and commercially oriented agriculture has the potential to have a significant and positive impact on both increased income and the environment. This is possible mainly in three ways. First, a highly productive and competitive agriculture implies intensification of cropping systems and input utilization to economically optimize the existing resource endowments at the household and community level. Such optimization attempts would make it economically less attractive for the farmers to continue cultivating the unproductive marginal lands. Once the farmers start applying expensive purchased inputs in their fields, the expected returns from the poor quality lands become unattractive.

Second, commercial and high growth agriculture would be able to generate enough employment and income opportunities within the sector itself to absorb a growing number of the hitherto unemployed or underemployed rural labor force. More intensive farming operations - both in cropping intensity and application of purchased inputs - would require not only an increased supply of better quality inputs and ancillary services such as extension and equipment repair but also more labor.

Third, a vibrant and growing agriculture means continuously rising rural household incomes, which are spent on goods and services provided from outside the agricultural sector. There would be more demand for manufactured products and processed agricultural goods, triggering and augmenting a multiplier effect in the rest of the economy. The APP states that, when agriculture grows at a respectable rate, the value of such a multiplier is 1.5. This means that, with each percentage point growth in agriculture, the non-agricultural sector will grow at 1.5 percent. Hence the strong case for agriculture to play the lead role in the overall transformation of the entire economy.

Considering the subsistence trap in which Nepal’s agriculture is currently caught, it will not be possible to set the growth process in motion if business is conducted as usual. Rather, it would require a complete reorientation and redirection of strategy, combined with the identification of a small number of priorities and corresponding reallocation of resources. The APP specifically prescribes such a strategy and priorities - namely, focusing on a few inputs and outputs - and policy and institutional interventions that could have a significant aggregate impact across the entire country.

The Agriculture Perspective Plan lays out the way Nepal’s agriculture can be transformed and how this transformation would have a favorable impact on the natural environment. With increased use of modern purchased inputs such as mineral fertilizer and other agrochemicals, however, a new category of environmental problems are likely to emerge that need to be
addressed by the research and extension system. These issues are also treated in the APP. The plan's main recommendations are summarized below.

The APP is a prioritized plan of action in which a small number of key priorities are carefully packaged together into a prioritized productivity package (PPP). Accordingly, there are four priority inputs (irrigation, fertilizer, technology, roads and power), four priority outputs (livestock, high-value crops, agribusiness, forestry), three targeted areas of focus for impact (poverty reduction and food security, environment, regional balance), and a number of policy interventions, institutional arrangements and investment decisions.

The Strategy

The following six points summarize the APP strategy.

- A technology-based green revolution in agriculture becomes the initial engine of accelerated growth.
- Accelerated agricultural growth creates a demand-pull for the production of high-value commodities in agriculture, as well as for non-agricultural commodities, with consequent large multiplier effects on other sectors of the economy.
- Broadly based high employment growth then becomes the mechanism for achieving societal objectives.
- Public policy and investment focus on a small number of priorities, building on past investment in human capital and physical and institutional infrastructure.
- A package approach to development is introduced, which in Nepal's case would be differentiated for the Terai, Hills and Mountains, and would recognize the powerful complementarily between public and private investment and priorities, and would ensure their coordination.
- To achieve broad participation, the strategy is regionally balanced and explicitly ensures the participation of women.

The APP differs from past plans in that it focuses on a small number of priorities so as to produce tangible impact and to realize scale economies essential for commercialization. These priorities are:

Priority Inputs: Four inputs are considered crucial for agriculture: well controlled year-round irrigation, coming mainly from shallow tube wells in the Tarai and small farmer-managed schemes in the hills; fertilizer, which accounts for nearly 44 percent to the total growth in agricultural GDP in the initial stages; agricultural research focusing on the issues directly related to the identified priority inputs, outputs and policy changes; and rural infrastructure (roads and power) to link the production areas with market outlets, facilitate increased rural mobility and stimulate the expansion of agro-processing industries.

Priority Outputs: The priority outputs include livestock (with emphasis on dairy) and high-value crops (main and off-season vegetables, fruits and medicinal plants).
**Priority Policy Reform**: In the policy arena, emphasis is put on land tenure; price policy; private sector promotion; poverty, women and the environment; and resource allocation for priority programs.

**Priority Institutions**: Actions from a number of key agencies will play a definitive role in successfully implementing the recommended APP package. These agencies are: the National Support Committee (proposed), Subcommittee for the Implementation of the District Agricultural Program (proposed), Independent Analytical Unit (proposed), Department of Agricultural Roads (proposed), Agricultural Development Bank, Agricultural Inputs Corporation, Department of Agriculture and Department of Livestock Services.

**Agricultural Research**

Accelerated technological change constitutes one of the key means of increasing agricultural production and incomes. This requires a highly responsive and dynamic research and extension system focusing on the same priorities and developing and disseminating suitable technological packages.

Both research and extension programs in Nepal have traditionally been implemented with broad mandates covering a wide range of diverse problem areas and commodity groups. Given the limited availability of resources and institutional capacity, past efforts thus have tended to be scattered thinly across a large number of activities that were not adequate to produce any perceptible impact on a national scale. The APP hence recommends reorienting research and extension approaches in a way that allows realization of economies of scale in the adoption of appropriate technologies in the selected priority commodities and disciplinary areas. The identified priorities in research and extension need to be fine-tuned to suit the diverse agroecological conditions of the country and to specific target groups such as women.

**Research Priorities**

The APP has identified the following main research priorities:

**Fertilizer**: Research needs to focus on increasing fertilizer use efficiency through the selection of appropriate mixes, timing and proper nutrient balance, including meeting trace element deficiencies. To complement the use of chemical fertilizers and to minimize adverse environmental consequences, attention has to be paid to the application of manure.

The extension service similarly needs to be geared toward promoting an integrated plant nutrition system combining appropriate mixes of inorganic and organic sources of plant nutrients, education and training programs on soil science and fertilizer management, and balanced use of nutrients for higher productivity.

**Cropping Systems for Shallow Tube wells**: While there is a vast potential for the use of shallow tube wells in the Tarai, the current rate of their utilization is quite low (about 200 hours per tube well per year). This is not an effective way of realizing optimum benefits from these tube wells. Efforts need to be made to identify and remove the major constraints faced by the
farmers. These efforts would have to be carried out mainly through farming systems research to identify suitable cropping patterns and varietal selection that promise optimal utilisation of the available resources and higher returns to the farmers.

For the hills and mountains, farming systems research will play an important role in identifying suitable farming systems keyed to the identified lead commodities. Through many of the ingredients of the prioritized productivity package will be mobilized for the promotion of the lead commodities, research needs to address issues related to increased efficiency of the entire farming system and its major components.

**Commodity Programs**: The APP does not specify lead commodities for the different agroclimatic conditions of the Tarai because it is assumed that the market mechanism will largely determine which crops and livestock species are most suitable for growing and rearing. It is most likely that the four major field crops - rice, wheat, maize and potato - will be the dominant crops, followed by cash crops for which markets exist, and fodder crops, increasingly popular once the drive for livestock rearing, particularly dairy animals, starts picking up. Varietal improvement together with soil fertility management, plant protection and irrigation focused on these crops should constitute the major agenda for research in the Tarai.

In the Hills, the lead commodities are citrus among crops and dairy among livestock in all the five geographic regions, followed by a small number of subsidiary commodities from among tea, cardamom, off-season vegetables, peas, radish seed, coffee, ginger, onion seed, goats, pigs and angora rabbits. Similarly, in the mountains, specific lead and subsidiary commodities have been identified for various ecological planning units. These include potato seed, apples, dairy, yaks, sheep and goats among the lead commodities, and citrus, off-season vegetables, potato seed, vegetable seed, yaks, pigs, sheep, cattle, goats and dairy among the subsidiary commodities.

**Marketing and Processing**: Corresponding to the APP's emphasis on high-value commodities, there is a need mainly in the hills and mountains to develop research capacity on aspects related to the marketing, storage, packaging and processing of those commodities. These activities now are totally separated from the commodity and farming system research programs and are being carried out on a piecemeal basis. The APP recommends that marketing and processing research should be integrated with the commodity and farming system research geared at the selected priority commodities.

Nepal's current research priorities and the corresponding expenditure pattern do not reflect those recommended by the APP. For instance, among the field crops, the predominant rice crop is given a much lower importance relative to its value of output whereas oilseeds, pulses and sugarcane are given higher importance. The APP suggests that the NARC should reexamine current research activities and resource allocations, disaggregated for all the commodities and ecological production units, and rationalize its research priority and fund allocation.

Nepal's agricultural research system needs an immediate reorientation and structural reform. The Nepal Agricultural Research Council as an autonomous apex body should be responsible for formulating research policies and priorities, promoting and facilitating research efforts of other relevant agencies and individuals, and coordinating and monitoring research activities. It has thus
far been bogged down with organizational and administrative details at the cost of genuine research.

NARC needs immediately to clarify its main goal and the mechanism for achieving that goal effectively. It needs to shed much of its organizational and administrative burdens and start providing effective leadership to all agricultural research initiatives to be undertaken by the various departments, commodity and disciplinary groups, and private foundations and individuals. The NARC is currently operating too many research stations, many not very effectively. It should retain only a few key stations - the APP recommends retaining five stations in the Hills and Mountains, and four in the Tarai - and transfer the remaining farms and stations to the concerned departments, the university system and other relevant agencies.

With the creation of the NARC, a mistaken notion has prevailed in Nepal that no other agency should do research. In consequence, the departments that used to undertake research in the past have now stopped. This is not only counterproductive but also inimical to the growth of a sound research system, which encourages a participatory process and integrates research, extension and teaching as complementary to a holistic process of technological advancement.

Nepal's agricultural research has historically harbored another serious misconception about what constitutes agricultural research. Research has been treated in a restricted sense to include biological, physical and mechanical sciences as these apply to the plants and animals. Thus only the traditional outfits of Khumaltar (agronomy, soils, plant pathology, entomology, botany, agricultural engineering, vegetables, animal husbandry and animal nutrition), Tripureswar (veterinary science) and Kirtipur (pomology) remained within the ambit of research. The farmer's knowledge and awareness, his resource endowment, the culture and the community he lives in, the economic environment that determines his farming practices and resource utilization, and the constraints that prevent him from realizing better returns are issues that shape and influence his behavior. These concerns fall in the realms of the social sciences, which have conspicuously been excluded as relevant areas of investigation. True, some outfits within the larger agricultural bureaucracy (namely, the now dismantled Department of Food and Agricultural Marketing Services) were set up to address some of these areas (farm management, price analysis and marketing), but they could not be effective because they were isolated from "mainstream" research.

The APP has made suggestions on how the existing deficiencies can be overcome by constituting multidisciplinary teams of researchers that include both the physical-biological experts as well as economists, marketing experts and processing experts. The details are laid out in the APP.

**Investment in Basic Infrastructure**

The drive to commercialize the country’s agriculture needs to move side by side with an effort to develop basic infrastructure in the countryside. Rural (agricultural) roads and telecommunication facilities enhance the process of agricultural commercialization by linking production areas with potential markets. Rural electrification is essential not only for energizing various kinds of agricultural equipment such as irrigation pumps but also to promote small agro-based industries for processing local agricultural surpluses, thus providing markets and adding value to locally
produced goods. Besides, the presence of roads, electricity and communication facilities contribute to complex and far-reaching opportunities for small entrepreneurs to initiate new ventures locally, and acts as a main force to attract qualified manpower to work in the rural areas. Construction of physical infrastructures also directly generates employment in their construction and maintenance.

The APP recognizes the importance of such basic infrastructures and has made recommendations for their development. It is important to bear in mind however, that infrastructure development has to be carried out concurrent with the drive to develop agriculture.

The APP has been endorsed by the government, and the ADB is assisting the National Planning Commission of Nepal (NPC) in developing an implementation plan with the assistance from ADB.

The APP focuses on limited inputs such as irrigation, seeds, rural roads, electricity, fertilizers and appropriate technology. As a result, it envisages increasing agricultural productivity, increasing employment and reducing poverty level.

However, it does not give adequate thrust on environmental concerns as it emphasizes the use of irrigation water and chemical fertilizer. It is too immature to comment on the issue of land degradation/conservation due to this policy at present. However, it could be very safely said that, given the resource constraints and mass poverty, this type of capital-intensive policy is bound to be more suitable to resource-rich farmers, and the majority of the poor may still be left behind.

**Investment Plan and Institutional Arrangements**

The APP contains an investment plan and requires well-orchestrated teamwork and co-operation from various governmental, non-governmental and donor communities to achieve the intended target. The current ninth five-year plan has basically borrowed key concepts from the APP, and the Independent Analytical Unit is already at place at the National Planning Commission.

The ninth plan has followed the APP, and the agricultural development plan for this plan period has been developed accordingly.
Nepalese Farming Systems

A. Salient Features: Nepalese farming systems can be grouped into the following types:

1) **Crop-dominated farming system:** In the crop-dominated farming system, cereal crops occupy an important place. Such systems predominate in Tarai but also exist in the Mid-hills. They are grown either under rainfed or irrigated conditions with or without fertilizer use. Use of manure is quite low. Two land types exist. In lowlands, rice and wheat are grown in rotation. Other patterns include rice-fallow, rice-mustard-maize, rice-lentil-maize and rice-wheat-maize. In uplands, upland rice is grown. Maize, mustard, peanuts, cowpeas and soybeans are other crops grown in uplands. In general, rice-based systems predominate in lowlands and maize-based systems dominate in uplands. Of the two land types, farmers apply manners to uplands because of proximity of such lands to the homesteads where farmers live.

2) **Horticulture-dominated farming system:** In the Mid-hills, horticulture occupies a major place. In sloppy areas of the hills (in the homestead as well as in the farmlands), horticultural trees (citrus, apples, plum, pear, peach) are grown in different scales depending on the agroecological as well as socioeconomic environments. In many Tarai areas, too, orchards of mango, banana, jackfruit, and some other fruits exist in many farmlands.

3) **Livestock-dominated farming system:** In high altitude mountains as well as in the Mid-hills areas, livestock occupies a major place. Because of low temperatures in the High Hills, crops are either not grown or grown with very low yields. In such hills, livestock are raised, either stall-fed or grazed. Transhumance system of livestock raising is also popular. Livestock are carried to the main fields and are housed there for a certain time (ranging from a few days to a few weeks) for manuring before planting of crops such as rice, maize or wheat.

4) **Integrated mixed farming systems:** In all the farming systems mentioned above, one or more components are integrated to some extent. Some are crop and horticulture integrated, some are crop and livestock integrated, while some are crop, livestock and tree integrated. The degree of integration varies according to agroecological and socioeconomic environments. In general, integration is higher in the Mid-hills than in the Tarai.

B. Linkages among Crops, Livestock, and Trees

In both the Hills and the Tarai, crops, livestock, trees, pasture, farming households and markets are integral components of farming systems. Crops, animals and their byproducts are used in multiple ways. There exists a complementary relationship between crops and livestock in the farming systems in the hills and mountains. Crop byproducts (e.g., hulls/husks, bran, flours and straw from rice; stalks, cobs, husks, flour, threshed cobs, and leaves from maize; flour, straw and hulls from wheat, etc.) can be used as feed and/or bedding material for animal production. In return, animals supply draught power and manure for crops and trees, (including horticultural and fodder trees). Trees or forests directly influence crop production by supplying leaves as fodder for animals and contribute to litter and compost for crops. In addition, forests, which are usually located on slopes in the hills, provide protection to croplands against landslides and soil erosion. Forests are the principal source of fallen, dry leaf litter and the lopped green foliage of
trees and herbaceous species, which is used for animal bedding and composting. Forest biomass, when mixed with animal excreta, yields organic compost, which forms the principal source of soil nutrients for hill agricultural land.

Thus there is the clear linkage among crops, livestock and trees/forests. The degree of linkage, however, differs from one agroecosystem to another.

C. Area, Production and Yield of Major Cereals

The analysis of the area, production, and average yield for rice, wheat and maize during the last three decades indicates an insignificant increase in the area, production and average yield of rice, and some increase in the area but a decrease in production and yield of maize. In wheat, total area and production have been substantially increased, but the average yield has not increased much. These data clearly indicate that despite investments in agricultural research, cereal productivity has not increased much. Table 2 shows the average yield of these cereals under different subecological belts in 1991-92. Not much very notable differences in yields among different subecological belts are observed, but the trend shows that rice yields are slightly higher in the eastern parts (both in hills and in Tarai), maize yields are higher in the western parts (especially in Terai), and no clear patterns exist in wheat yields.

Average yield (t/ha) of major cereals during 1991-92 in different sub-ecological belts.

<table>
<thead>
<tr>
<th>Sub-Ecological Belts</th>
<th>Paddy</th>
<th>Maize</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Mountains (n=3)</td>
<td>2.12</td>
<td>1.44</td>
<td>1.23</td>
</tr>
<tr>
<td>Eastern Hills (n=8)</td>
<td>2.06</td>
<td>1.47</td>
<td>1.17</td>
</tr>
<tr>
<td>Eastern Terai (n=5)</td>
<td>2.57</td>
<td>1.73</td>
<td>1.54</td>
</tr>
<tr>
<td>Central Mountains (n=3)</td>
<td>1.93</td>
<td>1.58</td>
<td>1.19</td>
</tr>
<tr>
<td>Central Hills (n=9)</td>
<td>2.86</td>
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<tr>
<td>Central Terai (n=7)</td>
<td>2.49</td>
<td>2.02</td>
<td>1.65</td>
</tr>
<tr>
<td>Western Mountains (n=2)</td>
<td>-</td>
<td>1.57</td>
<td>1.14</td>
</tr>
<tr>
<td>Western Hills (n=11)</td>
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<td>Western Terai (n=3)</td>
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<tr>
<td>Mid-Western Mountains (n=5)</td>
<td>1.84</td>
<td>1.42</td>
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</tr>
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<td>Mid-Western Hill (n=7)</td>
<td>1.73</td>
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<td>Mid-western Terai (n=3)</td>
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<td>1.77</td>
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<td>Nepal</td>
<td>2.28</td>
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<td>1.36</td>
</tr>
</tbody>
</table>


D. Agroecological Zones and Existing Farming Systems

Three major agroecological zones are identified: mountains, hills and the Tarai. In each, there may be several microenvironments or subecological zones. For example, mountains may be
grouped into high and low mountains; hills may be grouped into high, medium and low hills, and the Tarai into inner Tarai, Siwaliks (Churia) and flatland Tarai. Eastern mountains could be different from central, western and far-western mountains, and the same would be true for hills and the Tarai.

Especially in the mountain and hill areas, there could be several microenvironments, each with specific characteristics. This “mountain specificity” can be analytically characterized with six factors: inaccessibility, fragility, marginality, diversity or heterogeneity, “niche” availability, and human adaptation mechanisms. Inaccessibility, due to slope, altitude, overall terrain conditions, and periodic seasonal hazards (e.g. - landslides, snow storms, etc.), is the most obvious feature of mountain areas, and its concrete manifestations are isolation, distance, poor communications and limited mobility. Besides the dominant physical dimension, it has sociocultural and economic dimensions. Because altitude and steep slopes limit the mountain areas' capacity to withstand even small degrees of disturbance, these areas are known for their fragility. Marginality, refers to mountain areas being prevented from participation in the “mainstream” pattern of activities. Mountain areas have variations among and within ecozones, even at short distances. Owing to their specific environmental and resource-limited features, mountains provide a niche for specific activities or products. Thus mountains may have comparative advantages over plains in these activities but need to harness them if they are to be utilized. Mountain communities, through trial and error over the generations, have evolved their own adaptation mechanisms to handle mountain characteristics. Either they are modified (e.g. - through terracing and irrigation) to suit their needs, or activities are designed to fit the constraints of mountain conditions. Adaptive mechanisms or experiences are reflected through formal and informal arrangements for management of resources, diversified and interlinked activities to harness microniches in specific ecozones and effective use of upland-lowland links.

Because of mountain specificity, there could be several subagroecological zones in the mountains. This results in diverse and varied farming systems both among and within agroecological zones. For example, some authors have identified six agro-ecological zones from (subtropical to arctic) in the eastern hills, ranging from an altitude of less than 1,000 to about 5,000 meters. In the high Himalayas, summer grazing of yak is practiced in the tundra vegetation with open meadows. In the high mountain region (2,300 to 4,500 m) winter and summer grazing of yak, forest grazing, and sporadic and unreliable cropping occur. Towards the lower elevations of the high mountains, livestock-based farming systems are practiced in the subalpine climate. In the high altitude hills (1700 to 2300 m), potatoes (grown either as monoculture or interplanted with maize), maize, barley and buckwheat are important crops. The climate is cool-temperate with Quercus forests. In the mid-hills (1,100 to 1,700 m), a maize/finger millet-based cropping pattern dominates. Rice-based cropping patterns are practiced in the mid-hills, and rice predominates at the low altitude (<1,100 m) in rainfed as well as irrigated conditions.

In the hills, livestock is an essential and integral part of the farming systems. Cattle provide the main form of draught power, and manure is provided by all species of livestock. The sale of animals and animal byproducts is extremely important for small farmers – 55 percent of farm income derives from livestock, and small farmers actually earn more cash from this source than other middle and large farmers. In the Tarai, however, there are few ecological niches and less diversified farming systems.
E. Farm Tasks (Farm and Household)

In subsistence farming systems such as that, which exists in Nepal, farm people have to perform a wide range of household and farm-related tasks. Household tasks include cooking food, washing (clothes, utensils etc.), carrying water from water taps or wells, carrying fuelwood from forests or from community or private lands, shopping, child bearing and rearing, sending children to school, social gathering, entertaining guests etc. Farm tasks include: crop (agronomic and horticultural) production-related tasks such as seed selection, plowing, harrowing, planting, transplanting, manuring, applying fertilizer, inter-culture operation, irrigation, weeding, harvesting, threshing, postharvest activities (drying, processing, storage, etc.); livestock - production related tasks such as feeding, cleaning, milking, slaughtering, animal health care, breeding/stock maintenance, marketing, and pasture and forage production; and tree (horticultural as well as fodder tree) production-related tasks such as sapling/seedling raising, planting, pruning, lopping, thinning, cutting trees for fuelwood and fodder, harvesting horticultural fruits for sale or for home consumption, etc. Depending on the nature of tasks/activities, they are performed by different members of the household - men, women, and children. Some tasks are gender neutral (can be performed by both men and women), while others are gender specific (can be performed by either men or women only).

The table below shows the involvement of men, women, men and women both and children in various crop - and livestock - related activities in general. These roles/involvements may, however, differ in specific agroecological and socioeconomic environments.
Tasks performed by members of the household in crop and livestock farming

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Performed by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>I. Crop farming</td>
<td></td>
</tr>
<tr>
<td>Seedbed preparation</td>
<td>x</td>
</tr>
<tr>
<td>Seedling raising</td>
<td></td>
</tr>
<tr>
<td>Land preparation</td>
<td>x</td>
</tr>
<tr>
<td>Collecting FYM</td>
<td></td>
</tr>
<tr>
<td>Applying FYM</td>
<td>x</td>
</tr>
<tr>
<td>Applying chem. fertilizer</td>
<td>x</td>
</tr>
<tr>
<td>Uprooting seedlings</td>
<td></td>
</tr>
<tr>
<td>Transplanting</td>
<td>x</td>
</tr>
<tr>
<td>Broadcasting/sowing</td>
<td>x</td>
</tr>
<tr>
<td>Weeding</td>
<td></td>
</tr>
<tr>
<td>Applying insecticide</td>
<td>x</td>
</tr>
<tr>
<td>Irrigation</td>
<td>x</td>
</tr>
<tr>
<td>Harvesting</td>
<td></td>
</tr>
<tr>
<td>Hauling</td>
<td>x</td>
</tr>
<tr>
<td>Threshing (rice)</td>
<td></td>
</tr>
<tr>
<td>Dehusking/shelling (maize)</td>
<td></td>
</tr>
<tr>
<td>Winnowing</td>
<td>x</td>
</tr>
<tr>
<td>Cleaning</td>
<td></td>
</tr>
<tr>
<td>Grain storage</td>
<td>x</td>
</tr>
<tr>
<td>Drying</td>
<td></td>
</tr>
<tr>
<td>Milling (small-scale)</td>
<td></td>
</tr>
<tr>
<td>(large-scale)</td>
<td>x</td>
</tr>
<tr>
<td>Pounding (in Janto)</td>
<td>x</td>
</tr>
<tr>
<td>(in Dhiki)</td>
<td>x</td>
</tr>
<tr>
<td>II. Livestock farming</td>
<td></td>
</tr>
<tr>
<td>Building and maintenance of sheds</td>
<td>x</td>
</tr>
<tr>
<td>Cleaning sheds</td>
<td></td>
</tr>
<tr>
<td>Preparing and feeding feeds</td>
<td>x</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>x</td>
</tr>
<tr>
<td>Collecting fodder</td>
<td></td>
</tr>
<tr>
<td>Milking</td>
<td></td>
</tr>
<tr>
<td>Decision involving marketing of milk</td>
<td>x</td>
</tr>
<tr>
<td>Carrying milk for sale</td>
<td>x</td>
</tr>
<tr>
<td>Grazing animals</td>
<td>x</td>
</tr>
<tr>
<td>Care of birthing animals</td>
<td></td>
</tr>
<tr>
<td>Care of sick animals</td>
<td></td>
</tr>
</tbody>
</table>
Agricultural Extension

Meaning, Purpose and Philosophy of Extension

Some view extension as an educational process, while others consider extension it a delivery mechanism and still others conceive of it as an instrument of policy administration. However, there is a common agreement on the philosophy of extension; that agricultural extension is basically an educational process to help farmers make enlightened decisions to put improved farming technology into practice.

Evolution of Extension

Nepal's agricultural extension service is the oldest of all the public services targeted at the rural people. The historical reason for this is that the first external assistance (from the United States) was received in 1952 in the agricultural sector and it was used for the establishment of the Tribhuwan Gram Vikash (Village Development) Service for Extension. Below is the history of institutional development.

- Tribhuvan Village Development Program 1953
- Department of Agriculture 1951
  (Additional Support under U.S. Point Four Program)
- Department of Agricultural Extension 1966
  (Altogether, 5 agricultural departments)
- Single Department of Agriculture 1972
  (Research and Extension functions)
- Department of Livestock Development and Animal Health 1979
- Department of Horticulture 1990
- Department of Agricultural Development 1992
- Department of Agriculture and Department of Livestock Services 1995

Different Approaches to Extension

a) Conventional during 1960s and ‘70s, based on trickle-down strategy of diffusion theory.

b) Training and Visit (T & V) during mid-1970s in WB funded project covering all Tarai and few hill districts. It was more of a routine and disciplined program to focus on regular training to the agricultural assistants and the JTs/JTAs and through them to the farmers.
c) **Integrated Rural Development Projects** (IRDP) during 1970s and ‘80s. These assumed that existing technology of production was adequate and the major limiting factor was institutional, more specifically, coordination.

d) **Tuki** in 1977, also known as multipurpose progressive leader approach. “Tuki” means a kerosene lamp in the Nepali language. A Tuki was an enlightened farmer who was supplied with improved inputs in order to practice in his or her own farmland so that others would be motivated to practice. Inputs were highly subsidized for a Tuki. This approach was limited to Sindhupalchowk and Dolakha districts under the Swiss-assisted program.

e) **Block Production Program**: This approach was initiated at several cropping systems research sites to provide necessary technical support services to the farmers in a coordinated way to facilitate the adoption of technologies generated through cropping systems research during the 1980s.

f) **Farming Systems Research and Extension** (FSRE) evolved during 1980s out of the USAID-funded Integrated Cereals Project implemented during the 1970s. This was a bottom-up approach that involved farmers in all the steps of technology generation.

g) **Group Approach**: This emerged as a dominant approach of extension since 1990. The eighth five-year plan also adopted this approach. It builds on the notion that the majority of the farmers are economically and socially weak as individuals and so cannot bargain for the limited resources, but when they form a group, they become powerful. Moreover, it also becomes easier for the extension workers to reach more farmers frequently.

h) **Pocket Package Strategy**: This is the operational plan of the Agricultural Perspective plan (APP). The ninth five-year plan has adopted this approach. This approach assumes that there is a complementarity among the majority of the priority factors of production. Therefore they should be concentrated in a geographically defined pocket area.

All approaches described above can be grouped into three broad categories: those that emphasize agricultural performance, those that are related to rural community development and those that are closer to non-formal education.

**Current Extension System**

The current extension system operates through the regional directorates, district offices and agriculture/livestock services centers at the Ilaka level. As mentioned above, there are two departments related to agriculture - the Department of Agriculture and the Department of Livestock Services. These departments have five regional directorates in five development regions.

At the district level there are district offices and within each district (at the Ilaka level) there are service centers separately. There are altogether 932 agricultural service centers and 999 livestock service centers in Nepal.
Junior technical assistants/junior technicians work at the Ilaka level. An Ilaka is made of several village development councils (VDCs) and villages. They report to the in-charge of the district office. District office is at the district headquarter and a senior agriculture officer assisted by several subject matter specialists is in-charge of the district office.

Achievements and Problems

Improved farm practices and use of improved inputs were almost non-existent until recently. Records reveal that in 1965, only 1 percent of the total cultivated area was put under improved varieties of seeds and 451 MT of nutrients were used on farms. In 1990, areas under improved seeds of maize, wheat and paddy were 60 percent, 68 percent and 73 percent respectively. Nevertheless, yields have not increased, nor have the conditions of the majority of farmers have improved. Soil fertility has declined.

Extension is detached with research and education. There is a lack of professionalism and no research is undertaken in extension. In spite of the fact that Nepal is socially, culturally and ecologically a diverse country, extension teaching methods and approaches are stereotyped.

Agricultural development efforts are still target-oriented and based narrowly on increasing production, without due attention to market potentials. A very generalist approach is followed without due regard to diverse peculiarities of different agroecological regions and farmer categories. Technical service and input delivery mechanisms have been weak. Moreover, the grass-roots extension agents are technically ill prepared to help farmers.
A Sociological Perspective on Nepal's Agricultural Development

Agrarian Structure

More than four-fifths of Nepal's total population of nearly 2 million (18.4 million in 1991) depend on agriculture for their livelihood. In 1993/1994, agriculture accounted for about 42 percent of the total Gross Domestic Product with the percentage of the economically active population in agriculture at 81 percent of the population contributed 42 percent of the GDP. Per capita non-agricultural income is six times greater than agricultural income. Nepal was a food exporting country until early ‘80s, but it imports food grains at present.

The average operated land holding size in Nepal has decreased to 0.95 ha in 1991 from 1.13 ha in 1981, which is very low by any standard. The distribution of operated holding is also quite skewed - nearly one-fifths of households are landless and another 44 percent own less than 0.5 ha land to support a family (size averages six persons). The holdings are fragmented to an average of four parcels per holding. Very few people own most of the land. Official records show that 15 percent holdings are rented, so the number of tenants is quite significant in the country.

The land reform program carried out in 1964 fixed ceilings on holding size and announced some reforms in tenancy. But poor implementation of this program led to misappropriation of excess land. Although the number of formal tenants decreased, there was a very rapid shift from formal to informal tenancy. Dual ownership of land rendered no incentives to invest in land quality improvement.

A typical farm in Nepal has six persons with an equal number of livestock on less than a hectare of land. A farmer in general cultivates four to six crops on that piece of land. Most of such land is poor in fertility and farmed under rainfed condition.

Irrigation

Nepal has surplus water resources - both surface (200 billion cubic meters) and groundwater (12 billion cubic meters) resources are available for development of the 1.8 million hectares of land available for irrigation. At present, Nepal is making use of less than 8 percent of its water resource potential.

Although data on irrigation are not that reliable, it appears that various agencies have developed irrigation infrastructures covering about 62 percent (1.1 million hectares) of Nepal's potentially irrigable area. But the actual irrigated area is about 71 percent of the developed potential, and only 38 percent of the development potential is for year-round irrigation.

Nepal's agriculture thus continues to rely on the vagaries of nature. The proportion of irrigated area is small and the existing irrigation systems can seldom assure farmers of irrigation availability when it’s needed, despite a huge sum being spent in this sector.

At present, surfacewater irrigation infrastructure covers about 0.9 million hectares, of which one-fourth is agency managed and three-fourths is farmers managed. The area irrigated area with
groundwater is about 168,000 hectares, of which three-fourths is under farmers' managed shallow tube wells and the balance is under agency-managed deep tube wells.

**Fertilizers**

Land fertility is poor and yields of food crops are among the lowest in the Southern Asia.

Nutrient consumption per hectare in Nepal is extraordinarily low compared with other countries of the region: it is one-third to one-quarter that of Bangladesh, Pakistan and Sri Lanka and 10 percent that of China. The per hectare fertilizer consumption in Nepal is only 26 kg/ha of nutrients.

The yields of major food crops - rice, wheat and maize - have either remained constant or even declined in the last 30 years. For example, the yield of rice per hectare in Nepal is less than 2 tons; in India, it is over 3 tons and in Japan, an average yield of rice is more than 6 tons.

**Agricultural Roads**

As a part of the rural infrastructure, agricultural roads are critical to farmers' access to production technology, inputs, services and output marketing at low transaction costs.

It has been noted that the growth of the agricultural GDP in Nepal over the period 1967-90 was affected most by roads, followed by irrigation, research and extension, and rural electrification.

Nepal had a few hundred km of roads when the country made its first five-year plan some 40 years ago. A decade ago, the road length reached about 7,000 km., including black-topped, graved and fair weather roads. Even with 7,000 km of roads, Nepal was marketwise very much disconnected as, for example, people had to cross Indian territory to reach certain parts of the country. This divided Nepal into two markets. Currently, rural Nepal is one of the regions of the world still poorly served by roads. Hill and mountain areas of Nepal have only 4 km of road per 100 sq km. The figure is 13.5 km in the Tarai (southern flat plain land bordering to India) and 5 km for Nepal as a whole.

**Biodiversity**

Nepal is well known for its diverse human population. The Nepalese speak a variety of languages and adhere to various religions. Besides different ecological settings, cultural variations with different value orientations have shaped farming systems in Nepal.

It is rich in flora and fauna but is getting endangered very fast.

Most of the land holdings are fragmented and very small in size, and are owned by hundreds of thousands of small farmers. They tend their animals, which recycle various products useful for environmental conservation and human welfare. They use technologies, that are historically tested and manageable in size. They have plants and animals that have multiple uses but rarely have such resources found any significant and sincere place in any of the research and development programs.
Nepal is losing its biodiversity very fast. Producers of so-called high quality seeds and inputs sell their products by convincing local "experts" to propagate their technology.

Conversion of diverse farming systems into a single commodity or a single variety makes an industrialist’s or banker’s job easier from the supervision point of view but, at the same time, makes native farming more dependent and risky.

Another example is related to the externally assisted irrigation schemes. Nepal is famous for its thousands of farmers’ managed irrigation systems - nearly three-fourths of all the irrigation systems in Nepal are farmer managed.

These indigenous irrigation systems are gradually being merged into larger irrigation schemes that then are controlled by the government agency. After these small-scale farmer-managed irrigation systems are converted into complex and relatively large irrigation schemes, they are rarely understood and manageable by the small farmers. Thus the traditional beneficiaries of their own irrigation systems are converted into a group of totally dependent farmers who even partially or completely lose their traditional right over water.

**Changing Structure of Agriculture**

The structure of agriculture is rapidly changing. Small landowners are gradually being converted to either marginal farmers or landless laborers.

Nepal severely lacks a proper land use plan. As more and more agricultural land is being converted for non-agricultural purposes, farmers are being displaced. They have to move from their original residence in search of jobs and they mostly get settled in urban slum areas. As a result, in rural Nepal, families are gradually disintegrating. In single-parent families with the absent fathers, mothers must take on fatherly roles. These changes have not captured the attention of the agricultural change agents for redirecting their messages - the male farmers still get most of the training and have access to technology. Agricultural R and D do not address this problem.

High tech materials, that are more affordable by the rich and more suitable to the educated and rich have been replacing the indigenous knowledge system and technology.

Nepal is overdependent on foreign assistance; such assistance has usually brought along alien technologies that rarely become part of the indigenous system and ultimately disappear very soon after the termination of most of the development projects. Most times, such technology transfer has made farmers dependent on external assistance and in most cases the outside help has not been enough nor have farmers’ capacity increased - instead their dependency has increased on lending agencies or experts.

Rapid increase in population growth and increasing rural unemployment problems have motivated farmers to leave the villages in search of jobs in city areas.
Rapid urbanization, too, has motivated some farmers to sell their farmland for higher prices. Such lands are then used for non-agricultural purposes, and farmers, displaced from their traditional occupation, move for any unskilled job.

Review of Government’s Strategies for Agricultural Development

Nepal is in its ninth five-year-plan (beginning in 1997). As agriculture is still the dominant sector in Nepal's economy, it has been getting priority in resource allocations. However, this sector lacks any tangible evidence of success, and repeatedly nature is blamed for the failure of agricultural development, not the policies that were neither compatible to Nepal's situation nor based on the real footing. Following are some of the various approaches and policies adopted by the government at various time periods.

(a) Mid-‘50s to mid’60s: Community Development and Extension Approach

Nepal was under the Rana family regime for nearly 104 years until the early 1950s. During this period, Nepal was not open to the outside world. After the overthrow of the Rana regime, Nepal came into contact with the outside world and American-designed community development was imported to Nepal from India. The intensive Agricultural Development Program was run and American assistance was received under the P.L. 480 program. Village development workers were the grass-roots change agents to distribute improved agricultural inputs to the farmers. Junior technical assistants also disseminated improved agricultural information among the farmers with an assumption that after a few innovative farmers benefited from the adoption of improved agricultural innovations, this information would trickle down to their fellow farmers. But trickle-down theory did not work.

(b) Mid-‘60s to mid-‘80s: Commodity Development Approach

Following the programs of the international research centers such as CYMMIT and IRRI, Nepal launched the Integrated Cereals Project with American assistance. It was more a research-based approach with a focus and heavy concentration on cereals. Regional research centers were strengthened, but at the center, back-up facilities were not developed and extension was utterly neglected.

(c) Mid-‘80s to early 90s:

The commodity development approach to Extension continued in the ‘80s. Crops that were of great importance to the majority of the farmers - such as millet, barley and the like (which are still labeled as “minor crops”) - did not come under this project, and extension programs suffered from a low level of investment. As agricultural research also seemed to be very weak and less productive, there was a realization that an autonomous research organization should be established that would generate new and appropriate technology for adoption to attain a speedy growth rate.

(d) 1992 to late 1994:
There were the Department of Agriculture, the Department of Livestock Development, the Department of Horticulture and a Nepal Agricultural Research Council **within the Ministry of Agriculture**, and they had separate entities until 1992. Then all the development departments were merged into a single Department of Agricultural Development under the **single umbrella system**, and the research council was made autonomous in 1992. The strategy was to run all agricultural development activities from a single Department of Agricultural Development with research outside the government system. These organizational changes did not bring any desirable changes – rather, professional jealousy increased. The link between agricultural research and extension was broken.

**e) Early 1995 to date:**

Again the single Department of Agricultural Development was split into two departments: the Department of Agriculture and the Department of Livestock, with the Research Council remaining autonomous. During this period, an Agricultural Perspective Plan (1995-2015) was developed and endorsed by His Majesty's Government of Nepal.

It was realized for the first time that Nepal can not continue scattering its scarce resources on several issues related to agricultural development. Rather, it should identify and concentrate on fewer issues that were more important for rapid agricultural growth. Irrigation, fertilizer, technology, roads and power were identified as the most important factors for enhancing agricultural growth.

Groundwater development in the Tarai and more investment in research on food crops are the identified strategy for agricultural production. Similarly, the construction of agricultural roads and development of power are assumed to be very important in creating market access and modernization of agriculture.

As a planned strategy the Tarai would be developed for commercial farming, and hill and mountain areas would be developed for comparative advantage.

In conclusion, Nepal's agricultural research and development programs have not yet properly addressed the needs of the majority of the Nepalese farmers or been adequately responsive to its sociocultural and ecological variabilities.

In the past, agricultural policies have attempted more to safeguard the interests of the professionals, administrators and politicians than the interests of the needy farmers. Farmer-centered thinking would lead to a totally different type of organizational set-up and management style than the current ones in Nepal.

We see a great opportunity for social scientists for meaningful interventions in agricultural development planning in the future.
Water Resources Development

Nepal is blessed with plenty of water resources. It has an estimated water surface area of about 576,011 hectares. This water regime is mostly due to its unique physical setting between the Tibetan plateau and the Gangetic plain along the southern slope of the Himalayas - which itself has a rich water regime.

The mean annual precipitation in Nepal ranges from more than 5,000 mm along the southern slopes of the Annapurna range in central Nepal to less than 250 mm in the north central portion near the Tibetan plateau. The Southeast monsoon during the months of June to September influences much of Nepal’s rain. The humid monsoon air stream blowing from the Bay of Bengal is forced to rise as it meets the Himalaya. As a result heavy rainfall occurs on some sections of the southern Himalayan slopes (Ball, 1997).

Water Sources

Surface Water: There are mainly three kinds of surface water namely snow and glaciers, runoff, and lakes.

Glaciers and snow are key to the runoff of the major rivers of Nepal and dominantly influence the hydrological behavior. They act as reservoirs and release water after they melt. About eight percent of the country’s area is estimated to be under permanent snow cover.

Rivers are also classified according to what source these rivers have during the dry season. Rivers with glaciers and snow as their sources are more dependable compared to other types as they carry sufficient flows in the dry season also. Karnali, Narayani and Sapta Koshi rivers are of this type. Bagmati, Rapti, Kamala and Mechi rivers have their sources in Mahabharat range and easily dry during the winter season. The third-grade rivers originating from the Siwalik range are Tilawe, Bhangeri, Sirsia, Manusmara, Hardinath, Sunsari, Banganga etc. They have either very low amounts of water or dry up during the low flow season.

It is estimated that there are nearly 6,000 rivers in Nepal. The total length of all streams and rivulets exceeds 45,000 km. Considering only the three snow-fed major river systems with their total drainage area around 139,360 sq.km., the estimated annual mean stream-flow is found to be 4,700 cu.m/sec amounting to 74 percent of the total annual surface runoff of about 6,400 cu.m/sec or 202,000 million cubic meters. The total annual runoff from the territory of Nepal is 4,877 cu.m/sec. The total drainage area of all rivers amounts to about 191,000 sq.km - 74 percent of which lies in Nepal only. About 80 to 85 percent of annual surface runoff occur during the monsoon period. The mountainous terrain along with the summer monsoon produces disastrous floods in Nepal. Surface water is estimated to occupy 2.7 percent of the country area of which 97 percent is occupied by large rivers (ibid., 1997).

Two percent of all runoff is contributed to the lakes. In native language, the lakes are known as Pokhari, Tal, Dah, and Kund in Nepal. These lakes are also classified as glacier, tectonic, and oxbow lakes.
Glacier lakes originate from the glaciers and are situated at high altitudes mostly above 4,000 meters. There are many glacier lakes in Nepal - Lake Rara in Jumla district is of this type. The Water and Energy Commission has identified the Lower – Barun, Chho-Rolpa, Imja and Thulagi as glacier lakes, which are vulnerable to outburst, so these lakes are being carefully studied.

Tectonic lakes in the midland have mostly drained out.

Numerous oxbow lakes are found in the Terai plain, particularly in the central and western Terai regions. These are formed when rivers shift their course. Jagor Lake, near Dhangarhi area in the far western region is about 3 sq.km.

In addition to the natural lakes, numerous manmade ponds and reservoirs are located in Nepal, especially in Terai and the river valleys.

**Groundwater:** Most of the Terai and the inner valleys of Nepal are rich in groundwater. The Bhabar is the major zone for recharge of aquifers in the Terai.

An assessment APP (1995), of groundwater indicated the availability of 13.2 billion cu. m as replenishable and economically exploitable, of a total of 63 billion cu. m. groundwater. Groundwater contributes nearly 10 percent of the rivers during the low flow seasons.

**Water Use**

**a. Drinking:** This is one of the most important uses of water. About 60 percent of population in Kathmandu valley and 30 percent of the population in Nepal have access to safe drinking water. Against the demand for 140 million liters of water in the capital, 100 million liters is supplied during rainy season and 80 million liters in the dry season.

In the Terai plain nearly 90 percent of drinking water comes from groundwater either through the hand pump or the dug well. Most of the wells in the Terai are shallow in depth and unprotected from surface infiltration.

At present, groundwater makes up about 50 percent of the total water supply in Kathmandu valley. The rest comes from surface water sources consisting of 14 springs and five river intakes. Most of the rural population uses traditional sources of hill water irrespective of quality. The rural people in the hills get their drinking water supplies from streams/rivers, ponds and springs.

**b. Hydropower:** The theoretical power potential has been estimated to be about 83 m kilowat in Nepal. Though the hydropower potential of the country is enormous, it accounts for less than 1 percent in the overall energy balance of the country. With no other long-term viable resources available in the country hydropower is, no doubt, the energy of the future in Nepal.
Only about 12 percent of the total population has access to electricity. Less than 5 percent of rural areas, with about 90 percent of the total population, have access to electricity.

The potential power available in the river basins of Nepal and the projected demands are shown in the following table.

### Hydro-power potential in the river basins of Nepal

<table>
<thead>
<tr>
<th>River basin</th>
<th>Theoretical potential (MW)</th>
<th>Identified sites (No.)</th>
<th>Established potential capacity (MW)</th>
<th>Potential energy output (GWh)</th>
<th>Present developed capacity (MW)</th>
<th>Power demand 1984 (MW)</th>
<th>Power demand 2000 (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mahakali</td>
<td>13,000</td>
<td>2</td>
<td>2.250</td>
<td>10,000</td>
<td>0.1</td>
<td>0.8</td>
<td>6</td>
</tr>
<tr>
<td>Karnali</td>
<td>23,170</td>
<td>11</td>
<td>8.840</td>
<td>40,000</td>
<td>0.8</td>
<td>0.2</td>
<td>2</td>
</tr>
<tr>
<td>Gandaki</td>
<td>20,650</td>
<td>13</td>
<td>6.200</td>
<td>30,000</td>
<td>125.0</td>
<td>20.5</td>
<td>90</td>
</tr>
<tr>
<td>Koshi</td>
<td>22,350</td>
<td>53</td>
<td>11.840</td>
<td>62,000</td>
<td>27.0</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>Southern Terai</td>
<td>4,100</td>
<td>9</td>
<td>630</td>
<td>3,000</td>
<td>94.1</td>
<td>60.0</td>
<td>255</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>89</td>
<td>29.761</td>
<td>145,050</td>
<td>248.0</td>
<td>23.0</td>
<td>145</td>
</tr>
</tbody>
</table>


c. Irrigation: Of the potential irrigable land area of 2.178 million hectares in Nepal, the total developed net command area amount to about 994,100 ha. - with 579,500 ha. under farmer managed irrigation systems (FMIS), 258,400 ha. under agency managed irrigation systems (AMIS) and 156,200 ha. under unidentified systems. It is also reported that nearly three-fourths of irrigation are under the ownership and management of FMIS and the rest under the government. In the year 1992, the FMIS numbered 16,000 in the hills and mountains with an irrigated area of 322,000 ha., and 1,700 in Tarai with an irrigated area of 520,000 ha.

### Historical Sketch of Irrigation Development in Nepal

Aside from opportunistic irrigation, development of more irrigated area probably occurred during the past two centuries through the auspices of *birta* and *jagir* grant holders (Shivakoti, 1997). They were able to mobilize tenants, probably slave labor, capital and land to construct irrigation systems. *Guthis*, as noted above, were also a means to augment an agricultural surplus for the purpose of endowing the construction of a temple or to sustain a priest; irrigation was developed on those lands as well. Additionally, a variety of incentives, mostly in the form of tax breaks, were used to encourage the expansion of land under cultivation, particularly irrigated land.

The Department of Irrigation (DOI) came into existence in 1952 with technical assistance from India. This department was given an additional responsibility of looking after drinking water supply projects in 1955. During subsequent years, in 1966 and 1968, DOI was assigned additional responsibilities of undertaking minor irrigation projects and groundwater project components. In 1972, its name was changed to the Department of Irrigation, Hydrology and Meteorology (DIHM). It became the principal government agency involved in planning, design, construction, and management of most government-owned irrigation projects in Nepal. By 1995, government involvement in irrigation development grew to include several agencies including:
There were major differences in working policies and mandates among these agencies. The DIHM was supposed to undertake projects with command areas larger than 500 hectares in the Tarai and larger than 50 hectares in the hills. On completion of construction work by the DIHM, operation and maintenance remained a full function of the department and the beneficiaries were expected to pay a water fee to meet a part of operation and maintenance costs. DIHM has coordinated construction activities with the International Labor Organization (ILO), the World Bank, the Asian Development Bank, the USAID, and other donor agencies.

FIWUD identified its projects for assistance based on the collective decisions and requests of the users. If a project met criteria for approval, the project was approved. Farmers deposited 5 percent of the estimated cost in the bank in the name of the scheme, and committed another 20 percent of the estimated cost in the form of labor from the anticipated beneficiaries. The remaining 75 percent came as a FIWUD grant from the government. When the construction was complete, a users’ committee was formed, that took over the operation and maintenance of the system.

Ministry of Local Development (MLD) (formerly the Ministry of Panchayat and Local Development (MPLD) activities concentrated mainly on low-cost technologies for the improvement of farmers’ systems of less than 50 hectares command area in size. Participation of the anticipated beneficiaries was a requirement, although the proportion of participation was not fixed in this case. Construction contracts were awarded to the beneficiaries’ groups, who were responsible for operation and maintenance. The basis for the selection of projects was mainly political.

The Agricultural Development Bank of Nepal (ADB/N) has also played an active role in providing irrigation facilities to farmers. It has been responsible mainly for providing credit to farmers for agricultural activities, and it has collaborated with CARE/Nepal to finance several irrigation systems. The narrative that began this book is about an ADB/N/CARE financed irrigation system. The Agricultural Development Bank of Nepal maintains a staff of technicians at the central level who supervise the overall activities of irrigation development. At the district level, middle-level technicians (who have two years of training after high school education) supervise the construction and rehabilitation works related to irrigation and other technical matters. ADB/N maintains subbranch offices at many places within a district; a technician (three years’ training at pre-high school level) is posted there to supervise irrigation technical matters. Referring Pradhan, Shivakoti (1997) mentions that ADB/N has supported the development of about 106,000 hectares; these systems are mostly user-controlled.

Some of the larger irrigation projects in Nepal have been carried out through semi-autonomous organizations called Project Boards. Management under this system gave autonomy in personnel recruitment and financial flexibility. Besides larger projects, the Department of Agriculture also
launched integrated programs, such as the Hill Food Production Program, in which each project maintained its own staff of irrigation technicians for the project period.

Reorganization of National Irrigation Bureaucracy

A new irrigation policy was drafted in 1992. The new irrigation policy states more clearly the role of the irrigation agency and water users’ associations, the cost-sharing mechanism and the ownership of the system upon turn-over to the water users’ association. The objectives of the new irrigation policy are:

- To promote irrigation development that is cost-effective, economical, technically viable, and institutionally and environmentally sustainable, and that contributes to a reliable increase in agricultural production and productivity.

- To promote private sector involvement in irrigation development and expansion.

- To maximize the involvement and participation of users so as to decrease government responsibilities in development and management of irrigation and thereby promote local resource mobilization and self-reliance.

- To support personal and community efforts in irrigation development.

- To support and strengthen the capacity of other government and non-government agencies in irrigation development.

Two action plans stemming from this policy, are being implemented by the DOI: turn-over program wherein operation and management of irrigation systems constructed and managed by the DOI are turned over to organized groups of water users, and joint management of irrigation schemes which increase participation of users. Concerning the size of the irrigation systems to be turned over or jointly managed, the policy states:

“Among the government operated irrigation projects at present having up to 500 ha of irrigated area in the hills and 2000 ha of irrigated area in the Terai, and even bigger projects than those, if feasible, shall be gradually turned-over to water users association. In general projects larger than 400 ha in the hills and 2000 ha in Terai which can not be turned over to the water users association for their operation, maintenance and management shall be jointly carried out by the concerning irrigation office and water users association.”

Other provisions in the policy concern ownership of irrigation systems to be turned over and collection of water fee and incentives to WUAs in its collection and cost-sharing mechanisms. The provisions encompass the legitimization of WUAs registered under the Association Act.

The Eighth Plan (1992-97) further reinforced the value and need of users participation in irrigation management. The plan says:

“The management of large irrigation schemes is possible only if users are involved in the design of these schemes from the inception and planning stages. Therefore, it should be the norm of these projects to have user group participation early on. Locally
available technologies and methods will be promoted in community irrigation schemes which will be constructed and managed by the users. Large irrigation schemes will be divided into smaller units for the management of water and will be managed through a group of smaller community units and organization from within the command area for the collection of water fees and for repair and maintenance of secondary and tertiary canals."

With the aim of streaming government efforts and investments in a sectoral approach, two projects, Irrigation Line of Credit (ILC) and Irrigation Sector Project (ISP), were started. Both these projects aimed at improving the performance of irrigated agriculture through rehabilitation and upgrading of existing FMIS, development of new, small and medium-scale irrigation schemes and strengthening of the institutional capacity of the DOI to initiate and support participatory irrigation and development and management programs. The ILC was started in 1988 with credit assistance from IDA/World Bank, and the ISP was launched in 1989 under a loan from the ADB. Both these projects aimed at initiating irrigation development in a demand-driven mode with users participating at all stages from design and construction to operation and maintenance.

**Recent Changes in the Irrigation Policy**

According to the new irrigation policy of 1992, the farmers (water users) are recognized as autonomous entities with legal power who have rights and duties and full ownership of turnover systems, provision of joint management, and even the completed and handed over systems being the whole property of the users. But the water is still regarded as the government property. The government has not given full recognition to the prior use rights of the farmers and nor a guarantee to the farmers that their systems will not be evicted for other competing water uses in the future.

A new Water Resource Act (1993) addresses the issues of prioritization or hierarchy of water uses, privatization, incentives, licensing, etc. A fundamental characteristic of the new act is that the ownership of all water resources within the kingdom of Nepal is vested in the government, which has the ultimate power to allow corporations, communities or individuals to use them. The priority of water use as outlined in the act is: 1. drinking water and domestic use; 2. irrigation; 3. agricultural uses such as fishery and animal husbandry; 4. hydroelectricity; cottage industry, industrial enterprises, and mining uses; 5. navigation; 6. recreational uses; and 7. other uses.

The act also gives full authority to the government to utilize or develop water resources as it sees fit. The act also provides for conflict resolution through arbitration by a prescribed committee. The district water resource committee as prescribed however, comprises all the line agency officials at the district with chief district officer as the chairman and the local development officer as the member secretary. There is only one representative member to be nominated by the district development committee. Although the act will not affect the day-to-day operations of the irrigation systems, the trend, however, shows the basis of power is centralized rather than decentralized.
To sum up, at least since 1988 and especially after the promulgation of the new constitution in 1991, the Nepali government has taken a more active role in irrigation management in an effort to improve agricultural productivity and alleviate poverty.

Compared to the farmer managed irrigation schemes, the agency-managed systems are less efficient - and it is not unique to Nepal. Ample empirical evidence has shown that government agencies in many developing countries have failed to manage irrigation systems in an effective manner. A variety of research has suggested that inadequate local participation in the processes of governing and managing irrigation systems is a major reason for the ineffectiveness. Hence, enhancing farmer participation has been a major component in many reform programs in developing countries.

(iv) Miscellaneous Uses

Other uses of water are the industrial uses including inland water transport, recreational uses and religious uses. Nepal is not an industrial country but it still has to harness the water potentials. Very few industries, such as the carpet and paper industries, are using water but they still add to the water pollution. The situation is similar in the recreational and transport industries. Except for the use of rafting, and boating on lakes, this resource has not been fully utilized. Water has special meaning from the religious point of view as Nepalese use water in all worship and in taking a holy bath. Besides this use water is also used for domestic purposes such as laundry and dish washing.
Health and Education

Health

Good health of a country’s population is an indication of a more productive population and is a function of several factors such as the life expectancy of a person at birth, the infant mortality rate and maternal mortality, to mention a few. A relatively healthier population can work hard and is mentally fit to adjust to diverse conditions, earn more and invest in education to become more productive and efficient. Attempts made in the past to develop health services made some improvements in the public health status, but major health indicators of the Nepalese people have shown that their health status is far below that of people in other developing countries (NPC, 1998). The ninth plan document, documents the inconsistency between the policy, programs and budget; managerial problems; and inadequate scientific equipment in hospitals as some of the reasons for the poor public health status in the country.

The Life Expectancy Rate: The low average life expectancy of the country, which is estimated to be 55 years reflects the quality and accessibility of health facilities, especially to the majority of the poor. Poverty and ignorance (low literacy/information) contribute to poor nutrition, which further aggravates the health conditions.

The life expectancy of women in Nepal is less by two years than that of men. This is an indication of women’s lower status in the society. They work hard and get less food to eat. There is a sharp discrimination between the male child and the female child. More female children die than male children. There is a high maternal mortality rate and little interest among parents to invest in girls’ education.

Life expectancy is also related to location. The residents of mountains and high hills and the rural areas are found to have shorter life expectancy rates. Health facilities are better in the Tarai and the urban areas than in the hills and the rural areas. Moreover, there are more job opportunities and so a better chance of employment in the Tarai and the urban centers, which helps people maintain their health.

In spite of the fact that the average life expectancy in Nepal is still the lowest in Southern Asia, it increased by 13.5 years during 1976-1996 (HDR, 1998).

Infant Mortality Rate: Certain reports contain inconsistent data on the infant mortality rate (between census data and survey data). The survey data show a higher rate of mortality among male infants, whereas the census data show higher infant mortality rate among the female infants (HDR, 1998). The infant mortality rate at 98 per 1,000 live births in Nepal is very high. Nearly one child in every 10 births dies before its first birthday. Infants in rural areas are 1.6 times more likely to die than infants in urban areas. Similarly, infants of the mountain regions the midwestern and the farwestern regions have higher risk of mortality than infants of other ecological settings and regions.

Maternal Mortality: Twenty-seven per cent of all deaths of women aged 15 to 49 years are attributed to childbirth complications. The maternal mortality rate is estimated to be around 875
per 100,000 women aged 15 to 49 years. This is one of the very high figures in the world. Women have poor access to prenatal delivery and postnatal care. It is customary in most of Nepal to conduct child delivery in the home without the assistance of any kind of trained professional. Moreover, there is an acute shortage of such professionals in Nepal, especially in the rural areas.

Nepal implemented a health service policy 1991, during its eighth five - year plan. However, health conditions have not improved to a satisfactory level. The high maternal mortality rate, high child mortality rate and very low life expectancy are some of the indicators of very poor health conditions. A review of statistics provided in the Morbidity Survey of 1996 in Nepal indicates maternal health condition, childhood deformity, malnutrition and contagious diseases as the most fundamental factors in morbidity and death. A second long-term health plan (1997-2017) has been prepared to combat the situation, but the outcome has yet to be seen.

Education

An education system provides a strong vehicle for the development of a country. National development depends largely on the type of education system the country adopts and its educational policies. Nepal has experimented with several systems.

**Education before the Rana Regime (1846):** Education was imparted from religious institutions. The temples and government ministries served as venues and priests served as teachers.

**Education during the Rana period (1846-1951):** During this period, education of common people was abandoned. It was believed by the rulers that, if the people become educated, they become informed and they may demand greater democracy. However, during the later period, some improvements were made in the education sector. The first ever high school in Nepal, Darbar High English School was established in Kathmandu in 1859 for mostly the children of Rana families and the royal elites. The department of Education was also established. The first college, known as Trichandra College, was established in Kathmandu in 1918.

**Education with the Dawn of Democracy (1951-1971):** Education was made open to all. The Ministry of Education was opened in 1951. Tribhuvan University, the first ever university in the country, was opened in Kathmandu in 1959.

**Education after the Implementation of the National Education System Plan (NESP, 1971):**

Together with the implementation of the plan, several changes were made in the structure and functions of various echelons of the educational system. Important ones were the creation of regional directorates, the introduction of 10 years of schooling, compulsory of vocational education, implementation of semester and internal assessment systems in higher education, and granting of autonomous status to the Tribhuvan University.

A Sanskrit University was established in 1986 in Dang district and Kathmandu University in Kathmandu in 1993.
**Education after the Restoration of Democracy (1990):** The National Education Commission in 1990 to plan a suitable education system in a changed situation. On its recommendation, several changes were introduced. Some of the important ones were the introduction of 10+2 schooling system, three-year Bachelor’s course, the concepts of the multi-university and an open university system, and the formation of a University Grant Commission (UGC).

**Problems:** The problems are described below according to the level of education.

**Primary Education**

The country has committed to provide primary education for all up to 2000. But little has been done so far in this regard. The main challenge for primary education is the problems of efficiency and effectiveness. They are due to the low enrollment (only 65 percent of children are going to school and girls’ enrollment is only 31 percent); high dropouts and repeaters (only 27 percent complete primary education); no textbooks in the mother tongue; lack of trained teachers (only 30 to 40 percent trained); and inadequate physical facilities.

**Secondary and Higher Secondary Education**

In the secondary levels, vocational subjects are overlooked, financial constraints are high, little is left to procure teaching materials, frequent changes occur in the curriculum, and a single producer has a monopoly on production of limited textbooks. Little more than one-third of those who take examinations graduate from high school. Most of the higher secondary schools are ill prepared for running the 10+2 classes.

**Higher Education**

Higher education also faces several problems. The colleges cannot bear the ever-increasing enrollment problem. The dropout rate is 17.25 percent at the intermediate level and 30 to 40 percent at the postgraduate level. Financial constraints are acute and nearly 92 percent of the total budget dependents on government funding.

The educational administration is heavily centralized and local autonomy is exercised little; theoretical knowledge is not linked with practical life situations. The annual system of examination makes the teachers less responsible as the examiners are anonymous. The academic calendar is rarely followed. All of these conditions negatively affect the quality of education. Education in general and higher education in particular also has to face political pressure.

Illiteracy is still considered the main barrier to development and only 48 percent of the population above the age of six is literate. There is no gender balance - fewer girls get enrolled and the literacy rate of women is far less than that of men.
Towards Meeting Peoples’ Aspirations

Analysis of the Past

The king was received as a conqueror during the pre-Rana era (1768-1848). He became a titular head during the Rana regime (1849-1951). Absolute monarchy prevailed during the post-democratic and Panchayati period (1951-1990), and for the past nine years, the king has been a constitutional monarch.

Before contemporary Nepal came into being, it was divided into several principalities ruled by various chieftains and kings independent of anyone’s dominance. People had settled into several clusters and they had more or less their own ways of administering their people. Society was less stratified and these human clusters were isolated either by their political boundaries or their physiography.

The Shaha dynasty began expanding the national territory and unified all principalities, beginning this crusade from the district of Gorkha. The rulers during this period were mainly concerned with the conquer, security and the land revenue for the state and the army.

The Ranas were more concerned about the accumulation of wealth and property, the welfare of their relatives and courtiers, and to an extent some social works. They were also very sensitive to political freedom of the people. During the mid- and late 40’s British India had fallen. The freedom movement around Nepal and elsewhere had sensitized the Nepalese to liberation and freedom. Informed of this situation and taking the political leaders as their own enemies, the Rana rulers attempted to enact restrictive laws and prohibit the common people from being informed (or educated). On the other hand, people wanted emancipation and improvement in their lives. Mass illiteracy, poor health and extreme poverty were the main problems, that the people wanted to get rid of. The leaders wanted immediate seizure of political power to act in favor of the common people.

After the overthrow of the autocratic regime, people expected a big development leap. The power shifted from the Ranas to the king and absolute monarchy prevailed. This was a period when countries in the world, specifically the Asian countries that were declared democratic during the same time period began to accelerate their growth and development, but the people of Nepal did not experience any such change.

The leaders had raised hopes among the people for a better quality of life once democracy was obtained. But Panchayat leaders with the support from the monarchy began accumulating wealth and property, and some of the leaders who had nothing to start with accumulated wealth that was sufficient for their generations.

Because Nepal was already a democratic nation, foreign governments felt democracy was secured under the direct leadership of the king. This attracted many donors. Lending agencies, too, made liberal loans to help Nepal develop fast. But the country was ripped off, by not the donors and the lending agencies but by its own political leaders, whose insincerity, greed and
corruption, and immoral behavior soon made Nepal one of the poorest countries of the world. Nearly three-fourths of the people were declared as living below the poverty line. A feudal to semi-feudal social structure was perpetuated and the ownership of land, the main basis for survival of the majority of the people, became very skewed in distribution. The average size of land holding per family of six persons was reduced to almost 0.91 hectare. The situation in the social sector also deteriorated. The average life expectancy of the Nepalese people was one of the shortest in the world, and women lived shorter lives than men. The basic needs of food, shelter and clothing - were beyond the reach of the common man. The government gradually lost its legitimacy. The people began doubting in the dependability of economic institutions. Foreign governments, too, realized their mistakes by trusting too much to such a corrupt government and gradually started exerting pressure through the multinationals such as the World Bank, the International Monitory Fund and the Asian Development Bank.

People were informed and sensitized by the political leaders and their cadre, who were underground and did not support the Panchayat system throughout. A revolution was declared, people got organized and within few weeks the Panchayat system was toppled, and the king declared the reintroduction of the multi-party parliamentary democratic system and a ban of the Panchayat system.

Critique on the present:

The restoration of a parliamentary system of democracy in 1990 opened opportunities on several fronts for positive actions to raise the quality of life of the people. However, the continuation of power and influence of the established interest groups, coupled with political uncertainty, resulted in no noteworthy progress. As a result, Nepal remains one of the poorest countries of the world.

The past nine years (1990-1999) are reminiscent of almost the same number of years in the 1950s (1951-1959). During the ‘50s, there were very few political leaders in each political party and also a very few activist intellectuals to propagate political ideology. Those who were in power were either mostly engaged in supporting their own party or the party members, and the majority of the people were left behind. More recently, during the ‘90s, the Nepali people have tended to partition themselves into various political groups and factions, and the political parties and the leaders have clamored for power, oftentimes at any cost, even indulging in blatant violation of law and criminal activities. The significant difference is that the center of power shifted from the royal palace to political parties and their influential leaders.

Nepal’s Development Needs: In the past, Nepal’s needs were identified either by the rulers or the donors or, more recently, by the multinationals. The majority of the people have no say in shaping the destiny of the country. They have been treated merely as objects. In the name of development, the Rana rulers abolished slavery from Nepal and established one high school and a college in Nepal. As they were mercilessly exploiting the people, they thought some kind of progressive activity might help them raise their profile among people elsewhere and also might be helpful in reducing some of the dissatisfactions inside the country. These changes were not due to a real desire to help people get relief from all their miseries. Similarly, when Nepal was declared a democratic country, donors’ interest in Nepal grew. Since each developed nation had
its own path/stories of success, development practice in Nepal looked like the story of the blind man and the elephant. Some donors thought Nepal needed assistance in health; others in education. Some assisted in roads and others in agriculture. In recent years, water resources have been perceived by the multinationals as one of the important areas that could be utilized to raise Nepal’s standard of living to a great extent. Several organizations and countries have expressed their intent to get involved in harnessing these resources. Who gets most of the benefit after these resources are exploited remains to be seen.

Nepal is one of the developing countries that suffer from poor development performance and an uncertain social future. In numeric terms, such as miles of roads and number of schools, Nepal might have succeeded in achieving some physical targets, but development is about human beings, their habits and habitats. Those numbers have their values only when the members of the society graduate to become humane and resourceful to their families and, ultimately, the nation. When they do not, as definitely is the case of Nepal, the numbers can be deceptive. The social structure is still feudal. Property and wealth remain in a very few hands. Land, which the majority of the Nepali people need for their livelihood, has a very skewed distribution. A small number of people control most of the land, and the majority of the farmers have very little. Unemployment and poverty are rampant, and they have become key features of Nepal’s economy. Very few have access to safe drinking water, and the same is true of health and education facilities. These are not accessible to the majority of the poor. Most farming is dependent on rain-fed agriculture. The yield rates of important crops have declined during the past three decades. Landslides, soil erosion and land degradation are other problems that need to be addressed immediately.

Nepal has been fortunate to get foreign assistance very disproportionate to its size, but its effectiveness has become questionable.

Hundreds of thousands of young people have emigrated to other countries (muscle drain) to look for jobs or to get better education. Skilled intellectuals, too, have been migrating in increasing numbers, hunting for better job opportunities abroad and creating an acute brain drain in the country.

People need appropriate and relevant education. There is a need for a charismatic leader who could help hundreds of thousands of followers restore self-esteem, dignity and high morale. At present there is not even a single leader, political or religious, who has credibility. The majority of the people have almost lost faith in the bureaucrats and politicians, and corruption and greed have become major blocks to Nepal’s development.

The prolonged economic and social stagnation is having its effect on the future of the society as a nation-state. The inability of Nepal to solve old problems and cope with new ones has resulted in ethnic tension, communal competition and other forms of social stress. The country is gradually losing the collective will to struggle earnestly. The unabashed subservience of the ruling classes to their selfish interests, on the one hand, and external benefactors, on the other, may be only one indication. Can a democracy rooted in a fragile economy and a feudal social structure become sustainable? One needs to find out the development needs of Nepal in this context.
People’s Aspirations: The people of Nepal have sacrificed a great deal to restore the multiparty parliamentary democracy in the country. They aspired to a changed situation in which they would be able to improve their life situations. They trusted in the leadership, integrity, and competence of their political leaders. They believed that the leaders would be able to provide good guidance to the bureaucracy, and an uncorrupt, democratic path would be followed. Because they had preached ideals and political doctrines to their political cadres (and ultimately the people) during the underground period (Panchayat period, 1961-1990), the leaders were expected to become the role models to the society. The intellectuals who shouldered important responsibilities during the people’s movement of 1990 and helped political parties in various ways during the underground period also aspired to a Nepali society where very quickly a democratic norm would be established. The intellectuals hoped that all existing exploitative mechanisms and institutions of a primarily feudal society would be uprooted, and people from different segments of the population would be empowered. It was also hoped that Nepal would develop as a nation-state, and none would feel alienated. Nepal would very quickly take up a more suitable path of development that would help the Nepalese improve their quality of life. Nepal was also expected to preserve its good traditions and quickly move toward economic transformation.

Assessment: Hopes and Despairs

Less than a quarter of a year is left before Nepal enters the new millennium, but nearly half of Nepal’s population still lives in absolute poverty and illiteracy. Basic amenities of life are still luxuries to most of the people of Nepal.

Nepal’s GDP growth rate has steadily declined through the ‘90s. Agriculture, the mainstay of the population, is growing at almost the same rate as the population during this period. The performance of the non-agricultural sector has decelerated. The fiscal deficit is largely financed by foreign aid. Over the past several years, the current account deficit has been fully financed by foreign aid and miscellaneous capital inflows.

Under the umbrella of planned development, Nepal has over the past four decades unsuccessfully tested a number of development models financed fully by foreign aid. The current package of economic reform programs dates back to 1986 and came into a broader and deeper form in 1992. At that time, it was introduced by the first elected government after the restoration of democracy under the broad banner of “liberalization and privatization”. When the 1994 parliamentary election resulted in a hung parliament, political instability set in and further reforms slowed down. The third parliamentary election of 1999 has mandated a single party to run a majority government, and its assessment would be premature at this moment.

Poverty, unemployment, business slowdown, political tension and unrest are on the rise. Criminal elements appear to have gained influence. Corruption has gained ground. There has been a sharp decline in social values, and norms such as respect for honesty, competence, hard work, entrepreneurship and intellectual integrity are being undermined.

Political change was thought to be the panacea for all kinds of human miseries in Nepal and the multiparty parliamentary democratic system an enabling factor to empower the Nepalese people. But to their great despair, the majority of the people have remained untouched -- they are still not
partners in development. They do not know what is going to happen in their neighborhoods the next day. They know only when it happens, and that others make their decisions.

More and more people are becoming indifferent, and they see development as something alien to their culture. So, development has meant something that relates to being different. Can Nepal then be said to be developed when it is different from what it used to be? Or is it absolutely necessary for someone to behave very differently to be labeled “developed”? If so, then Nepal can be seen as already developed. I am saying this because the Nepalese used to be in harmonious relationship with one another in the past, at least in public. In the democratic era, previously ignored ethnic tensions have emerged as a major issue. This is a highly significant problem when the government has recently recognized 61 ethnic groups, and there are many others that were not included in the government list. The present mode of development has created this situation. There were few people to feed, and Nepal exported food grains until the mid-’80s. Now it imports food grains, and yields have declined. Land has become degraded, and the use of chemical fertilizers, insecticides and pesticides has increased. Similarly, organizations have grown and become more complex. These are only some examples. So if being simply different is development, then Nepal is already developed. But obviously this is not development in any meaningful sense. Similarly, if getting a different political system that is labeled as one of the best systems would have been a sufficient condition for democracy, empowerment and development, Nepal should certainly by now have experienced the fruits of democracy. We see corruption and greed as two of the most important factors that have hindered the Nepali society from moving ahead.

There was an utter misuse of authority. Those who misused most earned most, and they were the ones who succeeded in becoming more powerful.

The costs of running election campaigns have reached a level beyond the reach of an ordinary Nepali. It is always a desire of an ordinary politician to compete and get elected again. This provides opportunities for various ways to illegally collect money, and the one with more money also becomes a darling to the party and has a higher chance to get a ticket for candidacy. In Nepal, this is known as the “Pajero” culture, which is synonym for a corrupt parliamentarian. But who taught the Nepali politicians all these dirty political games? Certainly their colleagues in Bihar and Uttar Pradesh in India were the role models and some diplomats in Kathmandu who, in the name of supporting democracy in Nepal, got involved in financing these corrupt politicians and parties.

In bureaucracy, too, things are not much different. The root cause of greed and corruption is not generic to Nepali culture and society. It is an acquired syndrome nurtured very well mostly by the multi-nationals. The highest and ugliest corruption appears in any foreign-assisted mega-project. In such a situation, international bidders (companies) secretly compete among themselves through their agents and motivate the local recipient organization to accept huge amounts of money illegally and make decisions in their favor. In most cases, the donors know this, and yet they support their own companies. To curb this, we need assistance from the countries of the north, too, though some international influence in Nepali politics will remain there. That is unavoidable and is equally true elsewhere.
What could we infer, then? Is there still a hope to improve and strengthen democracy and liberate the Nepalese from the vicious circle of exploitation, poverty and loss of dignity? We strongly believe that Nepal could still be appropriately developed. Nepal is rich in natural resources. These could simultaneously be harnessed and conserved. Its cultural heritage as a symbol of ancient civilization, its scenic beauty and the majestic Himalayas would still attract visitors. Its geopolitical situation will continue to be an interest of many. Nepal’s varied terrain, rivers, plain and high hills, all offer a situation where it should be successful in utilizing comparative advantages. It is interesting to note that Nepal already has a critical mass of well-trained human resources currently partitioned into various political ideologies but with a great potential to work together. Its people are hard working and well disciplined. The endemic anomalies can also be arrested, provided that there are a sincere political will and leadership with good faith in the democratic ideals coupled with a civil society that directs the government to become more transparent and accountable to its people. Having achieved this, Nepal would certainly march towards the path of friendly development through empowering its people and strengthening its democracy.

**Epilogue**

No one disagrees that the pace of development has been slow in Nepal. The elite, the intellectuals and the political activists all believed that political change --, restoration of democracy - was a sufficient condition for the empowerment of people and development. Free and fair elections would pave the path for better democracy.

Nepal had its third general election in May 1999 and on an average, 66 percent of the voters cast their votes. Although this participation rate is promising, the voters had no say in the nomination of their candidates. It was the party president/the general secretary or his designate who had the greater role to play in approving a party candidate for each constituency. The people’s power and authority were indirectly stolen away by the parties and the party leaders.

The elected governments in the past passed a Human Rights Bill and the Local Autonomy Act (decentralization). These can be taken as positive steps toward making a transparent and accountable government. However, until now, these bills have been more talked about than practiced.

Nepal certainly has an open political system where we can agree to disagree. But the democratic culture and values must be allowed to flourish. People in Nepal are very cautiously optimistic about the success of democracy, which would ultimately lead toward empowerment of the people. Nepal’s democracy must provide the Nepalese opportunities for mass participation in each step and in the process of development. Democracy that ignores the people’s empowerment can lead to anarchy, and over-centralization might lead to self-destruction. A democracy that is founded in a very weak economy and fully dependent on foreign assistance is always in danger, and empowerment of people under such conditions always becomes a goal to desire. Though democracy is a necessary condition for empowerment and development, it is not a sufficient condition. So Nepal must find ways to strengthen its nascent democracy.
References


