

# **Approach to Promoting Decentralized Land Management in Nepal**

**Rabin K. SHARMA and Babu Ram ACHARYA, Nepal**

**Key words:** Decentralization, Land management, Land use, Poverty reduction, Local authority.

## **SUMMARY**

Nepal being the mountainous country has difficult terrain. Land is the main source of livelihood. The limited arable land with sparse and diverse utilization is not meeting even the subsistence agriculture practice of the majority of the people. The population growth resulting unlimited human activities, unplanned land uses, misuse of land-based resources and uneconomic labour investment has increasing poverty and causing serious problems in nation building. Unless the proper balance between land and people is maintained poverty reduction is not possible. Proper Land Management based on local spatial knowledge will enhance the economic growth of the poor and minimize the unequilibrium of overall prosperity of municipalities and villages in the districts. Indeed, the government has realized devolution approach for decentralized planning and has enacted and enforced Local Governance Act 1999; which reflects management of lands to some extent. In reality, it is not functioning well due to lack of commitment and various constraints.

Decentralized Land Management model, though ambitious, will hopefully promote economic and social welfare in the locality and uplift the quality of life of the Nepalese people. The significant of spatial planning in the framework of decentralized approach is envisioned so that the people will feel sustainable economic growth and balanced eco-system. The real life outcomes will certainly support the national goal of poverty reduction set forth by the current tenth five years plan (2003-2008 AD).

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## 1. GENERAL

Kingdom of Nepal is located along the longitude of 80 to 88 degrees East and the latitude of 26 to 31 degrees North. The altitude varies from 60m to 8848m. It covers an area of 147,181 square kilometres with 23million inhabitants. With the land resource perspective, it is classified into five physiographic regions namely: Terai (plain land), Siwaliks, Middle mountains, High mountainous and High Himalayas. Administratively, it is hierarchically divided into 5 development regions, 75 districts, 58 municipalities/ 3915 village development committees and wards at present.

Nepal is agrarian economies based country where land is considered as the primary resource for its economic development. The importance of land resource is further warranted in Nepal since overwhelming majority of population that is, more than 80 percent, live in rural areas and more than 60 percent economically active population has agriculture as their primary occupation. The crop production and availability situation in the country should be taken into account to regulate population growth especially when the country is facing with rapid growth of population. Together with grassland only 27.6 percent of the territory is arable in which inequalities abound by ecological zones, development regions and by districts. The cultivated land per capita for 2001 is 0.175 hectare or 3.4 *ropani* for the country as a whole. The overall average man-land ratio for 2001 is 5.7 persons per hectare. These ratios are high in the Terai and low in the mountains in general.

Since there is a little scope for expansion of cultivated land in the country there is no option in future except producing more basic crops and other commodities from less per capita arable land. This means the need for more cereal calorie has to meet through higher yields per unit of land and better post harvest management.

As a whole, the lessons from situation analysis of the population, land and adequacy of food production in Nepal implies that there is a need of population regulation together with ecological, social and economic sustainability. The use of natural resources must be based on principles of ecological sustainability and equity to save the children of today and tomorrow. Population growth should be regulated as per available resources and care must be taken to the level of technology so that social practices do not unnecessarily harm the environment. Moreover, sound economic policies capable of addressing inter-regional inequalities are also integral part to attain sustainable development of the nation. Therefore, this paper tries to encourage local authority for promoting decentralized land management.

## 2. LAND MANAGEMENT

Land Management is the process to make best use of the resources of land to achieve sustainable products of food and other agricultural products in the future. It covers all

activities concerned with the management of land as a resource both from an environmental and from an economic perspective. It includes farming, mineral extraction, property and estate management and physical planning of towns and countryside. It embraces such matters as:

- Property conveyance including decisions on mortgages and investment
- Property assessment and valuation
- Development and management of utilities and services
- Management of land resources such as forestry, soils, or agriculture
- Formation and implementation of land use policies
- Environmental impact assessment
- Monitoring of all activities on land that effect the best use of that land.

*(UN Economic Commission for Europe, Land Administration Guidelines, final draft-June 14, 1995)*

This definition also implies in the Nepalese context but the problems concerning planning of improved and/or sustainable land management is very crucial all over the world. The remedies of poor planning and management are often difficult to develop and still more difficult to implement in Nepal, where the various geographical diversities represent different land use and population groups. It is imperative to formulate appropriate land management plan and implement it for reconciling economic and social aims within the framework of national growth. The objective of land management should be directed towards minimizing land resources but maximizing long term benefits. It is therefore necessary to think on the spatial reality of land management for the contribution of overall national growth and supporting the working definition of sustainable development set-forth by Bruntland Commission.

Land management and control is the concept of national development, which serves common structural users. The geographic unit serves for the maintenance and management of public or private land as well as for infrastructural services (such as utilities and other public interests). It includes zoning and regulation for the protection of environment. Geo-information Science could be the best means to achieve the objectives of planning land management policy and provide adequate information to the public, planners and researchers.

### **3. HISTORY OF LAND MANAGEMENT IN NEPAL**

Since the existence of the society, land management was naturally controlled because of the limited population and their needs. As the population increased, the needs and aspirations of the people were increased but the complexities of the development process in the context of land management could not be tackled. That is why sustainable land management is the burning issue in those days in Nepal.

#### **3.1 Land Use**

If we look through the history of land management policy in 1834 A.D. during the rule of King Prithvi Narayan Shah, it may be conclude that the ruler had really done the appreciable

development in land management. The policies related to land management could be summarized as follows:

- Shift the village that is situated in the irrigable lands, to the high lands
- Shift the houses that are build on the plain plots of lands, to other place and construct canals to irrigate the plain lands
- Shift the village that is near to the mines. Explore and use the mines.

The realization of importance of land management could not be addressed strongly during last four decades and the efforts in this sector are minimal. As a result, the balanced land management is becoming complex. Mahesh Chandra Regmi stated in his book *Land Tenure and Taxation in Nepal* about the need for a proper land classification system in 1963 as: *We have noted that the present use of land resources which is the basis of the foregoing classification seldom indicates the suitability of the land for the particular use for which it is presently being utilized. Accordingly, a strong case can be made out for a proper classification of land use on the basis of physical factors such as topography, soil, texture, rainfall, location and altitude. Such a classification would not only assist in the formulation of sound land reform and development measures, but also contribute to an efficient and equitable system of land taxation.* During Land Reform Campaign in 1964, some provision of land use and cropping system was incorporated but could not functioned.

Nepal is at the crossroad in its development history. The government has wisely recognized that the effective land use planning is the integral part to response the current unplanned land utilization and uses. Accordingly it has established / launched a national land use program in 2001 AD. The act has been enacted but not enforced effectively. The major highlights of the amended legislation are: revised land ceiling and provisions for land use planning and land consolidation. The objectives of these measures are to acquire land for the landless as well as to improve the productivity of land. These measures are directed towards *poverty reduction, environmental protection, social justice and good governance*. The project is dedicated only for mapping until now. The settlement, resettlement and housing development companies have done some efforts to develop planned settlements by acquiring private and government lands, which is to some extent worthwhile to mention.

### **3.2 Land Measurement and Recording**

Land survey and recording appears in Nepal from early times, that is about 3<sup>rd</sup> century. During 13<sup>th</sup> century, the changes were made in land measurement, they are: its units, classification of arable lands as well as urban lands and separate profession for land measurement. The system usually employed in measuring the area of land, estimating the size of the agricultural holdings, or the quantity of seeds needed for sowing. These are termed as the *Dekhajanch* and the *Sarpat*. The *Dekhajanch* system usually been employed in estimating the size of the holding as *Hale, Pate, Kodale* or for ascertaining the amount of seeds needed for sowing that *Bijan system*. Under *sarpat* system the area of land is measured by means of a chain in accordance with a prevailing units of measurement, which may be the *bigha*, the *muri*, or the *ropani*. The first attempt at chain measurement of *khet* land under the *sarpat* system was employed in Kabhre and Sindhupalchowk districts in 1896, Palpa in 1896, Majhkirat in 1899 and Achham in 1928. Sarpat survey was conducted in Kathmandu valley

(Kathmandu, Lalitpur, Bhaktapur and Kirtipur) in 1923. In 1939, regulations were framed for conducting cadastral survey in Kathmandu and the survey was actually completed in 1950 and continued in Ilam, Gorkha, Kuncha, Pokhara, Palpa, Achham, Baitadi, Bhaktapur, Sankhu, Bara, Parsa, Rautahat and Saarlahi.

After that, a more complete and scientific land survey system has been realized. Accordingly, by the first five year plan, the government attempted to complete a plane table survey of the entire country and to complete the compilation of cadastral records. The units were used in bighas and ropanies in Terai (plain lands) and Pahad (hills) respectively. The program has not been implemented satisfactorily because of various difficulties such as Birta problems, Jamindars and Patwaries did not provide records, old orders and regulations were not suitable, numerous complaints regarding ownership and land grade were noted and new requirements were demanded. As a result of all these factors, the survey operation has not been preceded systematically. There has been carelessness and lethargy in work.

Although the land recoding system in Nepal is very old, the development of cadastral system is gradual. After few years, Land Survey and Measurement Act 1962 was formulated, and Land Reform Campaign was introduced in 1964. Then the rudimentary cadastre was replaced with systematic and compulsory cadastral survey and improved the land registration system. It was adopted specifically for launching land reform campaign to setup land ceiling, and to raise land revenue. The cadastral system is a graphical one with *general boundary principle*. The land registration system is improved *deeds registration system*. Due to non-existence of other accurate land records, the fiscal purposed cadastral records could play the role as legal and multi-purpose land information. Initially, the cadastral survey was carried out with local controls system for 38 districts of Nepal. A more accurate Cadastral Database is demanded from various users and the Survey Department is directed towards it.

#### **4. KEY ISSUES IN LAND MANAGEMENT**

Having annual income of US\$ 279 (per capita), Nepal is one of the lowest-income countries in the world. At the end of ninth five year plan (1998-2003AD) almost half of the population is estimated to live below poverty line and the number is apparently increasing. Population growth, sparse and unplanned settlement, migration, rapid urbanization, environmental degradation, subsistence agricultural practices with innocent uses of chemical fertilizer, cultivation heavily depending on the climatic condition, costly but poor health, education and transport services, poor market centers, weak link between food deficit and food surplus in Hills and Terai (plain land), imbalanced administrative and organizational structures in terms of governance, unprioritized sparse resources allocation, lack of professional leadership in the local development, trend of seeking off-farm jobs specifically in the youngster's generation specially seeking jobs outside the country, remittance based economy, investments on unproductive assets (like residences), excessive concentration of investment on economic activities in the capital, inaccurate input output relationship, uneconomic capital formation and savings have direct implication to the poverty perspective of the nation. The poor land management is not able to give sufficient priority to land related matters, as a result, arbitrary land use and transactions is increased, hindering the economic development and poverty reduction.

All these issues or the prime challenges are inter-related with land. Unless the proper balance between land, population and physical planning is maintained, poverty reduction in the country is not possible. To overcome to these challenges spatial planning is an indispensable tool, which provides comprehensive framework for local decisions in particular sectors based on indigenous knowledge, and thus assists in establishing land management for sustainable development and will minimize unequilibrium of overall prosperity of the municipalities and villages in the districts.

There is a lack of universally accepted definition of sustainable development. However, the Rio conference in 1992, the working definition set forth by Bruntland Commission that the sustainable development "..... *meeting the needs and aspirations of present generation without compromising the ability of future generations to meet their needs*" is widely referred. This Commission also outlines the role of information in maintaining the spirit of sustainable development. In August 2002, the World Summit on Sustainable Development (WSSD) Johannesburg had unconditionally recognized the significant of Geomatics (spatially related information) for the sustainability of the world. In the final WSSD implementation plan there are many references, which will need Geomatics input including the need for:

- Land reform
- Land management
- Monitoring of the environment
- Planning for sustainable new developments.

Furthermore, the International Steering Committee for Global Mapping (ISCGM) managed to include the following text into the World implementation document:

*'Promote the development and wider use of earth observations technologies, including satellite remote sensing, global mapping and geographic information systems, to collect quality on environmental impacts, land use and land-use changes'. There is also a statement about the need to take local circumstances into account when applying general legal, administrative or technical 'solutions' to development.*

#### **4.1 Land Issue**

Land management in Nepal is very poor. In fact it can be considered as the basic need of the country. The uneven population distribution and increasing number of people living in urban areas results heavy pressure on land and its resources. The variation of economic potentials in the districts is creating imbalance and inequalities. It is difficult to maintain self-sufficiency in food production and other agriculture products such as commercial crops, raw materials and export commodities. The main responsible authorities at the central level including Ministry of Land Reform and Management, Forest, Agriculture, Housing and Physical Planning, Population & Environment, Local Development and Local Actors, the government bodies, public and private agencies are supposed to work together. This is very prominent issue including the following:

- Lack of umbrella policy for land management
- Less priority for implementation of effective land management

- There are no pressure groups/forums
- No effective policy for settlements, housing and migration
- Land use zoning is not enforced by law
- No efficient utilities and services systems
- No control for haphazard settlements by private land developers
- Lack of awareness to encourage farmers for effective land management
- No search for new ideas for land management planning
- No donors are interested in this sector

## 4.2 Urban Population

The population growth can be found in the area surrounding the capital city Kathmandu, other municipalities and Terai (plain lands) where fertile agriculture land has been transferred into settlements and industrial areas. The inadequate road system makes traffic jams in Kathmandu metropolis. These uncontrolled settlement patterns along the highways as well are the barriers to improve quality of life such as health, education facilities, parks services centers and other utilities.

## 5. LOCAL SELF-GOVERNANCE

The government has formulated local government legislation (Local Self-Governance Act 1999) to empower local bodies. Number of functions related to land management are decentralized to local authorities and are mentioned as follows:

- Village Development Committee (VDC)
  - Relating to agriculture sector
    - To design and implement agriculture development programs within the VDC area
    - To arrange market centers
    - To arrange grazing lands for pasture areas as required for cattle
  - Relating to forest and environment
    - To afforest in the barren land, hills, steppe and steep land and in public land
    - To prepare and implement programs concerning vegetation, biological diversity and soil conservation and environmental protection
    - To formulate and implement utilization plan
    - To prepare land resource maps for the development of the VDC
- Municipality
  - Relating to physical planning
    - To frame land use maps and allocate lands for industrial, residential, agricultural and recreational areas places.
    - To prepare housing plan, water supply and sewerage
  - Relating to water resource environment
    - To manage water resources
    - To control soil erosion
    - To protect forest, vegetation and control other natural resources
  - Relating to others
    - To do plantation on either side of the roads and other necessary places

- To protect barren and governmental unregistered and public lands
  - To arrange market centers
  - To prepare municipal development plan for development of the city through various programs such as land use, land pooling and guided land development for making the municipality balanced and controlled development
  - To prepare a resource map
- District Development Committee (DDC)
    - Relating to agriculture sector
      - To prepare district policy on agriculture sector and formulate and operate programmes accordingly and monitor and evaluate the programmes
    - Relating to land reform and management sector
      - To protect and promote the government unregistered and public lands within the district development area
      - To prepare a resource maps for the whole district
    - Relating to forest and environment
      - To prepare plans and implement for forests, vegetation, biological diversity and soil conservation
      - To protect and promote the environment
      - To formulate plan for prevention of soil erosion, river cuttings and irrigation
      - To prepare plans for tourism industry
    - Relating to others
      - Local Body can acquire land for any developmental and construction works purpose providing compensation to the concerned land owners

The *Nepal Development Forum, Economic Update 2002*, *The World Bank* has illustrated some of the points about decentralization and is quoted as: *Decentralization: Nepal has one of the more advanced legislative frameworks for decentralization in South Asia in place, but implementation of decentralization has been slow.* The Local Self-Governance Act (LSGA) 1999 set ambitious targets for implementation of decentralization that were later followed up with more specific PERC recommendations to implement decentralization. The LSGA provides an expanded set of responsibilities for local governments, which consist of 75 District Development Committees (DDCs), 58 Municipalities and 3,913 Village Development Committees (VDCs). While Decentralization Implementation Monitoring Committee, (DIMC), has approved the fiscal decentralization framework, it still has to be materialized. The overlap between the decentralized sectoral units and line agencies of the central government also needs to be resolved. As a result, progress in implementing decentralization has been slowed down.

Seemingly breaking this impasse, the *budget speech of FY2002 promised a clear road map for implementing the decentralization program.* *Inter-alia*, it announced that:

- A “decentralization Implementation plan” would be prepared;
- Local bodies would be allowed to directly manage some basic services, including primary education, primary health care, agricultural extension services and animal health services;



- Local bodies would be provided with a larger tax base and transfers and made more responsible and accountable by gradually implementing the recommendations of Local bodies Finance Commission;
- District officers would be responsible for supervising and monitoring the effectiveness and quality of services delivered by themselves and the VDCs and
- A “District Technical Office” would be established in each district under the coordination of a local Development Officer to provide integrated technical services to all local level projects.

## **6. APPROACH TO DECENTRALIZED LAND MANAGEMENT**

Land management is mainly focused on agricultural production and environmental balance, in other words, for food security and comfortable environment for living. The farmers, industrialists, private and public organizations, agricultural and natural resources institutions, settlers, and many other social institutions are the users. The diverse groups of users have different ideas and views for the best use of land and its better management. A balance between individual user and wider community requirements and possibilities should also be taken into consideration.

Land management objective will not be fulfilled unless local issues and constraints are identified and addressed to resolve them. The collective decision of local actors will ultimately determine future prosperous. The farmers and other land users who are the custodians of land resource may not participate the program unless they foresee the tangible benefits such as increase in productivity or economic growth. It is necessary to set up practical mechanism to encourage the stakeholders and accommodating their aspirations.

Decentralized Land Management model, though ambitious, will hopefully promote economic and social welfare in the locality and uplift the quality of life of the Nepalese people. The significance of spatial planning in the framework of decentralized approach is envisioned so that the people will feel sustainable economic growth and balanced eco-system. The real life outcomes will certainly support the national goal of poverty reduction set forth by the current tenth five years plan (2003-2008 AD).

The role of decentralized land management is to bring economic and social changes. The key players are government, donor community, business circle, professional organizations, I/NGOs, and general public. The possibilities could be drawn explicitly based on need analysis, realization and some prior efforts in the land management sector both in rural and urban areas. Necessity, priority and luxury of the needs must also be defined prior to implementation. The society is seeking for basic food and security so the land management is dominated by desired needs. The users and land professionals really need to have a sustainable land management system, which is only possible through decentralized planning approach. National policy will only guide on the general framework for land use, land administration, physical environment etc. but socio-economic and biophysical condition is a must. It requires a good working administrative structure with people in local farm level and integrating different stakeholders. The capacity of the local people should be developed to

collect detail field information and apply their knowledge in land management process. The broader objectives of land management are:

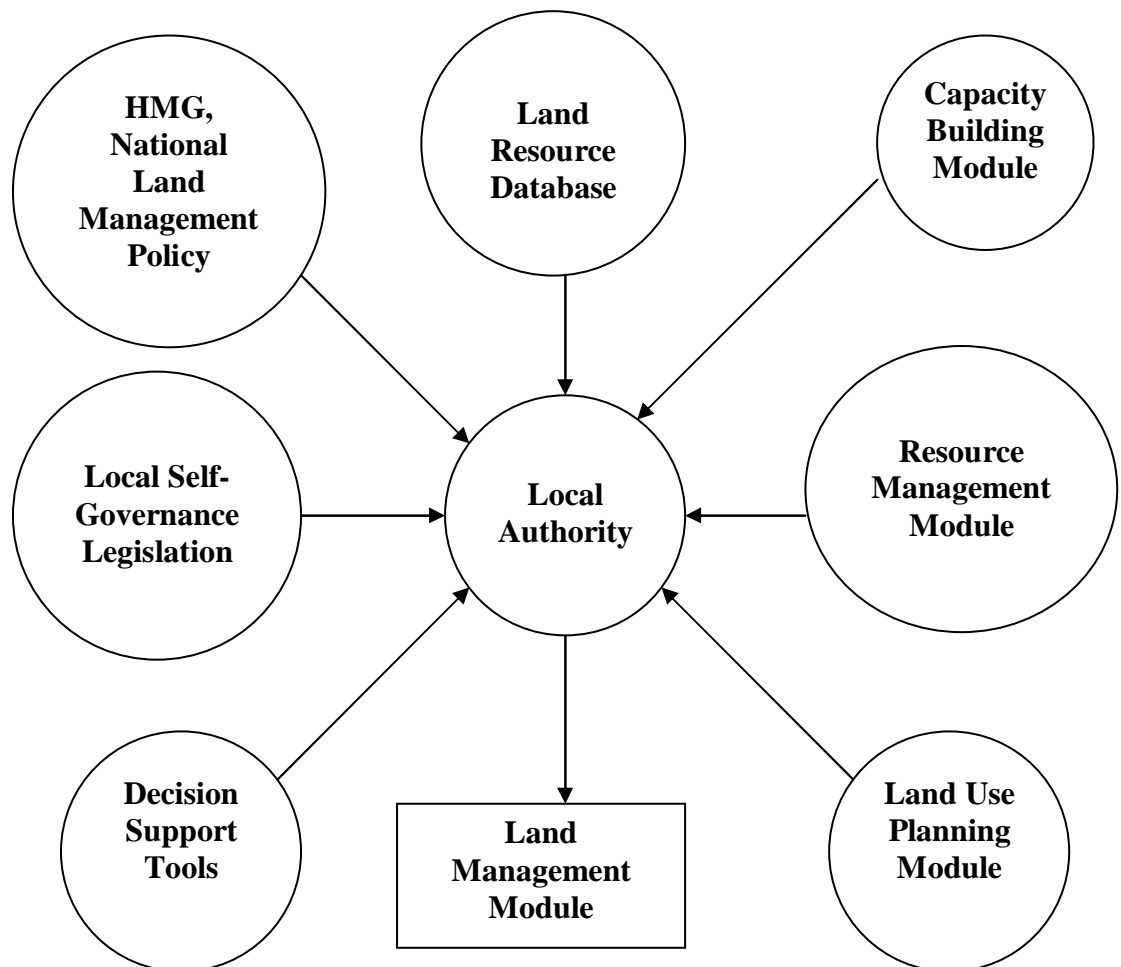
- Formulate suitable land management policy
- Formulate efficient land legislation
- Establish cadastre and geo-information databases (LIS/GIS)
- Design comprehensive land use planning
- Develop land valuation system
- Prepared plan for good housing and physical planning
- Improve agricultural productivity
- Manage utility services
- Improve environmental conditions for human activities
- Implement efficient management of the programs
- Develop land management sustainable system

The system approach should be socially adoptable, economically acceptable, sustainable and feasible. It should not be focused only into resources and priority areas but also towards the following operational aspects:

- Economic factors – production and welfare in rural and urban areas, transportation and communication facilities, strategies for agro and other industries, marketing and agro surplus and cadastre system
- Social factors – provide awareness and train the user community, participatory planning, public services including open spaces and parks and squatters and landless people's problems
- Physical factors – identify the available resources, rationalize the physical element in the area, irrigation and sewerage system, environment, cultural and natural resources conservation and physical infrastructures
- Administrative factors – institutional framework in national, regional, district, municipalities/villages and wards level, administrative framework for planning and implementing programs
- Planning and monitoring – study prior efforts and relevant documents, prepare maps for planning, prepare data and decide criteria, develop model and test it, reengineer if needed and implement, monitor and evaluate, make impact analysis, find fund and think to generate fund within the system itself, identify donor community and consider investment and output.

From the model it is clearly visualized that local authority has given the opportunity to take a lead role to design a decentralized land management module; which should be based on the HMG National land management policy and Local Self-Governance Act. So, based on land resources data base a decision support tools, capacity building module, land use planning module and resource management module need to be build for designing the self sustained land management module.

A basic model to design a decentralized land management module is suggested as follows :



**Figure 1:** Model for Decentralized Land Management Module

## 7. CONCLUSION

*“Whatever the system, it is the quality of people more than ideas that really matters”*. The quotation from Professor Peter Dale applies worldwide. The quality of people refers not just to their technical ability but also to their managerial skills and professionalism. Collecting data has never been more technically advanced and conducted with such detail. However, analyzing it, managing it, storing it, distributing it and sharing it have become more complex.

It is quite evident that local authority seems to be an ideal institution to implement the land management programme. In order to develop a sustainable land management module an effective decision making tools, proper capacity building module, resource management module and land use planning module need to be build. The system approach should be

focused on operational aspects so that it should be socially adoptable, economically acceptable, self-sustained and feasible to implement.

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## BIOGRAPHICAL NOTES

**Rabin K. Sharma**, Chief Survey Officer, His Majesty's Government, Foreign Unit, Survey Department.

**Qualification:** M.Sc. (Photogrammetry), B.E. (Surveying), B.Sc.

**Experience:** From 1975-1998 Worked in Topographical Survey Branch of Survey Department for supervising Surveying and Map Compilation works.

From 1998 – 2002 worked in Planning and Monitoring Section of the Department.

From 2002 – 2003 worked in Cadastral Survey Branch as Deputy Director General a.i.

From 2003 to date working in Foreign Unit of the Department to deal with the foreign organizations related with Geoinformatics field.

**Publication:** About 30 papers published in several national and international proceedings of the Conferences and Magazines.

**Membership :** Founder Member of Sigma-Mu Soceity, Associated Member of Institution of Surveyors (AMIS), Life Membership of Nepal Surveyor Soceity, Member of Nepal Engineer's Association

**Babu Ram Acharya**, Director General, His Majesty's Government, Survey Department, Nepal

**Qualification:** M.Sc. (GIS), B.Law, Diploma (Surveying), M.Sc (Mathematics).

**Experience:** From 1977-1997 Worked in different Branches of Survey Department for supervising Surveyiing and Mapping Projects of the Department.

From 1997 – 1998 worked in UN Volunteer as Census Cartographer in Cambodia.

From 1998 – 1999 Worked in Cadastral Survey Branch as Deputy Director General

From 1999 to date working as Director General of the Department.

**Publication:** About 20 papers published in several national and international proceedings of the Conferences and Magazines.

**Membership:** Founder Member of Institution of Governance (IoG) and Centre for Rural Development and Environment Conservation, Nepal (CRUDEC), Member of Nepal GIS Society and Nepal Remote Sensing and Photogrammetry Society.

## CONTACTS

Rabin K. Sharma

His Majesty's Government, Foreign Unit, Survey Department

P.O.Box 9435

Minbhawan, Kathmandu

NEPAL

Tel. + 977 1 4482 562

Fax + 977 1 4482 957

Email: uforeign@dos.gov.np

Web site: www.dos.gov.np

Babu Ram Acharya

His Majesty's Government, Survey Department, Nepal

P.O.Box 9435

Minbhawan, Kathmandu

NEPAL

Tel. + 977 1 4482 713

Fax + 977 1 4482 957

Email: survey@dept.wlink.com.np

Web site: www.dos.gov.np