

**Ministry of Agriculture Development (MOAD)
Nepal**

**THE PROJECT FOR
THE MASTER PLAN STUDY
ON
HIGH VALUE AGRICULTURE
EXTENSION AND PROMOTION
IN SINDHULI ROAD CORRIDOR
IN NEPAL
(SRCAMP)**

Final Report

Volume II Data Book

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**The Project for the Master Plan Study
on High Value Agriculture Extension and Promotion Project
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(SRCAMP)**

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Section 1
Background Information for Agricultural Development

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Note: Some parts of the writings in this Data Book refer to Ministry of Agriculture and Cooperatives (MoAC) which was reformed into Ministry of Agriculture Development (MoAD) in May 2012. Please note that those writings referring to MoAC were provided before the reform, while those referring to MoAD were written after the reform.

SN1.1: Sub-Sectoral Policies on Agricultural Development

(1) National Seeds Policy 2000

Effective distribution of high quality seeds helps in achieving the target of increased agricultural production. Existing technical activities have not been able to make suitable seeds easily available to the farmers. Seeds Act 2045 (1988) and Seeds Rules 2054 (1998) have already been promulgated in order to avail quality seeds to make necessary arrangements for production, processing and testing of seeds. In order to institutionalize the acceptance of key contribution of seeds and to materialize the economic achievement envisaged by the APP, the GoN formulated National Seeds Policy 2000. It was promulgated on 3 April 2000.

The objectives of the policy are to:

- Ensure availability of quality seeds of different crops in required quantities,
- Produce quality seeds and promote export of quality seeds,
- Make seed business effective in view of demand of the present world market, and
- Protect genetic characteristics of indigenous seeds and coordinate with concerned agencies to guarantee the patent right.

The policy objectives are consistent with the objectives of the APP as well as the requirements of the World Trade Organization (WTO). The policy envisages for:

- Inclusion of private sector in variety development and conservation, registration and release of variety through a 'Seed Board',
- Establishment of variety rights and agro-biodiversity conservation and encouraging joint venture of public and private sector with national and international seed entrepreneurs for the development and production of seeds.
- Seed multiplication covering the whole gamut of nucleus, pre-basic, basic and foundation seed production; variety maintenance which protects breeders' rights and production and promotion of export of high value seeds.
- Quality control with the adoption of quality declared seed system in addition to seed certification and truthful labeling.
- Promotion of the private sector in seed business including announcement of financial support to cover a part of the cost involved in pledging seeds for loan purpose, concessions on local tax and customs duty, provision of training to the private sector entrepreneurs, and provision of facilities to the seed industry at part to the facilities provided to priority industries under the Industrial Development Act, 1981.
- Supply management with the maintenance of buffer stocks to ensure regular supply of seeds.
- Institutional strengthening of National Seed Board and the establishment of seed quality control office.

- Development and enhancement of national capability for biotechnology and genetic engineering

(2) National Tea Policy 2000

In order to generate income and employment opportunities and develop tea as a reliable source of foreign currency by increasing involvement of private sector in the production, processing and business transaction and sustainable and well-management of tea development possibilities available in the country, GoN promulgated National Tea Policy, 2057 (2000) in line with the underlying spirit of the National Tea and Coffee Development Board Act, 2049.

The objectives of the policy approved by the government on 9 November 2000 are to:

- Qualitative and quantitative increase in the tea production by increasing private sector's involvement in tea cultivation
- Encouragement to tea entrepreneurs and farmers
- Increase income and employment opportunities
- Promotion of tea market
- Making tea industry sustainable and attractive
- Expansion of tea cultivation for protecting environment
- Promotion of institutional development of tea industry
- Fulfillment of domestic demand for tea and increase foreign exchange through export
- Emphasis on study, research and development of technology and human resource for tea industry

(3) National Fertilizer Policy 2002

In the context of the involvement of the private sector in the fertilizer trade since November 1997 and in line with the liberal, open and market-oriented economic policy, the GoN approved National Fertilizer Policy on 28 February 2002 to support the agriculture production by ensuring supply of quality fertilizer (production, import and distribution). Effective implementation of the policy is expected to help achieve the APP target on fertilizer use and contribute to the improvement and enhancement of soil fertility through efficient and balanced use of different types of plant nutrients and promotion of an integrated plant nutrient system.

The overall objective of this policy is to contribute to poverty alleviation through increased agricultural productivity by improving soil fertility. The specific objectives of the policy are to:

- Bring policy-wise improvement and manage infrastructure to increase fertilizer use and
- Promote integrated plant nutrient system for efficient and balanced use of fertilizer.

The four strategies of the policy include (i) ensuring availability of fertilizers (ii) making fertilizer distribution system transparent, competitive and effective (iii) establishing and strengthening

laboratories for effective system of fertilizer quality testing and (iv) implementation of an integrated plant nutrient system (IPNS) for lessening negative effects of fertilizer on soil fertility and promoting balanced use of fertilizer

The policy is focused on the fertilizer trade liberalization and enabling market forces to set sale prices of the fertilizers. Nevertheless, the policy endorses the provision of the transport subsidies in selected remote districts of Nepal. Of the four districts in the Sindhuli Road Corridor, only Ramechhap district receives transport subsidies for fertilizers under this scheme.

(4) Irrigation Policy 2003

Irrigation Policy (IP) intends to provide year round irrigation facility to the irrigation suitable land by effective utilization of the current water resources of the country. It also intends to develop institutional capability of water users for sustainable management of existing system and enhance the knowledge, skill and institutional working capability of technical human resources, water users and non-governmental association/organization relating to development of irrigation sector. The policy had identified Department of Irrigation as responsible institutions for conducting conservation functions of the prevailing irrigation infrastructures.

The objectives of the irrigation policy 2003 are to:

- Provide round-the-year irrigation facility to land suitable for irrigation by effective utilization of the available and usable water resources of the country.
- Develop institutional capability of Water Users for sustainable management of the existing systems as well as new systems to be developed in future.
- Enhance knowledge, skills and institutional capability of technical human resources, water resources and non-governmental associations/organizations relating to the development of irrigation sector.

Key features of this policy are:

- Promotion of the conjunctive use of groundwater and surface water irrigation systems along with the initiation of new and non-conventional irrigation systems such as rain water harvesting, pond, sprinkler, drip, paddle pump and other irrigation systems
- Need to formulate projects guided by the principles of Integrated Water Resources Management to ensure water availability for all stakeholders, return of investment, investment sharing and self-insurance against natural calamities.
- Adoption of the participatory management system and increase involvement and investment of the organized users at all stages of project implementation as well as to transfer the responsibility of operation, maintenance and protection of the irrigation systems to the water users association.
- Increase the roles and responsibilities of the local bodies in the course of development and management of irrigation system as per the doctrine of decentralization.

- Strengthening the capability of local bodies and users association to ensure their effective participation in the planning, construction and management of small and medium irrigation systems
- Involvement of the private sector in construction, operation and management of the irrigation system
- Provision for transferring the irrigation system constructed by the GoN to the users on the basis of work plan and the possession and ownership of the land and other infrastructures belonging to transferred system to be provided to the users as per the prevailing law.
- Commitment to introduce the provisions of quantitative measurement in the irrigation facility and monitoring the irrigation effectiveness on the basis of water quantity provided for each crop, irrigated area and increase of production.
- Selection of the project taking into account of social justice, balanced development, environmental balance, crop diversification, professionalism and higher economic output
- Mandatory for the water users' associations (WUAs) to be composed of with at least thirty three percent of the women representation as well as, need to have representation of dalit, downtrodden and backward ethnic communities in such association.
- Management of irrigation, electricity and drinking water projects in proportion to the investment and output utility for the purpose of enhancing national experience in the construction and management of multipurpose projects.
- Provision to fixing a minimum irrigation service charge for each crop based on production increase due to the irrigation.
- Establishment and operation of an Irrigation Development Fund for the self-sustainability of the development and expansion of irrigation service in the country.

(5) National Coffee Policy 2003

In a bid to make coffee a foreign exchange earner and provider of income generation and employment opportunities by increasing the involvement of public and private sectors in production, processing and transaction of coffee, the government has promulgated National Coffee Policy 2003. The specific objectives of the policy are to:

- Substitute import and promote export of coffee
- Generate income and employment opportunities to help poverty alleviation
- Expand coffee cultivation to help protect environment and
- Make coffee cultivation sustainable and attractive business.

(6) Agro-Biodiversity Policy, 2004

Agro-biodiversity Policy (ABP) aims at conserving and sustainable use of agricultural genetic resources / materials and associated traditional knowledge with the participation of concerned

stakeholders for present and future generations. Policy recognizes agro-biodiversity as an integral component of biodiversity and intends to ensure social, economic and environmental benefits to the Nepalese people as per the spirit of international treaties / agreements and national initiatives. Major highlights of agro-biodiversity policy include:

- Conservation, promotion and sustainable use of agro-biodiversity
- Maintaining sustainable ecological balances (ecosystems services)
- Fair and equitable sharing of benefits arising from the access and use of agricultural genetic resources and materials
- Inter-ministerial and inter-sectoral consultation for problem identification and regulation-development
- Inclusion of agro-biodiversity issues on environmental impact assessment of development programs
- Prioritize employment and income generating activities that benefit farming communities by adopting participatory approaches
- Develop human resources and basic physical infrastructure facilities for the conservation, maintenance and utilization of agro-biodiversity at local, regional and national level
- Adopt effective management systems for implementation and monitoring of short and long-term programs based on agro-ecosystem principles

(7) Agribusiness Promotion Policy, 2006

Agribusiness promotion policy was promulgated by the GoN on 27 November 2006. The overall objective of this policy is to enhance the participation of the private sector in the infrastructure development of agricultural market, trade and agro-based industries. This policy aims at diversification, commercialization and promotion of agricultural sector partnering with the private sector. Promulgation of this policy reveals government's conviction that poverty can be reduced through a policy that encourages production of market-oriented and competitive agro-products.

This policy has been formulated in the spirit of NAP 2004 and envisages to establish business promotion centers based on geographical diversities and business potentials to provide quality agricultural inputs and services. It also seeks partnership between the private sector and the government in exporting quality goods and developing market networks to tackle challenges due to Nepal's membership to WTO.

The policy stresses on the need to establish infrastructure development as a cornerstone for the commercialization of agriculture in the country where traditional subsistence farming has predominated.

Key features of this policy are:

- Promotion of partnership between the government, cooperatives and non-governmental organizations to promote agricultural businesses and their capacity enhancement activities;

- Focused on development of market infrastructure system in the lands owned by the private, cooperative, non-government and government organizations in PPP modality;
- Emphasis on the development of collection centers near production sites, development of wholesale and retail markets in urban centers with the participation of private and cooperative sectors for financial and management cooperation.
- Focused on the development, expansion and dissemination of agricultural market information through participation of the private sector, cooperatives and local bodies
- Committed to make the information system transparent, up-to-date, cost effective and useful for the wider sections of the society (domestic and external).
- Emphasis on making all contractual arrangements between farmers, businesspersons, entrepreneurs and concerned stakeholders systematic and scientific
- Provision for the inclusion of the private sector in the regional and district level agricultural development committees for identifying and solving problems effectively.
- Provision for the establishment of agriculture promotion fund to promote partnership approach in agribusiness sector¹
- Constitution of a high level Agribusiness Promotion Committee under the chairmanship of Hon. Minister for Agriculture and Cooperatives for facilitating the implementation of this policy and deciding on the policy matters.

Agribusiness Promotion Policy Implementation Procedure, 2008 explains and shows the process and methods of implementing Agribusiness Promotion Policy, 2006. It allows the District Agriculture Development Committee to declare special production region in the district after the commitment of related line agencies. Concerned technical department are authorized to recommend a custom subsidy for machinery import to the Ministry of Finance. A subsidy to the group or community for market infrastructure development is limited to Rs 5 hundred thousand while a subsidy to agriculture processors for processing equipments is limited to Rs 2 hundred thousand.

The procedure also authorized private sector to determine pricing system of the agricultural product, operate market facilities, establish certification laboratories for the quality of good and operate training institutions according to the government regulations and norms. The role of private sector lies in declaration and development of different development regions, regulation of agribusiness operation, development of legal bases for the public private partnership and planning of necessary human resources for agricultural development.

¹ The government is yet to establish such fund. However, Ministry of Agriculture has formulated High Value Agriculture Produce Processing Industries Grant Distribution Guidelines, 2009 for Cooperatives and Private sector to provide financial subsidy for establishment of processing industries. Subsidy on machinery or equipments is provided upto 25 percent of total cost or Rs 5 hundred thousands which ever is lower following competitive processes to promote processing and value addition of high value crops having commercial potential and comparative advantages such as tea, coffee, non timber forest products, Junar, Ginger and milk produce etc. Government allocated Rs 100 millions in the year 2010/11 for providing subsidy.

The implementation procedure argues all the office under MoAC to implement provisions of Agribusiness Policy 2006.

(8) National Dairy Development Policy (NDDP), 2007

NDDP confirms government's commitment to market economy and commercialization of the agriculture sector. Key objectives of this policy are to: (a) increase the production and productivity of milk in the rural areas, (b) expand milk collection, transport management and processing industries by making the production of milk and milk products commercial and competitive, (c) substitute import through diversification of milk products on the basis of feasibility of the internal markets and develop milk products as exportable items, and (d) make easy availability of milk and milk products to consumers by improving and regulating the quality of such products.

Focused on making the milk production areas competitive, commercial and qualitative within the participatory framework, this policy emphasizes the cooperative and private sector to contribute to employment generation and poverty reduction. Furthermore, if the "Milk Fund" as envisaged by this policy comes to operation, it will provide an opportunity for the public, private and cooperative sectors to work jointly in dairy development. The policy proposes to levy a service charge on milk sold by the industry on a per liter basis. The policy requires dairy industries in the government, cooperative and private sectors to get registered with the National Dairy Development Board (NDDB). The policy was approved by the GoN on 30 September 2007.

(9) Nepal Agriculture Extension Strategy (NAES), 2007

Approved by the GoN on 17th January 2007, the Nepal Agriculture Extension Strategy (NAES) envisages contributing to the overriding national poverty reduction goal by increasing the efficiency and productivity of agriculture and competitiveness in the value chain of agricultural system (from production to marketing) within the sustainable livelihoods framework. The Government is of the opinion that the implementation of the extension strategy will make agriculture extension efficient and effective as envisaged in Agriculture Perspective Plan by making it more participatory, and practical, pro-poor and farmer oriented in consistent with present changed context along with the spirit of the Poverty Reduction Strategy Paper.

The objectives of the NAES are to:

- Enhance capacity of farmers and agricultural extension agencies for participatory livelihoods analyses and undertake strategic actions focused on (i) improvements in capital assets (ii) reduction of risks and (iii) transformation of structures and processes
- Emphasize the following through partnership and synergistic pluralism among different partners and agencies (i) pro-poor service delivery (ii) transformation of the subsistence agriculture toward commercialization and (iii) increase of capacity for commercialized agriculture;
- Enhance commercialization of agriculture by promoting the production of appropriate raw materials for agricultural and livestock based industries and the establishment and operation of

environment friendly agro-based industries.

- Keep the frontline extension workers active, encouraged and disciplined by constantly updating them on (i) technical knowledge and skills, and (ii) social skills

The NAES includes several innovative ideas emphasizing on participatory and decentralized extension together with institutional pluralism, cluster approach, group federation and corporatization, use of local resource persons, use of information technology, and strengthened coordination. The thrusts in the new extension strategy are on income generation, food security, environment conservation and biodiversity utilization, equity and inclusion, value addition and quality products, commercialization, and sustainable livelihoods.

(10) Revised Policy on Fertilizer Subsidy, 2009

Government re-established the subsidy on fertilizer in 2009 with the objective of making fertilizer supply and distribution arrangement more effective.

Main features of the revised policy are:

- Provision of fixing sales price at 20-25 percent higher than that of India for five import points – Biratnagar, Birgunj, Bhairahawa, Nepalgunj and Dhangadi.
- Provision of a high level 'Subsidy Allocation Management Committee' under the chairmanship of Secretary at Ministry of Agriculture Development. The committee is mainly responsible for fixing sales price of the five import points.
- Agriculture Input corporation Limited (AICL) will be the sole agency to import fertilizer to be distributed at subsidized rate. AICL will receive difference amount between actual cost price of importing fertilizers from outside the country, and the sales price at import points.
- Retail price for farmers will be sales price at the import points plus transportation cost up to the delivery point.
- Annually 100 thousands metric tons of fertilizers will be imported under this scheme.
- Subsidized fertilizers will be provided for three crops a year and up to 0.75 hectare in the hills and 4 hectare terai. Subsidized fertilizers will be sold through the offices of AICL, and cooperatives organizations and cooperative shops.
- 'Fertilizer Supply and Distribution Management Committee' headed by the Chief District Officer of the respective district will look after the affairs related to supply and distribution of subsidized fertilizers at the district level.

(11) Floriculture Promotion Policy, 2012

Promulgated by the GoN on 14 December, 2012, the aimed to increase the production of flower and flower related products and contribute towards increasing employment opportunity, improving export and import, conserving floriculture related biodiversity and contribute for poverty reduction.

Following are the objectives of the policy:

- Increase the production and productivity of flowers and flower related products
- Increase the involvement of private sector in floriculture production and management in order to make them competitive in the internal market as well as for export promotion
- Conserve and promote local genetic resources of floriculture in Nepal

The policy envisages for the formation of 12 members Floriculture Business Development Coordination Committee under the coordination of secretary of Ministry of Agriculture Development with representation of private sector, sector ministries and civil society organizations for the effective implementation of the policy.

The policy has identified three financing mechanism for implementation of the policy which includes (a) financial support from national and international agencies and federations after taking necessary approval from the government (b) service charge for providing different advisory and consulting services in relation to floriculture production and marketing and (c) grant and other funds from Government of Nepal or other agencies.

(12) Rangeland Policy, 2012

The Rangeland policy was promulgated by the Government on April 2012 with a view to scientific management, conservation, utilization and sustainable development of rangeland resources. The policy aims at improving livelihoods of rangeland dependent community and thereby contributes to economic development of the country. The goal of the policy is to utilize local community traditional knowledge, technology and skills for sustainable management of range land resources while adopting environmental friendly technologies while integrating scientific management technologies. Objective of the policy includes:

- Improve conditions and increase productivity of rangeland
- Develop, promote and strengthen rangeland based enterprises and business
- Contribute to environment sustainability while conserving and sustainably utilizing rangeland biodiversity

The policy safeguards rights of the local communities on rangeland, adopt environment friendly technology, establish fodder bank, establishment of rangeland development and relief fund, in-situ and ex-situ conservation of genetic resources.

(13) National Seed Vision (SSDS), 2013

Realizing the ground reality of safeguarding the national interest of self sufficiency, import substitution, and export promotion of good quality seeds, National Seed Vision (2013 –2025) has been prepared. This vision is the first official document of its kind, which provides directives to all stakeholders associated with the seed business in Nepal for variety development and maintenance, seed multiplication, seed processing and conditioning, seed marketing, and seed quality control and use.

The vision, mission and goal of the strategy include:

- **Vision:** Quality Seed for improved well-being of farming families
- **Mission:** Produce and manage supply of quality seeds to all farmers through a sustainable and competitive seed system
- **Goal:** Increase crop productivity, raise income and generate employment opportunities through self sufficiency, import substitution and export promotion of quality seeds.

The objective of the strategy includes:

- To enhance farmers' access to sufficient quantity of quality seed and other planting materials.
- To increase seed replacement rate through increased production and supply of quality seeds.
- To promote local seed security through conservation and sustainable use of agro-biodiversity.
- To create an enabling environment for developing, producing and marketing quality seeds of improved varieties of agricultural crops.

Following strategies will be adopted to attain the objectives mentioned above:

- Promote use of quality seeds by expanding farmers' choice including use of local genetic resources.
- Support public, community and private enterprises in seed production, seed multiplication, processing and conditioning through efficient seed quality services.
- Strengthen varietal development, release, and maintenance breeding using diverse gene-pool both from local and exotic sources.
- Enhance marketing skills of seed entrepreneurs and invest in seed related infrastructure.
- Create enabling environment for developing efficient and effective public, community and private seed related organizations with business culture.

Implementation of the Seed Vision will have a significant impact in ensuring seed security, increasing productivity and raising income through seed self sufficiency, import substitution and export promotion. This will lead to food security, employment generation, biodiversity conservation, climate change adaptation, and gender equity as well as social inclusion.

SN1.2: Details of Agricultural Acts, Rules and Legislations

Acts/Rules/ Legislations	Purpose
Aquatic Animal Protection Act, 1960	Formulated to protect of aquatic lives in their natural places from fishing and their natural way of life. This is one of Nepal's oldest legislation giving early recognition of wetlands and aquatic life values. The key feature of this Act is making distinctions between the government and private water and giving prescriptions for the method of fishing. This Act has defined aquatic lives as any animals living in water, which includes fishes, amphibians, reptiles, birds and mammals living in water.
Food Act 1966	Promulgated to make legal provision for maintaining food quality and to prevent undesirable adulteration and/or extraction of/reduction in the inherent quality of food items in view of public health.
Plant Protection Act, 1972	Promulgated to prevent and control expansion of incoming of epidemic, infectious or communicable diseases and exporting or importing of plant and plant products.
Pesticides Act 1991 Pesticides Rules 1994	Promulgated to regulate the import, export, production, sale and purchase and use of pesticides against pests and diseases in seeds, plants, trees, animals, birds, etc. Pesticides rule has made detailed provisions on the requirements for application to the pesticide registrar
National Dairy Development Board Act 1992	Promulgated to establish National Dairy Development Board for maintaining public health facility by increasing milk production in the country on a participatory way through the harmonious milk production programs of public and private sectors.
National Cooperatives Development Board Act 1991	Promulgated to establish National Cooperatives Development Board and make provision for its operation for promoting and supporting development of various types of cooperatives/associations by ameliorating the socio-economic status of low-income people by way of mutual cooperation and cooperative.
Cooperatives Act 1992 Cooperatives Rules 1993	Promulgated to manage the formation and operation of various types of cooperatives for the economic and social upliftment of farmers, masons, resource poor, laborers, landless, unemployed or

Acts/Rules/ Legislations	Purpose
	social workers.
National Tea and Coffee Development Board Act, 1993	Promulgated to establish National Tea and Coffee Development Board and make provisions for its operation for planned development of tea and coffee industry, harmonization in the cultivation and processing of tea and coffee, production of high quality tea and coffee using modern technology, market management and framing a policy to promote export/import of tea and coffee.
Animal Health and Livestock Services Act, 1999	Promulgated to effectively manage production, sale, export and import of livestock, livestock products and livestock production inputs in view of importance of livestock sector in the national economy and nutrition support to human being.
Seeds Act 1988 Seeds Rules 1998	Promulgated to serve the economic interest of general public by systematizing the production, processing and testing of seeds and to avail quality seeds of different crops.
Chemical Fertilizer (Control) Order, 1999	Issued to regulate the production, import and sales of chemical fertilizer in the country. This order was promulgated under Essential Commodities Control Act 1960.
Slaughter House and Meat Inspection Act, 1998	Promulgated to establish slaughter house and make provision for meat inspection for maintaining meat quality by preventing adulteration and quality deterioration of meat and meat products in view of public health.
Kalimati Fruits and Vegetables Market Development Committee (Composition) Order, 2002	Issued to manage, preserve, operate and maintain physical infrastructure for marketing of fruits and vegetables in Kalimati Market, Kathmandu. This Order has been promulgated under Development Committee Act 1956

SN1.3: Cooperative Laws and Regulations

(1) Cooperative Act, 1992

The Act is brought for the purpose of registration and management of cooperatives in the country. This Act has defined terminologies such as institution or association, member, committee, Registrar, general meetings. For the purpose of this Act, "association" or "society" means a cooperative association or society registered pursuant to Section 5 of the Act and registrar means the executive chief of the Department of Cooperatives. According to this Act, cooperatives may be formed with a view to rendering services and facilities for the economic and social development of its members in consonance with the cooperative principle under the following conditions:

- A **preliminary cooperative** may consist of at least twenty five (25) persons of age 18 year and above as its members.
- A **Cooperative Union** may consist of at least five (5) preliminary cooperatives having a single purpose as its members.
- A **District Cooperatives Union** may consist of at least five (5) preliminary cooperatives or cooperative Unions or a combination of thereof as its members.
- A **Central Cooperatives Union** may consist of at least twenty five (25) preliminary cooperatives or at least five (5) cooperative Unions as its members.
- A **National Cooperatives Federation** may consist of at least fifteen (15) Cooperative Unions or District Cooperative Unions or Central Cooperative Unions or a combination of thereof as its members.

However, the Act forbids forming not more than one District Cooperatives society or sectoral society of the same nature and not more than one Central Cooperatives society of the same nature in the same district. The following are the key characteristic features of the Cooperative society as envisioned by the Act.

- An autonomous body to be corporated with perpetual succession.
- Possession of a separate seal of its own for all of its activities.
- Power and authority to deal with any movable and immovable property like an individual including acquire, use and dispose.
- Power and authority to sue by its name and be also sued by the same name like an individual, sue by its name.

The Department of Cooperatives, under the Ministry of Agriculture and Cooperatives (MOAC), works as a regulatory authority and it is also actively involved in promoting and developing Cooperatives.

The Cooperative Act has authorized cooperatives to collect money by issuing shares, selling up to 20

percent of its shares to any international organisation and by issuing debenture and by obtaining loan. There will be one-member-one-vote system in the Cooperatives. The cooperatives can do banking transactions by acquiring permission from the Nepal Rastra Bank.

The area of work of the institution or association will be limited by Rule of such association themselves. An application can be made to the registrar for the registration of various cooperatives with the signature of specified persons, two copies of by-rules, plan of action and the share promised for subscription by the members must be submitted with the application. The qualification of membership and membership acquiring and termination procedures are provided in the Act. The by-rule is the governing document of each cooperative organization. The procedures of general meeting, works or functions and board of directors are provided and governed by the By-rule. The body of the general shareholder, board of directors, sub-committees and account committee are the responsible organs conceived by this act for the management of each cooperative. Cooperatives can only distribute 15 percent of their profit as dividend. The liability of an association or society is limited. Therefore, it is mandatory that the name of each association or society should contain the word "cooperative" and the word "limited" as its last word.

According to this Act, there will be a need for any association or society registered under the Act to formulate its By-law for the operation of its business which shall come into force after having been approved by the Registrar. Every association or society shall be operated and managed in accordance with the By-law of that association or society. The By-law has to set out the name, address, jurisdiction/domain, objectives, modus operandi of the association or society and such other details as may be prescribed.

Cooperatives Rule, 1992. This rule has come in existence by virtue of the authority given by Section 48 of the Cooperatives Act. The registration procedures, registration certificate, grounds of vacancy of post and disqualification of membership, condition of withdrawal of shares, transfer of shares, preliminary general meeting, annual general meeting, special general meeting, appointment of representatives to represent the organization in any organization and appointment of registrar, functions and duties are provided in the rules.

(2) National Cooperative Development Board Act, 1991

This act was brought to assist in the promotion and development of different types of cooperative societies and unions and for the establishment, operation and management of the National Cooperative Development Board.

This act established an autonomous and corporate body called National Cooperative Development Board (NCDB) for formulating policies and plans in the cooperative sector of Nepal. The NCDB is chaired by Minister/State Minister for Agriculture and Cooperative, and Co-chairperson and Member-secretary are nominated by the Government of Nepal.

Members of the board include:

- Chairperson- National Cooperative Federation,

- Governor- Nepal Rastra Bank,
- Secretary- Ministry of Finance,
- Secretary- Ministry of Supplies,
- Secretary- Ministry of Industries,
- Secretary- Ministry of Agriculture & Cooperatives,
- Secretary- Ministry of Local Development,
- Representative- National Planning Commission,
- Registrar- Department of Cooperatives,
- Two persons elected from chairpersons of Central Cooperative Unions,
- Five persons nominated by Government of Nepal from among cooperators or social workers from five development regions,
- One women cooperative leaders
- Two experts in relevant disciplines, and
- General Manager- Agriculture Development Bank

The objective of the board is assisting in the development of different types of cooperative societies and unions by formulating policies and relevant plans for the economic and social development of the lower strata of people in accordance with the cooperative principles. The function, duties and powers of the Board are as follows:

- To assist Government in formulating plans and policies concerning cooperative development;
- To facilitate the implementation of cooperative polices;
- To create and maintain a cooperative development fund with a view to providing cooperatives with loans or grants for development purposes;
- To participate in the share capital of cooperative societies, unions or banks;
- To stand surety for cooperatives;
- To extend technical assistance to cooperatives;
- To bring coordination between cooperatives and other related government as well as nongovernmental agencies/organizations, and thereby, encourage cooperatives to expand their business services;
- To facilitate joint investment of government, cooperative and other national as well as international organizations for the industrial development in the cooperative sector;
- To conduct the required studies and research work for cooperative development; and

- To carry out all other functions as may be deemed necessary for promoting the cooperative movement.

The MOAC² has been implementing cooperative irrigation schemes since last few years. Likewise, the GoN has released following policies and programs which will be implemented through the cooperatives.

- Operation and Investment By-laws for Cooperatives, 2009
- Guidelines for the operation of Cooperative consumer shops, 2009
- Guidelines for the Cooperative Farming, 2009
- Cooperative Farming Implementation Procedure 2009

Formulation of aforementioned strategies suggests government's strong determination to further develop and strengthen cooperative movement in Nepal. Although the government has not yet promulgated cooperative policy, present Three Year Plan (TYP) and Previous Three Year Interim Plan devoted a separate chapter for cooperative sector to recognize its role in the national economy. Earlier periodic plans included cooperatives as a sub-sector of agriculture. The TYP has emphasized for strengthening partnership between government, public, private and cooperative sector to achieve inclusive economic growth in the country.

TYP aims to mobilize people's labor, skill, capital and resources in an organized way for the group benefits along with economic wellbeing, social transformation and equitable development through cooperative movement. Key features of the cooperative development strategies as depicted in the TYP are:

- Develop cooperative as economic pillar of the country by organizing people into cooperatives, especially poor and marginalized and build complementary relationship with government and private sector
- Improve financial access of people, especially poor, marginalized and excluded groups by involving and enhancing their participation in cooperatives and thereby contribute to inclusive and equitable development
- Formulate necessary policy required for cooperative farming, cooperative industries, distribution services, banking services and cooperative banking together with development of necessary infrastructure and facilities
- Establish and strengthen effective monitoring and evaluation system of cooperatives together with development of standard guidelines for establishment and operation of cooperatives
- Promote multipurpose cooperative institutions

TYP has prioritized for formulation of cooperative policy and promulgation of cooperative farming

² With the reform of governmental structure on May 18th 2012, Ministry of Agriculture and Cooperatives (MOAC) was renamed as Ministry of Agricultural Development (MOAD) and Department of Cooperatives (DoC) was separated. Because this text was drafted during 2011 and it was before reform, DoC is still written as a part of MOAC.

act. Likewise, it intends to support for agricultural commercialization by promoting cooperative farming.

The key highlights of the Cooperative Farming Guideline 2009 include:

- Focused on the small farmers to enable them to organize into cooperative farming within the concept of “Cooperatives in Village to Village and Food Stores in House to House for Increasing Agricultural Productivity”;
- Targeted to Dalits and socially deprived and poor such as Janajatis (ethnic castes), women, freed bonded laborers and landless poor to farm in a portion of community forest, freed tenant areas, new plantation areas and barren lands under electricity line based on feasibilities in such a way that it will not permit encroachment of such land;
- Policy defined Cooperative farming carried out through cooperative society registered under the Cooperative Act for the production of agricultural products in the lands which are under the ownership of the GoN, lands under the ownership or control of the local bodies or lands being used publicly; or farmed for the purpose of receiving outputs (benefits) based on the proportion of labor and land by investing capital and labor in group;
- Members of the cooperative societies permitted to pool private land voluntarily either at individual or in group levels and operate cooperative farming, and provision of receiving outputs based on the proportion of the land and labor contributed;
- Focused on supply of agricultural inputs and production, marketing (sale and procurement), and storage of agricultural products through cooperatives;
- Constitution of a high level committee for the purpose of facilitating cooperative farming and inter-ministerial coordination and policy directives under the chairmanship of State/Cabinet level Minister of the MOAC with secretary level representation of other related ministries such as Land Reform and Management, Forest and Soil Conservation, Local Development etc;
- Provision of District Land Management Committee under the coordination of Chief District Officer of the District Administration Office for availing land to the cooperative societies for Cooperative farming;

Provision of financial assistance and support to the cooperative farming based on approved norms/criteria within approved budget established by the targeted groups (poor and socially, deprived, freed bonded laborers etc.).

SN1.4: Details of Related Policies, Acts and Rules

(1) Revised Forest Policy, 2000

Revised Forestry Policy, 2000 is an updated version of the Forestry Master Plan, 1986. It aims to contribute to the growth of local and national economies and thereby to improve the quality of life of the people by managing land and forest resources, developing forest-based industries, and by creating opportunities for income generation and employment.

Major highlights of revised forest policy, 2000 include:

- Introduction of Land use planning to enhance the productivity of the resource base and for striking a balance between conservation and sustainable use of natural resources.
- Initiation of landscape planning approach to managing biological diversity on an ecosystem basis. Land and forestry resources will be managed and utilized according to their ecological status to conserve forests, soil, water and biodiversity along with meeting the basic needs of the people on a sustainable basis.
- Management and utilization of forestry resources of Nepal while giving priority to the production of products which best meet the basic needs of the people. The priority products are fuel wood for cooking, timber for housing, fodder for domestic animals, and medicinal plants for health.
- Emphasis on integrated farming for strengthening soil conservation and watershed management, for research, extension, and agro-forestry
- Involvement of the private sector and non-governmental organizations will be continued in forestry development activities. Likewise policy also intends to promote private sector involvement in Forestry Development through consolidating resource base and developing the industry.
- Provide livelihood opportunities to poor and landless people in forestry related activities

(2) National Transport Policy, 2001

The purpose of National Transport Policy (NTP) 2001 is to develop a reliable, cost effective, safe facility oriented and sustainable transport system that promotes and sustains the economic, social, cultural and tourism development of the Nepal as a whole. The strategies delineated responsibility between central and local levels, decentralized governance system by utilizing local resources and private sector involvement. The policy has accorded high priority to construct roads connecting the northern border, from the hilly districts of Nepal from where the contact can be established easily with the markets- or central on the other side of Tibet, the Autonomous Region of China.

NTP adopted following strategies:

- The Government will clearly indicate the limit and scope of work to be done from the central level and take responsibility of transport structure to be constructed from the central level.

- Making the decentralized governance system more strengthened and by maximum utilization of the resources and means of local level and that the policy envisages to make local level responsible and accountable to the development and promotion of transport system.
- Participation of the private sector involvement in the expansion and preservation of the transport system.

NTP suggested for enacting and implementing a comprehensive Transport Act, Rules covering road transport, tunnel, railways, waterways, ropeways, cable car, airport and multi-modal transport and replaced the existing Public Roads Act 1974.

The policy has classified the road systems into Central Level Transport System and Local Level Transport System. Central road system comprises of National highways and feeder roads³. Maintenance and improvement of central road system is to be carried out by central authority based on traffic level and the economic rate of return.

The local road system⁴ includes those roads which are not the parts of the central road system and where project formulation, construction, maintenance and repair have to be done by local institutions particularly District Development Committees (DDCs), Municipalities and VDCs. This comprises roads within district, village, main trails, mule tracks, agricultural roads and village trails.

- **District road:** Roads connecting one or more main development centers or connecting VDCs directly to the headquarters of the same district or other district or through important road system.
- **Agricultural road:** Roads connecting main agricultural production centers within a district.

NTP has devolved authorities to the local government (DDC, Municipality and VDC) for construction, repair and maintenance of the local roads. Likewise, NTP has given high priority for completing the construction of roads connecting all 75 district headquarters of the country to the main road networks. Policy also suggests constructing two national highways, one connecting east to west in the mid-hills (mid-hill highway) and other earlier postal roads in Terai as a part of the national transport network of the country. Likewise, the policy envisaged attracting and encouraging foreign and private sector investment in transport structures such as airports, roads, waterways and ropeways under the different modalities of public-private partnership arrangements namely Build Operate and Transfer (BOT), Operate and Transfer (OT) and Build, Own, Operate and Transfer (BOOT).

(3) Local Infrastructure Development Policy, 2003

The Local Infrastructure Development policy (LIDP) aims to support and accelerate sustainable development of local infrastructure in the spirit of the Local Self Governance Act (LSGA), 1999 and the principle of devolution of power, through plans for pro-poor development. The policy advocates

³ The feeder roads are major links to national highways and provide access to the district headquarters and places of national importance such as tourism, industry, power generation, and pilgrimage sites.

⁴ Rural roads feed off the strategic network and urban roads. The rural roads are administered by the Department of Local Infrastructure Development and Agricultural Roads (DOLIDAR).

gradual handing over of infrastructure ownership to local bodies, giving DDCs control over VDCs and municipalities, and improving procedures. Local Infrastructure development policy aims to contribute to poverty reduction by improving social and economic conditions of the local people at their own initiation and participation. It intends to increase access of the local people including women, Dalits, disabled, backward, oppressed and neglected to social service, economic opportunities and resources by means of physical and social infrastructure.

LIDP (2004) envisages planning, implementation and maintenance of local infrastructure development projects through DDCs and VDCs. Local infrastructure includes (i) irrigation and river control (ii) micro-hydropower development and utilization (iii) water supply, sewerage and sanitation (iv) solid waste management (v) building social infrastructure. The policy suggests conducting initial environmental evaluation and environment impact assessment during construction of local infrastructure. Likewise, it is committed for minimizing natural disasters due to construction of local infrastructure. This policy includes the concept of third party technical audit and social audit

Major strategies adopted by the policy include (a) devolution of authority for local infrastructure development (b) development of appropriate institutional structure for local infrastructure development and building technical capacity (c) mobilization of local resources and skills for local infrastructure development by enhancing people's participation and (d) strengthening coordination among various support agencies for effective mobilization of support received from them.

(4) Herbs and Non-Timber Forest Products (NTFPs) Development policy, 2004

This policy envisions holistic development of NTFP sector for poverty reduction and biodiversity conservation in Nepal focusing on regeneration, reproduction, ex-situ conservation of NTFPS; local processing through private sector participation; business development services; inclusion of the disadvantaged groups and earning of foreign currency through the competitive development of NTFPs. The policy aims to maximize economic and environmental benefits by promoting the cultivation and domestication of herbs, their sustainable harvests from both wild and cultivation, processing of the products and their marketing.

The long-term goal of the policy is to substantially contribute to Nepalese economy by conserving and preserving high value herbs and NTFPs and establish Nepal as an enormous source of herbs and NTFPs internationally by the year 2020. In this context, it has set of six objectives including:

- Conservation and utilization of herbs and NTFPs based on the principle of sustainable development without adversely affecting their regeneration and reproduction capacity along with sustainable harvesting and management to increase economic and environmental benefits through production, processing and sale
- Commercial farming of selected herbs and NTFPs along with ex-situ conservation to enhance national income and employment opportunities
- Conduct preliminary processing of herbs and NTFPS at the local level to create income and employment opportunities in the remote and very remote rural areas and perform processing

and value addition activities in collection and market center to enhance economic activities in partnership with the local bodies (DDC, VDC and Municipality) and other stakeholders

- Contribute to poverty reduction and improvement in living standard of local community by making herbs and NTFPs production competitive by providing on necessary finance, infrastructure, technical knowledge and skills including market management
- Ensure active participation of poor, marginalized group and women in production, collection, harvesting and sale of herbs and NTFPs and thereby contribute to mainstream gender and social inclusion
- Earn foreign currency through sale of herbs and non-timber forest produces on competitive basis.

Major highlights of the Herbs and NTFP policy, 2004 include:

- Implementation of good harvesting practices for sustainable utilization of herbs and NTFPs
- In-situ and ex-situ conservation of herbs and non-timber forest products
- Strengthen role of NTFP coordination committee on policy formulation along with monitoring and evaluation of NTFPs related program
- Identification of special area for promotion of NTFPs and ensure active involvement of local communities on management, conservation and utilization of NTFPs in those area
- Ensure continuous supply of NTFPs from forests or farm land considering demand of national and international market
- Ensure active people participation on conservation, management and utilization of NTFPs including strengthening market linkages among the producers and processors
- Strengthen private and cooperative concept and philosophizes on sale, export or processing of NTFPs
- Simplification of taxation on NTFPs produced on farm land
- Strengthen forest certification⁵ processes and organic farming
- Develop appropriate technology for domestication of NTFPs, especially for those having high commercial potential with active participation of forests, agriculture and soil conservation related group
- Extension of research and development to wider communities

⁵ Certification is a mechanism that ensures that forest products are coming from the forests managed according to particular environmental and social standards. There are three elements for certification, which includes standard, certification process and accreditation.

(5) National Park and Wildlife Conservation Act, 1973

The National Park and Wildlife Conservation Act was promulgated for making arrangement for the management of national parks, conservation of wildlife and their habitat, regulate hunting and to conserve, promote, develop, and make appropriate arrangements for and the use of places which are of special importance from the point of view of natural beauty and to maintain good manners and welfare of the general public. This Act is attracted to such areas within Nepal which are declared as national park or reserve or conservation area. This Act recognizes six categories of protected areas, namely National Park, Conservation Area, Wildlife Reserve, Strict Nature Reserve and Hunting Reserve.

(6) Land Act, 1984

The Land Act aims to divert inactive capital and burden of population from the land to the other sectors of economy to accelerate the pace of economic development and improve living standards of people by making equitable distribution of the cultivable land and providing encouragement to increase agricultural production.

(7) Soil Conservation & Watershed Management Act ,1982

The Soil Conservation & Watershed Management Act is enacted to preserve public convenience and financial interest of the common people by controlling natural disaster such as flood, land slide and soil erosion. The Act empowers Ministry of Forests and Soil Conservation to declare any area as a protected watershed area. Likewise, it authorizes to classify land use system within protected watershed area and enforce farming accordingly.

(8) Water Resource Act, 1992

The Water Resource Act deals with the development, utilization and conservation of water resources. This Act provides the following priority orders to be followed for the utilization of water resources: (a) Drinking and domestic use (b) irrigation (c) Agricultural uses such as animal husbandry and fisheries (d) hydro-electricity (e) cottage industry, industrial enterprises and mining uses (f) navigation (g) recreational uses, and (h) other uses.

(9) Forest Act, 1993

The Forest Act governs the management and conservation of forests with a view to meet the basic needs of the people and contribute to social and economic development through proper utilization of forest products. The Act sets out the systems for managing the national forest in the form of (a) government managed forest, (b) protected forest, (c) community forest, (d) leasehold forest and (e) religious forest.

(10) Environment Protection Act, 1996

The Environment Protection Act is a principal legal framework for environment protection and pollution control. The purpose of this Act is to make legal provisions to maintain clean and healthy environment by minimizing, as far as possible, adverse impacts likely to be caused from environmental degradation on human beings, wildlife, plants, nature and physical objects; and to protect environment with proper use and management of natural resources. In Nepal, Environment Protection Act 1996 (EPA 1996) and the corresponding Environment Protection Rule 1997 (EPR 1997) regulate environmental issues. The purpose of the EPA is to regulate the protection of the environment and to execute proper utilization of natural resources. This act has defined the terms such as environment, pollution, protection, proposal, proponent, Initial Environmental Examination, Environmental Impact Assessment, garbage, emission, biodiversity and national heritage. According to this Act, the proponent making a proposal shall have to carry out an initial environmental examination (IEE) or Environmental Impact Assessment (EIA) in the prescribed manner. Provisions for submission of a proposal for approval and conditions of approval are provided in the Act. The Act has the provision for the prevention and control of pollution. For this purpose, this Act intends to appoint an environmental inspector with defined power, duties and functions. This Act also has provisions for the protection of national heritage and environmentally sensitive areas as well.

The act has the provision of a separate Environment Protection Council to issue guidelines, and provide views and suggestions to the Government of Nepal. Similarly, various committees may also be formed to handle the technical work. An Environmental Protection Fund is also established by the Act. A provision is also provided in the Act for compensation to the persons affected by environmental pollution.

Although there is no clear procedure for conducting and approving strategic environment assessment (SEA) in Nepal's environment policies and legislations, based on broad definition of proposal provided in the EPA, any individuals, government entity or institution can carry out SEA. According to this Act, proposal means a proposal prepared in regard to the carrying out of such development work, physical activity that may bring about change in the existing environmental conditions or any plan, project or program which changes the land uses. SEA can be defined as follows:

"Strategic environmental assessment (SEA)" refers to a range of analytical and participatory approaches that aim to integrate environmental considerations into policies, plans, and programs and evaluate the inter-linkages with economic and social considerations. SEA is generally focused on a specific sector. It not only opens a dialogue among key stakeholders on environmental issues relating to a particular sector, for example, agricultural sector, but also assists to integrate economic, social, and environmental issues in the analysis.

Environment Protection Rule, 1997 has come into force by virtue of the power given by Section 24 of the Environment Protection Act. The rule has the provision for IEE and EIA before establishing an industry, and developing physical infrastructure and any other works that may create environmental damage. A list of such industries and works requiring EIA and IEE are mentioned in the schedules. According to this rule, the existing industries also have to obtain a pollution control certificate. The

government has the authority to prescribe pollution control standards for different industries. The methods and procedure IEE and EIA are laid down in the rules. This rule has made IEE/EIA mandatory for the governmental as well as the private sector. Prior to this, this was mandatory only for the government sector. Earlier, the implementation of EIA in the project planning used to be a closed door approach. However with the enforcement of EPR, the opportunity for the involvement of stakeholders has increased.

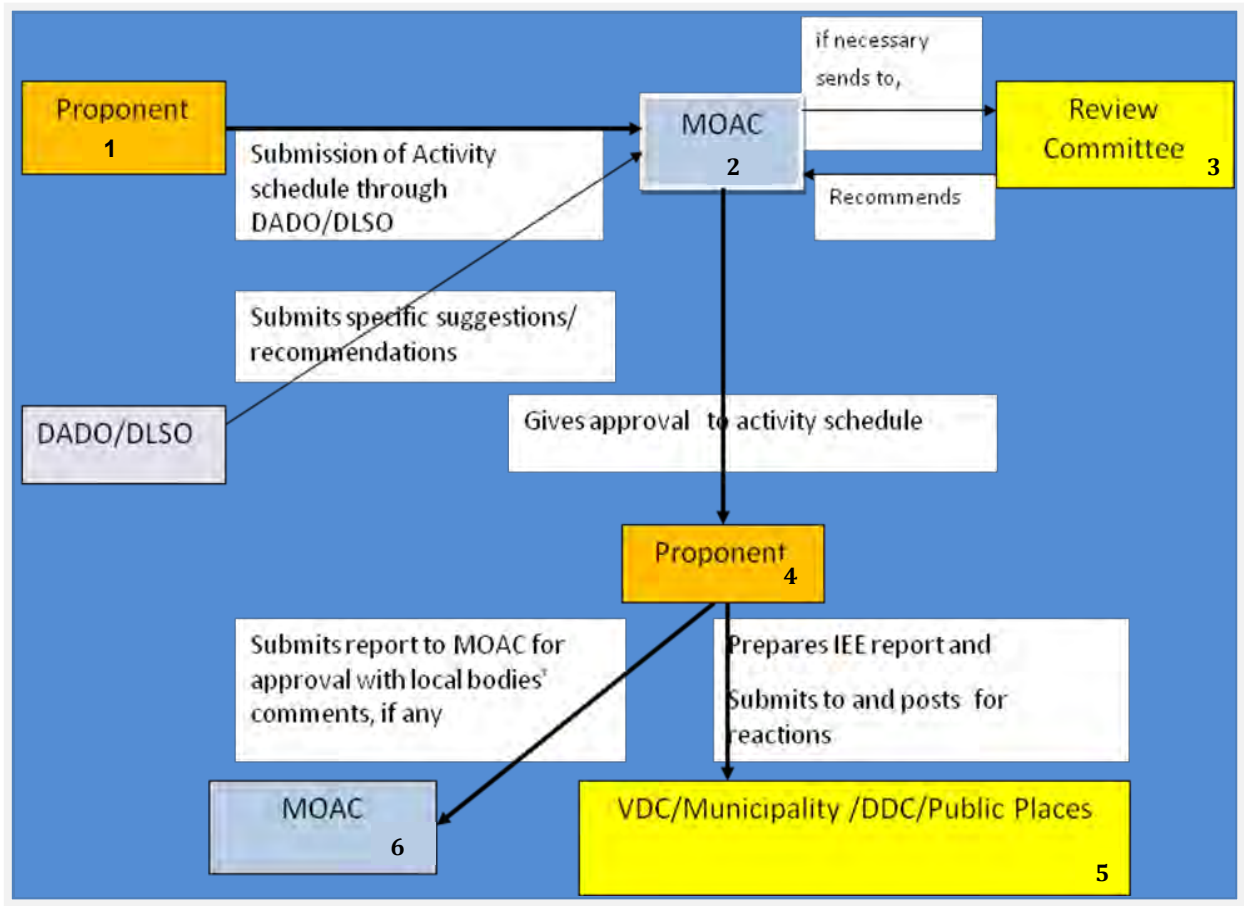
The rule has mentioned qualification, functions, duties and rights of the environmental inspector and procedures for the protection of national heritage and environmentally protected areas. It restricts activities in environmentally protected areas. Restricted activities in environmental protection areas are listed in the rules (these provisions are similar to the provisions of the Wildlife Protection Act and Rules). Any person can file a complaint regarding the violation of the provisions of this rule.

The rule has made provisions for establishing laboratory, handling of funds, and compensation. It provides seven different schedules. Industries related to agriculture are also fall under the scope of environmental assessment and these listed in the schedules.

The Environment Protection Act of 1995 and rules 1997 have made IEE, or EIA mandatory in forests, agriculture and hydropower development based on investment and the capacity of the industry.

Besides these national level policies, sectoral development policies have also emphasized, the need of environmental management, including the adoption of EIA process. For instance, the Irrigation Policy, 2003 includes commitments regarding the design and implementation of irrigation projects based on the recommendations of the EIA and IEE reports, prepared as per EPR 1997. Similarly the sectoral policies of agriculture, forests, industry, tourism, and solid waste management have accorded high priority to integrate environmental aspects in the respective development projects and programs.

In accordance with the EPA 1996 and EPR 1997, the Ministry of Agriculture and Cooperatives (MOAC) had issued the Guidelines for IEE in the agricultural sector. For agricultural projects, the MOAC was responsible for approving the IEE reports. However, EIA reports will be approved by the Ministry of Environment (MoE). The following flow diagram shows the process of IEE approval as per MOAC's IEE guidelines and the actors/agencies involved in it. The proposer receives MOAC's approval through respective DADO/DLSO.



Note: Number denotes sequential steps
 Source: IEE Manual for Agricultural Sector, 2008, MOAC

Figure SN1.4.1: IEE Process within MOAC

Box SN1.4.1 below shows the nature and types of projects requiring in the agricultural sector IEE pursuant to as per the MOAC guidelines 2008 EPA 1996 and EPR 1997. Activity schedule is the scoping document.

Box SN1.4.1: Proposals Requiring IEE in the Agricultural Sector	
1.	Any proposals requiring clearance of national forest up to 5 Ha in Terai and 1 Ha in hills for agricultural purposes.
2.	Construction activities involving the following: (a) Domestic fowls keeping with more than 30,000 (b) Big cattle numbering more than 1,000 (c) Small cattle (sheep and goats) numbering more than 5000 (d) Establishment of agricultural wholesale market in more than 1 Ha of land in Metropolitan and sub-metropolitan areas of Terai and 0.5 Ha in other areas (e) Construction of approved slaughter house
3.	Storage and disposal of obsolete (date expired) pesticides
4.	Production, formulation, storage, repackaging and disposal of inorganic fertilizers and inorganic pesticides
5.	Establishment of blending industry of chemical fertilizer and chemical pesticides
6.	Above mentioned proposals and those below the standards of such proposals as well as the proposals below the standards of those mentioned in - Schedule 2 of the EPR 1997 (see below) and those small scale development activities and projects, programs and activities related to physical infrastructure works and land use change which involve investment from NRs 5,00,00,000 (Five Crore) to 25,00,00,000 (Twenty Five Crore).

Source: IEE Manual for Agricultural Sector, 2008, MOAC

Proposals requiring IEE pursuant to Schedule 2 of EPR Rule 3 are mentioned below:

- 1) Clearing of national forests covering up to One hectare in the Hills and Five hectares in the Terai, and using them for agricultural purposes.**
- 2) Following Construction activities.**
 - (a) Construction of 1 to 5 Kilometers long agricultural road.
 - (b) Construction activities for farming Two Thousand to Five Thousand domestic fowls.
 - (c) Construction activities for farming big cattle numbering between one Hundred and Five Hundred.
 - (d) Construction activities for farming small cattle (sheep and goats) numbering between One Thousand and Five Thousand.
 - (e) Establishment of agricultural wholesale markets in urban areas.
- 3) Following activities relating to toxic Substances (only those which are listed) :**
 - (a) Import of One to Ten tons of toxic Substances.
 - (b) Sale, supply storage and disposal of 100 kg to One ton of toxic Substances.
 - (c) Uses of One Hundred kg to One ton of toxic Substances in a single area.

- 4) Establishment of the following agro based industries to dispose of polluted Substances mixed with dangerous toxins:**
 - (a) Milk-processing industries with a capacity up to Twenty Six Thousand liters a day.
 - (b) Such, agro based industries as those producing jam, jelly, squash and juice.
 - (c) Cheese industries
 - (d) Baby food industries.
- 5) Commercial fish-farming in an area of more than one hectare.**
- 6) Operation of any plan, project or program of any development work physical activity or land use - Except the proposals mentioned above and those below the standard of such proposals as well as the proposals below the standards of those mentioned in Schedule -2 with a cost of Rs. Ten millions to hundred millions.**

Proposals requiring EIA in the agricultural sector are mentioned below pursuant to Schedule 2, Rule 3 of the EPR 1997.

- 7) Clearing of forest covering more than One Ha in the Hills and Five Ha in the Terai and using it for agricultural proposes.**
- 8) Following activities relating to construction:**
 - (a) Construction of more than Five km. long agricultural roads.
 - (b) Construction activities for farming more than Five Thousand domestic fowls.
 - (c) Construction activity for farming more than Five Hundred big cattle
 - (d) Construction activity for farming more than Five Thousand small cattle (sheep and goats)
 - (e) Urbanization plan in cultivable lands.
- 9) Following activities relating to toxic Substance (only those which are listed):**
 - (a) Import of more than Ten tons of a toxic Substance.
 - (b) Sale, supply, storage and disposal of more than One ton of a toxic substance.
 - (c) Use of more than one ton of a toxic substance in a single area.
 - (d) Activities relating to insecticide plants or toxic substances.
- 10) Operation of any plan, project or program relating to any developmental work physical activity or change in land use except the proposals mentioned above and those below the standards of such proposals as well as the proposals below the standards of those mentioned in schedule -1 with a cost of more than One Hundred millions.**

Any persons or organizations who do not comply with the EPA and Regulations will be punished as per Section 18 (1) of the EPA 1996. With regard to the offences in the agricultural sector, the Act has delegated power to the Ministry of Agriculture and Cooperatives to take legal actions and punish the

offender.

(11) Local Self Governance Act (LSGA), 1999

The LSGA is enacted to establish a decentralized governance structure and to delegate and institutionalize the responsibility and power of these structures at the local level to formulate and carry out plans, and constitute local bodies for the development of the local self-governance system in a manner that they are able to make decisions on the matters affecting the day-to-date needs and lives of the people, by developing local leadership. The LSGA came to materialize the concept of decentralization as conceived in the constitution of Nepal. The Act establish a decentralized governance structure and delegate and institutionalize the responsibility and power to local bodies⁶ to formulate and carry out plans, and constitute local bodies for the development of the local self-governance system in a manner that they are able to make decisions on the matters affecting the day-to-date needs and lives of the people, by developing local leadership.

This act has established the village development committees (VDC), municipalities and district development committees (DDC) as local bodies. Each of these local bodies has a Council, Executive Committee with a chairperson, vice-chairperson and members (mayor and deputy mayor in case of municipality). Members of the VDC and municipality are directly elected, whereas an indirect voting system elects the chairperson and vice-chairperson of the DDC. While the purpose of this Act is to strengthen the decentralized governance system in Nepal and involve district people in the development of their districts through the establishment of the DDCs and VDCs, this act is specifically important to the agriculture sector.

Functions, Duties and Powers of VDC relating to agriculture include:

- Carry out or support for agricultural development program within the village development area.
- Arrange for agricultural Haats (weekly temporary bazaar), markets and fairs or to assist in organizing such fairs within the village development area.
- To operate or support to operate veterinary hospitals, as per necessity, for the prevention and control of animal diseases within the village development area, and to arrange for pasture areas for cattle grazing.

A VDC also works in the area of rural drinking water, irrigation and soil conservation, river control, infrastructure development, forest and environmental, plantation, protection of bio-diversity, tourism and cottage industries etc.

A municipality can designate agricultural areas within its jurisdiction; implement the irrigation projects and control floods and rivers. Functions, Duties and Powers of VDC relating to agriculture include:

- Prepare land-use map of the Municipality area and designate industrial, residential, agricultural, recreational area

⁶ Local bodies includes District Development Committee, Village Development Committee and Municipalities.

The DDC prepares policy on development of agriculture and livestock, implements programs in the sector and monitors progress. Major functions, duties and power of DDC relating to agriculture include:

- Make District level policy on agriculture and livestock development, and formulate, implement and monitor program.
- Arrange for seeds, fertilizers and other agricultural inputs required in the district.
- Provide services relating to agriculture extension in the district
- Promote agricultural *Haat* markets and fairs and manage market of agricultural products.

DDC also works on rural drinking water and habitat development, hydropower development, transport, land reform and land management, women and underprivileged groups, forests and environment, education, health, language, culture, information and communication, tourism etc.

LSGA (1999) is concerned with the service delivery in the agriculture sector although not directly related to the agriculture sector. Under this act, the government has devolved agricultural extension and livestock services to the local bodies and that district level agricultural programs and budget are to be approved by the District Council prior to the approval of by the GoN. The DDCs have been given some authorities even to the extent that they can change the budget heading within certain limits. Local Development Officer (LDO), the Member Secretary of the DDC is the immediate supervisor of the chief of the concerned District Agriculture Development Offices (DADOs) and the District Livestock Service Offices (DLSOs). The Act has gone so far that it has authorized the DDCs to establish their own Agriculture and Livestock Sections subject to the fulfillment of the conditions set by this act. However, to this date, none of the districts have established district agriculture and livestock offices of their own.

(12) Irrigation Rule, 2000

The Irrigation Rule deals with Irrigation Water User Associations and the transfer of projects to Irrigation Water User Associations. It provides for a joint management system by GoN and Irrigation Water User Association, deals with Irrigation and River Control Committee, sets out the conditions of service utilization, sets out the obligations of user of irrigation and provides for service charges and deals with the protection, repair and maintenance of irrigation systems.

(13) Financial Intermediary Society Act, 1998 with Amendments in 2004

Most of the micro-finance policies in Nepal are governed by this act. This act provides a limited banking license to Non-government organizations (NGOs). The purpose of this Act is to regulate NGOs working as financial intermediaries in micro-enterprises on an institutional basis targeted to low-income people carrying out microenterprises and thus to improve their economic condition. This Act has defined terminologies such as society, micro-credit, micro-savings, low income person, micro-enterprises etc. For the purpose of this Act, society means a Society registered under the 1977 Registration of Associations Act and licensed to work as a financial intermediary. This Act has forbidden to work as a financial intermediary without obtaining a license from Nepal Rastra Bank

(NRB) after the commencement of this Act. For getting the license, the society must be registered under the 1977 Registration of Associations Act with the objective of working as a financial intermediary and apply to NRB in prescribed manner. On receipt of an application under Section 4 of the Act, the NRB may issue the license after conducting necessary enquiries into it. While issuing a license under Section 5, the NRB prescribes the conditions to be fulfilled by the concerned Society while working as a financial intermediary. It shall be the duty of the concerned Society to fulfil the conditions prescribed by the NRB pursuant to the powers vested on it by the Act. The society working as financial intermediary will need to renew every two years in prescribed manner by the Rules. While supplying micro-credit, a Society must execute a written agreement with the borrower by prescribing conditions deemed essential for the protection and proper utilization of the credit.

A Society's Micro-Credit Fund includes the amounts received from the following sources:

Grants or loans received from the Government of Nepal (GoN) or NRB or local or foreign organizations or associations.

- 1) Amounts received through the collection of micro-savings.**
- 2) Amounts received from commercial banks or financial institutions.**
 - A prescribed amount from the fees collected from the members of the Society.
 - Service charges collected in consideration of the services provided by the Society.
 - Interest, fees, etc. received from micro-credit transactions.
 - Amounts received from other sources.

Key functions, duties, and powers of a Society as mentioned in the Act are as follows:

- To encourage low-income persons to form groups to collect micro-savings from groups or group-members.
- To supply micro-credit to any group or member thereof for operating micro-enterprises, with or without any movable or immovable property as collateral or guarantee.
- To obtain loans or grants from the GoN or Bank or any local or foreign organization or association, and use them for the supply of micro-credit or for making the process of supplying such credit effective. Provided that it shall be mandatory for a Society to secure the approval of from any foreign organization, association, etc.
- To evaluate schemes for which micro-credit have been requested, and determine whether or not they are feasible, before supplying micro-credit.
- To organize publicity and extension programs about micro-enterprises programs of the type which help to improve the economic condition of low-income persons.
- To organize workshops on micro-enterprises, extend help and provide training in the formulation of schemes, make available technical know-how, and mobilize technical assistance according to need.

- To provide necessary services to a group in respect to the micro-savings and mobilization of micro-credit.
- To take necessary actions for the timely realization of micro-credit.
- To conduct investigations from time to time to determine whether or not micro-credit has been properly utilized, and, if it is not found to have been properly utilized, to issue necessary directives or taking necessary action.
- To perform all such functions as are prescribed in connection with the supply of collection of micro-savings and micro-credit.
- To work as an agent of commercial banks and financial institutions.

A Society must submit to the NRB a preliminary annual report of its functions in the capacity of a financial intermediary along with a statement of its profit and loss within three months after the expiry of each financial year. This Act has given power to the society to determine the interest rates to be paid and charged by it on micro-savings and microcredit subject to the policy directives of the NRB. The society must furnish information to the NRB within seven days.

Government has already drafted Microfinance Authority Act 2010 for the establishment of a separate monitoring and supervision body-National Microfinance Development Corporation as a Second Tier Institution (STI). This body will be responsible for monitoring and supervision of microfinance service institutions for their institutional development as provisioned by National Microfinance Policy issued on May 4, 2008. Likewise, a draft on National Microfinance Development Fund Act has been prepared in order to institutionalize the existing Rural Self-Reliance Fund with as National Microfinance Fund with a view to provide resources for smooth delivery of microfinance services in a sustainable manner

For regulating agricultural finance, there is no specific legislations in Nepal. With the main objective of providing institutional credit for enhancing the production and productivity of the agricultural sector in the country, the Agricultural Development Bank, Nepal was earlier established in 1968 under the ADBN Act 1967, as successor to the cooperative Bank. However, this Bank too has been incorporated as a public limited company on July 14, 2005 under an umbrella Act, popularly known as Bank and Financial Institution Ordinance (BAFIO) enacted in February 2004. With the promulgation of this ordinance, Acts such as Agricultural Development Bank Act, 1967, Commercial Bank Act, 1974, Finance Company Act, 1986, Nepal Industrial Development Corporation Act, 1990 and Development Bank Act 1996 have been repealed. This ordinance has now been enacted by the Parliament and known as **Bank and Financial Institution Act (BAFIA) 2006**. This Act governs the functional aspect of banks and financial institutions. This Act has consolidated the entire fragmented act governing the bank and financial institutions. The major formal financial institution for agricultural credit in Nepal is still the Agriculture Development Bank Limited (ADBL).

Any person wishing to incorporate a bank or financial institution to carry on financial transactions should incorporate a bank or financial institution as a registered public limited company under the prevailing law of Nepal with prior approval of NRB by fulfilling the conditions prescribed in section

4 of BAFIA. This Act prohibits anybody to conduct financial transaction except an established bank or financial institution and no bank or financial institution can use the proposed name for the purpose of carrying financial transaction without obtaining license from NRB. NRB grants license if it is satisfied with the basic physical infrastructure of the bank or financial institution; if the issuance of license for operating financial transaction will promote healthy and competitive financial intermediary and protect the interest of the depositors, the applicant is competent to operate financial transaction in accordance with the provision of this ordinance and its regulation, directives, order or provisions of Memorandum and Article of Association and there are sufficient grounds to believe that the entity is competent to operate financial transaction.

Nepal Rastra Bank Act, 2002 has given full authority to the Nepal Rastra Bank regarding regulation, inspection and supervision of the banks and financial institutions. NRB is Nepal's central bank established in 1955 under the special Charter. The Charter designates NRB as a principal regulator of financial sector in Nepal. NRB has the sole responsibility to build a sound and healthy financial system in the economy. It involves creating an enabling environment, regulatory services in the like of policy and directives, inspection and supervision, interventions in respect of safeguarding depositors and shareholders, performance monitoring of system and dissemination of financial sector information.

Pursuant to the powers vested on NRB by its Act, it can deny license for financial transaction if the conditions stipulated in ordinance are not met. Likewise, NRB is also authorized to impose necessary conditions taking into account the existing financial position of the bank or financial institution, the interest of depositors and healthy operation of financial transaction. Similarly, it may increase, decrease or modify the terms and conditions time to time. The NRB can suspend the license of the license holder for a specific period of time issued for the purpose of carrying financial activities or it may order the bank or financial institution to close the operation of their office partially or fully if such a license holder acts against the provisions of the Nepal Rastra Bank Act, 2002, or the regulation made there under or fails to act in accordance with the order or directives issued by it or fails to act for the welfare and in the interest of the depositors. The NRB may cancel the license issued under this ordinance to carry on the financial transactions of the license holder under the certain circumstances as stipulated in the ordinance.

SN1.5: One Village One Product (OVOP) Program

(1) OVOP Concept and Policy in Nepal

Concept: OVOP is a rapidly evolving concept gradually being adopted by many countries across the world although it was pioneered by Mr. Morihiro Hiramatsu – the then Governor of Oita prefecture of Japan in 1976. It is a community development tool and movement which encourages local communities to use their indigenous skills, local resources and know-how to create unique, outstanding products of their own, utilizing locally available materials with value addition and processing. Central to the OVOP movement is local identity, local pride and value addition. Focused on stimulating the latent energy of people in local communities, the overall purpose of the OVOP is to promote local economies by promoting indigenous skills at both national and international levels. Evidence shows that OVOP program products sell for premium prices in both local and international markets (APO, 2007). Figure 2.5 presents a conceptual model of the OVOP movement.

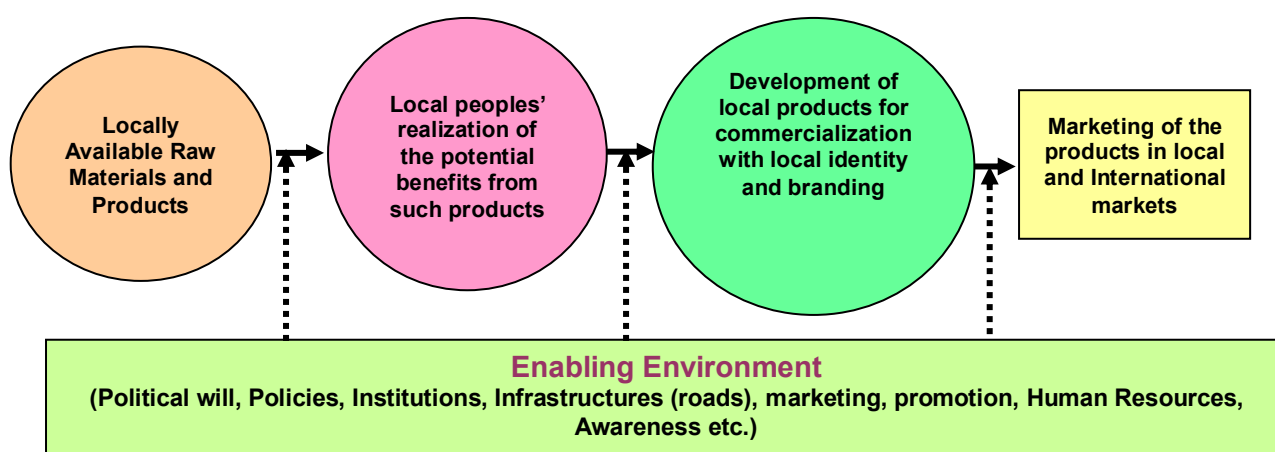


Figure SN1.5.1: Conceptual Model of OVOP Program

While many countries around the world, such as Thailand, Kenya, South Korea, the Philippines and Mongolia have benefited from the improved livelihoods and rural economy of their people for more than two decades by implementing this innovative community development program, it was piloted in Nepal only in 2006 and is currently in its third pilot phase. The credit for introducing it in Nepal goes then to Mr. Ono, the economic advisor to the Ministry of Finance from JICA. In 2006, the Minister of Finance announced in his budget speech, that the government will introduce OVOP as pilot projects in some selected districts in Nepal. This led the MOAC to formulate and implement the OVOP program as pilot projects in the Bhaktapur, Sindhuli, Ramechhap and Bardiya districts in Nepal in partnership with the Federation of Nepalese Chamber of Commerce and Industries (FNCCI). The corresponding products selected for the OVOP program were Lapsi in Bhaktapur, Junar in Sindhuli and Ramechhap, trout fish in Nuwakot and Rasuwa and Bel fruit in Bardiya.

In Nepal, the OVOP concept has been borrowed but adapted to the country's geographical situation and feasibilities. The difference is that the products have been identified by the name of the district, and not by the villages or the VDC. Within the district, the implementing agencies, particularly the

DADO and the District Chambers of Commerce have identified some VDCs to the products. For example, in the Sindhuli district, Khaniyakharka and Nakajholi VDCs have been identified as Junar VDCs. However, products are branded by district name and not by the VDC. The objectives of the OVOP program are:

- Development and value addition of products based on demand of markets through local labor and skills with the involvement of local communities
- Development of a competitive production systems and promotion of export by identification of exportable goods and through application of specialized production processes
- Poverty reduction and economic development of local communities

Last but not least, it is worth mentioning here that the OVOP concept is not new to Nepalese people even though the program was only implemented recently in Nepal. It has actually been practiced by the Nepalese people for hundreds of years as evidenced by the countrywide popularity of Pharping ko Naspati (pear of Pharping), Bhojpur ko Khukri (Nepali indigenous sharp knife), Sindhuli ko Junar (Junar of Sindhuli) and so forth. There are hundreds of products in Nepal for which buyers, be they local or foreigners, pay higher than normal market prices for products when they are identified as hailing from a particular place, for example Pharping Pear.

OVOP Policy: Following the proclamation of piloting the OVOP movement in Nepal by the Honorable Finance Minister in the annual government policy and budget, the GoN approved the **One Product Program Implementation Working Procedure, 2006** on November 27, 2006. The key features of this policy are:

- Implementation of the OVOP program based on direct partnership among public, private and local communities
- Adoption of the public-private partnership modality in which the MOAC is to partner with the FNCCI, an apex body of industrialists and business houses in Nepal.
- Active participation of all stakeholders within the concept of the Total Value Chain
- Formation of the OVOP Program Implementation Committees at the central and district levels.
- Implementation of the program as a three-year rolling plan
- Identification of products and corresponding districts
- Linking production and marketing aspects from the start of the project
- Clear defined roles and responsibilities of all key actors and stakeholders, including the MOAC and FNCCI
- Participatory program planning and formulation of targeted programs based on comparative benefits

- Provision of no additional human resources for the implementation of the project, are to be adjusted from among the existing human resources of the concerned/participating agencies
- Arrangements for regular supervision, monitoring and evaluation.

An Agri-business Promotion Committee was formed under the chairmanship of the Minister of Agriculture and Cooperatives for the purpose of facilitating the implementation of the “Agri-business Promotion Policy 2006”, approved by the GoN on November 27 2006. It has been also decided that necessary policy support to the OVOP movement would be provided through this committee. This decision indicates the government’s high level of commitment and support to the OVOP movement. Likewise, the recently released draft of the National Industrial Policy 2009 has vowed to give priority to the OVOP program. This shows the high level of policy support and backing to the OVOP movement in Nepal.

(2) Modality of OVOP Implementation

MOAC and FNCCI are the two leading agencies for implementing the OVOP program in Nepal. As stated earlier, the program follows the PPP approach. For the implementation of the program, almost 92 percent of the total cost has been shouldered by the GoN and the remaining 8 percent by FNCCI. Under this approach to service delivery, MOAC (public sector agency) and FNCCI (representative of the private sector) have been working towards achieving shared and/or common objectives of the OVOP program in which they share authority and responsibility, invest time and resources, and share risks and benefits.

According to the Working Procedure 2006, the OVOP program will be implemented as a three-year rolling -over program. However, it could be extended to five years or more as necessary.

Apart from the identification of different stakeholders for the implementation of the program the policy envisages to create a “**Basket Fund**” for OVOP program implementation. The basket fund is aimed at gathering the funding secured for the implementation of the the OVOP program in the country. The working procedure has depicted the mechanisms and processes for operating the fund. For dealing with the OVOP affairs and overseeing its implementation aspects, the Government has formed two committees, one at the central level and another at the district level. The central committee is coordinated by the Chairperson of the FNCCI with two joint coordinators, the Joint Secretary of the MOAC and the Executive Director of the Agriculture Enterprise Center (AEC). Established under the FNCCI, the AEC is responsible for providing technical backstopping and support to it in agribusiness and commodity associations. This is a technical wing of the FNCCI. For managing the basket fund, a “*Basket Fund Sub-Committee*” has been formed under the coordinator-ship of the Joint Secretary of Agri-Business Promotion and Statistics Division (ABPSD) of MOAC. The main roles of this basket fund sub-committee are as follows:

- Implementation of the decisions of the OVOP Program Implementation Committee
- Budgetary management of the approved programs
- Conducting annual auditing of the program and submission of the audit report to the relevant

agencies

- Updating the basket-fund according to the additional budget received from different agencies

The program is heavily subsidized as follows:

- Free training to farmer communities
- Plant saplings/fish fingerlings at highly subsidized prices (e.g. Rs.2.00/Lapsi plant)
- 50 percent subsidy in agricultural tools and implements
- Simplified loan procedures
- Regular supervision, monitoring and technical backstopping from JTs/JTAs
- Opportunities to participate in grading, processing and packaging training

(3) Administration and Management Structure

For the implementation of the OVOP program the government has established coordination committees at the central and the district levels. The central level OVOP program implementation committee is coordinated by the chairman of the FNCCI. The two joint coordinators of this committee are the Joint Secretary (ABPSD) of the MOAC and the Chairman of the AEC/FNCCI. Since the Executive Director of the AEC is designated as the member-secretary of this committee, the Secretariat of this Committee has been established at the AEC. The OVOP Program Implementation Committee was established and it is responsible for approving the budget and programs according to the goals and objectives of the OVOP program. Likewise, this committee is also responsible for maintaining coordination with different agencies and stakeholders for successful implementation of the OVOP program. Roles, responsibilities and rights of this committee are mentioned in the Working Procedures approved by the GoN for implementing the OVOP program in November 2006.

Likewise, at the district level, the District Level Program Implementation Committee has been formed. The coordinator of this committee is the chairman of the district chamber of commerce and the chief of DADO is the joint coordinator. This committee is responsible for identifying the VDCs for the program, facilitating the implementation of the program in the district and coordinating with the district level stakeholders.

The aforementioned implementation arrangements reveal the government's clear commitment to implementing the program under the joint responsibility and accountability of the MOAC and the FNCCI. However, its implementation requires the participation of several agencies and stakeholders as shown below in Table 2.4412.

Table SN1.5.1: Key Agencies Involved in the Implementation of OVOP Program

S.N	Organization	Key roles / responsibilities						
		Policy Support	Implementation	Coordination		Credit/ Finance	Supervision and Monitoring	Participation and General support
				National	District			
Public								
1	MOAC	√	√	√				
2	DOA				√			√
3	HDD		√	√			√	√
4	FDD		√	√			√	
5	DADO		√		√			
6	NARC							√
7	MOI	√						√
8	MOCS	√						√
9	MLD	√						
10	MOWCSC	√						√
11	DDC							
12	VDC		√					
13	WDO							√
Private								
1	FNCCI/AEC		√	√			√	
2	District CCI		√		√		√	
3	Banks					√		

Note: For Abbreviations see page on abbreviations and acronyms.

Within the MOAC, at the central level, the Fisheries Development Directorate and Fruit Development Directorate are responsible for implementing programs such as the provision of fingerlings, seedlings and training in their respective mandated areas. They also supervise and monitor programs in the districts. However, they will need to get their programs approved by the central committee and receive the fund through the OVOP Program Secretariat at the AEC. The OVOP program envisages the support of the Ministries of Industry and Commerce and Supplies in the following areas:

- Technology transfer
- Quality specification and assessment
- Trial and certification
- Export promotion
- Support for participation in international and domestic trade fairs
- Emphasis through industry policy
- Support in the marketing of produces
- Taking initiatives in external assistance

The fund is managed jointly by the Executive Director of the AEC and the Joint Secretary (ABPSD) of the MOAC.

At the district level, on the part of the MOAC, the DADO is responsible for the implementation of the program. Likewise, on the part of the FNCCI, respective district chambers of commerce and industry

are responsible. A separate OVOP account is established in the district and the fund is spent on the joint signature of the DADO and chief officer of the District CCI. The DDC is also expected to contribute to the fund but this has not yet happened.

(4) Pilot Project and its Status

This is the third year of the OVOP program implementation. Map 2.2 shows the OVOP program coverage in Nepal and Table 2.45 lists products selected in the pilot phase of the program. Of the five program formulation survey districts, the OVOP program is being implemented in Sindhuli and Ramechhap.

Map SN1.5.1: OVOP Program Coverage



Source: OVOP Program Secretariat, AEC

Table SN1.5.2: Products Selected in the Pilot Phase of OVOP Program

S. N.	Product	District	VDCs and Municipality
Year 1: Pilot Phase (2006/07)			
1	Junar (Sweet Orange) (<i>Citrus sinensis</i>)	Sindhuli Ramechhap	Ratanchura and Basheshwar Okhrene and Sukhajor
2	Lapsi (<i>Choerospondias axillaries</i>)	Bhaktapur	Changu Narayan, Jhaukhel, Chhaling, Bageshwari, Nagarkot, Sudal, Tathali, Chitapol, Nakhel, Sipadol, Dadhikot and Gundu
3	Rainbow Trout	Nuwakot Rasuwa	
4	Bel (<i>Aegle marmelos</i>)	Siraha Bardiya Banke	
Year 2 and 3: Additional Programs (2007/08)			
1	Cymbidium Orchid	Lalitpur	Badhikhel and Godawari
2	Agro-tourism	Kaski	Lekhnath Municipality

Source: OVOP Secretariate

Review of the program implementation reveals that that government has been increasing its budget every year. In the first year (2006/07), a total of Rs. 3.7 million was allocated which has been

increased by nearly nine times in 2007/08 (Rs. 31.5 million). In 2008/09, the government has allocated a total of Rs. 35.37 million. Table 2.46 provides a brief account of the current status of these programs being implemented in the districts.

Table SN1.5.3: Implementation Status of Sweet Orange, Lapsi and Bel under OVOP Program

Products, Activities and Achievements		
1. Sweet Orange (<i>Citrus sinensis</i>)		
1.1	Activities	Improvement in the internal markets in primary stage Selection of 2 VDCs from each district as the Junar villages i.e. Okhreni and Sukahjor in Ramechhap and Baseswor and Ratnachura in Sindhuli Development of the existing Junar orchard in the selected VDCs Development of grading machine and packaging boxes for "A" grade Junar
1.2	Achievements	Establishment of two Junar cooperatives in Sindhuli and Ramechhap districts A" grade Junar of both Ramechhap and Sindhuli have been marketed in Kathmandu market and other major markets.
2. Lapsi (<i>Choerospondias axillaries</i>)		
2.1	Activities	Selection of Baktapur district covering 12 potential villages for Lapsi production Distribution of 16,594 Lapsi saplings to the farmers in the village selected
2.2	Achievements	High survival rate (78%) of Lapsi seedlings (13000 plants surviving out of 16,594 total saplings planted)
3. Bel (<i>Aegle marmelos</i>)		
3.1	Activities	Establishment of Bel processing unit and entrepreneurship development Marketing and promotion of Bel squash in the internal markets, Working with two Bel producers i.e. Panchang Herbal Industry, Lahan in Siraha district and "Nava Durga Samudayik Sarbat Uddyog", Woralibazar in Bardiy Alternative Herbal Ltd. Is working as market promoter between the OVOP program and the Bel processors
3.2	Achievements	Farmers about to the launch improved forms of squash with new brand names such as "Saugat" along with "Marmelos". Increased quantity of Bel and squash production Involvement of community users group in the program

Last but not least, a review of the OVOP program implementation status to date reveals that this program is a priority program of the GoN, and that the MOAC is committed to making it a success. Encouragingly, the program covers two of the 10 Sindhuli Road Corridor districts, Sindhuli and Ramechhap and focuses on a unique Nepali fruit crop, Junar (sweet orange). Indeed, the quality and taste of Junar as found in these two districts are not found elsewhere in the world. Sindhuli ko Junar (Junar of Sindhuli) has now become as popular as Phariping ko Naspati (pear of Phariping).

(5) First Cymbidium Orchid Show 2009

The Cymbidium orchid has been listed as an OVOP product from the Lalitpur district. The government is promoting the product in two VDCs namely Badhikel and Godawari through the OVOP program. The Cymbidium orchid Growers' Group (CYMOGGs) has been united under the cymbidium orchid cultivation program of the government's OVOP movement. Given the high demand in the international market, the group has been continuously promoting the product in Nepal.

The first Cymbidium Orchid Show was organized by the Cymbidium Orchid Growers' Group (CYMOGG) in Kathmandu from March 21 to 22, 2009. The group is hopeful of making cymbidium orchid a major exportable floriculture product within 10 years and has exported samples of the cymbidium orchid to Arab countries and Singapore. Despite the high demand the group is unable to grow the required quantity due to little cultivation at the local level. There is great demand for cymbidium orchids in the international market.

In Nepal, nine nurseries are involved in growing the orchid under the OVOP program in the Lalitpur district. The geo-climatic conditions prevalent at altitudes between 1,300 m and 1,700 m are best suited for growing cymbidium orchid. With adequate inputs such as plant materials and technical training; the orchid can become a new primary export item from Nepal.

Nepal has 385 species of orchids under 102 genres and the number is increasing every year. The show had 100 varieties of cymbidium classed into four categories: Standard, priced from Rs.3,000 and up; Intermediate - priced between Rs.1,000 and Rs.2,000; Miniature, priced between Rs.800 and Rs.1,000; and Pendulous, which is the cheapest of all.

SN1.6: Details of Key Donors' Projects

(1) Commercial Agriculture Development Project (CADP) (2006-2012)

The overall objective of the CADP is to reduce poverty in the rural communities in the Eastern Development Region (EDR). The project aims to realize the objectives of poverty reduction by targeting poor areas and expanding the economic opportunities of the rural poor, involving the poor and other stakeholders in project activities, catalyzing private sector investment in agriculture, and strengthening the capacity of local institutions.

The outcome of the Project is improved efficiency in production, marketing and processing of high-value crops (HVCs) such as vegetables, fruits, tea, and spices within the project area. The Project intends to (i) increase employment in rural areas, (ii) add value to agriculture products, and (iii) increase rural incomes.

The Project has been implemented in Taplejung, Dhankuta, Ilam, Panchtar, Terhathum, Udayapur, Jhapa, Morang, Saptari, Siraha, and Sunsari of the EDR. The Project's approach is to establish a commercial agriculture fund (CAF) to be managed by Commercial Agriculture Alliance (CAA) which is a non-profit company registered at the Office of Company as per the project design. The CAA has two categories of membership; general and nominated. General members include farmer groups or cooperatives, traders, and processors engaged in commercial agricultural activities within the project area. Nominated members include (i) the Ministry of Agriculture and Cooperatives, and the Ministry of Local Development, (ii) district development committees (DDCs) of the 11 project districts and (iii) the Agro Enterprise Center.

For this project the ADB has agreed to provide a grant assistance amounting to US \$18.0 million (Rs.270.8 million) to the Government of Nepal over the six year period of its implementation. The project has also established a project management unit (PMU) in Biratnagar to oversee the implementation of the project.

(2) Sustainable Soil Management Program (SSMP) (2011-2014, 4 Phases)

Implemented in collaboration with the Government of Nepal (GoN) and the Civil Society Actors of Nepal in 1999, and financed by the Swiss Agency for Development and Cooperation (SDC), the Sustainable Soil Management Program (SSMP) envisages "improved livelihood of women and men farmers from bari-dominated hill farming systems in the mid-hills of Nepal through productive and sustainable management of soil".

The program is now in its fourth phase (January 2011-December 2014). Project is estimated to cost US\$ 0.76 millions. The project is being implemented in six districts, namely Khotang, Okhaldhunga, **Ramechhap**, Kalikot, Jajarkot, Dailekh and Achham. The fourth phase of the project will focus on up-scaling of proven SSM technologies and on decentralizing Farmer to Farmer (FtF) approach to the Village Development Committee (VDC) level.

The goal of this phase is "improved food security and livelihoods of women and men farmers in bari (un-irrigated uplands) dominated farming systems of Nepal's mid hills" with two major focuses:

- Enhance basket of SSM options and support in adoption of improved SSM practices to seize new production and market opportunities, and
- Institutionalize FtF agricultural extension approach to bring services to smallholders and disadvantaged households.

The main beneficiaries of SSMP are farm households from smallholder and Disadvantaged Groups (DAGs) in the hills of Nepal. It is expected that by the end of project phase, at least 50,000 households including additional 34,000 new farmers across seven program hill districts of Nepal will directly benefit from the project.

(3) Coffee Promotion Project (2003-2012)

The Coffee Promotion Project (CoPP) was started in 2003 and is gradually expanding to a sector support project. Implemented with the support of Swiss Development and Cooperation, the project facilitates the development of the coffee sector. The project is now in its third phase. It strengthens the stakeholders for production, processing and marketing of quality coffee for domestic as well as international markets.

The project is implemented in eight hilly districts namely, Gulmi, Palpa, Parbat, Syangja, Kaski, *Kavre*, Sindhupalchowk and Lalitpur. About US\$ 0.33 million per year from Helvetas and DFID have been contributed to this project. Major investments are made by farmers and the private sector.

(4) Poverty Alleviation in Selected Rural Areas of Nepal (PASRA) (2005-2011)

Implemented by the Ministry of Local Development, the objective of this project is to improve the prerequisites for social and economic development among the poor in selected rural districts of Nepal. This is a five year project and is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ). The project efforts are geared towards the establishment and strengthening of diversified, local systems for providing services aimed at reducing supply shortages in rural areas. The overall intends to improve the conditions for the social and economic development of the poor population in selected rural areas of Nepal.

The program focuses on the areas social inclusion, poverty reduction and good governance in five districts in mid-west Nepal and is part of the national Local Governance and Community Development Program (LGCDP), which is being promoted by several donors.

The program provides advisory services to a number of actors at local, regional and national level to close the supply gap in the region and hence improve economic and social conditions for the population. The advisory services cover the improved provision of services by public-sector providers, such as local authorities and agriculture and animal husbandry authorities, and by private service providers. Particular attention is paid to the needs of the rural population and to mechanisms and instruments to promote transparency and accountability. The program also helps to strengthen marginalised groups and promote their integration into the development process and supports poverty reduction measures.

(5) Project for Agriculture Commercialization and Trade (PACT) (2009-2015)

Funded by the World Bank, the development objective of the project is to improve the competitiveness of smallholder farmers and the agribusiness sector in selected commodity value chains in 25 districts. The project intends to achieve this by (i) helping farmer groups and cooperatives engage in profitable market-oriented production and improved access to markets through the provision of technology and information services and critical public infrastructure and linkages to agribusiness; (ii) creating and strengthening industry-wide partnerships along the value chain, thus forging linkages between producers, traders, processors, and other stakeholders and, (iii) reducing existing obstacles to agriculture and food trade thereby increasing the ability of farmers and agribusiness to respond to sanitary, phyto-sanitary (SPS) and food-quality standards to meet domestic and international market requirements. This project has the following three components:

- Agriculture and Rural Business Development
- Support for Sanitary and Phyto-sanitary Facilities and Food Quality Management
- Project Management and Monitoring and Evaluation

The project will be implemented in Bara, Chitwan, Sarlahi, Dhanusha, **Kavre**, Parsa, Rautahat, Mahottari, Dhading, Kathmandu, Lalitpur, Rupandehi, Nawalparasi, Syangya, Palpa, Kaski, Tanahu, Kapilvastu, Lamjung, Dang, Banke, Bardiya, Surkhet, Kailali, and Kanchanpur.

The key feature of this project is that it seeks to pursue partnerships which entail cooperation between farmer and farmer groups and vertical cooperation among partners of a value chain and that value chain participants are to be the main implementers and beneficiaries of the project. The total project cost is \$26.55 million, of which \$20 million is International Development Association (IDA) credit/grant, \$5.82 million is beneficiary contribution in cash and kind and \$0.73 million is GoN contribution.

(6) Community Livestock Development Project (CLDP) (2005-2011)

Funded by the Asian Development Project, this project is the follow-up of the Third Livestock Development Project. The objectives of this project are: (a) to improve the levels of food security, nutrition, incomes and employment through increased productivity of the livestock sub-sector in an environmentally sustainable and socially equitable manner (b) to enhance the capacity of the people to manage by themselves the ongoing process of development.

The project is focused on (i) gender and socially inclusive development and (ii) improvements in the levels of food security, nutrition, and employment from livestock production and small-scale livestock related enterprises. It has five components:

- Community Development and Capacity Building
- Livestock Productivity Improvement
- Livestock Processing and Marketing
- Livelihoods Pilot Program for Higher Altitudes

- Project Management Services

Project activities are based on the nature of support required. Therefore, its target areas have been categorized as follows:

- Intensive livestock production support in 22 Districts
- Processing, marketing and commercialization support in 21 other districts
- Livelihoods pilot program in 5 districts

CLDP implemented processing, marketing and commercialization support in Karve district of SRC. The total project cost is \$33 million, of which \$20 million is ADB grant.

(7) Poverty Alleviation Fund Project II (2007-2012)

Government of Nepal has received a total grant of US\$100 million from the World Bank to implement Poverty Alleviation Fund project. The objective of the Second Poverty Alleviation Fund Project (PAF II) is to improve living conditions, livelihoods and empowerment among the rural poor, with particular attention to groups that have traditionally been excluded by reasons of gender, ethnicity, caste and location. The additional credit would finance costs associated with scaled-up activities under the PAF and will also address an unexpected financing gap due to the efficient performance of the project. The PAF II was approved by the Board of Directors in December 2007 and the current closing date is September 30, 2012.

The main target groups of PAF are poor and excluded communities—who are mainly poor women, dalits and indigenous nationalities. PAF is being implemented in 55 districts of Nepal where three districts namely Ramechhap, Sindhuli and Dailekh are selected under the PAF projects considering their poverty and deprivation index. Apart from this, poverty pocket program are implementing in 20 districts of Nepal, where Kavre also falls under this program. Under this program, special poverty pocket area within the district is identified and poverty alleviation related programs are implemented.

Main program of PAF includes (a) Social Mobilization (b) income generating (c) community infrastructure construction and (d) capacity building

Salient features of the PAF project include:

- Poorest of the poor and socially excluded group plan and manage their program by themselves.
- Quick response to meet demand of poor after project formulation. There is flexibility to formulate projects as per local needs and potentials (meet district development plan).
- Direct funding is ensured to poor to manage their schemes.
- Both income generation and infrastructure sub-projects are meant for improving the livelihood of target community.
- There is as much as necessary flexibility for linkages and partnership to fetch synergy and quick discernible impact.
- Improved transparency and governance in service delivery.

- Community Institutional Development for long-term sustainability

(8) Home garden Project (2009-2013)

Home garden project Phase III is based on the lessons learnt and the experiences gained from the last two phases. The project intends to improve health and reduce economic vulnerability of poor and disadvantaged groups through improved nutrition and food security. The project has two specific outcomes:

- Small holders and Disadvantaged group (DAG) families adopt home garden for improved nutrition through diversified dietary sources.
- District and national level partners adopted home garden policies in their program and respond to the demands from home garden groups.

The project is being implemented in 16 districts of Nepal, namely Gulmi, Ilam, Jhapa, Rupandehi, Bardia, Kailali, Kanchanpur, Sindhupalchowk, **Dolakha**, **Kavre**, Baitadi, Dadeldhura, Surkhet, **Ramechhap**, Okhaldhunga and Khotang districts. The project follows SDC Disadvantaged Group (DAG) mapping and works with the same group where SDC already exists. The project is being implemented by Local Initiative for Biodiversity, Research and Development (LI-BIRD), national NGOs. The total budget of project is US\$ 1.1 million for the period 2009- 2013.

The project contributes to the economic and social wellbeing of DAGs, especially land poor families through, (a) diversified source of nutrition and thereby improved health conditions internally from home based resources; (b) small income generation and reduced vulnerability through sale of surplus home garden products, and (c) conservation of biodiversity and environmental protection with the productive use of the land available. The project also contributes for social empowerment of the poor, mainly women of disadvantaged caste and ethnic groups, through their organization, capacity building and involvement in collective action.

(9) Vegetable Seed Project (2011-2014)

Vegetable Seed Project, Phase III focus on consolidating the achievements on improved vegetable seed production and market linkages. It seeks to reorient its focus on quality assurance through truthful labeling and to promote the adoption of farmers' selected seed and technologies. Moreover, the farmer's cooperative based seed production programs remain its prime focus and thrust is on decentralized seed quality assurance provisions. The goal of this phase of the project is to improve food security and income for the poor and disadvantaged households (HHs) in remote areas of Nepal", with two major focuses:

- Farm families from poor and DAGs produce and sell quality seeds, and
- National Seed Board (NSB), NARC and DoA enforce decentralised seed production and quality control through both public and private institutions.

The major target groups, i.e. beneficiaries are farm households from poor and DAGs in the hills of Nepal. It is expected that by the end of project phase, at least 12,000 households including additional 5486 HHs across 16 program hill districts of Nepal including **Ramechhap** will directly benefit from

the project. The project is being implemented by Center for Environmental and Agricultural Policy Research, Extension and Development (CEAPRED), national NGOs. The budget of project is US\$ 2.54 millions.

CEAPRED Nepal will implement the program in close collaboration with the Government of Nepal (GoN) agencies, private seed entrepreneurs; NGO/Community based organisations and farmer's groups. The project will mobilize group provide technical support in seed production, dissemination and marketing. It will also work closely with private seed entrepreneurs to establish a formal seed marketing system

(10) High Value Agriculture Project in Hills and Mountains (2010-2017)

High Value Agriculture Project (HVAP) in Hill and Mountain Areas is the project with the financial support of International Fund for Agriculture Development (IFAD). The Project was signed on 5 July 2010 with the Government of Nepal. The overall goal of the project is the reduction of poverty and vulnerability of women and men in hill and mountain areas of the Mid-Western Development Region and the project purpose is the rural poor, especially women and marginal groups, are integrated in high value agriculture and NTFP/MAP value chains and markets and have improved income, employment opportunities and ability to respond to market demand and opportunities based on marketing agreements with private agribusiness.

The project outcomes are:

- Improved commercial relations and partnerships between agricultural/NTFP/MAP market operators and producers result in profitable, efficient, market-orientated production of high value commodities for 13 500 beneficiary households.
- Increased participation and access of poor marginal producers in high value commodity value chains and agricultural/NTFP markets
- Small poor farmers and other rural producers benefit from sustainable increases in volume and value of production of as a result of improved production/collection, value addition and sales of high value niche market products
- Enhanced environment and strengthened local capacity to support market driven/value chain initiatives.

The project has three components, which include:

- Pro-Poor Value Chain Development (USD 3.0 million) facilitates mutually beneficial and profitable production and marketing arrangements between producers of high value commodities and agri-businesses.
- Inclusion and Support for Value Chain Initiatives (USD 9.7 million) to benefit small poor farmers and other rural producers from sustainable increases in volume and value of production as a result of improved production/collection, value addition and sales of high value niche market products and strengthened local capacity for market driven initiatives.

- Project Management (USD 4.4 million) to provide effective technical, financial and contract management of the project within the context of gender and poverty targeted value chain development.

The project covers three north-south corridors: Surkhet-Chhinchu-Jajarkot, Surkhet- Dailekh and Surkhet-Jumla roads, and the seven districts served by these corridors: Achham, Dailekh, Jajarkot, Jumla, Kalikot, Salyan and Surkhet. Further, the area will cover three remote and high hills/mountainous districts Dolpa, Mugu and Humla as the road network expands.

The project is in implementation through the fiscal year 2010/11 and would be implemented over a six-year period. Project costs total USD 18.9 million with a base cost of USD 17.2 million. Ministry of Agriculture Development (MOAD) is the executing agency whereas SNV and Agri-enterprise Center are implementing agency. The SNV team, which would be responsible for the implementation of Component 1, and for helping coordinate activities in Component 2, would be an integral part of the PMU.

(11) High Mountain Agribusiness and Livelihoods Improvement Project (HIMALI) (2011-2017)

High Mountain Agribusiness and Livelihoods Improvement Project (HIMALI) is being implemented in Nepal with the financial support from Asian Development Bank, Manila. The project intends to assist farmers and downstream enterprises to strengthen linkages, taking advantage of the gradual improvement in infrastructure, to realize the existing demand for mountain products.

The project will improve incomes in selected high mountain areas. The project outcome will be that mountain agribusinesses are commercially viable in selected high mountain districts. The project is expected to result in (i) an additional \$20.0 million gross production value per year; (ii) 7,500 jobs created by participating enterprises; and (iii) participating business enterprises achieving a rate of return on investment of no less than 15% per annum by 2017. The project will also improve mountain communities' resilience to climate change by supporting the implementation of elements of community climate change adaptation action plans and community forestry and rangeland group action plans for timber, grazing, and medicinal plants collection.

The project has three components: 1) mountain agribusiness development, 2) value chain capacity development, and 3) project management. The overall cost of the project is US\$ 30.23 millions. The ADB grant will finance 66% of the project cost, and the government is to provide \$4.52 million equivalent to finance 15% of the project cost, including \$3.78 million equivalent of taxes and duties. Beneficiaries sharing in the agribusiness investments will provide an estimated \$5.71 million, or 19% of the project cost.

The project used a demand-driven approach to (a) mobilize interested producer groups; (b) provide support for quality improvement, value adding, and product aggregation into quantities of scale sufficient to attract demand-side business; (c) stimulate private sector agribusiness development; and (d) reduce risk exposure to businesses investing in the high mountain districts. Project grants will be provided to eligible entities for implementing viable agribusiness plans that demonstrate income and

employment benefits in the project districts.

The project is implemented in ten districts of four development regions, which includes (i) Central Development Region – Dolakha and Rasuwa; (ii) Eastern Development Region – Sankhuwasabha and Solukhumbu; (iii) Mid-Western Development Region – Dolpa, Jumla Humla and Mugu; and (iv) Western Development Region – Manang and Mustang.

MOAD is the executing agency and implementation through the Department of Livestock Services (DLS) and be responsible for overall project management and coordination. AEC will be an implementing agency and responsible for implementation of part of component 1.

(12) Project for Raising Incomes of Small and Medium Farmers (2011-2017)

Raising Incomes of Small and Medium Farmers Project is being implemented with the financial support from Asian Development Bank. The project intends to reduce the market and business risks for small and medium farmers who diversify into high-value commodities (HVCs) in 10 districts of Nepal's Mid-Western Development Region and Far-Western Development Region, namely Banke, Bardiya, Dang, Dhailekh, Surkhet, Baitadi, Dadeldhura, Darchula, Doti, and Kailali.

The project impact will be greater profitability of small and medium-sized farmers in 10 project districts. The outcome of the project is to increase production of HVCs by small and medium-sized farmers. By 2017, the project will achieve 7,500 hectares (ha) of contracted HVC production with estimated annual output of 64,500 tons and projected retail value of \$31.0 million; farm-gate value of \$13.5 million; and a gross margin to farmers of \$9.5 million per annum.

The estimated budget of project is US\$ 33.54 millions. ADB will finance 60% of the total costs, including contingencies. The government will provide \$5.33 million equivalent to 16% of the project cost, including PMU staff salaries and taxes. Beneficiary contributions of \$7.62 million include contributions to investments and increasing payments for services established under the project. SNV will finance the agribusiness and value-chain backstopping package with parallel grant financing for 50% of the direct costs of professional staff, with the ADB grant providing the remainder.

The project support small and medium-sized farmers diversify into HVCs by establishing market links; and providing capital for inputs and better technology, and for building postharvest value chain infrastructure such as storage, packaging, grading, and processing. Project grants will be provided to (i) small and medium farmers who are members of farmer groups or cooperatives with established market supply agreements for initial inputs and farm technology, and (ii) postharvest enterprises for the development of value chain infrastructure to support the market supply agreements. The project will outsource service delivery to nongovernment organizations (NGOs) and the private sector for farmer mobilization, training, production, and business planning, and for feasibility studies on access to project funding.

Ministry of Agriculture Development (MOAD) is the executing agency. The Department of Agriculture, the Agro Enterprise Center (AEC), which is the agricultural wing of the Federation of Nepalese Chambers of Commerce and Industry, and the Nepal Rastra Bank (NRB) will be the implementing agencies responsible for project management and coordination of implementation.

(13) Leasehold Forestry and Livestock Program (2005-2013)

IFAD provided a financial assistance to Nepal, comprising a loan of SDR 7.15 million (equivalent to approximately USD 10.49 million) on highly concessional terms and a grant of SDR 840,000 (equivalent to approximately USD 1.22 million) to finance the Leasehold Forestry and Livestock Program. The program builds on the success of the Hills Leasehold Forestry and Forage Development. Ministry of Forests and Soil Conservation is executing agency of the project while Department of Forests and Department of Livestock Services are implementing agency.

The overall goal of the eight-year LFLP is a sustained reduction in the poverty of the 44,300 poor households that are allocated leasehold forestry plots in 22 districts through increased production of forest products and livestock. The program has four components:

- Leasehold forestry and group formation to improve household forage and tree crop production from secure and sustainable management of leasehold plots
- Livestock development to improved household production of small livestock (goats)
- Rural financial services to establish viable microfinance institutions providing
- Services to lease-holders program management and coordination support to enhance Government's capacity to implement leasehold forestry as a national poverty reduction program in a gender-sensitive way.

It targets poor families in the 22 districts not covered by the ongoing IFAD Western Uplands Poverty Alleviation Project, with particular attention to those living in areas adjacent to degraded forest who cannot secure enough food for their families year round. The program is being implemented in all four districts of Sindhuli Road Corridor.

Total program costs including contingencies, duties and taxes are estimated at USD 12.77 million. Department of Forests is the lead agency for program implementation, with the Department of Livestock Service supporting implementation of the livestock development component.

(14) Combating Citrus Decline Problems in Nepal (2010-2012)

FAO is implementing combating Citrus Decline Problems in Nepal with the support from Food and Agriculture Organizations of United Nations. The total cost of the project is US\$ 0.4 million for two years (2010 – 2012). The project intends to promote citrus cultivation in eastern region of Nepal.

(15) Seeds for Farmers program (2013-2018)

Kisankalgi Unnat Biu-Bijan Karyakram is an IFAD funded operation to support accelerated agricultural growth. It aims at developing the formal seed sector as well as improving smallholder livestock through improved partnership with the private sector in the hills of Nepal. The Program is designed to support two key aspects of agriculture sector hampering productivity: the improvement of formal seed (cereals and vegetables) and improvement of smallholder livestock (goats and dairy) in order to increase income of the poor rural households. This will be achieved by developing the partnership between farmer organizations and the private sector

The goal of the Program is to promote inclusive, competitive and sustainable agricultural growth within the target area such as to contribute to overall economic growth. The development objective of the Program can be defined as to improve rural household incomes through sustainable, market-driven agricultural productivity improvements. Program will have duration of seven years and comprise three technical components, plus a component for Program Management and coordination (PMO).

The three technical components are:

- Support to the Extension of the Formal Seed Sector;
- Smallholder Livestock Development, and;
- Local Entrepreneurship and Institutional Development

The Program is a USD 59.7 million operation to be implemented on for seven years in two phases: the first phase will target six districts and 150,000 hhs (750,000 people) in the mid-west (Rukum, Salyan, Rolpa and Pyuthan) and west regions (Gulmi and Arghakhanchi). The second one will upscale results achieved to more districts from year 4 onwards, after the mid-term review and subject to availability of co-financing raised during phase one. During phase one, a total of 150,000 hhs from vulnerable groups are expected to be moved out of poverty. As a result of the investment in the seed and livestock industry, the potential impact on the wider farming community of the hills region is considered to comprise an additional 200,000 hhs.

(16) Agriculture and Food Security Project (2013-2018)

Funded by the World Bank, the Project Development Objective (PDO) is to enhance food and nutritional security of targeted communities in selected locations of Nepal. Food security will be realized through increased food availability, made possible by increasing productivity of agriculture, both crop and livestock. Nutrition security will be realized through improved dietary intake, made possible by promotion of diversified diets, and improved feeding and caring practices for pregnant and nursing women and children up to 2 years of age.

The key expected outcomes from the project are: (i) increase in the productivity of targeted crops; (ii) increase in the yield of targeted livestock products (milk, meat and eggs); (iii) increase in proportion of pregnant and nursing mothers and children between 6-24 months' age adopting appropriate feeding practices. Overall, the project will have four components, the fourth relating to project management.

- Technology Development and Adaptation
- Technology Dissemination and Adoption
- Food and Nutritional Status Enhancement
- Project Management

The project will be implemented over a period of five years by MOAD with support from MOHP, with monitoring and supervision provided by the World Bank.. The project will be implemented in 19 hill and mountain districts of the Mid- and Far-Western development region of Nepal, which includes Darchula, Baitadi, Dadeldhuda, Humla, Jumla, Mugu, Dolpa, Kalikot, Bajhang, Bajura Jajarkot

Achham, Doti, Dailekh, Surkhet, Rukum, Salyan, Rolpa, and Piuthan. These districts comprise 784 VDCs which together have over 645,000 households and a population of about 3.4 million. It is expected that approximately a quarter of these VDCs will be covered directly by the project. The beneficiaries of the project will be crop farmers (estimated direct beneficiaries 50,000), livestock farmers (32,500), women engaged in household/kitchen-garden production (35,000), and households with pregnant and nursing women (45,000). The project interventions will be organized and implemented through groups, including pre-existing groups in the project area. The priority target groups of the project are small and marginal farmers, landless households, indigenous population, and Dalits.

The project will be financed by a grant provided under the Global Agriculture and Food Security Program. Total project cost (including contingencies) of \$58 M is shared by technology development and adaptation (16.1%), technology dissemination and adoption (54.2%), nutritional status enhancement (18.4%) and the rest (11.3%) for project management support.

(17) The Knowledge-based Integrated Sustainable Agriculture and Nutrition (KISAN) (2013-2018)

KISAN is USAID's five-year, \$20.4 million, Feed the Future initiative in Nepal. The project seeks to sustainably reduce poverty and hunger in Nepal by achieving inclusive growth in the agriculture sector, increasing income of farm families and improving nutritional status, especially of women and children in over 160,000 households through integrated agriculture and nutrition activities. USAID will implement the project from 2013-2018 with Winrock International in collaboration with five Nepali organizations: Antenna Foundation Nepal; Development Project Service Center (DEPROSC); Center for Environmental and Agricultural Policy, Research, Extension and Development (CEAPRED); Nutrition Promotion and Consultancy Services (NPCS); and Nepal Water for Health (NEWAH). KISAN will impact one million Nepalis in Kapilbastu, Palpa, Agarkhachi, Gulmi, Banke, Bardiya, Surkhet, Dailekh, Jajarkot Dang, Salyan, Rukum, Rolpa, Pyuthan, Baitadi, Kailali, Kanchanpur, Doti, Accham, Dadheldhura.

(18) Samarth-Nepal Market Development Program (NMDP) (2012-2016)

Samarth-Nepal Market Development Program is a five year DFID-funded rural market systems development program that aims to reduce poverty in Nepal by increasing the incomes of 300,000 farmers and small-scale entrepreneurs by an average of £80 per year. The program follows a Making Markets Work for the Poor (M4P) approach. Samarth-NMDP seeks to improve the underlying pro-poor performance of rural sectors, leading to opportunities for better access and improved growth for poor and disadvantaged people. Samarth-NMDP operates by designing and implementing a series of catalytic interventions that respond to particular constraints hindering pro-poor growth in rural market systems. The program has a particular focus on poor and disadvantaged women and men.

Samarth -NMDP operates a portfolio approach to development and delivery of interventions. In a portfolio approach, a program maintains a flexible mix of markets, entry points, partners and type of interventions. Samarth -NMDP not only develops agricultural markets but also strengthens the

markets that are important to rural development for example mechanization, media, input suppliers etc. Current portfolio where Samarth -NMDP is working includes ginger, vegetables, pigs, fish and dairy sub-sectors. These provide basis for poverty reduction, reaching scale and outreach, feasibility and relevance to public priorities such as gender and social inclusion, environment and alignment with Government Nepal's priorities.

Samarth-NMDP is not limited to any particular geographical region, and has the potential to operate in any part of Nepal that is economically viable.

The program is being implemented in Sunsari, Morang, Jhapa, Okhaldhunga, Bhojpur, Bara, Rautahat, Sarlahi, Mahottari, Dhanusa, Siraha, Saptari, Chitwan, Dhading, Tanahu, Gorkha, Nawalparasi, Palpa, Rupandehi, Kapilvastu, Gulmi, Makwanpur, Mustang, Manang, Myagdi, Lamjung, Rasuwa, Sindhupalchok, and Dolakha districts.

The primary focus is smallholder farmers and small-scale entrepreneurs with incomes of less than USD1.25 per day, with a particular focus on women and marginalized groups - geographic focus will depend on where these aims can be most effectively achieved

SN1.7: Detailed Information of MOAD

(1) Ministry of Agriculture Development

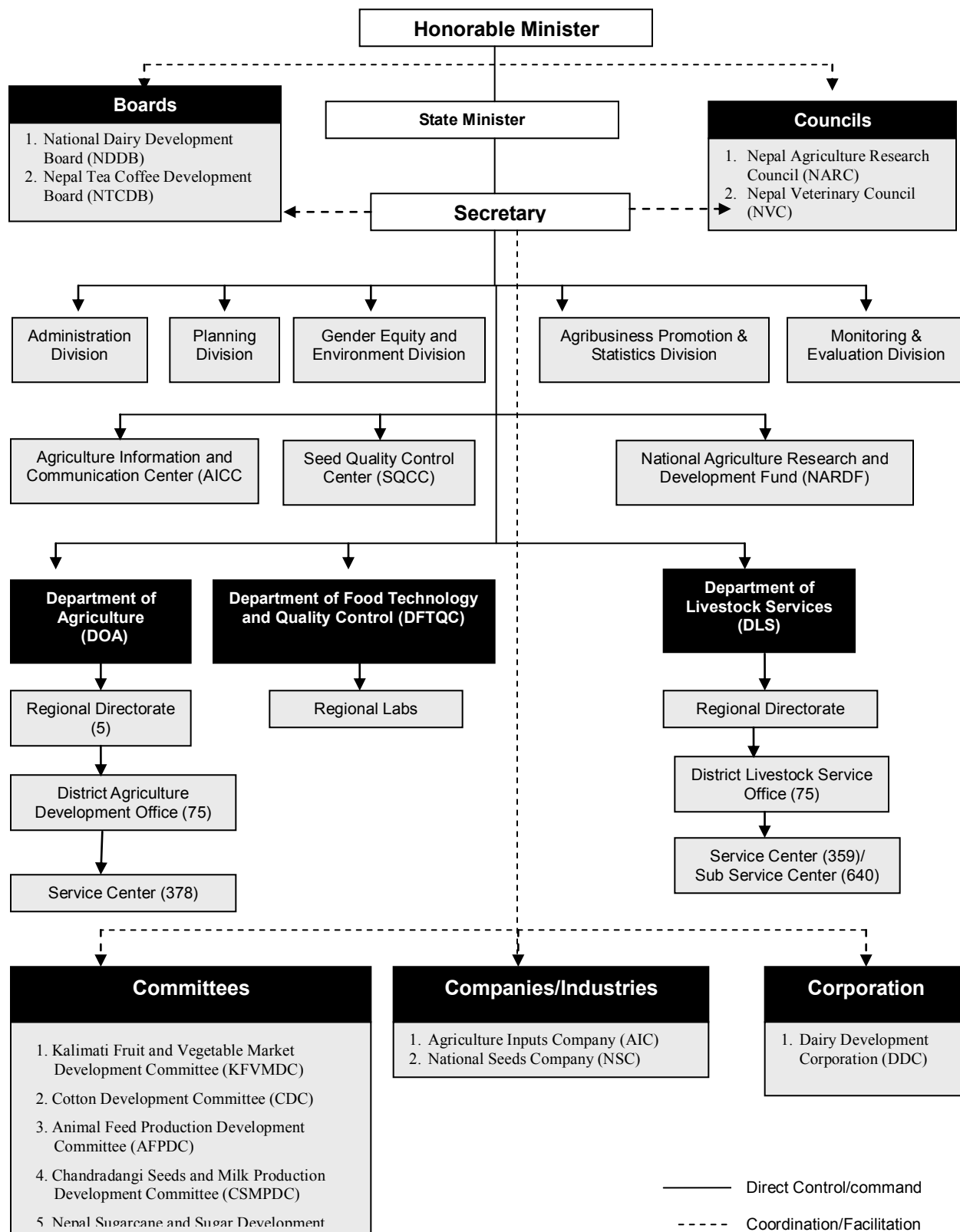
Structure

Ministry of Agriculture Development (MOAD) is the main institution responsible for the overall development of agricultural sector. Agriculture-related policy formulation and implementation based on country's needs and feasibilities is the overall objective of this ministry. Specifically, this ministry contributes to poverty reduction goal of the country by achieving high economic growth through commercial and competitive agricultural system. As shown below in Table SN1.7.1, this ministry has five divisions. Within MOAD, Secretary is assisted by five Joint Secretaries leading each of the five divisions.

Table SN1.7.1: Divisions and Sections in the Ministry of Agriculture Development

SN	Divisions	Sections
1.	Agricultural Business Promotion and Statistics Division	1) Agricultural statistics section 2) Agricultural business promotion section 3) Agricultural geographic information Section 4) World trade organization section
2	Planning Division	1) Agricultural policy section 2) Budget and program section 3) Foreign aid co-ordination section 4) Planning and human resource development section
3.	Gender Equity and Environment Division	1) Gender equity section 2) Environment and biological diversity section 3) Gender co-ordination section
4.	Administration Division	1) Staff administration section 2) General services section 3) Act rules consultation section 4) Financial administration section
5.	Monitoring and Evaluation Division	1) Priority program and foreign aid section 2) Agriculture perspective plan monitoring and analysis section 3) Board, Corporation, Committees co-ordination section 4) Agricultural inputs supply monitoring section

MOAD has four main executive departments and three central level organizations in addition to 5 committees established as per the Development Committee Act, two companies established under Company Act , 1 corporation established under Corporation Act, three boards established under separate legislative arrangements and Nepal Agriculture Research Council established under Nepal Agriculture Research Council Act. Figure SN 1.7.1 shows structure of the Ministry of Agriculture Development.



Source: MOAD, 2012

Figure SN1.7.1: Organizational Structure of the MOAD

Functions:

Government of Nepal, Work Distribution Rule 2007 has prescribed the functions of MOAD. MOAD has both development and regulatory roles. Major function of MOAD includes

- Policy, planning and implementation regarding agriculture and agricultural production.
- Development and improvement of cereal and pulses, oilseeds, cash and industrial crops including cotton, jute, sugarcane, tobacco, vegetables, fruits and tobacco, fisheries, bee keeping, mushroom, sericulture etc related crops.
- Research and utilization of knowledge related to agricultural chemicals and soil.
- Management of Agricultural farms and Agriculture center.
- Legislation, research and survey related to plant protection.
- Animal husbandry and its development, breeds improvement, animal feeds and forage related, veterinary services, prevention of livestock diseases and veterinary medicines management.
- Agricultural extension, dissemination and farmers programs.
- Development related to milk and dairy products.
- Agricultural market and price related to agricultural products.
- Agricultural inputs and agricultural technology development including seeds, seedlings, fingerlings, animal breeds, fertilizers, compost.
- Formulation, planning and implementation related to cooperative development.
- Food research related activities.
- Animal and plant quarantine related works.
- Human resource management including recruitment, transfer, career development of all staff under agricultural service (all faculties and sub-faculties).
- Plant protection related research and survey.
- Agricultural extension and youth mobilization.
- Nursery and seeds production.

In summary, the MOAD is responsible for undertaking activities related to production and productivity increase, food security, poverty reduction, environment and biodiversity conservation, targeted program, human resource development and cooperative promotion.

Following section briefly discuss on major functions performed by different board, committee and companies under MOAD.

Nepal Agricultural Research Council (NARC) established in 1991 replacing National Agricultural Research and Services Center (NARSC), as an autonomous organization under “Nepal Agricultural Research council Act – 1991. NARC is established for conducting efficient, effective and dynamic

agriculture research system in Nepal to uplift the economic level of the people by research activities on agriculture. The Sixteen-member Council is chaired by the Minister for MOAD. Major function of NARC includes:

- Conduct high level research work on various fields of agriculture required in line with the national agricultural policies
- Prioritize studies and researches to be conducted
- Provide research and consultancy services to its clients
- Coordinate, monitor and evaluate the agriculture research activities in Nepal
- Document and disseminate research activities

Nepal Veterinary Council (NVC) was established in 1999 under Nepal Veterinary Council Act 1998. The NVC was established to capitalize the veterinarian graduates in Nepal for providing certified professional services. The council of the NVC consist the Government nominated one chairman, and two members, two elected vice chairman and five members, and one member (President of Nepal Veterinary Association). Major function of NVC includes:

- Registers qualified veterinarian and maintain the professional database by providing individual specific professional NVC registration number,
- Monitor quality and effective services of veterinarian, and code of conduct/ professional ethics to be followed by the registered veterinarians according to NVC regulation and take necessary actions against those not following NVC regulations
- Monitoring and inspect veterinary institution involved in producing veterinarian,
- Recognize degrees obtained from non Nepalese universities or institutions and recommend the Government of Nepal on equivalencies of the degrees.
- Supports and recommend the GoN in formulating policies, action plan and programs for maintaining quality, effective, systematic and respectful veterinary services and profession in the country.

National Dairy Development Board (NDDB) was established in 1992, under the National Dairy Development Board Act 2001. NDDB was formed to increase dairy production based on the public participation, coordinating the programs of private and public dairy production and development, and to meet the increasing demand for milk and dairy products in Nepal. Main functions of NDDB include:

- Formulation of national dairy business policies and assist Government of Nepal (GoN) in formulation of the development plans
- Develop the dairy industry
- Sort out the problems in the livestock development and livestock health areas for the development of the dairy

- Establish the coordination between the entrepreneurs from private and public sector of the country
- Conduct high level study and research for the development of the dairy

The **National Tea and coffee Development Board (NTCDB)** was constituted by the Government of Nepal (GoN) under the NTCDB Act 1992. NTCDB's main objectives are to formulate plans and policies for the development of tea and coffee at the national level and to strengthen the public, private and the small farmers sectors involved in the tea and coffee industries. The NTCDB aims to accomplish and simplify the cultivation and manufacturing of tea and coffee, production of high quality and quantity, implementing modern technology and marketing management including export oriented and import rules and regulations that were necessary to establish and run. Honourable Minister of MOAD is the chairman of the board, and the board has an executive committee consists members from various ministries, organizations and private sectors. The main functions of the board include:

- Formulate and recommend production, processing, market promotion, import and export policies relating to Tea and Coffee industry and cause to implement approved policies.
- Identify problems in Tea and Coffee development and recommend measures to solve them.
- Manage the supply of inputs for Tea and Coffee cultivation as well as processing
- Provide Training and Technical support to individuals and institution involved in Tea and Coffee development through the establishment of Training and Research Centers
- Conduct study for the development of Tea and Coffee sector
- Provide other necessary support to Tea and Coffee

Livestock Feed Production Development Committee (LFPDC) was established in 1984 under Development Committee Act 1956. LFPDC aims to the development and expansion of improved livestock program, managing balanced feed and provide technical and extension services on balanced feed production. Main functions of the committee include:

- Make balanced nutritional fodder product of the livestock available in reasonable price
- Investigate and research required for the production of the livestock feed
- Technical assistance to the private sector involved in the production of livestock feed
- Process raw bone of livestock and produce bone powder to use in livestock feed and
- Supply of bone powder to use in livestock feed to private sector

Cotton Development Committee (CDC) has been functioning under the MOAD since 1987, for the development and expansion of cotton farming in the country. CDC aims to supply raw materials to the textile and thread industries in the country. Main function of the committee includes:

- Produce raw material required for the cloth and thread industry in the country
- Help to reduce cotton import

- Specifically, increase income of the small farmers and rural employment opportunities

Kalimati Fruits and Vegetable Market Development Committee (KFVMDC): Kalimati Fruits and Vegetable Wholesale Market Development Board were formed on 13 February 1995 under the Development Board Act 1957. The committee has been formed to manage operations of the market in an organized way and ensuring planned development of agriculture marketing for vegetable and fruits in the Kathmandu valley. Main functions of the committee include:

- Manage market facilities and services with commercial approach
- Keep and maintain market place clean and hygienic
- Control adulteration and transaction of unhygienic produces
- Encourage packaging, grading and standardization of produces
- Resolve the problems and disputes in course of market management and operation
- Fix necessary service charges and realize the same for facilities made available
- Establish agricultural marketing information system
- Encourage auction system in transaction
- Train staff, traders and farmers
- Establish and operate market and marketing facilities in potential areas

Chandra Dangi Seed and Dairy Development Committee (CDSDDC): Chandra Dangi Seed and Dairy Development Committee is a transformed form of Kankai Agricultural Firm established in 1976. Main functions of the committee include:

- Production of seed of grains such as maize
- Production of high-breed cows and buffalo calf
- Production of fish
- Production of fruit saplings
- Collection of the milk from the farmers and supply to dairy industries
- Breed improvement of local cattle

Nepal Sugarcane and Sugar Development Committee (NSSDC) was established by the Government of Nepal in 2010 under the Development Committee Act 1956. It aims to support government policy making and amendments for the development of sugarcane farmers, farming and sugar industries. Main function of the committee includes

Main Tasks and Responsibilities

- Support and recommend on policy level to the Government of Nepal for the development of sugarcane farming and sugarcane based industries
- Arrange agriculture inputs and technical supports for sugarcane growing farmers

- Coordinate among the stakes involved in sugarcane farming, research, development, promotion and sugar producers
- Identify new innovations and technology of sugarcane farming and sugar production and apply in the Nepalese context
- Conduct studies and analysis on cost of sugarcane production and price of sugars
- Share information on the studies of sugarcane and sugar demand and supplies
- Identify problems faced by sugarcane farmers, farming and sugar industries, and recommend proper solution to the Government of Nepal (GoN)
- Promote commercialization of sugarcane farming
- Support on consultancies based on market studies, to sugarcane farmers in order to make it prominent cash crops in the country
- Contribute on studies of value chain from sugar production to consumers in order to promote the sugar business
- Conduct studies and researches on the alternate use and scope of sugar industries by products
- Mediate between sugarcane producing farmers and sugar industries whenever dispute arises

Agriculture Inputs Company Limited (AICL)

Agriculture Inputs Company Limited was established in accordance to the Company Act 1993 to differentiate the seed and fertilizer transaction and involve private sector in the production of chemical fertilizer and make the public organization competitive. Main functions of the committee include:

- Produce, purchase and import and distribute different types of inorganic fertilizers according to national needs
- Import the required raw materials for producing the inorganic fertilizers and distribute and export by purifying, producing and blending
- Ensure regular supply of the chemical fertilizers by facilitating the buffer stock for the chemical fertilizers provided by the Nepal Government, donor nations and National and International related Institutions
- Purchase and sell and import and export the Agricultural products

National Seed Company Limited (NSCL) was established under the Company Act 1996 to supply qualitative seed required for boosting agricultural production. Main functions of company include:

- Professionally producing, purchasing, processing, storing and distributing the required high breed seeds for the agricultural production
- Import and export of the high breed seed
- Conduct trainings and consultation as per the tests, studies and requirements, considering the geographic situation of the country to improvise different types of vegetables and food crops

- Retail sale of the high breed seeds to the private sectors
- Production of contemporary breeder seeds in coordination with concerned authority

Dairy Development Corporation (DDC) established under Corporation Act 1964. DDC is a fully state owned corporation. DDC comprises of fully modern dairy plants, 11 cheese manufacturing units, 45 milk chilling plants (63 chilling centers covering 34 districts) and highly qualified dairy specialists. Main functions of Dairy Development Corporation include:

- Provide a guaranteed market for milk to the rural farmers with fair price
- Supply pasteurized milk and milk products to urban consumers
- Develop organized milk collection system to meet increasing demand for pasteurized milk and milk products
- Develop an organized marketing system for milk and milk products in urban areas

National Co-operative Unions Limited (NCUL): National Co-operative Unions Limited was established under the Co-operative Act, 1991 in 1993. It has obtained membership at International Cooperative Association (ICA) in 1997 A.D. Main functions of union include:

- Ensure active participation of the people for expansion and development of Nepal's co-operative movement as per the co-operative principle
- Support in the business development, economical and social programs of the co-operative organizations to increase the social and economic standard of the people
- Assist in leadership development and improvement in the management of the co-operative organizations
- Increase in mutual assistance of the like-minded national, regional and international organizations
- Provide leadership to the overall co-operative movement and represent in the nationally and internationally

Staffing:

Table SN1.7.2 below shows the staffing under the MOAD and at the MOAD by level and post classification. Total staff position approved for MOAD is 9469 of which 132 has been approved at ministerial level.

Table SN1.7.2: Staff Position at MOAD

SN	Position	Total Staff Position (Approved for MOAD and related organization)	Approved Staff Number at Ministry
1	Special class (Secretary)	1	1
2	Technical Officer		
	First Class	65	5
	Second Class	262	15
	Third class	868	22
3	Administration (Officer)		
	First class	1	1
	Second class	4	2
	Third class	14	8
4	Legal (Officer)		
	Second class	1	1
	Third class	3	0
5	Account (Officer)		
	Second class	3	1
	Third class	10	3
A	Officer (Total)	1,232	59
6	Assistant level		
	6.1 Administration (First class)	121	12
	6.2 Account (First class)	137	5
	6.3 Technical (First class)	1,634	11
	6.4 Administration (Second class)	266	5
	6.2 Account (Second class)	205	0
	6.3 Technical (Second class)	2,239	3
	6.4 Technical (Third class)	225	0
	6.5 Technical (Fourth class)	99	0
	6.5 Administration (Third class)	16	0
	6.6 Computer operator	6	3
	6.7 Typist	179	4
7	Others		
	7.1 Driver	201	12
	7.2 Office support	1,675	18
B	Assistant & others	8,237	73
	Overall (A+B)	9,469	132

Source: MOAD, 2012

Budget:

Table SN1.7.3 below shows budget allocated by the government of Nepal for MOAD in the Fiscal Year 2013/14. As seen from the data presented in this table, it allocated NRs. 21903 million in 2013/14 which is 4.2% of the total national budget. Of total budget allocated to this ministry, nearly 86% was allocated for recurrent and 12% in capital cost. Recurrent includes staff salary, allowances, travel costs, office supplies, training etc. Of the total budget of MOAD, fourth fifth (78.6%) came from government own source followed by foreign grant (19.6%) and foreign loan (1.7%).

Table SN1.7.3: Annual Budget of the Ministry of Agriculture Development, 2013/14

Unit: Million NRs

	Budget (Approved)
National budget	517,240
Ministry of Agriculture Development	21,903
Share of agriculture budget to national budget	4.2
Expenditure	
Recurrent	18,671 (85.2 %)
Capital	2,732 (12.5%)
Financing arrangements	500 (2.3%)
Financing plan	
Government source	17,230 (78.7%)
Foreign grant	4,290 (19.6%)
Foreign loan	383 (1.7%)

Source: NPC, 2013

(2) Department of Agriculture

Structure:

Department of Agriculture (DOA) is responsible for implementation of production oriented programs, technology transfer services and regulatory functions on crops and fisheries. The broad objective of this department has been to support and help achieve food security and poverty alleviation by the transformation of agriculture through diversification and commercialization. The department is headed by the Director General who is supported by three Deputy Director Generals on:

- Planning and Human Resource
- Monitoring, Evaluation and Management
- Technology Transfer and Co-ordination.

Table SN1.7.4 below presents organizations under DOA.

Table SN1.7.4: Organizations under DOA

SN	Organizations	Number
1	Program Directorate	12
2	National Development Program	5
3	Regional Directorates of Agriculture (RADs)	5
4	District Agriculture Development Offices	75
5	Regional Agricultural Training Centers	5
6	Regional Soil Testing Laboratories	5
7	Regional Seed Testing Laboratories	5
8	Regional Plant Protection Laboratories	5
9	Horticulture Farms	12
10	Fishery Development and Training Center	11
11	Vegetable Development Farms/Center	9
12	Agriculture Service Center	378

Apart from District Agriculture Development Office and Agriculture Service Center, following organizations are located in the Sindhuli Road Corridor districts.

SN	Organizations	Place	District
1	National Sericulture Development Program	Khopasi	Kavre
2	Root crop Vegetable Development Center		Sindhuli
3	Spices Crop Development Center	Panchkhal	Kavre
4	Nucleus Potato Seed Production	Nigale	Dolakha

Program directorates assist the department to formulate policies under their mandates thematic areas (scope of services), plan central level programs and implement through the respective District Agriculture Development Offices (DADOs). Twelve program directorates under the DOA are:

- Vegetable Development Directorate
- Fruit Development Directorate
- Fisheries Development Directorate
- Industrial Entomology Directorate
- Crop Development Directorate,
- Agricultural Business and Market Development Directorate
- Agricultural Extension Directorate
- Agricultural Training Directorate
- Plant Protection Directorate
- Post Harvest Management Directorate
- Soil Management Directorate and
- Agricultural Engineering Directorate.

Under each program directorate, relevant national programs, farms and centers are established. Likewise, the program directorates also control and command on regional laboratories. Five national level programs include:

- National Citrus Development Program
- National Potato Development Program
- National Natural and Artificial Water Bodies Fishery Development Program
- National Industrial Crop Development Program
- National Sericulture Development Program.

RADs are primarily responsible for administration, coordinating district level planning with technical/program directorates and monitoring the performances of DADOs located in their respective regions.

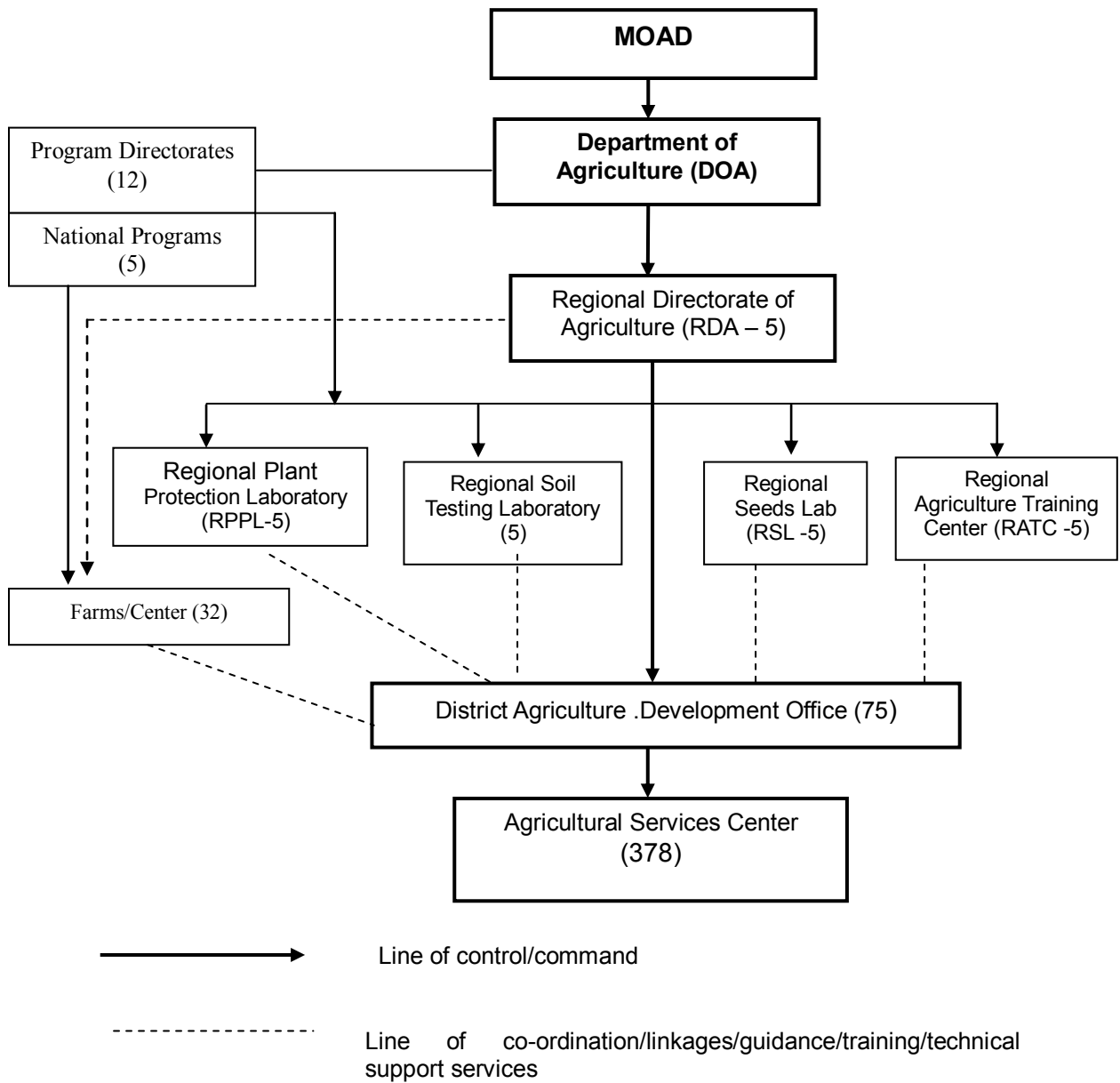
DADOs are established in each of 75 districts which are represented by 4 to 5 Agricultural Service Centers (ASCs) at the grassroots level. Each ASC is responsible to provide services to 10 to 12

Village Development Committees. There are 378 ASCs in 75 districts. Figure 2 shows organizational structure of the Department of Agriculture. **Map 1** shows location of different institutions under Department of Agriculture.

Functions:

Key functions of the DOA are:

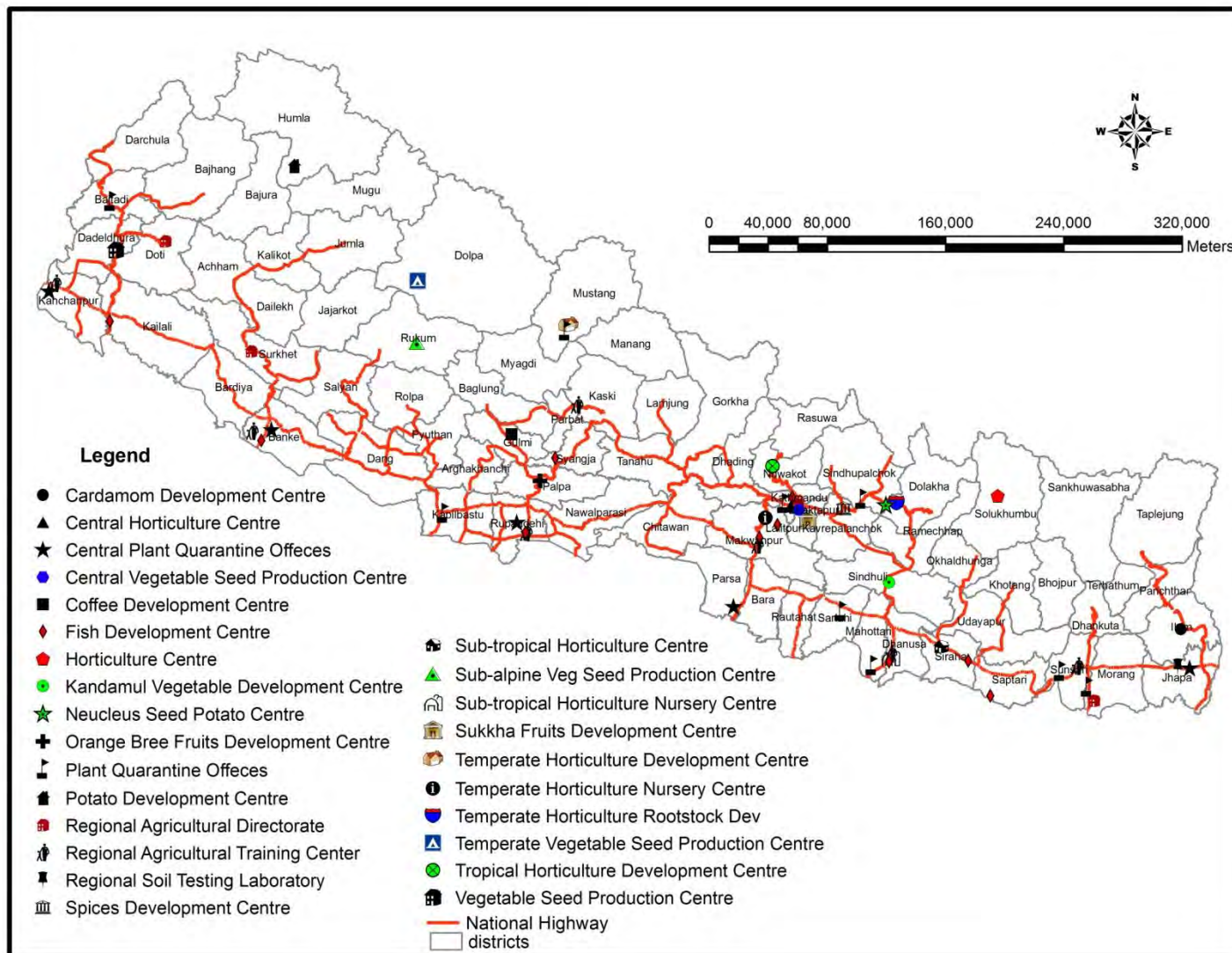
- 1) Implement production oriented programs such as:**
 - Crop development (cereal and cash crops, seeds management, technology transfer),
 - Horticulture development (fruit, vegetable, spice crops, tea, coffee, potato etc),
 - Fisheries Development (Fishery technology, fingerlings production and distribution)
 - Industrial entomology development (sericulture, mushroom and bee keeping)
- 2) Implement service orientated programs such as:**
 - Agricultural extension service,
 - Plant protection service,
 - Small irrigation,
 - Agricultural training service,
 - Post harvest loss control service,
 - Agricultural market development service,
 - Seeds and quality control service,
 - Soil analysis service, and
 - Agricultural engineering services.
- 3) Manage and coordinate department level agricultural projects including externally assisted projects.**
- 4) Human resource development of staff working under the department.**



Source: MOAD, 2012

Figure SN1.7.2: Organizational Structure of the Department of Agriculture

Map SN1.7.1: Location of Different Offices under Department of Agriculture



Staffing:

Table SN1.7.5 shows staff positions under the Department of Agriculture by level and staff position classification.

Table SN1.7.5: Staff Positions under the Department of Agriculture

SN	Position	Approved Staff Number
<i>A. Officers</i>		
1	Technical	
1.1	First Class (Joint secretary)	35
1.2	Second Class (Under secretary)	149
1.3	Third class (Section Officer)	538
2	Administration (Officer)	
2.1	Second class (Under secretary)	1
2.2	Third class (Section Officer)	3
3	Legal (Officer)	
3.1	Third class (Section Officer)	1
4	Account (Officer)	
4.1	Second class Under secretary)	1
4.2	Third class (Section Officer)	3
A	Total (Officers)	731
<i>B. Assistant and Others</i>		
5	Assistant level	
5.1	Administration (First class)	91
5.2	Account (First class)	97
5.3	Technical (First class)	931
5.4	Administration (Second class)	137
5.5	Account (Second class)	90
5.6	Technical (Second class)	1,099
5.7	Technical (Third class)	44
5.8	Technical (Fourth class)	52
5.9	Administration (Third class)	8
5.10	Typist	95
6	Others	
6.1	Driver	109
6.2	Office support	1,490
B	Total (Assistant and others)	4,243
	Overall (A+B)	4,974

Source: MOAD, 2010

Budget:

In the year 2011/12, the government approved NRs. 2,933.5 millions which is almost 24% of the total budget (NRs 12421.1 millions) allocated to the Ministry of Agriculture Development in 2011/12 (MOAD, 2012).

(3) Department of Livestock Service

Department of Livestock Service (DOLS) is responsible for production oriented services in livestock sector, veterinary services and related regulatory functions. Table SN1.7.6 presents organizational structure of Department of Livestock Services:

Table SN1.7.6: Organizations under DOLS

SN	Organizations	Number
1	Technical directorates	4
2	Regional directorate of livestock services	5
3	central level organizations	16
4	regional livestock services training centers	5
5	livestock animal quarantine offices	8
6	District Livestock Service Offices	75
7	Livestock Service Center	359
8	Livestock Service Sub Center	640

DOLS has four central level technical directorates namely

- Animal Health Directorate,
- Livestock Production Directorate,
- Livestock and Poultry Market Promotion Directorate and
- Livestock Training and Extension Directorate,

Central level organizations include

- Central Livestock Disease Investigation Laboratory
- Central Veterinary Hospital
- National Forage and Animal Feed Development Center
- Central animal quarantine Office
- National Poultry Disease Investigation Office
- Central Vaccine Production Office
- Rabies Vaccine Production Office
- National Foot and Mouth and Epidemiology Laboratory
- Veterinary Standard and Drug Management Office
- Veterinary Epidemiology Center
- Veterinary Public Health Office
- National Livestock Breeding Center
- National Forage and Animal Feed Center
- Central Sheep and Goat Promotion Office
- Central Pig and Poultry Promotion Office
- Livestock Quality Management Office

➤ Central Cow and Buffalo Promotion Office.

Apart from these offices, 8 livestock development farms, one poultry farm, 3 forage and fodder seed production farms and 2 Rhizobium Laboratory Farms are operating under this department.

Parallel to the RADs, five Regional Directorates of Livestock Services (RDLS) are established in five development regions with 75 District Livestock Services Offices (DLSO), one in each of 75 districts. Five RDLS in the five regions support DLSOs in administration, coordinating district level planning with technical directorates and monitoring performances. DLS is more spread than DOA. It has 359 livestock service center (LSS) and 640 livestock service sub centers (LSSC).

Apart from District Livestock service office, Livestock Service Center and Livestock Sub-Service Center, following organizations are located in the Sindhuli road corridor districts.

SN	Organizations	Place	District
1	Livestock Development Farm	Jiri	Dolakha

Figure SN1.7.3 shows the organizational structure of the Department of Livestock Services. Map SN1.7.2 presents location of different livestock related organizations of DLS.

Functions:

The overall objective of the DLS is to contribute to national production through diversification, commercialization and development of livestock keeping as income generating and respectable vocation. Department's activities can be divided into three major sub-sectors (a) Animal Health Service (b) Livestock production service and (c) Livestock training and extension service. Its key functions include:

- Increase production and productivity of livestock products and implement production oriented programs: milk, meat, egg and wool production programs (livestock, poultry, breeds management, technology transfer), (b) animal husbandry
- Implement service orientated programs (livestock extension service, veterinary services, animal quarantine services, livestock training services, veterinary medicine quality control service, livestock and poultry market development and promotion service, artificial insemination services, breeding services, pathology services, veterinary diseases diagnostic services, epidemiology services etc.)
- Manage and coordinate department level livestock development projects including externally assisted projects.
- Human resource development of staff working under the department

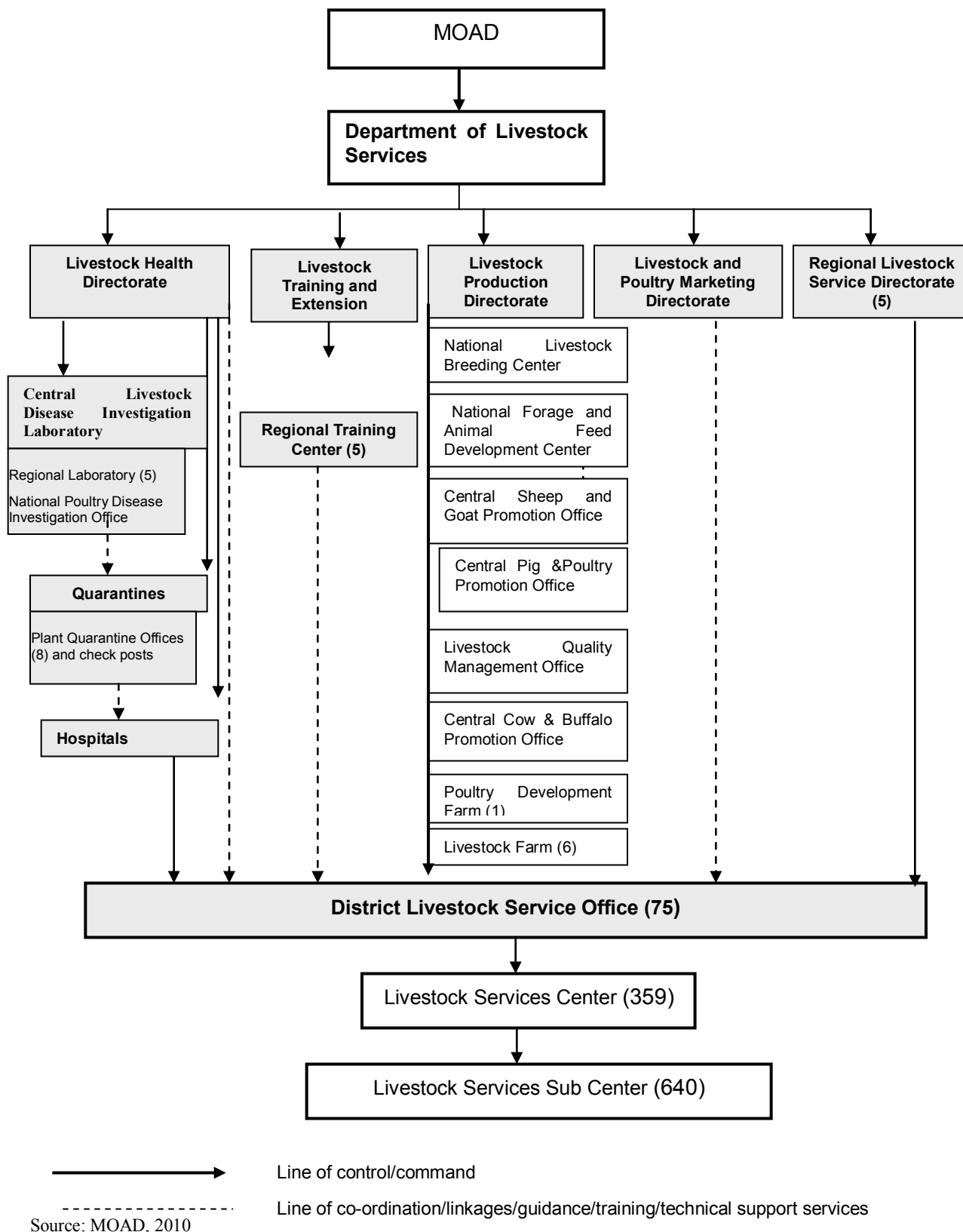
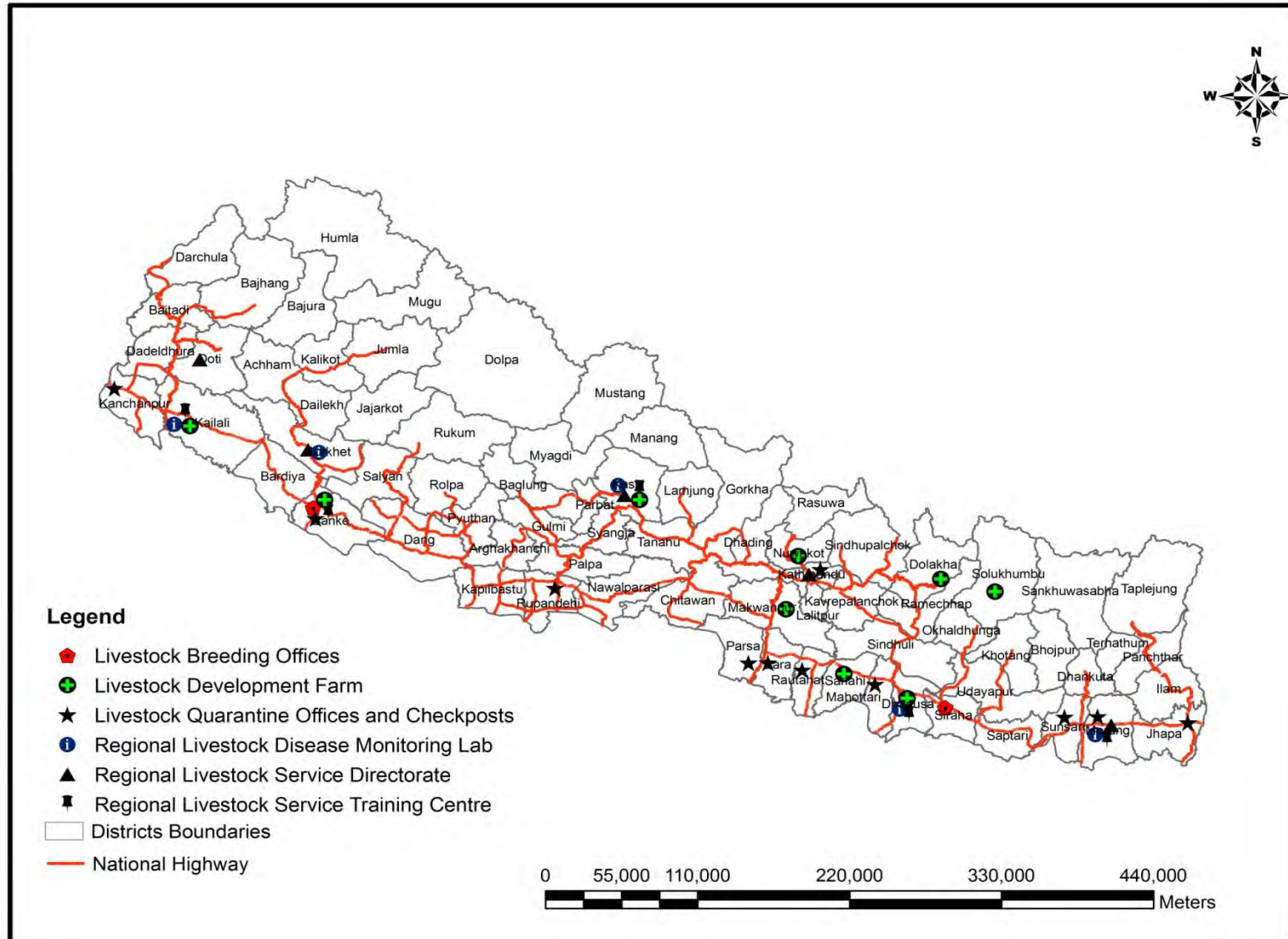


Figure SN1.7.3: Organizational structure of Department of Livestock Services

Map SN1.7 2: Location of Different Offices under Department of Livestock Service



Staffing:

Table SN1.7.7 below shows staff positions under the Department of Livestock Services.

Table SN1.7.7: Staff Positions under the Department of Livestock Services

SN	Position	Approved Staff Number
1	Technical Officer	
1.1	First Class	18
1.2	Second Class	75
1.3	Third class	244
2	Administration (Officer)	
2.1	Second class	1
2.2	Third class	2
3	Legal (Officer)	
3.1	Third class	1
4	Account (Officer)	
4.1	Second class	1
4.2	Third class	2
A	Officer (Total)	344
5	Assistant level	
5.1	Administration (First class)	13
5.2	Account (First class)	30
5.3	Technical (First class)	581
5.4	Administration (Second class)	114
5.5	Account (Second class)	112
5.6	Technical (Second class)	1,127
5.7	Technical (Third class)	174
5.8	Technical (Fourth class)	41
5.9	Administration (Third class)	6
5.10	Typist	73
6	Others	
6.1	Driver	72
6.2	Office support	1,363
B	Assistant others	3,706
	Overall (A+B)	4,050

Source: MOAD, 2010

Budget:

In the year 2011/12, the government approved NRs. 1,344.2 millions which is almost 11% of the total budget (NRs 12,421.1 millions) allocated to the Ministry of Agriculture Development in 2011/12 (MOAD, 2012).

(4) Department of Food Technology and Quality Control

Structure:

Department of Food Technology and Quality Control (DFTQC) is responsible for implementation of the Food Act 1966 to maintain food quality control, to research and disseminate food technology and raise public awareness of the benefits of improved nutrition. DFTQC provides these services through five regional food and quality control offices and district food inspection units. This department is organized into two divisions, one sanitary and phytosanitary (SPS) national Enquiry point, one national programs, 12 sections and several laboratories and 1 Apple Processing Center. Apple processing center is located in Jumla district. Figure 6.4 shows the organizational structure of the DFTQC. None of the DFTQC related office is located in SRC. Map 6.3 shows location of organizations under DFTQC in Nepal.

Functions:

The department works in the areas of ensuring availability of safe, quality and nutritious food to Nepalese people through a number of activities in the area of food quality control, development and dissemination of food processing technologies as well as food and food and nutrition. Its key functions include the following:

- Reduce the incidence of hazards (adulteration) related to food/feed
- Facilitate the national/international trade related to feed and agriculture
- Reduce post harvest loss through the development and dissemination of appropriate processing/preservation technologies
- Increase the establishment of small scale food industries
- Improve the knowledge, attitude and practice of consumers on food safety, quality and nutrition
- Execution of food act and feed act and education/awareness to producers, traders and consumers in partnership with government agencies, industries, farmers and consumer associations.

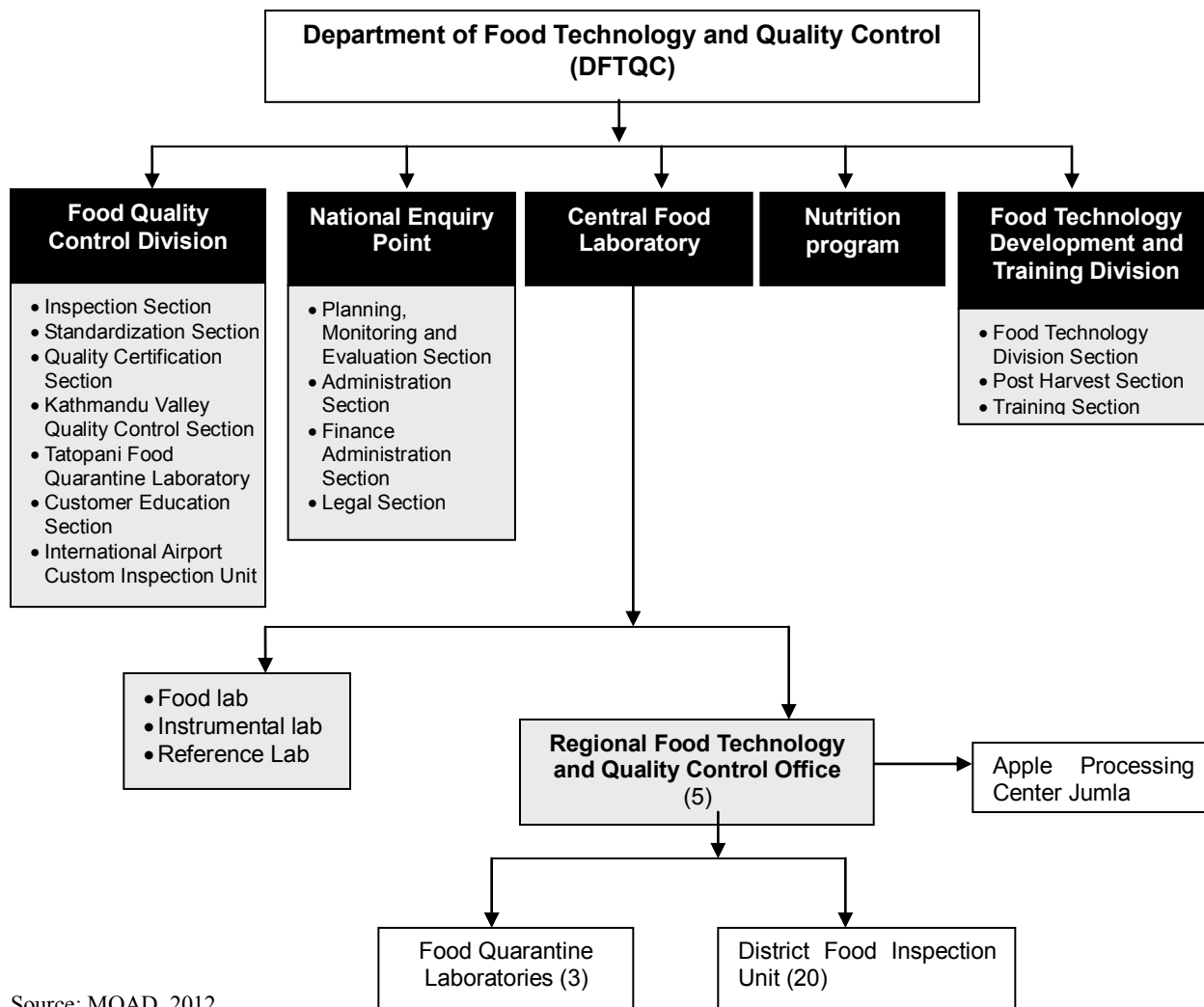
Staffing:

Table SN1.7.8 shows staff positions under the DFTQC and staff position classification.

Table SN1.7.8: Staff Positions under the DFTQC

SN	Position	Approved Staff Number
1	Technical Officer	
1.1	First Class	4
1.2	Second Class	18
1.3	Third class	46
2	Administration (Officer)	
2.1	Third class	1
3	Legal (Officer)	
3.1	Third class	1
4	Account (Officer)	
4.1	Third class	2
A	Officer (Total)	71
5	Assistant level	
5.1	Administration (First class)	2
5.2	Account (First class)	3
5.3	Technical (First class)	94
5.4	Administration (Second class)	7
5.5	Account (Second class)	2
5.6	Technical (Second class)	4
5.7	Technical (Third class)	7
5.8	Technical (Fourth class)	6
5.9	Computer Operator	1
5.10	Typist	4
6	Others	
6.1	Driver	3
6.2	Office support	27
B	Assistant others	160
	Overall (A+B)	231

Source: MOAD, 2012



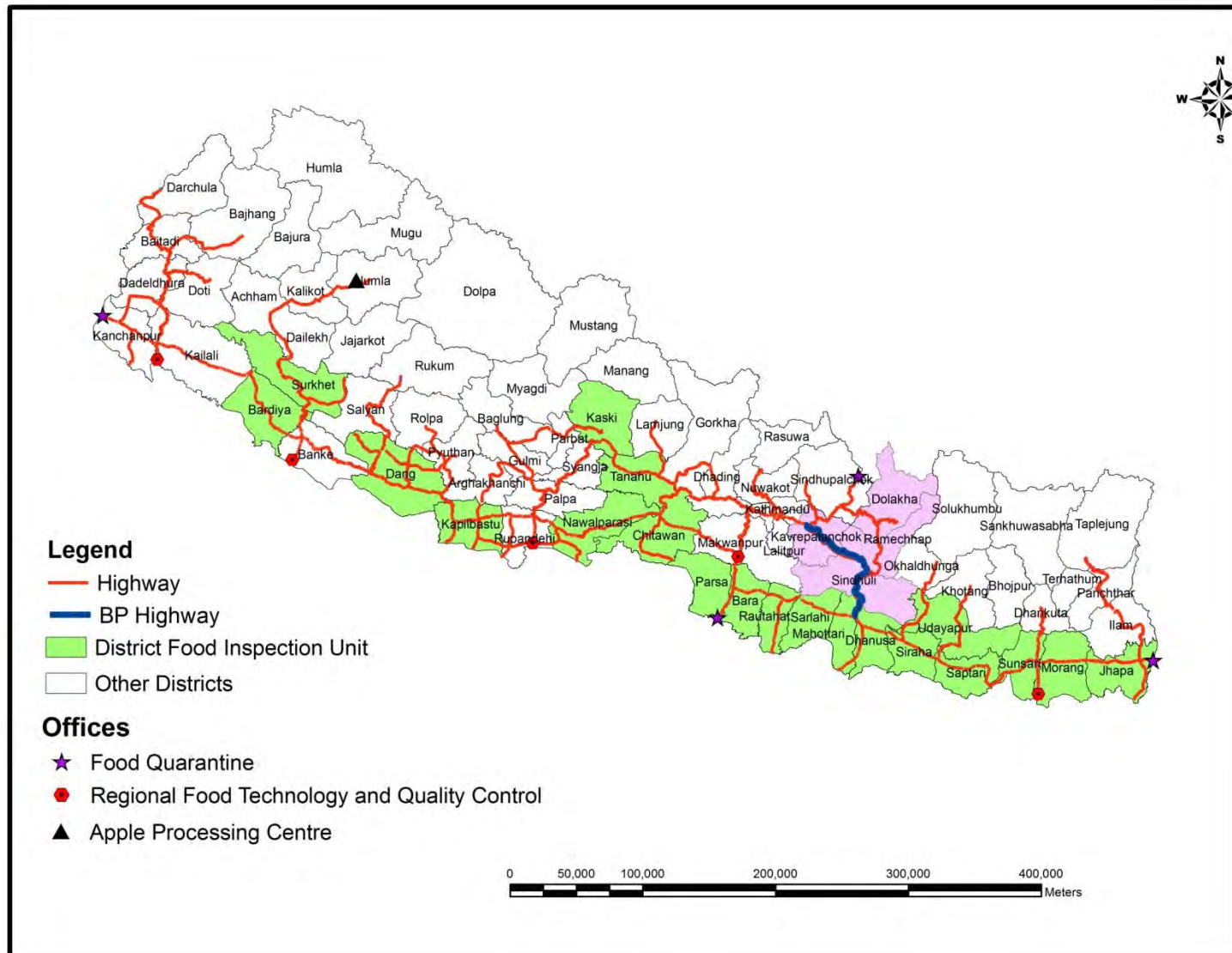
Source: MOAD, 2012

Figure SN1.7.4: Organizational Structure of DFTQC

Budget:

In the year 2011/12, the government approved NRs. 105.1 millions which is almost 1% of the total budget (NRs 12,421.1 millions) allocated to the Ministry of Agriculture Development in 2011/12 (MOAD, 2012).

Map SN1.7.3: Location of Offices under DFTQC



SN1.8: Agricultural Research and Extension

(1) Agricultural and Livestock Extension System in Nepal

In Nepal, at present, the two parallel departments under the Ministry of Agriculture and Cooperatives (MOAC) namely, the Department of Agriculture (DOA) and the Department of Livestock Services (DLS) are responsible for extension services. DOA is responsible on crops, horticulture and fisheries. Livestock extension is provided by DLS. Both the departments have similar structures from the central to regional and the district level.

Respective Regional Directorates under the two departments are responsible for supervision, coordination and monitoring at the regional level.

At the district level, both the DOA and DLS have established respective district offices (District Agriculture Development Office and District Livestock Service Office) with Agriculture Service Centers (ASCs) distributed at 4-5 locations in the district under the District Agriculture Development Office (DADO) and Livestock Service Centers (LSCs) and Livestock Service Sub-centers (LSSCs) under the District Livestock Service Office (DLSO). Number of Agriculture and Livestock Service Centers and agriculture/livestock technicians is shown below in Table 1. As seen in this table, the responsibility of public sector extension goes to less than 4,000 Junior Technicians (JTs) and Junior Technical Assistants (JTAs) housed in 378 ASCs, 359 LSCs and 640 LSCs.

Table SN1.8.1: Agriculture and Livestock Service Centers and Approved Positions on them

Description	Service Centers			Sub-centers			Grand Total
	Agriculture	Livestock	Total	Agriculture	Livestock	Total	
Service Centers and Sub-centers	378	359	737	-	640	640	1,377
Number of technicians	2,030	1,923	3,953	-	-	-	3,953

Source: MOAC, 2010

In 2002, the Government devolved the district level agriculture and livestock development offices to the District Development Committees (DDCs) as per the Decentralization Policy of the Government of Nepal and the Local Self Governance Act 1999.

A simple prototype of the Nepalese public extension service organization is shown below in Figure SN 1.8.1. Major functions/roles of different of organizational units of DOA and DLS in the delivery of agricultural extension services (from bottom to the top) are described in Table SN 1.8.2 and 1.8.3.

ASC/LSCs are operated by Junior Technician (JT) and/or Junior Technical Assistants (JTAs). An A/LSC is expected to cover more than 10 VDCs which mean more than 10,000 HHs. When there is only one technician, average number of HHs to be covered by a technician will come about 10,000. Apart from this, the most surprising and reality is that these A/LSCs are extremely poor in terms of basic facilities and equipments. Facilities at the service centers are so poor that organizing farmers' meeting and interactions at these centers is difficult. Neither these centers have minimum facilities for training nor any

agricultural equipments and machineries to demonstrate.

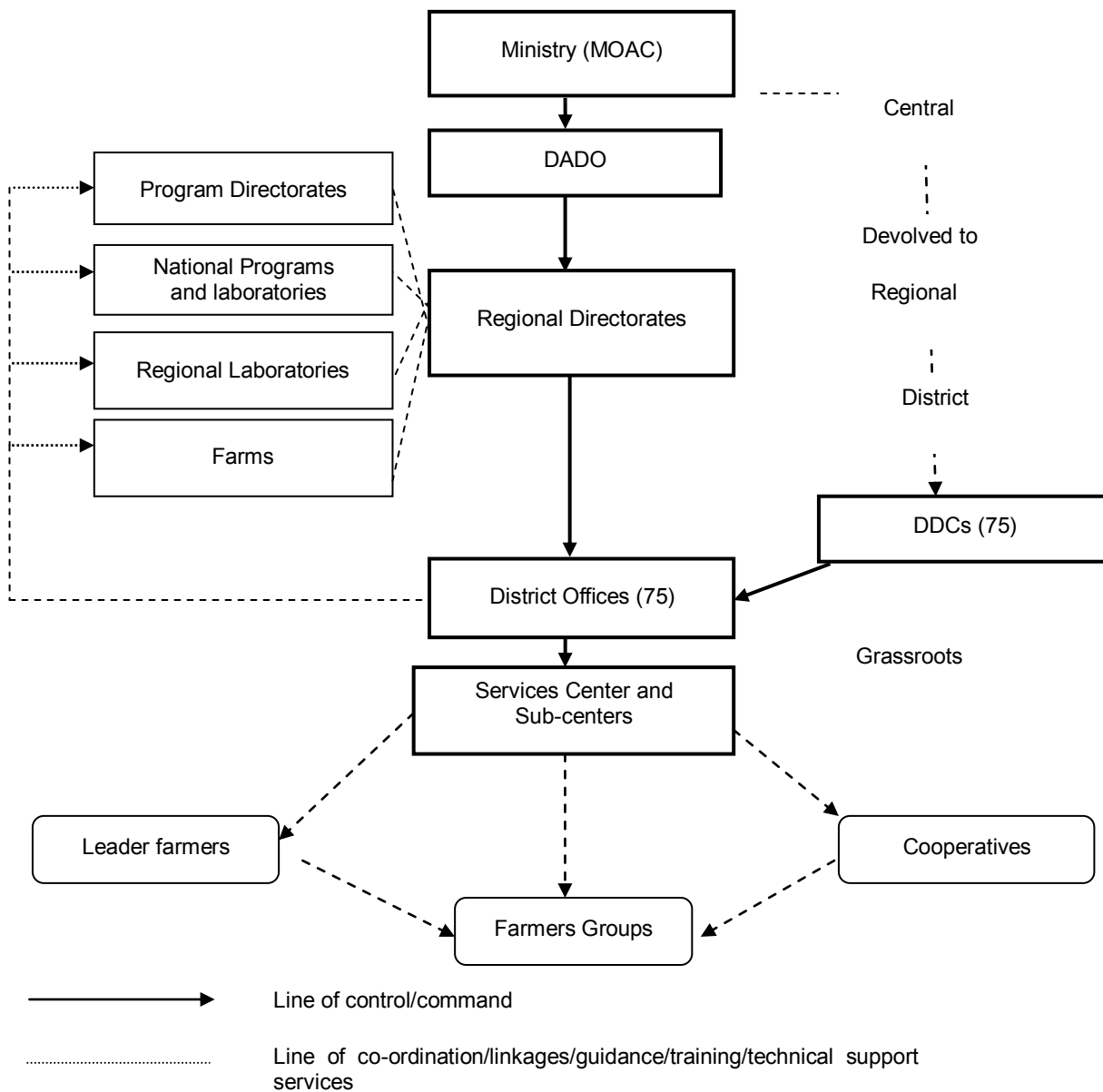


Figure SN1.8.1: Agriculture Extension Institutions in Nepal

Table SN1.8.2: Major Functions/Roles of Different Organizational Units of DOA in the Delivery of Agricultural Extension Services (from bottom to the top)

S.N	Organization	Major functions/activities	Remarks
1.	Agricultural services center	<ul style="list-style-type: none"> - Plan programs in consultations with farmer groups, CBOs etc. - Submit requests to DADO - Implement 79 ommerci as approved by DADO - Assist farmers to adopt improved agricultural technologies - Assist farmers to solve their farming problems - Implement devolved agricultural services programs in the respective focus/command VDCs. 	Both JT/JTAs are posted at the service center from where they are supposed to provide services to farmers
2	District Agricultural Development Office (DADO)	<ul style="list-style-type: none"> - Review and submit district agricultural development program to District Council for approval in accordance with MOAC's guidelines and NPC's budget ceiling. - Submit agricultural development annual plan and budget to DDC for approval as per MOAC's instructions and guidelines - Field and supervise frontline extension workers (JT/JTAs) in the district - Implement, supervise and monitor agricultural development programs in the district 	<p>Key actor for agricultural development (crops, horticulture and fisheries) in the district</p> <p>Each of the 75 districts of the country has a DADO</p> <p>Pursuant to LSGA, Department of Agriculture delegated authorities (financial/program) to DDC, who is to further delegate authority to DADO.</p>
3	Regional Directorate of Agriculture (RDA)	<ul style="list-style-type: none"> - Provide technical backstopping to DADO - Co-ordinate agriculture (crops, horticulture and fisheries) programs/units at the regional level - Supervise and monitor district programs 	- Each of the five regions of the country has a Regional Directorate of Agriculture
4	Program Directorates	<ul style="list-style-type: none"> - Formulate national policies, strategies, plans and annual programs in respective subject areas; - Undertake regular monitoring and evaluation of programs/projects in respective subject areas; - Impart training and extension functions in respective subject areas 	12 Program Directorates operate under the DOA
5	Department of Agriculture	<ul style="list-style-type: none"> - Provide technical backstopping to DADOs - Administratively control RDAs - Review and submit district agricultural programs to the Ministry for approval - Enhance DDC's capacities for planning and supervising district programs 	The lead public sector agency for extension services in crops, horticulture and fisheries sector.

Source: Adapted from APP ISR, 2006

Table SN1.8.3: Major Functions/Roles of Different Organizational Units under the DLS

S.N	Organization	Key functions/activities	Remarks
1.	Livestock services Center/sub-centers	<ul style="list-style-type: none"> - Plan programs in consultation with farmer groups, CBOs etc. - Submit monthly and periodic requests to DLSOs - Implement programs as approved by DLSOs - Assist farmers to adopt improved technologies - Assist farmers to solve their farming problems - Implement devolved livestock services programs 	<ul style="list-style-type: none"> - JTs provide leadership at the Service Centers and generally JTAs are fielded at LSCs
2	District Livestock Development Office (DLSO)	<ul style="list-style-type: none"> - Review and submit district livestock/veterinary development program to District Council for approval in accordance with MOAC's guidelines and NPC's budget ceiling. - Submit livestock development annual plan and budget to DDC for approval as per MOAC's instructions and guidelines - Field and supervise frontline extension workers (JT/JTAs) in the district - Implement, supervise and monitor livestock /veterinary development programs in the district 	<ul style="list-style-type: none"> - Key actor for livestock services/veterinary development - Each of the 75 districts of the country has a DLSOs - Pursuant to LSGA, Department of Livestock Services delegated authorities (financial/program) to DDC, who is to further delegate authority to DLSOs
3	Regional Directorate of Livestock (RDL)	<ul style="list-style-type: none"> - Provide technical backstopping to DLSO - Co-ordinate livestock / veterinary programs/units at the regional level - Supervise and monitor district programs 	<ul style="list-style-type: none"> - Each of the five regions of the country has a Regional Directorate of Livestock Services
4	Program Directorates	<ul style="list-style-type: none"> - Formulate national policies, strategies, plans and annual programs in respective subject areas; - Undertake regular monitoring and evaluation of programs - Impart training and extension functions in respective subject areas 	<ul style="list-style-type: none"> - Four Program Directorates operate under the DLS
5	Department of Livestock Services	<ul style="list-style-type: none"> - Provide technical backstopping to DLSOs - Administratively control RDAs - Review and submit district livestock programs to MOAC for approval - Enhance DDC's capacities for planning and supervising district programs 	<ul style="list-style-type: none"> - The lead public sector agency for extension services in various livestock species and veterinary services.

Source: Adapted from APP ISR, 2006

Key elements of Nepalese agriculture and livestock extension system are described below.

(2) Key Elements

Nepalese extension system is based on the following six key elements as described below.

Farmer Group Approach

Since early 1990 both departments have been following commodity specific group approach which is composed of men only, women only and mixed. Groups are viewed as a mechanism to transfer technologies, deliver services and distribute subsidies and grants to farmers. Data available from the two departments show that in 2010 there are about 22,358 farmer groups under the DOA and 14,360 under the DLS with annual growth rate of 8.0% and 11.4% under the DOA and DLS respectively with 20 to 25 members per group. The average number of groups per district under the DOA and DLS is 298 and 177 respectively ranging between 100 and 400. Recent years have seen several farmer groups being federated into cooperatives due to intervention and assistance coming from donor assisted projects or groups' self initiation as well.

Even when it is assumed that membership of farmers in the groups are not duplicated and all groups formed by both the departments are active and accessing DOA and DLS assistance, but which is not the case, household coverage by farmer groups under DOA and DLS is 14.8% and 5.9% respectively. This confirms Nepalese farmers' limited access to agricultural extension.

Table SN1.8.4 below presents number of agriculture groups formed by DADO in SRC districts. Nearly one thousands farmer groups are formed by DADO in the SRC area where above twenty thousands have obtained membership. Average number of members per group is 21 varying from highest of 27 farmers in Kavre to lowest of 19 members in Sindhuli and Ramechhap respectively.

Table SN1.8.4: Number of Farmer Groups formed by DADO

Districts	No of farmer groups	Members			Average member per group (No)
		Male	Female	Total	
Kavre	248	2,889	3,827	6,716	27
Dolakha	410	3,467	4,370	7,837	19
Ramechhap	129	1,851	799	2,650	21
Sindhuli	162	1,400	1,753	3,153	19
Total	949	9,607	10,749	20,356	21

Source: Computed from Annual Progress Report of DADO of Respective District (DADO Dolakha, 2010; DADO Kavre 2010; DADO Ramechhap 2010 and DADO Sindhuli 2010)

Table SN1.8.5 shows number of agriculture groups formed by DLSO in SRC districts. More than one thousands farmer groups are formed by DLSO in the SRC area where above fifteen thousands have obtained membership. Average number of members per group is 14 ranging from highest of 15 farmers in Sindhuli and Kavre to lowest of 10 members in Dolakha and Ramechhap respectively.

Table SN1.8.5: Number of Farmer Groups formed by DLSO

	No of farmer groups	Members			Average member per group (No)
		Male	Female	Total	
Kavre	568	4,269	4,459	8,728	15
Dolakha	292	1,722	1,309	3,031	10
Ramechhap	88	592	287	879	10
Sindhuli	185	1,202	1,528	2,730	15
Total	1,133	7,785	7,583	15,368	14

Source: Computed from Annual Progress Report of DLSO of Respective District (DLSO Dolakha, 2010; DLSO Kavre 2010; DLSO Ramechhap 2010 and DLSO Sindhuli 2010)

Pocket Package Strategy

GoN has adopted Pocket Package Strategy (PPS) as a strategy to facilitate the implementation of the Agriculture Perspective Plan (PPP) since 1998. PPS was approved by GON on March 19, 1998. PPS characterizes extension programs into three categories based on criteria such as availability of the basic physical infrastructure facilities, production potentials and access to markets. These three categories are (a) basic (b) commercial oriented and (c) commercial. Following table provides details regarding PPS.

Table SN1.8.6: Criteria for the PPS

S.N.	Type	Categories
1	Crop production	<ul style="list-style-type: none"> ▪ Area with road access and availability of irrigation, and electricity ▪ Area with availability of irrigation and road access ▪ Area with irrigation facilities ▪ Areas with road access ▪ Other feasible sites (Traditional agricultural areas)
2	Livestock and livestock originated products	<ul style="list-style-type: none"> ▪ Area with road access and availability of electricity and feed / fodder ▪ Area with road access ▪ Other feasible sites (Traditional agricultural areas)

Source: PPS, 2055, pp. 4

Table SN1.8.7: Size of the Agriculture Pocket Area

Region	Type of crops	Area (ha)
Terai	Cereal and cash crops	Approx. 1,000 ha irrigated land or command area of approx. 400 STWs
	Fruit	Approx. 150 ha
	Vegetable	Approx. 100 ha
	Fish	Approx. 10 ha including lakes of varied size
Hills	Cereal and cash crops	Approx. 100-150 ha
	Fruit	Approx. 60-70 ha
	Vegetable	Approx. 30-40 ha
Mountain	Fruit	Approx. 40-50 ha

Source: PPS, 2055, pp. 4

Table SN1.8.8: Size of the Livestock Pocket Area

Livestock type	Size of the pocket area
Cow and Buffalo	Approx. 50-75 cattle/buffalo raised by approx. 5 groups of 10-15 members per group and each group member's family raising at least one improved productive cattle/buffalo.
Goat, sheep and pig	Approx. 100-150 goat/sheep/pig raised by approx. 5 groups of 10-15 members per group and each group member's family raising at least two improved productive goat/sheep/pig.
Chicken	Approx. 1,750-3,000 chicks raised by approx. 5 groups of 10-15 members per group and each group member's family raising at least 35-40 chicks.

Source: PPS, 2055, pp. 4

Table SN1.8.9: Prioritized Production Pocket Type, Key Elements and Objectives

Package type	Key elements	Objectives
Basic	Agricultural inputs, agricultural technology and institutional structure	Strengthening food security situation in production pockets in the hills and the mountains
Commercial oriented	Agricultural inputs, agricultural technology, institutional structure, technology, agricultural loan and storage facilities	Area orients towards commercialization on basic packages starts to generate marketable surplus and these packages are required to attain certain economy of scale.
Commercial	Agricultural loan, agriculture stores, market development and agro-based industries; irrigation, electricity and agricultural roads.	Ensure agricultural commercialization motivating farmers on investment on technology and value addition.
Infrastructure	Irrigation, road and electricity	These three elements are considered to be a prerequisite for leapfrogging agriculture development.

Source: PPS, 2055, pp. 4

Since 1998, both DOA and DLS have used PPS as one of the main strategies for technology diffusion and agricultural extension service delivery. The PPS is regarded as the main way to disseminate core messages of APP to farmers. Review of the PPS shows that it has covered 12.18% of the total cultivated land and 15.7% farming households with average agriculture land coverage and beneficiary HHs per pocket estimated at 217.5 Ha and 286 HHs respectively. PPS coverage is quite low in terms of both number of beneficiaries and arable land despite that DADOs and DLSOs have been spending at least 60% of their financial resources (budget) and time as per the MOAC's instruction.

Experience of PPS implementation has remained mixed in Nepal. Several studies have been undertaken to assess the situation of PPS implementation in Nepal. A study on PPS approach undertaken for the Ministry of Finance, Government of Nepal and the ADB under Economic Policy Network remarked that the Ministry of Agriculture and Cooperatives is left alone to implement PPS against the integrated package approach conceptualized in the APP which required all relevant line agencies to act together on priority basis (Yadav 2006). This study further noted that concept of the Pocket Package is lacking the comprehensive, integrated holistic approach at implementation level and has failed to create the

momentum for rapid rate of growth in the specific potential area. APP Review Study reported that the districts have not been able to cover substantial areas under the PPS due to resource constraints (investment, limited understanding and technical expertise at the grassroots and implementation level, inadequate manpower, weak monitoring, technical backstopping etc.). This study has further confirmed that the impact of the APP is likely to remain minimal because of low coverage under the PPS.

Extension Methods

MOAC has approved a list of extension methods/activities with norms for DADOs and DLSOs. The list of extension methods whose norms have been approved by MOAC can be grouped into individual, group and mass communication methods. Individual methods include mini-kit demonstration, distribution of equipments such as sprayers, secateurs and primary treatment kit box for livestock at subsidized rates, distribution of forage seeds etc. group methods include farmer group organization, result demonstration, method demonstration, production demonstration, observation tours for farmers, farmers' field schools etc. mass communication methods include publication of bulletins, pamphlets, radio and TV program etc.

DADOs and DLSOs can select any of above methods in transferring technologies to farmers. The following conclusions can be drawn from the review of extension methods being carried out under the two departments.

- Field extensionists have been conditioned to work within the norms and targets. This leaves them no flexibility and become innovative to test and apply new methods and activities as might be required by the nature of technology. There is no premium for innovativeness.
- Many extension methods and activities are subsidy oriented. This implies controlled supply resulting into the probability of likely capture by the local elites and influential people who can influence extension personnel politically and institutionally.
- Majorities of the methods are applied in the groups. Therefore, poor and marginal farmers who, for some reasons, are not in the groups are likely to be bypassed.
- Demonstrations are mobile in the sense that every year demonstrator farmer is changed.
- Norms are approved by the MOAC based on the recommendations of the concerned program directorate. However, results of no independent assessment are available that have assessed the effectiveness and appropriateness of the different methods and the unit cost as provisioned in the Guidelines and Norms for Agricultural Extension.

Development and Use of Farmer Leaders

Nepalese agriculture extension system has been giving a high priority to the development and mobilization of local farmer leaders for transferring and dissemination of agricultural technologies since more than thirty years. Different projects have piloted, developed and mobilized different types of leader farmers with different incentive structures to compliment grassroots level extension agents of the Government of Nepal. Table 10 below shows these farm leaders with their key characteristic features.

Table SN1.8.10: Leader Farmers Compared

Name Criteria	Experienced Leader Farmer	Village Agriculture Development Worker	Model Extension Farmer	Village Animal Health Worker	Local Resource Person	Community Livestock Agent
Sponsoring project/Donor	Sustainable Soil Management Program/SDC	GoN/DOA/DDC/ VDC	Agriculture Training and Extension Improvement Project/ATIEP/JICA	GoN/DOA/DDC/VDC	Linking Local Initiatives /SDC	Community Livestock Development Project/CLDP
1. Nature	Specialization	Generalist	Specialization	Specialization	Specialization	Specialization
2. Technologies supported/ dissemination	Focus on SSM technologies	Multiple (Not identified)	Crop specific (demo farm crop)	Primary treatment of livestock disease, referral service and artificial insemination	Commodity/crop specific	Technical advice and support to Goat farmer groups and committees
3. Qualification	Recommended by DFG, local acceptance	Class 8 pass, recommended by VDC	Operation of demonstrated farm	Interested, even payment of training fee, unemployed educated youth usually class 10 pass	Class 8 pass, below class 10, a model farmer in specialized subject (25 to 45 years old), local acceptance	Class 8 pass, recommended by farmer groups and committees
4. Training	3 days training of trainer course	35-45 days long training (training center based)	Demo farm coaching and training by subject matter specialist/no set training	Training center based	Training center based/ module based training 35 days but in multiple shots to combine with practical training	35-45 days long training (training center based)
5. Remuneration	Service contract between service provider (SP) and DFG (Activity/event based)	Expected to be provided by VDC and earned through sale of services	Free/voluntary	Sale of services	Tripartite service contract between SP, farmer group and district committee (Output/outcome based)	Free/voluntary
6. Present status	Active	Mixed, no record	Active in their own demo farm	Active	Active	Semi-active/ inactive after the termination of the project

Farmer Field Schools (FFS)

Piloted for the first time in Indonesia in 1989 for introducing integrated pest management (IPM) system in the rice crop, in Nepal, farmer field school approach was introduced in 1998 by the Food and Agriculture Organization of the United Nations also in rice crop. The IPM -FFS has now become a model approach for farmer education in Asia and many parts of Africa and Latin America, and used for a wide range of crops including cotton, tea, coffee, potato, pepper, vegetables, small grains, and legumes. Farmers have liked this approach as it has provided them an effective learning opportunity.

In Nepal, the Plant Protection Directorate (PPD) of the DOA had introduced FFS concept through Community Integrated Pest Management (CIPM) in 1997 in collaboration with the FAO of the United Nations. CIPM, apart from improving crop yields or reducing pesticide use, intended to strengthen social capital in the management of natural resources in Nepal.

With the following salient features, the program has trained more than 20,000 farmers on FFS since its launch in 1997⁷.

- The learning process is aimed at building farmers' capabilities.
- Neither facilitators nor farmers dominate the learning process
- The facilitators and farmers learn together by practical experience in the field during one whole cropping season.
- Learning is based on analysis of the crop field agro-ecosystem

In the districts, FFS programs are implemented by DADOs as part of their annual program in the selected VDCs and are supervised by the Plant Protection Directorates. Like PPD, Soil Management Directorate too has been assisting DADOs to organize farmer field schools to adopt integrated plant nutrients management (IPNM) technologies.

As of 2010/11, Directorate of Agriculture Extension has approved norms for implementing farmer's field schools in the following thematic areas (AED 2011):

- Integrated crop management farmer schools in potato
- Farmers school in plant protection program
- Integrated plant nutrients management system
- FFS in fruits, tea, bee keeping, fisheries etc.

Participation in FFS is reported to have made farmers more confident and that they have been actively pursuing development in their communities through interaction with other institutions. A study found that farmers who participated in FFS more technically efficient in rice production than those who did not participate in such trainings. It further noted that investment (human and capital) in conducting FFS and similar other type of programs in enhancing farmers' knowledge, skill and awareness is

⁷ There is no officially record available with regard to the number of farmers participating in FFS and IPM program. This number has been estimated based on the expansion of FFS in Nepal.

justified (CRDS 2007).

Realizing the usefulness of the approach, all periodic plans including the current approach paper of the current Three Year Plan (2011-14) has given emphasized FFSs for promotion of IPM and IPNM technologies. While FFS has now been institutionalized and adapted in Nepalese public extension system, no reports provide details on FFSs running in Nepal annually by commodity and thematic areas. Quality control in FFSs has become a key issue for the DOA.

Parallel implementation of central level programs and devolved extension services

All DADOs and DLSOs are responsible to implement central level programs as per the budget and programs approved by the National Planning Commission and the MOAC on the top of the devolved extension programs. Central level programs include programs such as small irrigation programs, seed multiplication program, cooperative irrigation program, farmer field schools, community livestock development project, leasehold forestry program, cooperative poultry farming, avian influenza control program etc.

(3) Participation of Private Sector in Agricultural Extension

In Nepal recent years have seen an increasing participation of the private sector (for-profit) and non-profit non-government organizations in agricultural/livestock extension service. However, despite of increased participation of alternative service providers and guidelines formulated by the ministry for facilitating the partnership of the private, cooperatives and NGO sector in agricultural extension, Nepalese extension service has not been able to benefit from the government's policy of institutional pluralism. Key issues related to the little use of the public-private partnership (PPP) framework in Nepal is both the general lack of clarity on the roles of the public and private sectors and the mutual distrust by both the sectors among each other (Basnyat and Chapagain 2009). This study is critical of gross inability and weak capacity of the government institutions to monitor, supervise and control the quality of services delivered by the private sector.

(4) Research-Extension Linkage

Links between agricultural research institutes and their clients-farmers and technology transfer agencies-are crucial for successful technology development and delivery. For research extension linkage, MOAC has piloted the concept of Regional Technical Working Group (RTWG) and National Technical Working Group (NTWG). RTWGs are established in each of the five development regions comprising of representatives from regional research stations, regional directorates of agriculture and livestock, DADOs and DLSOs. Each RTWG is required to meet three times a year under the coordinatorship of regional research director, regional director of agriculture and regional director of livestock turn by turn. However, discussions with key stakeholders revealed that the RTWG modality has not worked well as per its key objective of achieving research extension linkage. Linkage between research and extension has remained weak. Key reasons for limited effectiveness in achieving research extension linkages include the following:

- Meeting of RTWGs are not held regularly
- Decisions of RTWGs are seldom followed up in terms of their implementation status by the

higher level authorities. The system of changing RTWG coordinator by trimester has added further difficulties to monitor the performance of RTWG and implementation of its decisions.

- Participants in RTWGs do change by venue of RTWGs
- Problems and issues of both research and extension get hardly resolved at RTWG level

(5) Coordination between Key Actors and Stakeholders in AKIS

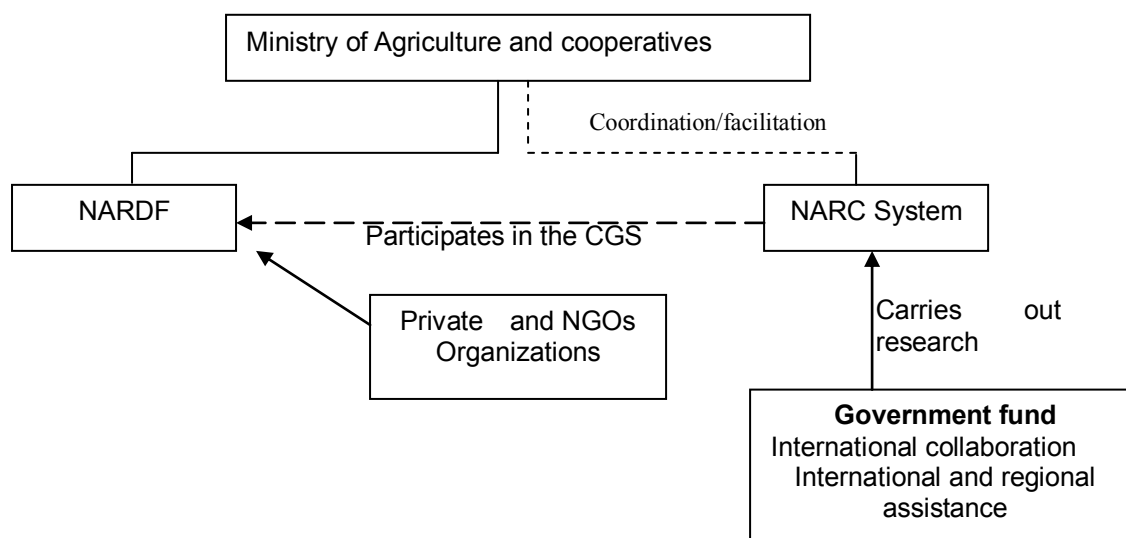
Importance of achieving coordination has been acknowledged at all levels, but results have not been encouraging. For achieving coordination, the government has made the provision of Central Agriculture Development Implementation Committee (CADIC) at the center, Regional Agriculture Development Committee (RADC) at the regional level and District Agriculture Development Committees (DADC) at the district level. However, performance of none of these committees are reported satisfactory (APPSP 2007, TFT, 2004, FAO 2010). However, weak coordination among key agricultural agencies at different levels has remained problematic since last two decades or more. Part of the reasons for this situation can be traced in contradictions and ambiguities in central level policies, legislations, management weaknesses and poor leadership.

All programs and activities to be implemented at the district level are expected to be discussed and approved by the DADC before formulation and prior to the submission at the respective departments, but seldom done as departmental instructions and guidelines dominate. Same applies to regional coordination. In terms of hierarchy of coordination (vertical), DADC's performance is satisfactory compared to RADC (Regional Agriculture Development Committee) and that of the CADIC is further weak compared to RADC. The system of education, research and extension linkage is either very poor or does not exist.

(6) Agricultural and Livestock Research System in Nepal

Previously agricultural research in the various agricultural sub-sectors was mainly carried out by the Department of Agriculture (DOA) and the Department of Livestock Services (DLS). In 1987, GoN established National Agriculture Research and Service Center (NARSC) and turned over research responsibility to it. NARSC was integrated with National Agriculture Research Council (NARC) after its establishment through the Act passed by the Parliament. The purpose of the NARC Act is to conduct agricultural research in the country to uplift the economic level of the people. Not only this Act established NARC as an autonomous apex institution for agricultural research in Nepal, but also separated agricultural research and extension formally. NARC enjoyed monopoly in public sector agricultural research until 2001. In 2001, GoN established the National Agriculture Research and Development Fund (NARDF) with a view to initiate competitive grant system (CGS) and to involve non-government and private sector in agricultural research. NARDF was established by the GoN through power vested on it by the Development Board Act 1956. Organizationally, NARDF operates under the MOAC as one of its central level organizations. Thus, National Agriculture Research System (NARS) is comprised of two parallel structures, one under the NARC system and other under the NARDF for which NARC is also one of the clients who can participate in competitive process and win if the proposal gets approved as per NARDF's policy. Figure 2 below shows Nepalese agriculture research system as described above.

NARC Act 1992 has designated MOAC as its link ministry. Honourable Minister for Agriculture and Cooperatives is the chairperson of the NARC Council and Secretary is the ex-officio member of this council. Budget and programs of NARC is approved by the National Planning Commission through MOAC. As NARC is a legally established autonomous organization, MOAC has no direct command and control over it but need to perform coordinating roles as a link ministry to the Government of Nepal.



Source: Computed from Review of MOAC Annual progress report, 2010.

Figure SN1.8.2: Overview of Nepalese Agriculture Research System

Nepalese agriculture research system is comprised of two systems, NARC system and CGS system operated by NARDF.

(7) Nepal Agriculture Research Council

Established in 1991 through its NARC Act 1991, NARC is an autonomous organization. NARC has undergone structural and organizational changes to modernize and implement various types of research in agriculture. The objectives of NARC are to:

- Conduct high level studies and researches on various aspects of agriculture,
- Identify the existing problem in agriculture and find out measures to solve,
- Assist government in the formulation of agriculture policies and strategies.

NARC is mandated to conduct research and study in different aspects of agriculture, animal science and fisheries for increasing national production and productivity by generating technologies suitable to diverse farming systems. NARC is organized into:

- National Agricultural Research Institute (NARI), with eight disciplinary division such as Agronomy, Plant Pathology, Entomology, Soil Science, Agro-engineering, Horticulture Research, Agro-Botany, Commercial Crops and Science and Technology

- National Animal Science Research Institute (NASRI) with five disciplinary divisions which include Animal nutrition, Animal breeding, Fishery Research, Animal Health Research and Pasture and Forage Research
- National Agriculture Genetic Resources Center (NAGRC),
- 14 National Commodity Research Programs (NCRP),
- 4 Regional Agricultural Research Stations (RARS) and
- 14 Agriculture Research Stations (ARS).

National institutes are responsible for managing disciplinary divisions and technical units located in Khumaltar, Lalitpur district. Research activities are implemented on agriculture stations and on farm in farmers' fields through outreach programs.

NARC collaborates with national development agencies, non-government organizations and private sectors in undertaking research activities in farmers' fields. Considering the recent advances in modern science and technology, the council has also made effective collaborations with international research institutions and universities in generating technologies and training human resources.

NARC carries out both basic and applied research. The generated technologies are primarily disseminated through Department of Agriculture (DOA) and Department of Livestock Services (DLS).

NARC produces and distributes breeder seed and foundation seed. Breeder seed is the source seed for foundation seed. Foundation seed is supplied to National Seed Company; community based seed production programs, NGOs, District Agriculture Development Office, farmers association and private seed growers for production of certified and improved seeds.

Agriculture Research Strategy

NARC envisages carrying out research in generating technologies for enhancing production and productivity, income generation of rural communities, conservation and sustainable use of genetic resources, addressing the issues of climate change and sustaining production environment. Its research strategies, among others, include the following:

- Identify agriculture research agenda based on national needs and priority, and resources.
- Formulate research vision and guidelines based on national periodical plans and policies.
- Support to enhance agriculture production and productivity at local, regional and national levels through commodity based disciplinary research on station/ laboratories, outreach research and participatory technology development initiatives.
- Develop location specific and widely adaptive technologies with emphasis on low cost as well as resource conservation.
- Strengthen agricultural research management by improving working environment, regular recruitment, appropriate career development opportunities, training and incentives.

- Ensure regular source seed /breed production, maintenance of nucleus stock and avail the produced source seed / breed to extension agents and concerned stakeholders.
- Collaborate and coordinate with national and international agricultural research institutes/agencies/centers/universities and CGIAR Centers for generating technologies and introduction of recent advances in science and technology.
- Involve relevant stakeholders (government organizations, non-government organizations, private sector, farming communities) at all stages from planning to implementation of research proposals. Encourage implementing research activities in collaborative and partnership mode.
- Organize regular meeting with donors, international agriculture research centers and local entrepreneurs for increasing investment in agriculture research.

Agriculture Research Agenda

NARC's guidelines and directives for the preparation of agriculture research projects (NARC, 2000) has indicated specific research agenda to address the issues of food security, poverty alleviation, alignment with national periodical plans and the emerging technical issues. The research agenda are:

- Increasing productivity and generating on- and off-farm employment for food security.
- Commercialization of agriculture for employment generation, poverty alleviation and export promotion.
- Utilization of available farm resources for rained and relatively low fertile land.
- Sustainable use of natural resources and utilization of degraded land (conservation agriculture).
- Cost effective technology, especially for small and marginal farmers.
- Eco-friendly management practices.
- Farming system oriented outreach research.
- Coping with negative effect of climate change. (NARC, 2000)

From this fiscal year, 2010/11, GoN has placed agricultural research under priority one and therefore getting good and timely budget. In 2011, it received NRs. 980 million from the government exchequer for agricultural research.

NARC has been carrying out participatory technology development initiatives through Outreach Research Division (ORD). Currently more than 50 outreach sites/research stations are being managed in the country by Outreach Research Division/Regional Agricultural Research Station and Agricultural Research Station which have been established based on agro ecological criteria to represent the command areas under them. Of the above 50 research station, only two lies in the Sindhuli road corridor. Jiri Agriculture Research Station and one national commodity research program (Hill crops), namely Kavre Agriculture Farm lies in the Sindhuli Road Corridor. Both of these are located in Dolakha district.

(8) Competitive Grant System under National Agriculture Development Fund

NARDF was established in 2001 based on lessons learned from Hill Agriculture Research Project implemented with the assistance of Hill Agriculture Research Project. NARDF implements competitive grant system concept by mobilising all the concerned stakeholders involved in agriculture research and development. The competitive grant system aims at participation of private sector, NGOs, CBOs, and civil society in national R&D activities. The objective of the fund is to provide full or partial grants for proposals aimed at alleviating poverty through overall development of the agricultural sector. NARDF funds only those projects which comply with the priority themes approved by its Fund Management Committee (FMC). The duration of the research should not be more than 3 years and maximum amount for a research project should not exceed NRs. 3 million. Table SN1.8.11 below presents number of project funded in the study district by NARDF with details in Table SN1.8.12.

Table SN1.8.11: Number of projects funded by NARDF in study districts

SN	Districts	No. of Projects (Until 2009/10)	Amount (Rs Million)
1	Kavre	5	10.34
2	Dolakha	3	12.6
3	Ramechhap	-	-
4	Sindhuli	3	6.53
	Total	11	29.47

Source: Annual Report, NARDF, 2011

NARDF is focused on institutionalizing a more demand-driven and pluralistic approach to agricultural research. NARDF's CGS includes two stages system. In the first stage, Project Concept Notes (PCN) are evaluated by three anonymous peer reviewers. Only those PCNs which are recommended for funding by all the three reviewers are requested to submit full proposals which will be again assessed by three anonymous peer reviewers. Like PCN case, only those proposals will be approved for funding which are recommended by all the three reviewers. However, key problem with regard to CGS system has been a long time taken (more than a year) to approve the research project from the date of PCN submission to final funding and weak monitoring and evaluation. Issues regarding the quality and reliability of research findings are often raised.

Table SN1.8.12: Description of the Projects Funded under NARDF

Districts	Project title	Project location	Institutions	Duration	Beneficiaries	Budget (NRs millions)
Kavre	Structural Changes and price parity in agriculture	Not stated	Broad Vision Research Center and Databank, Kathmandu	July 2008 - December 2009	Not stated	1.98
	Promoting adoption of holistic irrigation water management technology in river valley surface irrigation system	Bhumulutar	Love Green Nepal	Jun 2006 - May 2009	200 people	0.98
	Improving Food Availability situation of Marginal Farmers by Productivity Enhancement of Barilands	Balthali, Kusadevi, Mahendrajyoti and Ryale	SAERDEC Nepal, Kavre	June 2007 - May 2010	300 HHs	2.58
	Integrated Management of Yellow Rust Disease of Wheat in Hills of Nepal	Not stated	Plant Pathology Department, NARC	July 2008 - June 2011	500 HHs	1.99
	Participatory research on plantation, establishment of marketing channels and commercialization for high value cut flowers	Bhumulutar	Love Green Nepal	Jun 2006 - May 2009	200 people	2.81
	Total					
Dolakha	Improvement on quality cheese production and development of effective Marketing Network	Shayama, Jiri and Mali VDCs	Nepal Environment Protection Center, Kathmandu	Jan 2006 - Jan 2008	Not stated	2.38
	Promoting ecotourism and yak biodiversity for improving livelihood of farmers of Dolakha District	Cherdung, Dolakha	Improved Community Development (ICDM, Dolakha)	July 2008 - June 2011	Not stated	1.98
	Dolakha-Singhadi-Lamabagar Sadak Model Cattle Farming Assistance Program	Suspakhsamawati	District Development Committee, DLSO, Dairy Cooperative, KIST Bank, Triveni Cooperative	Dec 2009 - Nov 2012	125 HHs	8.24
	Total					

Districts	Project title	Project location	Institutions	Duration	Beneficiaries	Budget (NRs millions)
Ramechhap	None					
Sindhuli	Commercial Vegetable Farming at Peri-Urban Area and BP Highway Corridor of Sindhuli District	Dhurabajar, Sindhuli	Youth for Sindhuli	Not stated	320 HHs	1.96
	Fresh Vegetable Production and Developing Agricultural Marketing Network (VPAM)	Not stated	Gaon Jagaran Sewa Sanastha, Sindhuli	July 2009 to June 2012	1500 HHs	2.85
	Integration of Green Legumes in rice and maize based systems for enhancing food security and income generation in river basin and Tars of Central Nepal	Jhagagholi and Sitalpati VDCs	Outreasearch Research Division, Khumaltar	Aug 2007 - March 2010	3000 HHs	1.72
	Total					6.53

Source: Annual Report, NARDF, 2011

SN1.9: Information of Ministry of Federal Affairs and Local Development

The Ministry of Federal Affairs and Local Development (MOFALD) has been established by the Government to achieve the goal of the decentralization to work with the local bodies. The objectives of this ministry are to

- Develop the governance system and strengthen local authorities as capable, effective and responsible institutions to facilitate access to people in a transparent and accountable manner to manage local self governance system.
- Develop institutional mechanism and process for the implementation of local and community development programs through social mobilization and effective people participation.
- Facilitate to mainstream remote area to the nation building through mobilizing diverse development initiatives.
- Make institutional arrangements for uplifting the socioeconomic status of ethnic, indigenous, deprived and disadvantaged communities.
- Support the national goal of poverty alleviation through decentralization and local development.

This Ministry has one department under it- the Department of Local Infrastructure Development and Agricultural Road. Other institutions and agencies related with MOFALD are as follows:

- District Development Committees (75)
- Metropolitan City (1)
- Sub-metropolitan city (4)
- Municipalities (99)
- Village Development Committees (3,783)

Apart from the above, the following Academy, Commissions and Committees operate under the MOFALD.

- Local Development Training Academy (LDTA)
- National Foundation for Development of Indigenous Nationalities (NFDIN)
- Remote Area Development Committee (RADC)
- Monastery Management and Development Committee (MMDC)
- Solid Waste Management and Resources Mobilization Center (SWMRMC)
- Neglected, Suffered and Depressed Class Upliftment Development Board (NSDCUDB)
- National Dalit Commission (NDC)

- Badi Community Development Committee
- Local Body Fiscal Commission (LBFC)

Internally, the ministry is divided into five divisions as follows:

- General Administration Division
- Self Governance Coordination Division
- Planning and Foreign Aid Coordination Division
- Municipal Management Division
- Infrastructure development Division

Figure SN1.9.1 below shows the structure of the MOFALD. In addition to the agencies, department, divisions and sections shown in this organization structure, there are 75 district Development Committees, 99 Municipalities, 3783 VDCs and 75 District Technical offices Table SN1.9.1 below shows the staffing position under this Ministry. This does not include staffing positions under other agencies under this ministry.

Table SN1.9.1: Staffing under MOFALD

Position	Level	Number
Secretary	Special Class, gazetted Officer	1
Joint Secretary	First Class, gazetted Officer	4
Under Secretary (Administration, Accounts and Legal)	Second Class, Gazetted Officer	14
Section Officer (All types and categories)	Third Class, gazetted Officer	22
Office Assistant (All types and categories)	First Class, Non-gazetted	38
Office Assistant (All types and categories)	Second Class, Non-gazetted	18
Typist	Not applicable	8
Driver	Not applicable	6
Office Support	Not applicable	16
Total	Not applicable	127

Source: Ministry of Federal Affairs and Local Development, 2013

Functions:

The Government of Nepal (Rules of Business) regulation 2007 has mandated the following functions to the MOFALD.

- Formulation, implementation, monitoring and evaluation of policies, plans and programs on rural and local governance; remote area development; community development; and water supply and sanitation at local level.
- Training, research and investigation related to rural and local governance, remote area development, community development, and water supply and sanitation at local level.
- Demarcation and mapping of VDCs, municipalities, and districts.

- Coordination of local development programs.
- Local human resource development and mobilization of people for participation.
- Work as a focal point for international relations on local governance and development.
- Works concerning Coordination and work as a focal ministry among the Local Bodies.
- Vital event registration related work.
- Activities related to rural development.
- Policy formulation, program implementation and monitoring relating to decentralization.
- Appropriate technology development.
- Local infrastructure and agriculture road construction and maintenance.
- Mule trail and suspension bridge construction.
- Works related to deprived, disadvantage and ethnic groups.
- Social security related programs.
- Monastery management and development.
- Solid waste management, resource mobilization and environment improvement.

Budget:

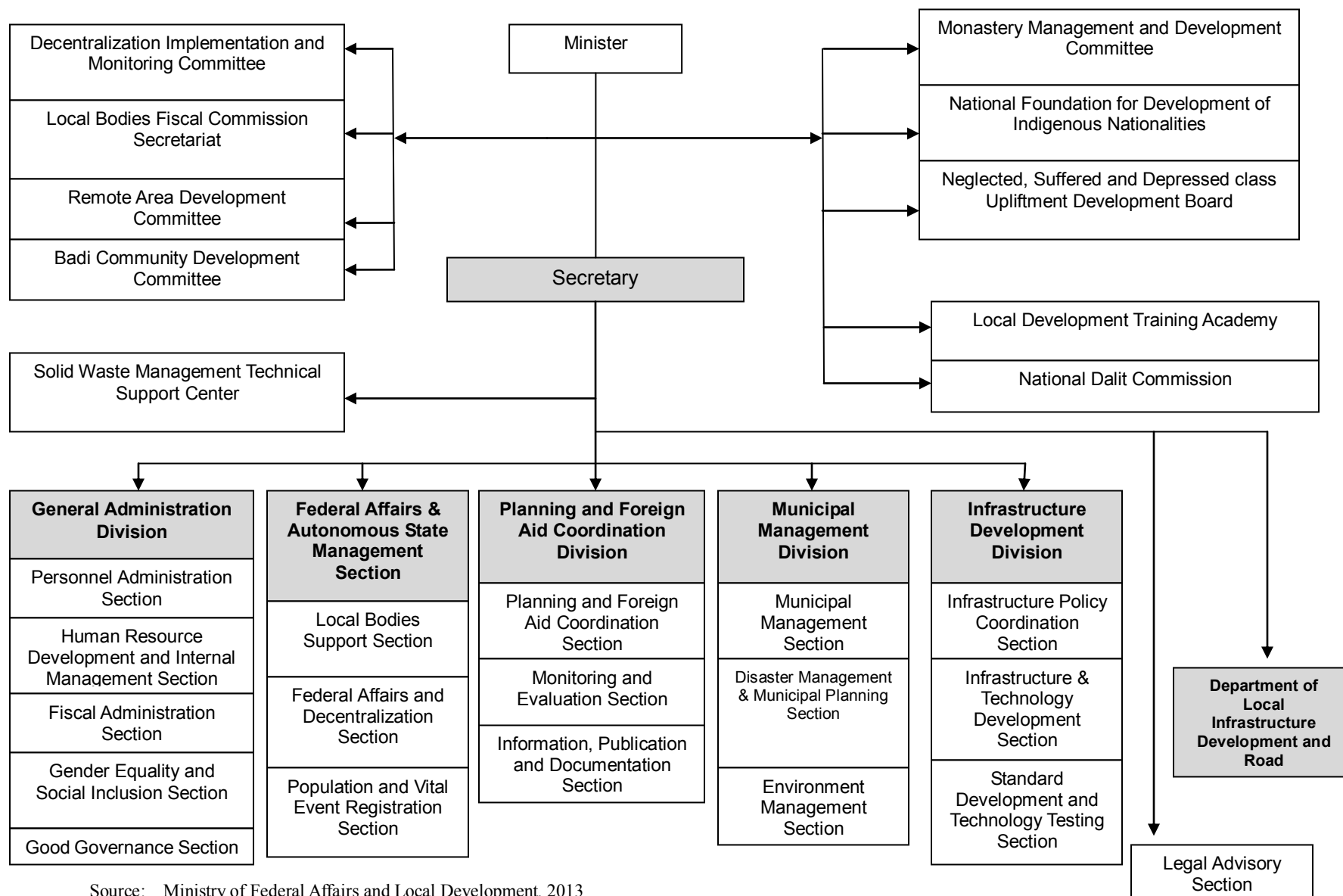
Table SN1.9.2 below shows the total budget approved for this ministry for the fiscal year 2013/14 by budget head.

Table SN1.9.2: Annual Budget of the Ministry of Federal Affairs and Local Development, 2013/14

Unit: Million NRs

	Budget (Approved)
National budget	517,240
Ministry of Agriculture Development	46,543
Share of agriculture budget to national budget	9.0
Expenditure	
Recurrent	42,966 (92.3 %)
Capital	3,576 (7.7%)
Financing arrangements	0
Financing plan	
Government source	32,319 (69.4%)
Foreign grant	10,677 (22.9%)
Foreign loan	3,547 (7.8%)

Source: NPC, 2013



Source: Ministry of Federal Affairs and Local Development, 2013

Figure SN1.9.1: Organizational Structure Ministry of Federal Affairs and Local Development

SN1.10: Market Networks in Nepal

Regional Market Networks in Terai: Though there are no designated regional markets in Nepal, the following have been identified based on their location and transportation connectivity with production/importation and consumption areas. From east to west, regional market networks include:

- **Jhapa Regional Market Network (JRMN):** JRMN, based in a major agricultural surplus area, includes Birtamod, Damak, Bhadrapur, Gaurigunj, Budhabare and Surunga markets. JRMN primarily supplies produce to the Mechi Zone (Ilam, Taplejung, Panchthar) and to more distant markets in Kathmandu, Pokhara, Kailali and Surkhet). JRMN is connected by road with the national transportation network at Damak and connected with West Bengal, India at Kakadbhitta. This regional market area is gaining prominence as a major agricultural center.
- **Biratnagar Regional Market Network (BRMN):** Biratnagar Regional Market Cluster (BRMC)⁸, including Katahari, Siswani, Rangeli, Dangihat, Letang, Madhumalla, Duhabi, Itahari and Dharan markets in Morang and Sunsari districts, is located in an important central production and food surplus area (in addition to including a major industrial center and agricultural processing facilities). As a major trading center of the country, Biratnagar is the source of many large traders and importers from India and third countries.
- **Lahan Regional Market Network (LRMN):** LRMN includes the Rajbiraj, Siraha, Saptari, Mahottari, Dhanusha and Udayapur production areas of central Nepal. This cluster is connected with various border cities in India, and as one of the major grain trading sources in Nepal. LRMN sends grains to markets all over Nepal, notably Narayanghat, Kathmandu, Kabhre, Kaski, Tanahun, Sarlahi and Sindhuli and the mountain areas of Janakpur and Sagarmatha zones.
- **Birgunj Regional Market Network (BJRMN):** The BJRMN includes Kalaiya, Hetauda, Birgunj, and Gaur markets and the grain producing areas of Bara, Makwanpur, Parsa and Rautahat districts. This cluster includes the dry port of Birgunj and connected to the East West High Way (EWHW), Bettia, Motihari and Muzaffarpur in India, and Kolkata by direct railway access. The majority of rice moving through BJRMN is from India, though once it enters Nepal it is incorporated with domestic production for forwarding to other markets.
- **Narayanghat Regional Market Network (NGRMN):** NGRMN⁹, including Ratnanagar, Birendranagar, Parsa, Bhandara, Sukranagar and Gunjanagar markets of Chitwan district, is emerging as a major trading post and terminal market in the country for domestic or imported products. Located in the center of Nepal, NGRMN is equally well connected with major production and consumption areas. It is also well linked to the transportation network, with access to the EWHW, the north-south highway to Tibet via Kathmandu and to India.

⁸ It is possible that the Jhapa Regional Market Cluster (JRMN) and Biratnagar Regional Market Cluster (BRMN) could merge and get into one market cluster in the coming year.

⁹ It may be noted that all produce consigned to Kathmandu and Pokhara consumption market has to pass through road grid based in Chitwan district.

- **Bhairahawa/Butwal Regional Market Network (BBRMN):** BBRMN directly serves the people living in the five municipalities of Butwal, Bhairahawa, Kapilvastu, Ramgram and Tansen. This network has two major markets, one for vegetables in Butwal and the other for cereals in Bhairahawa. The latter is well connected to India and is a major gateway for Indian rice entering the Nepal markets (both officially and unofficially). Linked to Butwal on Mahendra Highway, and to Pokhara through Palpa, the BBRMN service area includes the mountain areas of the Lumbini and Dhaulagiri zones.
- **Nepalgunj Regional Market Network (NRMN):** Nepalgunj is the gateway to the Mid-western Development Region, the largest and least developed region of the country. Linked to the transportation network and EWH at Kohalpur and Surkhet in the north, NRMN serves Karnali, Bheri and Rapti zones. It also feeds into other markets in the Far-west, including Baitadi and Sanfebagar. The NRMN sources food items from the adjoining districts, such as Dang, Banke, Bardiya, Kailali and Kanchanpur, and from the production areas around Dhangadhi and Mahendranagar. It can be noted that Dhangadhi/Attariya has the potential to develop into a major market center in the near future, especially given the connectivity to several Indian border cities.

Transit Markets on the Road Head in the Hills and Mountains: Transit markets, those importing and forwarding produce to other areas in the hills and mountains, play an important role in the supply of foods, vegetables and fruits to remote districts. Most of the transit markets are strategically located at arterial road heads. As a result, forward movement of food beyond the market center or road head generally occurs in two ways: purchase by migrants returning to their homes in surrounding areas from employment elsewhere or purchase by households from the surrounding areas that travel to the road head to gather supplies and then return home. From east to west, the transit markets identified are Mechinagar, Dhankuta, Banepa, Okhaldhunga, Dang, Surkhet, Dadeldhura and Sanfebagar.

- **Mechinagar Transit Market (MTM):** MTM, located in the Jhapa Regional Market Network and near to the Indian border, specialize in bundling produce in smaller quantities for forwarding to Panchthar, Tehrathum and Taplejung districts and plays an important role in forwarding produce grown in the area to other markets in Nepal and India.
- **Dhankuta Transit Market (DTTM):** DTTM¹⁰, an important traditional market center of the Eastern hills, serves as a major supplier to people living in Bhojpur and Sankhuwasabha districts. DTTM receives its produce from the Biratnagar Regional Market Network and sells it to commuters and travelers in transit to/from employment in the urban areas of Nepal and India.
- **Banepa Transit Market (BTM):** BTM, located in Kavrepalanchok – a major agricultural production district of Central Nepal – is surrounded by high-quality rice producing areas. The high-quality rice grown locally is supplied to Kathmandu, while medium and coarse rice from Birgunj and Narayangadh Regional Markets is imported for forwarding to the surrounding hill

¹⁰ There are two major markets in Dhankuta, at Hile and Sindhwa, in addition to the one in Dhankuta city.

and mountain districts of Ramechhap, Dolakha, Sindhupalchok and some parts of Solukhumbu. Importance of this market has been enhanced in recent years because of potato and vegetables coming to this market from the neighboring areas.

- ***Okhaldhunga Transit Market (OTM):*** OTM, receiving commodities from Lahan Regional Market Network, supplies food for consumption to the Okhaldhunga district and for forwarding by porter to parts of Ramechhap, Khotang and Solukhumbu. OTM additionally supplies commuters traveling to/from employment in urban areas of Nepal and India.
- ***Dang Transit Market (DTM):*** DTM, located in an important agricultural production area, serves as a major trading point in the Mid-western Development Region and connects to Salyan, Rukum, Jajarkot (via Tulsipur), and Rolpa and Pyuthan (via Bhalubang). DTM draws on low quality cereals from the Nepalgunj Regional Market Network and exports high-quality grain to the same and the Narayangadh market in Chitwan. Traders in this market also export lentil and oilseed grown in the Dang Valley.
- ***Surkhet Transit Market (STM):*** The STM, located before the Surkhet district headquarters from Kohalpur, receives commodities from the Nepalgunj Regional Market Network. It supplies goods and food to all five districts in the Karnali zone and Dailekh and Jajarkot in the Bheri zone.
- ***Dadeldhura Transit Market (DDTM):*** DDTM, a traditional market of the Far-west serving the entire Seti zone and Baitadi, was the first market to be developed in the area with the extension of the road from Dhangadhi. The importance of this market, however, is diminishing with the completion of the road to Baitadi and Sanfebagar and perhaps will further be reduced with road construction to Bajhang and market development in Deura, Bajhang.
- ***Sanfebagar Transit Market (SBTM):*** SBTM receives supplies directly from the Nepalgunj Regional Market Network via Dhangadhi/Attariya. This market serves Achham, Bajura and parts of Dailekh, Bajhang and Kalikot, all food-deficit districts low on the UNDO Human Development Index. The main buyers in this market include those returning home from employment in India and other parts of Nepal. It could therefore be a monitoring site to capture labour movement and its impact on prices and demand in Far-western food-deficit areas.

Urban Consumption Center Markets: Urban Consumption Center Markets (UCCMs), those serving urban areas like Kathmandu and Pokhara, include many cereal wholesalers and serve as transit markets for surrounding areas. These markets are strategically located on the country's highway/transport network, though within the city, market sites are scattered.

- ***Kathmandu Urban Consumption Center Market (KUCCM):*** Kathmandu, the capital city, is located in a valley with a population of about two million people. The Kathmandu Valley represents a major consumption center of Nepal, with its markets serving the entire population within a 50 km radius.

- ***Pokhara Urban Consumption Center Market (PUCCM)***: PUCCM represents the second major consumption market in Nepal. Pokhara is a major tourist destination and the city has strong demand for quality produce. Its fertile land is used to produce high-quality cereals and off-season horticultural items.

Permanent and Temporary Rural Markets: There are two types of rural markets in Nepal: permanent and temporary. Permanent markets are based in areas having relatively larger population, such as district headquarters. The nature of operation of these markets varies, though they tend to include more imported fruits and livestock, as most cereals and vegetables in rural areas are supplied through home production. Temporary markets, or *haat bazaars*, are periodically organized in central locations in a cluster of villages. These markets operate on a specific day of the week and are managed by the community. They provide varieties of locally grown or imported produce and play an important role in meeting household consumption needs.

It can be also noted that though markets normally exist in all rural district headquarters, these markets mostly deal with non-food items. Given the lack of connectivity and profitability of food supply (high volume, but low value), the private sector is largely not engaged in the supply of food to these areas. The major private sources of food for people living in these areas thus remain domestic production or transit markets.

For import and export of agricultural products to India, traders have been using primarily the following surface routes:

- Birgunj custom point, Parsa district
- Jogbani custom point, Morang district
- Bhairahawa custom point, Rupandehi district
- Kakadbhitta custom point, Jhapa district
- Nepalgunj custom point, Banke district

Of the above custom points, Birgunj is the largest point where the government has already established dry port and that a railway line has been extended from Raxual (India) to Birgunj for transportation of goods. Likewise, the government has already established dry ports in Jogbani and Bhairahawa. Apart from the land transport, some overseas import and export trading takes place from International Tribhuwan Airport too.

SN1.11: District Level Planning Process

LSGA, 1999 provides comprehensive framework for bottom up and integrated planning. LSGA prescribes local bodies to formulate periodical and annual plans for the development of their respective sector following the participatory processes while integrating sectoral plans and strengthening coordination among various agencies. The LSGA prescribes local bodies (DDC/VDC and municipality) to adopt integrated planning at the district level. Under the LSGA, a bottom up planning is envisioned at the district level ensuring participation of all government line agencies and NGOs/CBOs working in the district. Based on their own district periodic plan, each DDC is required to formulate their annual plan to be endorsed by the DCC council (the apex body of the DDC). Under the LSGA, DDC expects that all government and nongovernmental organizations to submit their respective annual plan for the endorsement by district council. The plan is then forwarded to the NPC through MLD specifying the components which will be financed by DDC resources and those which require budgetary support. Line ministries further provide guidelines for assisting the local authorities. Local Self Governance Regulation, 1999 has endorsed a 14 steps planning framework (Table SN1.11.1).

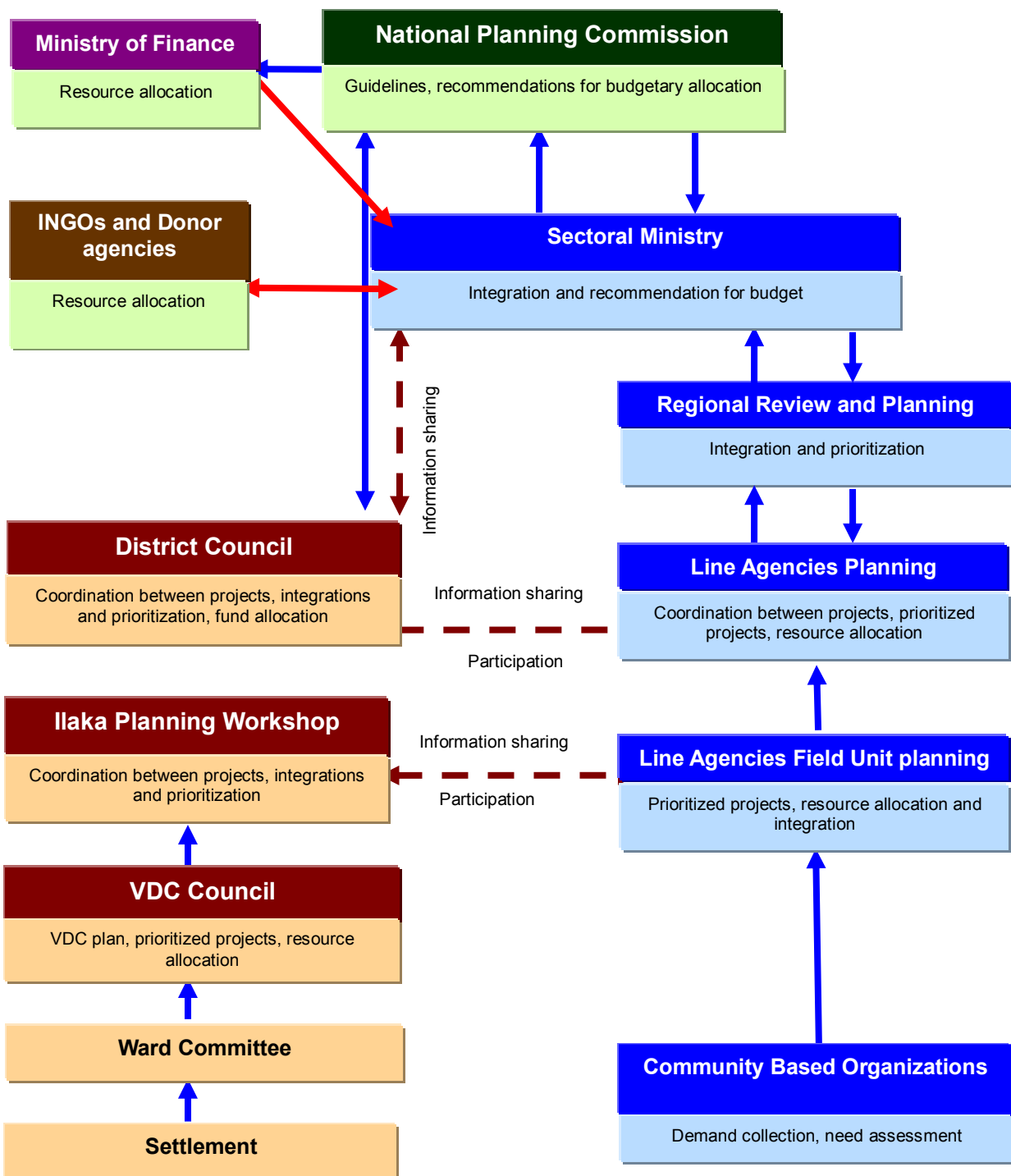
Figure SN1.11.1 presents existing planning processes, which shows that most of the sectoral agencies and local government are following bottom-up participatory planning process with top down investment and fund flow decision/mechanism. National Planning Commission (NPC) and concerned sectoral ministries provide guidelines to DDC and respective sectoral agencies for program planning and formulation. Dual planning process exists at the district level where sectoral agencies and local bodies including Village Development Committee (VDC), municipalities plan their program independently. Sectoral agencies share information with the DDC based on which, the latter prepare their plans and submitted to the Ministry of Local Development (MLD) and NPC for approval and necessary action. Information sharing and communication of the sectoral agencies with the lowest tier of the local bodies, especially with VDC and municipality is almost lacking.

NPC and Sectoral Ministries develop directives and prepare budget ceiling and forward to DDCs and district level line agencies by mid of November. After this, planning process starts at district level. District line agencies follow bottom-up participatory planning processes at the settlement or the community level. Settlement level demands are consolidated, reviewed, prioritized, and integrated at the VDC. VDCs identify programs which can be implemented through their own sources and activities which require external support as well, and submit to VDC council for approval. The program and projects approved by VDC Council are consolidated and prioritized during *Ilaka* planning workshop and are forwarded to the DDC. DDC reviews the program and projects through its various committees and finally submits to the District Council for prioritization, co-ordination, integration and resource allocation. After approval from the district council, the plan becomes a part of the District Plan. District Plan includes individual projects and programs, with a cost estimate. Budgetary allocations are either made by the DDC itself from its own sources or requests for funding are forwarded to government line agencies or donor agencies. Government line ministries send their sector specific plans to the NPC which makes recommendations for budgetary allocation to the

Ministry of Finance for the inclusion in the fiscal year budget to be submitted to the Parliament for approval.

Sectoral Agencies

Sectoral agencies such as District Agriculture Development Office (DADO) and District Livestock Service Office (DLSO) have been following the sectoral planning processes. NPC along with the sectoral Ministry provides guidelines including budget ceiling to their sectoral agencies every year. Sectoral agencies then perform planning every year following the participatory bottom-up planning processes. For example, field units of district line agencies such as DADO and DLSO conduct participatory program planning with the community based organizations to collect their needs. These program and projects are prioritized and compiled at service center level. These programs and project are further compiled at the district level, which are later approved by the District Council. Apart from this, each ministry has been independently organizing regional level planning workshops in each development region where the concerned line agencies submit their annual plan. The proposed plans are collected and compiled by the concerned departments and respective ministry and submitted to the NPC for approval.



Source: NARMA, 2010

Figure SN1.11.1: Existing Planning Process of Sectoral Agencies and Local Government

Table SN1.11.1: Planning Procedure of DDC

Steps	Theme	Activity	Who/When
Primary	Information	Data analysis and preparation of resource map	DDC
Step 1	Guidelines	Fix budget ceiling	NPC/middle of November
Step 2	Revision of guidelines	Revision of guideline and budget ceiling	DDC/third week November
Step 3	Planning workshop	Discussion of plan priority and budget with DDC member and line agency heads	DDC/ end of November
Step 4	VDC meeting	Discussion of possible priority sector and program / projects at ward and settlement level	VDC/ Third week of December
Step 5	Selection of Projects	Discussion of felt needs of community, priorities projects and fill-up of demand collection compilation of community demand	Community/ third week of December
Step 6	Ward meeting	Prioritization and recommendation for VDC compilation and ward level projects, Resource	Ward meeting/ last week of December
Step 7	VDC meeting	Estimation, prioritization, classification of project as per resource need and classify projects to be implemented by VDC and to be forwarded to <i>Ilaka</i> district level.	VDC/ January first week
Step 8	VDC council meeting	Approval with or without alteration, of the VDC meeting outcome	VDC council /second week of January
Step 9	<i>Ilaka</i> level planning workshop	Compilation, Prioritization and Recommendation of projects revised from VDC council	Coordinated by <i>Ilaka</i> member/first week of February
Step 10	Sectoral planning workshop	Classification of projects recommended from <i>Ilaka</i> level, Prioritization and recommendation for further processing	Sectoral committee of DDC/ third week of February
Step 11	Integrated planning formulation	Inclusion, exclusion and revision of priority of the projects on recommendation of sectoral planning committee	Integrated planning committee of DDC/End of February
Step 12	DDC Meeting	Compilation and analysis of projects from sectoral committees and appraisal of complied projects i.e. environmental, economic and social standpoint, prioritization, of projects, classification of projects according to resource i.e. implementation through the sectoral ministry.	DDC/ first week of March
Step 13	DDC Council	Approval of programs and policies of district	Second week of March
Step 14	Implementation	Presents the approved programs to the central agencies. Implementation of programs after approval of central agency	Forth week of march / DDC and Line agencies After approval generally at end of July /DDC and line agencies

Source: NARMA, 2010

Role and Responsibilities of the Local Bodies Related to Planning and Coordination

(1) VDCs

- Each VDC shall formulate periodical and annual plans for the development of their area. While formulating plan priority should be given to (a) Projects which are production-oriented and from which consideration may be obtained sooner (b) Projects raising living standard, income and employment of, and giving direct benefits to, the rural people, and contributing to the alleviation of poverty. (c) Projects which can be operated with low cost and larger people's participation. (d) Projects to be operated through local means, resources and skills. (e) Projects providing direct benefits to the women as well as backward class and children. (f) Projects that can contribute to protect and promote the environment.
- Each local government unit should have to collect village level objective data and prepare a resource map reflecting the situation of the village for the development of the village development area.
- The Village Development Committee shall be required to obtain the guidance and prior estimation of the resources and means from the District Development Committee and other concerned agencies for the forth-coming fiscal year until the month of Marg of each year. Even the Village Development Committee itself shall have to provide guidance on selection of projects and formulation of plans to the different Ward Committees for the formulation of service and development programs for the forth-coming fiscal year.
- In formulating its plans and service programs, the Village Development Committee shall have to maintain coordination with governmental, non-governmental and donor agencies implementing different services and development programs.
- The Village Council may constitute the following sectoral committees consisting of three members under the chairmanship of one of the Members of the Village Council :
 - Infrastructure and Construction Development Committee,
 - Agriculture, Forest and Environment Committee,
 - Population and Social Committee,
 - Organization and Administration Committee
 - Water Resources and Land Committee

(2) Municipalities

- Each Municipality shall have to formulate periodical and annual development plans for the development of the municipal area. In formulating periodical plans, it shall be finalized having included therein the sectoral programs of sectoral area in consultation with the sectoral committees.
- In formulating the plans, the Municipality shall, as per necessity, have to launch plans such as land-use, land-pulling, and guided land development for making the development of the municipal area balanced and planned.

- The Municipality shall have to obtain guidance and prior estimation of the resources and means from His Majesty's Government, District Development Committee and other concerned bodies for the coming Fiscal Year until the month of Marg of each year. Even the Municipality itself shall have to provide guidance on selection of projects and formulation of plans to the different Ward Committees for the formulation of service and development programs for the forth-coming fiscal year.
 - Projects have to be invited from the Ward Committees, consumers' committees, and non-governmental organizations in the municipal area, and plans have to be formulated on the basis thereof.
 - The Municipality shall have to maintain coordination with governmental, non-governmental and donor agencies implementing different services and development programs in the municipal area in the following matters: (a) To remove duplication between the Municipality and the concerned agency on investment to be made in any service sector. (b) To maintain complementary coordination among the investors. (c) To chiefly maintain the role of consumers on procedures of the both. (d) To follow the method whereby the inhabitants of the Municipality can have maximum benefit from the investment. (e) To determine time-table for the implementation of various programs.
 - Municipal Council may constitute the following sectoral committees consisting of three members under the chairmanship of one of the Members of the Municipal Council:
 - Infrastructure and Construction Development Committee,
 - Agriculture, Forest and Environment Committee,
 - Population and Social Committee,
 - Organization and Administration Committee
 - Water Resources and Land Committee
- (3) District Development Committee (DDC)**
- Each DDC shall have to formulate periodical and annual development plans for the development of its District. periodical plan to be formulated pursuant to sub-rule (1) shall contain the long term aims, objectives and working policies of the plan, physical infrastructures and services, and facilities in the District, resources mobilization and possibilities of income generation, the cost involvement of governmental and private sector and the works to be carried out by the DDC.
 - The National Planning Commission and His Majesty's Government shall, on the basis of the plans formulated pursuant to sub-section (1), have to provide grants and necessary policies and guidelines to the DDC within the month of Kartik.
 - In formulating the annual plan, the following matters shall have to be taken as the basis :- (a) Directives received from the National Planning Commission and the concerned Ministry on national development policy. (b) District level policies and goals set on the basis of national goal and policy. (c) Overall necessities indicated by periodical plans. (d) Plans received from

the Village Council and the Municipal Council.

- In formulating the district development plan, the act of formulating the plan shall be carried out after holding necessary discussion on it in the service center subject-wise plan formulation committee, the integrated plan formulation committee, DDC and the District Council.
- There shall be an integrated plan formulation committee at the district level. (2) The committee referred to in sub-section (1) shall comprise the following members :- (a) President of the DDC - Chairman (b) Parliamentarians within the concerned district development area - Ex-officio Member (c) Coordinators of the subject-wise plan formulation committees - Member (d) Other persons, as prescribed- Member (3) The committee as referred to in sub-section (1) shall coordinate and set the priority of, the projects obtained from the subject-wise plan formulation committees and give them a form of the integrated district development plan.
- In formulating the integrated district development plan, there shall be held a meeting of governmental and non-governmental organizations implementing different services and development programs within the District and coordination shall be maintained between annual development plans.
- The District Council may constitute the following sectoral committees consisting of three members under the chairmanship of the Members of the District Council :
 - Infrastructure and Construction Development Committee
 - Agriculture, Forest and Environment Committee
 - Population and Social Committee,
 - Organization and Administration Committee
 - Water Resources and Land Committee
- In formulating periodical plans, it shall be finalized having included therein the sectoral programs of sectoral area in consultation with the sectoral committees.
- Once having received the pre-estimation of resources and means and guidelines from GoN and the National Planning Commission, the DDC shall have to organize a planning formulation workshop within the second week of the month of Marga for achieving the target of the plan with the participation of sectoral bodies, financial institutions, Chamber of Commerce and Industries, chief of non-governmental organizations, Mayors of Municipalities, and the representatives of the Federation of the Village Development Committees (VDCs).
- Considering the suggestions derived from the workshop held pursuant to clause (a) and the pre-estimation of resources and means and guidelines, the Planning Formulation Form shall have to be made available to the concerned VDC and Municipality within the last day of the month of Marga each year for formulation of plan accordingly.
- The concerned VDC and Municipality shall, within second week of the month of Magha each year, determine the sectoral priority order of the projects to be launched from the district level and central level on the form received pursuant and forwards it to the concerned DDC and the Area Services Centers.

- A planning formulation meeting for the formulation of area level projects shall be held under the chairmanship of the concerned Area Member consisting of the Chairmen and Vice-chairmen of the VDCs and Mayors and Deputy-mayors of Municipalities within the area, the Chiefs of the sectoral bodies and the financial institution and representatives of non-governmental organizations within the area. In such meetings, the Chiefs of the district level Sectoral bodies and the President and Vice-president of the DDC may also be invited. The secretary of the DDC shall depute an appropriate staff for rendering the services of secretariat to such meeting. The meeting shall determine the sectoral priority order of the projects received from the VDCs and Municipalities within the area, and forward them to the DDC and the concerned sectoral committees within the third week of the month of Magha.
- The Sectoral Planning Formulation Committee shall classify the projects received from various areas into the district level and central level projects, determine the priority order of such projects and forward them to the Integrated Planning Formulation Committee within the first week of the month of Falgun each year.
- The Integrated Planning Formulation Committee shall, upon discussion on the projects received from the Sectoral Planning Formulation Committee and upon looking into the complementary and supplementary relationship amongst the projects, change, add and reduce and change into the priority order of the projects as per necessity, and submit to the DDC within second week of the month of Falgun.
- DDC shall, before finalizing the district development projects recommended by the Integrated Planning Formulation Committee have to analyze about the policy of Government of Nepal, guidelines, target of the periodic plan, land-use map, master plan, particulars of resources and means resource map, working capacity and working efficiency, environmental impact and the balance amongst the areas. While analyzing in such a way, a separate classification shall be made as to the projects to be launched at district level and central level, and the projects to be launched in participation with other institution.

Human Resources and Administrative Structures of DDC and DTO

DDC: Established pursuant to the LSGA within the framework of the decentralized governance, DDCs and VDCs are autonomous organizations responsible for overall development of their respective districts and coordination of development activities in the district. DDCs and VDCs are formed from the elected and nominated local leaders from their constituencies. Key administrative officer is Local Development Officer in case of the DDC and VDC Secretary in case of the VDC. These officials are provided by the government through the MLD.

The organizational structure and staffing pattern of a typical is presented in Figure SN1.11.2 and staffing pattern in Table SN1.11.2. This applies to all the DDCs. However, DDCs are free to appoint additional staff based on the work load but as a temporary arrangement only.

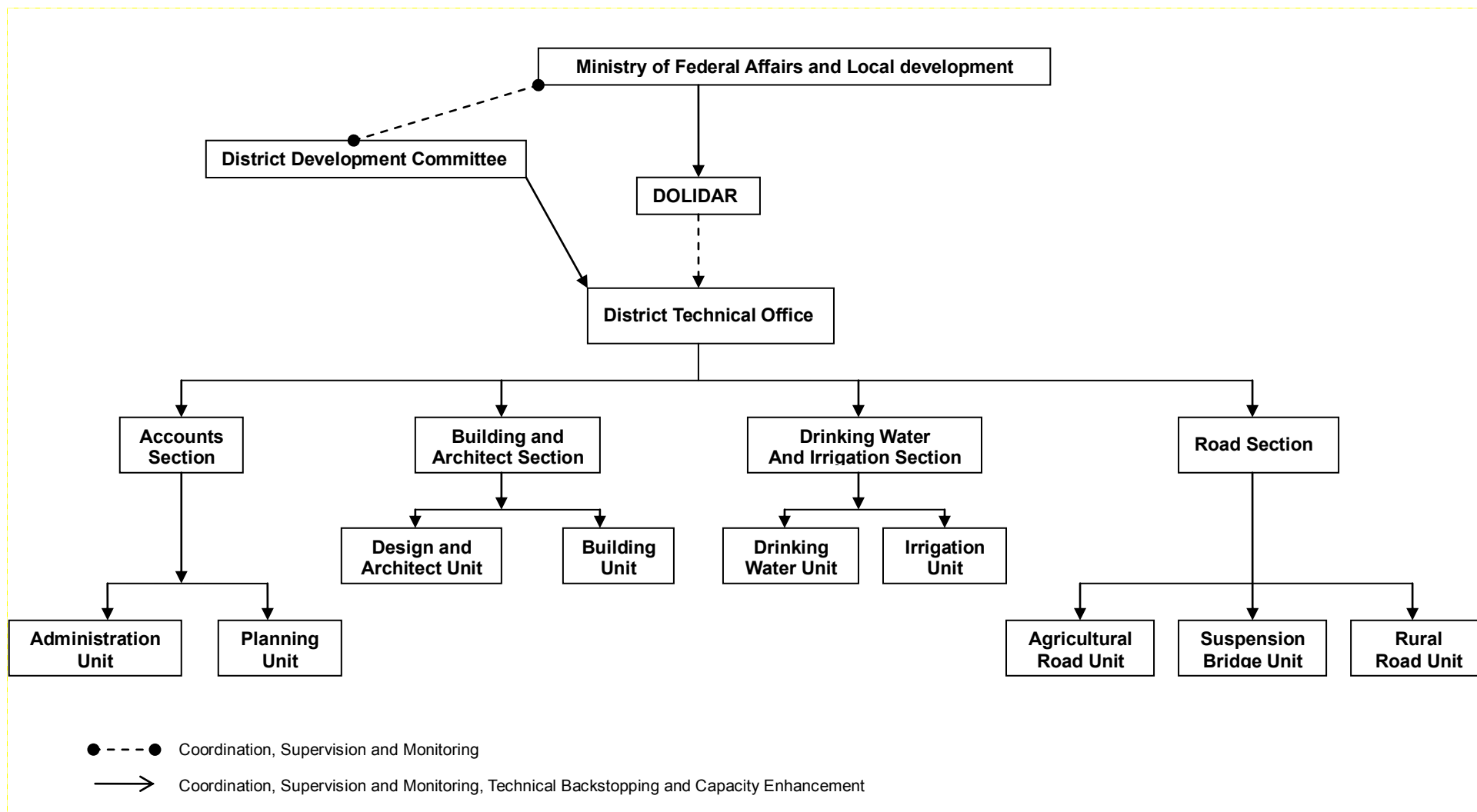


Figure SN1.11.2: Organizational Structure of the DDC

Table SN1.11.2: Staffing Structure of the DDC

Position	Class	Kavre	Dolakha	Ramechhap	Sindhuli
Local Development Officer	Gazetted II class	1	1	1	1
Planning, Monitoring and Administrative Officer	Gazetted III class	1	1	1	1
Accounts Officer	Gazetted III class	1	-	1	1
Program Officer	Officer Level VI	4	2	4	1
Engineer	Officer Level VI	1	-	3	1
Overseer	Assistant Level V	-	1	2	3
Accounts Officer	Officer Level VI	1		-	1
Internal Auditor	Officer Level VI	1	1	-	1
Accountant	Assistant Level V	2	1	1	-
Office Assistant		-	-	1	-
Nayab Subba (Senior Admin. Assistant)	Assistant Level V	2	2	1	2
Social Mobilizer	Assistant Level V			3	
Sub-overseer	Assistant Level IV	8	3	4	7
Kharidar (Junior Admin. Assistant)	Assistant Level I	2	1	-	1
Kharidar (Junior Admin. Assistant)	Assistant Level IV	8	6	4	3
Asst. Accountant	Assistant Level IV	1	3	1	1
Computer Operator	Assistant Level IV			2	1
Typist	Assistant Level IV	1	2	1	
Telephone Operator	Assistant Level III	1		1	
Driver	Assistant Level III	2	2	2	4
Office Support	Assistant Level I	9	8	12	9
Total		46	34	43	38

Source: Collected from Respective District Development Committee Offices of SRC districts

DTO: DOLIDAR has established DTOs in all the districts. While DOLIDAR is responsible for local roads, DTO, as a devolved organization within the DDC, is responsible for all types of local level infrastructure construction activities in the districts carried out by the DDC. Administratively, it is controlled and supervised by the DDC but the capacity enhancement of the DTO staff and their transfer and other administrative works are carried out by the DOLIDAR which is a department under

the MLD.

Based on the workload of the DTO, DDC might provide additional staff to the DTO as a temporary arrangement. Table SN1.11.3 shows the staffing structure of the DTO in Kavre district and this applies to almost all the DTOs with some variation in the number based on the district workload.

Table SN1.11.3: Staffing Structure of the DTO

Position	Class	Kavre	Dolakha	Ramechhap	Sindhuli
Divisional Engineer	Gazetted II Class	1	1	1	1
Engineer	Officer Level VI	2	1	1	2
Accountant	Assistant Level V	1	1	1	
Nayab Subba (Senior Admin Assistant)	Assistant Level V	1	1	1	1
Overseer	Assistant Level V	6	6	-	6
Sub-overseer	Assistant Level	7	6	6	6
Kharidar (Junior Admin Assistant)	Assistant Level IV	1	1	1	1
Technicians	Assistant Level	4	4	4	4
Peons		2	2	2	2
Total		26	23	17	23

Source: Collected from Respective District Technical Offices of SRC districts

SN1.12: Human Resources and Administrative Structure of DADO

All the four districts lie in mid-hills, hence human resource and administrative structure of DADO is almost similar. Table SN1.12.1 presents human resources of four districts as approved by the GoN in 2003. This table provides approved positions. But actual persons working in the district is even smaller than this because of transfer, retirement and vacancies. Meanwhile, it should be noted that the number of actual JTs/JTAs in the district would not tally with the figures given in the Table because of the recent decision of the present Government to promote all those staff to the next higher level position automatically who have served at least certain number of years as has been provisioned in the recent amendment of the Civil Service Act. This number has been so large that the government has not been able to provide responsibilities commensurating to their promoted positions. The Government is now planning to offer voluntary retirement to all those who have completed at least 20 years in the permanent position and have crossed 50 years of age. Field survey in the respective district will bring out the actual figures. Presently promoted officials are now working in their previous positions.

Table SN1.12.1: Human Resources of DADOs in study districts (Approved)

	Positions	Kavre	Dolakha	Ramechhap	Sindhuli
1	Senior Agriculture Development Officer	1	1	1	1
4	Agriculture Extension Officer	1(1)	1	1	1
6	Horticulture Development Officer	1	1	1	1
3	Plant Protection Officer	1	1	1	1
2	Planning, Monitoring, Evaluation and Market Development Officer	1	-	1(1)	1
7	Junior Technicians	12 (1)	8 (2)	10 (3)	10 (2)
8	Junior Technical Assistants	16 (1)	8	14 (1)	14 (1)
9	Accountant	1 (1)	1	1	1
10	Administrative Assistant	1	1	1	1
11	Typist/Computer Operator	1 (1)		-	-
12	Driver	1 (1)		-	1 (1)
13	Peons/Runners	17 (6)	11	15(1)	15 (3)
	Total	54 (12)	33 (2)	46 (6)	47 (7)

Note: Figure in parenthesis denotes number of vacant positions

Source: Official records of DADO of respective districts, (Annual Progress report, 2011/12)

Figure SN1.12.1 below presents the institutional structure/arrangement of Agriculture Development in the district.

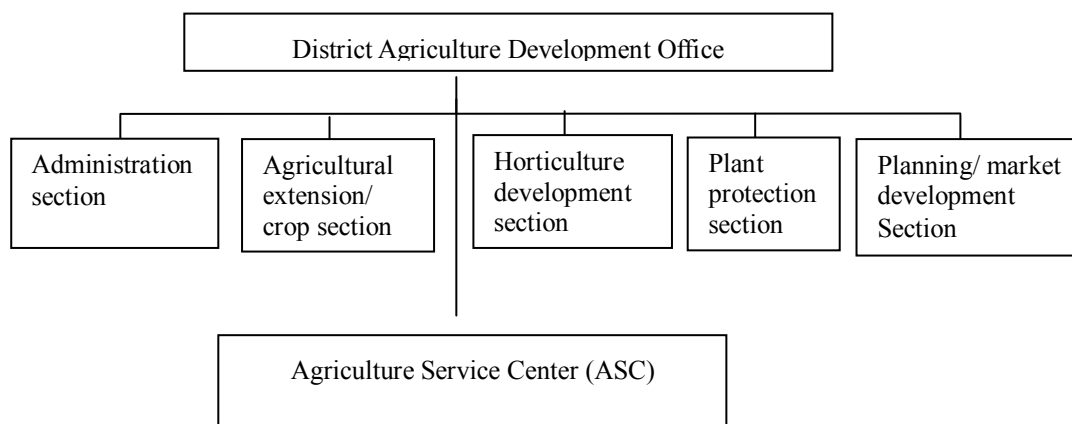


Figure SN1.12.1: Organization Structure of DADO

Table SN1.12.2 presents list of service centers and their service coverage by study district. This shows that each district is divided into 4 to 7 service centers.

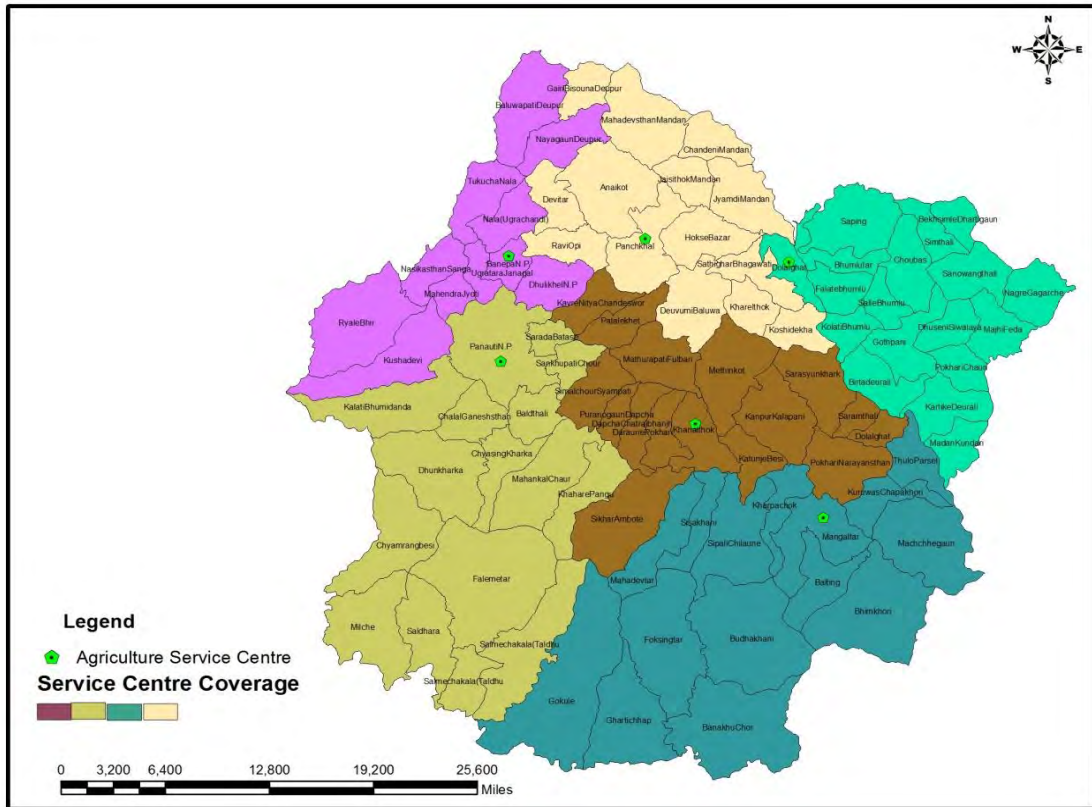
Table SN1.12.2: Organization of DADOs and Service Centers in Study Districts

DADO	DADO (District Headquarters)	Field
	Sections	Service Centers (Coverage)
Kavre	<ol style="list-style-type: none"> 1. Planning, Monitoring, Evaluation and Market Development 2. Plant Protection 3. Agriculture Extension/Crop Development 4. Administration 5. Accounts 	<ol style="list-style-type: none"> 1. Bhakundebesi (16 VDCs) 2. Mangaltar (15 VDCs) 3. Panchkhal (14 VDCs) 4. Dolalghat (18 VDCs) 5. Khopasi (16 VDCs) 6. Banepa (11 VDCs)
Dolakha	<ol style="list-style-type: none"> 1. Plant Protection 2. Agriculture Extension 3. Horticulture Development 4. Administration 5. Accounts 	<ol style="list-style-type: none"> 1. Jiri (9 VDCs) 2. Malukhola (11 VDCs) 3. Magapauwa (8 VDCs) 4. Singati (19 VDCs) <p>Office command area: Bhimeshwar Municipality and 4 VDCs</p>
Ramechhap	<ol style="list-style-type: none"> 1. Planning, Monitoring, Evaluation and Market Development 2. Plant Protection 3. Agriculture Extension 4. Horticulture Development 5. Administration 6. Accounts 	<ol style="list-style-type: none"> 1. Bamati (10 VDCs) 2. Dhobi (11 VDCs) 3. Ramechhap (9 VDCs) 4. Chisapani (8 VDCs) 5. Doramba (8 VDCs) 6. Khaniyapani (8 VDCs)
Sindhuli	<ol style="list-style-type: none"> 1. Planning 2. Plant Protection 3. Agriculture Extension 4. Horticulture Development 5. Administration 6. Accounts 	<ol style="list-style-type: none"> 1. Dudhauri (9 VDCs) 2. Dakaha (9 VDCs) 3. Basheshwor (8 VDCs) 4. Bhimsthan (8 VDCs and Ward No. 1 – 8 of Kamalamai Municipality) 5. Jhangajholi Ratmata (10 VDCs) 6. Kapilakot (8 VDCs) <p>Bhiman Contact Point: Ranibas VDC and Ward No. 9 – 18 of Kamalamai Municipality</p>

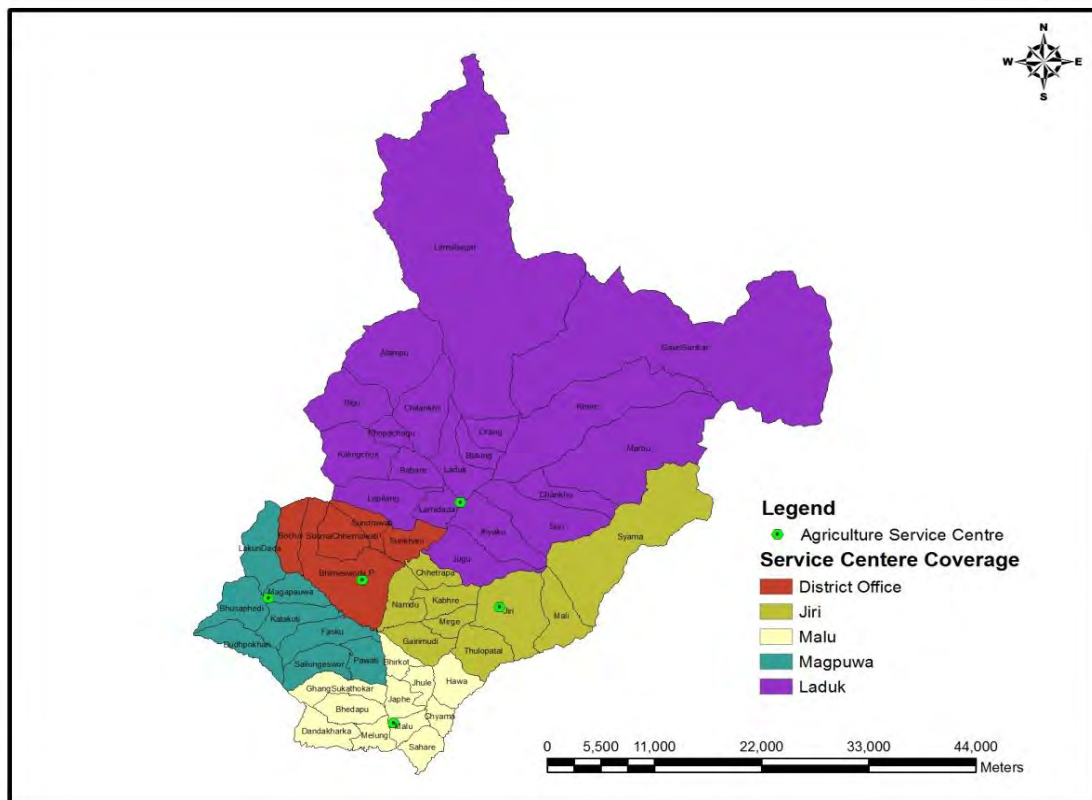
Note: Figures in Parenthesis show the number of VDCs covered by the service center.

Map SN1.12.1, Map SN1.12.2, Map SN1.12.3 and Map SN1.12.4 presents VDCs coverage of service center of Karve, Dolakha, Ramechhap and Sindhuli districts respectively.

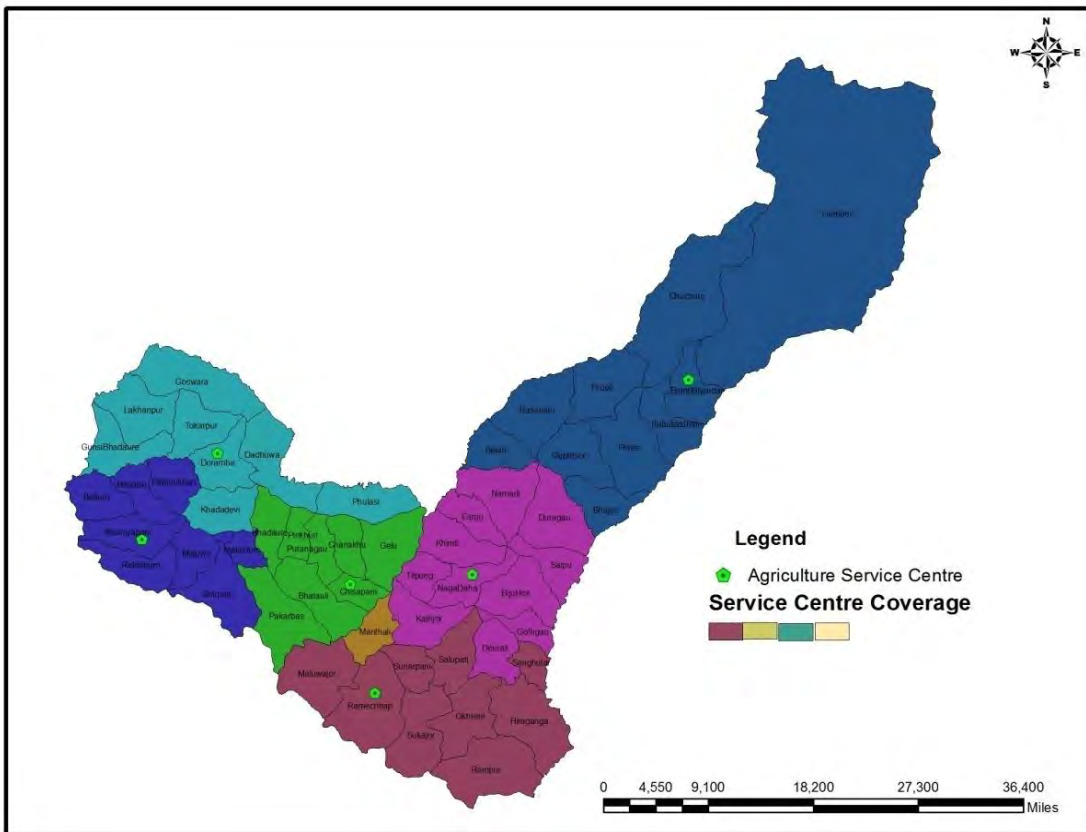
Map SN1.12.1: VDCs Coverage of DADO's Service Centers, Karve



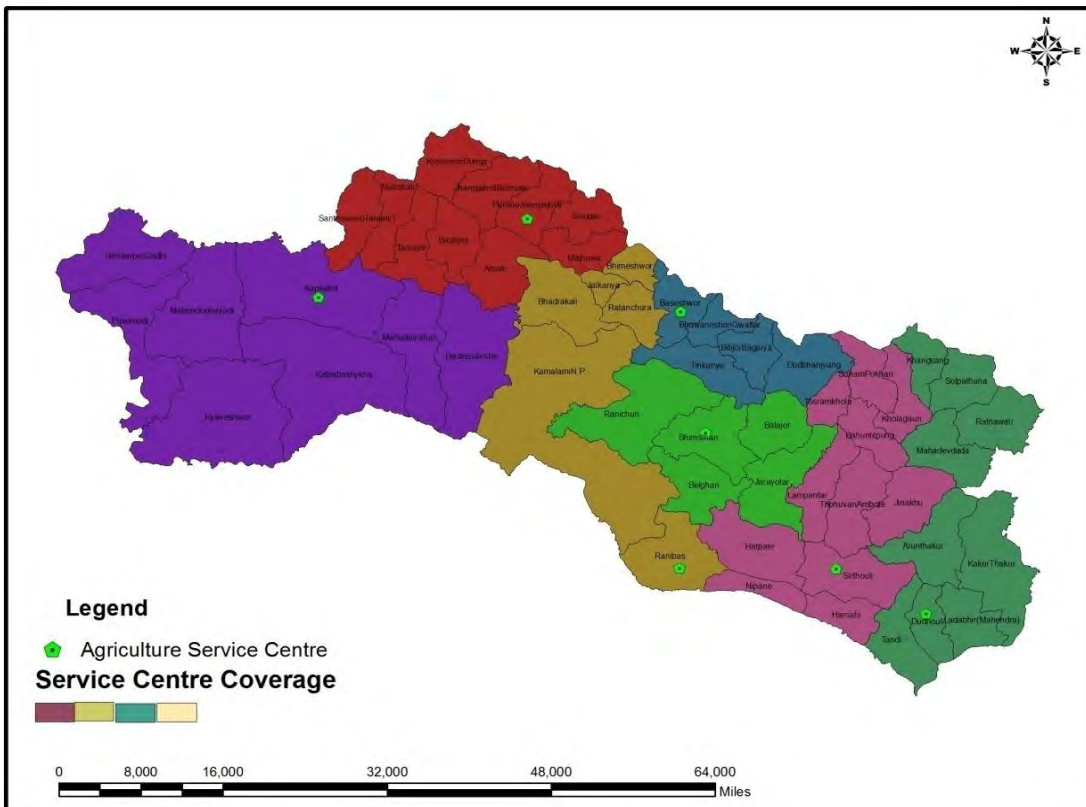
Map SN1.12.2: VDCs Coverage of DADO's Service Centers, Dolakha



Map SN1.12.3: VDCs Coverage of DADO's Service Centers, Ramechhap



Map SN1.12.4: VDCs Coverage of DADO's Service Centers, Sindhuli



Services Provided by Agricultural Extension Staff: In the district, extension activities are carried out by JTs/JTAs who are fielded at the SCs (See Table SN1.12.2 for the service centers in four study districts) based on district's approved annual programs and budget. The key extension activities carried out by JTs/JTAs are as follows:

1) Demonstration

- Production demonstration
- Result demonstration
- Method demonstration of key practices
- Minikit demonstration

2) Training

- District level (subject specific, production oriented, marketing, agribusiness)
- Service Center level
- On the spot training

3) Supply of production inputs

- Fruit saplings
- Bee keeping, sericulture related
- Others as per the demand of the farmers/producers

4) Service arrangements

- Soil and fertilizer testing
- Plant protection services
- Market facilitation and information etc
- Small irrigation projects
- Cooperative
- Irrigation projects

Above are examples only and that these are not exhaustive. Number and frequency of the services and activities depend on the target and budget available to the service center.

SN1.13: Human Resources and Administrative Structure of DLSO

Table SN1.13.1 presents the human resources in the four study districts as approved by the GoN in 2003. This table provides approved positions. But actual persons working in the district is even smaller than this because of transfer, retirement and vacancies.

Table SN1.13.1: Human Resources of DLSO in Study Districts

	Kavre	Dolakha	Ramechhap	Sindhuli
Livestock Development Officer	1	1	1	1
Veterinary Doctor	1	1	1	1
Livestock Technicians (JT)	4	4	2	3
Livestock Health Technicians (JT)	3	3	3	4
Junior Livestock Technicians (JTA)	11 (3)	10 (1)	8	9
Junior Livestock Health Technicians (JTA)	7	7	7	5
Assistant Accountant	1	1	1	1
Khardhar (Admin Assistant)	1	1	1	1
Livestock technician	-	-	-	3(2)
Typist	1		-	
Driver	1	1	-	
Peon	22	14 (1)	14(2)	16(2)
Total	53 (3)	43 (2)	38 (2)	44 (4)

Note: Figure in parenthesis denotes number of vacant positions

Source: Official records of DADO of respective districts

Figure SN 1.13.1 below presents the institutional structure/arrangement of District Livestock Service Office in the district.

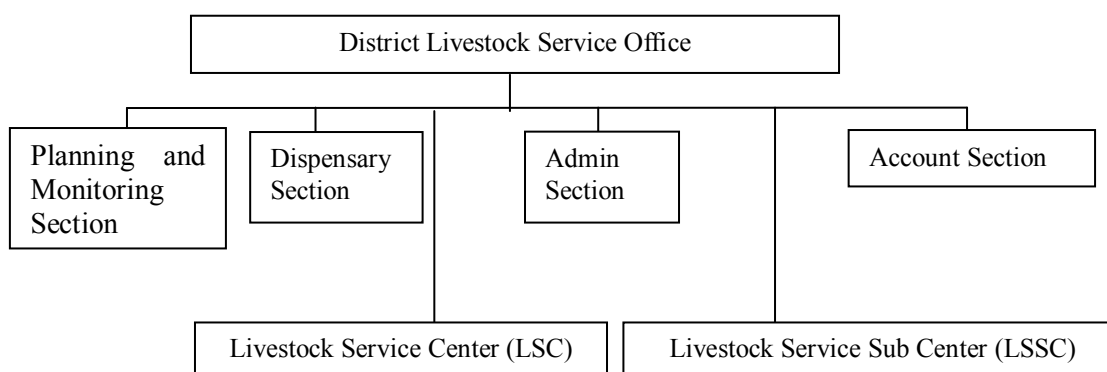


Figure SN1.13.1: Organization Structure of DLSO

Table SN1.13.2 presents list of service centers and their service coverage by study district. This shows that each district is divided into 4 to 8 service centers and 7 to 13 sub-service centers.

Table SN1.13.2: Organization of DLSOs and Service Centers in Study Districts

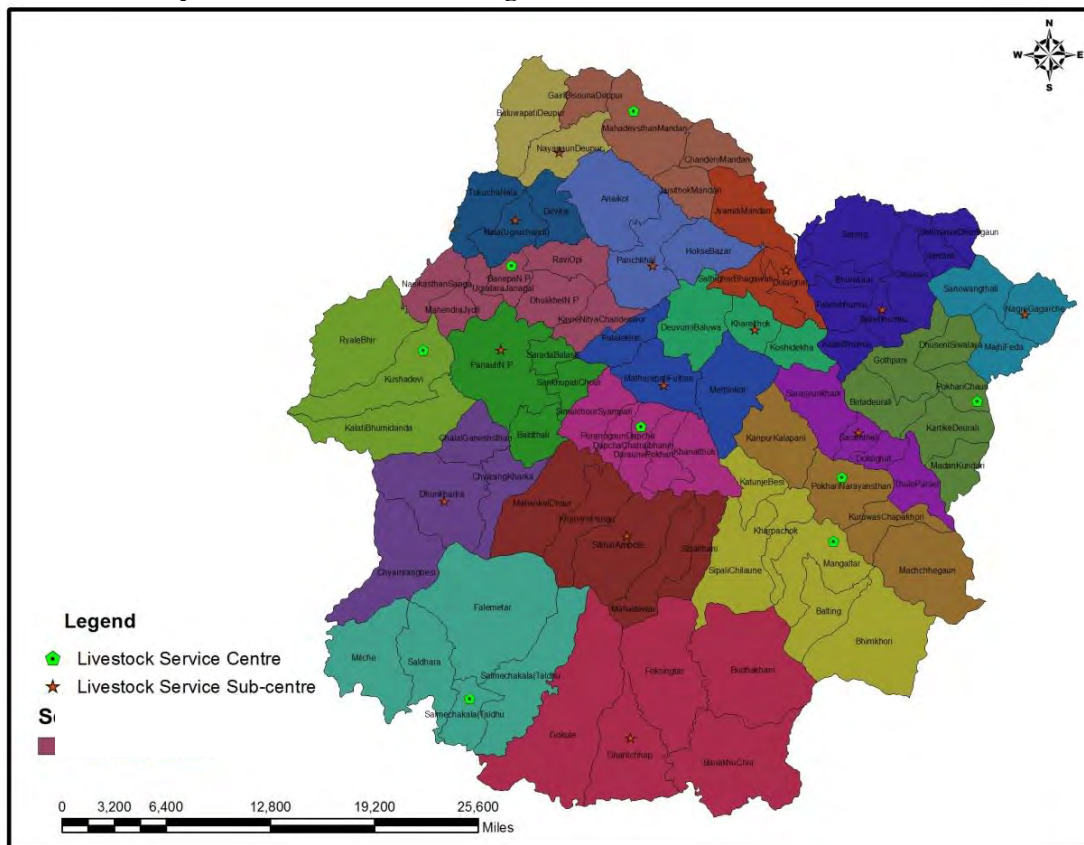
DLSO	DLSO (District Headquarters)	Field	
	Sections	Service Centers (Coverage)	Sub-serve center
Kavre	<ol style="list-style-type: none"> 1. Planning and Monitoring Section 2. Administration, Account and Store 3. Dispensary 	<ol style="list-style-type: none"> 1. Banepa (5 VDCs) 2. Kusadevi (4 VDCs) 3. Taldhunga (5 VDCs) 4. Mangaltar(6 VDCs) 5. Dapcha (4 VDCs) 6. Pokhari Narayan (4 VDCs) 7. Pokhari Chaur (6 VDCs) 8. Mahadevsthan (4 VDCs) 	<ol style="list-style-type: none"> 1. Panchkhal (4VDCs) 2. Shalle (7 VDCs) 3. Nala (3 VDCs) 4. Khopasi (4 VDCs) 5. Dhunkharka (4 VDCs) 6. Chatachap (5 VDCs) 7. Nagragrcha (3 VDCs) 8. Phulbari (3 VDCs) 9. Saramthali (4 VDCs) 10. Kharelthol (2 VDCs) 11. Naya gaon (3 VDCs) 12. Shikharambate (5 VDCs) 13. Sathighar (3 VDCs)
Dolakha	<ol style="list-style-type: none"> 1. Planning and Monitoring Section 2. Administration, Account and Store 3. Dispensary 	<ol style="list-style-type: none"> 1. Jiri (5 VDCs) 2. Japhe (5 VDCs) 3. Melung (3 VDCs) 4. Singati (4 VDCs) 5. Jagat (4 VDCs) 6. Magapauwa (6 VDCs) 	<ol style="list-style-type: none"> 1. Gaurimudi (3 VDCs) 2. Sunkhani (2VDCs) 3. Jugu (3 VDCs) 4. Suri (3 VDCs) 5. Sangwa (3 VDCs) 6. Bigu (3 VDCs) 7. DLSO (3 VDCs)
Ramechhap	<ol style="list-style-type: none"> 1. Planning and Monitoring Section 2. Administration, 3. Account and Store 4. Dispensary 	<ol style="list-style-type: none"> 1. Ramechhap (5 VDCs) 2. Khimtti (4 VDCs) 3. Bhirpani (5 VDCs) 4. Bhethane (5 VDCs) 	<ol style="list-style-type: none"> 1. Banti (5 VDCs) 2. Daragaun (11 VDCs) 3. Chisapani(5 VDCs) 4. Doramba (4 VDCs) 5. Betali (4 VDCs) 6. Sanghatar (5 VDCs) 7. Paranagaun (4 VDCs) 8. Kathjor (3 VDCs)
Sindhuli	<ol style="list-style-type: none"> 1. Planning and Monitoring Section 2. Administration, Account and Store 3. Dispensary 	<ol style="list-style-type: none"> 1. Bhimsthan (3VDCs) 2. Dudhauli (5 VDCs) 3. Dakaha(5 VDCs) 4. Gawaltar(4 VDCs) 5. Jangajholi(5 VDCs) 6. Kapilalot (4 VDCs) 	<ol style="list-style-type: none"> 1. Bahantilpung (4 VDCs) 2. Sawalpathan (4VDCs) 3. Ranichuri (3 VDCs) 4. Bastipur (5 VDCs) 5. Ratanchura (3 VDCs) 6. Mahandrajhadi (5 VDCs)

Note: Figures in Parenthesis show the number of VDCs covered by the service center.

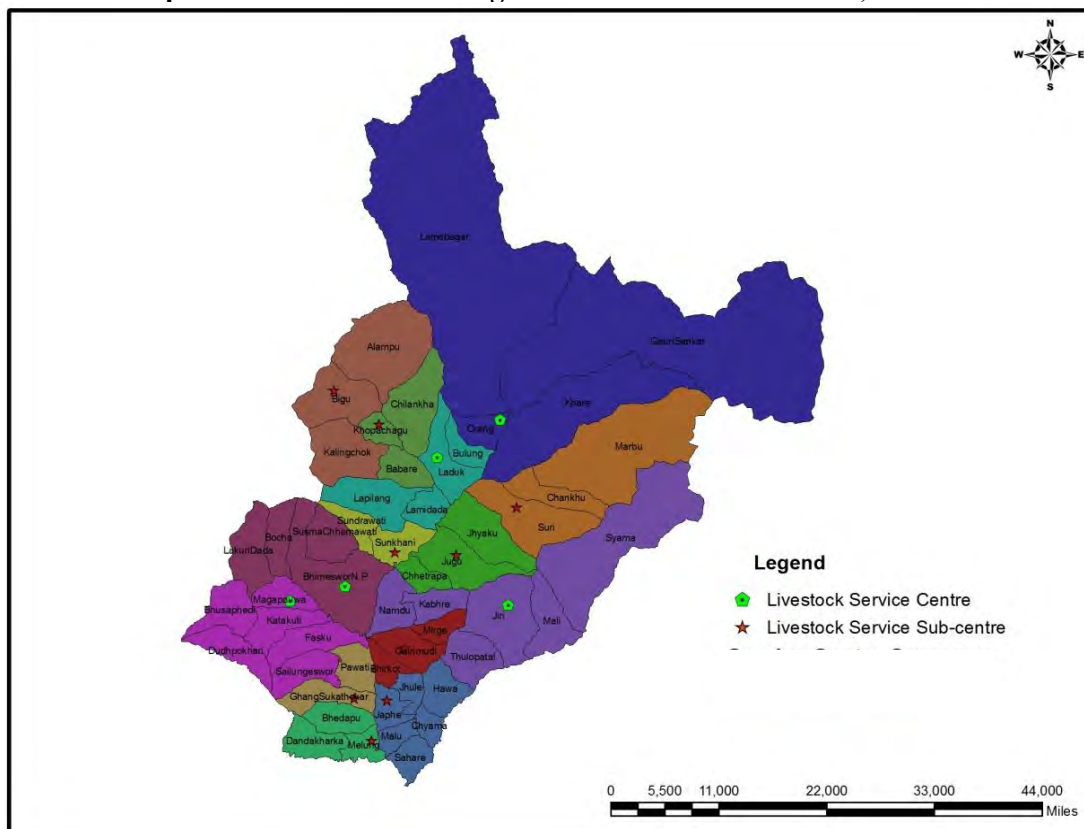
Source: Official records of DADO of respective districts

Map SN1.13.1, Map SN1.13.2, Map SN1.13.3 and Map SN1.13.4 presents VDCs coverage of DLSO's service and sub service center of Karve, Dolakha, Ramechhap and Sindhuli districts respectively.

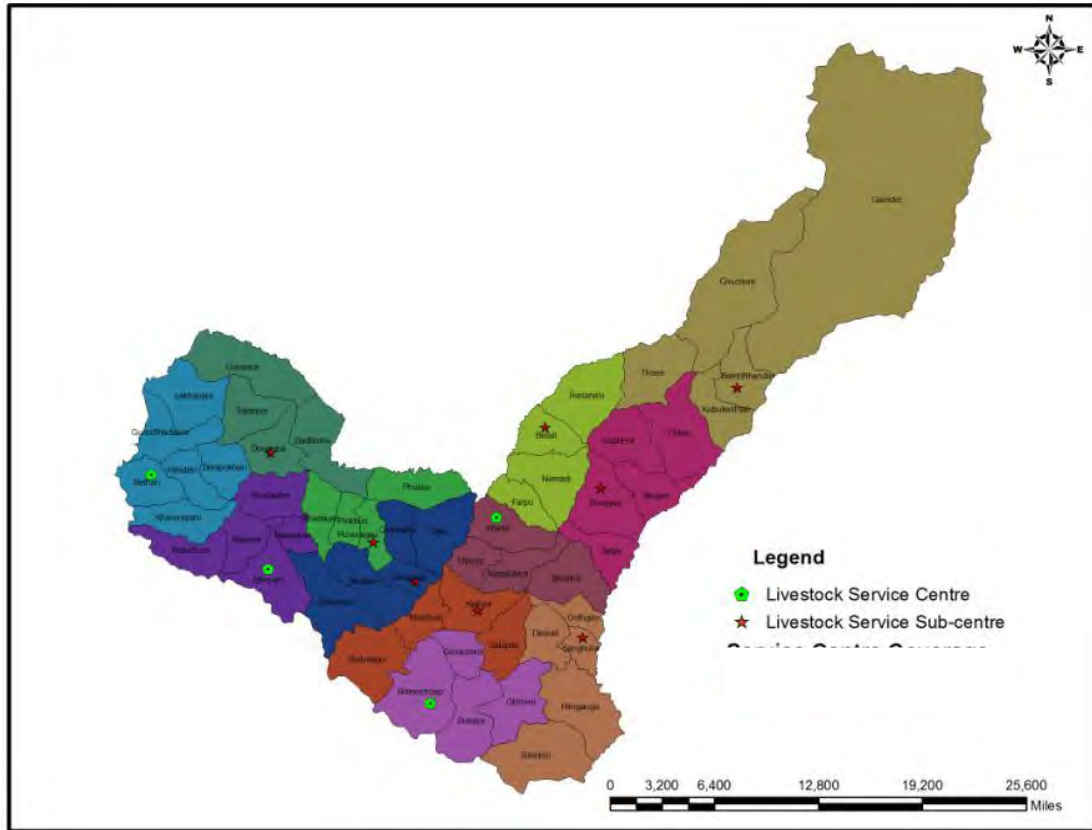
Map SN1.13.1: VDCs Coverage of DLSO's Service Centers, Karve



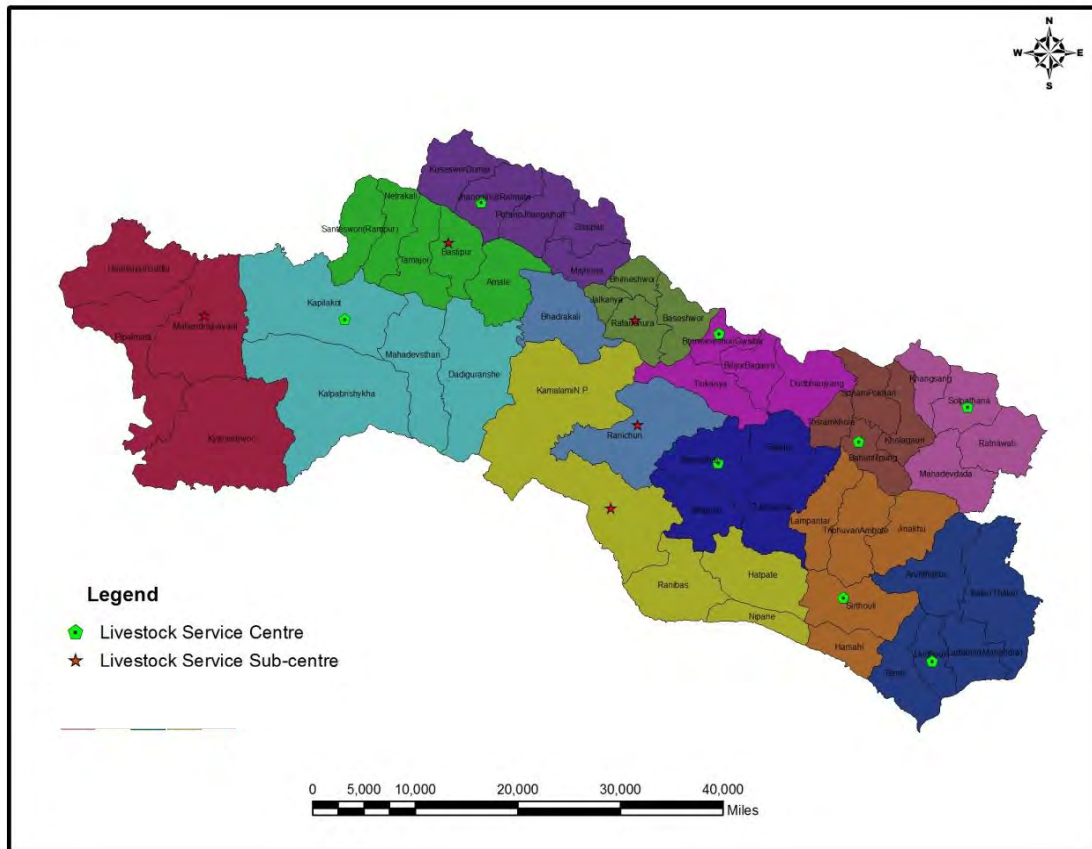
Map SN1.13.2: VDCs Coverage of DLSO's Service Centers, Dolakha



Map SN1.13.3: VDCs Coverage of DLSO's Service Centers, Ramechhap



Map SN1.13.4: VDCs Coverage of DLSO's Service Centers, Sindhuli



Livestock Extension Staff: Services provided by the livestock extension staff includes:



- Medical treatment services
- Livestock and livestock feed, forage and grass distribution
- Training and capacity building
- Laboratory services
- Vaccination services
- Artificial inseminations
- Minikit distributions

Above are examples only and that these are not exhaustive. Number and frequency of the services and activities depend on the target and budget available to the service center.

SN1.14: Profiles of Selected Market

(1) Agriculture Produce Market Center, Charikot, Dolakha

1) Market overview

S. N.	Criteria	Characteristics	Remark
1	Background	The market was constructed by Small Marketing Infrastructure Project of UNCDF in 1998, which aimed at improving the marketing of fruits and vegetables in central and eastern Nepal.	
2	Location	Bhimeswor Municipality, Dolakha district	
3	Type of market	Retail market	
4	Year of Establishment	1998	
5	Market size	0.15 ha	
6	Ownership of the market	Management committee	
7	Operation schedule	Daily	
8	Business hour	5 hours a day (5 am to 10 am)	
9	Market management	Managed by committee	
9.1	Market management committee	Yes, formed as per the Management and Operation of Agriculture Produce Market Directive, 2053 (1997)	
9.2	Number of persons in management committee	9	
9.3	Government officer	2	
9.4	Farmers	3	
9.5	Traders	3	
9.6	Local government	1	
9.7	Other		
9.8	Women representation in committee	16.6 % (1 out of six elected persons is woman)	
10	Number of operation staff	1 (Cleaner)	
11	No. of sheds	5 (open)	
12	Number of stalls	5	
12.1	Wholesale stalls		
12.2	Farmers' stalls		
12.3	Store rooms (Small)	8	
12.4	Store rooms (Large)		
13	Rent of the stalls	NRs 150 per month	
13.1	Wholesale stalls		
13.2	Farmers' stalls		
13.3	Store rooms (Small)	NRs 800 to NRs 1000 per month	
13.4	Store rooms (Large)		
14	Key commodities traded	Mainly vegetables along with cereals and spices	
15	Revenue per year	NRs 103,220	
16	Expenditure per year	NRs 63,414	
17	Capacity usage ratio	100 percent	All stalls are rented
18	Number of traders	Around 20 traders regularly operate from the market	More than 100 traders come during the market day, i.e. on Saturday
19	Approximate turnover in the market per month	NRs 2 to NRs 2.5 hundred thousand	
20	Mode of transport	Main mode of transport is on foot (almost all) whereas majority use public transportation (bus) as well	
21	Road	No problem, approach road is constructed recently	
22	Loading and unloading	No problem, farmers themselves bring the produce and sale to the trader	
23	Price monitoring system	Yes, carried out regularly and price are recorded	
24	Grading	Not at all, generally left to the discretion of traders and farmers	

S. N.	Criteria	Characteristics	Remark
25	Weight monitoring	Not at all.	
26	Quality monitoring	Not at all, left to the traders and purchasers	

2) Use of the market

S. N.	Criteria	Characteristics	Remark										
1	Who bring commodities?	<table border="1"> <caption>Data for 'Who bring commodities?'</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>95</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>5</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	95	Wholesalers (outside district)	5	Wholesalers (outside region)	0	Wholesalers (outside country)	0	Farmers from nearby villages bring agriculture produce. Very few wholesalers from outside district also bring agriculture produce, especially cereals and pulses
Category	Percent												
Farmers near by	95												
Wholesalers (outside district)	5												
Wholesalers (outside region)	0												
Wholesalers (outside country)	0												
2	Who sell the commodities at the market?	<table border="1"> <caption>Data for 'Who sell the commodities at the market?'</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>90</td> </tr> <tr> <td>Retailers</td> <td>10</td> </tr> <tr> <td>Wholesalers</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers	90	Retailers	10	Wholesalers	0	Wholesalers (outside country)	0	Mainly farmers sell agriculture produce in the market followed by retailers.
Category	Percent												
Farmers	90												
Retailers	10												
Wholesalers	0												
Wholesalers (outside country)	0												
3	Who buy the commodities?	<table border="1"> <caption>Data for 'Who buy the commodities?'</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>90</td> </tr> <tr> <td>Retailers and restaurants</td> <td>10</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Individual consumer	90	Retailers and restaurants	10	Wholesalers (within Nepal)	0	Wholesalers (outside country)	0	Mostly individual consumers buy from this market.
Category	Percent												
Individual consumer	90												
Retailers and restaurants	10												
Wholesalers (within Nepal)	0												
Wholesalers (outside country)	0												
4	Tendency of deal	Increasing, mainly because of increasing demand for vegetables											
5	Seasonal fluctuation in volume	Very much											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market




Following activities are essential for activation and improvement of this market:

- Regulate un-organized market along the road side/buspark
- Strengthen capacity of market stakeholders for effective and efficient management and utilization of market facility
- Build capacity of traders in quality management and business skills
- Keep the market place clean and hygienic
- Improve the drainage system of the market



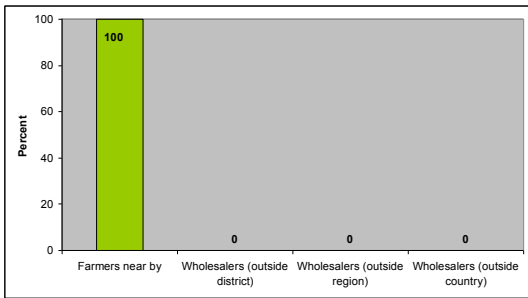
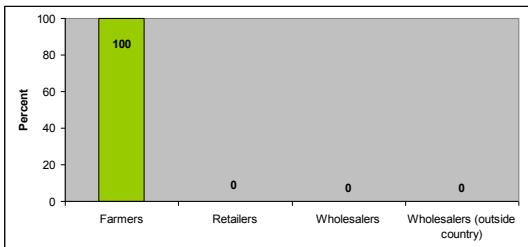
(2) Agriculture Produce Market Centre, Jiri, Dolakha

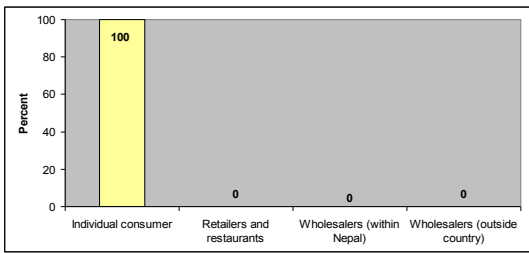
1) Market overview

S. N.	Criteria	Characteristics	Remark	
1	Background	The market was constructed by Small Marketing Infrastructure Project of UNCDF in 1998, which aimed at improving the marketing of fruits and vegetables in central and eastern Nepal.		
2	Location	Jiri VDC, Dolakha district		
3	Type of market	Retail market		
4	Year of Establishment	1998		
5	Market size	0.2 ha		
6	Ownership of the market	Management committee		
7	Operation schedule	Non-operational		
8	Business hour			
9	Market management	Managed by committee		
9.1	Market management committee	Yes, formed as per the Management and Operation of Agriculture Produce Market Directive, 2053 (1997)		
9.2	Number of persons in management committee	9		
9.3	Government officer	2		
9.4	Farmers	3		
9.5	Traders	3		
9.6	Local government	1		
9.7	Other			
9.8	Women representation in committee	None		
10	Number of operation staff	1 (market manager)		
11	Number of sheds			
12	Number of stalls	7		
12.1	Wholesale stalls			
12.2	Farmers' stalls			
12.3	Store rooms (Small)	16		
12.4	Store rooms (Large)			
13	Rent of the stalls	Vacant		
13.1	Wholesale stalls			
13.2	Farmers' stalls			
13.3	Store rooms (Small)	Vacant		
13.4	Store rooms (Large)			

S. N.	Criteria	Characteristics	Remark
14	Key commodities traded	Mainly vegetables and potato	
15	Revenue per year	NRs 41,500 (This income was high because storehouse was rented to hydro power company)	
16	Expenditure per year	NRs 4,072	
17	Capacity usage ratio	0 %	
18	Number of traders	None in the market center	Around 15 traders are selling fruits and vegetables in Lincon road, Jiri and nearby area
19	Approximate turnover in the market per month	Not known	
20	Mode of transport	Main mode of transport is on foot	
21	Road	Bad, road is seasonal	
22	Loading and unloading	No problem, since it is not operational	
23	Price monitoring system	Not at all, none of the farmers and traders bring agriculture commodities in this market	
24	Grading	Not at all	
25	Weight monitoring	Not at all	
26	Quality monitoring	Not at all	

2) Use of the market

S. N.	Criteria	Characteristics	Remark
1	Who bring commodities?	 <p>A bar chart with a vertical axis labeled 'Percent' ranging from 0 to 100. The horizontal axis has four categories: 'Farmers near by', 'Wholesalers (outside district)', 'Wholesalers (outside region)', and 'Wholesalers (outside country)'. The 'Farmers near by' bar is green and reaches 100%. The other three bars are grey and reach 0%.</p>	Mainly farmers from nearby villages bring agriculture produce and sell in the market
2	Who sell the commodities at the market?	 <p>A bar chart with a vertical axis labeled 'Percent' ranging from 0 to 100. The horizontal axis has four categories: 'Farmers', 'Retailers', 'Wholesalers', and 'Wholesalers (outside country)'. The 'Farmers' bar is green and reaches 100%. The other three bars are grey and reach 0%.</p>	

S. N.	Criteria	Characteristics	Remark										
3	Who buy the commodities?	 <table border="1"> <caption>Data for Bar Chart: Who buy the commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>100</td> </tr> <tr> <td>Retailers and restaurants</td> <td>0</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Individual consumer	100	Retailers and restaurants	0	Wholesalers (within Nepal)	0	Wholesalers (outside country)	0	Mostly individual consumers buy from this market.
Category	Percent												
Individual consumer	100												
Retailers and restaurants	0												
Wholesalers (within Nepal)	0												
Wholesalers (outside country)	0												
4	Tendency of deal	Very decreasing, mainly due to non-operation of market											
5	Seasonal fluctuation in volume	No, non-operational											
6	Seasonal fluctuation in price	No, non-operational											

3) Activation and improvement of market




Following activities are essential for activation and improvement of this market:

- Strengthen capacity of market stakeholders for effective and efficient management and utilization of market facility
- Conduct regular interaction among farmers, traders and management committee
- Improve physical facility of the market, especially make potato storage friendly



(3) Haat Bazaar, Ramechhap

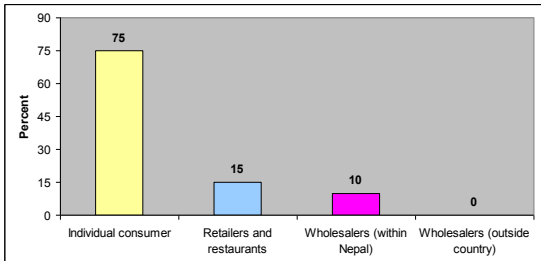
1) Market overview

S. N.	Criteria	Characteristics	Remark
1	Background	This is traditional rural weekly market, where farmers from nearby villagers bring their agriculture produce for sale. VDCs and local NGOs have constructed market sheds.	
2	Location	Ramechhap VDC, Ramechhap district	
3	Type of market	Retail Market Collection Center	
4	Year of Establishment	Not known traditional	
5	Market size	0.5 ha	
6	Ownership of the market	Local government	
7	Operation schedule	Once a week	
8	Business hour	13 hours a day (5 am to 5 pm)	
9	Market management	Managed by committee	
9.1	Market management committee	Yes, formed by the local government	
9.2	Number of persons in management committee	11	
9.3	Government officer	-	
9.4	Farmers	-	
9.5	Traders	9	
9.6	Local government	1	
9.7	Other	1 (Police)	
9.8	Women representation in committee (Percent)	22.2 % (Two out of nine elected persons are women)	
10	Number of operation staff	1 (Part time)	
11	Number of sheds	5	
12	No. of stalls		
12.1	Wholesale stall	NA	
12.2	Farmer stall	NA	
12.3	Store rooms (Small)	None	
12.4	Store rooms (Large)		
13	Rent of the stall	Contractor charges the rent. NRs 5 per load of agriculture produce or NRs 5 per goat	

S. N.	Criteria	Characteristics	Remark
13.1	Wholesale stall		
13.2	Farmer stall		
13.3	Store rooms (Small)		
13.4	Store rooms (Large)		
14	Key commodities traded	All agriculture produce but mainly vegetables, fruits, goat and pulses	
15	Revenue per year	NRs 50,000	
16	Expenditure per year	NRs 32,500	
17	Capacity usage ratio	110 %	
18	Number of traders	More than 100 during market day	Number of traders depends upon season
19	Approximate turnover in the market per month	NRs 1 million to NRs 1.2 million	Around NRs 3 to 4 hundred thousand per market day
20	Mode of transport	Main mode of transport is on foot (almost all) followed by public transportation (bus).	
21	Road	Bad, farmers have to travel long distance to bring produce, link road between market and production pocket is poor	
22	Loading and unloading	No problem, due to small transaction	
23	Price monitoring system	Not carried out	
24	Grading	Not at all, generally left on discretion of traders and farmers	
25	Weight monitoring	Not at all.	
26	Quality monitoring	Not at all, left to the traders and purchasers	

2) Use of the market

S. N.	Criteria	Characteristics	Remark										
1	Who bring commodities?	<table border="1"> <caption>Data for 'Who bring commodities?'</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>100</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	100	Wholesalers (outside district)	0	Wholesalers (outside region)	0	Wholesalers (outside country)	0	Farmers from nearby villages bring agriculture produce for sale. None of the wholesaler visited this market place to sell agriculture produce.
Category	Percent												
Farmers near by	100												
Wholesalers (outside district)	0												
Wholesalers (outside region)	0												
Wholesalers (outside country)	0												
2	Who sell the commodities at the market?	<table border="1"> <caption>Data for 'Who sell the commodities at the market?'</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>90</td> </tr> <tr> <td>Retailers</td> <td>10</td> </tr> <tr> <td>Wholesalers</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers	90	Retailers	10	Wholesalers	0	Wholesalers (outside country)	0	Farmers themselves sale agriculture produce. However, few retailers either buy the agriculture produce from farmers or bring from nearby districts, especially
Category	Percent												
Farmers	90												
Retailers	10												
Wholesalers	0												
Wholesalers (outside country)	0												

S. N.	Criteria	Characteristics	Remark										
			potato and onion and sale in this market										
3	Who buy the commodities?	 <table border="1"> <caption>Data for Bar Chart: Who buy the commodities?</caption> <thead> <tr> <th>Buyer Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>75</td> </tr> <tr> <td>Retailers and restaurants</td> <td>15</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>10</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Buyer Category	Percent	Individual consumer	75	Retailers and restaurants	15	Wholesalers (within Nepal)	10	Wholesalers (outside country)	0	<p>Apart from individual consumers, retailers from Manthali come to this market to buy fruits and vegetables. Few wholesalers from nearby districts come to buy pulses, legumes and chilli in this market.</p>
Buyer Category	Percent												
Individual consumer	75												
Retailers and restaurants	15												
Wholesalers (within Nepal)	10												
Wholesalers (outside country)	0												
4	Tendency of deal	Stable											
5	Seasonal fluctuation in volume	Very much											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market


Following activities are essential for activation and improvement of market:

- Build capacity of traders in product quality management and business skills
- Construct market sheds
- Construct approach road to the market from production pocket
- Monitor quality and price of agriculture produce
- Keep the market place clean and hygienic



(4) Agriculture Produce Market Center, Kavre

1) Market overview

S. N.	Criteria	Characteristics	Remark
1	Background	The market was constructed by Small Marketing Infrastructure Project of UNCDF in 1998, which aimed at improving the marketing of fruits and vegetables in central and eastern Nepal.	
2	Location	Panchkhal VDC, Kavre district	
3	Type of market	Collection center	
4	Year of Establishment	1998	
5	Market size	0.25 ha	
6	Ownership of the market	Management committee	
7	Operation schedule	Daily	
8	Business hour	4 hours a day (4 pm to 7 pm)	
9	Market management	Managed by cooperatives	
9.1	Market management committee	Not applicable, Cooperative look after the management	
9.2	Number of persons in management committee		
9.3	Government officer		
9.4	Farmers		
9.5	Traders		
9.6	Local government		
9.7	Other		
9.8	Women representation in committee		
10	Number of operation staff	2 (One market manager and one cleaner)	
11	No. of sheds		
12	Number of stalls	9	
12.1	Wholesale stalls		
12.2	Farmers' stalls		
12.3	Store rooms (Small)	1	
12.4	Store rooms (Large)		
13	Rent of the stalls	Seasonal operation of market from June/July to October/ November	
13.1	Wholesale stalls		
13.2	Farmers' stalls		
13.3	Store rooms (Small)	No rent is charged, however traders have to pay for NRe 1 per plastic	

S. N.	Criteria	Characteristics	Remark
13.4	Store rooms (Large)	bag/crate and NRs 3 per jute bag for	every purchase of agriculture commodities
14	Key commodities traded	Mainly green vegetables	
15	Revenue per year	NRs 98,288	
16	Expenditure per year	NRs 82,891	
17	Capacity usage ratio	50 percent	Seasonal operation
18	Number of traders	Around 50 traders come during the season (June/July to Oct/Nov)	
19	Approximate turnover in the market per month	NRs 4.1 million to NRs 4.5 million during the season	
20	Mode of transport	Main mode of transport is on foot followed by tractor (majority. Some use public transportation (bus) as well.	
21	Road	Bad, road is seasonal	
22	Loading and unloading	No problem, farmers themselves bring the produce and sell to trader	
23	Price monitoring system	Yes, carried out regularly and price are recorded	
24	Grading	Not at all, generally left on discretion to traders and farmers	
25	Weight monitoring	Not at all. However, Nepal Bureau of Standards and Measurement do periodic monitoring of weights and measures	
26	Quality monitoring	Not at all, left to the traders and purchasers	

2) Use of the market

S. N.	Criteria	Characteristics	Remark												
1	Who bring commodities?	<table border="1"> <caption>Data for Chart 1: Who bring commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>30</td> </tr> <tr> <td>Retailers</td> <td>70</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	30	Retailers	70	Wholesalers (outside district)	0	Wholesalers (outside region)	0	Wholesalers (outside country)	0	Farmers nearby (100 %) bring commodities to this market. None of the wholesaler brings the agriculture produce in this market
Category	Percent														
Farmers near by	30														
Retailers	70														
Wholesalers (outside district)	0														
Wholesalers (outside region)	0														
Wholesalers (outside country)	0														
2	Who sell the commodities at the market?	<table border="1"> <caption>Data for Chart 2: Who sell the commodities at the market?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>100</td> </tr> <tr> <td>Retailers</td> <td>0</td> </tr> <tr> <td>Wholesalers</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers	100	Retailers	0	Wholesalers	0	Wholesalers (outside country)	0	Farmers sell their produce in this market, whereas wholesalers buy from this market and export to other market places of the country.		
Category	Percent														
Farmers	100														
Retailers	0														
Wholesalers	0														
Wholesalers (outside country)	0														

S. N.	Criteria	Characteristics	Remark										
3	Who buy the commodities?	<table border="1"> <caption>Data for Bar Chart: Who buy the commodities?</caption> <thead> <tr> <th>Buyer Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>0</td> </tr> <tr> <td>Retailers and restaurants</td> <td>10</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>90</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Buyer Category	Percent	Individual consumer	0	Retailers and restaurants	10	Wholesalers (within Nepal)	90	Wholesalers (outside country)	0	Mainly wholesalers within Nepal buy agriculture produce (More than 90 % in volume). Nevertheless, very few retailers nearby also come to this market.
Buyer Category	Percent												
Individual consumer	0												
Retailers and restaurants	10												
Wholesalers (within Nepal)	90												
Wholesalers (outside country)	0												
4	Tendency of deal	Stable											
5	Seasonal fluctuation in volume	Very much											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market




Following activities are essential for activation and improvement of this market:

- Regulate un-organized market along the road side
- Strengthen capacity of market stakeholders for effective and efficient management and utilization of market facility
- Build capacity of traders in quality improvement and business skills
- Conduct regular interaction between farmers, traders and cooperatives
- Keep the market place clean and hygienic
- Improve basic physical facilities at market sheds such as constructing channel gate and toilet and drinking water



(5) Agriculture Produce Market Center, Sindhuli

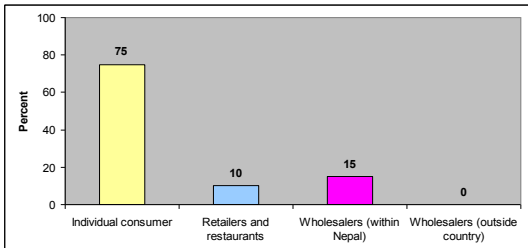
1) Market overview

S. N.	Criteria	Characteristics	Remark	
1	Background	The market was constructed by Small Marketing Infrastructure Project of UNCDF in 1998, which aimed at improving the marketing of fruits and vegetables in central and eastern Nepal.		
2	Location	Kamalamai Municipality, Sindhuli district		
3	Type of market	Retail market		
4	Year of Establishment	1998		
5	Market size	0.13 ha		
6	Ownership of the market	Management committee		
7	Operation schedule	Daily		
8	Business hour	13 hours a day (6 am to 7 pm)		
9	Market management	Managed by committee		
9.1	Market management committee (MMC)	Yes, formed as per the Management and Operation of Agriculture Produce Market Directive, 2053 (1997)		
9.2	Number of persons in management committee	8		
9.3	Government officer	1		
9.4	Farmers	3		
9.5	Traders	3		
9.6	Local government	1		
9.7	Other			
9.8	Women representation in committee	None		
10	Number of operation staff	2 (One market manager and one cleaner)		
11	No. of sheds			
12	Number of stalls	20		
12.1	Wholesale stalls			
12.2	Farmers' stalls			
12.3	Store rooms (Small)	12		
12.4	Store rooms (Large)			
13	Rent of the stalls	NRs 300 to NRs 3,300 per month		
13.1	Wholesale stalls			
13.2	Farmers' stalls			

S. N.	Criteria	Characteristics	Remark
13.3	Store rooms (Small)	NRs 400 per month	
13.4	Store rooms (Large)		
14	Key commodities traded	Mainly fruit, vegetables and livestock	
15	Revenue per year	NRs 189,000	
16	Expenditure per year	NRs 170,100	
17	Capacity usage ratio	80 %	Few stalls and store room are still vacant
18	Number of traders	Around 15 traders regularly operate from the market	More than 100 traders come during the market day, i.e. Saturday
19	Approximate turnover in the market per month	NRs 1.35 million to NRs 1.8 million	Each trader's daily turnover is around NRs 3,000 to NRs 4,000
20	Mode of transport	Main mode of transport is on foot and public transportation (bus) whereas some use trucks and tractor	
21	Road	Bad, road is seasonal	
22	Loading and unloading	No problem, MMC has identified porters and fixed rate for them	
23	Price monitoring system	Yes, carried out regularly and price are recorded	
24	Grading	Not at all, generally left on discretion to traders and farmers	
25	Weight monitoring	Not at all. However, Nepal Bureau of Standards and Measurement do periodic monitoring of weights and measures	
26	Quality monitoring	Not at all, left to the traders and purchasers	

2) Use of the market

S. N.	Criteria	Characteristics	Remark												
1	Who bring commodities?	<table border="1"> <caption>Data for Chart 1: Who bring commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>30</td> </tr> <tr> <td>Retailers</td> <td>70</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	30	Retailers	70	Wholesalers (outside district)	0	Wholesalers (outside region)	0	Wholesalers (outside country)	0	Farmers from nearby villages bring agriculture produce. However, most of the retailers themselves bring agriculture produce from nearby wholesale market, such as Dhalkebar.
Category	Percent														
Farmers near by	30														
Retailers	70														
Wholesalers (outside district)	0														
Wholesalers (outside region)	0														
Wholesalers (outside country)	0														
2	Who sell the commodities at the market?	<table border="1"> <caption>Data for Chart 2: Who sell the commodities at the market?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>5</td> </tr> <tr> <td>Retailers</td> <td>95</td> </tr> <tr> <td>Wholesalers</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers	5	Retailers	95	Wholesalers	0	Wholesalers (outside country)	0	Mainly retailers sell agriculture produce in the market followed by farmers.		
Category	Percent														
Farmers	5														
Retailers	95														
Wholesalers	0														
Wholesalers (outside country)	0														

S. N.	Criteria	Characteristics	Remark										
3	Who buy the commodities?	 <table border="1"> <caption>Buyer Characteristics Data</caption> <thead> <tr> <th>Buyer Type</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>75</td> </tr> <tr> <td>Retailers and restaurants</td> <td>10</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>15</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Buyer Type	Percent	Individual consumer	75	Retailers and restaurants	10	Wholesalers (within Nepal)	15	Wholesalers (outside country)	0	Individual consumers buy from this market. Likewise, few wholesalers also come to buy fruits, especially Junar from this market
Buyer Type	Percent												
Individual consumer	75												
Retailers and restaurants	10												
Wholesalers (within Nepal)	15												
Wholesalers (outside country)	0												
4	Tendency of deal	Decreasing, mainly because of increasing demand for fruits and vegetables											
5	Seasonal fluctuation in volume	Very much											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market




Following activities are essential for activation and improvement of this market:

- Regulate un-organized road side market along the road side/bus park
- Strengthen capacity of market stakeholders for effective and efficient management and utilization of market facility
- Build capacity of traders in product quality management and business skills
- Conduct regular interaction between farmers, traders and management committee
- Construct approach road to the market
- Keep the market place clean and hygienic
- Construct small market stalls/sheds



(6) Agriculture Produce Market Center, Bardibas

1) Market overview

S. N.	Criteria	Characteristics	Remark
1	Background	The market was constructed by Small Marketing Infrastructure Project of UNCDF in 1998, which aimed at improving the marketing of fruits and vegetables in central and eastern Nepal.	
2	Location	Bardibas VDC, Mahottari district	
3	Type of market	Retail market	
4	Year of Establishment	1998	
5	Market size	0.4 ha	
6	Ownership of the market	Management committee	
7	Operation schedule	Twice a week (Wednesday and Saturday)	
8	Business hour	13 hours a day (6 am to 7 pm)	
9	Market management	Managed by committee	
9.1	Market management committee	Yes, formed as per the Management and Operation of Agriculture Produce Market Directive, 2053 (1997)	
9.2	Number of persons in management committee	9	
9.3	Government officer	1	
9.4	Farmers	3	
9.5	Traders	3	
9.6	Local government	1	
9.7	Other	1 (Member secretary)	
9.8	Women representation in committee		
10	Number of operation staff	4 (One market manager, two watchmen and one cleaner)	
11	No. of sheds		
12	Number of stalls	65	
12.1	Wholesale stalls		
12.2	Farmers' stalls		
12.3	Store rooms (Small)	6	
12.4	Store rooms (Large)	16	
13	Rent of the stalls	NRs 80 per month	
13.1	Wholesale stalls		
13.2	Farmers' stalls		

S. N.	Criteria	Characteristics	Remark
13.3	Store rooms (Small)	NRs 300 per month	
13.4	Store rooms (Large)	NRs 400 to NRs 700 per month	
14	Key commodities traded	All agriculture produce but mainly vegetables	
15	Revenue per year	NRs 189,000	
16	Expenditure per year	NRs 170,100	
17	Capacity usage ratio	60 %	Few stalls and store rooms are still vacant
18	Number of traders	More than 150 agriculture traders during the market day	
19	Approximate turnover in the market per month	NRs 1.26 million to NRs 2.5 million	
20	Mode of transport	Main mode of transport is animal carts, tempos and bicycles (almost all) whereas some use foot, public transportation (bus) trucks and tractor	
21	Road	Bad, market place is just inside the road, road is dirty	
22	Loading and unloading	No problem, management committee has identified porters and fixed rate for them	
23	Price monitoring system	Yes, carried out regularly and price is recorded	
24	Grading	Not at all, generally left on discretion of traders and farmers	
25	Weight monitoring	Not at all. However, Nepal Bureau of Standards and Measurement do periodic monitoring of weights and measures	
26	Quality monitoring	Not at all, left to the traders and purchasers	

2) Use of the market

S. N.	Criteria	Characteristics	Remark										
1	Who bring commodities?	<table border="1"> <caption>Data for Chart 1: Who bring commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>65</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>25</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>10</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	65	Wholesalers (outside district)	25	Wholesalers (outside region)	10	Wholesalers (outside country)	0	Farmers from nearby villages bring agriculture produce for sale. Few wholesalers from nearby districts and outside the region also bring their agriculture produce.
Category	Percent												
Farmers near by	65												
Wholesalers (outside district)	25												
Wholesalers (outside region)	10												
Wholesalers (outside country)	0												
2	Who sell the commodities at the market?	<table border="1"> <caption>Data for Chart 2: Who sell the commodities at the market?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>10</td> </tr> <tr> <td>Retailers</td> <td>85</td> </tr> <tr> <td>Wholesalers</td> <td>5</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers	10	Retailers	85	Wholesalers	5	Wholesalers (outside country)	0	Mainly retailers sell agriculture produce in the market followed by farmers and wholesalers.
Category	Percent												
Farmers	10												
Retailers	85												
Wholesalers	5												
Wholesalers (outside country)	0												

S. N.	Criteria	Characteristics	Remark										
3	Who buy the commodities?	<table border="1"> <caption>Data for Bar Chart: Who buy the commodities?</caption> <thead> <tr> <th>Buyer Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>100</td> </tr> <tr> <td>Retailers and restaurants</td> <td>0</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Buyer Category	Percent	Individual consumer	100	Retailers and restaurants	0	Wholesalers (within Nepal)	0	Wholesalers (outside country)	0	Individual consumer buys from this market.
Buyer Category	Percent												
Individual consumer	100												
Retailers and restaurants	0												
Wholesalers (within Nepal)	0												
Wholesalers (outside country)	0												
4	Tendency of deal	Decreasing, mainly because of (a) operation of daily road side market in Bardibas and (b) poor transport facility											
5	Seasonal fluctuation in volume	Very much											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market




Following activities are essential for activation and improvement of this market:

- Regulate un-organized road side market along the highway
- Strengthen capacity of market stakeholders for effective and efficient management and utilization of market facility
- Build capacity of traders in product quality management and business skills
- Conduct regular interaction between farmers, traders and management committee
- Develop cold store/refrigeration room
- Construct approach road to the market
- Keep the market place clean and hygienic



(7) Fruits and Vegetable Market, Dhalkebar

1) Market overview

S. N.	Criteria	Characteristics	Remark
1	Background	The market was constructed by Small Marketing Infrastructure Project of United Nations Capital Development Fund (UNCDF) in 1998, which aimed at improving the marketing of fruits and vegetables in central and eastern Nepal.	
2	Location	Dhalkebar VDC, Dhanusha district	
3	Type of market	Collection center/Retail market	
4	Year of Establishment	1998	
5	Market size	1.02 ha	
6	Ownership of the market	Marketing committee	
7	Operation schedule	Twice a week (Sunday and Wednesday)	
8	Business hour	17 hours a day (4 am to 7 pm)	
9	Market management	Managed by committee	
9.1	Market management committee	Yes, formed as per the Management and Operation of Agriculture Produce Market Directive, 2053 (1997)	
9.2	Number of persons in management committee	9	
9.3	Government officer	1	
9.4	Farmers	3	
9.5	Traders	3	
9.6	Local government	1	
9.7	Other	1 (Member secretary)	
9.8	Women representation in committee	16.6 % (1 out of six elected persons is woman)	
10	Number of operation staff	5 (One manager, one office runner, one cleaner and two volunteers)	
11	Number of sheds	64	
12	Number of stalls		
12.1	Wholesale stalls	32	
12.2	Farmer stalls	28	
12.3	Store rooms (Small)	4	
12.4	Store rooms (Large)		
13	Rent of the stall	Depends on type of the stall	
13.1	Wholesale stall	NRs 150 to NRs	

S. N.	Criteria	Characteristics	Remark
		200/month/stall	
13.2	Farmer stall	NRs 100/month/stall	
13.3	Store rooms (Small)	NRs 150/month/stall	
13.4	Store rooms (Large)		
14	Key commodities traded	All agriculture produce but mainly vegetables	
15	Revenue per year	NRs 500,000	
16	Expenditure per year	NRs 450,000	
17	Capacity usage ratio	125 %	
18	Number of traders	More than 400 during market day	Traders have rented for storage purpose only
19	Approximate turnover in the market per month	NRs 1.6 million to NRs 2.5 million	Transaction of around NRs 2 to NRs 3 hundred thousand per market day
20	Mode of transport	Main mode of transport is foot and bicycle (almost all) followed by tempo and animal cart (majority). Some uses cycle, public transportation (bus) minivan/jeep, trucks and tractor for transportation.	
21	Road	Bad, farmers have to travel long distance to bring produce, link road between market and production center is essential	
22	Loading and unloading	No problem, management committee have identified porters and fixed rate for them	
23	Price monitoring system	Yes, carried out regularly and price are recorded	
24	Grading	Not at all, generally left on discretion of traders and farmers	
25	Weight monitoring	Not at all. However, Nepal Bureau of Standards and Measurement do periodic monitoring of weights and measures	
26	Quality monitoring	Not at all, left to the traders and purchasers	

2) Use of the market

S. N.	Criteria	Characteristics	Remark										
1	Who bring commodities?	<table border="1"> <caption>Data for Bar Chart: Who bring commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>90</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>5</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>3</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>2</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	90	Wholesalers (outside district)	5	Wholesalers (outside region)	3	Wholesalers (outside country)	2	<p>Farmers from nearby villages bring agriculture produce for sale. Few wholesalers from nearby districts and outside the region also bring their agriculture produce.</p> <p>Likewise, traders from India also bring green vegetables and chilli, especially during off-seasons.</p>
Category	Percent												
Farmers near by	90												
Wholesalers (outside district)	5												
Wholesalers (outside region)	3												
Wholesalers (outside country)	2												

S. N.	Criteria	Characteristics	Remark										
2	Who sell the commodities at the market?	<table border="1"> <caption>Who sell the commodities at the market?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>25</td> </tr> <tr> <td>Retailers</td> <td>69</td> </tr> <tr> <td>Wholesalers</td> <td>3</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>3</td> </tr> </tbody> </table>	Category	Percent	Farmers	25	Retailers	69	Wholesalers	3	Wholesalers (outside country)	3	Most of the farmers don't sell their produce in retail. Hence, traders buy produce from farmers. Majority of the traders sell them in retail.
Category	Percent												
Farmers	25												
Retailers	69												
Wholesalers	3												
Wholesalers (outside country)	3												
3	Who buy the commodities?	<table border="1"> <caption>Who buy the commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual Consumers</td> <td>30</td> </tr> <tr> <td>Retailers/Restaurants</td> <td>15</td> </tr> <tr> <td>Wholesalers within Nepal</td> <td>50</td> </tr> <tr> <td>Wholesalers outside Nepal</td> <td>5</td> </tr> </tbody> </table>	Category	Percent	Individual Consumers	30	Retailers/Restaurants	15	Wholesalers within Nepal	50	Wholesalers outside Nepal	5	Wholesalers buy from farmers and export it to other part of the country or even in India.
Category	Percent												
Individual Consumers	30												
Retailers/Restaurants	15												
Wholesalers within Nepal	50												
Wholesalers outside Nepal	5												
4	Tendency of deal	Increasing, mainly because of (a) increase in production and (b) increase in the number of traders.											
5	Seasonal fluctuation in volume	Very much											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market




Following activities are essential for activation and improvement of market:

- Strengthen capacity of market stakeholders to manage the market facility efficiently
- Build capacity of traders in product quality management and business skills
- Construct market sheds
- Develop cold store/refrigeration room
- Construct approach road to the market
- Quality monitoring of agriculture produce
- Improve packaging facility



(8) Fruits and Vegetable Market, Naya Buspark, Hetauda

1) Market overview

S. N.	Criteria	Characteristics	Remark	
1	Background	Hetauda municipality constructed this market in 2008 with a view to regulate unorganized fruits and vegetable market along the road side.		
2	Location	Hetauda Municipality, Makwanpur district		
3	Type of market	Retail market		
4	Year of Establishment	2008		
5	Market size	0.2 ha		
6	Ownership of the market	Municipality		
7	Operation schedule	Daily		
8	Business hour	16 hours a day (4 am to 8 pm)		
9	Market management	Rental, directly rented-out to traders		
9.1	Market management committee	None, but traders have formed an association to look after welfare and concern		
9.2	Number of persons in management committee	Not applicable		
9.3	Government officer	-		
9.4	Farmers	-		
9.5	Traders	-		
9.6	Local government	-		
9.7	Other			
9.8	Women representation in committee (%)	-		
10	Number of operation staff	1		Only one watchman
11	Number of sheds	2 (One big and one small)		
12	Number of stalls	78		
12.1	Wholesale stalls			
12.2	Farmers' stalls			
12.3	Store rooms (Small)			
12.4	Store rooms (Large)			
13	Rent of the stall	Newly established		
13.1	Wholesale stalls			
13.2	Farmers' stalls			
13.3	Store rooms (Small)			

S. N.	Criteria	Characteristics	Remark
13.4	Store rooms (Large)		
14	Key commodities traded	Fresh fruits and vegetables, potato, onion and garlic	
15	Revenue per year	-	
16	Expenditure per year	-	
17	Capacity usage ratio	80 %	
18	Number of traders	More than 300	
19	Approximate turnover in the market per month	NRs 13.5 million to NRs 18 million	Each trader's daily turnover is around NRs 1,500 to NRs 2,000
20	Mode of transport	Main mode of transport is public transport (almost all) followed by foot (majority). Some use cycles, taxis, minivans/jeeps, trucks, tractors and tempos	
21	Road	No problem, however upgrading into black topped is required	
22	Loading and unloading	No problem, around 30 traders have been registered by trader association to work for this market	
23	Price monitoring system	Not carried out	
24	Grading	Not at all, generally left to the discretion of traders and farmers	
25	Weight monitoring	Not at all. However, Nepal Bureau of Standards and Measurement carry out periodic monitoring of weights and measures	
26	Quality monitoring	Not at all	

2) Use of the market

S. N.	Criteria	Characteristics	Remark										
1	Who bring commodities?	<table border="1"> <caption>Commodity Sources</caption> <thead> <tr> <th>Source</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>25</td> </tr> <tr> <td>Retailers themselves</td> <td>65</td> </tr> <tr> <td>Wholesaler</td> <td>10</td> </tr> </tbody> </table>	Source	Percent	Farmers	25	Retailers themselves	65	Wholesaler	10	Most of the retailers bring commodities from nearby wholesale markets (Narayanghat, Nepal and Raxaul, India).		
Source	Percent												
Farmers	25												
Retailers themselves	65												
Wholesaler	10												
2	Who sell the commodities at the market?	<table border="1"> <caption>Sellers at the Market</caption> <thead> <tr> <th>Seller Type</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>0</td> </tr> <tr> <td>Retailers</td> <td>85</td> </tr> <tr> <td>Wholesellers within Nepal</td> <td>15</td> </tr> <tr> <td>Wholesellers outside Nepal</td> <td>0</td> </tr> </tbody> </table>	Seller Type	Percent	Farmers	0	Retailers	85	Wholesellers within Nepal	15	Wholesellers outside Nepal	0	Mostly retailers sell commodities in the market. Few fruits and vegetable wholesalers have been doing their business from outside the market. But wholesaler does both wholesaling and retailing.
Seller Type	Percent												
Farmers	0												
Retailers	85												
Wholesellers within Nepal	15												
Wholesellers outside Nepal	0												

S. N.	Criteria	Characteristics	Remark										
3	Who buy the commodities?	<table border="1"> <caption>Data for Bar Chart: Who buy the commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual Consumers</td> <td>70</td> </tr> <tr> <td>Retailers/Restaurants</td> <td>10</td> </tr> <tr> <td>Wholesalers within Nepal</td> <td>10</td> </tr> <tr> <td>Wholesalers outside Nepal</td> <td>10</td> </tr> </tbody> </table>	Category	Percent	Individual Consumers	70	Retailers/Restaurants	10	Wholesalers within Nepal	10	Wholesalers outside Nepal	10	It is also reported that some Traders from India come to buy green coriander during July/August.
Category	Percent												
Individual Consumers	70												
Retailers/Restaurants	10												
Wholesalers within Nepal	10												
Wholesalers outside Nepal	10												
4	Tendency of deal	Increasing rapidly, mainly because of (a) rapid increase in migration of population from nearby terai district and (b) increasing cultivation of vegetables in the district due to the effort of several NGOs.											
5	Seasonal fluctuation in volume	Very much											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market



Following activities are essential for activation and improvement of this market:


- Regulate un-organized road side market along the highway
- Organize and strengthen the capacity of the traders, farmers to manage the market facility efficiently
- Build capacity of traders in product quality management and business skills
- Construct market sheds and increase size of stalls
- Develop cold store/refrigeration room
- Improve road quality by black-topping
- Make necessary arrangements for collection, disposal and management of garbage
- Regular price and quality monitoring of agriculture produce
- Introduce market management system



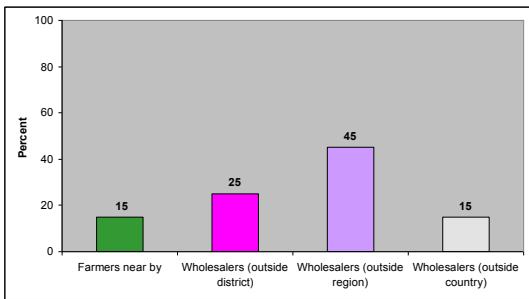
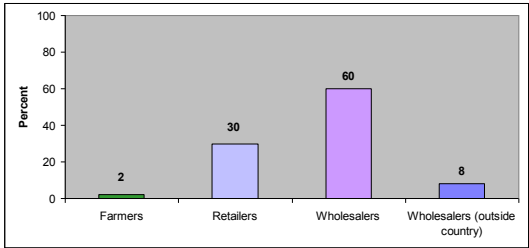
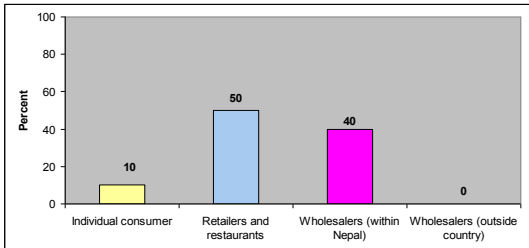
(9) Kalimati Fruits and Vegetable Market Development Committee, Kathmandu

1) Market overview

S. N.	Criteria	Characteristics	Remark	
1	Background	This market was set up by then Department of Food and Agriculture Marketing Services under the Ministry of Agriculture in 1986 for giving an organized shape to the marketing of agricultural produce, especially, vegetables and fruits in Kathmandu valley. In 1989, UNCDF provided support for construction of physical infrastructure and equipping the market.		
2	Location	Kathmandu Metropolis, Kathmandu district		
3	Type of market	Wholesale/Retail market		
4	Year of Establishment	1986		
5	Market size	2.25 ha		
6	Ownership of the market	Government		
7	Operation schedule	Daily		
8	Business hour	16 hours a day (4 am to 8 pm)		
9	Market management	Managed by Market Development Board		
9.1	Market Management Board	Yes, formed under the Development Board Act 1957		
9.2	Number of persons in Board	11		
9.3	Government officer	2		
9.4	Farmers	3		
9.5	Traders	3		
9.6	Local government	1		
9.7	Other	2 (Representative from employee association and executive director of the board)		
9.8	Women representation in committee	16.6 % (1 out of six elected persons is woman)		
10	Number of operation staff	53 (including 11 officers)		
11	Number of sheds			
12	Number of stalls	450		
12.1	Wholesale stalls			
12.2	Farmers' stalls			

S. N.	Criteria	Characteristics	Remark
12.3	Store rooms (Small)		
12.4	Store rooms (Large)		
13	Rent of the stall	Depending upon location and size. Rent per sq feet of land varies from NRs 24.4 to NRs 47.7 per month	
13.1	Wholesale stalls		
13.2	Farmers' stalls		
13.3	Store rooms (Small)		
13.4	Store rooms (Large)		
14	Key commodities traded	Fruits and vegetables including fish	
15	Revenue per year	NRs 32.8 million	
16	Expenditure per year	NRs 27.4 million	
17	Capacity usage ratio	100 %	
18	No. of traders	More than 400 registered wholesalers, 80 retailers and 26 cooperatives and farmer groups	
19	Approximate turnover in the market per month	NRs 250 to NRs 300 million (Around NRs 10 million/day)	
20	Mode of transport	Main mode of transport is trucks (almost all). Some uses foot, taxi, cycle, public transport (bus) minivan/jeep, trucks and tractor as well	
21	Road	No problem	
22	Loading and unloading	No problem	
23	Price monitoring system	Yes, carried out regularly and price are recorded	
24	Grading	Not at all, generally left to discretion of traders and farmers	
25	Weight monitoring	Not at all	
26	Quality monitoring	Not at all	

2) Use of the market

S. N.	Criteria	Characteristics	Remark										
1	Who bring commodities?	 <table border="1"> <caption>Data for Chart 1: Who bring commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>15</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>25</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>45</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>15</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	15	Wholesalers (outside district)	25	Wholesalers (outside region)	45	Wholesalers (outside country)	15	Mainly the wholesalers or middlemen from adjoining and other districts bring agriculture produce to this market. Very few farmers and their groups/cooperatives also bring agriculture produce as well.
Category	Percent												
Farmers near by	15												
Wholesalers (outside district)	25												
Wholesalers (outside region)	45												
Wholesalers (outside country)	15												
2	Who sell the commodities at the market?	 <table border="1"> <caption>Data for Chart 2: Who sell the commodities at the market?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>2</td> </tr> <tr> <td>Retailers</td> <td>30</td> </tr> <tr> <td>Wholesalers</td> <td>60</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>8</td> </tr> </tbody> </table>	Category	Percent	Farmers	2	Retailers	30	Wholesalers	60	Wholesalers (outside country)	8	Mainly wholesalers sell commodities in this market followed by retailers. Nevertheless, few farmers also sell agriculture produce in small quantity, especially green leafy vegetables.
Category	Percent												
Farmers	2												
Retailers	30												
Wholesalers	60												
Wholesalers (outside country)	8												
3	Who buy the commodities?	 <table border="1"> <caption>Data for Chart 3: Who buy the commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>10</td> </tr> <tr> <td>Retailers and restaurants</td> <td>50</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>40</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Individual consumer	10	Retailers and restaurants	50	Wholesalers (within Nepal)	40	Wholesalers (outside country)	0	Mainly retailers and wholesalers buy commodities from this market.
Category	Percent												
Individual consumer	10												
Retailers and restaurants	50												
Wholesalers (within Nepal)	40												
Wholesalers (outside country)	0												
4	Tendency of deal	Increasing, mainly because of (a) increase in production, (b) increase number of traders and (c) increase in demand											
5	Seasonal fluctuation in volume	Obvious											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market



Following activities are essential for activation and improvement of market:

- Strengthen market information system
- Introduce transparent pricing of commodities (auction system)
- Manage the garbage of the market
- Improve the market infrastructure, especially in case of fruit
- Strengthen capacity of market stakeholders to manage the market facility efficiently
- Build capacity of farmers and traders in product quality management and business skills
- Develop cold store/refrigeration room
- Conduct periodic quality monitoring of agriculture produce
- Improve packaging facility



(10) Valley Fruits and Vegetable Market, Naya Baneshwor, Kathmandu

1) Market overview

S. N.	Criteria	Characteristics	Remark	
1	Background	This market was established as private limited company in 2001. Land is taken on lease from government for a period of 10 years.		
2	Location	Kathmandu Metropolis, Kathmandu district		
3	Type of market	Retail market		
4	Year of Establishment	2001		
5	Market size	0.3 ha		
6	Ownership of the market	Private sector		
7	Operation schedule	Daily		
8	Business hour	17 hours a day (4 am to 9 pm)		
9	Market management	Managed by private sector as a company		
9.1	Market Management Board	Yes, formed under the Development Board Act 1957		
9.2	Number of persons in board	11		
9.3	Government officer	2		
9.4	Farmers	3		
9.5	Traders	3		
9.6	Local government	1		
9.7	Other	2 (Representative from employee association and executive director of the board)		
9.8	Women representation in committee	16.6 % (1 out of six elected persons is woman)		
10	Market management board	Not applicable		
11	Number of staff	10 (Including one officer)		
12	Number of stalls	115		
12.1	Wholesale stalls			
12.2	Farmers' stalls			
12.3	Store rooms (Small)			
12.4	Store rooms (Large)			
13	Rent of the stall	Rent depends upon location. NRs 70 per day if stall has both side road connection whereas NRs 50 if road is connected to only one side		

S. N.	Criteria	Characteristics	Remark
13.1	Wholesale stalls		
13.2	Farmers' stalls		
13.3	Store rooms (Small)	Vacant	
13.4	Store rooms (Large)		
14	Major agriculture produce	Fruits and vegetables including fish	
15	Revenue per year	NRs 2.4 million	
16	Expenditure per year	NRs 1.9 million	
17	Capacity usage ratio	90 percent	
18	Number of traders	Around 105 traders	
19	Approximate turnover in the market per month	NRs 7.5 million to NRs 8.0 million (Around NRs 2.5 hundred thousand per day)	
20	Mode of transport	Main mode of transport is on trucks (almost all). Some uses foot, taxi, cycle, minivan/jeep, trucks and tractor as well	
21	Road	No problem	
22	Loading and unloading	No problem	
23	Price monitoring system	Yes, but not regularly	
24	Grading	Not at all, generally left to discretion of traders and farmers	
25	Weight monitoring	Yes, but not often	
26	Quality monitoring	Not at all	

2) Use of the market

S. N.	Criteria	Characteristics	Remark										
1	Who bring commodities?	<table border="1"> <caption>Data for Chart 1: Who bring commodities?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers near by</td> <td>40</td> </tr> <tr> <td>Wholesalers (outside district)</td> <td>50</td> </tr> <tr> <td>Wholesalers (outside region)</td> <td>10</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers near by	40	Wholesalers (outside district)	50	Wholesalers (outside region)	10	Wholesalers (outside country)	0	Mainly the wholesalers or middlemen from adjoining districts, other districts bring agriculture produce to this market. Very few farmers and their groups/cooperatives also bring agriculture produce as well.
Category	Percent												
Farmers near by	40												
Wholesalers (outside district)	50												
Wholesalers (outside region)	10												
Wholesalers (outside country)	0												
2	Who sell the commodities at the market?	<table border="1"> <caption>Data for Chart 2: Who sell the commodities at the market?</caption> <thead> <tr> <th>Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Farmers</td> <td>5</td> </tr> <tr> <td>Retailers</td> <td>70</td> </tr> <tr> <td>Wholesalers</td> <td>25</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Category	Percent	Farmers	5	Retailers	70	Wholesalers	25	Wholesalers (outside country)	0	Mainly retailers sell commodities in this market followed by wholesalers. Nevertheless, few farmers also sell their agriculture produce, especially green leafy vegetables.
Category	Percent												
Farmers	5												
Retailers	70												
Wholesalers	25												
Wholesalers (outside country)	0												

S. N.	Criteria	Characteristics	Remark										
3	Who buy the commodities?	<table border="1"> <caption>Data for Bar Chart: Who buy the commodities?</caption> <thead> <tr> <th>Buyer Category</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Individual consumer</td> <td>75</td> </tr> <tr> <td>Retailers and restaurants</td> <td>25</td> </tr> <tr> <td>Wholesalers (within Nepal)</td> <td>0</td> </tr> <tr> <td>Wholesalers (outside country)</td> <td>0</td> </tr> </tbody> </table>	Buyer Category	Percent	Individual consumer	75	Retailers and restaurants	25	Wholesalers (within Nepal)	0	Wholesalers (outside country)	0	Mainly individual consumer and retailer buy commodities from this market.
Buyer Category	Percent												
Individual consumer	75												
Retailers and restaurants	25												
Wholesalers (within Nepal)	0												
Wholesalers (outside country)	0												
4	Tendency of deal	Increasing, mainly because of increase in demand											
5	Seasonal fluctuation in volume	Obvious											
6	Seasonal fluctuation in price	Very much											

3) Activation and improvement of market

Following activities are essential for activation and improvement of market:

- Strengthen market information system
- Manage the garbage of the market
- Improve the market infrastructure, especially for meat
- Build capacity of farmers and traders in product quality management and business skills
- Develop cold store/refrigeration room
- Conduct periodic quality monitoring of agriculture produce
- Improve packaging facility



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Section 2
Agricultural Statistics

Section 2: Agricultural Statistics

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1. BRIEF OVERVIEW OF THE AGRICULTURE SECTOR IN NEPAL

Position of Agriculture in Nepal

Table 1.1: Annual Growth of Agriculture and Non-agriculture Sector GDP

(Unit Percent)

Sector	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Agriculture, forestry and fishing	0.97	5.82	3.02	2.01	4.51	4.98	1.26
Non-agriculture	4.36	5.88	4.14	5.39	3.64	4.15	4.98

Source: Central Bureau of Statistics (CBS) 2013 a. National Accounts of Nepal, Kathmandu, Nepal

Government Policies

Table 1.2: Major Quantitative Target Set by TYP (2010/11-2012/13)

Agriculture and Livestock related production	Unit	Existing Status (2009/10)	Target of the plan (2012/13)
1. Cereal production	000 MT	7,762	9,561
2. Pulses production	000 MT	262	277
3. Cash crops	000 MT		
3.1 Potato		2,517	2,755
3.2 Sugarcane		2,592	3,238
3.3 Oil Crops		150	190
4. Fruits, Spices and tea	000 MT		
4.1 Fruits		706	775
4.2 Cardamom		5.23	8
4.3 Garlic		39	57
4.4 Ginger		210	228
4.5 Turmeric		38	49
4.6 Chili		26	31
4.7 Tea		18.75	25
5. Vegetables	000 MT	3,004	3,601
6. Honey	MT	554	1,200
7. Coffee	MT	1,100	1,300
8. Cocoon	MT	40	60
9. Livestock produce			
4.1 Milk	000 MT	1,496	1,774
4.2 Meat	000 MT	248	287
4.3 Egg	No (10 millions)	56	64
10. Fish	000 MT	50	56

Source: National Planning Commission (NPC), 2011 (a).

Table 1.3: Criteria for the Identification of Pocket Areas

SN	Type	Criteria
1	Crop production including horticulture	<ul style="list-style-type: none"> ▪ Area with road access, availability of irrigation, and electricity (all the three elements); ▪ Area with availability of irrigation and road access (two elements except electricity) ▪ Area with irrigation facilities only ▪ Areas with road access only ▪ Other feasible sites (Traditional agricultural areas)
2	Livestock and livestock originated products	<ul style="list-style-type: none"> ▪ Area with road access and availability of electricity and feed / fodder; ▪ Area with road access ▪ Other feasible sites (Traditional agricultural areas)

Source: Pocket package strategy (PPS) 1998.

Table 1.4: Characterization of Pocket Area by MOAD

Package type	Key elements	Objectives
Basic	Agricultural inputs, agricultural technology and institutional structure	To strengthen food security situation in production pockets in the hills and the mountains
Commercial oriented	Agricultural inputs, agricultural technology, institutional structure, technology, agricultural loan and storage facilities	To enhance production for generating marketable surplus and increase to attain certain economy of scale.
Commercial	Agricultural loan, agriculture stores, market development and agro-based industries; irrigation, electricity and agricultural roads.	To ensure agricultural commercialization motivating farmers on investment on technology and value addition.
Infrastructure	Irrigation, road and electricity	Focused on ensuring supply of constrained infrastructure such as irrigation, road or electricity

Source: PPS, 1998 pp. 4

Table 1.5: Size of the Agriculture Pocket Area

Region	Type of crops	Area (ha)
Terai	Cereal and cash crops	Approx. 1000 ha irrigated land or command area of approx. 400 STWs
	Fruit	Approx. 150 ha
	Vegetable	Approx. 100 ha
	Fish	Approx. 10 ha including lakes of varied size
Hills	Cereal and cash crops	Approx. 100-150 ha
	Fruit	Approx. 60-70 ha
	Vegetable	Approx. 30-40 ha
Mountain	Fruit	Approx. 40-50 ha

Source: PPS, 1998 pp. 4

Table 1.6: Size of the Livestock Pocket Area

Livestock type	Size of the pocket area
Cow and Buffalo	Approx. 50-75 cattle/buffalo raised by approx. 5 groups of 10-15 members per group and each group member's family raising at least one improved productive cattle/buffalo.
Goat, sheep and pig	Approx. 100-150 goat/sheep/pig raised by approx. 5 groups of 10-15 members per group and each group member's family raising at least two improved productive goat/sheep/pig.
Chicken	Approx. 1750-3000 chicks raised by approx. 5 groups of 10-15 members per group and each group member's family raising at least 35-40 chicks.

Source: PPS, 1998 pp. 4

Table 1.7: Pocket Area Coverage, 2011/2012

SN	Descriptions	Total
1	Number of pockets	1,726
2	Area under pockets (Hectare, 000)	375.3
2.1	Basic pocket	95,483.2
2.2	Commercial oriented	109,547
2.3	Commercial	128,135.2
3	Number of beneficiary HHs	493,561
3.1	No of beneficiary HH per pocket	286
4	Average area per pocket (ha)	217.5

Source: Agriculture Extension Directorate, 2012

Table 1.8: Key Donor Projects in the Agriculture Sector

Funding Source	Project Title
ADB	Decentralized Rural Infrastructure and Livelihoods (2004 - 2011)
	Community-Managed Irrigated Agriculture Sector (2004 - 2012)
	Commercial Agriculture Development Project (CADP) (2006 - 2013)
	Improving the Livelihoods of Poor Farmers and Disadvantaged Groups in the Eastern Development Region (2006 - 2010)
	Rural Reconstruction and Rehabilitation Sector Development Project (2008 - 2011)
	Highland Mountain Agribusiness and Livelihood Improvement Project (HIMALI) (2011-2017)
	Project for Raising Incomes of Small and Medium Farmers (2011-2017)
	Community Livestock Development Project (CLDP) (2003-2010)
IFAD	Leasehold Forestry and Livestock Program (2005-2013)
	High Value Agriculture Project in the Hills and Mountains (HVAP) (2010 - 2017)
	Improved seeds for Farmers Programme (2012/13 to 2019/20)
JICA	Kennedy Round 2 Grant Program
	Improvement and Promotion of Tea Technology
	Himalayan Tea Technology and Extension Program
	Production and Processing of Seed Cocoon
SDC	Sustainable Soil Management Program Phase 4 (2011 - 2014)
	Coffee Promotion Project (2003 - onwards)
	Home garden Project phase 3 (2009 – 2013)
	Vegetable Seed Project (VSP), Phase 3 (2011-2014)
World Bank	Irrigation and Water Resources Management (2007 - 2013)
	Nepal Food Crisis Response Program (2008 - 2011)
	Road Access Improvement and Decentralization Project (2005 - 2010)
	Poverty Alleviation Fund (PAF) (2007 – 2012)
	Project for Agriculture Commercialization and Trade (PACT) (2009-2015)
	Nepal Agriculture and Food Security Project(2012/13 to 2016/17)
FAO	Improving National Carp Seed Production System in Nepal (2010-2012)
	Combating Citrus Decline Problems in Nepal (2010-2012)
GIZ	Poverty Alleviation in Selected Rural Areas of Nepal (PASRA) 2005-11)
USAID	Knowledge-based Integrated Sustainable Agriculture and Nutrition (KISAN) (2013-2018)
DFID	Samarth-Nepal Market Development Programme (NMDP) (2012-2017)

Table 1.9: Agriculture Sector Institutions by Type and Function

Function/Type	Public Sector	Semi-Government	NGOs and private sector
Policy, coordination, formulation of legislations	<u>National</u> NPC, MOAD, MWR, MLD, <u>Local</u> DDC	<u>National</u> NDDB, NARC, NTCDB, NCDB,	FNCCI, Agri Enterprise Centre (AEC), Commodity Associations
Program Implementation, Administration, Regulation	DOA, DLS, DOC, DFTQC, NARDF, <u>Local</u> DDC	NDDB, National Seeds Committee, NCDB, NARC	
Technology (Research & extension)	DOA, DLS, DFTQC, NARDF	NARI, NASRI, IAAS	INGOs, NGOs, Input suppliers
Training	DOA, DLS, DOF, DOI, NCDTC	IAAS, CTEVT	INGOs, NGOs, Private training institutions
Irrigation	DOI, DDC, DADO		WUAs, Agriculture Cooperatives, INGOs, NGOs
Rural and agricultural road	DOLIDAR, DDC, VDC	-	INGOs, NGOs, CBOs private contractors
Rural Credit	NRB	Grameen Banks, CDB	Commercial Banks, Development Banks, INGOs, NGOs, Cooperatives, Grameen Banks
Input supplies	DOA, DLS, DOF	AICL, NSCL, ALI, AFPDB	Private sector (agrovets, commercial suppliers)
Production		CDC	Private sector – small, medium and large scale
Processing	ABPMDB	DDCN, CDC, TCN, HPPC	Private sector – small, medium and large scale
Marketing outputs		NFC	Private sector (small, medium and large scale)

Note: Refer abbreviations and acronyms page

Table 1.10: Status of Cooperatives in Nepal by Number and Type by June 2012

SN	Type	Nepal		No. of Members			Capital	Investment
		No.	(%)	Female	Male	Total	(Rs in '000)	(Rs in '000)
1	Milk	1749	19.0	28,303	74,505	102,808	167,115	425,594
2	Agriculture	5373	58.4	200,793	211,790	412,583	698480	4,097,486
3	Vegetables & Fruits ¹	196	2.1	17,717	13,279	30,996	41,917	559,062
4	Consumers	1416	15.4	40,307	31,625	71,932	201491	398,126
5	Coffee	80	0.9	1,704	2,313	4,017	14,231	5,017
6	Tea	97	1.1	1,347	3,908	5,255	76,760	16,318
7	Herbs	144	1.6	1,530	3,189	4,719	19,764	8,469
8	Bee-keeping	65	0.7	1,546	2214	3,760	6,782	3,621
9	Junar	31	0.3	304	700	1,004	706	323
10	Sugarcane	48	0.5	287	979	1,266	409	571
Agricultural		9,199	34.7	293,838	344,502	638,340	1,227,655	34,319
11	Electricity	406	34.7	12,005	48,636	60,641	64,003	33,629
12	Other	722	2.3	46,483	57,653	104,136	834,957	1,073,709
13	Saving and credit	11,851	4.2	1,029,424	929,498	1,958,922	19,464,192	94,775,686
14	Multi-purpose	4,136	68.5	544,565	1,316,382	1,860,947	5,266,512	32,831,319
15	Health	85	23.9	4,256	4,652	8,908	223,128	120,745
16	Communication	102	0.5	3,980	8,579	12,559	90,215	33,632
Non-agricultural		17,302	65.3	1,640,713	2,365,400	4,006,113	25,943,007	128,868,720
Total No.		26,501		1,934,551	2,709,902	4,644,453	27,170,662	128,903,039
(%)		100.0		41.7	58.3	100.0		

Source: Statistical Profile of Cooperatives in Nepal, 2013. Department of Cooperatives (DOC)

¹ Vegetable and Fruits Producers' Cooperatives handles high value commodities, while Agriculture Cooperatives do crops and agricultural inputs

Table 1.11: Details of Farmer Groups in Nepal, 2009/10

SN	Details	Department of Agriculture		Department of Livestock Service		Total/Average	
		No.	%	No.	%	No.	%
Total groups		29,989	100	17,768	100	47,757	100.0
1.1	Female farmers only	6,674	22.3	5,772	32.5	12,446	26.1
1.2	Male farmers only	3,673	12.2	2,839	16.0	6,512	13.6
1.3	Mixed	19,642	65.5	9,157	51.5	28,799	60.3
Total members		603,295	100	215,051	100	818,346	100.0
2.1	Female members	303,945	50.4	115,413	53.7	419,358	51.2
2.2	Male members	299,350	49.6	99,908	46.5	399,258	48.8

Source: Annual Programme and Statistics, 2011/12, Agriculture Extension Directorate, Department of Agriculture

Table 1.12: Details of Community Forestry User Group in Nepal by Physiographic Region

Physio-graphic region	No of districts	No of CFUGs	Forest Area (Ha)	HHs (No)	CF/district	Forest Area/HH
Mountains	15	2,875	270,370	294,532	192	0.92
Midhills	39	13,131	1,114,681	1,447,404	337	0.77
Terai/Inner Terai	20	2,127	314,997	495,259	106	0.64
Nepal	74	18,133	1,700,048	2,237,195	245	0.76

Source: Community Forestry User Group (CFUG) Database, Department of Forests, Government of Nepal as of October 20, 2013

Agricultural Production in Nepal

Table 1.13: Major Crops Grown in Different Physiographic Regions of Nepal

Crops/ Commodities (Major)	Terai	Hill	Mountain
Cereals	Rice, Wheat, Maize	Rice, Wheat, Maize Barley	Barley, Maize, Naked barley, Fox tail millet, Hog millet, Buckwheat
Pulses	Arahar, Horse Gram, Lentil, Chickpea	Black gram, Pea	Beans
Oilseeds	Mustard	Mustard	-
Cash crops	Potato, Sugarcane, Jute, Tobacco	Potato	Potato
Beverages	Tea	Tea, Coffee	-
Vegetables	Cauliflower, Tomato, Brinjal, Lady's finger, Cucurbits etc.	Cauliflower, Cabbage, Cucurbits, Tomato	Cauliflower, Cabbage, Green leafy vegetables
Fruits	Mango, Litchi, Areca nut, Coconut, Lime, Watermelon, Banana, Jack fruit, Pomegranate (Tropical/sub-tropical fruits)	Citrus (Orange and Sweet orange), Grapes, Guava, Pear, Pomello, Pomegranate, Peach Persimmon, etc (Sub-tropical and temperate fruits)	Apple, Pear, Walnut, Almond (Temperate fruits)

Source: CBS, 2001

Table 1.14: Status of Cultivated Land, 2001

Details	2001	Remark
Arable land area	2.65 million ha	57.5% increase compared to 1961 status
Number of ag. holdings	3.36 million	118.5% increase compared to 1961 status
Average holding size	0.80 ha	27% decrease compared to 1961 Status

Source: CBS, 2002

Table 1.15: Farm Size and Distribution of Cultivated Landholdings in Nepal, 2001

Category	Percentage of Total Holdings	Percentage of Total Area	Average Holding Size in Hectare
Less than 0.5 ha	47.7	14.7	0.24
0.5 - 1 ha	27.2	24.2	0.70
1.0 - 2.0 ha	17.5	29.8	1.61
2.0 - 3 ha	4.7	14.0	2.36
3 - 5 ha	2.15	10.0	3.69
Above 5 ha	0.75	7.3	7.64
Total	100	100	0.8

Source: CBS, 2002

Table 1.16: Size Distribution of Agricultural Land Ownership by Households and Region

(in percent)

Region/ holding	Mountains		Hills		Terai	
	Total Holdings	Total Area	Total Holdings	Total Area	Total Holdings	Total Area
< 0.5 ha	45.8	17.3	50.1	19.8	44.6	10.6
0.5 - 1 ha	31.0	29.4	30.7	32.5	23.2	17.2
1.0 - 2.0 ha	17.8	32.2	15.4	30.7	20.1	28.7
2.0 - 3 ha	3.7	11.8	2.8	9.8	7.0	17.4
>3.0 ha	1.7	9.3	1.0	7.2	5.1	26.1
Total	100	100	100	100	100	100

Source: CBS, 2002

Table 1.17: Size Distribution of Agricultural Land Ownership by Household and Region

Region/ Operation	Percent of Total Operated Land		Percent of Total Owned Land	
	Owner operated	Rented-in	Owner operated	Rented-out
Mountains	89.4	10.6	97.0	3.0
Hills	89.1	10.9	95.9	4.1
Terai	80.1	19.9	90.0	10.0
Nepal	84.7	15.3	93.2	6.8

Source: CBS, 2002

Table 1.18: Status of Cultivated Land in Nepal

Agro ecological zone (AEZ)	Cultivated land (Nepal) (sq km)	Total Land, (sq km)	Cultivated Land as % of Total Land
Mountain	2,525	63,086	4.0
Hills	12,232	44,436	27.5
Terai	15,772	39,962	39.5
Total	30,529	147,484	20.7

Source: Water and Energy Commission Secretariat (WECS), 2010

Table 1.19: Total Area under Cereal Crops and Their Shares by Physiographic Region, 2011/12

Crops	Area		Share in Total Area (%)			Total
	(ha)	Percent	Mountain	Hill	Terai	
Paddy	1,531,493	44.1	4.4	25.8	69.7	100.0
Maize	871,387	25.1	11.3	70.9	17.8	100.0
Millet	278,030	8.0	21.1	75.5	3.4	100.0
Wheat	765,317	22.0	5.9	34.4	59.6	100.0
Barley	27,966	0.8	52.8	42.0	5.2	100.0
Total	3,474,193	100.0	8.3	43.2	48.6	100.0

Source: Computed from Statistical Information on Nepalese Agriculture System (SINA), MOAD 2012.

Table 1.20: Production of Major Cereal Crops and Their Shares by Physiographic Region, 2011/12

Crops	Total Production		Share in Production (%)				Yield (kg/ha)
	MT	Percent	Mountain	Hill	Terai	Total	
Paddy	5,072,248	53.7	3.0	23.7	73.2	100.0	3,312
Maize	2,179,414	23.1	9.9	70.1	20.0	100.0	2,501
Millets	315,067	3.3	20.0	76.7	3.2	100.0	1,133
Wheat	1,846,142	19.5	3.7	30.2	66.1	100.0	2,412
Barley	34,829.8	0.4	58.6	36.1	5.3	100.0	1,245
Total	9,447,701	100.0	5.6	37.5	56.9	100.0	2,719

Source: Computed from SINA, MOAD 2012.

Table 1.21: Area, Production and Yields of Paddy, Maize and Millet

(Area in ha, Production in MT and Yield in kg/ha)

Year	Paddy			Maize			Millet		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
2003/04	1,559,436	4,455,722	2,857	834,285	1,590,097	1,906	259,597	283,378	1,096
2004/05	1,541,729	4,289,827	2,782	849,892	1,716,042	2,019	258,839	289,838	1,120
2005/06	1,549,447	4,209,279	2,717	850,947	1,734,417	2,038	261,673	290,936	1,112
2006/07	1,439,525	3,680,838	2,557	870,401	1,819,925	2,091	265,160	284,813	1,074
2007/08	1,549,262	4,299,246	2,775	870,166	1,878,648	2,159	265,496	291,098	1,096
2008/09	1,555,940	4,523,693	2,907	875,428	1,930,669	2,205	265,889	292,683	1,101
2009/10	1,481,289	4,023,823	2,716	875,660	1,855,184	2,119	268,473	299,523	1,116
2010/11	1,496,476	4,460,278	2,981	906,253	2,067,522	2,281	269,820	302,691	1,122
2011/12	1,531,493	5,072,248	3,312	871,387	2,179,414	2,501	278,030	315,067	1,133
Annual Growth Rate (%)	(0.29)	1.26	1.56	0.72	3.41	2.68	0.76	1.07	0.28

Source: Computed from SINA, MOAD 2012.

Table 1.22: Area, Production and Yields of Wheat, Barley and Cereals Crops

(Area in ha, Production in MT and Yield in kg/ha)

Year	Wheat			Barley			Total Cereals Crops		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
2003/04	664,589	1,387,191	2,087	27,467	28,151	1,091	3,345,374	7,744,539	2,255
2004/05	675,807	1,442,442	2,134	26,428	29,341	1,110	3,352,695	7,767,490	2,317
2005/06	672,040	1,394,126	2,074	26,227	27,786	1,059	3,360,334	7,656,544	2,279
2006/07	702,664	1,515,139	2,156	26,580	28,293	1,064	3,304,330	7,329,008	2,218
2007/08	706,481	1,572,065	2,225	26,106	28,082	1,076	3,417,511	8,069,139	2,361
2008/09	694,950	1,343,862	1,934	25,817	23,224	900	3,418,024	8,114,131	2,374
2009/10	731,131	1,556,539	2,129	26,600	27,587	1,037	3,383,153	7,762,656	2,295
2010/11	767,499	1,745,811	2,275	28,461	30,240	1,063	3,468,509	8,606,542	2,481
2011/12	765,317	1,846,142	2,412	27,966	34,830	1,245	3,474,193	9,447,701	2,719
Annual Growth Rate (%)	1.86	3.07	1.20	0.49	1.22	0.32	0.50	2.07	1.74

Source: Computed from SINA, MOAD 2012.

Table 1.23: Area under Major Cash Crops as Percentage of Total Cultivated Area and Yield

Year	% of cultivated land				Yield (kg/ha)			
	Oilseed	Potato	Sugarcane	Jute	Oilseed	Potato	Sugarcane	Jute
2003/04	6.0	4.6	1.9	0.4	711	11,490	38,794	1,433
2004/05	6.1	4.7	1.9	0.4	756	11,846	40,217	1,452
2005/06	6.1	4.9	2.0	0.4	741	13,090	39,682	1,428
2006/07	6.0	5.0	2.1	0.4	736	12,657	40,610	1,434
2007/08	5.8	5.1	2.0	0.4	745	13,110	39,475	1,466
2008/09	4.4	4.4	1.4	0.4	747	13,326	40,523	1,512
2009/10	4.8	4.5	1.4	0.3	781	13,584	42,790	1,233
2010/11	6.9	5.9	2	0.0	824	13,735	43,148	1,365
2011/12	7.0	6.5	2.1	0.3	834	13,584	45,447	1,369
Annual Growth Rate (%)	0.33	2.99	(0.94)	(31.21)	1.71	2.09	1.67	(1.01)

Source: Computed from SINA, MOAD 2012.

Table 1.24: Area, Production and Yields of Vegetables and Fruits (2003/04 and 2011/12)

Year	Vegetables			Fruits			
	Area (ha)	Production (MT)	Yield (mt/ha)	Area	Productive Area (ha)	Production (MT)	Yield (mt/ha)
2003/04	172,586	1,890,100	11.0	86,707	54,112	511,397	9.5
2004/05	180,823	2,065,193	11.4	89,312	55,348	552,879	10.0
2005/06	189,832	2,190,100	11.5	91,923	56,548	535,449	9.5
2006/07	191,922	2,298,689	12.0	94,901	57,595	575,095	9.5
2007/08	208,108	2,538,904	12.2	100,099	63,432	630,563	9.9
2008/09	225,154	2,754,406	12.2	103,651	68,785	686,213	10.0
2009/10	235,098	3,003,821	12.8	107,322	70,722	706,972	10.0
2010/11	244,102	3,203,563	13.1	117,932	79,184	794,164	10.0
2011/12	245,037	3,298,816	13.5	139,321	101,233	1,029,754	10.2
Annual Growth Rate (%)	4.93	7.53	2.47	5.35	7.26	8.00	0.73

Source: Computed from SINA, MOAD 2012.

Table 1.25: Average Cost of Production per Hectare of Major Cereal Crops (2007/2008)

Crops	Production Cost (Rs/ha)			Gross Income (Rs/ha)			Net Profit (Rs)		
	2007/08	2011/12	% change	2007/08	2011/12	% change	2007/08	2011/12	% change
Paddy	24,684	47052	90.6	57,448	64872	12.9	32,764	17,820	(45.6)
Wheat	22,756	52049	128.7	37,539	76324	103.3	14,783	24,275	64.2
Maize	17,613	41711	136.8	28,435	53519	88.2	10,823	11,808	9.1

Source: Computed from SINA, MOAD 2012.

Table 1.26: Average Cost of Production per Hectare of Major Vegetable Crops, 2007/08 and 2011/2012

Crops	Production Cost (Rs/ha)			Gross Income (Rs/ha)			Net Profit (Rs)		
	2007/08	2011/12	% change	2007/08	2011/12	% change	2007/08	2011/12	% change
Tomato	69,389	115,161	66.0	183,074	422,092	130.6	113,685	306,931	170.0
Potato	120,096	185,592	54.5	310,319	292,766	(5.7)	190,224	107,174	(43.7)
Onion	43,254	69,457	60.6	179,322	240,036	33.9	136,068	170,579	25.4
Cauliflower	59,574	100,225	68.2	175,512	373,783	113.0	115,938	273,558	136.0
Garlic	93,728	269,760	187.8	662,036	1,488,842	124.9	568,308	1,219,082	114.5
Pea	36,957	113,626	207.5	191,981.8	292,544	52.4	155,025	178,918	15.4
Radish*	42,706	94,028	120.2	117,274	175,824	49.9	74,568	81,796	9.7
Gourd*	58,339	85,577	46.7	190,512	185,344	(2.7)	132,173	99,767	(24.5)
Cabbage*	59,103	90,741	53.5	202,160	326,573	61.5	143,057	235,832	64.9
Capsicum*	54,437	94,395	73.4	270,496	319,914	18.3	216,059	225,519	4.4
Chili*	52,440	80,596	53.7	304,335	369,125.5	21.3	251,895	288,530	14.5
Ginger*	246,490	563,232	128.5	496,635	891,161	79.4	250,145	327,929	31.1
Brinjal*	61,091	81,609	33.6	146,838	179,632	22.3	85,747	98,023	14.3

Note: * Data for 2009/10

Source: Computed from SINA, MOAD 2012

Table 1.27: Milk and Meat Production (2003/04 and 2011/12)

Year	Milk production, MT			Meat (net) Production						
	Total	Cow	Buffalo	Total	Buffalo	Mutton (Sheep)	Goat	Pig	Chicken	Duck
2003/04	1,231,853	368,531	863,322	208,412	133,600	2,779	40,540	15,389	15,881	223
2004/05	1,274,228	379,637	894,591	214,817	138,953	2,744	41,698	15,724	15,461	237
2005/06	1,312,140	385,290	926,850	219,205	142,040	2,737	42,820	15,773	15,605	230
2006/07	1,351,394	392,791	958,603	227,105	147,031	2,747	44,933	16,035	16,126	233
2007/08	1,388,730	400,950	987,780	233,897	151,690	2,733	46,188	16,425	16,632	229
2008/09	1,445,419	413,919	1,031,500	241,690	156,627	2,711	48,472	16,992	16,662	226
2009/10	1,497,429	429,129	1,068,300	250,213	162,358	2,705	50,315	17,059	17,551	225
2010/11	1,556,510	447,185	1,109,325	277,625	167,868	2,722	52,809	17,923	36,085	218
2011/12	1,622,751	468,913	1,153,838	287,930	172,414	2,720	53,956	18,277	40,603	217
Annual Growth Rate (%)	3.45	2.91	3.67	4.06	3.25	(0.24)	3.82	2.18	11.56	(0.72)

Source: Computed from SINA, MOAD 2012.

Table 1.28: Annual Sales of Chemical Fertilizers

(Unit: MT)

Year	Public	Private sector	Total
2003/04	20,493	118,265	138,758
2004/05	31,811	90,895	122,706
2005/06	13,295	78,258	91,553
2006/07	25,169	65,679	90,848
2007/08	6,646	47,107	53,753
2008/09	7,133	5,677	12,810
2009/10*	10,329		10,329
2010/11*	110,013		110,013
2011/12*	144,814		144,814
Annual Growth Rate (%)	17.70	(39.1)	(10.2)

Note: Private sector did not import fertilizers from 2009/10

Source: Computed from SINA, MOAD 2012

Table 1.29: Fertilizer Price Differentials between India and Nepal

(Rs/mt)

Country	Urea (Nitrogen)		DAP (Di-ammonium phosphate)		MOP (Potash)	
	2007	2012	2007	2012	2007	2010
Nepal *	24,000	18,000	25,000	32,000	13,600	20,000
India**	7,008	8,496	14,960	25,909	7,128	14,618
Price difference, %	242.5	111.9	67.1	23.5	90.8	36.8

Source: Computed from SINA, MOAD 2012.;

* Retail prices vary by locations. ** <http://fert.nic.in/page/fertilizers-accounts>

Table 1.30: Institutional Arrangements for the Provision of Agricultural Inputs

Inputs	Supply of inputs	Quality Control and regulation	Remark
Seeds	<ul style="list-style-type: none"> • National Seeds Corporation Limited • Agro-vets • Private seeds company • Agricultural cooperatives • Seeds Entrepreneurial Association of Nepal 	Central seeds quality control centre	<ul style="list-style-type: none"> • Share of National Seeds Company in the cereal crop seeds market is less than 10% of the country's seeds.
Fertilizer	<ul style="list-style-type: none"> • Agriculture Inputs Company Limited • Private importers • Fertilizer dealers • Agriculture cooperatives 	<ul style="list-style-type: none"> • Fertilizer Unit/MOAD • Fertilizer Inspectors appointed in all 75 DADOs as per the FCO. 	<ul style="list-style-type: none"> • Share of the Agriculture Inputs Company in the fertilizer market is less than 5% and most of the fertilizers have been entering Nepal through informal cross-border trade. However, this is discouraged by the FCO due to uncertainties in the quality of such fertilizers and finding most of fertilizers being low quality imported through such mechanisms. While the government sources data do not record the use of fertilizers imported through informal sources, studies carried out by independent sources use such figures. Therefore, exact figure of fertilizer use is not available. Fertilizer distribution system has become uncertain after the deregulation.
Water	<ul style="list-style-type: none"> • Department of Irrigation • Department of Agriculture • Water Users Associations 	<ul style="list-style-type: none"> • DOI 	<ul style="list-style-type: none"> • According to the Ministry of Water Resources sources, of the total cultivated area of the country (2,642,000 hectares [ha]), about 1,766 ha (67%) is irrigable. Most of this (76%) lies in Terai. At the end of the Tenth Plan (2006/2007), the total irrigated area was reported at 1,194,628 (67%). But year round irrigation was available to less than 40% of the total irrigated areas.

Table 1.31: Cereal Crops Seeds Distribution and Quality Control System

Agencies	Types of seeds produced	Distribution		Quality control	
		Agencies	Purpose	Production	Distribution
Nepal Agriculture Research Council (NARC)	Breeders seed	NARC Farms DOA Farms NSC PSC	Production of foundation seeds	NARC	NARC
	Foundation seeds	DADO, Community based seed production	Production of certified seeds	Central Seed Quality Control Center	-
National Seed Company (NSC)	Foundation seeds	Contract growers	Production of certified seeds	Regional Seed Laboratory	-
	Certified seeds	Contract growers	Contract growers	-	-
		Farmers/ producers	Cereal grain production	-	
	Improved seeds	Farmers/ producers	Farmers/producers		Seed Inspector/ DADO
Private Seed Company (PSG)	Foundation seeds, certified and improved seeds	Contract growers	Seed multiplication and cereal grain production	-	-
DADO	Improved seeds	SPGs and cooperatives	Seed multiplication	-	-
Cooperative	Certified seeds and improved seeds	Members and non-members	Seed production and consumption	-	-
Seed Producer Group	Certified seeds and improved seeds	Members and other farmers	Seed production and consumption	-	-

Source: Basnyat, 2010

Table 1.32: Distribution of Agricultural Credit through Agricultural Development Bank

(Unit: In million)

Year	Agriculture	Other	Total
2002/03	9,411	559	9,969
2003/04	9,081	1,069	10,150
2004/05	9,995	1,679	11,673
2005/06	10,715	2,093	12,808
2006/07	12,255	2,396	14,650
2007/08	4,776	31,559	36,335
2008/09	3,654	38,261	41,915
2009/10	4,373	36,329	40,702
2010/11	9,023	32,351	41,374
2011/12	15,820	37,037	52,857
Annual Growth rate (%)	(16.4)	101.0	32.0

Source: Computed from various issues of Statistical information in Nepalese Agriculture

Table 1.33: Ten Key Commodities Exported to India and Other Countries, 2012

Commodities Exported to India		Commodities exported to other countries	
Commodities	Value (Rs Million)	Commodities	Value (Rs Million)
Herbs	3,027.1	Pulses	2,497.0
Cardamom	803.6	Tanned skin	723.5
Oil Cakes	642.7	Paper and paper products	587.3
Skin	382.4	Tea	251.8
Ghee (Vegetable)	371	Herbs	197.7
Ginger	366.6		
Ghee(Clarified)	366.6		
Rosin	315.2		
Live Animals	248.8		
Pulses	202.5		
Total value	7,276.5		4,257.3

Source: Computed from Nepal Rastra Bank, Quarterly Economic Bulletin April-May, 2013 Vol 47 (3). Nepal Rastra Bank, Kathmandu

Table 1.34: Ten Key Commodities Imported from India and Other Countries, 2012

India		Other countries	
Commodities	Value (Rs Million)	Commodities	Value (Rs Million)
Rice	4,267.0	Crude Soyabean Oil	9,962.3
Agri. Equip.& Parts	4,145.8	Crude Palm Oil	4,210.6
Vegetables	2,589.5	Edible Oil	2,794.1
Paper	2,278.1	Chemical Fertilizers	2,291.3
Tobacco	1,916.8	Betelnut	1,639.2
Baby Food & Milk Products	979.1	Raw Wool	657.2
Insecticides	942.4	Palm oil	312.6
Fruits	857.6	Powder Milk	300.6
Cumin seed	702.3	Small Cardamom	286.9
Live animals	422.9	Insecticides	206.7
Total export value		Total export value	

Source: Computed from Nepal Rastra Bank, Quarterly Economic Bulletin April-May, 2013 Vol 47 (3). Nepal Rastra Bank, Kathmandu

Table 1.35: Trade Status of Agricultural Commodities, 2012

(Unit: Rs Millions)

Countries	Export	Import	Trade balance
India	7,276.5	19,279.8	(12,003.3)
Other countries	4,257.3	22,726.4	(18,469.1)
Total	11,533.8	42,006.2	(30,472.4)

Source: Computed from Nepal Rastra Bank, Quarterly Economic Bulletin April-May, 2013 Vol 47 (3). Nepal Rastra Bank, Kathmandu

Table 1.36: Import and Export of Livestock Commodities, 2012

(Unit: Rs Millions)

Commodities	Export	Import	Trade balance
Live Animal	248.8	422.9	(174.1)
Skin	1,105.9		1,105.9
Powder Milk		300.6	(300.6)
Baby Food & Milk Products		979.1	(979.1)
Raw Wool		657.2	(657.2)
Total	1,354.7	2,359.8	(1,005.1)

Source: Computed from Nepal Rastra Bank, Quarterly Economic Bulletin April-May, 2013 Vol 47 (3). Nepal Rastra Bank, Kathmandu

Market Networks

Table 1.37: Agriculture Markets Network in Nepal

S. N.	Agriculture Markets	Type	Key agricultural commodities/ products	District
Eastern Development Region				
1	Birtamod	Wholesale Market		Jhapa
2	Budhabare	Collection Centre		Jhapa
3	Suranga	Collection Centre*		Jhapa
4	Dharan	Wholesale Market		Sunsari
5	Kaptanganj	Collection Centre		Sunsari
6	Katahari	Retail Market		Morang
7	Rangeli	Collection Centre*		Morang
8	Basantapur	Collection Centre (Inactive)		Tehrathum
9	Katari	Collection Centre (Inactive)		Udayapur
Central Development Region				
1	Kalimati	Wholesale Market	Vegetables and Fruits	Kathmandu
2	Balaju	Collection Centre	Fruits and Vegetables	Kathmandu
3	Chhainmali	Collection Centre	Pears	Kathmandu
4	Kabhresthali	Collection center	Organic vegetables	Kathmandu
5	Narayangadh	Wholesale Market		Chitwan
6	Bhandara	Collection Center	Vegetables	Chitwan
7	Jagatpur	Collection Center		Chitwan
8	Janakpur	Wholesale Market		Dhanusha
9	Dhalkebar	Collection Centre	Vegetables and Fruits	Dhanusha
10	Hansapur	Periodic Market (twice weekly)		Dhanusha
11	Bardibas	Periodic Market and collection centre	Vegetables	Mahottari
12	Gaushala	Collection Center		Mahottari
13	Charikot	Periodic Market (weekly) and retail market		Dolakha
14	Jiri	Periodic Market (weekly) and collection center	Potato	Dolakha
15	Sindhulimadhi	Weekly Market and Collection Center	Junar and Orange	Sindhuli
16	Lalgadh	Collection Center	Vegetables	Sarlahi
17	Nawalpur	Collection Center	Vegetables	Sarlahi
18	Gadariya	Collection Center		Sarlahi
19	Haripur	Collection Center		Sarlahi
20	Saru Attha	Collection Center	Vegetables	Rautahat
21	Mohamadpur	Collection Center		Rautahat
22	Handikhola	Collection Center	Vegetables	Makwanpur
23	Bastipur	Collection Center		Makwanpur
24	Charaundi and Khatritar	Collection Center		Dhading
25	Dharke	Collection Center (Inactive)		Dhading
26	Teenpiple and	Collection Centre (inactive)		Kabhre

S. N.	Agriculture Markets	Type	Key agricultural commodities/ products	District
	Panchkhal			
27	Tamaghat	Collection Centre		Kathie
28	Simrangadh	Collection Centre	Vegetables	Bara
29	Kalaiya	Collection Center and wholesale market*	Vegetables	Bara
30	Basantapur	Collection Center		Bara
31	Klohahi	Collection Center		Bara
32	Bodhavan	Collection Center (farmers' chautari)		Bara
33	Patthariya	Collection Centre	Vegetables	Parsa
34	Pokhariya	Bi-weekly and Retail Market		Parsa
35	Jawalakhel	Retail Market	Vegetables	Lalitpur
Western Development Region				
36	Pokhara	Wholesale Market	Fruits and Vegetables	Kaski
37	Prithvichowk and Birauta	Retail Market	Fruits and Vegetables	Kaski
38	Damauli	Retail Market	Fruits and Vegetables	Tanahun
39	Jomsom	Collection Centre	Apple	Mustang
40	Kawasoti	Collection Centre	Banana, Orange and Vegetables	Nawalparasi
41	Waling	Collection Center*		Syanja
Mid-western Development Region				
42	Lamahi	Wholesale Market		Dang
43	Ghorahi	Wholesale Market		Dang
44	Kohalpur	Wholesale Market		Banke
45	Chaulikka Baba	Wholesale Market*		Banke
46	Kapurkot	Collection Centre		Sallyan
47	Babiyachaur	Collection Centre and retail market	Vegetables	Surkhet
Far-western Development Region				
48	Tikapur	Collection Center	Banana	Kailali
49	Attariya			Kailali

* Under construction

Source: Computed from Agriculture Marketing Information Bulletin, 2010 of Agribusiness promotion and Marketing Development Directorate, 2010

Table 1.38: Major Fruits and Vegetables Wholesale Market Operating in the Urban Area

1.	Biratnager (Morang)	7.	Balaju (Kathmandu)
2.	Janakpur (Dhanusha)	8.	Butwal (Rupandehi)
3.	Birgunj (Parsa)	9.	Pokhara (Kaski)
4.	Narayanghat (Chitwan)	10.	Attaria (Kailali)
5.	Kalimati (Kathmandu)	11.	Kohalpur (Nepalgunj)
6.	New Baneshwor (Kathmandu)		

Table 1.39: Major Fruits and Vegetables Collection Centers based in Production Area

1.	Birtamod (Jhapa)	8.	Charikot and Jiri (Dolakha)
2.	Dharan (Sunsari)	9.	Tamaghat and Tinpile (Kavre)
3.	Sindhuwa (Dhankuta)	10.	Dharke and Dhusa (Dhading)
4.	Dhalkebar (Dhanusha)	11.	Damauli (Tanahun)
5.	Bardibas, Nawalpur, Lalbandi (Sarlahi)	12.	Lamahi (Dang)
6.	Saruahatta (Rauthat)	13.	Kapurkot (Sallyan)
7.	Handikhola (Makwanpur)	14.	Kohalpur (Banke)

Table 1.40: History of Agricultural Markets Development in Nepal

Year	Key activities	Remarks
1964	Establishment of Food Management Corporation, a public sector corporation under the Corporation Act for the procurement and distribution of food grains within the country and supplies subsidized rice to remote areas in hills and mountains	This corporation has a long history of more than 150 years but the establishment of Food Management Corporation is regarded as government's first attempt to intervene food market.
1969	Establishment of Dairy Development Corporation, a public sector corporation under the Corporation Act to develop the dairy industry by organizing milk collection, processing, sale of pasteurized milk and milk products to the urban consumers	
1974	Establishment of seven public sector Rice Export Companies (RECs) for export of rice (Monopoly granted)	
1974	Establishment of Nepal Food Corporation by dividing the then Agriculture Marketing Corporation into two corporations- Nepal Food Corporation and the Agriculture Inputs Corporation. Earlier, Food Management Corporation was integrated to the Agriculture Management Corporation in 1972.	
1979	Monopoly of rice export companies removed	
1980	Abolished the rice export companies	
1984	Land acquisition for establishing Kalimati Fruits and Vegetables wholesale markets	
1986	Kalimati Wholesale Market started to operate	
1990	Kalimati Wholesale Market (KWM) Project' was signed by GON and the United Nations Capital Development Fund (UNCDF) and the United Nations Development Programme (UNDP)	
1991	Operation of Ratnapark Wholsale market at the street sides between Ratna Park and Rani Pokhar, Kathmandu	Operated with the permission of Kathmandu Municipality, every morning from 4 to 7.30 A.M
1992-94	Marketing Development Division of the Department of Agriculture Operated Kalimati Market	
1995	Kalimati Fruit and Vegetable Wholesale Market Development Board formed for management of Kalimati market	
1995	Project support to a new Kalimati Project implemented with the support of FAO and UNDP	Project terminated in September 2000

Year	Key activities	Remarks
1996	Small Marketing Infrastructure Project initiated with the support of UNCDF. It established 19 marketing centres in different parts of the country, (13 collection centres, 3 trading centres and 3 urban centres (one wholesale and two retail centres).	The project was completed in 2000.
1996	Agriculture Produce Market Centre Management and Operation Directives implemented	The directive was amended in 1998
1996/ 97	Agriculture Produce Marketing Centre, Dharan established with funding assistance of ADB	
1997/ 98	Collection Centres constructed at Lamahi, Dang and Kohlpur with the ADB assistance through Secondary Agriculture Development Project	
1998	Improvements of physical facilities at Kalimati market completed with the assistance of UNCDF for	Agreement signed in November 1990 but the project was commenced in 1996
1998	Agricultural Marketing Development and Management Act, 2055 drafted	The proposed Bill is still to be approved. The process pending due to political instability
1999	The Third Livestock Development Project produced report on livestock and meat marketing system in Nepal	This report is said to be the first report on livestock marketing system in Nepal
2000	Master plan for Agricultural Marketing in Kathmandu valley prepared with the support of the FAO	The project was started in June 1999.
2001	Constitution of Kalimati Fruit and Vegetable Wholesale Market Development Board under the Development Board Act 1957	
2001	A study on the Agricultural Marketing Development Project in the Nepal carried out by JICA	
2006	Promulgation of Agriculture Business Promotion Policy for promotion of market oriented and competitive agriculture production	
2006	Third amendment in Kalimati Fruit and Vegetable Wholesale Market Development Board	
2007	Support to District Agriculture Development Office for establishment of small collection center	
2008	Promulgation of Agriculture business promotion policy implementation working procedure (2008) Promulgation of Agriculture and Livestock Market Infrastructure Development Programme Implementation Guideline 2008	
2009	Formulated the Criteria and Standard for construction of Agriculture Market infrastructure through support from Government Institutions	
2011	Formulated the Guidelines for construction and operation of Agriculture Market infrastructure in partnership with other institutions	

Source: Compiled from Different Sources

Table 1.41: Fruits and Vegetables Arrivals in Kalimati Wholesale Market from Kavre Districts in 2010/2011

Commodities	Market arrivals (MT)					Share of study districts on total market arrival (%)		
	Dolakha	Kavre	India	Tibet	Total	Dolakha	Kavre	Total
Tomato Big	0.75	618.77	1,274.60	-	4,693.37	0.02	13.18	13.20
Tomato Small	8.60	4,321.45	189.95	-	21,052.26	0.04	20.53	20.57
Potato Red	5,087.75	8,753.08	13,139.87	48.99	38,302.80	13.28	22.85	36.14
Potato White	356.98	965.23	5,564.59	25.00	8,980.57	3.98	10.75	14.72
Onion Dry	11.04	17.17	20,188.52	37.00	21,251.49	0.05	0.08	0.13
Carrot	3.00	7.50	55.00	-	2,576.59	0.12	0.29	0.41
Cabbage	168.60	706.69	25.00	-	13,707.57	1.23	5.16	6.39
Cauli Local	1,067.56	2,217.43	42.40	-	23,217.08	4.60	9.55	14.15
Cauli Terai	-	-	23.70	-	1,625.41	-	-	-
Raddish Red	-	-	-	-	43.42	-	-	-
Raddish White	14.50	297.15	10.00	-	5,954.86	0.24	4.99	5.23
Brinjal Long	1.00	455.87	88.70	-	4,787.52	0.02	9.52	9.54
Brinjal Round	-	9.80	9.00	0.70	152.31	-	6.43	6.43
Cow pea	2.00	413.03	43.50	0.20	3,209.63	0.06	12.87	12.93
Green Peas	-	294.97	1,188.57	-	2,762.08	-	10.68	10.68
French Bean	13.10	333.92	100.10	-	4,302.23	0.30	7.76	8.07
Sword Bean	-	1.00	22.10	-	357.72	-	0.28	0.28
Soyabean Green	0.50	24.20	-	-	74.75	0.67	32.37	33.04
Bitter Gourd	3.00	487.40	150.70	-	4,730.76	0.06	10.30	10.37
Bottle Gourd	2.00	810.75	138.30	-	4,610.65	0.04	17.58	17.63

Commodities	Market arrivals (MT)					Share of study districts on total market arrival (%)		
	Dolakha	Kavre	India	Tibet	Total	Dolakha	Kavre	Total
Pointed Gourd	-	-	142.25	-	2,601.19	-	-	-
Snake Gourd	0.50	59.60	-	-	657.65	0.08	9.06	9.14
Smooth Gourd	2.00	378.00	17.00	-	2,895.87	0.07	13.05	13.12
Sponge Gourd	-	0.50	-	-	8.18	-	6.11	6.11
Pumpkin	-	218.10	229.00	-	1,639.80	-	13.30	13.30
Squash	5.00	356.25	32.00	-	3,064.29	0.16	11.63	11.79
Turnip	-	-	-	-	7.26	-	-	-
Okara	0.50	180.20	90.95	-	2,123.16	0.02	8.49	8.51
Sweet Potato	-	2.00	11.00	-	204.65	-	0.98	0.98
Barela	-	23.19	5.00	-	397.77	-	5.83	5.83
Arum	5.00	8.30	0.50	-	233.47	2.14	3.56	5.70
Christophine	-	41.75	-	-	1,308.30	-	3.19	3.19
Brd Leaf Mustard	17.20	2.55	-	-	556.85	3.09	0.46	3.55
Spinach Leaf	1.00	-	-	-	352.41	0.28	-	0.28
Cress Leaf	-	-	-	-	141.60	-	-	-
Mustard Leaf	-	-	-	-	275.71	-	-	-
Fenugreek Leaf	-	-	-	-	108.20	-	-	-
Onion Green	2.00	30.70	76.50	-	993.88	0.20	3.09	3.29
Bakula	1.00	17.68	-	-	130.73	0.76	13.52	14.29
Yam	-	8.50	8.00	-	1,270.12	-	0.67	0.67
Mushroom	-	-	-	-	549.09	-	-	-

Commodities	Market arrivals (MT)					Share of study districts on total market arrival (%)		
	Dolakha	Kavre	India	Tibet	Total	Dolakha	Kavre	Total
Asparagus	-	-	-	-	41.00	-	-	-
Neuro	-	-	-	-	41.75	-	-	-
Brocauli	-	-	-	-	336.29	-	-	-
Sugarbeet	-	-	-	-	21.23	-	-	-
Drumstick	-	-	-	-	14.83	-	-	-
Bauhanian flower	-	-	-	-	97.40	-	-	-
Red Cabbage	-	-	0.04	-	13.17	-	-	-
Lettuce	-	-	0.20	-	68.50	-	-	-
Knolkhol	-	-	0.15	-	10.58	-	-	-
Celery	-	-	0.08	-	9.23	-	-	-
Parseley	-	-	0.02	-	9.53	-	-	-
Fennel Leaf	-	-	0.80	-	93.53	-	-	-
Mint	-	-	0.02	-	9.87	-	-	-
Turnip A	-	0.50	0.10	-	94.70	-	0.53	0.53
Cucumber	6.10	1,006.39	126.30	-	6,885.58	0.09	14.62	14.70
Vegetables	6,780.7	23,069.6	42,994.5	111.9	193,660.3	3.50	11.91	15.41
Apple	0.20	-	143.25	2,120.59	2,296.79	0.01	-	0.01
Banana	0.15	-	564.39	4.77	576.56	0.03	-	0.03
Lime	0.50	1.67	1,789.11	-	1,853.97	0.03	0.09	0.12
Pomegranate	0.05	-	128.78	1.39	130.34	0.04	-	0.04
Mango	60.60	4.65	1,566.48	46.50	2,820.92	2.15	0.16	2.31

Commodities	Market arrivals (MT)					Share of study districts on total market arrival (%)		
	Dolakha	Kavre	India	Tibet	Total	Dolakha	Kavre	Total
Grapes	-	-	156.41	0.63	157.81	-	-	-
Orange	-	4,317.83	951.10	-	11,860.22	-	36.41	36.41
Water Melon	36.30	-	4,237.51	39.65	4,353.51	0.83	-	0.83
Sweet Orange	0.10	46.13	264.10	1.80	475.17	0.02	9.71	9.73
Mandarin	-	-	25.41	-	31.01	-	-	-
Pine Apple	0.10	-	173.73	0.90	190.73	0.05	-	0.05
Jack Fruit	4.00	112.90	149.91	-	1,045.47	0.38	10.80	11.18
Lemon	-	-	22.00	-	42.09	-	-	-
Sweet Lime	-	-	-	-	15.00	-	-	-
Pear	-	2.50	6.16	98.11	164.18	-	1.52	1.52
Papaya	18.10	-	721.36	3.43	755.65	2.40	-	2.40
Guava	-	17.20	151.94	-	329.15	-	5.23	5.23
Mombin	-	16.80	-	-	79.76	-	21.06	21.06
Litchi	-	-	20.62	0.70	77.76	-	-	-
Musk Melon	-	6.00	228.09	3.10	237.19	-	2.53	2.53
Sugarcane	-	0.10	7.52	0.20	13.74	-	0.73	0.73
Kinnow	-	-	22.89	-	22.89	-	-	-
Strawberry	-	-	0.02	-	0.08	-	-	-
Fruits	120.1	4,525.8	11,330.8	2,321.8	27,530.0	0.44	16.44	16.88
Ginger	21.20	100.80	19.00	147.00	2,922.78	0.73	3.45	4.17
Chilli Dry	-	6.48	17.18	-	56.79	-	11.41	11.41

Commodities	Market arrivals (MT)					Share of study districts on total market arrival (%)		
	Dolakha	Kavre	India	Tibet	Total	Dolakha	Kavre	Total
Chilli Green	1.00	131.07	968.74	-	3,310.09	0.03	3.96	3.99
Capsicum	-	182.58	524.95	-	1,330.08	-	13.73	13.73
Garlic Green	-	2.90	0.50	-	190.43	-	1.52	1.52
Coriander Green	-	5.60	1.00	-	326.08	-	1.72	1.72
Garlic Dry Chinese	-	2.00	2.52	1,371.62	1,419.84	-	0.14	0.14
Garlic Dry Nepali	38.70	192.40	4.50	13.00	833.95	4.64	23.07	27.71
Clive Dry	-	-	-	-	0.20	-	-	-
Clive Green	-	0.50	0.05	-	10.45	-	4.79	4.79
Spices	61	624	1,538	1,532	10,401	0.59	6.00	6.59
Maize	-	-	-	-	1.00	-	-	-
Tamarine	-	-	24.00	-	54.70	-	-	-
Fish Fresh	-	-	2,303.20	-	2,656.34	-	-	-
Other	12.20	146.98	98.64	0.04	688.75	1.77	21.34	23.11
Bamboo Shoot	-	0.60	-	-	34.64	-	1.73	1.73
Others	12.20	147.58	2,425.84	0.04	3,435	0.36	4.30	4.65
Total:	6,973.9	28,367.3	58,289.5	3,965.3	235,026	2.97	12.07	15.04

Source: Computed from database of Kalimati Market, 2011

Table 1.42: Market Arrivals of Agriculture Products in Kalimati Wholesale Market and from Kavre Districts

Unit: MT

	Vegetables	Fruits	Spices	Others	Total
Kavre district (A)					
2003/04	19,525	1,617	443	40	21,625
2004/05	19,351	1,196	785	116	21,448
2005/06	20,405	764	448	8	21,625
2006/07	30,956	1,073	707	8	32,743
2007/08	27,117	1,318	785	21	29,241
2008/09	30,989	1,126	884	3	33,002
2009/10	23,121	1,027	465	6	24,619
2010/11	23,484	2,789	261	2	26,535
2011/12	22,447	4,185	347	14	26,793
2012/13	23,070	4,526	624	148	28,367
Growth rate	1.5	15.8	(3.8)	(7.4)	2.6
Total market arrival (B)					
2003/04	107,142	18,792	9,660	2,171	137,766
2004/05	109,030	8,757	9,114	4,446	131,347
2005/06	121,378	9,041	7,816	5,052	143,286
2006/07	158,425	10,801	9,898	5,797	184,921
2007/08	171,416	13,803	12,372	5,913	203,504
2008/09	147,216	14,737	9,671	5,737	177,360
2009/10	150,102	11,741	9,554	5,129	176,526
2010/11	160,791	25,855	9,699	3,664	200,010
2011/12	158,521	27,949	9,553	3,912	200,131
2012/13	193,660	27,530	10,401	3,435	235,026
Growth rate	5.6	10.9	1.0	0.7	5.7
Ratio of products A by B expressed in percent					
2003/04	18.2	8.6	4.6	1.8	15.7
2004/05	17.7	13.7	8.6	2.6	16.3
2005/06	16.8	8.5	5.7	0.1	15.1
2006/07	19.5	9.9	7.1	0.1	17.7
2007/08	15.8	9.5	6.3	0.3	14.4
2008/09	21.1	7.6	9.1	0.1	18.6
2009/10	15.4	8.7	4.9	0.1	13.9
2010/11	14.6	10.8	2.7	0.1	13.3
2011/12	14.2	15.0	3.6	0.4	13.4
2012/13	11.9	16.4	6.0	4.3	12.1

Source: Computed from database of Kalimati Market, 2013

Table 1.43: Distribution of Periodic Markets (Haat Bazar) by Development Region

Development Region	Established Under Local Initiative	Established Under Government Initiative	Total Number	Proportion
EDR	447	4	451	46.5%
CDR	329	2	331	34.2%
WDR	131	4	135	13.9%
MWDR	41	1	42	4.3%
FWDR	7	3	10	1.0%
Total	955 (98.5%)	14 (1.5%)	969	100.0%

Source: Agribusiness Promotion and Marketing Development Directorate (ABPMDD), 2013

Table 1.44: Management of Market Facilities of Agriculture Commodities

Market	Ownership	Management modality	Service charge
Biweekly Market/ Weekly Market	Local bodies, schools	Contract out	Daily rental payment
Small collection center in production areas	Farmer groups/cooperatives, commodity associations	Farmers groups	Levy on sale of agriculture produce, membership fee, free
Market yard developed by government	Government, local bodies, schools	Formation of Market management committee and handed over responsibility of management	Monthly, annual or daily rental payment depending upon use of the market facilities
Market yard developed by private sector	Private sector	Enterprises/Business operation	Monthly, annual or daily rental payment depending upon use of the market facilities
Cold storage	Mostly private sector, few groups	Enterprises	Rental payment based on quantity of produce stored

Source: Field Consultation and interactions, 2009

Table 1.45: Livestock Market and its Ownership

Ownership	Number	Percent
Cooperative	3	4.5
VDC/Municipality	36	54.5
Private	8	12.1
School	4	6.1
Committee	5	7.6
Community forests	1	1.5
Not specified	7	10.6
Management committee	2	3.0
Total	66	100.0

Source: Compiled from Annual Report of Department of Livestock Service, 2011/12

Table 1.46: National Annual Average Price of the Rice

(Unit: Rs/Kg)

Year	Rice Coarse	Basmati Rice	Mansuli Rice	Flat Rice (Terai)
2003/04	17.88	36.02	23.48	23.99
2004/05	18.13	34.36	22.94	23.11
2005/06	29.9	40.35	27.08	26.86
2006/07	22.63	43.83	28.18	27.15
2007/08	25.51	45.85	30.99	30.34
2008/09	29.79	52.50	36.10	37.98
2009/10	31.57	61.09	40.97	40.66
2010/11	34.93	65.28	43.72	46.81
2011/12	34.45	63.72	43.4	47.86
Average Annual Growth Rate (%)	8.6	9.1	9.5	10.6

Source: ABPMDD/DoA, 2012

Table 1.47: National Annual Average Price of the Pulses

(Unit: Rs/Kg)

Year	Blackgram	Pigeonpea	Mugi Chhanta	Lentil	Soyabean
2003/04	46.37	52.46	57.89	43.04	30.99
2004/05	46.51	55.18	56.51	44.74	30.89
2005/06	51.72	56.55	61.14	47.99	33.01
2006/07	69.94	63.21	76.60	52.28	34.66
2007/08	75.11	74.33	81.83	64.43	35.40
2008/09	75.30	83.44	83.81	84.43	52.32
2009/10	99.00	120.46	116.48	105.53	62.97
2010/11	117.70	127.86	150.35	104.22	68.89
2011/12	110.95	119.57	139.47	93.07	73.70
Average Annual Growth Rate (%)	13.6	13.5	13.9	13.6	13.5

Source: ABPMDD/DoA, 2012

Table 1.48: National Average Annual Price of the Vegetables

(Unit: Rs/Kg)

Year	Potato	Tomato	Onion	Ginger	Dry Chili
2003/04	8.77	25.90	16.27	28.54	106.67
2004/05	11.65	18.48	23.13	56.75	119.18
2005/06	15.22	25.76	28.27	49.33	123.27
2006/07	17.56	29.31	30.96	38.06	147.25
2007/08	20.22	30.18	34.92	37.05	156.78
2008/09	18.43	33.37	32.76	51.48	163.69
2009/10	28.00	39.34	40.60	72.70	171.22
2010/11	28.00	39.34	40.60		171.22
2011/12	23.70	40.57	34.87	64.44	171.22
Average Annual Growth Rate (%)	14.0	8.8	9.6	8.7	6.4

Source: ABPMDD/DoA, 2012

Table 1.49: National Average Annual Price of the Livestock Products

(Unit: Rs/Kg)

Year	Mutton	Chicken	Hen Egg	Fish (Rohu)	Milk	Ghee	Buff Meat
2003/04	194.64	135.83	4.66	106.19	22.43	236.47	82.68
2004/05	201.34	142.74	5.02	111.78	23.02	243.08	83.59
2005/06	209.37	146.89	4.98	122.38	25.14	246.62	84.17
2006/07	222.43	156.75	5.17	130.50	24.85	255.51	88.70
2007/08	239.30	167.34	6.51	141.22	28.9	266.34	98.00
2008/09	279.14	191.84	7.00	149.37	32.02	313.97	127.03
2009/10	346.55	249.32	8.62	203.58	39.07	411.30	158.27
2010/11	387.12	267.19	9.32	222.74	41.07	456.30	188.47
2011/12	421.31	246.36	9.76	228.99	68.06	510.60	203.39
Average Annual Growth Rate (%)	11.0	9.6	10.9	11.1	13.0	10.9	13.6

Source: ABPMDD/DoA, 2012

Table 1.50: Annual Average Price of Vegetables, Fruits and Spices at the Wholesale Market of Nepal, 2010/11

S. N.	Commodities	Unit	Wholesale market		
			Kalimati (Kathmandu)	Amarhat (Sunsari)	Birtamod (Jhapa)
Vegetables					
1	Potato	Rs/Kg	-	18.0	21.8
2	Potato Red	Rs/Kg	20.1	-	-
3	Potato White	Rs/Kg	15.7	-	-
4	Tomato Big	Rs/Kg	32.3	-	-
5	Tomato Small	Rs/Kg	32.3	-	-
6	Tomato	Rs/Kg	-	23.3	30.8
7	Cabbage	Rs/Kg	17.7	12.3	28.5
8	Cauli Local	Rs/Kg	39.4	-	-
9	Cauli Terai	Rs/Kg	17.8	20.4	30.4
10	Radish Red	Rs/Kg	21.0	-	-
11	Radish White	Rs/Kg	14.1	-	-
12	Radish	Rs/Kg	-	8.8	15.1
13	Carrot	Rs/Kg	37.4	28.3	-
14	Brinjal Long	Rs/Kg	24.0	-	-
15	Brinjal Round	Rs/Kg	25.9	-	-
16	Brinjal	Rs/Kg	-	10.9	28.6
17	Bottle Gourd	Rs/Kg	23.4	-	-
18	Spinach Leaf	Rs/Kg	33.7	-	-
19	Cress Leaf	Rs/Kg	40.0	-	-
20	Mustard Leaf	Rs/Kg	31.5	-	45.8
21	Fenugreek Leaf	Rs/Kg	36.0	-	-
22	Green Leaf	Rs/Kg	-	25.1	-
23	Capsicum	Rs/Kg	62.6	50.2	-

S. N.	Commodities	Unit	Wholesale market		
			Kalimati (Kathmandu)	Amarhat (Sunsari)	Birtamod (Jhapa)
24	Onion Dry	Rs/Kg	34.8	-	38.3
25	Chilli Green	Rs/Kg	40.1	37.5	-
26	Cow pea	Rs/Kg	41.2	-	-
27	Green Peas	Rs/Kg	49.4	-	-
28	Bitter Gourd	Rs/Kg	42.3	20.8	44.6
29	Pumpkin	Rs/Kg	21.6	-	23.9
Fruits					
1	Apple	Rs/Kg	84.5	84.0	85.6
2	Banana	Dozen	41.0	-	31.1
3	Lime		275.1	-	-
4	Pomegranate	Rs/Kg	249.9	108.1	213.6
5	Mango	Rs/Kg	57.0	29.0	-
6	Grapes	Rs/Kg	128.6	103.0	137.1
7	Orange	Rs/Kg	58.7	48.9	60.6
8	Water Melon	Rs/Kg	36.2	-	-
9	Sweet Orange	Rs/Kg	64.3	18.3	42.5
10	Mandarin	Rs/Kg	55.2	-	-
11	Pineapple	Rs/Kg	63.7	23.0	61.4
12	Jackfruit	Rs/Kg	36.5	-	-
13	Sweet Lime	Rs/Kg	40.0	-	-
14	Pear	Rs/Kg	85.5	7.2	42.8
15	Papaya	Rs/Kg	28.9	-	35.0
16	Guava	Rs/Kg	28.2	9.4	40.0
17	Mombin	Rs/Kg	27.9	-	-
18	Aric nut			-	-
19	Lemon			27.5	357.3
Spices					
1	Ginger	Rs/Kg	62.3	41.7	62.0
2	Chilli Dry	Rs/Kg	133.1	-	155.0
3	Chilli Green	Rs/Kg	40.1	37.5	-
4	Capsicum	Rs/Kg	62.6	50.2	-
5	Garlic Green	Rs/Kg	53.2	-	-
6	Garlic dry	Rs/Kg	-	156.9	183.0
7	Cardamom	Rs/Kg	-	310.0	1,562.0
8	Tejpat	Rs/Kg	-	15.4	-

Source: Computed from ABPMDD, 2011

Table 1.51: Trend on Price of Vegetables in Kalimati Wholesale Market, Kathmandu in the Year 2002, 2005, 2008, 2010, 2011 and 2012

SN	Vegetables	Price trend (Price in Rs/kg)						Annual growth rate 2002-2012 ² (%)
		2002	2005	2008	2010	2011	2012	
1	Tomato Big	17.91	34.92	22.69	30.19	32.32	33.98	7.4
2	Tomato Small	14.72	31.17	19.09	28.85	32.25	30.61	8.5
3	Potato Red	11.87	14.50	17.41	26.02	20.13	26.50	9.3
4	Potato White	10.24	12.25	14.64	20.73	15.65	22.75	9.3
5	Onion Dry	13.24	17.67	22.4	25.77	34.75	26.01	7.8
6	Carrot	21.36	39.42	28.18	36.94	37.38	37.12	6.3
7	Cabbage	7.73	13.50	11.14	18.36	17.69	19.54	10.9
8	Cauli Local	23.32	32.92	22.28	27.84	29.41	29.89	2.8
9	Cauli Terai	11.58	17.60	12.64	17.65	17.77	14.26	2.3
10	Radish Red	8.36	22.08	14.13	21.88	20.96	29.64	15.1
11	Radish White	14.56	15.67	10.42	14.58	14.12	18.38	2.6
12	Brinjal Long	11.99	21.50	17.91	22.71	24.02	24.35	8.2
13	Brinjal Round	15.00	24.83	18.51	23.38	25.91	32.57	9.0
14	Cow pea	21.49	34.25	26.7	35.69	41.16	48.50	9.5
15	Green Peas	34.55	54.70	40.87	58.98	49.39	60.64	6.5
16	French Bean	14.69	28.58	21.86	34.89	36.84	43.44	12.8
17	Sword Bean	17.18	31.38	29.78	41.51	46.97	63.14	15.6
18	Soya bean Green	17.16	34.63	22.51	43.00	36.54	50.19	12.7
19	Bitter Gourd	24.04	39.42	30.01	40.28	42.27	52.17	9.0
20	Bottle Gourd	12.42	23.42	17.83	23.63	23.40	30.12	10.3
21	Pointed Gourd	27.64	54.50	39.44	40.80	37.25	66.71	10.3
22	Snake Gourd	19.38	29.00	21.85	31.26	32.53	31.76	5.6
23	Smooth Gourd	18.01	29.30	27.67	32.58	35.41	46.10	11.0
24	Sponge Gourd	24.55	39.40	19.78	24.44	26.75	37.86	4.9
25	Pumpkin	7.48	16.75	10.72	16.49	21.60	21.68	12.6
26	Squash	8.36	20.67	12.26	20.09	22.17	22.09	11.4
27	Turnip	15.84	22.40	16.94	24.12	28.58	35.00	9.2

² Growth rate is computed by using compound annual growth rate formula between two periods (2002 and 2010)

SN	Vegetables	Price trend (Price in Rs/kg)						Annual growth rate 2002-2012 ² (%)
		2002	2005	2008	2010	2011	2012	
28	Okra	25.05	43.58	36.26	41.64	46.51	57.53	9.7
29	Sweet Potato	13.31	22.00	16.54	27.19	35.52	44.12	14.2
30	Barela	18.61	27.82	19.10	22.78	30.28	38.56	8.4
31	Arum	19.71	19.50	18.09	31.15	32.80	33.68	6.1
32	Christophine	11.43	18.92	17.05	19.85	20.74	25.91	9.5
33	Broad Leaf Mustard	14.75	22.83	17.56	25.12	27.77	33.99	9.7
34	Spinach Leaf	17.66	23.17	19.80	28.91	33.72	39.84	9.5
35	Cress Leaf	18.53	26.33	21.67	29.92	39.99	53.64	12.5
36	Mustard Leaf	15.05	22.50	17.07	26.49	31.49	38.73	11.1
37	Fenugreek Leaf	19.92	24.67	20.45	30.11	36.02	50.98	11.0
38	Onion Green	23.05	25.83	25.04	33.57	42.49	41.93	6.9
39	Broad bean	19.32	36.83	28.20	39.18	38.76	45.91	10.1
40	Yam	11.53	21.11	13.47	24.67	22.62	34.87	13.1
41	Mushroom*	-	170.83	153.9	222.14	285.57	176.92	0.6
42	Asparagus*	-	221.25	140.33	164.14	161.77	219.15	(0.2)
43	Neuro*	-	25.17	18.85	29.65	37.88	58.22	15.0
44	Brocauli*	-	68.25	38.09	51.14	58.36	73.63	1.3
45	Sugar beet	-	66.83	41.89	50.93	59.23	62.15	(1.2)
46	Drumstick*	-	82.00	65.35	61.68	48.04	89.35	1.4
47	Bauhanian flower*	-	42.33	24.81	38.25	41.69	78.64	10.9
48	Red Cabbage*	-	55.00	45.98	54.83	42.82	59.49	1.3
49	Lettuce*	-	68.75	27.64	35.85	31.02	41.71	(8.0)
50	Knolkhol*	-	37.27	29.54	43.96	40.00	37.49	0.1
51	Celery*	-	100.42	73.35	59.62	64.01	102.88	0.4
52	Parseley*	-	98.33	96.77	94.18	122.54	164.46	9.0
53	Fennel Leaf*	-	25.50	18.35	29.44	37.21	47.83	11.1
54	Mint*	-	47.83	37.16	57.03	72.32	125.48	17.4
55	Turnip A*	-	25.83	20.05	24.45	30.12	34.75	5.1
56	Cucumber	14.65	36.58	19.55	30.12	30.12	38.59	11.4

Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2002, 2005, 2008, 2010, 2011 and 2012) and Kalimati Market Development Committee Database.

Note: * Annual growth rate computed for seven years only (2005 – 2012)

Table 1.52: Trend on Price of Fruits in Kalimati Wholesale Market, Kathmandu in the Year 2002, 2005, 2008, 2010, 2011 and 2012

SN	Fruits	Price trend (Price in Rs/kg)						Annual growth rate 2002-2012 ³ (%)
		2002	2005	2008	2010	2011	2012	
1	Apple	63.34	56.17	61.71	91.95	84.48	124.24	7.8
2	Banana	24.56	29.00	25.94	37.10	40.97	49.51	8.1
3	Lime	111.89	230.83	204.04	282.42	275.06	320.55	12.4
4	Pomegranate	56.66	79.75	101.75	145.71	249.87	237.38	17.3
5	Mango	69.16	91.33	66.84	64.19	57.03	119.11	6.2
6	Grapes	97.27	140.50	97.07	107.81	128.62	145.9	4.6
7	Orange	36.70	48.50	34.56	51.60	58.74	64.58	6.5
8	Water Melon	32.10	31.91	29.04	31.07	36.23	38.57	2.1
9	Sweet Orange	30.40	47.75	42.84	57.07	64.26	82.41	11.7
10	Mandarin	24.17	34.67	15.44	34.59	55.20	131.25	20.7
11	Pineapple	32.42	51.08	47.44	53.59	63.66	73.59	9.5
12	Jack Fruit	21.71	32.6	26.94	32.90	36.54	38.41	6.5
13	Lemon	6.38	23.56	21.12	32.66	22.74	41.66	23.2
14	Sweet Lime	35.31	27.25	14.88	35.84	40.00	51.25	4.2
15	Pear	47.30	56.83	64.17	67.00	85.48	132.87	12.2
16	Papaya	28.03	41.42	27.97	30.45	28.89	46.80	5.9
17	Guava	16.40	35.75	27.36	39.95	28.21	37.40	9.6
18	Mombin	22.20	37.91	27.52	34.98	27.94	56.26	10.9
19	Musk Melon*	-	54.75	67.78	52.50	0	165.00	20.2
20	Sugarcane*	-	34.00	44.04	54.43	49.32	63.33	10.9
21	Kinnow*	-	52.50	36.19	57.56	89.93	60.97	2.5

Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2002, 2005, 2008, 2010, 2011 and 2012) and Kalimati Market Development Committee Database.

Note: * Annual growth rate computed for seven years only (2005 – 2012)

³ Growth rate is computed by using compound annual growth rate formula between two periods (2002 and 2010)

Table 1.53: Trend on Price of Spices in Kalimati Wholesale Market, Kathmandu in the Year 2002, 2005, 2008, 2010, 2011 and 2012

SN	Spices	Price trend (Price in Rs/kg)						Annual growth rate 2002-2012 (%),
		2002	2005	2008	2010	2011	2012	
1	Ginger	18.64	65.92	31.17	59.77	62.29	51.21	11.9
2	Chili Dry	69.47	79.17	95.40	121.62	133.05	161.09	9.8
3	Chili Green	19.70	36.42	26.54	33.51	40.14	48.58	10.5
4	Garlic Green	25.37	33.67	29.78	36.8	53.23	60.69	10.2
5	Coriander Green	35.26	53.42	35.00	41.41	68.94	84.88	10.3
6	Garlic Dry Nepali	45.74	43.83	41.53	73.51	139.56	74.87	5.6
7	Clive Dry*		71.08	55.50	76.57	66.25	94.97	4.9
8	Garlic Dry Chinese*		51.58	45.51	91.75	166.5	131.38	16.9
9	Clive Green*		34.33	54.48	50.94	65.49	108.38	21.1
10	Capsicum*		64.75	37.29	56.28	62.63	64.66	(0.0)

Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2002, 2005, 2008, 2010, 2011 and 2012) and Kalimati Market Development Committee Database.

Note: * Annual growth rate computed for seven years only (2005 – 2012)

Table 1.54: Trend on Price of Vegetables in Amarhat (Dharan) Wholesale Market, Sunsari over the Last Three Years (2005 to 2012)

(Price in Rs/kg)

SN	Vegetables	Price trend (Price in Rs/kg)					Annual growth rate 2002-2012 (%),
		2005	2008	2010	2011	2012	
1	Potato	13.12	16.58	24.17	18.00	21.92	5.9
2	Tomato	16.25	16.75	42.25	23.33	26.33	5.5
3	Cabbage	4.94	6.92	8.50	12.25	9.75	7.8
4	Cauliflower	18.19	20.58	21.25	20.42	28.75	5.2
5	Chayote	13.88	6.46	8.61	8.63	11.63	(1.9)
6	Radish	6.13	8.75	16.83	8.83	10.09	5.7
7	Green Leaf*	15.75	19.83	24.17	25.08		5.3
8	Bean	32.13	19.25	27.08	32.55	36.25	1.3
9	Brinjal	14.57	8.42	11.40	10.90	18.00	2.4
10	Cucumber	27.40	14.08	20.36	25.42	27.92	0.2
11	Carrot	21.29	11.42	25.17	28.25	40.00	7.3
12	Bittle Gourd	19.5	20.42	20.67	20.75		0.7
13	Capsicum*		32.92	47.00	50.18	67.50	27.0
14	Bamboo Shoot	13.00	6.42	17.25	20.00	20.58	23.1

Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005, 2008 and 2010, 2011 & 2012).

Note: * Annual growth rate computed for data available periods only

Table 1.55: Trend of Price of Fruits in Amarhat (Dharan) Wholesale Market, Sunsari during the Last Three Years (2005 to 2012)

(Price in Rs/kg)

SN	Fruits	Price trend (Price in Rs/kg)					Annual growth rate 2002-2012 (%),
		2005	2008	2010	2011	2012	
1	Banana		21.58				NA
2	Pears	9.14	2.75	11.50	7.17	16.00	6.4
3	Apple	52.33	60.67	69.58	84.00	93.33	6.6
4	Pineapple		4.50	18.00	23.00		72.3
5	Mango	30.00	19.58	35.00	29.00	40.00	3.2
6	Guava		2.83	11.20	9.40	21.25	95.8
7	Lemon		26.17	31.11	27.50	30.00	4.7
8	Orange	69.90	22.83	45.75	48.86	42.50	(5.4)
9	Sweet Orange		11.67	17.25	18.33	30.00	37.0
10	Pomegranate	38.50	60.42	95.30	108.11	120.00	13.5
11	Graps	22.00	51.67	76.88	103.00	120.00	20.7
12	Watermelon	17.50	3.25		21.00		2.0
13	Other Fruits		22.17	33.75	26.08	35.00	16.4
14	Cinnamon leaf	15.29					NA

Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005, 2008 and 2010, 2011 & 2012).

Note: * Annual growth rate computed for data available periods only

Table 1.56: Trend of Price of Spices in Amarhat (Dharan) Wholesale Market, Sunsari during the Last Five Years (2005 to 2012)

(Price in Rs/kg)

SN	Spices	Price trend (Price in Rs/kg)					Annual growth rate 2002-2012 (%),
		2005	2008	2010	2011	2012	
1	Ginger	25.75	21.17	47.92	41.67	22.50	(1.5)
2	Onion	13.44	22.67	24.92	35.25	22.00	5.6
3	Garlic	25.14	47.25	119.17	156.92	80.83	13.9
4	Green Chillie	15.63	25.17	37.50	37.50	46.67	12.9
5	Akbari Pepper	75.80	134.17	211.50	191.30	318.75	17.3
6	Cardamom	162.50	79.55	210.00	310.00	1,250.00	25.4
7	Tejpat	NA	11.17	15.33	15.42	30.90	12.0

Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005, 2008 and 2010, 2011 & 2012).

Note: * Annual growth rate computed for data available periods only

Table 1.57: Annual Average Price of Fresh Fruits and Vegetables at Charaundi, Dhading

SN	Commodities	2008	2010	2011	Annual growth rate 2008 – 2011 (%)
1	Tomato	15.7	38.12	22.64	13.0
2	Bitter Gourd	24.1	39.17	33.66	11.8
3	Bottle Gourd	12.1	43.29	14.39	5.9
4	French Bean	16.0	41.25	25.70	17.1
5	Cabbage	8.7	47.62	13.37	15.4
6	Brinjal	10.5	30.36	13.39	8.4
7	Guava	18.3	32.67	29.81	17.7
8	Smooth Gourd	17.8	43.91	19.78	3.6
9	Cowpea	19.1	36.25	30.83	17.3
10	Okra	14.6	41.86	32.35	30.4
11	Rajma	33.3	58.00	59.07	21.1
12	Capsicum	35.0	54.00	52.99	14.8
13	Other	13.1	35.78	20.18	15.5

Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005, 2008 and 2010, 2011 & 2012).

Note: * Annual growth rate computed for data available periods only

Table 1.58: Market Arrivals of Vegetables in Kalimati Market between 2005 and 2012

Year	Market arrival			Annual growth rate, (%) during 2005-2012
	2005 (MT)	2012 (MT)	Percent change	
Tomato Big	1,543	4,693	204.2	17.2
Tomato Small	13,115	21,052	60.5	7.0
Potato Red	19,086	38,303	100.7	10.5
Potato White	5,761	8,981	55.9	6.5
Onion Dry	9,066	21,251	134.4	12.9
Carrot	922	25,77	179.5	15.8
Cabbage	7,700	13,708	78.0	8.6
Cauli Local	11,459	23,217	102.6	10.6
Cauli Terai	2,038	1,625	(20.2)	(3.2)
Raddish Red	458	43	(90.5)	(28.6)
Raddish White	4,399	5,955	35.4	4.4
Brinjal Long	1,955	4,788	144.9	13.6
Brinjal Round	292	152	(47.8)	(8.9)
Cow pea	1,580	3,210	103.1	10.7
Green Peas	1,140	2,762	142.3	13.5
French Bean	3,206	4,302	34.2	4.3
Sword Bean	531	358	(32.6)	(5.5)
Soyabean Green	242	75	(69.1)	(15.4)
Bitter Gourd	1,792	4,731	164.0	14.9
Bottle Gourd	2,400	4,611	92.1	9.8
Pointed Gourd	1,731	2,601	50.3	6.0
Snake Gourd	196	658	235.5	18.9
Smooth Gourd	1,023	2,896	183.1	16.0
Sponge Gourd	77	8	(89.4)	(27.4)
Pumpkin	1,148	1,640	42.8	5.2
Squash	1,315	3,064	133.0	12.8
Turnip	311	7	(97.7)	(41.5)
Okara	1,748	2,123	21.5	2.8
Sweet Potato	90	205	127.4	12.5
Barela	303	398	31.3	4.0

Year	Market arrival			Annual growth rate, (%) during 2005-2012
	2005 (MT)	2012 (MT)	Percent change	
Arum	296	233	(21.1)	(3.3)
Christophine	1,014	1,308	29.0	3.7
Broad Leaf Mustard	1,129	557	(50.7)	(9.6)
Spinach Leaf	648	352	(45.6)	(8.3)
Cress Leaf	455	142	(68.9)	(15.4)
Mustard Leaf	844	276	(67.3)	(14.8)
Fenugreek Leaf	447	108	(75.8)	(18.3)
Onion Green	793	994	25.3	3.3
Bakula	8	131	1,534.1	49.0
Yam	957	1,270	32.7	4.1
Mushroom	69	549	695.8	34.5
Asparagus	2	41	1,949.9	54.0
Neuro	75	42	(44.3)	(8.0)
Brocauli	119	336	182.6	16.0
Sugarbeet	73	21	(70.9)	(16.2)
Drumstick	24	15	(38.2)	(6.7)
Bauhanian Flower	16	97	508.8	29.4
Red Cabbage	2	13	558.3	30.9
Lettuce	348	69	(80.3)	(20.7)
Knolkhol	83	11	(87.3)	(25.5)
Celery	7	9	31.9	4.0
Parseley	6	10	58.9	6.8
Fennel Leaf	97	94	(3.6)	(0.5)
Mint	1	10	886.5	38.7
Turnip A	604	95	(84.3)	(23.3)
Cucumber	4,285	6,886	60.7	7.0
Total	109,029	193,660	77.6	8.6

Source: Computed from Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005 & 2012) and Database of Kalimati Market .

Table 1.59: Market Arrivals of Fruits in Kalimati Market between 2005 and 2012

Year	Market arrival			Annual growth rate, (%) during 2005-2010
	2005 (MT)	2012 (MT)	Percent change	
Apple	282	2,297	714.5	34.9
Banana	118	577	388.6	25.4
Lime	2,520	1,854	(26.4)	(4.3)
Pomegranate	114	130	14.3	1.9
Mango	148	2,821	1,806.0	52.4
Grapes	34	158	364.1	24.5
Orange	3,675	11,860	222.7	18.2
Water Melon	255	4,354	1,607.3	50.0
Sweet Orange	166	475	186.2	16.2
Mandarin	14	31	121.5	12.0
Pineapple	104	191	83.4	9.0
Jackfruit	375	1,045	178.8	15.8
Lemon	17	42	147.6	13.8
Sweet Lime	33	15	(54.5)	(10.7)
Pear	174	164	(5.6)	(0.8)
Papaya	419	756	80.3	8.8
Guava	1	329	32,815.0	128.9
Mombin	171	80	(53.4)	(10.3)
Litchi	25	78	211.0	17.6
Musk Melon		238		
Sugarcane	83	14	(83.4)	(22.7)
Kinnow	25	23	(8.4)	(1.3)
Strawberry	4	0	(98.0)	(42.8)
Total	8,757	27,530.0	214.4	17.8

Source: Computed from Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005 & 2012) and Database of Kalimati Market .

Table 1.60: Market Arrivals of Spices in Kalimati Market between 2005 and 2012

Year	Market arrival			Annual growth rate, (%) during 2005-2012
	2005 (MT)	2012 (MT)	Percent change	
Ginger	1,657	2,923	76.4	8.4
Chilli Dry	307	57	(81.5)	(21.4)
Chilli Green	2,997	3,310	10.4	1.4
Capsicum	410	1,330	224.4	18.3
Garlic Green	339	190	(43.8)	(7.9)
Coriander Green	651	326	(49.9)	(9.4)
Garlic Dry Chinese	1,979	1,420	(28.3)	(4.6)
Garlic Dry Nepali	755	834	10.5	1.4
Clive Dry	20	0	(99.0)	(48.2)
Clive Green		10.45		
Total	9,114	10,401	14.1	1.9

Source: Computed from Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005 & 2012) and Database of Kalimati Market .

Table 1.61: Horticulture Products Arrived from Kavre to Total Products Arrived in Kalimati Market

(Unit: Percent)

Years	Vegetables	Fruits	Spices	Others	Total
2003/04	18.2	8.6	4.6	1.8	15.7
2004/05	17.7	13.7	8.6	2.6	16.3
2005/06	16.8	8.5	5.7	0.1	15.1
2006/07	19.5	9.9	7.1	0.1	17.7
2007/08	15.8	9.5	6.3	0.3	14.4
2008/09	21.1	7.6	9.1	0.1	18.6
2009/10	15.4	8.7	4.9	0.1	13.9
2010/11	14.6	10.8	2.7	0.1	13.3
2011/12	14.2	15.0	3.6	0.4	13.4
2012/13	11.9	16.4	6.0	4.3	12.1

Source: Computed from Database of Kalimati Market, 2013

Table 1.62: Annual Growth Trend of Market Arrivals of Agriculture Produce in Kalimati Market and from Kavre (2003/04 to 2012/13)

(Unit: Percent)

	Vegetables	Fruits	Spices	Others	Total
Overall	5.6	10.9	1.0	0.7	5.7
Kavre	1.5	15.8	(3.8)	(7.4)	2.6

Source: Computed from Database of Kalimati Market, 2013

2. AGRICULTURE DEVELOPMENT IN SRC DISTRICTS

Position of SRC Districts in entire Nepal

Table 2.1: Basic Data of the District

S N	Particulars	Unit	Study districts				Nepal
			Kavre-	Dolakha	Ramechhap	Sindhuli	
1	Area	Sq km	1,396	2,191	1,546	2,491	147,181
2	Population*	Nos	381,937	186,557	202,646	296,192	26,494,504
3	Male*	Nos	182,936	87,003	93,386	142,123	12,849,041
4	Female*	Nos	199,001	99,554	109,260	154,069	13,645,463
5	Sex Ratio*	%	91.93	87.39	85.47	92.25	94.16
6	Total Households*	000 Nos	80,720	45,688	43,910	57,581	5,427,302
7	Average HH size*	no	4.73	4.08	4.62	5.14	4.88
8	Population density*	Nos/s q km	274	85	131	119	180
9	Proportion of urban population*	%	15.5	5.9		13.3	17.1
10	Literacy rate*	%	63.7	50.6	39	50.1	53.5
11	Poverty incidence**	%	13.9	26.0	25.6	38.3	25.2

Source: * CBS, 2012; ** CBS 2013 b

Table 2.2: Demographic Information of SRC Districts

SN	Particular	Kavre	Dolakha	Ramechhap	Sindhuli
1	Total Population	381,937	186,557	202,646	296,192
2	Male	182,936	87,003	93,386	142,123
3	Female	199,001	99,554	109,260	154,069
4	Sex Ratio (Males per 100 females)	92	87	86	92
5	Total Households	80,720	45,688	43,910	57,581
6	Average Household Size	4.7	4.1	4.6	5.1
7	Population Density per Sq. Km	274	85	131	119
8	Annual population growth rate (%)	(0.1)	(1.0)	(0.5)	0.6

Source: CBS, 2012

Table 2.3: Population by VDCs

1. Kavre

SN	Name of VDCs/ Municipalities	2011 Census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
1	Aanekot	1,493	7,100	3,704	3,396	√
2	Balthali	660	2,695	1,490	1,205	√
3	Balting	504	2,590	1,366	1,224	√
4	Baluwapatti Duepur	1,292	6,023	3,080	2,943	√
5	Bankhuchor	709	4,554	2,298	2,256	√
6	Banepa Municipality	5,540	24,764	12,439	12,325	√
7	Beksimle Ghartigaun	256	1,161	618	543	√
8	Bhimkhor	1,066	5,524	2,980	2,544	√
9	Bhumlutar	529	1,885	1,021	864	√
10	Birtadeuarali	530	2,272	1,265	1,007	√
11	Bolde Fediche	470	2,041	1,125	916	√
12	Budhakhani	662	3,941	2,047	1,894	√
13	Chalal Ganesthan	864	3,973	2,188	1,785	√
14	Chandeni Mandan	782	3,265	1,765	1,500	√
15	Chaubase	487	2,068	1,125	943	√
16	Chayamrangbesi	304	1,629	813	816	√
17	Chaysin Kharka	611	2,789	1,504	1,285	√
18	Dandagaun	484	3,104	1,610	1,494	√
19	Dapcha Chatraibahnj	632	2,766	1,485	1,281	√
20	Daraune Pokhari	645	2,684	1,477	1,207	√
21	Devbhumi Baluwa	1,578	7,138	3,809	3,329	√
22	Devitaar	572	2,652	1,443	1,209	√
23	Dhulikhel Municipality	3,279	14,283	7,161	7,122	√
24	Dhunkharka	1,035	4,916	2,656	2,260	√
25	Dhuseni Siwalaya	366	1,716	940	776	√
26	Dolalghat	467	2,126	1,063	1,063	√
27	Fhalate Bhumlu	303	1,185	659	526	√
28	Falemetar	668	4,234	2,104	2,130	√
29	Foksitar	376	2,339	1,235	1,104	√
30	Gairi Bisauni Duepur	1,203	5,374	2,877	2,497	√
31	Ghartichhap	411	2,612	1,348	1,264	√
32	Gokule	752	4,837	2,414	2,423	√
33	Gothpani	518	2,292	1,221	1,071	√
34	Hokse Bazaar	970	4,613	2,386	2,227	√
35	Jaisithokmandan	667	2,965	1,607	1,358	√
36	Jyamdi Mandan	1,090	4,878	2,569	2,309	√
37	Kalati Bhumidada	766	3,638	1,944	1,694	√
38	Kanpur Kalapani	922	4,376	2,325	2,051	√
39	Kartike Deurali	675	3,061	1,616	1,445	√
40	Katunje Besi	497	2,399	1,237	1,162	√
41	Kavre Nitya Chandeswar	1,042	4,927	2,645	2,282	√
42	Khahare Pangu	559	2,394	1,282	1,112	√
43	Khanalthok	1,082	4,707	2,513	2,194	√
44	Kharelthok	626	2,389	1,319	1,070	√
45	Kharpachowk	335	1,676	887	789	√
46	Kolati Bumlu	316	1,322	724	598	√
47	Koshidekha	461	1,761	980	781	√
48	Kuruwas Chapakhori	584	2,753	1,407	1,346	√
49	Kusadevi	1,549	7,114	3,850	3,264	√
50	Machhegaun	1,263	6,110	3,343	2,767	√
51	Madan Kundari	478	1,897	1,072	825	√
52	Mahadevsthan Mandan	1,873	8,166	4,276	3,890	√
53	Mahadevtar	381	2,083	1,083	1,000	√
54	Mahangkal Chaur	787	3,470	1,937	1,533	√
55	Mahendra Jyoti	661	3,409	1,749	1,660	√
56	Majhi Feda	627	2,669	1,444	1,225	√
57	Mangaltar	786	3,737	1,980	1,757	√

SN	Name of VDCs/ Municipalities	2011 Census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
58	Mathurpatifulbari	973	4,458	2,379	2,079	√
59	Methinkot	1,055	4,721	2,596	2,125	√
60	Milche	447	2,693	1,327	1,366	√
61	Nagar Gacharche	479	2,237	1,198	1,039	√
62	Nala (Ugrachandi)	1,444	7,198	3,648	3,550	√
63	Nasikasthan Sanga	1,305	6,121	3,186	2,935	√
64	Nayagau Deupur	951	4,417	2,433	1,984	√
65	Panauti Municipality	5,943	27,358	14,267	13,091	√
66	Panchkhal	2,766	12,339	6,442	5,897	√
67	Patleket	806	4,009	2,063	1,946	√
68	Pokari Chaur	648	3,176	1,832	1,344	√
69	Pokhari Narayansthan	647	2,945	1,566	1,379	√
70	Puranogaun Dapcha	443	1,988	1,071	917	√
71	Ravi Opi	923	4,315	2,301	2,014	√
72	Rayalebhir	977	4,302	2,447	1,855	√
73	Saldhhara	461	2,646	1,401	1,245	√
74	Salle Bhumlu	489	1,763	971	792	√
75	Salmechakhal (Taldhunga)	312	1,721	892	829	√
76	Sankhupati Chaur	722	3,372	1,788	1,584	√
77	Sanowangthali	343	1,509	773	736	√
78	Saping	786	3,246	1,774	1,472	√
79	Sarda Batase	511	2,368	1,276	1,092	√
80	Sarmthali	239	1,071	553	518	√
81	Sarasyunkhark	1,095	5,316	2,785	2,531	√
82	Sathighar Bhagwati	650	2,657	1,414	1,243	√
83	Shikar Ambote	850	3,711	1,977	1,734	√
84	Simalchour Shyampatti	832	3,819	2,069	1,750	√
85	Simthali	350	1,731	877	854	√
86	Sipali Chilaune	574	2,878	1,488	1,390	√
87	Sisakhani	344	1,754	935	819	√
88	Thulo Parsel	578	2,476	1,350	1,126	√
89	Tukucha Nala	1,029	4,907	2,602	2,305	√
90	Ugratara Janagal	1,634	6,953	3,489	3,464	√
	Institutional	69	7,616	5,390	1,326	
	TOTAL	80,720	381,937	182,936	199,001	

2. Dolakha

S.N	Name of VDCs/ Municipalities	2011 census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
1	Alampu	413	1,803	939	864	√
2	Babare	794	3,533	1,895	1,638	√
3	Bhedapu	918	3,705	2,109	1,596	√
4	Bhimeswor Municipality	6,076	22,537	12,048	10,489	√
5	Bhirkot	606	2,562	1,399	1,163	√
6	Bhusafeda	519	2,091	1,136	955	√
7	Bigu	406	1,612	853	759	√
8	Bocha	775	2,799	1,617	1,182	√
9	Bulung	510	2,043	1,071	972	√
10	Chankhu	347	1,272	669	603	√
11	Chhetrapa	580	2,447	1,331	1,116	√
12	Chilankha	661	2,875	1,509	1,366	√
13	Chyama	607	2,733	1,467	1,266	√
14	Dandakharka	946	4,136	2,304	1,832	√
15	Tamchet Dudhpokhari	596	2,450	1,313	1,137	√
16	Fasku	1,117	4,338	2,461	1,877	√
17	Gairimudi	1,129	4,278	2,301	1,977	√
18	Gauri Sankar	287	975	511	464	√
19	Ghyang Sukathokar	1,032	4,230	2,288	1,942	√
20	Hawa	381	1,721	936	785	√
21	Japhe	824	3,784	1,947	1,837	√

S.N	Name of VDCs/ Municipalities	2011 census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
22	Jhule	547	2,241	1,224	1,017	√
23	Jhyaku	998	4,637	2,426	2,211	√
24	Jiri	1,899	7,373	3,901	3,472	√
25	Jugu	938	3,882	2,091	1,791	√
26	Kabhre	1,191	4,723	2,572	2,151	√
27	Kalingchok	541	2,806	1,397	1,409	√
28	Katakuti	955	3,738	2,111	1,627	√
29	Khare	432	1,833	904	929	√
30	Khopachagu	476	2,198	1,163	1,035	√
31	Laduk	928	3,663	1,930	1,733	√
32	Lakuridada	924	3,713	1,979	1,734	√
33	Lamabagar	536	2,098	1,058	1,040	√
34	Lamidada	1,045	4,232	2,169	2,063	√
35	Lapilang	1,206	4,942	2,559	2,383	√
36	Magapauwa	780	2,950	1,611	1,339	√
37	Mali	693	2,749	1,525	1,224	√
38	Malu	584	2,482	1,309	1,173	√
39	Marbu	331	1,409	711	698	√
40	Melung	836	3,566	1,970	1,596	√
41	Mirge	879	3,482	1,915	1,567	√
42	Namdu	1,300	4,946	2,662	2,284	√
43	Orang	488	2,157	1,080	1,077	√
44	Pawati	1,109	4,573	2,524	2,049	√
45	Sahare	800	3,326	1,791	1,535	√
46	Sailungeswor	991	4,131	2,280	1,851	√
47	Sunakhani	1,194	4,675	2,544	2,131	√
48	Sundrawati	677	2,766	1,444	1,322	√
49	Suri	734	3,054	1,581	1,473	√
50	Suspa Kshyamawati	864	3,437	1,862	1,575	√
51	Syama	440	1,867	1,033	834	√
52	Thulopatal	822	3,526	1,915	1,611	√
	Institutional	30	1,458	1,249	209	
	TOTAL	45,688	186,557	87,003	99,554	

3. Ramechhap

S.N.	Name of VDCs/ Municipalities	2011 Census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
1	BantiBhandar	739	3,144	1,453	1,691	√
2	Betali	952	4,483	2,047	2,436	√
3	Bethan	1,090	4,634	2,089	2,545	√
4	(Gagal) Bhadaure	574	2,475	1,129	1,346	√
5	Bhataili	820	3,936	1,832	2,104	√
6	Bhirpani	764	3,253	1,392	1,861	√
7	Bhujee	538	2,402	1,134	1,268	√
8	Bijulikot	1,087	5,058	2,290	2,768	√
9	Chanakhu	476	2,366	1,036	1,330	√
10	Chisapani	686	3,187	1,412	1,775	√
11	Chuchure	585	2,629	1,214	1,415	√
12	Dadhuwa	1,016	4,730	2,162	2,568	√
13	Deurali	702	3,257	1,451	1,806	√
14	Dimipokhari	726	3,073	1,393	1,680	√
15	Doramba	794	3,273	1,481	1,792	√
16	Duragau	652	3,023	1,458	1,565	√
17	Farpu	450	2,098	1,039	1,059	√
18	Gelu	1,267	5,652	2,428	3,224	√
19	Goswara	770	3,632	1,614	2,018	√
20	Gothgau	566	2,401	1,051	1,350	√
21	Gumdel	497	2,466	1,190	1,276	√
22	GunsiBhadaure	1,056	4,702	2,165	2,537	√
23	Gupteshwor	361	1,769	839	930	√

S.N.	Name of VDCs/ Municipalities	2011 Census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
24	Hiledevi	707	3,031	1,401	1,630	√
25	Himganga	849	4,248	1,852	2,396	√
26	Kathjor	934	4,716	2,126	2,590	√
27	Khadadevi	838	3,925	1,814	2,111	√
28	Khaniyapani	794	4,065	1,896	2,169	√
29	Khimti	968	4,278	1,951	2,327	√
30	Kubukasthali	606	2,727	1,264	1,463	√
31	Lakhanpur	1,323	6,209	2,842	3,367	√
32	Majuwa	453	2,293	1,054	1,239	√
33	Makadum	422	1,911	825	1,086	√
34	Baluwajor	715	3,496	1,603	1,893	√
35	Manthali	2,018	7,569	3,842	3,727	√
36	NagaDaha	777	3,679	1,654	2,025	√
37	Namadi	827	3,981	1,861	2,120	√
38	Okhreni	742	3,503	1,594	1,909	√
39	Pakarbas	1,177	6,392	3,095	3,297	√
40	Phulasi	1,284	5,733	2,594	3,139	√
41	Pinkhuri	428	2,078	903	1,175	√
42	Pritee	1,128	5,093	2,363	2,730	√
43	Puranagau	635	3,008	1,296	1,712	√
44	Rakathum	716	3,434	1,550	1,884	√
45	Ramechhap	1,153	5,222	2,452	2,770	√
46	Rampur	858	4,101	1,848	2,253	√
47	Rasanalu	1,026	4,424	2,034	2,390	√
48	Saipu	616	2,876	1,355	1,521	√
49	Salupati	764	3,612	1,611	2,001	√
50	Sanghitar	500	2,342	1,021	1,321	√
51	Sujakor	756	3,538	1,610	1,928	√
52	Sunarpani	500	2,141	970	1,171	√
53	Those	606	2,443	1,089	1,354	√
54	Tilpung	828	4,195	1,907	2,288	√
55	Tokarpur	767	3,517	1,607	1,910	√
	Institutional	27	1,223	1,203	20	
	Total	43,910	202,646	93,386	109,260	

4.Sindhuli

S.N.	Name of VDCs/ Municipalities	2011 Census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
1	Amale	415	2,261	1,047	1,214	√
2	Arunthakur	1,010	5,766	2,742	3,024	√
3	Bahuntilpung	559	3,116	1,533	1,583	√
4	Balajor	734	4,358	2,062	2,296	√
5	Baseshwor	620	3,200	1,557	1,643	√
6	Bastipur	545	3,029	1,366	1,663	√
7	Belghari	749	3,846	1,898	1,948	√
8	Bhadrakali	848	4,415	2,074	2,341	√
9	Bhimeshwor	459	2,298	1,149	1,149	√
10	Bhimsthan	1,160	5,780	2,710	3,070	√
11	Bhuwaneshwori Gwaltar	371	2,039	999	1,040	√
12	Bitijor Bagaiya	349	1,942	965	977	√
13	Dadiguranshe	973	4,804	2,262	2,542	√
14	Dudbhanjyang	529	2,860	1,405	1,455	√
15	Dudhouli	1,758	8,568	4,044	4,524	√
16	Hariharpur Gadhi	708	4,744	2,253	2,491	√
17	Harsahi	973	4,693	2,170	2,523	√
18	Hatpate	1,623	8,106	3,831	4,275	√
19	Jalkanya	395	1,806	822	984	√
20	Jarayotar	1,425	7,310	3,414	3,896	√
21	Jhangajholi Ratmata	1,194	5,337	2,506	2,831	√

S.N.	Name of VDCs/ Municipalities	2011 Census*				VDCs with telephone facility**
		Total No of HHs	Total Population	Male Population	Female Population	
22	Jinakhu	949	5,270	2,621	2,649	√
23	Kakur Thakur	995	5,487	2,666	2,821	√
24	Kalpabrishykh	1,594	9,370	4,483	4,887	√
25	Kamalanai Municipality	9,304	39,413	18,788	20,625	√
26	Kapilakot	1,967	11,485	5,589	5,896	√
27	Khang Sang	510	2,831	1,362	1,469	√
28	Kholagaun	528	2,829	1,352	1,477	√
29	Kuseswor Dumja	1,010	4,973	2,366	2,607	√
30	Kyaneshwor	1,617	9,364	4,482	4,882	√
31	Ladabhir	1,585	7,226	3,407	3,819	√
32	Lampantar	1,151	5,942	2,807	3,135	√
33	Mahadevdada	657	3,879	1,880	1,999	√
34	Mahadevsthan	1,309	6,967	3,210	3,757	√
35	Mahendrajhyadi	962	6,015	2,872	3,143	√
36	Majhuwa	526	2,398	1,090	1,308	√
37	Netrakali	606	3,400	1,612	1,788	√
38	Nipani	702	3,418	1,602	1,816	√
39	Pipalmadi	1,299	7,604	3,668	3,936	√
40	Puranojhanga Jholi	1,015	4,707	2,161	2,546	√
41	Ranibas	1,110	5,067	2,327	2,740	√
42	Ranichuri	1,685	8,881	4,189	4,692	√
43	Ratanchura	548	2,821	1,337	1,484	√
44	Ratnawati	493	2,745	1,276	1,469	√
45	Santeswori (Rampur)	446	2,725	1,344	1,381	√
46	Sirthouli	1,673	7,618	3,568	4,050	√
47	Sitalpati	812	4,058	1,865	2,193	√
48	Solpathana	395	2,195	1,079	1,116	√
49	Sunam Pokhari	452	2,489	1,194	1,295	√
50	Tamajor	445	2,346	1,102	1,244	√
51	Tandi	1,896	9,150	4,353	4,797	√
52	Tinkanya	805	4,169	1,988	2,181	√
53	Tosramkhola	330	1,979	944	1,035	√
54	Anambote	771	4,074	2,008	2,066	√
	Institutional	37	3019	2722	297	
	Total	57,581	296,192	142,123	154,069	

Source: *CBS, 2012; ** ICSR, 2013

Table 2.4: Population by Ethnic Groups in the SRC Districts

(In percent)

SN	Ethnicity	Population			
		Kavre	Dolakha	Ramechhap	Sindhuli
1	Tamang	33.9	15.3	20.0	25.6
2	Bahun	22.8	10.4	5.7	9.2
3	Chhetri	13.2	34.3	26.6	14.5
4	Newar	13.0	8.3	14.2	6.5
5	Dalit	5.9	8.8	8.2	11.3
6	Magar	3.5	1.9	11.0	14.3
7	Danuwar	1.5	NA	NA	4.4
8	Sanyasi	1.1	0.7	0.8	0.6
9	Thakuri	1.0	0.6	NA	0.9
10	Pahari	0.9	NA	0.4	NA
11	Gharti/Bhurtel	0.7	1.0	1.4	1.5
12	Majhi	0.7	NA	2.6	3.4
13	Gurung	0.4	0.8	NA	NA
14	Rai	0.3	NA	NA	1.8
15	Sherpa	0.3	5.4	2.2	0.0
16	Others	0.8	1.2	1.6	2.8
17	Thami	NA	7.7	0.7	NA
18	Jirel	NA	2.5	0.0	NA
19	Sunwar	NA	1.2	4.2	2.6
21	Hyau	NA	NA	0.3	NA
22	Tharu	NA	NA	NA	0.6
23	Total	100.0	100.0	100.0	100.0

Source: CBS, 2002

Table 2.5: Ethnicity by VDC in SRC Districts

1. Kavre

Unit: No

S.N	VDC/Municipality	Total	Tamang	Bahun	Chhetri	Newar	Dalit	Magar	Danuwar	Sanyasi	Thakuri	Pahari	Gharti/ Bhurtel	Majhi	Gurung	Rai	Sherpa	Others
1	Anaikot	6,789	3,231	1,844	461	295	554	102	0	57	161	0	28	0	0	0	11	45
2	Baldthali	3,137	1,162	565	864	78	60	181	0	104	0	0	0	0	0	0	107	16
3	Balting	2,592	990	242	81	58	149	397	0	0	595	0	42	0	0	33	0	5
4	BaluwapatiDeupur	6,365	3,353	1,571	527	191	119	40	0	0	147	0	35	0	267	10	0	105
5	BanakhuChor	4,522	3,237	0	55	191	213	562	0	64	0	0	0	190	0	0	0	10
6	Banepa N.P	15,822	371	2,339	1,666	10,279	355	299	0	26	28	0	23	9	29	36	153	209
7	Bekhsimle Dhartigaun	1,447	509	116	389	52	82	0	0	0	0	284	0	0	0	0	0	15
8	Bhimkhori	5,384	2,639	150	666	417	257	1,032	0	24	0	10	140	0	0	0	0	49
9	Bhumlutar	2,228	523	454	39	530	115	0	0	15	14	16	143	327	0	0	0	52
10	Birtadeurali	3,323	790	1,057	532	0	187	0	0	29	0	225	111	390	0	0	0	2
11	BoldeFediche	2,574	2,091	139	33	197	109	0	0	0	0	0	0	0	0	0	0	5
12	Budhakhani	4,000	2,986	0	44	0	120	842	0	0	0	0	0	0	0	0	0	8
13	Chalal Ganeshsthan	4,313	2,747	152	583	641	114	51	0	0	0	9	0	0	0	0	0	16
14	ChandeniMandan	3,871	1,385	1,236	244	329	191	0	0	43	34	0	78	275	0	0	0	56
15	Choubas	2,447	670	157	812	0	138	0	0	0	0	660	0	0	0	0	0	10
16	Chyamrangbesi	1,833	634	1,062	86	0	40	0	0	0	0	0	0	0	0	0	0	11
17	ChyasingKharka	3,119	2,238	160	425	130	119	7	0	0	0	0	11	0	0	0	0	29
18	Dandagaun	3,001	2,258	86	29	12	24	369	0	0	0	0	0	144	70	0	0	9
19	Dapcha Chatraibhanjha	3,454	1,966	554	53	779	68	0	0	0	0	0	0	0	0	0	0	34
20	DaraunePokhari	3,286	1,093	946	77	884	227	31	0	16	0	0	0	0	0	0	11	1
21	DeuvumiBaluwa	6,773	347	1,722	236	659	371	0	3,166	26	191	7	24	0	0	0	0	24
22	Devitar	2,614	2,091	302	19	7	70	10	0	0	0	0	0	0	109	0	0	6
23	Dhulikhel N.P	11,521	1,768	1,671	1,337	5,064	490	475	0	24	201	11	8	0	92	89	19	272
24	Dhunkharka	5,470	1,027	3,383	324	376	271	88	0	0	0	0	0	0	0	0	0	1
25	DhuseniSiwalaya	2,253	519	984	416	73	244	0	0	0	0	0	11	0	0	0	0	6
26	Dolalghat	2,237	922	45	262	209	98	0	0	7	324	125	0	210	0	0	0	35
27	FalateBhumlu	1,540	436	465	111	23	105	0	0	91	0	0	210	98	0	0	0	1

S.N	VDC/Municipality	Total	Tamang	Bahun	Chhetri	Newar	Dalit	Magar	Danuwar	Sanyasi	Thakuri	Pahari	Gharti/ Bhurtel	Majhi	Gurung	Rai	Sherpa	Others
28	Falemetar	4,097	3,454	170	405	10	38	0	0	0	0	0	0	0	0	0	0	20
29	Foksingtar	2,394	1,651	0	36	0	88	610	0	0	0	0	0	0	0	0	0	9
30	GairiBisouna Deupur	6,226	364	3,718	503	550	606	18	268	120	42	0	0	0	0	0	8	29
31	Ghartichhap	2,623	1,064	0	41	0	27	1,470	0	7	0	0	0	0	0	0	0	14
32	Gokule	4,558	3,377	184	87	256	111	470	0	17	0	11	0	0	0	0	0	45
33	Gothpani	3,000	1,112	1,363	43	37	202	0	0	93	0	42	0	0	0	0	63	45
34	HokseBazar	4,469	1,340	1,304	807	287	533	20	72	0	8	0	5	0	0	5	57	31
35	JaisithokMandan	3,109	1,139	1,156	310	102	68	188	0	0	103	0	32	0	0	0	0	11
36	JyamdiMandan	5,303	1,503	1,599	806	18	613	0	0	36	665	5	0	16	0	0	29	13
37	KalatiBhumidanda	3,801	1,352	922	914	165	193	0	0	0	6	0	82	0	139	0	18	12
38	KanpurKalapani	4,685	2,397	930	546	497	213	40	0	18	0	0	34	0	0	0	0	28
39	KartikeDeurali	3,940	463	1,881	316	8	544	0	0	477	0	75	70	68	0	10	12	16
40	KatunjeBesi	2,433	1,214	540	230	85	116	9	0	0	213	0	0	0	0	0	5	21
41	KavreNItya Chandeswor	4,905	296	2,346	1,086	58	961	0	0	163	102	9	29	0	0	0	17	38
42	KharePangu	2,648	1,868	0	214	238	254	27	0	0	0	0	10	0	8	9	0	20
43	Khanalthok	5,491	1,629	1,764	518	946	331	41	0	106	0	0	0	0	21	27	26	82
44	Kharelthok	2,939	1,236	803	277	317	135	36	0	10	0	10	0	0	0	0	0	115
45	Kharpachok	1,740	1,288	0	0	0	73	104	0	0	264	0	0	0	0	0	0	11
46	KolatiBhumlu	1,628	30	211	167	86	238	10	0	0	0	468	0	408	0	0	0	10
47	Koshidekha	2,016	568	683	102	19	425	202	0	0	0	0	0	0	0	0	0	17
48	KurwasChapakchori	3,047	2,182	550	46	0	132	24	0	0	110	0	0	0	0	0	0	3
49	kushadevi	7,314	1,196	3,997	1,227	405	235	17	0	0	100	0	87	0	0	26	17	7
50	Machchhegaun	7,207	5,483	376	695	210	208	185	0	0	8	0	9	21	0	0	0	12
51	MadanKundari	2,335	1,617	445	49	14	54	0	0	14	0	0	106	0	6	0	16	14
52	Mahadevsthan Mandan	8,612	330	3,074	1,127	1,254	905	56	782	88	95	0	5	10	38	662	18	168
53	Mahadevtar	2,074	996	0	32	170	36	832	0	0	0	0	0	0	0	0	0	8
54	MahankalChaur	3,954	2,635	275	343	33	94	460	0	8	28	0	45	0	0	0	6	27
55	MahendraJyoti	3,353	631	492	1,980	12	146	0	0	0	0	0	71	0	0	0	0	21
56	MajhiFeda	3,294	1,763	492	591	190	151	0	0	59	0	0	0	0	0	0	20	28
57	Mangaltar	3,858	2,193	322	170	214	173	570	0	0	169	14	28	0	0	0	0	5
58	MathurapatiFulbari	4,565	1,660	1,549	224	560	401	23	0	0	5	0	37	0	0	5	0	101

S.N	VDC/Municipality	Total	Tamang	Bahun	Chhetri	Newar	Dalit	Magar	Danuwar	Sanyasi	Thakuri	Pahari	Gharti/ Bhurtel	Majhi	Gurung	Rai	Sherpa	Others
59	Methinkot	4,583	1,109	1,622	424	274	861	68	43	61	17	0	84	0	0	0	15	5
60	Milche	2,647	1,969	0	113	6	56	486	0	0	0	0	0	0	0	0	0	17
61	NagreGagarche	2,604	614	234	67	1,421	90	171	0	0	0	0	0	0	0	0	0	7
62	Nala (Ugrachandi)	7,074	179	3,493	384	2,468	498	11	0	0	0	0	0	0	9	0	11	21
63	Naldung Baluwapatti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	NasikasthanSanga	5,556	1,345	256	1,534	1,885	214	225	0	0	15	0	0	0	5	26	0	51
65	NayagaunDeupur	4,919	2,236	1,593	197	40	427	17	0	0	0	0	102	0	286	0	0	21
66	Panauti N.P	25,563	1,412	4,525	9,067	7,428	1,399	117	0	402	24	368	305	12	58	110	62	274
67	Panchkhal	11,872	1,058	3,518	1,382	1,958	1,479	80	1,347	588	27	0	155	0	29	18	0	233
68	Pataleket	4,130	1,157	1,978	469	83	293	5	0	0	5	0	130	0	0	0	0	10
69	PokhariChauri	4,331	0	3,360	525	0	196	12	0	117	0	0	0	0	0	0	0	121
70	Pokhar iNarayansthan	3,815	3,187	124	0	180	186	118	0	0	8	0	0	0	0	0	0	12
71	Puranogaun Dapcha	2,147	680	823	219	185	234	0	0	0	0	0	0	0	0	0	0	6
72	RaviOpi	4,411	406	1,771	1,307	170	493	50	0	33	0	0	41	0	10	0	93	37
73	RyaleBhir	4,502	1,815	2,070	89	403	30	0	0	0	0	0	48	0	0	0	0	47
74	Saldhara	2,735	1,741	255	362	0	112	191	0	0	9	60	0	0	0	0	0	5
75	SalleBhumlu	2,600	1,121	390	478	374	149	0	0	17	0	57	0	0	0	0	0	14
76	Salmehakala (Taldhunga)	1,710	843	398	330	19	81	0	0	0	0	21	9	0	0	0	0	9
77	SankhupatiChour	3,670	1,047	773	659	937	151	14	0	0	0	0	63	0	0	0	8	18
78	Sanowangthali	2,033	1,165	484	233	17	98	7	0	0	0	0	0	0	0	0	9	20
79	Saping	3,956	399	345	971	634	297	0	0	771	0	287	32	206	5	0	0	9
80	SaradaBatase	2,480	358	528	803	549	89	7	0	0	0	0	0	0	5	137	0	4
81	Saramthali	1,252	864	179	0	84	0	0	0	0	0	0	0	117	0	0	0	8
82	Sarasyunkharka	5,407	3,400	763	285	355	142	421	0	0	0	0	0	12	22	0	0	7
83	Sathighar Bhagawati	3,111	115	469	627	843	465	148	27	100	0	254	31	0	0	0	0	32
84	SikharAmbote	4,278	2,679	144	432	196	163	561	0	8	0	0	18	0	0	0	0	77
85	Simalchour Syampati	4,278	2,969	553	345	149	81	0	0	0	0	0	0	0	0	0	167	14
86	Simthali	1,972	75	17	1,296	15	92	0	0	0	0	470	0	0	0	0	0	7
87	SipaliChilaune	3,058	2,095	451	84	6	117	11	0	8	232	0	18	0	0	0	33	3
88	Sisakhani	2,115	1,923	33	36	68	47	0	0	0	0	0	0	0	0	0	0	8

S.N	VDC/Municipality	Total	Tamang	Bahun	Chhetri	Newar	Dalit	Magar	Danuwar	Sanyasi	Thakuri	Pahari	Gharti/Bhurtel	Majhi	Gurung	Rai	Sherpa	Others
89	ThuloParsel	3,060	2,017	203	0	0	121	634	0	13	38	0	0	22	0	0	0	12
90	Ugratarajagal	5,197	45	897	2,794	590	303	94	0	17	0	0	12	0	360	15	11	59

2. Dolakha

Unit: No

S.N	VDC/Municipali	Total	Chheti	Tamang	Bahun	Nawar	Thami	Dalit	Sherpa	Jirel	Magar	Sunuwar	Sharti Bhujel	Gurung	Sanyasi	Thakuri	Others
1	Alampu	1,808	0	0	0	10	1,642	73	51	0	7	0	0	0	0	0	25
2	Babare	3,682	1,568	67	194	169	1,496	116	80	0	0	7	0	0	0	0	5
3	Bhedapu	4,216	1,822	1,675	63	381	0	194	0	0	73	0	0	0	0	0	8
4	Bhimeswar N.P	21,916	7,779	2,491	3,039	4,490	848	1,634	304	0	185	10	288	344	89	272	143
5	Bhirkot	2,929	1,482	13	542	113	12	545	0	0	31	6	143	0	0	0	223
6	Bhusafeda																
7	Bigu	1,859	278	71	18	137	343	72	741	0	183	0	10	0	0	0	6
8	Bocha	3,406	1,630	1,280	139	164	0	13	0	0	0	0	170	0	0	0	10
9	Bulung	2,242	544	792	279	218	0	253	0	0	21	0	59	8	0	62	6
10	Chankhu	1,295	0	302	0	18	0	177	654	0	0	0	0	141	0	0	3
11	Chhetrapa	2,547	840	8	10	619	24	102	0	310	0	0	53	6	0	0	575
12	Chilanka	2,996	837	561	12	241	153	224	424	0	254	0	119	83	0	0	58
13	Chyama	2,895	1,087	0	740	84	0	261	0	0	648	0	6	0	0	0	69
14	Danda-kharka	4,179	1,281	967	29	568	137	306	0	0	815	0	0	0	68	0	8
15	Dudhpokhari	1,606	0	1,318	0	144	0	74	0	0	28	0	0	37	0	0	5
16	Fasku																
17	Gairimudi	4,300	476	2,763	188	91	0	417	82	0	62	0	30	0	180	0	11
18	GauriSankar	1,397	27	415	7	51	12	23	723	0	39	0	0	32	0	65	3
19	Ghang Sukathokar	4,600	2,281	1,182	463	0	0	356	31	0	9	0	125	0	0	0	153
20	Hawa	1,980	284	7	69	20	0	103	288	0	26	1,159	0	0	0	0	24
21	Japhe	4,222	1,805	268	1,248	0	0	692	0	0	57	0	105	10	0	26	11
22	Jhule	2,662	1,600	411	62	124	0	240	18	0	12	23	49	89	0	0	4
23	Jhyaku	4,713	2,174	708	126	23	0	258	1,378	15	0	0	22	0	7	0	2
24	Jiri	8,508	1,972	297	324	374	0	304	1,254	3611	58	100	20	25	0	6	163
25	Jugu	4,328	2,799	222	139	5	0	498	50	576	0	0	30	0	0	0	3
26	Kabhre	5,350	2,339	49	1,963	25	0	844	49	53	0	0	7	0	11	0	10

S.N	VDC/Municipali	Total	Chheti	Tamang	Bahun	Nawar	Thami	Dalit	Sherpa	Jirel	Magar	Sunuwar	Sharti Bhujel	Gurung	Sanyasi	Thakuri	Others
27	Khalingchok	2,330	40	604	0	95	1,516	39	0	0	16	0	0	0	0	0	20
28	Kakakuti																
29	Khare	2,079	285	732	69	366	127	85	179	0	126	0	0	108	0	0	2
30	Khopachagu	2,020	631	28	84	61	902	100	192	0	0	0	0	0	0	0	22
31	Laduk	3,793	1,038	1,486	558	131	0	282	10	0	26	0	14	0	42	172	34
32	Lakuridada	4,508	868	1,307	72	1,785	343	5	12	0	0	0	50	0	13	0	53
33	Lamabagar	1,808	28	1,309	16	47	0	85	212	0	34	13	0	29	0	6	29
34	lamidada	6,580	2,269	171	778	245	358	2,701	19	0	0	0	0	0	0	18	21
35	Lapilang	4,874	2,056	0	46	138	2,354	138	83	0	0	0	24	7	5	0	23
36	Magapauwa																
37	Mali	3,189	1,366	89	139	23	0	405	1,103	0	0	21	0	39	0	0	4
38	Malu	2,810	1,193	0	417	344	0	533	0	0	27	6	71	0	218	0	1
39	Marbu	1,520	37	91	0	247	26	173	524	0	183	0	17	215	0	0	7
40	Melung	4,413	1,289	147	685	1,036	83	397	0	0	270	0	37	13	284	168	4
41	Mirge	3,126	1,243	1,267	372	0	0	185	0	0	0	0	0	0	54	0	5
42	Namdu	5,683	1,368	578	1,762	452	76	894	0	0	13	0	132	0	252	0	156
43	Orang	2,010	183	1,190	40	92	18	135	0	0	48	0	0	41	0	244	19
44	Pawati	4,835	4,657	0	10	104	0	59	0	0	0	0	0	0	5	0	0
45	Sahare	2,746	1,239	120	726	177	0	359	0	0	0	0	27	0	24	0	72
46	Sailunge-swor	2,183	910	330	23	670	0	168	22	0	53	0	0	0	0	0	7
47	Sunakhani	5,349	2,816	50	1,520	172	132	334	0	0	30	0	8	5	0	0	282
48	sundrawati	2,890	464	0	1,220	0	1,111	82	5	0	0	0	0	0	0	0	8
49	Suri	3,294	1,117	708	46	270	0	396	361	0	0	133	88	164	0	0	11
50	Susma Chhemawati	3,547	443	25	472	24	2,239	191	104	0	23	0	0	21	0	0	5
51	Syama	2,038	1,017	39	34	108	0	144	600	0	0	32	29	0	15	0	20
52	Thulopatal	3,669	668	1,459	59	291	0	252	183	41	0	665	40	6	0	0	5

3: Ramechhap

Unit: No

S. N	VDC/MUNICIPALITY	TOTAL	CHHETRI	TAMANG	DALIT	NEWAR	MAGAR	BAHUN	SUNUWAR	MAJHI	SHERPA	GHARTI	SANYASI	THAMI	PAHARI	HAYU	OTHERS
1	Bamtibhandar	2,895	1,387	93	416	67	11	21	21	0	731	84	0	0	0	0	64
2	Betali	4,469	2,175	38	824	76	215	543	205	0	0	299	32	0	0	0	62
3	Bethan	6,256	1,732	3,725	270	195	5	122	0	118	0	0	0	0	0	0	89
4	Bhadaure	2,842	801	1,589	37	188	211	0	0	0	0	8	0	0	0	0	8
5	Bhautali	4,066	832	758	477	342	324	297	0	792	0	163	37	0	0	0	44
6	Bhirpani	3,918	1,361	513	144	1,327	86	7	69	325	0	0	0	0	0	0	86
7	Bhujee	2,439	153	111	355	506	0	0	1,203	0	88	14	0	0	0	0	9
8	Bijulikot	5,548	1,584	1,698	424	592	632	308	124	0	0	9	65	0	0	0	112
9	Chanankhu	2,534	1,405	539	44	74	411	0	0	0	0	24	0	0	29	0	8
10	Chisapani	3,303	324	0	601	1,209	140	339	0	505	0	89	62	0	19	0	15
11	Chuchure	2,738	1,424	422	77	299	8	60	46	0	247	132	0	0	5	0	18
12	Dadhuwa	3,176	186	131	101	699	397	28	5	0	228	0	0	1,278	0	0	123
13	Deurali	3,459	1,360	25	321	393	1,142	78	34	0	0	11	0	0	0	0	95
14	Dimipokhari	3,608	515	1,472	179	216	1,126	54	0	0	10	0	25	0	0	0	11
15	Doramba	3,721	52	1,596	527	444	736	60	0	122	0	0	0	0	171	0	13
16	Duragau	3,239	964	565	375	0	22	254	869	0	15	98	21	0	0	0	56
17	Farpu	2,081	656	942	52	0	0	0	327	0	19	27	0	0	0	0	58
18	Gelu	6,147	3,503	464	494	301	830	229	0	6	0	130	0	0	118	0	72
19	Goswara	3,702	0	1,234	268	193	1,779	0	0	0	0	0	0	0	181	0	47
20	Gothgau	2,575	1,357	33	302	501	211	106	0	0	0	32	0	0	0	0	33
21	Gumdel	2,563	1,093	81	223	0	6	17	37	0	924	72	0	14	0	0	96
22	Gunsibhadaure	5,704	505	1,462	325	566	346	2,019	0	283	0	10	44	0	35	0	109
23	Guptesor	1,772	374	261	55	263	57	23	489	0	168	12	0	0	0	0	70
24	Hiledevi	3,305	589	1,641	253	545	64	13	0	0	178	15	0	0	0	0	7
25	Himganga	4,488	62	316	253	985	2,061	110	477	96	0	0	107	0	0	0	21
26	Kathjor	4,779	2,389	114	576	944	196	411	0	0	0	85	46	0	0	0	18
27	Khadadevi	4,052	232	2,016	237	436	920	0	0	0	0	0	0	176	0	0	35

S. N	VDC/MUNICIPALITY	TOTAL	CHHETRI	TAMANG	DALIT	NEWAR	MAGAR	BAHUN	SUNUWAR	MAJHI	SHERPA	GHARTI	SANYASI	THAMI	PAHARI	HAYU	OTHERS
28	Khaniyapani	4,108	680	685	207	1,989	352	161	0	0	0	0	21	0	0	0	13
29	Khimti	4,422	1,382	507	294	978	425	377	184	84	0	55	20	0	0	0	116
30	Kubukasthali	3,090	1,505	0	161	76	0	193	853	0	249	5	0	10	0	0	38
31	Lakhanpur	7,245	476	2,167	339	1,178	866	1,898	0	0	0	0	11	0	118	0	192
32	Majuwa	2,326	556	1,008	167	553	0	0	0	0	0	27	0	0	0	0	15
33	Makadum	2,156	1,692	218	96	72	39	0	0	0	0	17	0	0	0	0	22
34	Maluwajor	3,556	488	766	365	627	22	111	0	1,115	0	24	0	0	0	0	38
35	Manthali	5,053	1,592	201	437	736	118	879	34	483	13	262	16	0	0	17	265
36	Nagadaha	3,787	774	2,151	155	142	546	0	0	0	0	0	0	0	0	0	19
37	Namadi	3,981	2,407	382	342	63	6	25	254	0	151	218	0	0	0	0	133
38	Okhereni	3,550	263	1,562	268	415	938	6	0	0	0	7	0	0	0	48	43
39	Pakarbass	6,109	1,649	397	717	1,600	153	673	0	764	0	33	96	0	0	0	27
40	Phulasi	5,985	2,541	1,622	631	295	398	112	0	0	10	190	142	0	13	0	31
41	Pinkuri	2,316	812	932	173	119	185	10	0	0	0	9	0	0	71	0	5
42	Pritee	5,178	1,619	1,018	556	331	92	133	1,290	0	71	14	0	29	0	0	25
43	Puranagau	3,241	382	512	283	479	612	0	0	0	0	57	908	0	0	0	8
44	Rakathum	3,624	154	605	162	2,037	298	0	0	356	5	0	0	0	0	0	7
45	Ramechap	5,412	532	1,007	635	2,104	56	405	28	202	29	156	0	0	16	176	66
46	Rampur	4,400	0	1,230	222	1,196	953	7	567	210	0	0	0	0	0	0	15
47	Rasanalu	4,563	1,261	884	148	39	0	21	1,272	0	735	59	0	0	0	0	144
48	Saipu	2,904	809	411	309	32	225	504	432	0	0	170	0	0	0	0	12
49	Salupati	3,944	1,066	161	559	621	892	478	0	0	0	70	26	0	0	0	71
50	Sanghutar	2,316	644	14	136	693	119	263	0	0	0	25	7	0	0	0	415
51	Sukajor	3,963	1,298	451	102	495	947	0	29	57	13	84	0	0	0	441	46
52	Sunarpani	2,440	1,086	5	700	287	9	92	0	0	0	169	70	0	0	0	22
53	Those	2,868	1,090	480	38	362	68	24	0	0	782	0	0	0	0	0	24
54	Tilpung	4,318	1,871	688	283	533	655	215	0	0	0	12	0	0	0	0	61
55	Tokarpur	3,890	295	23	489	461	2,223	216	0	0	0	0	0	0	118	0	65

4. Sindhuli

S.N	VDC/MUNICIPALITY	TOTAL	TAMANG	CHHETRI	MAGAR	DALIT	BAHUN	NEWAR	DANUWAR	MAJHI	SUNUWAR	RAI	GHARTI/ BHUJEL	THAKURI	SANYASI	THARU	OTHERS
1	Amale	2,298	1,831	114	0	120	145	0	8	0	69	0	0	0	6	0	5
2	Arunthakur	5,276	1,384	1,102	1,398	367	105	43	0	0	784	24	0	0	0	0	69
3	Bahuntilpung	3,007	875	101	602	487	543	252	0	0	0	0	43	43	19	0	42
4	Balajor	4,203	142	881	2,176	434	262	221	0	0	36	0	13	13	0	0	25
5	Baseshwor	3,331	223	276	239	1,014	420	727	0	75	0	9	197	197	0	0	151
6	Bastipur	2,909	1,592	298	358	145	6	14	0	0	240	0	0	0	0	0	256
7	Belghari	3,844	793	770	712	437	446	205	0	105	56	0	86	86	9	0	44
8	Bhadrakali	4,591	2,047	516	773	438	219	468	0	0	116	0	0	0	0	0	14
9	Bhimeshwor	2,024	0	510	74	320	437	297	0	63	0	167	40	40	0	0	76
10	Bhimsthan	5,773	1,269	702	665	679	842	1,088	0	279	46	0	10	10	40	0	78
11	Bhuwaneshori	1,794	176	314	177	480	192	127	0	52	0	0	190	190	7	0	72
12	Bitijor bagaiya	1,874	39	442	467	375	126	50	0	85	0	0	76	76	0	0	17
13	Dadiguranshe	4,851	1,336	637	394	583	624	105	0	445	26	0	161	161	61	0	479
14	Dudhanjyang	2,931	68	997	325	312	500	62	0	22	394	0	33	33	0	0	185
15	Dudhouli	7,735	263	1,595	211	1,304	479	213	2,279	12	127	91	71	71	83	0	936
16	Hariharpur	4,005	3,820	0	49	71	0	0	0	0	0	0	0	0	0	0	65
17	Harsahi	4,535	454	393	266	618	422	0	1,872	207	5	0	33	33	26	28	211
18	Hatpate	7,510	322	779	816	743	2,226	407	1,450	420	24	8	187	0	0	10	118
19	Jalkanya	1,915	160	335	72	220	793	186	0	0	0	0	14	0	0	0	135
20	Jarayotar	7,145	991	771	3,077	803	904	232	0	0	29	0	153	0	109	0	76
21	Jhangakhohiratomato	5,950	769	530	536	631	1,197	1,614	0	170	0	0	158	24	293	0	28
22	Jinakhu	2,094	1,133	286	347	70	118	66	0	0	73	0	0	0	0	0	1
23	Kakur thakur	5,143	1,991	770	849	371	12	152	46	20	738	183	0	0	0	0	11
24	Kalpa brishykha	8,849	5,804	458	95	770	132	224	0	1,306	0	0	0	0	0	7	53
25	Kamalaimai N.P	32,838	6,071	8,081	2,897	3,863	3,523	4,530	192	772	360	235	767	36	359	38	1,117
26	Kapilakot	10,062	4,864	388	3,034	320	248	207	0	668	5	0	71	0	121	37	99

S.N	VDC/MUNICIPALITY	TOTAL	TAMANG	CHHETRI	MAGAR	DALIT	BAHUN	NEWAR	DANUWAR	MAJHI	SUNUWAR	RAI	GHARTI/ BHUIJEL	THAKURI	SANYASI	THARU	OTHERS
27	Khangsang	2,708	0	75	1,260	271	580	194	0	118	0	0	210	0	0	0	0
28	Kholagaun	2,999	314	425	553	725	725	211	0	12	0	0	23	0	5	0	6
29	Kuseswor dumja	5,113	1,459	353	1,376	679	552	388	0	57	33	31	114	0	8	0	63
30	Kyaneswor	9,592	7,584	316	453	370	155	5	53	491	0	25	52	0	11	0	74
31	Ladabhir	7,382	531	2,720	423	799	1,316	94	324	44	225	201	56	425	41	0	183
32	Lampantar	5,259	604	670	1,595	871	910	488	0	0	0	24	56	0	0	0	41
33	Mahadevdada	3,846	140	377	552	735	129	7	0	0	1,793	0	69	0	14	0	30
34	Mahadevsthan	6,197	2,565	419	133	424	182	471	0	1,646	37	0	7	0	80	0	233
35	Mahendrajhyadi	5,130	2,764	0	605	142	0	0	377	279	0	895	0	0	0	0	68
36	Majhuwa	2,874	1,144	725	266	205	284	7	0	0	0	0	142	0	56	0	45
37	Netrakali	3,346	2,822	50	37	36	22	335	0	0	0	0	12	0	0	5	27
38	Netrapani	3,523	80	444	138	323	368	138	1,145	168	65	9	37	0	17	0	591
39	Pipalmadi	7,484	2,889	6	458	701	25	395	171	26	0	2,226	0	0	0	58	532
40	Purano khnagajholi	4,681	772	1,216	355	1,145	558	271	0	6	109	150	6	59	21	0	13
41	Ranibas	5,119	111	1,257	405	577	673	54	918	764	11	15	71	83	29	101	50
42	Ranichuri	9,171	2,792	1,461	1,991	932	259	1,019	0	167	0	36	247	185	7	0	75
43	Ratamata																
44	Ratanchura	2,650	46	977	257	353	110	461	0	0	0	30	164	0	75	0	177
45	Ratnawati	2,724	344	440	152	402	227	0	0	65	209	874	0	0	0	0	11
46	Santeswori	2,902	1,478	0	728	132	0	403	0	0	0	0	0	8	0	5	148
47	Sirthouli	7,440	601	1,135	459	704	990	118	2,804	0	115	7	39	0	33	108	327
48	Sitalpati	4,417	0	1,938	541	894	268	208	0	157	0	67	300	0	0	0	44
49	Solpathana	2,256	39	703	611	117	180	350	0	16	183	10	41	0	0	0	6
50	Sunam pokhari	2,255	28	394	313	645	504	58	0	0	221	0	0	7	72	0	13
51	Tamajor	2,326	1,850	78	32	118	0	192	0	0	47	0	0	0	0	0	9
52	Tandi	8,907	558	1,766	706	1,499	612	26	639	622	844	64	0	28	50	1,246	257
53	Tinkanya	4,580	503	62	2,298	556	45	61	0	0	0	15	61	745	46	0	188
54	Tosramkhola	2,008	172	21	872	428	58	356	0	0	67	0	18	0	0	0	16
55	Tribhuvanambote	3,562	328	143	1,478	555	714	259	0	0	6	0	44	0	0	0	35

Source: CBS, 2001

Table 2.6: Economically Active Population Involved in Various Economic Activities

(In percent of population)

SN	Economically Activity	Kavre	Dolakha	Ramechhap	Sindhuli
1	Legislators/Senior Officials/ Managers	0.4	0.2	0.0	0.1
2	Prof./SemiProf./Tech Workers	4.7	3.5	1.6	2.7
3	Adm. & Clerical Workers	1.9	1.8	0.7	2.6
4	Services Workers & Shop, Market Sales Workers	11.1	6.4	2.2	5.7
5	Farm/ Fishing/ Forestry	60.8	64.7	84.5	70.8
6	Craft and Trade Workers	9.8	10.6	4.7	6.6
7	Prod. Labor Worker	2.3	0.6	0.3	0.7
8	Other and Not Stated	9.0	12.2	6.0	10.8
9	Total	100	100	100	100

Source: CBS, 2002

Table 2.7: Population in the SRC Districts by Religion

(In percent of population)

S N	Religion	Sindhuli		Ramechhap		Dolakha		Kavre	
		Populati on	%	Populati on	%	Populati on	%	Populati on	%
1	Hindu	190,952	64.47	145,771	71.93	126,492	67.80	238,994	62.57
2	Buddha	90,136	30.43	49,990	24.67	41,600	22.30	132,245	34.62
3	Islam	179	0.06	33	0.02	46	0.02	318	0.08
4	Kirat	1,024	0.35	33	0.02	35	0.02	61	0.02
5	Christian	2,897	0.98	3,188	1.57	3,041	1.63	6,786	1.78
6	Prakriti	9,736	3.29	2,915	1.44	15,058	8.07	2,286	0.60
7	Bon	3	0.00	63	0.03	4	0.00	4	0.00
8	Jainism	-	0.00	-	0.00	4	0.00	3	0.00
9	Bahai	3	0.00	6	0.00	4	0.00	7	0.00
10	Shikhism	-	0.00	-	0.00	0	0.00	3	0.00
11	Unidentifi ed	1,262	0.43	647	0.32	273	0.15	1,230	0.32
	Total	296,192	100.00	202,646	100.00	186,557	100.00	381,937	100.00

Source: CBS, 2012

Table 2.8: Coverage of Drinking Water and Sanitation

SN	Percent of HHs	Kavre	Dolakha	Ramechhap	Sindhuli
1	Drinking Water Supply	81.6	81.4	79.0	61.7
2	Sanitation facilities (Toilet)	71.2	48.1	31.2	21.0

Source: Intensive Study and Research Center (ISRC), 2013

Table 2.9: Type of Road and Responsibility

Road Class	Description	Responsibility
National Highway	Main arterial routes connecting major towns and administrative centers	The SRN is the responsibility of Department of Roads
Feeder Roads	Important Roads that Feeds into National Highway and provide access to the district headquarters and places of national importance such as tourism, industry, power generation, and pilgrimage sites.	
District Roads	Roads Connecting groups of villages within a district to roads of a higher class	The LRN is the responsibility of DDCs, assisted and coordinated by DoLIDAR
Urban Roads	Roads within Municipal Boundary (Except SRN)	Responsibility of Municipalities; assisted and coordinated by DoLIDAR
Village Roads	Non-through Roads Linking Villages to Roads of Higher Class.	Responsibility of VDCs/DDCs assisted and coordinated by DoLIDAR

Table 2.10: Road Status in Study Districts

Districts	No. of VDCs and Municipality(ies)			VDCs and Municipality(ies) with			
	VDCs	Municipality (ies)	Total (A)	Strategic Road		Local Road	
				No.	% of Total (A)	No.	% of total (A)
Kavre	87	3	90	25	27.8	83	92.2
Dolakha	51	1	52	19	36.5	51	98.1
Ramechhap	55	0	55	15	27.3	51	92.7
Sindhuli	53	1	54	29	53.7	30	55.6
Total	246	5	251	88	35.1	215	85.7

Source: Computed from District Road Network Development Plan (2013-2018) of Kavre, Dolakha, Ramechhap and Sindhuli districts, 2013

Note: Number in above table represents the number of VDCs connected with respective types of road to the VDC headquarter

Table 2.11: District Transport Perspective Plan of SRC

1. Kavre

Road name	Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m ³)	Gabion walls (m ³)	Lined drain (m)	New construction (km)
Mane Dhovan - Ranikot - Surya Binayak	24DR001	2	4.3	-	4.3	1	4.3	-	-	-	-	-	-	-	-	-	-	-
Namobuddha-Sankhu -Panauti-Kushadevi-Rayale-Gwarko (Lalitpur)	24DR002	2	19.6	-	19.6	-	2	-	-	-	-	-	-	-	-	-	-	-
Sanga - Aashapuri -Ryale	24DR003	3	9.4	-	9.4	1.5	4.6	8.9	-	-	-	5	-	-	-	100	9,300.00	-
Nala-Ghimire Gaun-Nagarkot	24DR004	2	10	-	10	0.9	7	-	-	-	7	13	-	6	-	610	2,800.00	-
Bhaisepti (Sanga) - Basdol (Mahendrajyoti)-Panauti	24DR005	1	7.3	-	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Nagarkot(Kavrechock)-Garibisuna-Hinguawapati-Jogitar-Jyamdi-Dolalghat	24DR006	3	38.9	-	38.9	7.6	20.5	6.9	-	-	-	20	-	6	-	945	29,200.00	-
Kuntabesi-Nayagaun-Nagarkot	24DR007	3	18.2	-	18.2	6.7	8.9	-	-	-	-	4	-	12	100	500	4,000.00	-
Dhulikhel - Raviopi - Nagarkot	24DR008	3	11.4	-	11.4	3	11.4	-	-	-	-	-	-	3	-	-	-	1
Banepa - Raviopi-Panchkhal	24DR009	3	14.5	-	14.5	3	4.5	-	-	-	-	-	-	3	-	100	14,000.00	-
Panauti-Malpi-Kolati Bhumidanda	24DR010	1	6	-	6	-	-	-	-	-	-	5	-	-	-	-	5,500.00	-
Khopasi-Dhungkharka-Chyamrangbesi-Milche Borang	24DR011	3	18.4	-	18.4	4	18.4	-	-	-	-	-	-	2	-	1,350.00	7,500.00	-

Road name	Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)	New construction (km)
Ravi Opi (Dundamukh) - Devitar - Anekot (Ghumauni Chour)-Nayagaun	24DR012	2	13.2	-	13.2	0.9	13.2	-	-	-	-	-	-	8	-	500	8,500.00	-
Samajkalyan (Panchkhal) -Anekot -Nagarkot	24DR013	2	7.5	-	7.5	-	7.5	-	-	-	-	-	-	-	-	-	7,000.00	15
Khopasi-Kamidanda-Taaldhunga	24DR014	5	59.1	-	59.1	-	50.2	-	-	-	-	-	-	-	-	-	58,000.00	-
Katunjebesi-Sikhar Ambote-Roshikinar-Panauti	24DR015	1	7.1	-	7.1	-	0.3	-	-	12	-	-	-	-	-	-	7,100.00	-
Chyalti-Falometar- Taal Dhunga - Bhorleni (Makwanpur)	24DR016	1	7	-	7	5	7	-	-	-	-	6	-	3	-	600	8,900.00	11
Milche Borang Danda-Taal Dhunga-Banakhu	24DR017	3	29.1	-	29.1	-	29.1	24	-	-	-	10	-	6	-	-	28,000.00	15
Kavrebhanjyang - Faskot - Inte-Sankhu Fendi - Shyampati Kuru Gaun - Bhalu Kharka - Baseri	24DR018	-	12.1	-	12.1	-	12	-	-	-	-	-	-	-	-	140	4,000.00	6
BP Highway - Sharda Batase - Inte	24DR019	-	2.7	-	2.7	-	0.6	-	-	-	7	-	-	2	-	-	2,000.00	32
Kavrebhangyang - Dapcha - Pipaltar-Sikhar Ambote-Sanjhakot-Tara Khase Lekh Gokule	24DR020	3	24.6	-	24.6	4	11.3	-	-	15	-	-	-	1	-	600	25,100.00	25
Kamidanda Bhanjyang-Medhamsu-Falamsangu-Sikhar Ambote-	24DR021	3	24.5	-	24.5	14.3	24.5	-	-	15	8	10	-	1	-	-	22,000.00	4

Road name	Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)	New construction (km)
Mahadevtar-Sisakhani (Pota Dhovan)																		
Katunje-Sipali-Budakhani-Banakhu	24DR022	2	20.9	-	20.9	5	-	11	-	15	8	20	-	3	200	760	19,000.00	-
Katunje-Thalibesi-Khar pachock-Kalinchock-Sungure-Sipali Bhanjyang	24DR023	2	15	-	15	3	14	-	-	-	-	-	-	-	-	460	13,000.00	-
Bhakunde-Pokhari Narayansthan-Mechhe	24DR024	3	30.4	-	30.4	-	17.2	-	-	-	-	-	8	-	-	-	27,500.00	-
Tinpiple - Kalchhe- Bela (BP Highway)	24DR025	1	9.9	-	9.9	-	9.9	-	-	12	5	5	10	-	-	40	9,000.00	14.1
Tinpiple-Baluwa-Bhedabhari	24DR026	1	11.8	-	11.8	-	3.3	-	-	-	-	-	-	1	-	-	11,000.00	-
Panchkhal-Bohere Dhovan - Timalbsi - Thulo Parsel	24DR027	3	30.6	-	30.6	3	7.1	-	-	-	-	42	10	7	-	440	27,000.00	12
Bohere Dovan-Aadha Bato -Sarsyunkharka (Danda Gaun)-Saramthali-Maure	24DR028	2	19.1	-	19.1	6	19.1	13	-	-	-	-	1	4	-	150	18,000.00	28
Palanchowk - Kharelthok - Koshi Dekha	24DR029	1	10	-	10	5	5	-	-	-	-	-	-	1	-	370	6,000.00	-
Mamti - Titretar - Chopatar - Thulo Parshel- Dolalghat	24DR030	2	20	-	-	3	20	-	-	-	-	-	-	-	-	300	6,500.00	-

Road name	Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)	New construction (km)
Piple Deurali - Chisapani - Ghyangdanda (Bhimkhori)- Betini - Ahale Banspur	24DR031	2	13.2	-	13.2	2.5	12.2	-	-	-	-	1	-	2	-	945	8,000.00	-
Dolalghat-Falante-Kolat i-Birta Deurali-Gothpani-Katti ke Deurali -Madankudari	24DR032	3	30.2	-	30.2	5	28.8	-	-	-	15	-	-	-	-	-	30,200.00	4.3
Dolalghat-Sallebhumlu- Chaubas-Lauredeurali- Nagregagarche	24DR033	3	38.7	-	38.7	-	38.7	-	-	-	-	-	-	-	-	-	38,000.00	17
Dolalghat-Saping-Simth ali-Bekhsimle	24DR034	2	23.8	-	23.8	-	23.8	-	-	-	15	15	-	3	-	100	23,800.00	8
Kolati -Dhadkharka - Pokhari Chauri - Gurase	24DR035	2	14.4	-	14.4	-	14.4	-	-	-	-	17	-	3	-	80	13,500.00	-
Chiuribas (Mangaltar)-Dandakhar ka-Budakhani (Killa)	24DR036	2	15.5	-	15.5	4.5	14.5	-	-	-	-	-	-	1	-	755	14,000.00	2
Chaubas-Gumpati- Salambu Kafle - Kilpubagar	24DR037	3	20.6	-	20.6	7	20.6	-	-	-	-	7	15	-	-	-	18,500.00	-
Dhadkharka - Majhifeda - Shailung	24DR038	2	12.6	-	12.6	-	12.6	-	-	-	-	15	-	4	-	100	12,000.00	-
Total		82	681.6	-	661.6	95.9	498.5	63.8	-	69	65	195	44	82	300	9,945	537,900	194.4

2. Dolakha

Road name	Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)	New construction (km)
Bhorle- Jaintipur- Marbu	22DR001	16	16	16	16	4	12	-	-	16	-	100	50	2	-	8,000.00	16,000.00	14
Singati- Bulung- Gagar	22DR002	18.5	18.5	18.5	18.5	6	15.5	-	-	36	-	80	80	2	-	9,000.00	18,000.00	16.5
Singati- Sorung Sangwa	22DR003	7.07	7.07	7.07	7.07	-	6.87	-	-	37	-	20	-	-	-	1,200.00	6,500.00	10
Sunkhani- Sangwa	22DR004	28.92	28.92	28.92	28.92	10.1	9.23	-	-	60	-	260	20	-	150	10,000.00	8,000.00	3.08
Kalinchok- Bigu	22DR005	7.5	7.5	7.5	7.5	6	7.5	-	-	15	-	30	-	-	50	8,000.00	4,200.00	11.5
Namdu- Jugu- Jhyaku- Bhorle	22DR006	28.23	28.23	28.23	28.23	8	20.73	-	-	64	12	70	70	10	30	1,450.00	19,100.00	16.77
Makaibari- Deurali- Panighat- Kshemawati	22DR007	9	9	9	9	0.3	6.5	-	-	-	6	70	20	-	50	5,000.00	9,000.00	-
Busti- Putalikath- Thulopatal- Laharemane	22DR008	15	15	15	15	8	10	-	-	-	-	36	-	-	50	7,000.00	13,500.00	-
Khawa- Chhaude	22DR009	19.3	19.3	19.3	19.3	7	13.1	-	-	-	-	-	-	-	-	2,500.00	17,000.00	-
Bhirkot- Gairimudi- Chhaude- Hawa	22DR010	25	25	25	25	15	14	-	-	27	10	20	-	-	100	10,000.00	8,000.00	-
Bhirkot- Sahare- Hawa- Jiri	22DR011	33.5	33.5	33.5	33.5	3.5	30.5	-	-	49	-	10	10	-	-	2,000.00	24,000.00	2
Ghyawapani- Sera- Surke - Nigale	22DR012	15	15	15	15	0.5	9.88	-	-	50	-	50	40	4	-	3,000.00	13,500.00	-
Nayapul- Pawati- Dandakharka	22DR013	28.12	28.12	28.12	28.12	1	23.63	-	-	51	-	100	50	2	-	500	12,500.00	7
Mude- Melung- Sitali	22DR014	51	51	51	51	1.5	36	-	-	40	10	120	100	3	-	11,000.00	25,000.00	4
Nigale-Bagkhor- Bhusafeda- Tamchet- Dudhpokhari	22DR015	14	14	14	14	5	9	-	-	36	-	110	90	5	-	4,000.00	13,000.00	7
Total		316.14	316.14	316.14	316.14	75.9	224.44	0	0	481	38	1,076	530	28	430	82,650	207,300	91.85

3. Ramechhap

Code	Column1	Emergency Maintenance	Routine Maintenance	Recurrent Maintenance	Periodic Maintenance	Rehabilitation	Graveling/Cobbing (Km)	Blacktopping (Km)	Widening	Bridge (m)	Slab Culvert (m)	CC Causeway (m)	Stone Causeway(m)	Pipe Culvert (units)	Masonry Walls (m3)	Gabion Walls (m3)	Lined Drains (m)	New Construction (km)
21DR001	Devitar-Doramba-Paseban-Koilibagar						50.5		2	50	18	30	829	441			50,500	
21DR002	Manthali-Galba-Chauri	16.5	16.5	16.5	16.5		58		2	90	30		652.5	507.5			65000	
21DR003	Khairenighat-Bethan-Galba						30		2.5	40	18		337.5	262.5			30,000	
21DR004	Khairenighat-Galba-Doramba-Kholakharka						36.35		3				409.5	318.5			36,350	
21DR005	Puditar-Tharbhanjyang - Alchidhunga-Alampur						14.12			180	48		157.5	122.5			14,120	7
21DR006	Chauri(Bangebeshi)-Gunsi-Bhadaure Gurase						8.48						94.5	73.5			8,480	
21DR007	Khairenighat-Khanyapani-Danse-Sunapati-Dogma						18.69			20			211.5	164.5			18,690	
21DR008	Goganpani Sunarkhop Majhuwa						7.78				2		85.5	66.5			7,780	
21DR009	Majhuwa(Dadhuwa) Nigalbas Timu						12.74			240	30		144	112			12,740	6.74
21DR010	Sitkha-Goganpani-Dhulebesi						15.2		2.5	30	30		171	133			15,200	
21DR011	Bhatauli-Dhulebesi-Mahakalsthan(Gagal)						13		2	60	30	61	148.5	115.5			13,000	10.3
21DR012	Sathimure Kalleri Pinkhuri (Gothdanda)						8		2		12		90	70			8,000	
21DR013	Manthali-Chisapani-Puranagaun(Health Post)-Thanapati						12.5		3				139.5	108.5			12,500	

Code	Column1	Emergency Maintenance	Routine Maintenance	Recurrent Maintenance	Periodic Maintenance	Rehabilitation	Gravelling/Cobbing (Km)	Blacktopping (Km)	Widening	Bridge (m)	Slab Culvert (m)	CC Causeway (m)	StoneCauseway(m)	Pipe Culvert (units)	Masonry Walls (m3)	Gabion Walls (m3)	Lined Drains (m)	New Construction (km)
21DR014	Manthali Chanakhu Ga. Bi. Sha. Bhawan Pokharidanda						10.12		2	20	24		112.5	87.5			10,120	
21DR015	Manthali-Gelu-Pokharidanda						17		2.5	30	12		193.5	150.5			17,000	
21DR016	Khimti-Betali-Dharapani	34.5	34.5	34.5	34.5		17.5			150		50		154			34,500	
21DR017	Shivalaya-Garjang-Sangbadanda	12.5	12.5	12.5	12.5		12.5		3		30		139.5	108.5			12,500	
21DR018	Deurali-Serding-Gumdel						23		3				261	203			23,000	
21DR019	Salu-Dhobi-Base-Bamti						54.39		3		6	171	612	476			54,390	13
21DR020	Dilauri-Sabra- Kaileshor-Bamti						16.16		2	480	96		180	140			16,160	32.5
21DR021	Those-Singati-Pritee						26		2.5				292.5	227.5			26,000	
21DR022	Rasnal Bhitrikhani Gupteshor Kaileshor Dhungebhir Bhujikoldanda						23.35		2.5	60	36		261	203			23,350	
21DR023	Yonjantole Pharpu Ga. Bi. Sha. Bhawan	4.98	4.98	4.98	4.98		4.98		2.5				54	42			4,980	
21DR024	Khimti Shivalaya	4	4	4	4		4		2.5			6	45	35			4,000	
21DR025	Haldebeshi-Dhobi-Dhandebesi						36		1			18	405	315			36,000	
21DR026	Manthali-Kathjour-Dhobi	22	22	22	22		17		1				193.5	150.5			22,000	
21DR027	Manthali-Sunarpani						8.5		2				94.5	73.5			8,500	
21DR028	Manthali Bhaluwajor						11.06		2.5			32	126	98			11,060	

Code	Column1	Emergency Maintenance	Routine Maintenance	Recurrent Maintenance	Periodic Maintenance	Rehabilitation	Gravelling/Cobbing (Km)	Blacktopping (Km)	Widening	Bridge (m)	Slab Culvert (m)	CC Causeway (m)	StoneCauseway(m)	Pipe Culvert (units)	Masonry Walls (m3)	Gabion Walls (m3)	Lined Drains (m)	New Construction (km)
21DR029	Manthali Raltar Samalsthan (Salu)						7.5			90			85.5	66.5			7,500	
21DR030	Kukurkatte Bhanjyang Gothgaun Sirise						14			40	30		157.5	122.5			14,000	
21DR031	Ramechhap-Bhalukhop-Okhrene-Himganga						12		3			21	135	105			12,000	
21DR032	Ramechhap-Rampur-Kolunjorghat						23		3				261	203			23,000	
21DR033	Ramechhap-Birtaghat						11.74			60		28	130.5	101.5			11,740	
F202[02]	Siuraune(Dharapani)-Those-Bamti	10	10	10	10		20.25		2				135	105			24,250	
Total		104	104	104	104		655		59	1640	452	417	7,345	5,663			688,410	69.54

4. Sindhuli

Code	Name of road	Emergency Maintenance	Routine Maintenance	Recurrent Maintenance	Periodic Maintenance	Rehabilitation	Gravelling/Cobbling (Km)	Blacktopping (Km)	Widening	Bridge (m)	Slab Culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe Culvert (units)	Masonry Walls (m ³)	Gabion Walls (m ³)	Lined Drains (m)	New Construction (km)
20DR001	Sandhe-Khorbhyang-Hariharpur Gadhi	2.5							3,000			36	18	12	719.18	2174.25	2230	
20DR002	Pipalmadhi-Karmaiya	6	12	9			12.5		3,000			116		3	500	1950	3500	6
20DR003	Hariwan-Kyaneswor- Bhitri Jamune-Boteni	2	4.2	4.2	1		2		6,000	150	12		150	15	1,506.08	4553.25	4670	10.35
20DR004	Kapilakot-Madhubani-Rampur-Netrakali-Kusheshwor Dumja	15	15	10			20		6,800	50	12	180		71	3741	11310	11600	
20DR005	Pipalbhanjyang-Haitar-Netrakali	1	8	8							6	18		12	1,735.05	5245.5	5380	10.3
20DR006	Sindhuligadhi-Majhuwa-Kaphalchauri Dumja	5	9	5			15		4,000			24	24	40	2,515.5	7605	7800	24
20DR007	Khaniyakharka-Kamarebhannjynag-Dhapchauki-Tilpung Bhanjyang	8	15	5	14.5		9.5		6,000		20	219	24	106	3,059.88	9250.8	9486	20.8
20DR008	Sindhulimadi-Bhimasthan-Chhakmake—Bahuntipung	18	22	10	14.5		31.1		2,800	100	60	330	60	45	2,322	7020	7200	
20DR009	Bahuntipung-Mahadevdanda-Tinkhande	10	15	5					6,000		10	100	24	20	2,936.69	8878.35	9106	22.6
20DR010	Bahuntipung-Nawalpur Ghat	6	10	5					3,800			27	24	12	1,895.01	5729.1	5876	5.15
20DR011	Chhakmake-Aambote-Jinakh u-Jhankritar	6	15	8			22.5		6,500	80	110	250	90	32	1,515.75	4582.5	4700	8.25
20DR012	Ratanpur-Langurkhola-Majhuwa-Balajor	2							1,500						206.4	624	640	27.8

Code	Name of road	Emergency Maintenance	Routine Maintenance	Recurrent Maintenance	Periodic Maintenance	Rehabilitation	Gravelling/Cobbing (Km)	Blacktopping (Km)	Widening	Bridge (m)	Slab Culvert (m)	CC Causeway (m)	StoneCauseway(m)	Pipe Culvert (units)	Masonry Walls (m3)	Gabion Walls (m3)	Lined Drains (m)	New Construction (km)
20DR013	Mulkot-Nagedanda-Amare-Majhuwa	5	10	8			12		3,000			45			774	2340	2400	10
	Total	86.5	135.2	77.2	30		124.6		52,400	380	230	1,345	414	368	23,426.5	71,262.8	7,4588	145.25

Table 2.12: District Transport Master Plan (2013-2018)

Improvement type	units	Kavre		Dolakha		Ramechhap		Sindhuli	
		Quantity	Cost (NRs Millions)	Quantity	Cost (NRs Millions)	Quantity	Cost (NRs Millions)	Quantity	Cost (NRs Millions)
Bridges	m	69	42.8	481	194.0	1,390	546	380	228
Slab culverts	m	65	11.4	38	15.2	378	52.2	230	34.5
Causeways	m	239	20.2	1,606	82.8	433.5	73.3	1759	138.6
Hume pipes	units	82	0.8	28	0.3	3,062.5	61.3	368	3.6
Masonry retaining walls	m ³	300	3.0	430	4.3			23,426.5	234.3
Gabion retaining walls	m ³	9,945	29.8	82,650	330.6			71,262.75	178.1
Lined drains	m	537,900	806.9	207,300	207.3	390,800	781.6	74,590	74.5
Widening	m		0.0	0		342.3	1,032.6	52,400	1,310
Rehabilitation	km	95.9	76.7	75.9	60.7	0		0	0
Gravelling	km	498.5	897.3	224.44	269.3	357.8	787.2	124.6	274.1
Blacktopping	km	63.8	363.7	0		0		29	165.3
Grade improvement	km					108.85	870.8		
New construction	km	194.4	1,127.5	91.85	718.7	69.54	278.2		
Conservation	km					260.32	168.9		
Total			3,380.0		1,883.2	0	1,883.2		2,641.0

Source: Computed from District Road Network Development Plan (2013-2018) of Kavre, Dolakha, Ramechhap and Sindhuli districts, 2013

Table 2.13: District Transport Master Plan**A. Kavre**

The 80% budget is allocated for the District Road Core Networks roads of Kavrepalanchok District and left 20% budget is allocated for village roads. In the allocation of the DTMP budget, priority is given to conservation works, followed by improvement works and finally new construction. The total estimated amount of funding is NRS 939,345,000 for the 5-years DTMP period

Conservation (km)	Improvement gravel (km)	Improvement blacktop (km)	New construction (km)
316.14	-	-	-

Standard of DRCN roads

	Total length	Fair-weather		All-weather gravel		All-weather blacktop		
	km	km	%	km	%	km	%	
Start of DTMP	681.60	498.50	73%	170.90	25%	12.20	2%	
End of DTMP	681.60	396.74	58%	272.66	40%	12.20	2%	
Difference	-	-	101.76	-15%	101.76	15%	-	0%

Population with access to road network

	Direct access to SRN			No access to road			Fair-weather core roads			All-weather core roads		
	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%
Start of DTMP	25	164,507	45%	7	21,402	6%	66	207,998	56%	33	199,362	54%
End of DTMP	25	164,507	45%	2	5,339	1%	28	73,199	20%	53	265,719	72%
Difference	-	-	0%	5	16,063	-4%	38	134,799	-37%	20	66,357	18%

B. Dolakha

The 80% budget is allocated for the DRCN roads of Dolakha District and left 20% budget is allocated for village roads. In the allocation of the DTMP budget, priority is given to conservation works, followed by improvement works and finally new construction. That is to say, any DTMP funding is first allocated to conservation, and remaining funds is allocated for improvement of the existing DRCN roads for maintainable all weather standards. The total estimated amount is Rs. 312,275,865 for the 5-years DTMP period.

Conservation (km)	Improvement gravel (km)	Improvement blacktop (km)	New construction (km)
316.14 km	-	-	-

Standard of DRCN roads

	Total length	Fair-weather		All-weather gravel		All-weather blacktop	
	km	km	%	km	%	km	%
Start of DTMP	316.14	224.44	71%	91.70	29%	-	0%
End of DTMP	316.14	224.44	71%	91.70	29%	-	0%
Difference	-	-	0%	-	0%	-	0%

Population with access to road network

	Direct access to SRN			No access to road			Fair-weather core roads			All-weather core roads		
	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%
Start of DTMP	19	85,690	46%	35	103,423	56%	16	80,701	44%	1	975	1%
End of DTMP	19	85,690	46%	35	103,423	56%	16	80,701	44%	1	975	1%
Difference	-	-	0%	-	-	0%	-	-	0%	-	-	0%

C. Ramechhap

The district has decided to allocate 98% of total road sector budget for DRCN roads and it is the amount available for implementation of DTMP. The budget is allocated giving priority for conservation works, followed by improvement works and finally for new construction of DRCN roads. Thus road sector budget of the district is divided first for DRCN roads (DTMP budget) and VRCN roads (non-DTMP budget) respectively as 98% and 2%.

Conservation (km)	Improvement gravel (km)	Improvement blacktop (km)	New construction (km)
260.32	260.70	-	59.79

Standard of DRCN roads

	Total length	Fair-weather		All-weather gravel		All-weather blacktop	
	km	km	%	km	%	km	%
Start of DTMP	688.41	619.41	90.0	33.00	5		
End of DTMP	748.20	454.50	61.0	293.70	39		
Difference	59.79	(164.91)	(29.0)	260.70	34		

Population with access to road network

	Direct access to SRN			No access to road			Fair-weather core roads			All-weather core roads		
	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%
Start of DTMP	15	56966	28	4	12549	6	51	188874	94	10	47631	24
End of DTMP	15	56966	28	0			55	201423	100	45	172559	86
Difference				(4)	12549	(6)	4	12549		35	124928	25

D. Sindhuli

District has decided to allocate 93% of total road sector budget for DRCN roads and it is the amount available for implementation of DTMP. The budget is allocated giving priority for conservation works, followed by improvement works and finally for new construction of DRCN roads. Thus road sector budget of the district is divided first for DRCN roads (DTMP budget) and VRCN roads (non-DTMP budget) respectively as 93% and 7%.

Conservation (km)	Improvement gravel (km)	Improvement blacktop (km)	New construction (km)
293.71	107.09		9.86

Standard of DRCN roads

	Total length	Fair-weather		All-weather gravel		All-weather blacktop	
	km	km	%	km	%	km	%
Start of DTMP	293.71	260.71	89	32.00	11	1.0	
End of DTMP	293.71	153.62	52	139.09	47	1.0	
Difference	-			107.09	36		

Population with access to road network

	Direct access to SRN			No access to road			Fair-weather core roads			All-weather core roads		
	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%
Start of DTMP	29	192724	60	24	125055	23	23	121287	38	8	71302	22
End of DTMP	29	192724	60	23	116437	24	24	129905	40	18	149466	47
Difference					8618	1	1	8618	3	12	78164	24

Table 2.14: Five Year Road Development Plan

	Unit	Kavre	Dolakha	Ramechhap	Sindhuli
Total road length	km	681.60	316.14	619.41	293.71
A. Road improvement					
Conservation	Km	681.60	316.14	260.32	293.71
Improvement gravel	Km	101.76		260.70	107.09
Improvement blacktop	Km				
New construction	km	20.26		59.79	9.86
B. Road Conditions					
Fair-weather	Km	396.74	224.44	454.5	153.62
All-weather gravel	Km	272.66	91.70	293.7	139.09
All-weather blacktop	Km	12.20			1.0

Source: Computed from District Road Network Development Plan (2013-2018) of Kavre, Dolakha, Ramechhap and Sindhuli districts, 2013

Table 2.15: Five Year Financing Plan for Road Development

(Unit: Rs in '000)

	Kavre		Dolakha		Ramechhap		Sindhuli	
	Amount	%	Amount	%	Amount	%	Amount	%
Community		-		-	676,451	20.0	34,987	1.8
DDC	166,582	17.7	134,312	43.0	3,053	0.1	39,286	2.0
GoN	555,249	59.1	16,117	5.2	616,615	18.2	1,045,838	53.7
Donor/Project	217,515	23.2	161,846	51.8	1,622,754	47.9	612,342	31.5
VDC		-		-	161,175	4.8	213,526	11.0
Other		-		-	305,255	9.0		-
Total	939,346	100.0	312,276	100.0	3,385,302	100.0	1,945,979	100.0

Source: Computed from District Road Network Development Plan (2013-2018) of Kavre, Dolakha, Ramechhap and Sindhuli districts

Table 2.16: Source and Consumers of Electricity

(Unit: No. of Household)

SN	Items	Kavre	Dolakha	Ramechhap	Sindhuli
1.1	Grid and Isolated hydro-power	33,554	10,567	5,504	3,343
1.2	Alternative Energy	4,090	3,195	3,072	1,568
1.3	Total Consumers	37,644	13,762	8,576	4,911
2	Total No. of HH	78,887	48,294	45,185	54,551
3	Percent of HHs with electricity	47.7%	28.5%	19.0%	9.0%

Source: Mega Publication and Research Center (MPRC), 2011

Table 2.17: Electricity Development Priority and Programme of the District, 2013/14

Districts	Priority	Programme
Kavre	<ul style="list-style-type: none"> Expansion of electricity in those rural areas having no access to electricity 	<ul style="list-style-type: none"> Micro-hydro development Orientation programme Rural energy development programme Local electricity line transmission program
Dolakha	<ul style="list-style-type: none"> Production of electricity through rural and community electrification Encourage use of alternative and renewable energy Provide shares to local community 	<ul style="list-style-type: none"> Micro-hydro development Promote community based rural electrification programme Local electricity transmission line construction and installation of transfers Supply of electricity as per demand of local community Promote public private and community partnership on hydropower development
Ramechhap	<ul style="list-style-type: none"> Expansion of electricity by utilizing revenue generated from electricity Expansion of electricity through rural and community electrification programme, especially micro-hydro development, bio-gas and other renewable energy 	<ul style="list-style-type: none"> Micro-hydro development Local electric transmission line construction and installation of transfers Local electric transmission line construction from community electricity programme
Sindhuli	<ul style="list-style-type: none"> Expansion of electricity those rural areas having no access to electricity through development of micro-hydropower 	<ul style="list-style-type: none"> Micro-hydro development Local electric transmission line construction and installation Provide grants of NRs 50,000 for installation of micro and small hydropower

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.18: Tourism Development Program of 2013/14

SN	Programme	Budget (Rs '000)
1	Kavre – Tourism infrastructure development	28
	Nava durga Bhawani temple area	500
	Bhirabnath temple area	500
	Patlekheta area	800
	Pauti and Namobudha area	500
	Kusadevi area	500
	Shryothan Monastery (Daraunepokhari) area	800
2	Dolakha – Tourism infrastructure development	2,500
	Sailungeshwor Area	500
	Bhimeshwor Area	500
	Sunkhani Kalinaga Area	500
	Kalinchok area	1,000
3	Ramechhap	3,300
	Trekking trail development from Panighatta to Sunpatti	500
	Nawadeveshishwor area tourism development	500
	Bhutpokhari conservation	500
	Doramba area tourism infrastructure development	800
	Galu-Khadadevi-Goldhunga-Sailung trekking trail construction	500
	Jata[okhari conservation	500
4	Sindhuli – Tourism infrastructure development	4,700
	Kamalamai Municipality and Siddhababa Area	1000
	Historic Sindhuligadhi and Hariharpur Gadi's Tourism	1,700
	Raktamala Mandir Construction renovation	1,000
	Jalyanya Complex	500
	Jalkanya pond conservation complex	500

Source: Computed from Nepal Development Programme, 2013/14, NPC 2013

Table 2.19: Major Tourism Attractions

1. Kavre

Major tourism attraction of Kavre includes

(a) Tourist Attractive Centre

Places of Interest	VDC
Thumki Danda	Balthali
Naulichaur Aadhabat	Sarsyukhark
Nagarkot	Baluwapati Deupur
Dwarpal , Thulochaur	Nayagaun Deupur
Dhulikhel, Devasthan Danda Purano Bazaar	Dhulikhel Municipality

(b) Religious Places

Temple	Place
Narayansthan	Dhulikhel Municipality
Indreshwor Mahadev	Panauti Municipality
Palanchok Bhagawati	Sathighar Bhagawati
Chandeshwori Bhagawati	Banepa Municipality
Dhaneshwor Mahadev	Banepa Municipality
Namobuddha	Shyampati
Ugrachandi Bhagawati	Nala
Dulaleshwor Mahadev	Dolalghat
Bethanchok Narayan	Dhunkhark
Kasyapeshwor Mahadev	Mahadevsthan
Umadevimai	Chandeni
Dhaneshwor Mahadev	Subbagaun

2. Dolakha

Major tourism attraction of Dolakha includes

Dolakha is one of the main tourist place of Nepal from this single place the heart touching views of Himalaya, like Mt. Gaurishankar (7146m) of Rolwaling himalayan range. The main tourist attraction centres are Bhimeshwor municipality, Kalinchowk, Bigu, Rolwaling region, Lamabagar, Jiri and Shailungeshwar.

Tourist Attractive Places

Name of Places	Significance of the place
Bhimeshwor Municipality	District Headquarter, historical town Dolakha Bazaar and Bhimeshwor Temple.
Kalinchowk	The religious and natural peak.
Rolwaling Region	The popular tourist spot , famous Chho Rolpa Himtal (which is situated at the bottom of the Soboche and Tasilapcha mountains of Rolwaling mountain range), Dudhkunda, Beding village.
Lamabagar	The entrance to Tibet, place of tourist attraction.
Jiri	Important tourist place, trekking point of Mt. Everest.
Mt. Gaurishankar	The standard of the time measurement of point Nepal, religious mountain.
Tashi Gumba of Bigu	Religious and tourist place, Producer of Vichhunis.
Shailungeshwar	Tourist place, the hill of hundred hills.

Potential Area for tourism development: Dolakha Bhimsen, Sundrawati Bhagawati, Kalinchok Bhagawati, Shailungeshwor Mahadev, Tasi Gumba, Deulangeshwor Mahadev, Rolwaling Valley, Chchho Rolpa Glacier, Gaurishankar Mountain, Beding Gaun, Jiri valley, Jatapokhari, Bahulapokhari and Barasaya Paltan.

Potential area for religious tourism: Dolakha Bhimsen, Kalinchok Bhagawati, Sundrawati Bhagawati, Sailungeshwar Mahadev, Tasi Gumba, Deulangeshwar Mahadev, Jatapokhari and Bahula Pokhari.

3. Ramechhap

Major tourism attraction includes

Places of Interest	VDC
Paanch pokhari	Chuchure
Shailung danda	Dadhuwa
Sunapati danda	Khaniyapani, Hiledevi and Bethan
Serding danda	Gumdel VDC
Agleswor danda	Doramba, Khandadevi and Dimipokhari
Numburchuli	Gumdel
Thana danda	Okhreni
Thalari	Bijulikot
Tinlaal pokhari	Gumdel VDC
Khandadevi	Khandadevi

4. Sindhuli

Major tourism attraction includes

Places of Interest	VDC/Municipality
Sindhuligadhi	Kamalamia Municipality
Hariharpur Gadhi	Harihargadhi
Maisthan:	Kamalamia Municipality
Siddhasthan	Kamalamia Municipality
Raktamana Mandir	Kamalamia Municipality
Kusheswor Mahadeva	Dumja
Panchakanya Pokhari	Mahadevsthan
Sharpe Dhunga	Sirthauli
Kali khola Mahadava and Sadhekhop Dudhkunda	Hatpate
Basheswor Gufa and	Basheswor
Ramite, Jor Sala	Bahun Tilpung
Vishnu Pau	Pokhari
Chharchhare Tower	Belghari
Chamare falls, Tapeshwori MMandir	Ambote
Phaparchuli (Top hills of district)	Amale & Bastipur
Phikkal Danda	Mahadevsthan
Ratanchura Gufa	Ratanchura

District Development Plans for Agriculture Sector in SRC Districts

Table 2.20: DDCs' Budget, 2013/14

(Rs. In Million)

	Unit	Kavre	Dolakha ⁴	Ramechhap	Sindhuli
Infrastructure & Organization Development	Rs million	847.9	1,060.6	374.9	1,328.4
	Percent	35.2	36.5	16.0	44.4
Agriculture, Forest and Environment	Rs million	90.4	80.85	106.2	154.5
	Percent	3.8	2.8	4.5	5.2
Population and Social Development	Rs million	1,303.9	724.0	1,289.4	1,053.0
	Percent	54.2	24.9	54.9	35.2
Water Resources & Land Management	Rs million	62.9	135.9	115.6	103.8
	Percent	2.6	4.7	4.9	3.5
N/I NGOs	Rs million	100.9	901.7	462.9	351.3
	Percent	4.2	31.1	19.7	11.7
Total	Rs million	2,406.00	2,903	2,349.0	2,990.9
	Percent	100.0	100.0	100.0	100.0

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

⁴ Sectoral budget breakdown of Dolakha is not available. It classified budget into DDC budget (NRs 235.2 millions), line agencies (NRs 900.9 millions), Municipality (NRs 63.3 millions) and VDCs (NRs 801.7 millions). However, data presented on table is computed based on classification on other districts.

Table 2.21: Development Priority of Agricultural Sector in SRC Districts, 2013/14

District	Agriculture	Livestock
Kavre	<ul style="list-style-type: none"> • Improve living standard of farmers through sustainable agriculture developing by transforming subsistence farming system to competitive and commercialize agricultural system • Increase production and productivity of agriculture crops 	<ul style="list-style-type: none"> • Increase income of livestock farmers by increasing, livestock production and productivity, employment opportunities and improving quality of livestock assets
Dolakha	<ul style="list-style-type: none"> • Promote commercial farming along the road corridors based on comparative advantages • Implement agriculture commercialization programme in partnership with public sector, private sector and financial institutions • Promote organic farming • Promote cultivation and marketing of potato, Kiwi, Orange, Junar, Pomegranate, off-season vegetables, fruits, tea, floriculture and other cereals crops for commercialization of agricultural crops • Develop district as resource center of Pomegranate, orange, Kiwi fruits • Promote mechanization of agriculture • Promote One village One product focusing on Lokta crop 	<ul style="list-style-type: none"> • Promote, encourage and support for livestock insurance, improve livestock breeding, fattening, healthy milk production, goat rearing, animal vaccination, improved variety of fodder cultivation and awareness programme • Develop district as resource center of cow, pig and goat • Export meat and meat products from the district
Ramechhap	<ul style="list-style-type: none"> • Increase income of farmers by forming and strengthening Agriculture, Forests and Environment committee in all 55 VDCs to implement agricultural related programme of DDC, VDC and DADO such as small irrigation special programme, chemical fertilizer distribution, improved seeds availability etc • Strengthen agriculture and forest committee formed at VDC level • Promote commercialization of high value agriculture crops • Improve food security and nutrition on food deficit area • Promote decentralized and participatory agricultural extension programm 	<ul style="list-style-type: none"> • Motivate farmers for improved and commercialized livestock farming by providing support on livestock feed, breed quality improvement and market developed
Sindhuli	<ul style="list-style-type: none"> • Coordinate with the District Industry and Commerce Association for establishment of Junar processing plants under one village one product programme • Improve Junar transportation facility to processing center 	

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.22: District Agricultural Development Program of DADOs in 2013/14

(Unit: Rs in '000)

Programmes	Kavre	Dolakha	Ramechhap	Sindhuli
A) Commercial agriculture development (Pocket area development)				
Citrus and other fruits development	1,900	720	316	508
Commercial Vegetable production/ Off-season	1,675	1,200	479	981
Potato production	500	600	169	143
Cash/species crop development	-	1,080	460	454
Fruit orchard development	-	-	374	-
Mushroom cultivation	625	-	148	-
Coffee promotion programme	141	-	-	-
Tea promotion programme	211	-	-	-
Cardamom promotion programme	211	-	-	-
High value agriculture production	-	840	-	-
Commercial Apiculture development programme	-	1,200	-	447
Agriculture market development project	2,380	840	21	-
Fishery development	186	-	-	512
Oil Crop production programme	-	-	21	-
B) Food security and nutrition program				
Integrated plant and water management	-	1,200	-	1,226
Seed self sufficiency	1,770	840	-	817
Agriculture mechanization	-	1,100	-	-
Plant protection and support service	-	1,800	17	-
Post harvest and lost minimization	-	600	-	-
Intensive crop production programme	-	-	946	-
Sustainable agriculture management	11,643	-	493	-
Climate smart agriculture promotion	-	-	432	-
C) Poverty reduction				
Agriculture extension support service	-	1,920	1,479	3,078
Planning, statistic and human resource	-	720	-	-
Technology dissemination and inclusive programme	276	-	-	-
Fruit sapling distribution	-	-	-	44
Income generating programme	-	-	-	28
D) Agro-biodiversity conservation				
Agro-biodiversity conservation	-	820	-	-

Note: Above programme budget does not including monitoring and follow-up support programme

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.23: Annual Budget of DADO, 2013/14

(Unit: Rs in '000)

Budget	Kavre	Dolakha	Ramechhap	Sindhuli
Programme	12,713	14,640	5,770	9,546
Capital expenditure	650	515	3,985	14,820
Office operations	1,903	-		1,575
Administrative (Salary and allowance)	11,040	10,000	12,936	10,592
Total	26,306	25,155	22,691	36,533

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.24: Status of District Agriculture Budget per Household and VDC, 2011/12

Districts	Total number of households	No of VDCs *	Total budget (Rs in '000)	Program me budget (Rs in '000)	Total Budget (Rs/HH)	Average Budget per VDC/Municipality	
						Program	Total
Kavre	80,720	90	26,306	12,713	326	14,126	292,289
Dolakha	45,688	52	25,155	14,640	551	28,154	483,750
Ramechhap	43,910	55	22,691	5,770	517	10,491	412,564
Sindhuli	57,581	54	36,533	9,546	634	17,678	676,537
Total	227,899	251	110,685	42,669	2,028	70,449	1,865,140

* includes Municipality (ies) too.

Source: Computed from Approved Annual Budget and Programs, 2013/14 of respective districts DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.25: Different Agricultural Program

SN	Name of the programme	Amount (Rs in '000)			
		Kavre	Dolakha	Ramechhap	Sindhuli
1	Community Managed Irrigated Agriculture Sector Project (CMIASP)				
2	Sericulture development programme	15,386			
3	Crops development programme	2,152	1,113	1,108	1,049
4	Potato and spices development programme	22,731	4,332	2,038	17,408
5	Horticulture Development Programme	575	14,399	191	
6	Food security improvement programme				
7	Sustainable Soil Management Programme				
8	Fishery development programme	705			255
9	Soil testing and improvement programme	1,855		1,325	1,325
10	Cooperative farming, small irrigation and cooperative development	7,381	6,089	7,623	5,347
11	Plant protection programme	2,850			400

Source: Computed from Nepal Development Programme, 2013/14, National Planning Commission 2013

Table 2.26: District Livestock Support Program of DLSO in 2011/12

(Unit: Rs in '000)

Programme	Kavre	Dolakha	Ramechhap	Sindhuli
Livestock breeding programme	220	620	301	89
Commercial cow, buffalo and goat pocket development and extension	745	400	440	
Livestock feed and pasture development	273	425	482	390
Livestock health programme	371	521	447	300
Training and capacity development	360	355	327	54
Awareness building and sensitization related programme	70	200	778	415
Partnership programme	835	35	171	195
Livestock fattening programme	250			
Service center improvement programme	180			
Women and Dalit focus programme	116		22	
Livestock based cooperative development programme	200	50.5		
Livestock laboratory and vaccination programme	226		640	29
Milk production programme			75	
Local livestock breed conservation programme			123	
Livestock based tourism programme			256	
Livestock based market development programme		100		
Other supportive programme such as monitoring, publication, profile preparation, vaccination, monitoring, meeting organization etc	987	270	584	550

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.27: Annual Budget of DLSO, 2012/13

(Unit: Rs in 000)

Programme	Kavre	Dolakha	Ramechhap	Sindhuli
Capital expenditure	180	350	1,460	1,800
Program expenditure	4,883	2,976	4,646	2,022
Office operations	-	1,600	-	89
Administrative (Salary and allowance)	14,241	10,900	10,018	12,250
Total	19,254	15,826	16,214	16,162

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.28: Status of District Livestock Budget per Household and VDC, 2011/12

Districts	Total number of households	No of VDCs *	Total budget (Rs in '000)	Programme budget (Rs in '000)	Total Budget (Rs/HH)	Average Budget per VDC/Municipality	
						Program	Total
Kavre	80,720	90	19,254	4,883	239	54,256	213,933
Dolakha	45,688	52	15,826	2,976	346	57,231	304,346
Ramechhap	43,910	55	16,214	4,646	369	84,473	294,800
Sindhuli	57,581	54	16,162	2,022	281	37,444	299,296
Total	227,899	251	67,456	14,527	1,235	233,404	1,112,375

* includes Municipality (ies) too.

Source: Computed from Approved Annual Budget and Programs, 2013/14 of respective districts DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.29: Different Livestock Related Programs

Programme	Amount (Rs in '000)			
	Kavre	Dolakha	Ramechhap	Sindhuli
Leasehold forest and livestock development (DLSO)	2,295	1,070	1,440	783
Livestock development services	3,849	1,149	5,574	1,167
Livestock farm		17,347		
Livestock market development programme	3,250	1,600	1,300	300
Livestock health service programme	700	367	373	377

Source: NPC 2013 (Computed from Nepal Development Programme, 2013/14, National Planning Commission)

Table 2.30: Production Pockets of Agricultural Commodities

District	Pocket Area	Pocket VDC/ Municipality (N.P.)	Area (ha)
Kavre	Orange and other fruits	Sankhu, Saradabatase, Panauti N.P., Balthali, Chalal, Kusadevi, Ryale, Mahendrajyoti, Kavre, Patlekhet, Phulbari, Shyampati, Sanga, Janagal	855
	Seed Production	Kusadevi, Sanga, Mahendrajyoti, Daraunepokhari, Khanalthok, Koshipari area, Pokhari chauri Majhipheda (Pocket area no. 4), Dandapari area	85
	Vegetable	Dhulikhel N.P., Panchkhal, Baluwa, Hokse, Jyamdi, Nayagaon, Mahadevsthan, Chandeni, Banepa N.P., Panauti N.P., Kavre, Patlekhet, Phulbari, Methinkot, Kanpur, Sarsyukharka, Khanalthok, Mangaltar, Sivalichilaune, Sankhu, Balthali, Tukuchanala, Devitar, Raviopi	725
	Food security	All VDCs of Koshipari, Dandapari and Timal area	1,500
	High wayside Papaya cultivation	Methinkot, Bhakundebesi, Panchkhal area	10
	Apiculture	Phulbari, Patlekhet, Khanalthok, Shyampati, Kusadevi, Ryale, Mahendrajyoti, Dhusenisivalaya, Pokharichauri, Sankhu, Saradabatase, Panauti N.P., Balthali, Kavre	
	Organic Vegetable farming	Mahendrajyoti, Dhulikhel N.P., Kusadevi, Panchkhal	50
	Mushroom	Dhulikhel, Banepa, Panauti,	4
	Dolakha	Commercial vegetable	Bhimeshwar N.P., Melung, Jiri
Commercial fruits		Pawati, Phasku, Sunkhani, Sundrawati, Gairimudi, Mirge, Lamidanda, Laduk	100
Cash and spice crops		Suri, Marbu, Bulung, Orang, Chankhu, Khare, Susmachyamawati, Sundrawati, Sunkhani, Gairimudi, Mirge, Bhimeshwar N.P.	35
Commercial potato		Dhyang, Sailung, Maga, Jiri, Gairimudi, Bigu, Bhusapheda, Kalinchok, Chilankha	140
Food security		Bhimeshwar N.P., Namdu, Melung, Malu, Bhedpu, Pawati, Bulung	205
High value agriculture production programme		Jiri, Khimti and Singati	225
Ramechhap	Commercial orange type fruits	Ramechhap, Bhaluwajor, Okhreni, Salu, Phulasi, Dadhuwa, Hiledevi, Dimipokhari, Lakhanpur, Makadum, Sukajor	230
	Commercial vegetable	Bhamti, Those, Sanghutar, Chisapani, Gelu, Pakarbas, Dorabha, Khimti, Tilpung, Manthali, Bhatauli, Okhreni, Chisajuupani, Sukajor, Ramechhap	160
	Potato production	Daduha, Doramba, Gosawar, Banti, Rasnal, Naghdaha, Bijulikot, Gupteshor, Those, Kumbhakasthali	1,500

District	Pocket Area	Pocket VDC/ Municipality (N.P.)	Area (ha)
	Mushroom	Khimti, Tiplung, Phalase, Naghdaha, Manthali, Ramechhap	NA
	Intensive crop development	Khimti, Betali, Kuwasthali, Ramechhap, Manthali, Sanghutar, Chisapani, Bhattauli, Pakabar, Puranogaun	3,594
	Winter fruits	Doramba, Gouswara, Hiledevi, Bamti, Gumdel, Those, Chuchure, Rasnal, Okhrene, Bhuj, Sukajor	200
	Export promotion (Ginger, cardamom)	Bamti, Priti, Kubhukasthali, Gupteshwor, Daduha, Phalasi	
	Summer fruits	Manthali, Bhattauli, Gelu, Pakarbas, Kathjor, Sanghutar, Bhirpani, Chisapani, Khimti, Bhaluwajor, Himganga, Rampur5	55
	Citrus type fruits	Namdi, Betali, Bamti, Kubhukasthali, Duragaon, Saipu, Bijulikot, Makadum, Naghdaha, Himganga, Deurali, Gothgaon, Dimipokhari, Pakarbas, Lakhanpur, Bhuj, Priti	1,100
Sindhuli	Integrated crop and water management	Bhiman, Gwaltar, Cithauli, Bhimsthan, Mahadevsthan, Hatpate, Dudhauri, Gadauri, Dandiguranse	8,250
	Seed sufficiency	Kamalamai N.P., Nipane, Kapilakot	15
	Crop rotation extension and soil improvement	Kamalamai N.P., Dudhauri, Kapilakot, Bhimsthan, Cithauli, Mahadevsthan, Hatpate	100
	Ginger cultivation	Arunthakur, Kakurthakur, Bhadrakali, Nipane	175
	Seasonal vegetable production	Bhadrakali, Kamalamai N.P., Hatpate, Mahadevsthan, Bhimsthan, Dudhauri, Underconstruction highway side	350
	Off-seasonal vegetable production	Cithauli, Kapilakot, Dudhauri, Bhimsthan, Kamalamai N.P., Jalkanya, Ratanchura	80
	Commercial orange type fruits	Tinkanya, Jalkanya, Baseshwar, Ratanchura, Underconstruction highway side, Dumja, Majhuwa, Jhangajholi ratmata	624
	Potato production	Jhangajholi ratmata, Kamalamai N.P., Ratanchura, Bitijor, Jalkanya	70

Source: Compiled from Annual Progress report of District Agriculture Development Office (DADO Kavre, 2012; DADO Dolakha 2012, DADO Ramechhap 2012 and DADO Sindhuli, 2012)

Table 2.31: Livestock Production Pockets

Districts	Livestock	VDCs/Municipality (N.P)
Kavre	Cow	Panauti N.P, Sarada Batase, Panchkhal, Mahadevsthan, Chandeni Mandan, Anaikot, Raviopi, Dhulikhel N.P., Ugrachandi Nala, Janagal, Sanga, Sankhupaticaur, Mahendrajyoti, Banepa N.P.
	Buffalo	Kushadevi, Panauti N.P., Anaikot, Dhungkharka, Nayagaon, Panchkhal, Chalal, Jyamdi, Mahadevsthan, Patlekhet, Chandeni Mandan, Raviopi, Devbhumi Baluwa, Kharelthok, Jaisithok, Sarada Batase, Hokse, Kavre, Ugrachandi Nala, Mahendrajyoti, Khanalthok, Methinkot, Devitar, Tukucha Nala, Phulbari, Likhel, Balthali, Ryale
	Goat	Chattrebanjh, Dapcha, Daraune Pokhari, Puranagaon, Khanalthok, Kanpur Kalapani, Sarsyukharka, Birta Deurali, Kattike Deurali, Pokhari Chauri, Chaubas, Gothpani, Madankudari, Pokhari Narayansthan, Kurubas Chapakheri, Mechhe, Bhumidanda, Balting, Saramthali, Bakhani, Dandapari area
	Pig	Panauti N.P., Banepa N.P., Dhulikhel N.P., Ugrachandi Nala, Panchkhal, Sanga, Jaisithok, Kharelthok
	Poultry	Dhulikhel N.P., Banepa N.P., Panauti N.P., Panchkhal, Ugrachandi Nala, Sanga, Methinkot
Dolakha	Goat	Boch, Bhirkot, Bhimeshwar N.P., Sahare, Syma, Pawati, Jugu, Mirge, Melung, Lopilang, Orang, Khare, Jhyaku
	Cow	Boch, Bhirkot, Bhimeshwar N.P., Sunkhani, Sushmachyamawati, Pawati, Laduk, Lakuridanda
	Yak	Syama, Jiri, Mali, Jhyaku, Suri, Chankhu, Marbu
	Cheese	Syama, Jiri, Mali, Chankhu
Ramechhap	Buffalo	Khimti, Gelu, Tilpung, Manthali, Kathjor, Bhaluwajor, Bhattauli, Pakarbas, Ramechhap, Okhreni
	Cow & Yak	Bamti, Gumdel, Those, Chuchure, Rasnal, Priti, Bhujji, Doramba, Dadhuwa, Goshwara
	Sheep	Betali, Rasnal, Gupteshwar, Bhujji, Doramba, Dadhuwa, Those, Chuchure
	Goat	Gelu, Chisapani, Puranagaon, Himganga, Rampur, Okhreni, Ramechhap, Bhaluwajor, Bhirpani, Rakathum, Bethan, Betali, Chuchure, Those, Phulasi, Bamti, Lakhanpur, Khimti, Kathjor, Duragaon, Sangutar, Namadi
	Poultry	Khimti, Tilpung, Manthali, Bhattauli, Rampur, Ramechhap
	Pig	Ramechhap, Sukhajor, Bhaluwajor, Manthali, Hiledevi, Bhattauli, Bethan
Sindhuli	Cow	Kamalamai N.P. area
	Buffalo	Kamalamai N.P. area, Ranichuri, Sithauli, Belghari, Jalkanya, Bhadrakali, Majhuwa, Netrakali, Amale, Tamajor, Jhanghajholi Ratmate, Rampur, Mahadevsthan
	Goat	Kamalamai N.P., Kapilkot, Bastipur, Ratanchura, Belghari, Bhadrakali, Dudhauli, Ladhahir, Amale, Sitalpati, Dandiguranse, Pokhari Bhuwaneshwari, Dudbhanjyang
	Poultry	Kamalamai N.P., Bhimeshwar, Kapilkot, Dudhauli, Jhanghajholi Ratmate, Harsahi, Sithauli
	Sheep	Mahadev Danda, Tinkanya, Bitijor, Thosrongkhola, Bahuntipung
	Rabbit	Ranichuri, Ratanchura, Kuseshwar Dumja
	Pig	Kamalamai N.P., Ranibas, Hatpate, Sithauli, Harsahi, Nipane, Tandi, Ladhahir, Dudhauli, Sitalpati

Source: Compiled from Annual Progress report of District Livestock Service Office (DLSO Kavre, 2012; DLSO Dolakha 2012, DLSO Ramechhap 2012 and DLSO Sindhuli, 2012)

Table 2.32: List of NTFPs Traded from SRC Districts

SN	Name of NTFPs	Kavre	Dolakha	Ramechhap	Sindhuli
1	Lichens	√	√	√	√
2	Lauthsalla	√			√
3	Chiraito	√	√	√	√
4	Salla simta	√	√		
5	Majhitho	√	√	√	√
6	Jibanti	√			√
7	Fruit of Paiyu	√			
8	Kurilo	√		√	√
9	Nundhiki	√			
10	Pyauli flower	√			
11	Bark of Pawan	√			√
12	Sughandhawal	√		√	√
13	Bhadraksha	√			
14	Akarkanda	√			
15	Resin	√	√		√
16	Gujargano		√		
17	Padamchal		√	√	
18	Pakhanbed		√	√	√
19	Dhasingre (Machino)		√		
20	Amala		√		
21	Nagbeli		√		
22	Lokta		√	√	
23	Argeli		√	√	
24	Bisphej		√		
25	Allo		√		
26	Sunpati		√		
27	Kholme		√		
28	Kutki		√	√	
29	Bish			√	
30	Indreni seeds			√	
31	Amriso				√
32	Bhorla leaves				√
33	Bhutkesh				√
34	Kukur tarul				√
35	Musli				√
36	Nepali Dalchini				√
37	Timur				√
38	Tejpat				√

Source: Compiled from District Forest Working Scheme of Respective Districts (DFO Kavre, 2008; DFO Dolakha 2008, DFO Ramechhap 2007 and DFO Sindhuli, 2008)

Table 2.33: Status of Leasehold Forests User Groups

District	No of groups (No)	Area (ha)	HHs (No)	Area per HHs
Kavre	416	2,467	3,982	0.62
Dolakha	177	851	1,781	0.48
Ramechhap	439	2,576	3,788	0.68
Sindhuli	411	2,593	3,730	0.70

Source: Leasehold Forestry database, Department of Forests, 2013

Table 2.34: Location of Leasehold Forestry Program

SN	District	Name of the VDC/Municipality (N.P)	VDCS
1	Kavre	Anaikot, Budhakhani, ChalalGaneshsthan, Dandagaun, Dapcha, Chatraibhanjha, DeuvumiBaluwa, Devitar, Falemetar, Ghartichhap, Gokule, Kharelthok, Kushadevi, Methinkot, Milche, Nala (Ugrachandi), RaviOpi, RyaleBhir, Saldhara, Salmechakala (Taldhunga), Sathighar Bhagawati, SikharAmbote, Naldum, Kharepangu, Karpachok, and SipaliChilaune	26
2	Dolakha	Bhimeswor N.P, Bhirkut, Gaurisankar, Jhyaku, Jiri, Katakuti, Laduk, Magapawa, Mali, Malu and Suri	11
3	Ramechhap	Bhadaure, Bhatauli, Bhirpani, Bijulikot, Chisapani, Dadhuwa, Deaurali, Doramba, Guptesor, Hiledevi, Khadadevi, Khaniyapani, Kubukasthali, Lakhanpur, Makadum, Maluwajor, Nagadaha, Okhreni, Pakarbas, Pinkhuri, Pritee, Puranagau, Rakathum, Ramechhap, Rampur, Salupati, Sukajor, Himganga, Goshwara, and Tokarpur	30
4	Sindhuli	Amale, Arunthakur, Bastipur, Harsahi, Jalkanya, Jhangajholiralmata, Kholagaun, Lampantar, Mahendrajhyadi, Majhuwa, Nipani, Pipalmadi, Ranibas, Ranichuri, Ratanchura, Sitalpati, Tamajor and Tribhuwanambote	19
	Total		81

Source: DLSO Report, 2012

Table 2.35: Present Level of Irrigation Development in the Study Districts (2011/12)

District	Total arable land (ha)	Irrigable area (ha)	Irrigated Area (ha)
Kavre	29,921	7,958	4,414
Dolakha	24,042	4,911	5,211
Ramechhap	32,276	4,248	5,391
Sindhuli	34,333	20,652	10,898
Total	120,572	37,769	25,914

Source: Computed for Statistical Information in Nepalese Agriculture, 2011/12, MOAD

Table 2.36: Agencies Involved in Irrigation Development

Agencies	Focus	Kavre	Dolakha	Ramechhap	Sindhuli
Project (Local Governance and Community Development Programme)	Small irrigation			√	
Irrigation Development Division	All type of irrigation	√	√	√	√
District Agriculture Development Office	Small irrigation	√	√	√	√
District Technical Office	Small irrigation	√	√	√	√
NGOs	Small irrigation	√	√	√	√
District Development Committee	Small irrigation	√	√	√	√

Source: Compiled from District Development Plan of Respective Districts (DDC Kavre, 2013; DDC Dolakha 2013, DDC Ramechhap 2013 and DDC Sindhuli, 2013)

Table 2.37: Annual Irrigation Development Plan of Irrigation Development Division

1. Kavre

Program	Amount (NRs 000)
Community managed Agricultural Areas	
Community Manage Irrigation Agriculture Sector Programme	
Tesrokulo Irrigation Program, PanchKhal 5 and 6 Hokse 1 to 4	
Sikhar kateri Irrigation program, Opi 1,2,5	
Tatalebidhi Taitar Irrigation program, Nayagau Mahadevstan	1,800
Project Identification Works	50
Chakhola Maina Kunti Irrigation programs, Mahadevstan	
Milchefat irrigation program	
Malpi Lilawati irrigation Program, Panauti- 4	
Tinsaya kulo Irrigation program, baluwa	
Banthali fanth Irrigation program, Banthali	
Chukhabesi Amabote Irrigation program, Sasyukharka VDC	
Peepaltar Irrigation program, Daraune Pokhari	
Boldechaur Irrigation program, Dukharka	
Andheri kulo nirman Irrigation Program, Sikhar Ambote	
Chuhichumma Dada gau kharuwa- Peepal dada Irrigation Program	
Chakhola mautakunta Irrigation Program, Mahadevstan	
Narayantar Irrigation Program, Sikharambote 5,6,7,8	
Peepaltar Irrigation program, Daraune Pokhari -04, vchatreebanj-3. Puranogau 3,5	
Other Irrigation Programs	
Underground shallow and Deep Tubewell Irrigation Programs	
Preservation and sustainable management of Irrigation system	
Repair and Maintenance Projects	
Dovantara Irrigation system	
Gimti Irrigation program, Narayan Pokhari	
Situwa Sipaghat Irrigation System Renovation, Gairi Bisauna Deupur	

Program	Amount (NRs 000)
Valayotar Irrigation system, Kavre pokhari chaur 1,2	
Sinduredai Kulo Irrigation System, Gairi Bisauna Deupur 6	
Saatbise Bagarkhet Irrigation system, Fatkasile -03, 4	
Mulbadh Kulo jaisiChowk	
Baskhola Khet Irrigation system, Fulbar -06, Buchakot	
Lashyatar Irrigation System, Bhumdu -03	
TataleKulo badh nirman and Kulo Marmat , Anaikot	
Janaitar Irrigation System 1,3 Chandi	
Arubote Irrigation System, Bakhrasimle -05	
Ghattekhola Irrigation System	
Panighat Irrigation System	
Dalabesi Irrigation Program, BhimKhor	
GoldeChaur Irrigation System, DharmaKahrka	
Dhyalbu Khola Irrigation system, Kusahadevi	
Irrigation Schemes with New Technology (water-efficient types, e.g. pond, water harvesting, etc.)	
Serial Projects	
Chapa Pokhari reconstruction, Kavre -04	
Dihi Keht Irrigation Program Majhifera -02, Kavre	
Pokhara chauri Irrigation Program, Pokhari Chauri	
Gambu khola Thuli Khet Irrigation Program Gothpani, 2 (15 He)	
jimrelikhola bata upallo kattike Irrigation Construction	
Kattike chiuri Bas dhara, Kattike Deurali -02	
Karukhola Ahal Dado Irrigation Program, Gothpani , 08	
Daule mata dada baltar Chiuri Bas Pokhari, Karktike Dhaurali	
Indrawati Lifat Irrigation programs, Kuntabesi	
Kalodhunga Simkhet Peepal bot Irrigation program	
Preparation of working procedure and implementation of feasible projects in a prioritized manner	
Falte Keht jamula dada Irrigation Pokhari nirman, falate	
Kupre Kholcha Irrigation program	
Raj app besi Irrigation Kattike Dhaurali -01	
Simbot Irrigation Pokhari Program , Dumrepani	
Syale Chipigau Irrigation Program	
Kafle Irrigation Pokhari Majhifeda	
Somsur Thopa Irrigation, Madan Kudari, -02 Kavre	
Ghisi gau sopiolo veg pokhari Irrigation programs	
Losadol Dovan Khola Irrigation Program	
Baun Chaur Irrigation Program, Kalanti Vumedada	
Piyu khola pokhari Irrigation Program, Majhifeda	
Chisapanitar Lift Irrigation program, Jyamdi	
Rusedhara Irrigation porogra, Mahadevstan	
Medium irrigation project	
Serial Projects	
Vakundebsi, dapcha Irrigation Program, Bhakundebsi	3,000

Program	Amount (NRs 000)
Malpi Lilawati irrigation program, panauti	500
Patne Khola Chyangsikharka Patgau Besi Irrigation Program, Chsidkharka	2,500
Khahare punga Irrigation Program, KhaharePunga	1,500
Asikhola sarbavang Irrigation Program	2,000
Arubote Irrigation Program	1,500
Preparation of working procedure and implementation of feasible projects in a prioritized manner	250
Pauwabesi Irrigation Program, Holmutar -07	
Tilechaur Irrigation program, Meche 6,7 and 9	
Dor khola Irrigation Program, Chyamarad besi -07	
Tusare Bajekhet Irrigation program, Pokhari chaur	
Palanchwok Irrigation Program, falametar	
Cha Khola Mainakunta Irrigation Program	
Khahare Fath Irrigation program, Birta deurali	
Pauwabesi fath Irrigation Program -07	
Banthali Irrigation Program, Banthali	
Panighat Irrigation Program, Ugratara	
Jageswor Irrigation Program, mahadevtar	
Bafal Irrigation program, Nagregache -7,8,9	
Valukhola Irrigation program	
Tin Saya Kulo Irrigation program, Baluwa 7,8,9	
Mahadevtar irrigation Program, Mahadevtar	
Baun Chaur Irrigation Program, Kalanti Vumedada	
Dovantar Irrigation Program, Madan Kudari, 6.4	
Panch Khal Upatteka Irrigation Program, Panchkhal	
Undertaking Project Feasibility	550
Chatichaga Karukhola Irrigation, Githopani	
Panchkhal Upatteka Grand Irrigation survey	
Dhartichap Irrigation Program	
Ghatebadh Aasikhola Majh Irrigation program, Anai Kot Mahadevstan	
Tusare Bajekhet Irrigation program, Pokhari chaur	
Bagulta besri dovan Irrigation Program Sikharambote -9	
Chakhola Kirtetaru Jagrumti Irrigation Programs, Nayagau	
Thuldhunge Ja, ou, Sa Simthali	
Figu Khola Irrigation Program Panchkhal, 7 VDCs including Devbhumi	
Dharsingkhola Jimledha Dadagau	
Dhaneko Badh Rahele, Anekot	
Hile jaljale Badh Irrigation Program, Tukukacha nala	
Thulokhet Irrigation program, kusadevi	
Galgau Sitar Irrigation program, Mahankal vankdeu	
Wakhola maita kunta Irrigation Program, mahadevstan	
Asikhola sarbavang Irrigation Program	
thulo parsel Irrigation Program, thulo pokhari	
Shree Raj kulo Irrigation program, Chaubas	

Program	Amount (NRs 000)
Dorkhola irrigation Program, Chyamarang besi -07	
Khahare Fath Irrigation program, Birta deurali	
Gaireko mul irrigation program, Badare, Pokhari chauri	
Bichari Badh kulo Bistar Irrigation Parogra, Pkhari Narayanstan	
Bagmati Irrigation program, milche Barnabansi- 05, kavre	
Pokhari khola Dhakal chumka Irrigation programBaluwapati Deupur	
Kuwaapani irrigation rprogram pokhari chauri	
Aaptar Irrigation Program dadagau	
Majhitar Irrigation Program, Saldhara	
Bhimtar Irrigation Program Khaharepunga, -3,4, kavre	
Kindre irrigaitonj program , Sikhar ambote 1,2,3,4	
Lamsikhola Khurkuttol Irrigation Program	
Agale Badredaha rugure dada Irrigation program, gothapani	
Pasthali Irrigation Program, Panauti -013	
Masane khola Irrigation program, Bankhuchaur	
Vyatar irrigation program, Pokharichaur	
Dadagau Irrigation Program Mahadevstan -01	
Mankul Khet Rosi Khola Irrigation program	
Other Irrigation Programs	
Total	18,925

2. Dolakha

Program	Amount (Rs 000)
Reconstruction and Protection Program	
Reconstruction and Sustainable mangement of Irrigation system	
Reconstruction and Preservation of 'Ka' Irrigation system	
Guhekhola Chalise small farm land, Malu -4	150
Jamune Irrigation system, Pawati-2	200
Agemul Dadagau GairiKhet Malu -5	100
Devistan Irrigation System, Mirga -7	200
Sand Vadauri Irrigation System, Pawati -2	100
BataseKhola Irrigation system Gairigaun Jhule -1	100
Mane Irrigation System, Dudhpokhari	100
Nibuwatar Irrigation system, Fasku -1	100
Marbutar Irrigation System, Namdu -6	100
Gopikhola Irrigation System, Gairimudi -1	100
BeldeKhola Lama Chang Irrigation System, DadaKharka -7	100
Vusafeda Irrigation system, Vusfeda	200
Garve Gaiabari Irrigation system, Melung	200
Simkochair Ketorshor Irrigation System, Pawati	150
Kumburekhola Sera Kulo Irrigation System, Virkot- 02	100
Kholma Khola Irrigation System, DudhPokhari -04	100
Durbukhola Irrigation system, Gairigau- 03	100

Program	Amount (Rs 000)
Agemul Dadagau GairiKhet Malu - 04, Kotegau	100
Irrigation Schemes with New Technology (water-efficient types, e.g. pond, water harvesting, etc.)	
Serial Projects	
Okhar Bote Pallo Padheri Irrigation Program , Vageri -08	25
Jilu Modern irrigation system program, Vi, Na, Pa (20 Ha)	0
Daduwa AsareVirkot Thopa Irrigation Program (20 Ha)	300
Majesh Pokhari Irrigation Program (20 Ha)	600
Sapkota Irrigation Pond Vi Na Pa -07	300
Guiya Khola Thopa Irrigation Program, Pawati -03 Bakhrechhap	800
Patale Sallari Thopa Irrigation Program, Namdu -08	100
Aaru kharke Thopa Irrigation Program, Dhyang Sukathokar -09	600
Iron Pond Irrigation Program, Sailungeshwor -05	800
Chumi Thopa Irrigation Program, Gairimudei -03	300
ThuloKhola Irrigation Program, fasku 08, Sanjhe	600
Lakurithopa Irrigation Program, Pawati -07	200
Sim pokhari Irrigation Program, Vimeshwor- 12	200
Birauti Narding, Thopa Irrigation Program, Jugu- 09	200
Mal Dada Pokhari Irrigation Program, Vi.Na.Pa -01	200
Implementation of feasible projects in a prioritized manner	
Aaitabare Pokhari Irrigation Program Pawati -06	
Biruwa Pokhari Irrigation Program, Vinapa -06	
Iamche Ahal Pokhari Irrigation Program, Vusafeda -02	
Birauti Narding Thopa irrigation Program, Jugu -09	
Khopung dhara Thopa Irrigation Program, Khopa Changu- 05	
Dhadkharka Mulbaripokhari Irrigation Program, Vi, Na, Pa -01	
Ratmate Thopa Irrigation Program Malu -01	
Dhuladhule Kapti Pokhari Irrigation Program, Suri -02	
Deurali Thopa Irrigation Program, Boach	
Chagekhola thopa Irrigation Program, Sunkhani -06	
Kali Pokhari springcolour irrigation Program, Sailungeshowr -06	
Jalpa Pokhari Irrigation Program Pawati -09	
Taunani Simpani Pokhari Irrigation Program Vi.Na.Pa -03	
Simkochaur Kedaeswor Thopa Irrigation Program, Pawati - 09	
Mal Dada Pokhari Irrigation Program Vi.Na.Pa 01	
Chagekhola thopa Irrigation Program, Boach -06	
Gogulate Irrigation Prgoram Pokhari Bigu- 01, Gogulat	
Chipchipe ko Muhan Pokhari Irrigation Program Virkot- 08	
Valuswara Kattike Pokhari Irrigation Program, Sailungewor - 09	
Samkharka Modern Technological Irrigation Program, Vinapa -12	
Kattike Pokhari Irrigation Program, Vinapa -06	
Fatakehola Irrigation Program, Malunga -06	
Thapagau Simdharo irrigation PO=rogram Dhyangasukathokar -04, Thapagau	
Others New Technological Irrigation Programs	

Program	Amount (Rs 000)
Medium Irrigation program	
Serial Projects	
Dadekhola, Dhayangkhola Dovan Irrigation Program, Dhyang Sukathokar (140 Ha)	1,000
Ghatte khola Irrigation Program, Bhimsen Na.Pa -05 and 07 (48 Ha)	2,000
Chyangsedhari Irrigation Program, Sukathokar (100 Ha)	1,000
Chilakha Irrigation Program, Chilakha (100 ha)	1,000
Fadkekhola Irrigation Program, Melunga - 6,7,8,9	3,000
Fulek Irrigation Program	1,500
khori Irrigation Program	500
Majhgau Sanitar Marge Irrigation Program (40 ha)	3,500
Jhaprakhola Irrigation Program, Gairemudi , -05 and 06	2,500
Katakuti Okharpauwa Irrigation program, Okharpauwa (100 ha)	1,000
Maltikhola Kul Dhunga Irrigation Program, Melunga -01 and 02	100
Sailungfedi dadakharka Irrigation Program, Dadakharka 1 to 9 (200 ha)	500
Kavre Irrigation Program, Kavre -05	500
Nigale jamune Irrigation Program, DadaKahrka -07 (42 ha)	500
Development of working guidelines of feasible projects and implementation on a prioritized manner	250
Bodhle khola Irrigation Program, Dadakharka	
Tapuko Vir Kauli Irrigation Program, Va. Na. Pa -011	
Sundrawati Irrigation Program, Sundrawati and Sunkhani	
Sulsing Surkhe Irrigation Program Lakuri dada	
Mathillo Milti khola Irrigation Program	
Hosiga Irrigation Program, Thulopr	
Matpadevstan Khaharekhola Irrigation Program, Nampu -08	
Virtane Irrigation Program, Chilakha- 02, 3 and 4	
Pau Vaisidar Irrigation Program, Vimeswor Na.Pa -02	
Havi Chahara Irrigation Program Vi.Na.Pa 1 and 5 to 13 (450 ha)	
Adhari Khola Irrigation Program, Namdu -05 to 07 Sirubari Dada Khet	
Kali Daha Riyale Irrigation Program, Jase 7 and 8 (60 ha)	
Dade Rin salle Irrigation Program	
Matillo thulo Adheri Khola Irrigation Program, Pawati 4 to 7 and 9	
Dudh Pokhari Irrigation Program	
Duduwa khola Irrigation Program, Bulug	
Ghatte kulla Irrigation Program, Maga pauwa	
Simkhet Ange Irrigation Program, Sailungewor -09 Gharamghar	
Tallo Andheri Khola Peepar dada Irrigation Program, jhule -09 (40 ha)	
Sugarcane (ukkhubari) Kaule irrigation Program Vi.Na.Pa- 011	
Chapakhol Irrigation program, Thulopatal	
Juhekhola Che.Pa.Paa Namdu Irrigation Program	
Maldada VI.Na.Pa -01 Irrigation Program, Patatol	
Syangwa Irrigation Program, Laduk	
Mathillo Mirtikhola Irrigation Program, Melunga	
Bille Khola Irrigation Program. Katakuti -01 to 7	

Program	Amount (Rs 000)
Project identification	50
Vut chahara chalise kole kaule Irrigation Program Vi.Na.Pa 11, ukkhubari	
Mahadeu Guhiye Kothekhola Irrigation Program, Vi.Na.Pa 11 ukkhubari	
Rajkulo Irrigation Program, Vimeshwor Na.Pa -02	
Anndheri Khola Irrigation Program, Pawati. 07	
DihiChautari Irrigation Program, Vimeswor Na. Pa	
Chahare Khola Irrigation Program, Pwati -07	
Mahavir Irrigation Program, dudh Pokhari	
Khari Khola Tin Dhovan Irrigation Program, GairiMudi -03	
Dade 3 Irrigation Program Sailungewor	
Chayane Khola Busti Jholung Irrigation Program, Vi.Na.Pa 6 Busti	
Lukuri Chyamma Irrigation Program, Namdu -04	
Pautrakhola Irrigation Program, Suri	
Jhorkhola Irrigation Program 3,4,5	
Vurunga Khola Irrigation Program, Fusku- 09	
Rato Chahara Irrigation Program, Fusku	
Patlekhola Irrigation Program, Kalinchok tarevirr	
Fadkekhola Irrigation Program, Vedpu	
Kotake Baisake Chinke Irrigation Program, Boach	
Votekhet Kaurini Matillo Padehre Irrigation Program, Melunga- 4,6	
Ghatte khola Irrigation Program, Kavre	
Kungel Irrigation Program, Laduk -5	
Vittekhola Thulo Khola Khahare Khet Irrigation Program -02	
Nau saya tallo Kuli Sichahi Irrigation Program Melunga -02 to -8	
Batase Khola Kalodaha raile irrigation Program, Jafe- 08	
Other Irrigation Programs	
Total	26,425

3. Rammechap

Program	Amount (NRs 000)
Repair and Maintenance Projects	
Reconstruction and Sustainable mangement of Irrigation system	
Wathan Irrigation Program 1,4,5	100
Nerujhadaule Dhungefat Irrigation system -05	100
Adheri Khola Irrigation Program, Mahbote	100
Sadhutar Irrigation program	100
Gumdi Bhadaure Irrigation system, Gundi	100
Tamakshi Irrigation system, agharabise Chisapani	100
Khokar Khola Irrigation system, Fulasi -06	100
Sadi Khola Irrigation system, Karjan fulasi -07	100
Pallo buffer Salibote, Chakhu -03	100
Pokuse Bhanise Bijulikot -05	100
Andheri Khola Irrigation system, Paspur	50

Program	Amount (NRs 000)
Thulokhola Irrigation system	50
Serial projects	
Andheri Khola Irrigation system, (5 He)	
Jordhara Pokhari Irrigation program	
Pakhabari Pokhari irrigation program, khimti	
Satidevi than Irrigation program, gunsi	
Tilpudsimthopa irrigation program	
Bhujedada T State irrigation program	
Magrakhola irrigation program, Fusali -09	
Initiate the implementation process of feasible projects in a prioritized manner	
Pokharedada Pokhari irrigation program Fulasi	
Chiurabote Thopa irrigation program, Khimti	
Bhatere Chaur Thopa Construction, Betale -03	
Thokarpur Pokhari Pokhari irrigation program	
Khahare Thopa irrigation program	
Magarchaap Thopa irrigation program -05	
Simmpane Pokhari irrigation program, Gulsi	
Chadare Pokhari irrigation program Gelu	
Topla Thopa irrigation program -06	
Ghatte khola irrigation program - 02	
Jordhara Pokhari Irrigation program	
Medium irrigation project	
Serial projects	
Bramha Bishnu khola irrigation program -03, 07	7000
Patali Serawesi irrigation program -04 to 08	1,500
Khokarkhola Bhangal irrigation program -09	500
Jyamire irrigation program, Khimti -05	500
Raj kulo Irrigation program	1,500
Initiate the implementation process of feasible projects in a prioritized manner	250
Lambirebesi Likhukhola Irrigation program	
Ranbi Kola Thulo Khet Irrigation program, Majuwa Nigalpani	
Birtatar Irrigation program, Sukajar	
Satdhara Puditar Irrigation program, Lakhanpur	
Haluwa khola v, Nimdi	
Burkekholo Irrigation program, Rasanalu	
Likhukhola Irrigation program	
Tilpung khola Jud Muhan Irrigation program	
Sisneri Ghattekholo Irrigation program	
Simle Deurali Khola Irrigation program, Gunsi	
Bagarbesi Arubote Irrigation program 5,3,1	
Doramba Irrigation program, Doramba 2,3,4	
Undertaking Project Feasibility	

Program	Amount (NRs 000)
Dimi Pokhara Khola Irrigation program -07 , 8	
Toki simle Irrigation program	
Gaudari Luvu Irrigation program	
Airam Khola Muhan to Tilpung Irrigation program	
Bimire Khola sansole kaichal Irrigation program	
Rajai Simla besi Irrigation program	
Jyamire irrigation program, Khimti -05	
Vaisiseta Pahara Irrigation program	
Ghuseni basasi to sudhatar - 07, Lambire besi Irrigation program	
Fundri Khola tunnel construction, Himganga	
Lampate Irrigation program	
syahale khola construction, Gothgau -08	
Larku khola Sundhatar Irrigation program	
Khairekhola Hirkotar Khimti Besi Irrigation program, Gunsu -09,8,4	
Satidevi Pokhari Besi Irrigation program, Betali -08	
Other Irrigation programs	
Total	23,370

4.Sindhuli

Program	Amount
Community Management Irrigation Agriculture Sector Programme	
Construction of work plan approved projects	
Balubai Irrigation Program	1,050
Tari Irrigation Program	1,575
Dhami Dumariya irrigation Program, Kamala Metorcity	7,350
Devjor hadi damar irrigation Program, mahadevstan	200
JirDha Khola Irrigation Program, Bhimstan	3,600
Project Identification Works	50
Mulkulo Irrigation Program, Bhwaneshwori	
Kyarsal Tinralai irrigation Program, Peepalmadi	
Ghante Irrigation Program	
Dhari Thunsi Irrigation Program, Singhaura -09	
Pihire Irrigation Program, Bhimsen -03	
Pakha Vitte Irrigation Program, Bhimsen -03	
Changuli Bhutaha irrigation Program	
Balhattar khar Khol Irrigaiton program, dadi	
Thakur Khola Irrigation program, Ladavir	
Shitalpati Irrigation Program. Shitalpati	
Sarahagara Irrigation Program, Sungaure, Ladivir.-02	
Bari kuo irrigation program, vuwaneshwori	
lukumkhola irrigation Program, Dubachaur 7,8,9	
Defunct SISP (dadi Irrigation Program, ratanpur)	
Dhutaha Irrigation Program Kulo , Kapilakot	
PautiKhola Irrigation Program	

Program	Amount
Chalise Kulo Irrigation Program	
Mul kulo irrigation Program	
Moti Irrigation Program, Pokhare VDC	
Kusumtar Irrigation program	
Kamal Pattyani Irrigation program	
dadikhola Irrigation program, Jarayo tar	
Bijayapur Irrigation Program, Bittijare	
sarki Kulo Irrigation Program	
Kamala suke watanchaudi	
Other Irrigation programs	
Underground Deep Tubewell Irrigation Program	2,600
Maintenance and construction Programs	
Repair and maintenance of irrigation programme	
Pathar Khola Dovan Dadi Guras VDC	100
Simalekula Silapati -09	100
Dhungin Panch Siwai system, Kamalamai mertroctiy	100
Harsahi Irrigation tunnel construction	100
Sanguwale tallofate Irrigation System	100
Parta Kamitar Irrigation tunnel, Mahadevstan, -04 devjot	100
Koilafath Chandrakhola Irrigation System	100
Simlekula Aggrilchowk	100
Nagvanjyang Karttike Jogi Dada Sombata kulo -04	100
ghumare khola irrigation System	
chadadha irrigation system, Bhinstan	
Gadauli Thulitar Irrigation System -07	
Integrated crop and water management	
Chadaha Irrigation System (200 ha)	200
New Techonology based Irrigation system	
Sequencial Programs	
Mathillo Punchure Pokhari irrigation program	800
Bhimstan Thopa Irrigation Program, Bhimstan -05	900
Votekhola Pokhari Irrigation Program, Ratanchura	200
Kalimati Pire Dhap Pokhari Irrigation program -04	200
Khorkhola Irrigation Program, Hapte -04	200
Dhungindhara Bari Irrigation Program -05	200
Serial projects	
Sunkoshi tar Lift Irrigation Program, Ratamata	
Taibar Bora bari Irrigation Program	
Thopa Irrigation Program -01	
Salbote Irrigation Program	
Gadrame Irrigation tunnel , Balajor -02	
Patarai khola Irrigation Program, Kyaneshowr 2 and 4	
Fusrai sana Irrigation tomarkhola, hariharpargadi	

Program	Amount
Sallebas Thopa Sichahi Program -04	
Medium irrigation project	
Kogati Irrigation Program, Dudhauri	
Bohoretar Bari Irrigation Program, Jhagajholi ratamata	
Amote irrigation Program	
balhatta khar khola irrigation Program, dadigarni (60 ha)	
Preparation of working procedure and implementation process of feasible projects in a prioritized manner	250
Buflirrigation Programs, Nipalmadi - 09	
Palpali dada Kulo Irrigation Programs, ratanchura	
Kahyarsal Irrigation Program	
Dahaka Irrigation Program	
Vuwaneshwori Sarki kulo Irrigation Program	
Mahendra Jhadi Irrigation program	
Valukhola Irrigation Program, Lampanatar	
Koila Chauki Irrigation Program	
Kamalasuke Irrigation Program	
Beldhari Irrigation Program. Beldhari -01	
Ladavari Irrigation program	
Amle irrigation program, Ratanchura	
Thulakhola irrigation program, 2,3	
Kavre Irrigation Program, Ranichuti -05	
Undertaking Project Feasibility	50
Kusumtar Irrigation Program	
Jyamiredharkeht Irrigation Program	
Sawale kholsi tallo sagbale Irrigation Program, Kamalamai	
Ratnawati VDC kohalbot Irrigation Program	
Sunkoshi Nadibata Khdsad Irrigation Program	
Kagla Thakur Guhan Thai Dudhauri Ladavir Irrigation Program	
bagmati river Kanyadaha Irrigation Program, Peepal madi	
waltar Irrigation Daid -05	
valuwadar Irrigation Program, Kapilkot	
Mangalpur yatri Irrigation Tadi	
Dhoksila Irrigation tunnel, basebar, 7 and 8	
Nyadaha Irrigation Program 1,2,3 and 4	
PeepalVanjang irrigation Kulo Beldhari Tatha Bhimstan	
Devostan Ardhari Dihitar Kalbrikshya 4,6,7	
Pautepokhari Irrigation Program, Pokhari VDC 2,4,5,8,9	
Hattisar Kyandra Irrigation Program	
Galgale Irrigation Program	
Other Irrigation Program	
Total	29,625

Agriculture Production in SRC Districts

Table 2.38: Proportion of Households with Land and Holding Status in Study Area

Land	Kavre		Dolakha		Ramechhap		Sindhuli	
	No. of Household	%	No. of Household	%	No. of Household	%	No. of Household	%
Not-owned	33	0.1	231	0.6	44	0.1	70	0.2
Owned	64,537	99.9	40,165	99.4	38,756	99.9	46,226	99.8
Total	64,570	100.0	40,396	100.0	38,800	100.0	46,296	100.0

Source: National Sample Census of Agriculture, Nepal, 2001/02, CBS.

Table 2.39: Distribution of Agricultural Landholding

Holding Size (ha)	Kavrepalanchok		Dolakha		Ramechhap		Sindhuli	
	ha	%	ha	%	ha	%	ha	%
< 0.1	2,059	3.2	1,388	3.5	461	1.2	2,006	4.3
0.1 - 0.2	4,717	7.3	3,586	8.9	2,500	6.5	5,201	11.3
0.2 - 0.5	22,852	35.4	13,967	34.8	10,725	27.7	15,323	33.1
0.5 - 1.0	22,553	34.9	13,099	32.6	14,081	36.3	14,530	31.4
1.0 - 2.0	9,998	15.5	6,072	15.1	8,400	21.7	7,533	16.3
2.0 - 3.0	1,727	2.7	1,735	4.3	1,733	4.5	1,096	2.4
3.0 - 4.0	332	0.5	289	0.7	680	1.8	350	0.8
4.0 - 5.0	266	0.4	29	0.1	88	0.2	47	0.1
5.0 - 10.0	33	0.1	-	0.0	88	0.2	117	0.3
10.0 +	-	-	-	0.0	-	-	23	0.0
Total	64,537	100.0	40,165	100.0	38,756	100.0	46,226	100.0

Source: National Sample Census of Agriculture, Nepal, 2001/02, CBS.

Table 2.40: Land Tenure Arrangement in Study Districts

Land Tenure	Kavrepalanchok		Dolakha		Ramechhap		Sindhuli	
	ha	%	ha	%	ha	%	Ha	%
Owned	42,878	97.0	26,452	96.5	32,248	99.5	29,965	98.3
Rented	1,326	3.0	930	3.4	170	0.5	309	1.0
Other	14	0.0	24	0.1	1	0.0	220	0.7
Total	44,218	100.0	27,406	100.0	32,419	100.0	30,494	100.0

Source: National Sample Census of Agriculture, Nepal, 2001/02, CBS.

Table 2.41: Use of Agriculture Equipments in SRC Districts and Nepal

(Unit: % of farmers)

Agriculture equipments	Kavre	Dolakha	Ramechhap	Sindhuli	Nepal
Iron ploughs	0.1	1.8	0.1	1.2	24.2
Power tiller	5.3	0.1	-	-	0.5
Shallow tube well	-	-	-	-	3.6
Deep tube well	-	-	-	0.0	1.7
Rower pump	0.1	0.1	-	0.0	0.7
Tractor	-	0.1	-	-	0.9
Thresher	1.2	0.1	-	-	1.7
Pumping set	0.3	-	0.4	0.0	6.3
Animal drawn cart	0.1	-	0.1	0.3	6.7
Sprayer	16.6	1.5	3.0	2.5	6.0

Source: CBS, 2002

Table 2.42: Typical Cropping Patterns Based on the Commercial Crops

Irrigated	Partially Irrigated	Unirrigated
Kavre		
Paddy – Potato - Vegetables		Maize – Wheat – Tori
Paddy – Potato - Potato		
Maize – Potato - Vegetables		
Paddy – Wheat - Tori		
Paddy – Wheat - Potato		
Dolakha		
Paddy – Wheat - Maize	Paddy – Wheat	Maize – Potato
Paddy – Tori*/Potato - Maize	Paddy – Tori/Potato	Maize/Millet – Wheat - Barley
Paddy – W. Vegetables - Maize	Paddy – Maize	Maize – Pulses
Paddy – Fallow - Maize	Paddy – Vegetables	Potato – Wheat
Paddy – Tori/Wheat - Maize	Paddy – Fallow	Maize – Vegetables/Tori
Ramechhap		
Paddy – Vegetables - Vegetables	Maize - Potato + Peas	
Vegetables –Vegetables – Vegetables	Potato – Potato	
	Potato - Vegetables	
	Paddy – Potato	
	Maize – Potato	
	Maize + Soybean - Vegetables	
	Paddy - Wheat	
Sindhuli		
Paddy – Wheat - Maize		Maize – Millet
Paddy – Musuro** - Paddy		Maize – Soyabean
Paddy – Tori - Paddy		Maize – Tori
Paddy – Maize		Maize – Buckwheat

Note: *Tori=Mustard, **Musuro=Pulse (Dhal)

Source: Annual Reports of DADOs, 2011/12

Table 2.43: Proportion of Cropped Area under Different Crops, 2009/2010

Crops	Kavrepalanchok		Dolakha		Ramechhap		Sindhuli	
	ha	%	ha	%	Ha	%	ha	%
Cereals	49,350	66.2	20,213	87.7	39,153	79.9	43,466	80.8
Cash Crops	11,632	15.6	2,810	12.2	3,591	7.3	7,253	13.5
Pulses	409	0.5	902	3.9	865	1.8	2,335	4.3
Spices	1,356	1.8	209	0.9	338	0.7	575	1.1
Citrus	1,281	1.7	470	2.0	1,618	3.3	1,758	3.3
Deciduous	487	0.7	296	1.3	453	0.9	154	0.3
Tropical	546	0.7	78	0.3	387	0.8	693	1.3
Vegetables	9,337	12.5	631	2.7	830	1.7	2,155	4.0
Coffee	130	0.2	0	-	0	-	0	-
Total	74,528	100.0	23,045	100.0	49,006	100.0	53,817	100.0

Source: Statistical Information on Nepalese Agriculture 2009/10, MOAD 2012

Table 2.44: Proportion of Cultivated Area under Different Crops

SN	Crops	Kavrepalanchok		Dolakha		Ramechhap		Sindhuli	
		Area	Percent	Area	Percent	Area	Percent	Area	Percent
1	Cereals	49,350	66.2	20,213	78.9	39,153	82.9	43,466	74.4
1.1	Paddy	10,100	13.6	3,135	12.2	9,408	19.9	10,265	17.6
1.2	Maize	24,300	32.6	8,454	33.0	20,041	42.4	15,450	26.5
1.3	Millet	3,500	4.7	3,562	13.9	5,057	10.7	11,610	19.9
1.4	Wheat	9,950	13.4	4,398	17.2	4,458	9.4	5,550	9.5
1.5	Barley	750	1.0	219	0.9	170	0.4	56	0.1
	buck wheat	750	1.0	445	1.7	19	0.0	535	0.9
2	Cash crops	11,632	15.6	2,810	11.0	3,591	7.6	7,253	12.4
2.1	Oilseed	1,910	2.6	300	1.2	501	1.1	5,492	9.4
2.2	Potato	9,695	13.0	2,505	9.8	3,090	6.5	1,750	3.0
2.3	Sugarcane	27	0.0	5	0.0		0.0	11	0.0
3	Pulses	409	0.5	902	3.5	865	1.8	2,335	4.0
3.1	Lentil	65	0.1	5	0.0	12	0.0	420	0.7
3.2	Chick Pea	50	0.1	7	0.0	21	0.0	30	0.1
3.3	Pigeon Pea	0	0.0	2	0.0	5	0.0	29	0.0
3.4	Blackgram	51	0.1	139	0.5	184	0.4	288	0.5
3.5	Grass Pea	0	0.0	0	0.0	0	0.0	4	0.0
3.6	Horse Gram	0	0.0	12	0.0	31	0.1	175	0.3
3.7	Soyabean	112	0.2	314	1.2	311	0.7	885	1.5
3.8	Others	131	0.2	423	1.7	301	0.6	504	0.9
4	Spices	1,356	1.8	209	0.8	338	0.7	575	1.0
4.1	Cardamom	97	0.1	150	0.6	82	0.2	23	0.0

SN	Crops	Kavrepalanchok		Dolakha		Ramechhap		Sindhuli	
		Area	Percent	Area	Percent	Area	Percent	Area	Percent
4.2	Ginger	50	0.1	40	0.2	83	0.2	362	0.6
4.3	Garlic	582	0.8	8	0.0	68	0.1	105	0.2
4.4	Turmeric	45	0.1	6	0.0	35	0.1	50	0.1
4.5	Chilli	582	0.8	5	0.0	70	0.1	35	0.1
5	Citrus fruits	1,281	1.7	470	1.8	1,617.5	3.4	1,758	3.0
5.1	Mandarine	1,010	1.4	283	1.1	448	0.9	209	0.4
5.2	Sweet orange	78	0.1	82	0.3	1106	2.3	1,476	2.5
5.3	Lime	121	0.2	103	0.4	63.5	0.1	73	0.1
5.4	Lemon	25	0.0	2	0.0	0	0.0	0	0.0
5.5	Others	47	0.1	0	0.0	0	0.0	0	0.0
6	Deciduous fruits	487	0.7	296		453		154	
6.1	Apple	85	0.1	69	0.3	90	0.2	13	0.0
6.2	Pear	112	0.2	50	0.2	82	0.2	60	0.1
6.3	Walnut	40	0.1	49	0.2	27	0.1	14	0.0
6.4	Peach	71	0.1	58	0.2	71	0.2	42	0.1
6.5	Plum	56	0.1	38	0.1	31	0.1	24	0.0
6.6	Apricot	1	0.0	3	0.0	85	0.2	0	0.0
6.7	Persimmon	67	0.1	17	0.1	42	0.1	1	0.0
6.8	Pomegranate	3	0.0	2	0.0	22	0.0	0	0.0
6.9	almond		0.0		0.0		0.0		0.0
6.1	pulm	52	0.1	10	0.0	3	0.0	0	0.0
7	Tropical fruits	546	0.7	78	0.3	387	0.8	693	1.2
7.1	Mango	115	0.2	20	0.1	138	0.3	117	0.2
7.2	Banana	65	0.1	10	0.0	72	0.2	225	0.4
7.3	Guava	70	0.1	13	0.1	52	0.1	65	0.1
7.4	Papaya	200	0.3	21	0.1	30	0.1	26	0.0
7.5	Jackfruit	21	0.0	1	0.0	30	0.1	28	0.0
7.6	Pineapple	12	0.0	1	0.0	8	0.0	154	0.3
7.7	Litchi	63	0.1	12	0.0	56	0.1	75	0.1
7.8	Arecanut	0	0.0	0	0.0	0.5	0.0	0	0.0
7.9	Coconut	0	0.0	0	0.0	0.5	0.0	3	0.0
7.1	Avocado		0.0		0.0		0.0		0.0
8	Vegetables	9,337	12.5	631	2.5	830	1.8	2,155	3.7
8.1	Cauliflower	1,208	1.6	200	0.8	72	0.2	250	0.4
8.2	Cabbage	580	0.8	20	0.1	63	0.1	170	0.3
8.3	Broccoli	575	0.8	0	0.0	1	0.0	5	0.0
8.4	Tomato	2,520	3.4	10	0.0	18	0.0	68	0.1
8.5	Radish	512	0.7	15	0.1	71	0.2	435	0.7
8.6	Broad Mustard Leaf	582	0.8	200	0.8	76	0.2	410	0.7

SN	Crops	Kavrepalanchok		Dolakha		Ramechhap		Sindhuli	
		Area	Percent	Area	Percent	Area	Percent	Area	Percent
8.7	Carrot	130	0.2	0	0.0	20	0.0	5	0.0
8.8	Turnip	15	0.0	0	0.0	3	0.0	0	0.0
8.9	Capsicum	153	0.2	0	0.0	2	0.0	0	0.0
8.10	Peas	225	0.3	20	0.1	17	0.0	0	0.0
8.11	French Beans	0	0.0	20	0.1	0	0.0	0	0.0
8.12	Fresh Beans-Pole	182	0.2	20	0.1	21	0.0	60	0.1
8.13	Fresh Beans Bush	81	0.1	20	0.1	15	0.0	0	0.0
8.14	Fresh Beans Sword	40	0.1	0	0.0	5	0.0	0	0.0
8.15	Broad Beans	37	0.0	25	0.1	4	0.0	0	0.0
8.16	Asparagus Beans	25	0.0	0	0.0	15	0.0	0	0.0
8.17	Cowpea	16	0.0	0	0.0	21	0.0	70	0.1
8.18	Asparagus	30	0.0	0	0.0	0	0.0	0	0.0
8.19	Tree tomato	20	0.0	5	0.0	4	0.0	0	0.0
8.20	Chilli Akabare	15	0.0	5	0.0	13	0.0	5	0.0
8.21	Chilli	272	0.4	5	0.0	90	0.2	35	0.1
8.22	Okra	157	0.2	0	0.0	8	0.0	110	0.2
8.23	Brinjal	157	0.2	1	0.0	14	0.0	45	0.1
8.24	Onion	306	0.4	3	0.0	35	0.1	125	0.2
8.25	Cucumber	280	0.4	10	0.0	35	0.1	50	0.1
8.26	Pumpkin	350	0.5	20	0.1	57	0.1	15	0.0
8.27	Squash	201	0.3	1	0.0	12	0.0	3	0.0
8.28	Bitter Gourd	200	0.3	2	0.0	23	0.0	60	0.1
8.29	Sponge Gourd	80	0.1	0	0.0	20	0.0	40	0.1
8.30	Snake Gourd	50	0.1	0	0.0	3	0.0	21	0.0
8.31	Bottle Gourd	52	0.1	0	0.0	24	0.1	49	0.1
8.32	Ash Gourd	5	0.0	0	0.0	1	0.0	0	0.0
8.33	Balsam Gourd		0.0		0.0		0.0		0.0
8.34	Chavote	35	0.0	20	0.1	30	0.1	39	0.1
8.35	Lettuce	15	0.0	0	0.0	0	0.0	0	0.0
8.36	Fennel Leaf	12	0.0	0	0.0	5	0.0	0	0.0

SN	Crops	Kavrepalanchok		Dolakha		Ramechhap		Sindhuli	
		Area	Percent	Area	Percent	Area	Percent	Area	Percent
8.37	Cariander Leaf	60	0.1	1	0.0	4	0.0	5	0.0
8.38	Spinach	30	0.0	1	0.0	6	0.0	40	0.1
8.39	Cress	25	0.0	1	0.0	4	0.0	25	0.0
8.40	Amaranthus	2	0.0	1	0.0	1	0.0	0	0.0
8.41	Fenuqreek Leaf	21	0.0	1	0.0	1	0.0	0	0.0
8.42	Others (Leafy Veg)	11	0.0	0	0.0	1	0.0	0	0.0
8.43	Colocasia	40	0.1	2	0.0	10	0.0	10	0.0
8.44	Yam	25	0.0	2	0.0	5	0.0	5	0.0
8.45	Elephant foot yam	0	0.0	0	0.0	0	0.0	0	0.0
8.46	Other Veg.	5	0.0	0	0.0	0	0.0	0	0.0
9	Coffee	130	0.2	0	0.0	0	0.0	0	0.0
	Total	74,528	100.0	25,609	100.0	47,235	100.0	58,389	100.0

Source: Statistical Information in Nepalese Agriculture, 2011/12. MOAD

Table 2.45: Land Use Pattern of the Study Districts

(Unit: Area in Ha)

Land Use	Kavre		Dolakha		Ramechhap		Sindhuli	
	Area	%	Area	%	Area	%	Area	%
Agriculture	61,599	43.8	44,871	20.9	59,180	42.2	58,846	23.8
Pasture	3,746	2.7	34,128	15.9	1,414	1.0	1,414	0.6
Forest	73,801	52.5	94,478	44.1	66,152	47.2	178,130	71.9
Other	1,340	1.0	40,801	19.0	13,433	9.6	9,319	3.8
Total land	140,486	100.0	214,278	100.0	140,179	100.0	247,709	100.0

Source: ISRC, 2008

Table 2.46: Arable and Cultivated Land in Study Districts

Districts	Arable land (Ha)	Cultivated land	
		(Ha)	% of Arable land
Kavre	61,599	36,442	59.2
Dolakha	44,871	29,423	65.6
Ramechhap	59,180	40,050	67.7
Sindhuli	58,846	39,485	67.1

Source: ISRC, 2008

Table 2.47: Cropping Intensity in Study Districts

Districts	Cultivated land (Ha)	Cropped land	
		(Ha)	% of cultivated land
Kavre	36,442	80,929	222
Dolakha	29,423	23,045	78
Ramechhap	40,050	49,006	122
Sindhuli	39,485	53,817	136

Source: Computed from ISRC, 2008 and Statistical Information on Nepalese Agriculture 2009/10, MOAD 2010

Table 2.48: Annual Growth of Agricultural Commodity Production over the Last Seven Years (2003/04 to 2009/10)

Commodities	Kavre		Dolakha		Ramechhap		Sindhuli	
	Production 2009/10 (MT)	Growth Rate (%)	Production 2009/10 (MT)	Growth Rate (%)	Production 2009/10 (MT)	Growth Rate (%)	Production 2009/10 (MT)	Growth Rate (%)
Paddy	31,899	-5.8	6,250	-4.1	15,757	-1.8	13,100	-6.0
Wheat	18,286	-8.4	5,105	-0.8	7,060	-2.2	8,930	-4.6
Maize	56,288	0	12,336	3.6	46,016	3.9	31,503	0.8
Potatoes	170,755	9.0	27,004	4.9	29,260	2.8	14,550	-8.3
Pulses	2,892	-1.9	1,004	0.2	958	-1.2	2,455	0.5
Vegetables	132,890	15.4	14,266	1.1	10,554	5.0	2,1372	1.9
Oilseeds	3,604	5.0	267	-0.6	400	10.7	5,396	1.3
Cardamom	42	13.9	27	12.9	3	-2.1	0.2	-25.8
Chilies	3,010	40.4	50	-12.5	471	12.8	102	5.4
Ginger	420	-60.0	327	15.9	910	12.5	4,430	18.2
Garlic	5,415	9.6	50	-32.0	530	16.5	850	6.7
Deciduous (winter) Fruits	256	0.6	155	-0.8	191	1.7	104	-1.2
Pears	1,090	0.9	401	2.0	782	0.9	688	-0.7
Persimmons	66	10.6	40	-1.0	33	31.4	3	-7.8
Tropical Fruits	3,458	2.8	475	11.7	2,053	3.1	2,784	1.4
Mangos	974	4.0	120	2.6	620	12.3	850	1.6
Bananas	453	2.5	22	-0.8	321	1.3	374	1.0
Pineapples	113	1.8	0	0	74	10.2	188	8.7
Citrus Fruits	9,130	15.9	2,989	7.9	12,288	7.5	17,485	22.8
Junar	730	10.8	613	17.0	11,964	3.1	15,577	14.1
Oranges	7,669	9.6	1,869	9.6	174	-21.8	1,554	26.1

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MoAC.

Table 2.49: Trend of Paddy Cultivated Area over the Last Nine Years (2003/04 to 2011/12)

Year	Area (ha)			
	Dolakha	Ramechhap	Kavre	Sindhuli
2003/04	3,110	7,872	15,000	6,400
2004/05	3,113	8,673	11,875	6,540
2005/06	3,115	8,643	11,105	6,565
2006/07	3,125	8,743	10,550	6,065
2007/08	3,125	8,743	10,550	6,065
2008/09	3,125	8,743	11,275	6,065
2009/10	3,133	8,743	11,275	6,265
2010/11	3,133	9,460	11,350	8,265
2011/12	3,135	9,408	10,100	10,265
Annual Growth (%)	0.1	1.7	(2.7)	4.3

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.50: Trend of Paddy Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	46,900	7,464	17,010	16,000
2004/05	38,340	7,938	18,742	16,252
2005/06	35,470	7,235	14,000	14,443
2006/07	33,500	6,318	15,757	11,143
2007/08	35,845	6,318	15,757	11,143
2008/09	31,899	6,318	15,757	11,143
2009/10	31,899	6,250	15,757	13,100
2010/11	32,915	6,304	25,049	19,010
2011/12	31,512	9,248	30,200	32,848
Annual Growth (%)	(3.8)	(0.2)	5.8	5.4

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.51: Trend of Paddy Yield over the Last Nine Years (2003/04 to 2011/12)

Year	Area Yield(kg/ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	3,127	2,400	2,161	2,500
2004/05	3,229	2,550	2,161	2,485
2005/06	3,194	2,323	1,620	2,200
2006/07	3,175	2,022	1,802	1,837
2007/08	3,398	2,022	1,802	1,837
2008/09	2,829	2,022	1,802	1,837
2009/10	2,829	1,995	1,802	2,091
2010/11	2,900	2,012	2,648	2,300
2011/12	3,120	2,950	3,210	3,200
Annual Growth (%)	(1.1)	(0.3)	4.1	1.1

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.52: Trend of Wheat Cultivated Area over the Last Nine Years (2003/04 to 2011/12)

Year	Area(ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	11,500	4,605	3,790	5,700
2004/05	12,950	4,603	4,598	5,575
2005/06	12,950	4,603	4,798	5,580
2006/07	12,950	4,603	4,803	5,580
2007/08	12,950	4,603	4,803	5,580
2008/09	12,550	4,400	4,803	5,500
2009/10	12,550	4,400	4,803	5,500
2010/11	9,995	4,400	4,820	5,600
2011/12	9,950	4,398	4,458	5,550
Annual Growth (%)	(2.4)	(0.8)	1.3	(0.2)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.53: Trend of Wheat Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	30,000	8,288	6,650	11,250
2004/05	26,000	7,825	9,515	11,050
2005/06	26,000	7,825	10,555	13,671
2006/07	22,050	7,500	9,080	10,930
2007/08	22,050	7,500	9,080	10,930
2008/09	18,286	5,105	7,060	8,930
2009/10	18,286	5,105	7,060	8,930
2010/11	21,001	5,105	9,013	13,730
2011/12	21,478	4,837	8,292	13,700
Annual Growth (%)	(4.7)	(7.5)	(0.6)	0.6

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.54: Trend of Wheat Yield over the Last Nine Years (2003/04 to 2011/12)

Year	Yield(kg/ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	2,609	1,800	1,755	1,974
2004/05	2,008	1,700	2,069	1,982
2005/06	2,008	1,700	2,200	2,450
2006/07	1,703	1,629	1,890	1,959
2007/08	1,703	1,629	1,890	1,959
2008/09	1,457	1,160	1,470	1,624
2009/10	1,457	1,160	1,470	1,624
2010/11	2,101	1,160	1,870	2,452
2011/12	2,159	1,100	1,860	2,468
Annual Growth (%)	(2.3)	(6.8)	(1.9)	0.9

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.55: Trend of Maize Cultivated Area over the Last Nine Years (2003/04 to 2011/12)

Year	Area (Ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	25,000	5,360	15,100	14,887
2004/05	23,200	5,370	20,005	15,102
2005/06	23,200	5,372	21,502	15,400
2006/07	23,200	5,390	23,008	16,500
2007/08	23,200	5,390	23,008	16,500
2008/09	24,279	5,390	23,008	16,500
2009/10	24,279	5,387	23,008	16,500
2010/11	24,279	5,387	18,041	18,535
2011/12	24,300	8,454	20,041	15,450
Annual Growth (%)	0.3	3.1	1.6	1.5

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.56: Trend of Maize Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	59,000	9,648	32,090	32,007
2004/05	53,400	9,934	46,112	35,308
2005/06	53,500	9,950	40,805	36,030
2006/07	53,500	10,800	46,106	38,693
2007/08	55,640	10,800	46,016	38,693
2008/09	56,288	10,800	46,016	38,693
2009/10	56,288	12,336	46,016	31,503
2010/11	56,096	12,336	36,800	39,423
2011/12	62,937	21,135	50,103	40,170
Annual Growth (%)	0.9	7.3	2.3	1.6

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.57: Trend of Maize Yield over the Last Nine Years (2003/04 to 2011/12)

Year	Yield(kg/ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	2,360	1,800	2,125	2,150
2004/05	2,302	1,850	2,305	2,338
2005/06	2,306	1,852	1,898	2,340
2006/07	2,306	2,004	2,000	2,345
2007/08	2,398	2,004	2,000	2,345
2008/09	2,318	2,004	2,000	2,345
2009/10	2,318	2,290	2,000	1,909
2010/11	2,310	2,290	2,040	2,127
2011/12	2,590	2,500	2,500	2,600
Annual Growth (%)	0.7	4.0	0.6	0.1

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.58: Trend of Potato Cultivated Area over Last Seven Years (2003/04 to 2011/12)

Year	Area(ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	5,000	2,445	2,665	1,250
2004/05	5,050	2,445	2,735	1,525
2005/06	5,050	2,445	3,035	1,528
2006/07	5,050	2,445	3,040	1,538
2007/08	5,350	2,445	3,040	1,538
2008/09	5,404	2,505	3,040	1,605
2009/10	9,230	2,505	3,040	1,700
2010/11	9,230	2,550	3,040	1,700
2011/12	9,695	2,505	3,050	1,750
Annual Growth (%)	10.0	0.5	1.4	3.3

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.59: Trend of Potato Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	92,500	20,226	26,600	14,750
2004/05	86,150	20,226	25,248	17,525
2005/06	89,150	26,550	32,000	16,544
2006/07	89,150	26,550	30,430	15,950
2007/08	94,150	26,550	30,430	15,950
2008/09	94,615	27,004	33,440	1,926
2009/10	170,755	27,004	29,260	14,550
2010/11	170,755	28,600	31,300	17,700
2011/12	179,358	27,004	32,903	17,500
Annual Growth (%)	10.6	3.8	2.4	(2.7)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.60: Trend of Potato Yield over the Last Nine Years (2003/04 to 2011/12)

Year	Yield(kg/ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	18,500	8,272	9,981	11,800
2004/05	17,059	8,272	9,231	11,492
2005/06	17,653	10,859	10,544	10,827
2006/07	17,653	10,859	10,010	10,371
2007/08	17,598	10,859	10,010	10,371
2008/09	17,508	10,780	11,000	1,200
2009/10	18,500	10,780	9,625	8,559
2010/11	18,500	11,216	10,296	10,412
2011/12	18,500	10,780	10,788	10,000
Annual Growth (%)	0.5	3.3	0.9	(5.8)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.61: Trend of Pulses Cultivated Area over the Last Nine Years (2003/04 to 2011/12)

Year	Area(ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	4,150	1,059	1,110	2,185
2004/05	3,200	1,060	1,110	2,758
2005/06	3,200	1,060	940	2,590
2006/07	3,200	1,060	915	2,597
2007/08	3,200	1,060	915	2,597
2008/09	3,250	1,060	920	2,547
2009/10	3,314	1,081	938	2,597
2010/11	3,131	902	864	2,335
2011/12	3,131	902	864	2,335
Annual Growth (%)	(1.8)	(1.8)	(2.9)	(0.4)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.62: Trend of Pulses Production over the Last Seven Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	3,425	984	1,014	2,100
2004/05	2,765	977	1,014	2,782
2005/06	2,765	977	917	2,373
2006/07	2,765	977	933	2,420
2007/08	2,765	977	933	2,420
2008/09	2,815	977	933	2,390
2009/10	2,892	1,004	958	2,455
2010/11	2,895	892	879	2,297
2011/12	2,895	901	881	2,289
Annual Growth (%)	(0.7)	(0.9)	(1.5)	(0.3)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.63: Trend of Pulses Yield over the Last Nine Years (2003/04 to 2011/12)

Year	Yield(kg/ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	825	929	914	961
2004/05	864	922	914	1,009
2005/06	864	922	976	916
2006/07	864	922	1,020	932
2007/08	864	922	1,020	932
2008/09	866	922	1,014	938
2009/10	873	928	1,022	945
2010/11	925	988	1,017	984
2011/12	925	998	1,019	950
Annual Growth (%)	1.1	0.8	1.4	(0.1)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.64: Trend of Vegetable Cultivated Area over Last Seven Years (2003/04 to 2011/12)

Year	Area(ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	5,200	1,350	955	1,679
2004/05	5,350	1,375	973	1,745
2005/06	5,617	1,443	1,021	1,832
2006/07	5,194	1,437	540	1,857
2007/08	6,903	1,431	900	1,862
2008/09	7,051	1,476	807	1,792
2009/10	8,185	1,499	846	2,038
2010/11	8,694	3,698	2197	3,433
2011/12	9,356	637	840	2,155
Annual Growth (%)	8.4	0.1	3.3	5.5

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.65: Trend of Vegetables Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	55,959	13,000	7,784	1,7875
2004/05	60,048	13,610	7,784	1,8911
2005/06	63,681	14,433	8,254	2,0054
2006/07	68,418	14,208	6,196	1,9483
2007/08	104,035	13,987	8,169	1,8928
2008/09	106,652	14,051	9,496	1,9349
2009/10	132,890	14,266	10,554	2,1372
2010/11	134,342	34,784	22,779	63,934
2011/12	145,606	4,946	9,395	22,248
Annual Growth (%)	14.6	(1.8)	8.5	8.1

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.66: Trend of Vegetables Yield over the Last Nine Years (2003/04 to 2011/12)

Year	Yield(kg/ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	10,761	9,630	8,151	10,646
2004/05	11,224	9,898	8,000	10,837
2005/06	11,337	1,002	8,084	10,947
2006/07	13,173	9,887	11,474	10,492
2007/08	15,071	9,774	9,077	10,057
2008/09	15,126	9,520	11,775	10,800
2009/10	16,236	9,517	12,482	10,487
2010/11	15,452	9,406	10,368	18,624
2011/12	15,563	7,765	11,191	10,324
Annual Growth (%)	5.6	5.9	5.0	2.4

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.67: Trend of Oilseeds Cultivated Area over Last Seven Years (2003/04 to 2011/12)

Year	Area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	3,000	310	250	5,700
2004/05	3,540	275	350	5,710
2005/06	3,540	275	435	5,545
2006/07	4,240	275	349	5,530
2007/08	4,240	275	349	5,530
2008/09	4,240	275	400	5,530
2009/10	4,235	295	500	5,691
2010/11	4,235	291	501	5,496
2011/12	1,910	300	501	5,492
Annual Growth (%)	(1.5)	0.3	7.4	(0.4)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.68: Trend of Oilseeds Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	3,000	280	120	4,718
2004/05	3,040	242	335	5,031
2005/06	3,040	242	309	4,436
2006/07	4,100	242	297	4,756
2007/08	4,100	242	297	4,756
2008/09	4,100	242	380	4,756
2009/10	3,604	267	400	5,396
2010/11	3,604	255	256	5,169
2011/12	1,950	260	296	4,904
Annual Growth (%)	(1.4)	0.1	6.1	1.1

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.69: Trend of Oilseeds Yield over the Last Nine Years (2003/04 to 2011/12)

Year	Yield(kg/ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	1,000	903	480	828
2004/05	859	880	957	881
2005/06	859	880	710	800
2006/07	967	880	851	860
2007/08	967	880	851	860
2008/09	967	880	950	860
2009/10	851	905	800	948
2010/11	851	876	511	941
2011/12	1020	870	590	890
Annual Growth (%)	0.1	(0.2)	(1.2)	1.4

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.70: Trend of Cardamom Cultivated Area during Last Seven Years (2003/04 to 2011/12)

Year	Area (Ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	40	30	14	2
2005/06	35	21	15	2
2006/07	35	21	15	2
2007/08	35	28	20	2
2008/09	49	30	25	2
2009/10	49	110	30	2
2010/11	60	150	78	23
2011/12	97	150	82	23
Annual Growth (%)	13.0	36.5	31.4	41.8

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.71: Trend of Cardamom Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	22	17	4	1
2005/06	32	8	2	1
2006/07	25	8	2	1
2007/08	25	10	2	1
2008/09	52	11	3	0.18
2009/10	42	27	3	0.18
2010/11	29	43	16	0.73
2011/12	51	70	30	0.84
Annual Growth (%)	9.6	30.0	36.5	(10.9)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.72: Trend of Chilly Cultivated Area over the Last Nine Years (2003/04 to 2011/12)

Year	Area (Ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	38	20	15	25
2005/06	272	20	177	
2006/07	296	22	193	
2007/08	296	30	170	28
2008/09	568	30	135	29
2009/10	568	10	61	29
2010/11	580	12	117	30
2011/12	582	5	70	35
Annual Growth (%)	35.5	(16.0)	6.2	4.9

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.73: Trend of Chilly Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	114	75	49	78
2005/06	880	59	516	
2006/07	920	65	568	
2007/08	920	30	425	100
2008/09	3,010	36	488	102
2009/10	3,010	50	471	102
2010/11	3,100	60	422	105
2011/12	3,110	10	279	122
Annual Growth (%)	50.2	(16.0)	13.6	4.4

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.74: Trend of Ginger Cultivated Area over the Last Nine Years (2003/04 to 2011/12)

Year	Area (Ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	500	25	25	185
2005/06	32	26	70	202
2006/07	32	26	70	202
2007/08	32	35	82	341
2008/09	40	50	85	345
2009/10	40	38	70	345
2010/11	48	42	85	355
2011/12	50	40	83	362
Annual Growth (%)	(14.5)	8.9	11.8	11.5

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.75: Trend of Ginger Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	5,861	322	300	2,295
2005/06	491	205	1,155	2,029
2006/07	320	211	890	2,091
2007/08	320	288	1,312	4,774
2008/09	420	850	1,465	4,830
2009/10	420	327	910	4,430
2010/11	504	361	1,130	4,615
2011/12	525	360	1,505	5,140
Annual Growth (%)	(17.0)	7.4	14.5	15.4

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.76: Trend of Garlic Cultivated Area over the Last Nine Years (2003/04 to 2011/12)

Year	Area (Ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	500	20	5	93
2005/06	512	20	61	93
2006/07	568	22	67	115
2007/08	568	12	65	95
2008/09	570	13	65	100
2009/10	570	7	80	100
2010/11	577	10	66	98
2011/12	582	8	68	105
Annual Growth (%)	2.0	(14.6)	25.7	0.9

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.77: Trend of Garlic Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	3,511	257	35	636
2005/06	3,867	139	500	654
2006/07	3,515	146	524	703
2007/08	3,515	40	520	807
2008/09	5,415	78	520	850
2009/10	5,415	50	530	850
2010/11	5,500	71	528	833
2011/12	5,545	48	738	800
Annual Growth (%)	8.3	(19.0)	29.4	4.2

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.78: Trend of Productive Area under Winter Fruits over the Last Nine Years (2003/04 to 2011/12)

Year	Area (Ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	243	160	171	111
2004/05	243	160	172	111
2005/06	245	160	174	112
2006/07	239	160	174	112
2007/08	239	160	174	112
2008/09	245	150	184	103
2009/10	256	155	191	104
2010/11	246	176	196	86
2011/12	300	176	304	99
Annual Growth (%)	1.7	0.9	5.0	(2.4)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.79: Trend of Production of Winter Fruits over the Last Nine Years (2003/04 to 2011/12)

Year	Productive Area (Ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	2,227	1,326	1,538	1,071
2004/05	2,252	1,335	1,569	1,094
2005/06	2,262	1,317	1,587	1,101
2006/07	2,253	1,304	1,583	1,100
2007/08	2,253	1,304	1,583	1,100
2008/09	2,243	1,220	1,674	1,032
2009/10	2,326	1,252	1,732	1,040
2010/11	2,042	1,392	1,768	612
2011/12	2,575	1,392	2,517	685
Annual Growth (%)	0.6	0.3	4.4	(6.0)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.80: Trend of Productive Area under Pear over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area(ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	81	31	60	58
2004/05	81	31	60	58
2005/06	82	31	61	58
2006/07	82	31	61	58
2007/08	82	31	61	58
2008/09	83	34	62	55
2009/10	84	34	62	55
2010/11	82	38	63	30
2011/12	82	38	63	30
Annual Growth (%)	(1.5)	3.1	0.9	(7.8)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.81: Trend of Production of Pear over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	1,021	357	732	707
2004/05	1,045	366	756	731
2005/06	1,058	366	769	731
2006/07	1,058	366	769	731
2007/08	1,058	366	769	731
2008/09	1,074	402	777	688
2009/10	1,090	402	782	688
2010/11	820	449	790	285
2011/12	820	449	790	285
Annual Growth (%)	(2.3)	3.2	0.6	(10.2)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.82: Trend of Productive Area under Persimmon over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	5	6	2	1
2004/05	5	6	2	1
2005/06	5	6	2	2
2006/07	5	6	2	2
2007/08	5	6	2	2
2008/09	7	5	4	0.5
2009/10	9	6	5	0.5
2010/11	9	8	6	0
2011/12	60	8	32	0
Annual Growth (%)	24.6	3.1	32.6	NA

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.83: Trend of Production of Persimmon over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	35	39	7	7
2004/05	35	39	7	7
2005/06	35	39	7	14
2006/07	35	39	7	14
2007/08	35	39	7	14
2008/09	51	33	28	3
2009/10	66	40	33	3
2010/11	51	33	28	3
2011/12	66	40	33	3
2010/11	66	50	36	3
2011/12	600	50	227	3
Annual Growth (%)	28.2	2.7	47.5	(16.1)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.84: Trend of Productive Area under Summer Fruits over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	276	31	156	248
2004/05	278	31	157	249
2005/06	281	31	159	253
2006/07	283	31	159	253
2007/08	286	31	161	257
2008/09	1,130	154	691	990
2009/10	346	56	206	286
2010/11	230	53	212	449
2011/12	271	54	277	593
Annual Growth (%)	2.0	11.7	9.0	12.1

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.85: Trend of Summer Fruits Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	2,861	249	1,685	2,465
2004/05	3,053	280	1,764	2,654
2005/06	2,903	249	1,714	2,521
2006/07	3,093	280	1,783	2,691
2007/08	2,943	255	1,732	2,555
2008/09	3,338	465	1,981	2,662
2009/10	3,458	475	2,053	2,784
2010/11	2,474	445	2,100	4,492
2011/12	2,787	445	2,968	6,567
Annual Growth (%)	(0.5)	9.6	5.6	9.9

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.86: Trend of Productive Area under Mango over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	100	16	42	101
2004/05	101	16	43	101
2005/06	102	16	43	101
2006/07	102	16	43	101
2007/08	105	16	45	104
2008/09	133	19	82	119
2009/10	139	19	89	121
2010/11	80	13	89	90
2011/12	90	13	89	106
Annual Growth (%)	(0.4)	(1.6)	12.9	0.6

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.87: Trend of Mango Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	699	92	294	706
2004/05	884	123	372	884
2005/06	713	92	301	706
2006/07	896	123	370	876
2007/08	735	99	315	728
2008/09	930	118	576	833
2009/10	974	120	620	850
2010/11	880	81	626	513
2011/12	945	81	844	795
Annual Growth (%)	3.1	(2.1)	13.6	(1.4)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.88: Trend of Productive Area under Banana over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	28	2	21	25
2004/05	28	2	21	25
2005/06	28	2	21	25
2006/07	28	2	21	25
2007/08	28	2	21	25
2008/09	32	2	23	26
2009/10	32	2	23	26
2010/11	25	5	23	220
2011/12	50	5	66	220
Annual Growth (%)	4.1	11.1	8.9	29.2

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.89: Trend of Banana Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	396	23	298	354
2004/05	396	23	298	354
2005/06	396	23	298	354
2006/07	396	23	298	354
2007/08	396	23	298	354
2008/09	453	22	321	374
2009/10	453	22	321	374
2010/11	270	30	321	2,420
2011/12	600	30	889	2,553
Annual Growth (%)	1.5	2.9	8.4	25.9

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.90: Trend of Productive Area under Pineapple over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	8	0	6	8
2004/05	8	0	6	8
2005/06	8	0	6	8
2006/07	8	0	6	8
2007/08	8	0	6	8
2008/09	9	0	6	9
2009/10	9	1	6	15
2010/11	9	1	6	15
2011/12	9	1	6	106
Annual Growth (%)	2.0		-	25.4

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.91: Trend of Pineapple Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	102	0	16	102
2004/05	102	0	66	102
2005/06	102	0	77	102
2006/07	102	0	77	102
2007/08	102	0	77	102
2008/09	112	0	73	115
2009/10	113	0	74	188
2010/11	112	0	73	186
2011/12	112	0	73	1638
Annual Growth (%)	1.6	0	11.0	26.8

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.92: Trend of Total Productive Area under Citrus over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	146	191	502	124
2004/05	532	204	831	754
2005/06	582	204	831	754
2006/07	611	212	847	769
2007/08	590	137	950	1,404
2008/09	776	295	830	1,195
2009/10	791	304	841	1,225
2010/11	831	315	859	1,239
2011/12	838	318	1128	1,253
Annual Growth (%)	16.5	7.7	5.7	22.5

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.93: Trend of Total Citrus Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	1,532	1,822	5,514	1,254
2004/05	5,946	1,963	11,489	9,007
2005/06	6,550	1,968	11,522	9,032
2006/07	6,899	2,037	11,750	9,282
2007/08	7,106	1,360	13,184	19,336
2008/09	8,968	2,898	12,140	17,016
2009/10	9,130	2,989	12,288	17,485
2010/11	9,783	3,122	12,515	17,024
2011/12	9,232	2,884	11,360	11,399
Annual Growth (%)	7.6	8.6	0.5	8.2

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.94: Trend of Productive Area under Junar over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	35	24	35	670
2004/05	39	25	755	683
2005/06	39	25	755	683
2006/07	42	26	765	691
2007/08	43	25	925	1,264
2008/09	58	58	800	1,047
2009/10	58	60	808	1,060
2010/11	59	63	821	1,067
2011/12	60	63	825	1,077
Annual Growth (%)	7.8	16.5	24.3	7.7

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.95: Trend of Junar Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	396	252	10,220	8,040
2004/05	454	268	10,684	8,290
2005/06	455	269	10,715	8,314
2006/07	490	277	10,882	8,425
2007/08	538	250	12,950	17,692
2008/09	728	591	11,840	15,279
2009/10	730	613	11,964	15,577
2010/11	614	611	12,151	15,258
2011/12	619	617	8,167	9,737
Annual Growth (%)	6.3	17.0	(1.3)	7.2

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.96: Trend of Productive Area under Orange over the Last Nine Years (2003/04 to 2011/12)

Year	Productive area (ha)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	385	110	46	34
2004/05	408	120	52	39
2005/06	458	120	52	39
2006/07	482	125	56	44
2007/08	495	95	8	115
2008/09	605	177	13	122
2009/10	614	181	14	126
2010/11	637	187	17	131
2011/12	643	190	282	135
Annual Growth (%)	7.3	8.1	(0.3)	23.2

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.97: Trend of Orange Production over the Last Nine Years (2003/04 to 2011/12)

Year	Production(MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	4,447	1,056	529	392
2004/05	4,773	1,168	607	449
2005/06	5,374	1,171	608	450
2006/07	5,671	1,219	654	515
2007/08	6,116	973	98	1,418
2008/09	7,565	1,822	160	1,501
2009/10	7,669	1,869	174	1,554
2010/11	8,154	2,001	185	1,454
2011/12	7,587	1,767	3017	1,363
Annual Growth (%)	8.2	8.7	(0.8)	22.3

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.98: Trend on Cattle Number over the Last Nine Years (2003/04 to 2011/12)

Year	Cattle(No)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	129,467	91,269	66,871	109,893
2004/05	129,514	91,797	66,973	109,890
2005/06	129,614	91,898	70,782	109,990
2006/07	134,007	93,114	70,782	110,100
2007/08	134,007	93,114	70,782	110,100
2008/09	136,266	93,752	71,747	110,180
2009/10	134,255	76,632	85,466	110,340
2010/11	136,484	77,161	87,125	117,605
2011/12	138,750	79,170	89,847	119,560
Annual Growth (%)	0.9	(2.4)	4.0	0.9

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.99: Trend on Buffalo Number over the Last Nine Years (2003/04 to 2011/12)

Year	Buffalo(No.)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	89,479	38,931	50,274	53,114
2004/05	129,479	39,900	64,410	58,485
2005/06	129,624	49,001	64,538	58,595
2006/07	130,999	46,721	64,510	60,682
2007/08	130,999	40,721	64,510	60,682
2008/09	131,727	38,938	64,528	61,772
2009/10	130,999	46,579	60,109	63,068
2010/11	130,500	46,892	71,505	63,065
2011/12	150,990	50,613	75,169	62,002
Annual Growth (%)	3.6	2.1	3.0	1.7

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.100: Trend on Sheep Number over the Last Nine Years (2003/04 to 2011/12)

Year	Sheep (No.)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	2,285	23,330	3,134	2,740
2004/05	3,385	23,252	3,145	2,310
2005/06	3,533	23,352	3,245	2,394
2006/07	3,652	23,044	3,242	1,709
2007/08	3,652	23,044	3,242	1,709
2008/09	3,751	22,916	3,265	1,438
2009/10	3,652	16,624	3,237	1,247
2010/11	3,652	16,718	4,260	274
2011/12	3,613	16,500	4,271	263
Annual Growth (%)	3.7	(5.0)	3.6	(25.0)

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.101: Trend on Goat Number over the Last Nine Years (2003/04 to 2011/12)

Year	Goat (No.)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	265,852	170,887	59,738	87,614
2004/05	285,852	174,641	59,870	92,600
2005/06	285,960	174,743	59,970	92,706
2006/07	289,676	178,409	59,970	114,859
2007/08	289,676	178,409	59,970	114,859
2008/09	291,573	180,287	59,995	127,150
2009/10	289,676	144,619	92,500	145,800
2010/11	289,675	147,300	106,500	165,615
2011/12	294,676	145,780	122,619	181,482
Annual Growth (%)	0.8	(2.5)	9.5	9.9

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.102: Trend on Poultry Bird Number over the Last Nine Years (2003/04 to 2011/12)

Year	Poultry birds (no.)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	660,002	345,224	140,324	315,286
2004/05	710,954	345,227	190,286	272,344
2005/06	737,833	305,643	190,522	272,126
2006/07	786,449	358,948	204,518	293,151
2007/08	786,449	358,948	204,518	293,151
2008/09	807,964	358,972	211,828	303,999
2009/10	864,510	325,142	427,226	401,141
2010/11	1,384,950	359,219	509,400	538,500
2011/12	1,440,228	360,352	555,803	1,440,280
Annual Growth (%)	9.5	0.7	18.4	16.1

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.103: Total Quantity of Milk Produced in the Study Districts (2003/04 to 2011/12)

Year	Total Quantity of milk produced (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	36,383	12,759	13,132	15,407
2004/05	48,010	12,986	15,985	16,523
2005/06	48,129	14,868	16,182	16,550
2006/07	72,130	13,713	16,282	16,960
2007/08	72,100	13,134	16,382	16,749
2008/09	72,631	12,817	16,431	17,170
2009/10	68,659	14,543	16,173	17,436
2010/11	69,910	14,641	18,561	17,752
2011/12	77,517	15,515	20,058	18,105
Annual Growth (%)	8.5	1.7	3.6	1.6

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.104: Quantity of Cow Milk Produced in the Study Districts (2003/04 to 2011/12)

Year	Cow Milk Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	10,382	4,733	2,998	4,374
2004/05	10,386	4,760	3,002	4,374
2005/06	10,463	4,765	3,173	4,378
2006/07	11,500	5,050	3,200	4,379
2007/08	11,500	5,100	3,300	4,600
2008/09	11,694	5,135	3,345	4,803
2009/10	11,521	5,353	3,984	4,810
2010/11	12,990	5,390	4,061	5,127
2011/12	13,795	5,530	4,478	5,513
Annual Growth (%)	3.4	2.1	5.1	2.8

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD.

Table 2.105: Quantity of Buffalo Milk Produced in the Study Districts (2003/04 to 2011/12)

Year	Buffalo Milk Production (MT)			
	Kavre	Dolakha	Ramechhap	Sindhuli
2003/04	26,001	8,026	10,134	11,033
2004/05	37,624	8,226	12,983	12,149
2005/06	37,666	10,103	13,009	12,172
2006/07	60,630	8,663	13,082	12,581
2007/08	60,600	8,034	13,082	12,149
2008/09	60,937	7,682	13,086	12,367
2009/10	57,138	9,190	12,189	12,626
2010/11	56,920	9,251	14,500	12,625
2011/12	63,722	9,985	15,580	12,592
Annual Growth (%)	9.9	1.5	3.3	1.2

Source: Various Issues of Statistical Information on Nepalese Agriculture of different years, MOAD

Post Harvest Handling in SRC Districts

Table 2.106: List of Agricultural Markets Identified by DADO in the Study Districts

SN	Districts	Name of the Markets	Total Number
1	Kavre	Bohore Dobhan, Banstala Bensi, Baluwa, Tin Ghare, Keraghari, Phedi, Lamidanda, Chandeni, Zero Kilo, Palanchowk Bhagwati, Hokshe Shreeram Pati, Jor Pipal, Dolalghat, Kunta Besi, Khawa, Banepa, Dhulikhel, Nala, Panauti, Naubishe/Roshikhola, Bhakundebesi, Patlekhet, Dahal Danda, Kavre, Tamaghat, Tinpiple Khattar, Bela, Patlegaun, Ranipani, Pakucha, Khawa, Dulalthok, Bekhaldehi, Khumbari, Chakhola, Haldechhap, Bucchakot, Dandagaun, Arubot danda, Darimkot, Nagbeli, Jorsalla, Katunje, Mangaltar, Pauwa, Bhimkhori, Walting, Shyampati, Kavre, Sanga, Nalasera, Kusadeli, Parkhalchour, Chyamrangbesi, Dungkharka, Gelung, Dhumkharka Mankhal, Parthalibhanjyang, Ganeshthan, Patchichour, Khopasi, Mangla, Sipaghat, Panchkhal	61
2	Dolakha	Charikot, Dolakha Bazar, Jiri, Singati, Kirnetar, Gumu Khola, Maina Pokhari, Malu Khola, Naya Pul and other temporary markets	10
3	Ramechhap	Those, Khimti, Dhobi, Sangutar, Ramechhap, Salupati, Devitar, Doramba, Galbu, Saba Danda, Gelu	12
4	Sindhuli	Kamalamai NP, Bhiman, Kapilakot, Ratanchura, Jhangajholi Ratmata, Sithauli and Dudhauri	7
	Total		90

Source: Computed from Annual Progress Report of DADO, 2012 of respective districts

Table 2.107: List of Markets Identified by DLSO in the Study Districts

SN	Districts	Name of the Livestock Markets	Number
1	Kavre	Banepa, Panauti, Panchkhal, Dolalghat, Dapcha, Nala, Sanga Khopasi, Palanchok Bagwati, Madhevsthan, Mangaltar, Taldhunga, Pokhari narayansthan	13
2	Dolakha	Charikot, Jiri, Dolakha, Chaude, Mainapokhari, Tamakoshi, Kirnetar, Magaduerali, Singati	9
3	Ramechhap	Manthali, Sangutar, Bamtibhandar, Dhobi, Khimti, Doramba, Devitaar, Dhosebazaar, Chuchure/siwalaya, SaluSithkha, Galpaa, Sirise	12
4	Sindhuli	Kamalamai NP, Bhiman, Kapilakot, Jhangajholi Ratmata, Sithauli and Dudhauri	6
	Total		40

Source: Computed from Annual Progress Report of DADO, 2012 of respective districts

Table 2.108: Key Features of the Selected Markets

SN	Key features	Markets surveyed				
		Tamaghat Kavre (1)	Charikot Dolakha (2)	Jiri Dolakha (3)	Bhangeri Ramechhap (4)	Sindhuli Madi Sindhuli (5)
1	Market type	Collection centre	Retail	Retail	Weekly market	Retail Collection Centre
2	Ownership	MOAD	MOAD	MOAD	VDC	MOAD
3	Market Management	Cooperative	MMC	MMC	VDC	MMC
4	Key commodities traded	Seasonal Vegetables	Vegetables Cereals Spices	Vegetables Potato	Vegetables Fruits Live animals Poulties Groceries Cereals Pulses etc.	All agriculture produce but mainly vegetables and Junar in the season
5	Operation Schedule	Daily	Daily Haat in Saturday	Weekly market in Saturday Other day not operating	Thurs Day weekly market	Daily
6	Time of operation	3 to 6 PM	6 AM to 10 AM	6 to 10 AM	Morning to Afternoon	Morning to afternoon
7	Number of stalls	Many	A few operating	A few operating	Many (Over crowded)	A few operating
8	Market activeness	Very active	Poor	Poor	Very active	Poor
9	Traders	Kathamndu Kavre Pokhara	Local	Local	Sindhuli Ramechhap Dhanusha Mahottari Dolakha	Local Dhanusha Mahottari Sarlahi
10	Price information	Not posted	Not posted	Not posted	Not posted	Not posted

Source: Market survey, 2009

Table 2.109: Key Features of the Selected Markets (Cont.)

Key features	Markets surveyed contd.				
	Bardibas Mahottari (6)	Dhalkebar Dhanusha (7)	Hetuda Makwanpur (8)	Kalimati Kathmandu (9)	Baneshor Kathamndu (10)
1. Market type	Retail	Retail Collection centre	Wholesale/ Retail	Wholesale/ Retail	Wholesale/ Retail
2. Ownership	MOAD	MOAD	Municipality	MOAD	Private trader
3. Market Management	MMC	MMC	Municipality and Traders' Association	Marketing Board	Private trader
4. Key commodities traded	All agriculture produce but mainly vegetables	All agriculture produce but mainly vegetables	Fruits Vegetables Potato Onion Garlic etc	Fruits Vegetables Fish	Vegetables Fish
5. Operation Schedule	Twice a week (Wednesday and Saturday)	Twice a week market (Sunday and Wednesday)	Daily	Daily	Daily
6. Time of operation	Morning	Morning	Till evening	4 am to 8 pm day (16 hours)	4 am to 9 pm (17 hours)
7. Number of stalls	Many (Over crowded)	Many (Over crowded)	Not sufficient	Over crowded	Fully occupied
8. Market activeness	Very active	Very active	Very active	Very active	Very active
9. Traders	Sindhuli Mahottari Dhanusha Siraha	Sindhuli Mahottari Dhanusha Siraha	Local	Majority from Nuwakot Dhading Kavre and local	Local
10. Price information	Not posted	Not posted	Not posted	Not posted	Not posted

Source: Market survey, 2009

Table 2.110: Area, Production and Yield of Potato in SRC Districts, 2011/12

	Area, Ha	Production, MT	Average Yield, kg/Ha
Kavre	9,695	179,357	18,500
Dolakha	2,505	27,004	10,780
Ramechhap	3,050	32,903	10,788
Sindhuli	1,750	17,500	10,000
Total	17,000	256,764	15,104

Source: Statistical Information on Nepalese Agriculture 2011/12

Table 2.111: Area and Production of Tomato in SRC Districts

Districts	Area (Ha.)		Production (MT.)		Yield, MT/Ha	
	2010**	2007*	2010	2007	2010	2007
Kavre	2,520	199	40,320	2,978	16.0	15.0
Dolakha	10	31	200	294	20.0	9.5
Ramechhap	18	10	258	70	14.3	7.0
Sindhuli	68	38	836	407	12.3	10.7
Total (Average)	2,616	278	41,614	3,749	15.9	13.5

Source: * Vegetable Development Directorate, 2007; ** Statistical Information on Nepalese Agriculture 2009/10

Table 2.112: Post Harvest Activities for Tomato in SRC Districts

Activities	Performed by			
	Producers	Collectors	Wholesalers	Retailers
Grading by size of the products (large and small sizes)	Almost none	Occasionally	Often	Often
Cleaning	Almost always	None	Almost none	Almost none
Packaging in crates	None (Bring in bamboo baskets)	Transfer in hard plastic crates for transportation	None	None
Storage	None	None	None	None

Source: Field Consultation, 2009

Table 2.113: Area (productive) and Production of Junar

District	Total Area, Ha	Productive area, Ha	Production, MT	Productivity MT/Ha
Kavre	209	135	1,363	10.1
Dolakha	283	190	1,767	9.3
Ramechhap	448	282	3,017	10.7
Sindhuli	1,010	643	7,587	11.8
Total	1,950	1,250	13,734	11.0

Source: Statistical Information on Nepalese Agriculture 2011/12, MOAD

Table 2.114: Sale and Consumption of Junar

	Ramechhap	Sindhuli	Total
Self consumption and endowment, MT	2,425	2,187	4,612
Local processing and sale in local market, MT	716	1,193	1,909
Transportation loss, MT	970	796	1,766
Sale outside district, MT	8,014	5,765	13,779

Source: District Profile, DADO, Ramechhap, 2008 Sindhuli, DDC, 2008.

Table 2.115: Number of Milk Animals, Production and Productivity in Study Districts

District	No. of milky animal			Production (MT.)			Avg. Yield/animal (Litre)		
	Cow	Buffalo	Total	Cow milk	Buffalo milk	Total	Cow	Buffalo	Total
Kavre	23,418	62,716	86,134	13,795	63,722	77,517	589	1,016	900
Dolakha	11,681	12,180	23,861	5,530	9,985	15,515	473	820	650
Ramechhap	10,396	16,254	26,650	4,478	15,580	20,058	431	959	753
Sindhuli	12,612	15,385	27,997	5,513	12,592	18,105	437	818	647
Total or Ave.	58,107	106,535	164,642	29,316	101,879	131,195	505	956	797
Nepal	998,963	1,331,037	2,330,000	468,913	1,153,838	1,622,751	469	867	696

Source: Statistical Information on Nepalese Agriculture 2011/102, MOAD

Table 2.116: No. of Milk Cooperatives in Study Districts

Districts	No. of Cooperatives	Member		
		Men	Women	Total
Kavre	272	0	7834	7834
Dolakha	7	1,410	1,560	2,970
Ramechhap	4	72	80	152
Sindhuli	17	297	317	614
Total	300	1,779	9,791	11,570
Nepal	1,749	74,505	27,349	101,854

Source: Department of cooperative, 2012, Statistical Information on Nepal's Cooperative

Key Players in Agricultural Value Chains in SRC Districts

Table 2.117: Players for Different Components of Agriculture-Related Activities in District Level

Organization	Type	Key functions	Central organization
DDC	Autonomous local government/bodies	Overall responsibility, Coordination, Supervision, Monitoring etc.	GoN
DADO	Government	Crops, Cash Crops, Horticulture, Fisheries Development. Small scale farmer managed irrigation	DOA/MOAC
DLSO	Government	Livestock Dev Veterinary Services	DLS/MOAC
DADC	Government - public - private	Coordination among different key players	GON and DOA/MOAC
Division Irrigation Office	Government	Irrigation	DOI/MWR
Agriculture Development Bank (ADB) Branch/District Office	Public Limited	Agricultural credit	Central Office
Agriculture and Microfinance Banks	Private	Agriculture and microfinance	Central Offices
Agriculture Inputs Company Ltd/Branch Office	Public company	Distribution of chemical fertilizers	Central Office
Agro-vets	Private trader	Supply of agro and veterinary chemicals and seeds	-
Fertilizer dealers	Private trader	Sale/supply chemical fertilizers	-
Saving and credit cooperatives	Cooperatives	Agriculture credits	-
Producers' Group (Agriculture/Farmers Cooperatives, Farmer Groups)	Cooperatives	Supply of agro and veterinary chemicals, fertilizer, seeds, and procure agriculture produces	-
Subject-specific cooperatives such as Dairy Cooperatives	Cooperatives	Purchase fresh milk and milk products from members	-
Producers' associations such as Junar Central	Private	Technical support and backstopping in the	-

Organization	Type	Key functions	Central organization
Cooperative Union Ltd. in Sindhuli and Ramechhap		production and marketing of concerned products and marketing services	
District Chamber of Commerce and Industry (DCCI)	Private	Coordinating and networking of private firms	FNCCI and AEC
NGOs- International, National, District and Community Based	NGO/CBO	Income generating activities, social mobilization, technical services etc	NGO Federation

Source: Communications with stakeholders of respective districts

Table 2.118: Composition of District Agriculture Development Committee

S. No	Organization represented and position	Position in DADC
1.	Chairman, District Development Committee	: Chairman
2.	Chief District Officer, District Administration Office	: Vice Chairman
3.	Convener, Agriculture and Public Construction Committee, DDC Member	: Member
4.	Chef, District Irrigation Office	: Member
5.	Chief, District Cooperative Office	: Member
6.	Chief, District Forest Office	: Member
7.	Chief, District Livestock Services Office	: Member
8.	Chief, Agriculture Development Bank, District Office	: Member
9.	Chief, Local Infrastructure/Agriculture Road Section, DDC	: Member
10.	Chief, Agriculture/Livestock Farms situated in the district under Nepal Agricultural Research Council	: Member
11.	Chief, Rural Electrification Office	: Member
12.	Chief, Agricultural Inputs Corporation, District Office	: Member
13.	Chief, Women Development Section	: Member
14.	Chairman, District Cooperatives Union	: Member
15.	Local Development Officer, DDC	: Member
16.	Farmers representatives two (Men -1 and women -1)	: Members (2)
17.	Private entrepreneur by District Federation of Industry and Commerce)	: Member
18.	NGO representative from the private sector one	: Member
19.	Chief, District Agriculture Development Office	: Member-Secretary
20.	Assistant Planning Officer, District Agriculture Development Office	: Joint Member Secretary

Source: Ministry of Agriculture and Cooperatives, 2011

Table 2.119: Details of Cooperatives in Study Districts

	Kavre	Dolakha	Ramechhap	Sindhuli
Saving and credit cooperatives	461	208	185	123
Agriculture Cooperatives ⁵	146	133	82	88
Vegetable and Fruit Producers' Cooperatives	19	6	11	7
Tea Producers' Cooperatives	0	2	1	0
Milk Producers' Cooperatives	272	7	4	17
Multipurpose Cooperatives	184	38	34	21
Coffee cooperatives	8	-	-	1
Junar cooperatives	0	-	-	31
Other Cooperatives	54	58	20	64
Total cooperatives	1,144	452	337	352
No of agriculture related cooperatives	445	148	98	144
Total	38.9	32.7	29.1	40.9

Source: Department of Cooperative Statistics 2012

Table 2.120: Details of Farmers Groups in Study Districts

No. of Farmer Groups by type of activity	Total No. of Farmer Groups
Kavre district	
<u>Agriculture/Farmer Groups</u>	
Cereal Crops:	42
Vegetable:	73
Coffee:	16
Potato:	7
Fruits:	18
Bee Keeping:	17
Cardamom:	6
Seed:	4
Silkworm:	4
IPM (Integrated Pest Management):	6
Soil Improvement / Conservation:	17
Mushroom:	2
Multipurpose:	50
<u>Livestock Groups</u>	
Goat:	70
Leasehold Forest:	267
Dolakha district	
<u>Agriculture/Farmer Groups</u>	
Cereal Crops:	32
Cash Crops:	5
599 Agriculture: 262, Livestock: 337	
456 Agriculture: 268 Livestock: 188	

⁵ Vegetable and Fruits Producers' Cooperatives handles high value commodities, while Agriculture cooperatives do crops and agricultural inputs.

No. of Farmer Groups by type of activity	Total No. of Farmer Groups
Vegetable: 44	
Off season Vegetable: 11	
Fruits: 11	
Bee Keeping: 10	
Integrated: 147	
Soil Improvement / Conservation: 6	
Mushroom: 1	
Floriculture: 1	
<u>Livestock Groups</u>	
Goat: 100	
Cattle: 41	
Buffalo: 25	
Yak: 10	
Poultry: 3	
Swine: 9	
Ramechhap district	
<u>Agriculture/Farmer Groups</u> : 129	
<u>Livestock Groups</u>	
Goat: 47	
Sheep: 5	
Cattle: 2	
Buffalo: 21	
Buffalo and Cattle: 3	
Yak/Chauri: 5	
Poultry: 9	
Swine: 2	
Rabbit: 1	
Dairy: 1	
Leasehold Forest: 15	
	240 Agriculture: 129 Livestock: 111
Sindhuli district	
<u>Agriculture/Farmer Groups</u>	
Cereal Crops: 67	
Mixed Crops: 9	
Vegetable: 24	
Horticulture: 52	
Fruits: 5	
Bee Keeping: 1	
Seed: 2	
IPM: 1	
<u>Livestock Groups</u>	
Goat: 95	
Cattle: 4	
Buffalo: 60	
Poultry: 3	
Swine: 24	
	347 Agriculture: 161 Livestock: 186

Source: DADO and DLSO District Profiles 2009/10 of Kavre, Dolakha, Ramechhap and Sindhuli districts

Table 2.121: Details of Community Forestry User Group in Study Districts

District	No of CFUGs	Forest Area (Ha)	HHs (No)	Forest Area/HH (Ha)
Kavre	411	18,995.22	36,097	0.53
Dolakha	280	29,901.43	41,229	0.73
Ramechhap	339	26,861.88	39,546	0.68
Sindhuli	406	685,12	42,333	1.62
Total	1436	144270	159205	0.91

Source: CFUG Database, Department of Forests, Government of Nepal as of October 20, 2013

Table 2.122: List of Micro-credit Development Banks Functional in SRC Districts

	Name of Institution	Kavre	Dolakha	Ramechhap	Sindhuli
1	Madhymanchall Grameen Bikas Bank Ltd.	✓			
2	Rural Microfinance Development Centre Ltd.	✓	✓	✓	✓
3	Deprosc Microfinance Development Bank Ltd	✓	✓	✓	✓
4	Chhimek Microfinance Development Bank Ltd	✓			✓
5	Shawalamban Laghu Bitta Bikas Banks Ltd.	✓			✓
6	Sana Kisan Vikas Bank Ltd.	✓	✓		
7	Naya Nepal Laghu Bitta Bikas Bank Ltd.	✓		✓	✓
8	Sworojagar Laghu Bitta Bikas Bank Ltd	✓			
9	First Microfinance Development Bank Ltd	✓	✓		
10	Mirmire Microfinance Development Bank Ltd.	✓	✓		

Source: Nepal Rastra Bank (NRB), 2011

Table 2.123: List of Saving and Credit Cooperatives with Limited Banking Authority Registered under NRB Operating in SRC Districts

Names	Operation Date	Head Office	Paid up Capital (Rs. '000)
Bindabasini Saving & Credit Co-operative Society Ltd.	6/21/1995	Khopasi, Kavre	411
Shree Manakamanal Sahakari Sanstha Ltd.	2/18/1997	Banepa, Kavre	120

Source: NRB, 2011

Table 2.124: List of NGOs Providing Financial Services with NRB License Functional in SRC Districts

	Names	Kavre	Dolakha	Ramechhap	Sindhuli
1	Mahuli Samudyik Bikas Kendra				✓
2	MANUSHI		✓		
3	Jiwan Bikash Society				✓
4	Nepal Mahila Utthan Kendra	✓	✓	✓	
5	Gramin Mahila Utsukta Bikas Manch				✓
6	Sawabalamban Bikash Kendra	✓			

Source: NRB, 2011

Table 2.125: Number of input suppliers in study districts

	Category	Kavre	Dolakha	Ramechhap	Sindhuli
1	Registered pesticide sellers	72	36	36	16
2	Registered fertilizer sellers	139	95	51	18
3	Cooperative shops registered under DADO	NA	69	54	42
4	Agro-vets ⁶	69	36	49	23

Source: Computed from Annual Progress Report of DADO, 2010 and 2012 of respective districts

Table 2.126: Agriculture-related Business Service Providers

	Category	Kavre	Dolakha	Ramechhap	Sindhuli
1	Registered pesticide sellers	72	36	36	16
2	Registered fertilizer sellers	139	95	51	18
3	Cooperative shops registered under DADO	NA	69	54	42
4	Agro-vets	69	36	49	23

Source: Computed from Annual progress Report of District Agriculture Development Office, 2010/2011 of respective districts (DADO Kavre, 2013, DADO Dolakha 2013, DADO Sindhuli 2013 and DADO Ramechhap, 2013)

Table 2.127: Livestock-related Business Service Providers

	Category	Number			
		Kavre	Dolakha	Ramechhap	Sindhuli
1	Feed shop	85	7	2	4
2	Dairy / Chilling center	268	6	12	23
3	Feed industry	7	0	2	0
4	Hatchery	8	0	0	0
5	Meat processing industry	2	0	0	0
6	Village Animal health worker ⁷	341	55	285	105
	7.1 Active	120	35	46	48
	7.2 Inactive	221	20	239	57
8	Vet shops ⁸ / Livestock medicine shop	81	39	32	44
9	Meat shops	267	22		37
10	NGOs working in the livestock sector	20	4	12	13

Source: Computed from Annual progress Report of District Livestock Service Office, 2010/2011 and 2011/12 of respective districts (DLSO Kavre, 2011, DLSO Dolakha 2011, DLSO Sindhuli 2011 and DLSO Ramechhap, 2011)

⁶ Agro-vets is a small private shops operated by farmers for selling of seeds, pesticides, medicines and other agriculture production inputs including livestock feed, medicines and treatment facilities.

⁷ Village Animal Health Workers are trained individuals for providing livestock health treatment at village level.

⁸ A small shop established by private entrepreneurs who have been either trained on livestock management or have academic degree in livestock for selling of medicines and providing medical treatment facilities

Table 2.128: Market Price Information System for Producers

Responsible Agency	Purpose	Information source	Frequency	Available for producers
Nepal Rastra Bank	Estimation of consumer price index	21 urban centers for the CPI Retail prices of consumer goods	Weekly	No
Agriculture Business Promotion and Market Promotion Directorate (ABPMD) and Livestock Market Promotion Directorate (LMPD)	Retail Prices of agricultural commodities	DOA and DLS Collection Centres, DADO/DLSOs, Weekly Markets, particularly in urban centres	Fortnightly	Reports published through special issue of Agricultural Marketing Information Bulletin, but hardly reaches to producers
AEC of FNCCI	Retail Prices of 311 selected vegetables and other key agricultural commodities from 31 districts and India	Selected Markets through out the country, particularly in urban centres	Daily	Published in the AEC website (www.agripricenepal.com) and posted in markets
Kathmandu Fruit and Vegetable Markets	Wholesale and retail prices of selected fruits and vegetables	Kalimati Market Centre	Daily	Available through telephone, internet and scrolling news in selected TV channels

Source: Consultations with District and National stakeholders, 2013

Table 2.129: National Consumer Price Index

Year	National consumer price index (Percent)	Adjusted national consumer price index (Percent)
2003/04	88.6	100
2004/05	92.6	105
2005/06	100	113
2006/07	105.9	120
2007/08	113	128
2008/09	127.2	144
2009/10	139.4	157
2010/11	148.4	167

Source: NRB, 2011

Table 2.130: Details of Manufacturing Establishments in SRC Districts

Name	No.	No.of workers engaged	No.of employees	Value of output (NRs 000)	Value of input (NRs 000)	Total value added (NRs 000)
Kavre	21	1,330	1,278	711,119	488,327	222,792
Dolakha	6	111	94	13,938	7,469	6,469
Ramechhap	7	109	109	11,280	4,841	6,539
Sindhuli	N/A	N/A	N/A	N/A	N/A	N/A
Nepal	3,446	177,550	169,891	156,305,650	115,304,387	41,001,263

Source: CBS, 2008

Table 2.131: Registered Small and Cottage Industries in SRC Districts

	Items	Kavre	Dolakha	Ramechhap	Sindhuli
1	Cottage Industry				
1.1	Private Firm	35	41	77	35
1.2	Partnership Firm	2	2	13	0
1.3	Private Limited	5	0	2	0
	Total	42	43	92	35
2	Small Industry				
2.1	Private Firm	2,114	538	565	631
2.2	Partnership Firm	156	85	28	5
2.3	Private Limited	157	9	18	5
	Total	2,427	632	611	641
3	Sectors*				
3.1	Manufacturing/Industries (Productive)	401	131	154	153
3.2	Energy	8	1	4	0
3.3.	Agriculture and Forest	327	70	76	67
3.4	Tourism	138	28	91	7
3.5	Mineral	0	3	9	4
3.6.	Service	1,206	419	368	445
3.7	Construction	0	23	1	2
	Total	2,080	675	703	678

Note: * total of cottage and small industry

Source: ISRC 2013

Table 2.132: Number of Agriculture and Livestock Related Agro-vets Operating in the District

Name	Agriculture related	Livestock related
Kavre	70	49
Dolakha	125	38
Ramechhap	36	57
Sindhuli	34	39
Total	265	183

Source: Computed from Annual progress Report of District Livestock Service Office, 2011/12 of respective districts (DLSO Kavre, 2011, DLSO Dolakha 2011, DLSO Sindhuli 2011 and DLSO Ramechhap, 2011)

Table 2.133: Projects/Program AEC is Involved

	Name of Projects/Programme	Involvement of AEC
1	Raising Incomes of Small and Medium Farmers (RISMF) Project ⁹	AEC is responsible for strengthening farmers' participation in the high value commodities value chain for securing markets and the post harvest investment program of the project. AEC will support planning for securing markets, including developing and implementing a service provider prequalification procedure, development of training programs and review of local service provider business plans and grant applications. AEC will also be responsible to (a) Facilitate business to business (B2B) linkages (b) develop Value Chain integration business plan and develop and manage Agriculture Management Information System and networks dissemination through District Chamber of Commerce and Industries.
2	High Value Agriculture Project (HVAP) ¹⁰	Under this project, AEC is responsible for marketing of the high value products from the point that they are available (post harvest) in the project areas to the final buyer/agribusiness. Major responsibilities of AEC under this project include (a) Market information management and dissemination (b) Capacity strengthening of District Chambers of Commerce and Industry (c) B2B linkages and (d) Value chain learning, documentation and sharing.
3	High Mountain Agribusiness and Livelihood Project (HIMALI) ¹¹	AEC will assist farmer groups, private agribusiness and agricultural value chain service enterprises to develop and implement viable and sustainable business plans and improve forward and backward market linkages. The AEC will assist entities to prepare and submit Agribusiness Grant Applications. AEC will be involved in (a) Business planning and implementation support (b) Assistance to prepare grant applications (c) Input and output market information (d) Agribusiness promotion and networking value chain linkages and (e) technical advisory services and assistance to support business plan implementation, and (g) Monitor grant recipient performance.
4	One village One Product (OVOP) ¹²	AEC is implementing one village one product programme under public private sector partnership programme. The programme includes 8 commodities in 11 districts. Junar is promoted under OVOP in Sindhuli and Ramechhap districts while Lokta is promoted in Dolakha district. The secretariat for the OVOP program is entrusted to the AEC of the FNCCI.

⁹ Raising Incomes of Small and Medium Farmers Project (2011 – 2017) is implemented with the financial support from Asian Development Bank (ADB) with a view to reduce the market and business risks for small and medium farmers who diversify into high-value commodities (HVCs) in 10 districts of Nepal's Mid-Western Development Region and Far-Western Development Region, namely Banke, Bardiya, Dang, Dhailekh, Surkhet, Baitadi, Dadeldhura, Darchula, Doti, and Kailali.

¹⁰ The project (2010 – 2017) is implemented with financial support of International Fund for Agriculture Development (IFAD) for the reduction of poverty and vulnerability of women and men in hill and mountain areas of the Mid-Western Development Region of Nepal.

¹¹ HIMALI is implemented (2011 -2017) in Nepal with the financial support from ADB. The project intends to assist farmers and downstream enterprises to strengthen linkages, taking advantage of the gradual improvement in infrastructure, to realize the existing demand for mountain products.

¹² OVOP is a Public Private Partnership (PPP)-based program officially launched in July 17, 2006 for 5 years as a pilot project to alleviate poverty in local community and to benefit local producers and the business enterprises through promotion of local products.

Table 2.134: Major NGOs in Agriculture Sector Operating in SRC Districts

Name of NGOs		Type	Program
Kavre			
1	ADRA Nepal	INGO	Kitchen Gardening Training and Seed Kit Distribution
2	CEAPRED	NNGO	Vegetable Seeds Production
3	Women Awareness Centre	NNGO	Training on Cardamom, Seasonal and off-season vegetables; Distribution of seedlings and seeds
4	District Coffee Entrepreneurs' Association	DNGO	Training on coffee cultivation and Conduction of IPM farmers' school
5	Love Green Nepal	NNGO	Conservation of fruits, Processing and orchard management training
6	Digo Uddam thatha Samajik Bikas Kendra	DNGO	Enterprise development
7	ICIMOD	INGO	Distribution of fruit saplings
8	RIMREC	NGO	Agriculture-related training
Dolakha			
1	Sustainable Rural Energy Development Centre, Bhimeshwar Municipality - 10	DNGO	Vegetable, Cardamom and Fruit cultivation
2	Ecology, Agriculture and rural Development Society (ECARDS)	DNGO	Vegetable cultivation and storage improvement
3	Community Organization for Development, Bhimeshwar Municipality - 10	NNGO	Vegetable cultivation, storage improvement, compost-making and vermiculture
4	Village Development Tuki Association, Bhimeshwar Municipality - 10	DNGO	compost-making and vermiculture, Leguminous crops and commercial vegetables cultivation
5	Community Environment Education and Mass Awareness Rural Development Organization, Bhimeshwar Municipality - 10	DNGO	Training, small irrigation, distribution of plants and inputs
6	CEAPRED	NNGO	Vegetable and vegetables seed production
7	Civil society forum for sustainable development (CVIC)	NNGO	Farmer group formation, mobilization, demonstration
8	Fashelung Social Service Nepal	DNGO	Vegetable farming, seed distribution, goat farming
9	Rural Environment Improvement Society (RISE)	DNGO	Social mobilization, empowerment, capacity building
10	Rural Reconstruction Nepal	NNGO	Literacy and Education
Ramechhap			
1	Development Project Service Centre, Manthali	NNGO	Subsidized vegetable seed distribution, training, small irrigation
2	CEAPRED	NNGO	Vegetable cultivation,
3	Nepal Sarywodaya Sewa Kendra	DNGO	Agriculture, Livestock and farm related
4	Janabhawana Youth Club, Lekarpur	DNGO	Agro-forestry training, mushroom cultivation training
5	Shivashakti Youth Club, Salu – 6	DNGO	Goat-raising, cultivation of mushroom, fruits,

Name of NGOs		Type	Program
			vegetables, and irrigation
6	Rural Reconstruction Nepal	NNGO	Vegetable cultivation, livelihoods improvement
7	LIBIRD	NNGO	Home garden Programme
8	Junar (Sweet orange) Development Association, Ramechhap	DNGO	Expansion and management of Junar orchard, quality improvement, pest control
9	Tamakoshi Service Committee, Manthali	DNGO	Irrigation, commercial vegetables cultivation, organic fertilizer management training
10	Social Service Youth Club, Hile Devi – 8	DNGO	Fruits cultivation, processing training, operation of agriculture saving groups
11	Community Development Society, Manthali	DNGO	Training on cereals, vegetables cultivation and bee-keeping
Sindhuli			
1	Seeds Nepal	DNGO	Livestock and agriculture development
2	Prayas Nepal	DNGO	Sustainable agriculture, income generating
3	Rural Development Society	DNGO	Income generation, capacity building
4	Junar Association of Nepal	DNGO	Junar production and marketing
5	Sahakarya Nepal	DNGO	Enterprise development, empowerment
6	READS Nepal	DNGO	Income generating, infrastructure development, irrigation, education
7	Sindhuligadhi Sewa Prathisthan	DNGO	Livestock insurance, irrigation, infrastructure
8	Rural Economic Empowerment Society	DNGO	Enterprise development
9	Rural Development and Women Empowerment Center	DNGO	Micro=hydro, income generating
10	Rural Women Awareness Center, Sindhuli	DNGO	Income generating
11	Civil Concern Society, Sindhuli Nepal	DNGO	Income generating, poverty reduction
12	DIYALO Pariwar	NNGO	Income generating, poverty reduction
13	Manav thatha Rastriya Bikas Samaj	NNGO	Income generating, poverty reduction
14	Plan Nepal	INGOs	Income generating, livelihoods improvement
15	PRAYAS Nepal	DNGOs	Agriculture, Livestock and Women Empowerment

Note: DNGO = District Level NGO; NNGO = National Level NGO; INGO = International NGO.

Source: Collated from District Annual Development Plan of the Kavre, Ramechhap, Dolakha and Sindhuli districts, 2013/14

3. DEVELOPMENT CONSTRAINTS FOR COMMERCIAL AGRICULTURE IN SRC DISTRICTS¹³

Horticultural Crops

Table 3.1: Share of High Value Crops in Total Farm Income

	Area/Zone	Average cereal area in a year (ha)	Average annual income from cereal (NRs)	Average cash crop area (ha)	Average annual income from cash crop (NRs)	Total average farm income (NRs)
1	Cereal zone (plain)	0.82	50,457	0.160 (16.33%)	23,400 (31.38%)	78,857
2	Potato and vegetables zone (hills Kavre)	0.84	62,121	0.412 (32.75%)	49,602 (44.39%)	111,723
3	Citrus zone (hills, Sindhuli)	0.89	57,162	0.318 (26.38%)	39,410 (40.81%)	96,553
	Grand Average	0.85	56,416	0.290	37,076	93,493

Source: A Study on Potentiality of Commercialization of Agriculture in Dhurikhel-Bardibas Road Corridor (Sindhuli Road Corridor), DOA, Regional Agricultural Directorate, July 2011

Table 3.2: Income Generated by Vegetable Farming and its Comparative Advantage against Cereals

	Area/Zone	Average cereal income per hectare of land (NRs)	Average vegetable income per hectare of land (NRs)	Ratio of vegetable and cereal income
1	Cereal zone (plain)	61,319	185,413	3.03 : 1
2	Potato and vegetables zone (hills Kavre)	73,476	158,109	2.15 : 1
3	Citrus zone (hills, Sindhuli)	64,257	134,210	2.08 : 1
	Grand Average	66,327	161,910	2.43 : 1

Source: A Study on Potentiality of Commercialization of Agriculture in Dhurikhel-Bardibas Road Corridor (Sindhuli Road Corridor), DOA, Regional Agricultural Directorate, July 2011

¹³ With regard to NTFPs, due mainly to its vast variety and limitation of information in general, analyses of constraints were not conducted at this stage. It will be conducted at later stage of the Study after certain NTFPs were identified as high potential commodity.

Table 3.3: Status of Availability of Fertilizers in Study Districts

(Unit: Percent of VDCs)

	Status of Availability	Kavre	Dolakha	Ramechhap	Sindhuli
1	Very Less	10.0	9.8	9.1	18.5
2	Less	8.9	9.8	21.8	22.2
3	Moderate	23.3	31.4	40.0	37.0
4	High	30.0	43.1	16.4	11.1
5	Very High	27.8	5.9	12.7	11.1

Source: Field Consultation, 2011

Table 3.4: Status of Availability of Seeds in Study Districts

(Unit: Percent of VDCs)

	Status of Availability	Kavre	Dolakha	Ramechhap	Sindhuli
1	Very Less	27.8	5.9	7.3	22.2
2	Less	33.3	25.5	45.5	27.8
3	Moderate	17.8	31.4	21.8	27.8
4	High	12.2	33.3	16.4	14.8
5	Very High	8.9	3.9	9.1	7.4

Source: Field Consultation, 2011

Table 3.5: Status of Availability of Pesticides in Study Districts

(Unit: Percent of VDCs)

	Status of Availability	Kavre	Dolakha	Ramechhap	Sindhuli
1	Very Less	36.7	27.5	25.5	22.2
2	Less	28.9	33.3	38.2	29.6
3	Moderate	20.0	23.5	16.4	25.9
4	High	5.6	13.7	10.9	13.0
5	Very High	8.9	2.0	9.1	9.3

Source: Field Consultation, 2011

Table 3.6: Availability of Input Suppliers in Study Districts

(Unit: Percent of VDCs)

	District	Availability of input suppliers	
		Low	Very Low
1	Kavre	52.2	79.6
2	Dolakha	25.5	47.8
3	Ramechhap	18.5	47.8
4	Sindhuli	20.4	83.3

Source: Field Consultation, 2011

Livestock and Livestock Products

Table 3.7: Number of Dairy Animal and Milk Production in 4 Districts in 2009/2010

District	Cow		Cattle Population	Milking Cow Ratio (%)	Buff Cow		Buffalo Population	Milking Cow Ratio (%)
	Population	Milk Yield (L/head)			Population	Milk Yield (L/head)		
Kavre	23418	589	138750	16.9	62716	1236	150990	41.5
Dolakha	11681	473	79170	14.8	12180	1274	50613	24.1
Ramechhap	10396	431	89847	11.6	16254	1234	75169	21.6
Sindhuli	12612	437	119560	10.5	15385	1177	62002	24.8

Source: Statistical Information on Nepalese Agriculture, MOAD, 2011/2012

Table 3.8: Cheese Production for 5 years in DDC Dairy Products & Distribution Project

	(In Ton)				
Year	2005/06	2006/07	2007/08	2008/09	2009/10
Cheese					
Kanchan	114	100	100	124	129
Yak	44	46	47	48	56
Mozzarella	11	19	24	34	30
Cheese spread	5	6	6	1	1
Processed cheese	1	1	1	2	1
Total	175	172	178	209	217

Source: Dairy Development Corporation Report 2009/2010

Table 3.9: Chilling Centre Capacity under Milk Distribution Project of Dairy Development Corporation (DDC) in 2009/2010

Project Name	Region	District	Number of Cooperaive	Number of Chilling Centre	Capacity (L)	Average Milk Collection (L/day)	Number of Booth
Kathmandu	Central	Kavre and others 7district	281	22	109,000	72,400	1,309
Biratnagar	Eastern	Ilam and others 4district	126	10	3,800	36,300	231
Hetauda	Central	Rautahat and others 3district	167	8	40,200	23,700	185
Nepalgunj	Western	Shurkhet and others 4district	40	4	21,000	6,700	N.A
Janakpur	Central	Sindhuli and others 6district	25	7	9,000	4,150	78
Lumbini	Western	Rupandehi and others 3district	79	9	32,000	16,300	81
Dairy Product	—	Dolakha and others 8district	49	15	19,200	11,350	—
Total			767	75	234,200	170,900	1,884

Source: Dairy Development Corporation Report 2009/2010

Table 3.10: Distribution of DDC Dairy Products in 2009/2010

Project Name	Milk Collection	Processed Milk	Ghee	Butter	Yogurt	Skim Milk Powder	Panir	(In Ton)		DDC Fresh Bottle ('000')
								Ice-cream	Cheese	
Kathmandu	29,711	50,966	902	381	—	—	—	—	—	481
Biratnagar	11,759	13,303	243	287	908	506	29	6	—	—
Hetauda	4,674	5,600	51	55	335	—	27	1	—	145
Nepalgunj	1,187	—	—	—	—	—	—	—	—	—
Janakpur	395	1,222	—	2	342	—	1	—	—	—
Lumbini	5,409	556	10	10	42	—	7	—	—	—
Dairy Product	3,283	—	—	27	895	—	63	72	215	—
Total	56,418	71,647	1,206	762	2,522	506	127	79	215	626

Source: Dairy Development Corporation Report 2009/2010

Table 3.11: Meat production in 2011/12

Meat	Production (ton)	Proportion (%)
Buff	172,414	59.9
Mutton	2,720	0.9
Goat	53,956	18.7
Pig	18,277	6.3
Chicken	40,346	14.0
Duck	217	0.1
Total	287,930	100.0

Source: Statistical Information on Nepalese Agriculture, MOAD, 2011/12

Table 3.12: Food Availability and Requirement of 4 Districts in 2011/2012

District	Crops Production (ton)					Total Crop Production (MT)	Requirement (MT)	Balance MT + (-)
	Rice	Maize	Wheat	Millet	Barley			
Kavre	17,170	41,787	3,126	17,426	226	80,479	78,469	2,010
Dolakha	5,033	13,260	3,771	3,719	63	26,170	35,661	(9,491)
Ramechhap	16,464	38,238	4,935	6,669	29	66,350	41,130	25,220
Sindhuli	17,907	29,366	8,445	11,191	18	67,137	59,532	7,605
Central Mountain	22,294	59,535	27,164	10,390	230	114,545	98,999	15,546
Central Hill	177,251	259,169	34,877	99,801	466	573,007	920,870	(347,863)
Central Terai	589,934	71,074	2,828	382,088	176	1,046,100	877,524	168,576
Central Region	789,479	389,778	64,869	492,279	872	1,733,652	1,897,393	(163,741)
Nepal	2766,894	1,503,091	255,954	1491,818	11856	6,037,727	5,151,420	886,307

Source: Statistical Information on Nepalese Agriculture, MOAD, 2011/12

Table 3.13: Imports of Cereals in 2009/2010

Commodities	Quantity (Ton)	Values (Rs.)	Importing Country
Durum wheat	30.0	306,243	India
Wheat	1,176.9	25,339,512	India, Italy
Barley	11.8	201,468	India
Oats	1,287.9	8,800,197	India
Maize seeds	9,778.8	121,820,739	India, Argentina
Maize corn	132,213.4	1,309,990,298	India, Argentina
Rice in the husk	13,224.2	241,270,791	India, USA, Pakistan
Husked (brown) rice	557.2	6,518,436	India
Semi milled or wholly milled rice	79,087.5	2,279,768,273	India, USA
Broken rice	9,978.0	108,268,004	India
Buckwheat	138.9	1,696,840	India
Millet	11,071.9	79,742,992	India
Cereals	728.5	11,086,293	India
Wheat flour	254.5	8,974,988	USA, Italy, India
Rye flour	523.2	13,081,589	India
Maize corn flour	111.2	2,515,631	India
Cereal Flours	9.4	643,055	India, Thailand
Meals of wheat	30.6	580,498	India, China P.R
Meals of maize	486.3	12,943,945	India
Total	260,700.2	4,233,549,792	

Source: Statistical Information on Nepalese Agriculture, MOAD, 2009/2010

4. DEVELOPMENT POTENTIALS FOR COMMERCIAL AGRICULTURE IN SRC DISTRICTS

Potential Development Activities for the Agricultural Commercialization in SRC Districts

Table 4.1: Livestock Population and Population per Household in 4 Districts in 2009/2010

	Region	Mountain-Central				Hill-Central				Nepal	
	District	Dolakha		Kavre		Ramechhap		Sindhuli		Population	Per HH
	Unit	Population	Per HH	Population	Per HH	Population	Per HH	Population	Per HH		
Cattle	No.	76,632	1.78	134,255	1.90	85,466	2.12	110,340	2.26	7,199,260	1.69
Milking cow	No.	11,307	0.26	21,692	0.31	9,889	0.24	11,640	0.24	954,680	0.22
Buffaloes	No.	46,579	1.08	130,999	1.86	60,109	1.49	63,068	1.29	4,836,984	1.14
Milking buff	No.	11,210	0.26	56,148	0.80	12,998	0.32	15,446	0.32	1,252,770	0.29
Sheep	No.	16,624	0.39	3,652	0.05	3,237	0.08	1,247	0.03	801,371	0.19
Goat	No.	144,619	3.35	289,676	4.11	92,500	2.29	145,800	2.99	8,844,172	2.08
Pigs	No.	6,369	0.15	13,658	0.19	14,281	0.35	17,374	0.36	1,064,858	0.25
Chicken	No.	320,892	7.43	861,880	12.22	426,621	10.56	396,428	8.13	25,760,373	6.06
Laying Hen	No.	136,418	3.16	312,286	4.43	94,100	2.33	107,510	2.20	7,290,875	1.71
Duck	No.	4,250	0.10	2,630	0.04	605	0.01	4,713	0.10	379,753	0.09
Laying Duck	No.	1,470	0.03	783	0.01	276	0.01	915	0.02	175,300	0.04

Source: Statistical Information on Nepalese Agriculture, MOAC, 2009/2010

Table 4.2: Livestock Population and Population per Household in 4 Districts in 2011/12

Animals Categories	Region	Mountain Central		Hill central						Nepal	
	District	Dolakha		Kavre		Raechhap		Sindhuli		Pop	Per HH
	Unit	Pop	Per HH	Pop	Per HH	Pop	Per HH	Pop	Per HH		
Cattle	No.	79,170	1.64	138,750	1.60	89,847	2.00	119,560	2.05	7,244,944	1.33
Milking cow	No.	11,681	0.24	23,418	0.27	10,396	0.23	12,612	0.22	998,963	0.18
Buffalo	No.	50,613	1.05	150,990	1.74	75,169	1.67	62,002	1.06	5,133,139	0.95
Milking Buffalo	No.	12,180	0.25	62,716	0.72	16,254	0.36	15,385	0.26	1,331,037	0.25
Sheep	No.	16,500	0.34	3,613	0.04	4,271	0.09	263	0.00	807,267	0.15
Goat	No.	145,780	3.01	294,676	3.40	122,619	2.72	181,482	3.11	9,512,958	1.75
Pig	No.	10,999	0.23	14,520	0.17	16,524	0.37	19,432	0.33	1,137,489	0.21
Chicken	No.	360,352	7.44	1,440,228	16.63	555,803	12.34	1,440,280	24.72	45,171,185	8.32
Laying Hen	No.	61,428	1.27	30,360	0.35	80,959	1.80	70,140	1.20	7,907,468	1.46
Duck	No.	4,194	0.09	2,651	0.03	618	0.01	4,651	0.08	376,916	0.07
Laying Duck	No.	1,451	0.03	1,391	0.02	282	0.01	1,912	0.03	174,978	0.03

Source: Statistical Information on Nepalese Agriculture, MOAD, 2011/12

Table 4.3: Comparison of Milk Production per Household between National Average and 4 districts in 2009/2010

Region	Mountain-Central		Hill-Central				Nepal			
	Dolakha		Kavre		Ramechhap		Sindhuli			
	Total	Per HH	Total	Per HH	Total	Per HH	Total	Per HH		
District	ton	Kg	ton	Kg	ton	KG	ton	Kg		
Cow milk	5,353	124	11,521	163	3,984	99	4,810	99	429,129	101
Buffalo milk	9,190	213	57,138	810	12,189	302	12,626	259	1,068,300	251
Total milk	14,543	337	68,659	973	16,173	401	17,436	358	1,497,429	352

Source: Statistical Information on Nepalese Agriculture, MOAC, 2009/2010

Table 4.4: Comparison of Milk Production per Household between National Average and 4 districts in 2011/12

Animals Categories	Region	Mountain Central		Hill central						Nepal	
	District	Dolakha		Kavre		Ramechhap		Sindhuli			
		Total Mt	Kg Per HH	Total Mt	Kg Per HH	Total Mt	Kg Per HH	Total Mt	Kg Per HH	Total Mt	Kg Per HH
Cow Milk		5,530	114	13,795	159	4,478	99	5,513	94	468,913	86
Buffalo Milk		9,985	206	63,722	735	15,580	345	12,592	216	1,153,838	212
Total		15,515	320	77,517	895	20,058	445	18,105	310	1,622,751	298

Source: Statistical Information on Nepalese Agriculture, MOAD, 2011/12

Table 4.5: Comparison Meat Production per Household between National Average and 4 districts in 2009/2010

Region	Mountain-Central		Hill-Central						Nepal	
District	Dolakha		Kavre		Ramechhap		Sindhuli		Total	Per HH
	ton	kg	ton	kg	ton	kg	ton	kg	ton	kg
Buff meat	1,638	37.95	3,487	49.45	1,557	38.55	2,129	52.72	162,358	38.17
Mutton	62	1.44	17	0.24	9	0.22	3	0.07	2,705	0.64
Goat	391	9.06	726	10.30	146	3.62	468	11.59	50,315	11.83
Pig	77	1.78	115	1.63	103	2.55	190	4.70	17,059	4.01
Chicken	163	3.78	287	4.07	186	4.61	211	5.22	17,551	4.13
Duck	1	0.02	2	0.03	0	0.00	2	0.05	225	0.05
Total meat	2,332	54.03	4,634	65.72	2,001	49.55	3,003	74.36	250,213	58.83

Source: Statistical Information on Nepalese Agriculture, MOAC, 2009/2010

Table 4.6: Comparison Meat Production per Household between National Average and 4 districts in 2011/12

Animals Categories	Region	Mountain Central		Hill central						Nepal	
	District	Dolakha		Kavre		Ramechhap		Sindhuli			
	Unit	Total Mt	Kg per HH	Total Mt	Kg per HH	Total Mt	Kg per HH	Total Mt	Kg per HH	Total Mt	Kg per HH
Bufflo Meat		1,780	36	4,119	48	1,947	43.23	2,093	35.9	172,414	31.8
Mutton		61	1	18	0	11	0	2	0	2,720	0
Goat		394	8	739	8	193	4	568	9.7	53,956	9.9
Pig		133	2	122	1.4	119	2.6	213	3.6	18,277	3.3
Chicken		330	6	1,252	14.5	472	10.48	590	10.2	40,346	7.4
Duck		1	0.02	2	0.02	0	0.02	2	0.034	217	0.039
Total		2,699	55	6,252	72.18	2,742	60.8	3,468	59.5	287,930	52.439

Source: Statistical Information on Nepalese Agriculture, MOAD, 2011/12

Table 4.7: Imports of Live Animals in 2009/2010

Commodities	Unit	Quantity	Values (Rs.)	Importing Country
Horses	head	209	586,810	India
Asses, mules and hinnies	head	180	1,218,346	Russia, india
Live bovine animals	head	2,343	3,819,185	India
Bovine animal (Buffalo)	head	25,960	58,231,902	India
Live swine	head	1,595	290,162	India
Live swine weighing less than 50 kg	head	159	178,368	
Live swine weighing 50 kg or more	head	1	1,714	India
Sheep	head	25,798	7,251,216	India
Goats	head	391,184	391,972,327	India
Fowls of the species Gallus domesticus, weighing not more than 185 g	Pcs.	48,876	24,578,880	Malaysia, Italy, France, and others
Turkeys, weighing not more than 185 g	Pcs.	214	821,971	Malaysia
Live poultry weighing not more than 185g	Pcs.	174,655	32,507,982	Malaysia, Ausralia, U.A.E, and others
Fowls of the species Gallus domesticus	Pcs.	4,950	2,160,350	U.K.
Live poultry	Pcs.	141	54,019	India
Mammals	head	1	1,714	India
Live animals	head	982	847,046	India
Total			524,521,992	

Source: Statistical Information on Nepalese Agriculture, MOAC, 2009/2010

Table 4.8: Imports of Live Animals in 2011/12

Commodities	Unit	Quantity	Values(Rs)	Impoting Contry
Horse	Heads	198	615,913	India
Asses, mules and hinnies	Heads	2,799	6,784,972	India
Live bovine animals	Heads	4132	3,265,998	India
Bovine animal (Buffalo)	Heads	80,067	153,467,929	India
Live swine	Heads	3,387	690,612	India
Live swine weighing less than 50 kg	Heads	1,568	2,351,316	India
Live swine weighing 50 kg or more	Heads	520	675,916	India
Sheep	Heads	14,897	47,035,952	India
Goats	Heads	1,181,428	991,536,306	India
Fowls of the speices Gallus domestics	Heads	3,264	246,157	China
Live poultry weighing not more than 185g	Heads	650	65,000	India
Cuts and offal of turkeys, frozen	Kg	698	100,090	India
Mammals	Heads	26	83,200	India
Live animals	Heads	336	898,073	India
Preparations of a kind used in animal feeding	Kg	19,371,196	1,416,787,185	Argentina, Bangladesh, China, India, Korea 19 Countries abroad)
Milk and cream in powder, granules or other solid form.	Kg	50,000	13,177,387	Pakistan

Source: Statistical Information on Nepalese Agriculture, MOAD, 2011/12

Section 2: Agricultural Statistics

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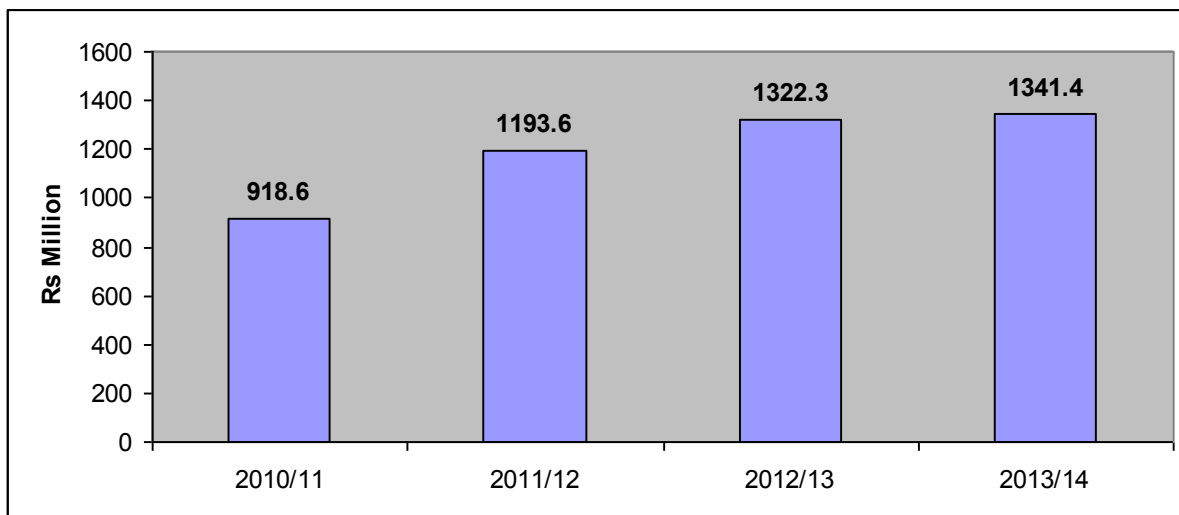
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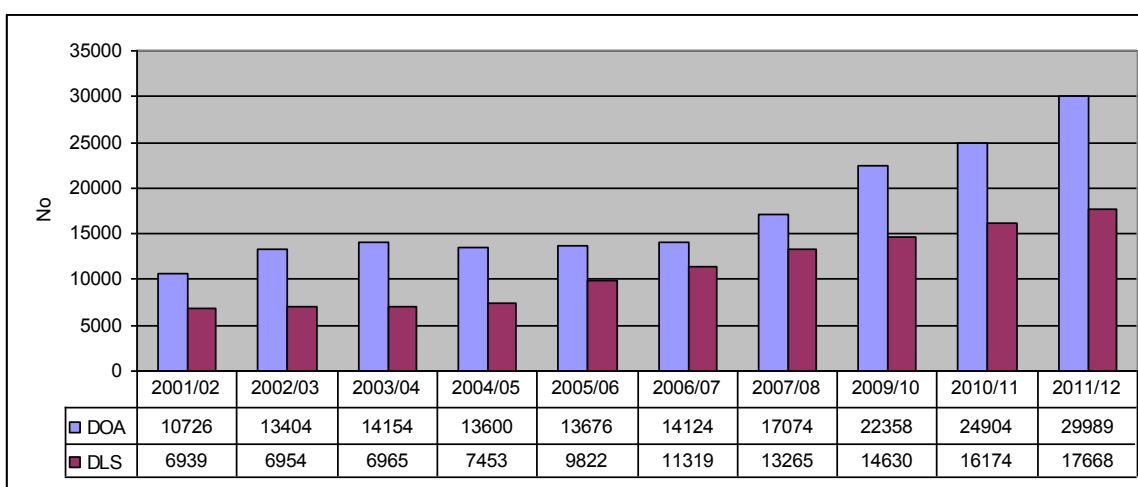
1. BRIEF OVERVIEW OF THE AGRICULTURE SECTOR IN NEPAL

Government Policies



Source: NPC 2011 b.

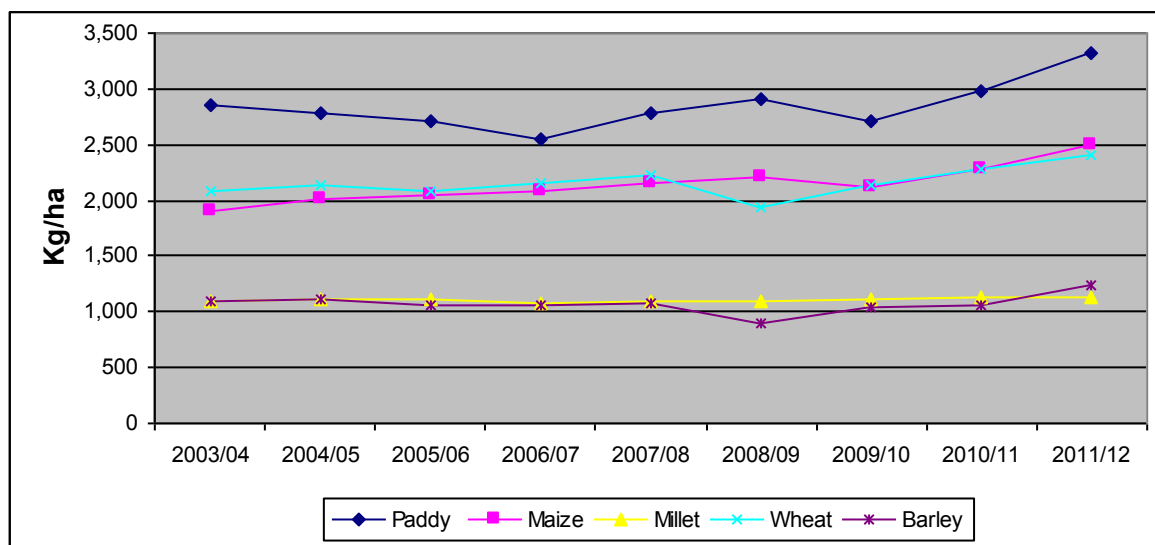
Figure 1.1: Investment Plan of Government in Agriculture Sector



Source: Agriculture Extension Directorate, 2012

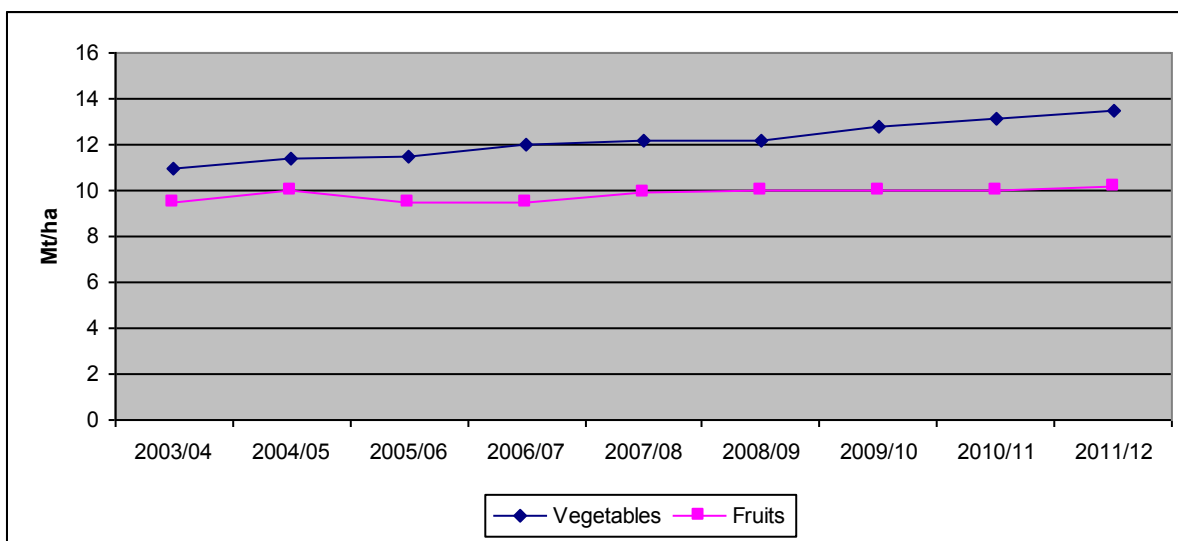
Figure 1.2: Number of Farmer Groups Registered with the DOA and DLS

Agricultural Production in Nepal



Source: Computed from SINA, MOAD 2012.

Figure 1.3: Yield of Major Cereal Crops between 2003/04 and 2011/12



Source: Computed from SINA, MOAD 2012.

Figure 1.4: Yield of Vegetables and Fruits between 2003/04 and 2011/12

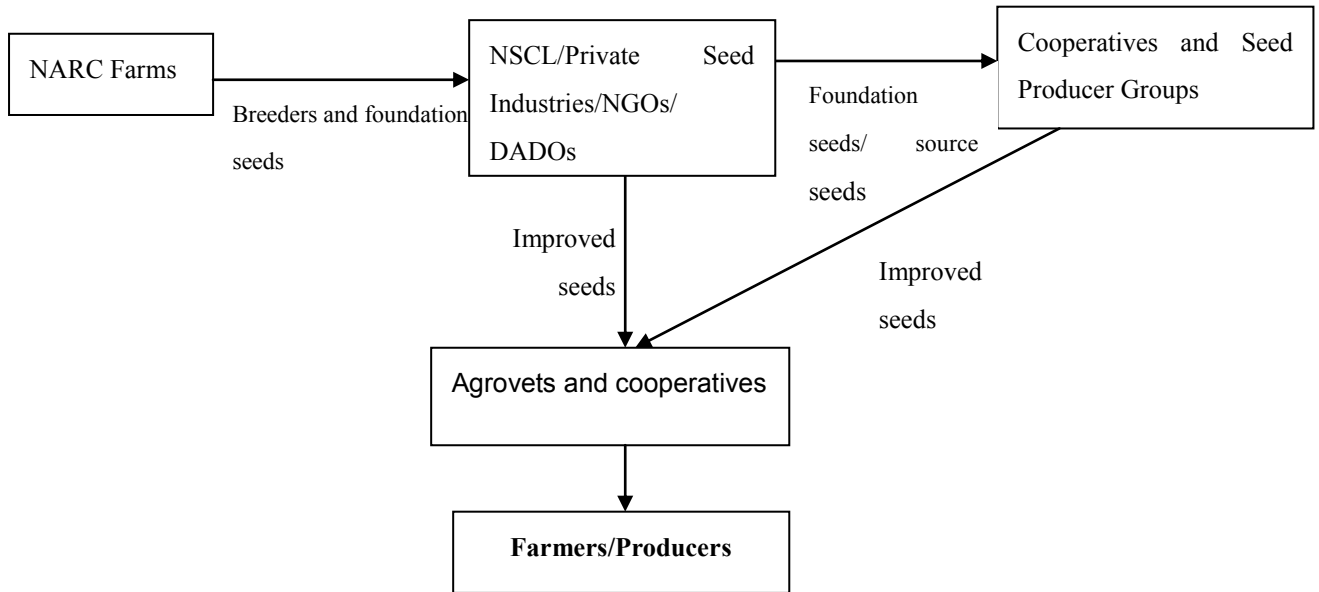


Figure 1.5: Seeds Supply Routes

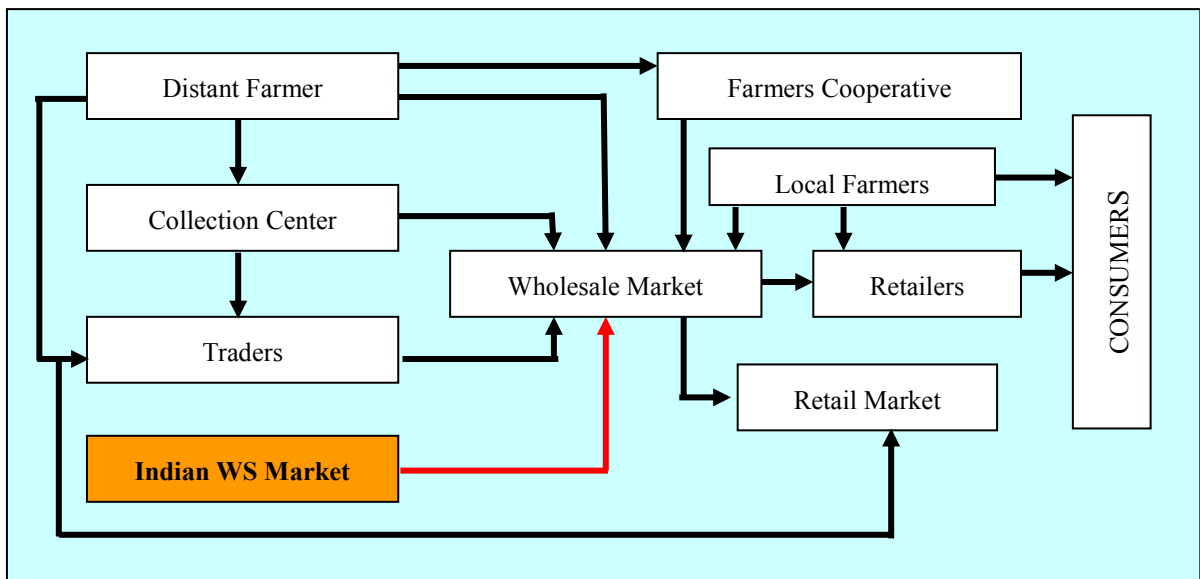


Figure 1.6: Marketing Channels for Fruits and Vegetables in Nepal

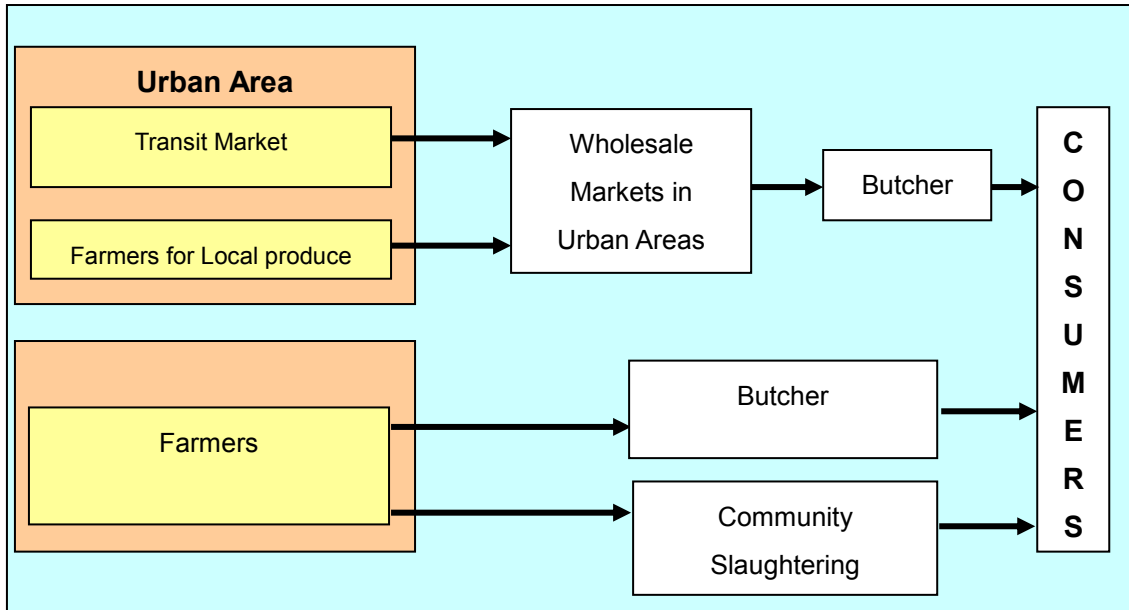
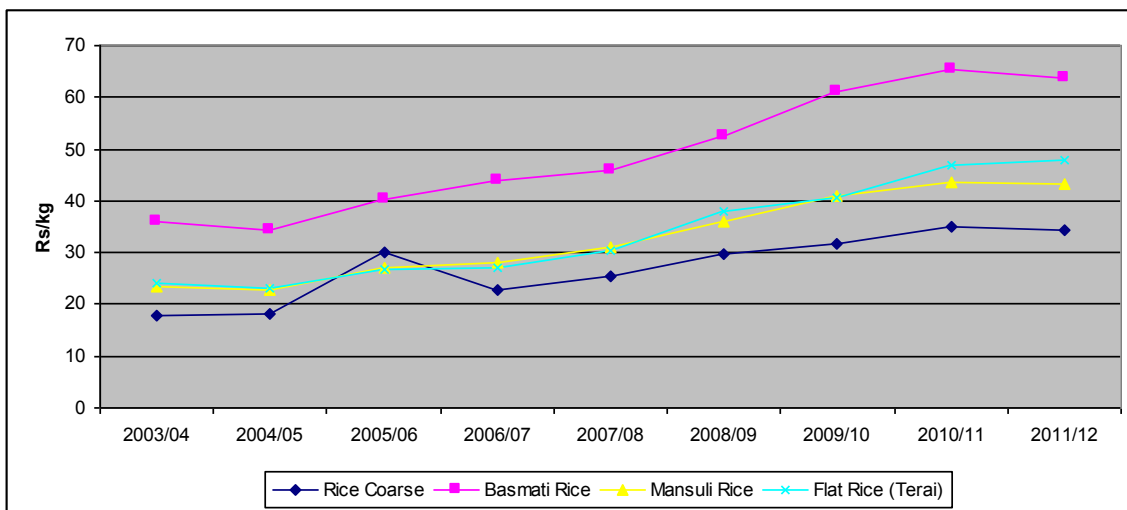
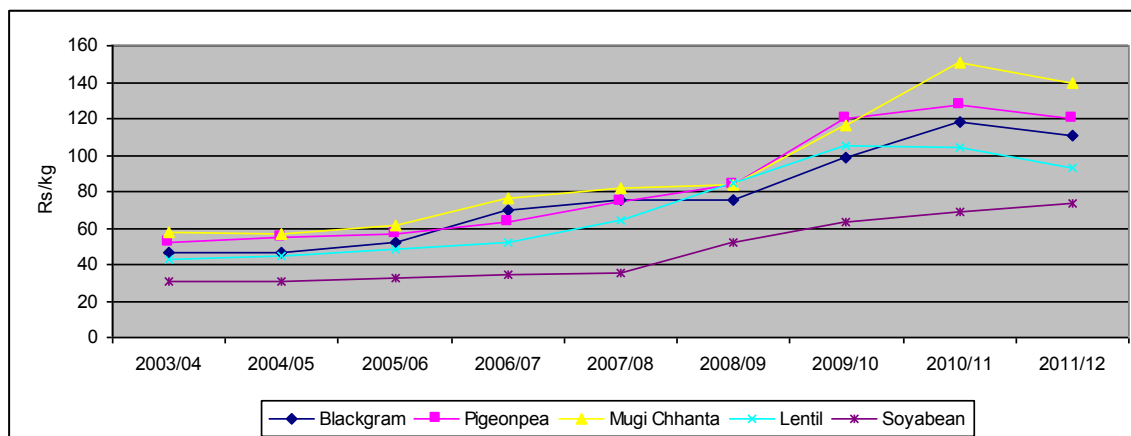


Figure 1.7: Marketing Channels for Live Animals in Nepal



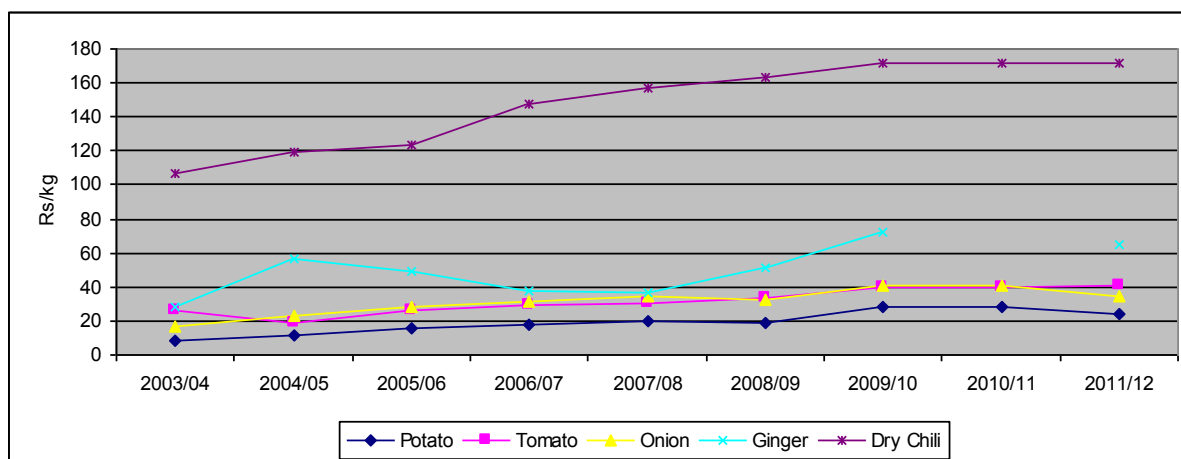
Source: Agribusiness Promotion and Marketing Development Directorate (ABPMDD)/DoA, 2012

Figure 1.8: National Annual Average Price of Different Types of Rice



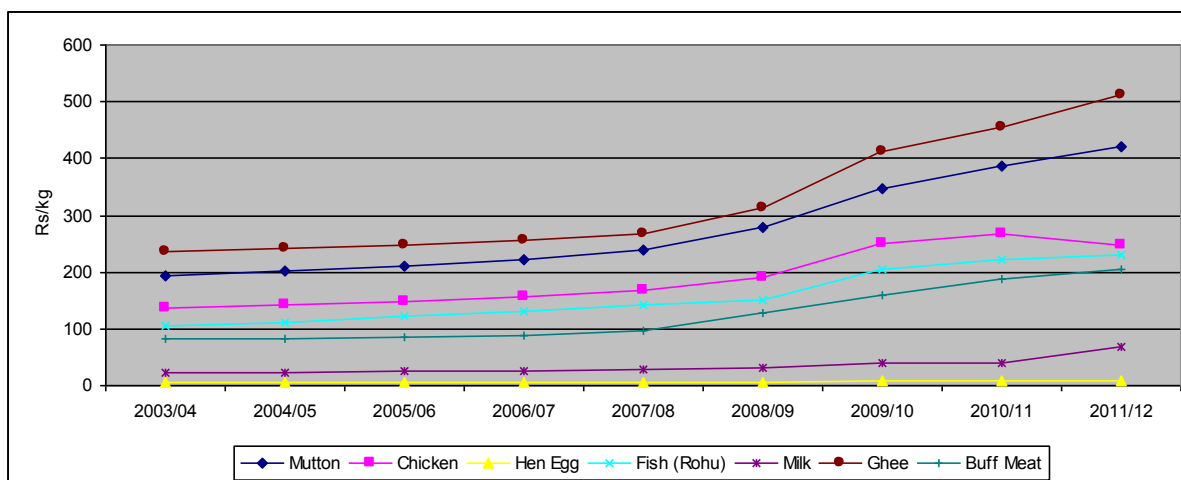
Source: ABPMDD/DoA, 2012

Figure 1.9: National Annual Average Price of Pulses



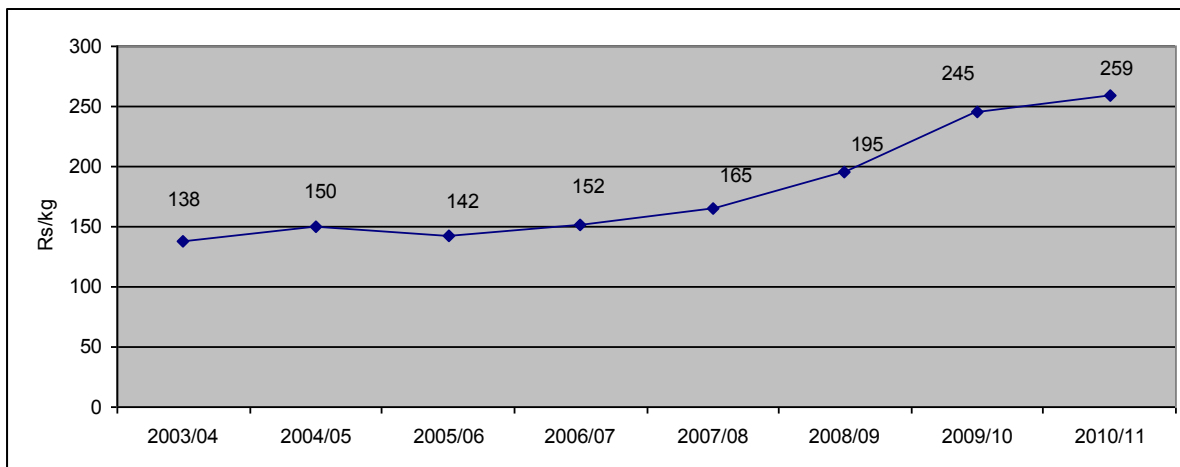
Source: ABPMDD/DoA, 2012

Figure 1.10: National Annual Average Price of Vegetables



Source: ABPMDD/DoA, 2012

Figure 1.11: National Annual Average Price of Livestock Produces



Source: Compiled from various issues of Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005, 2008, 2010 and 2011).

Figure 1.12: Price of Live Goat per Kilogram

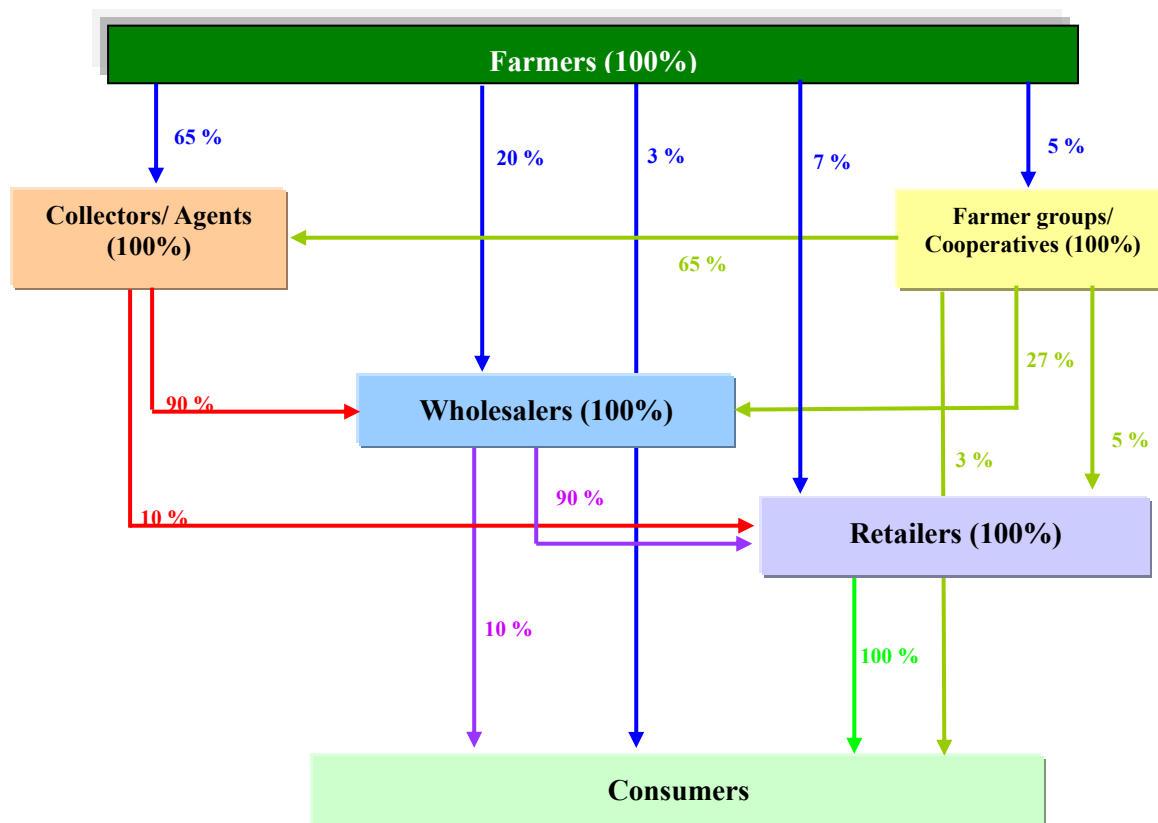
2. AGRICULTURE DEVELOPMENT IN SRC DISTRICTS

Post Harvest Handling in SRC Districts

Area	Months											
	July-Aug	Aug-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-March	March-April	April-May	May-June	June-July
High hills	Market						Production					Market
Low hills		Production					Market					
Terai		Production			Market							

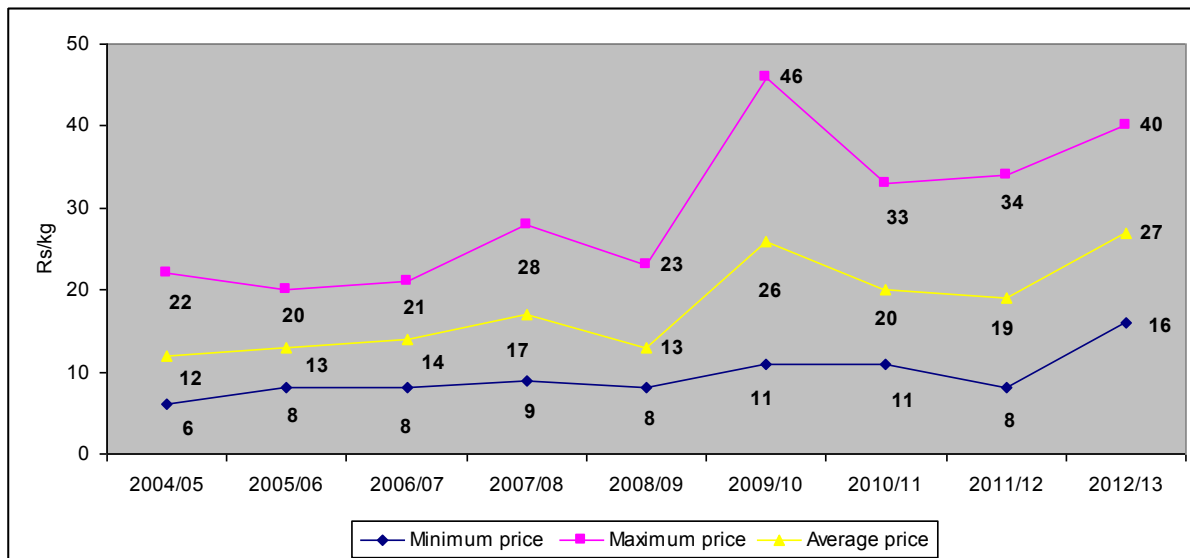
Source: Field Consultation, 2009

Figure 2.1: Marketing Calendar of Potato in SRC Districts



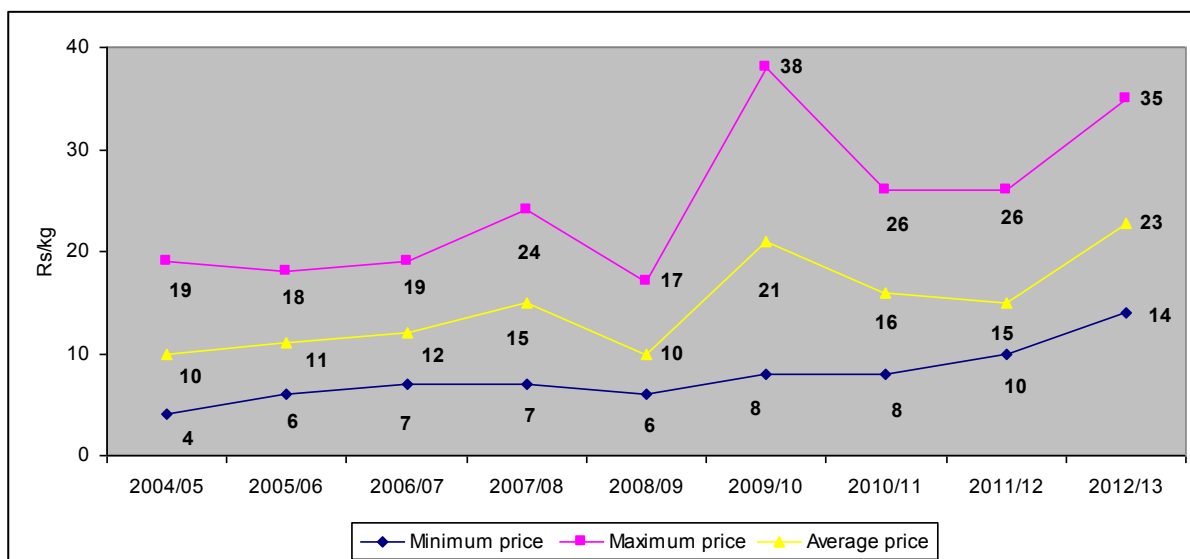
Source: Field Consultation, 2009

Figure 2.2: Distribution System of Potato in the Study Districts



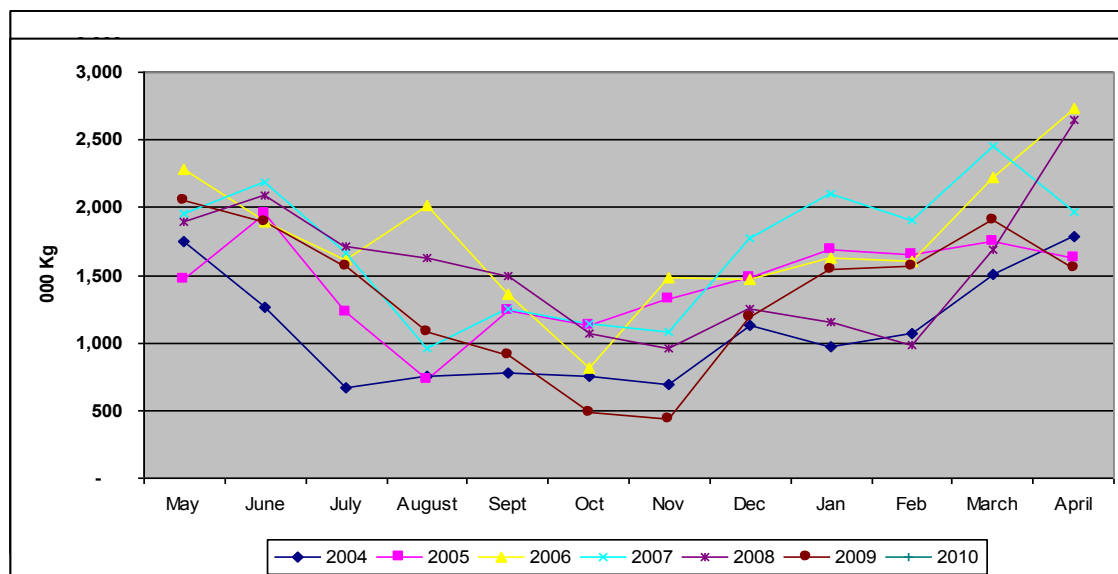
Source: Computed from database of Kalimati market, 2013

Figure 2.3: Wholesale Price Trend of Red Potato in Kalimati Market



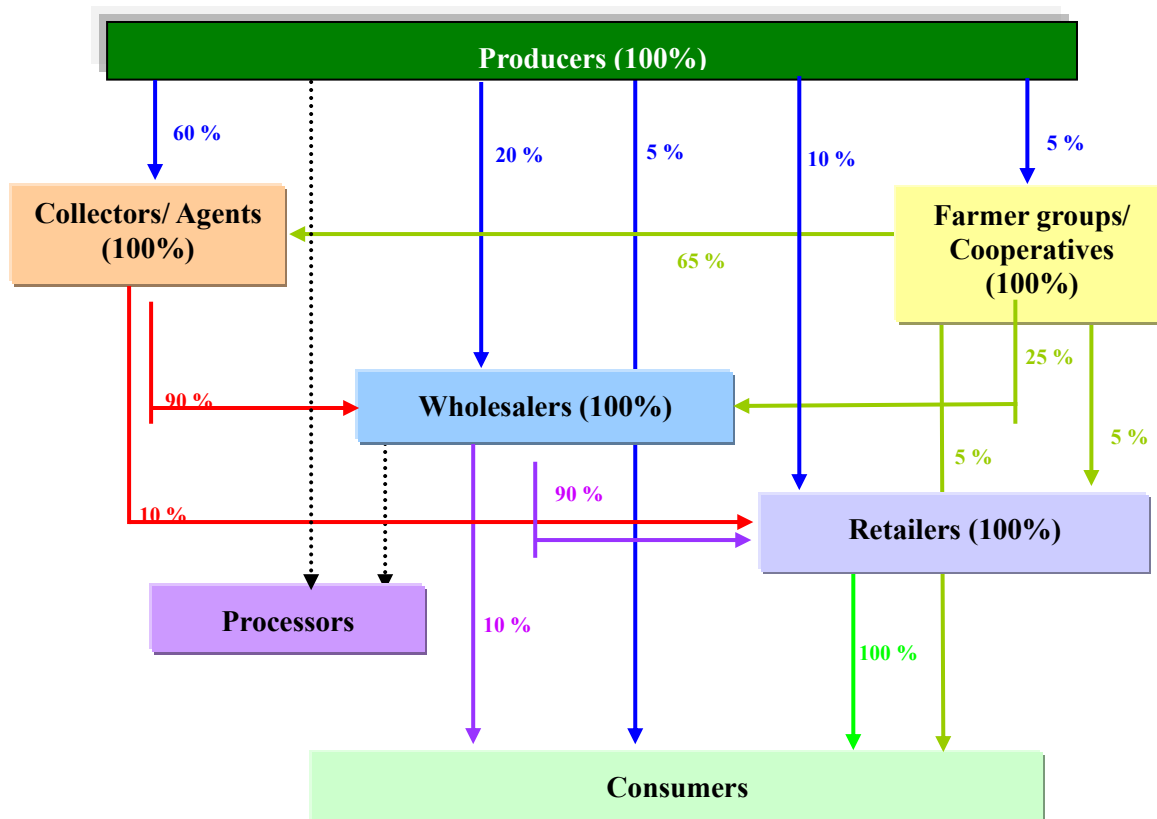
Source: Computed from database of Kalimati market, 2013

Figure 2.4: Wholesale Price Trend of White Potato in Kalimati Market



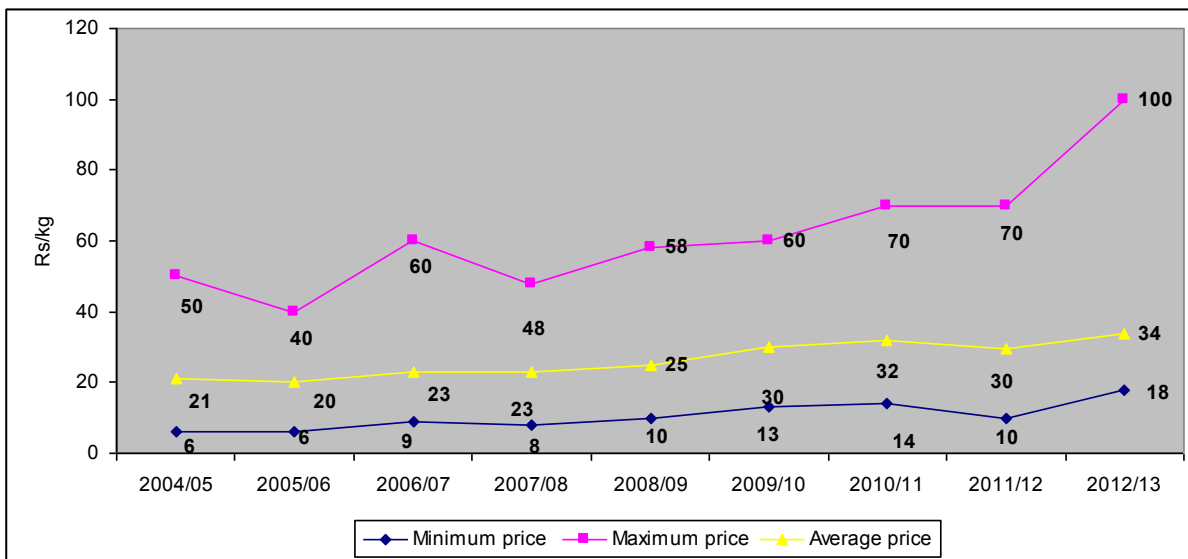
Source: Computed from database of Kalimati market, 2011

Figure 2.5: Trend of Sales Volume for Small Tomato in Kalimati Market



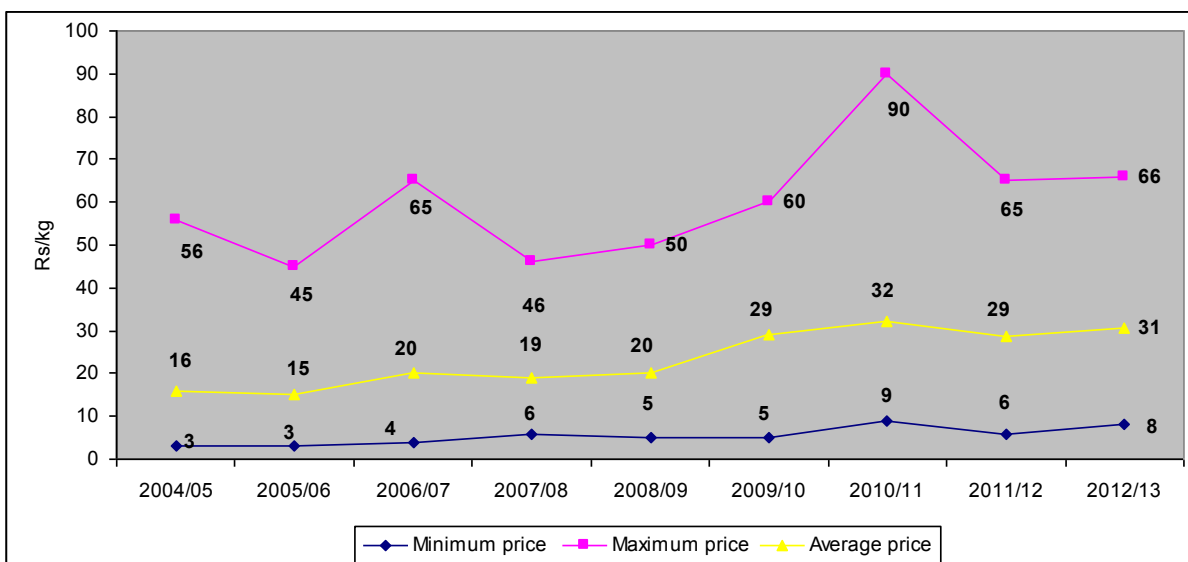
Source: Field Consultation, 2009

Figure 2.6: Distribution System of Tomato in Production District



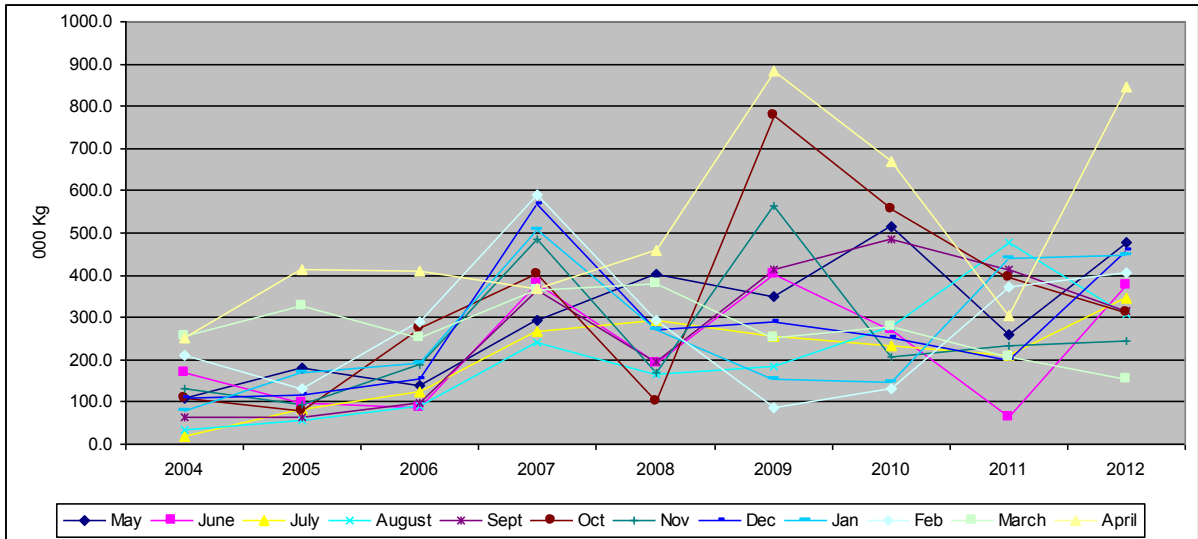
Source: Computed from database of Kalimati market, 2013

Figure 2.7: Wholesale Price of Big Tomato in Kalimati Market



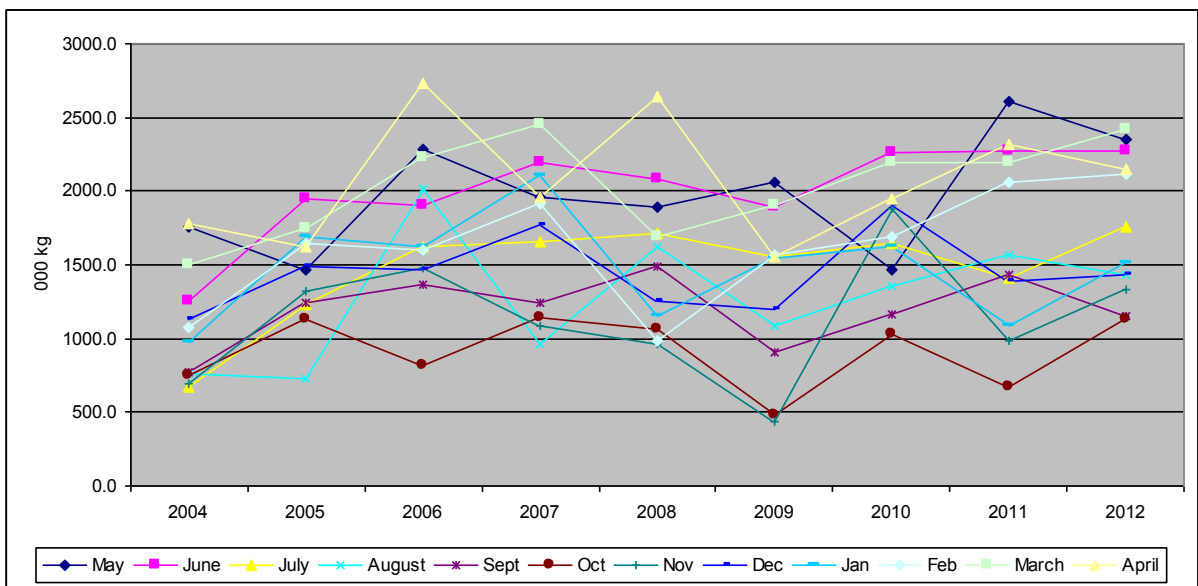
Source: Computed from database of Kalimati market, 2013

Figure 2.8: Wholesale Price of Small Tomato in Kalimati Market



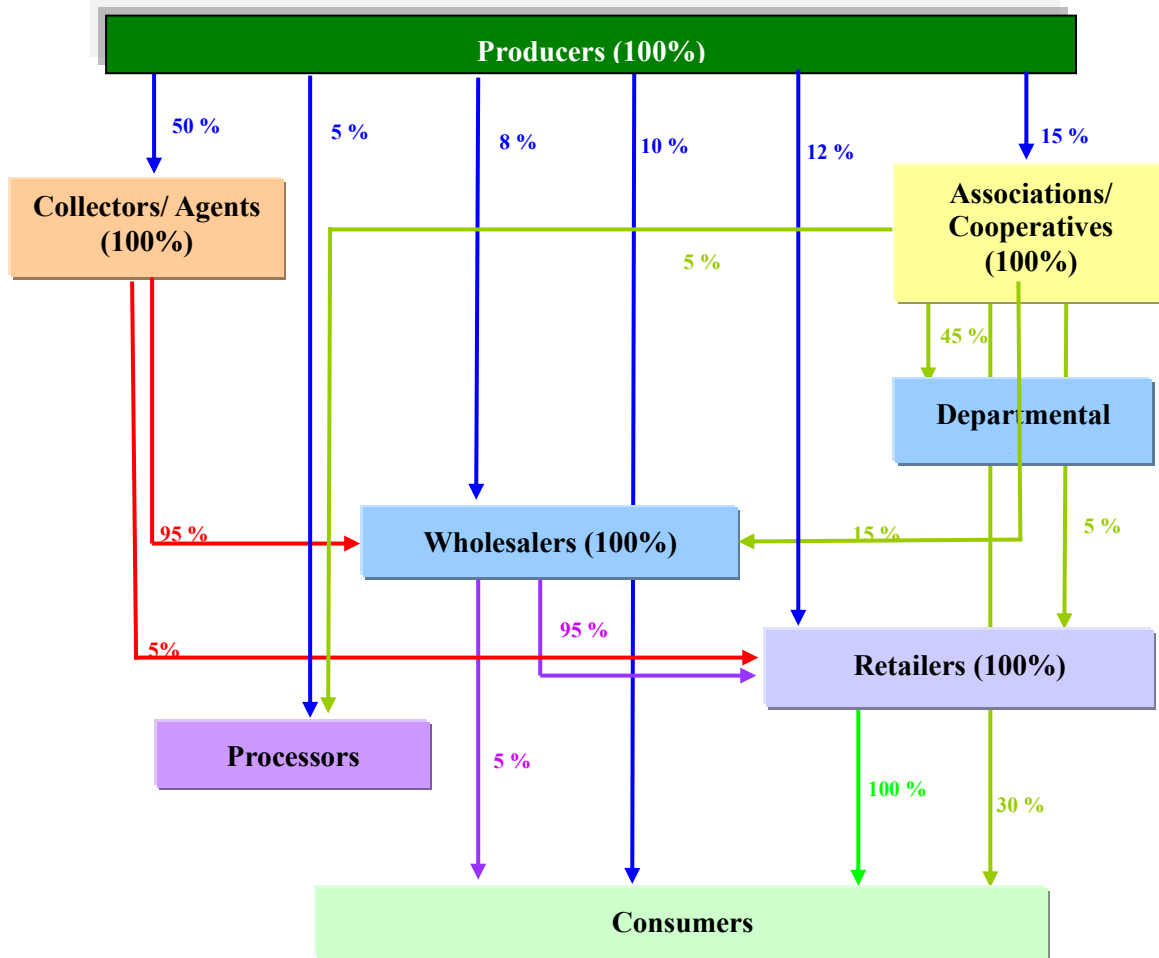
Source: Computed from database of Kalimati market, 2013

Figure 2.9: Sale Volume of Big Tomato in Kalimati Market



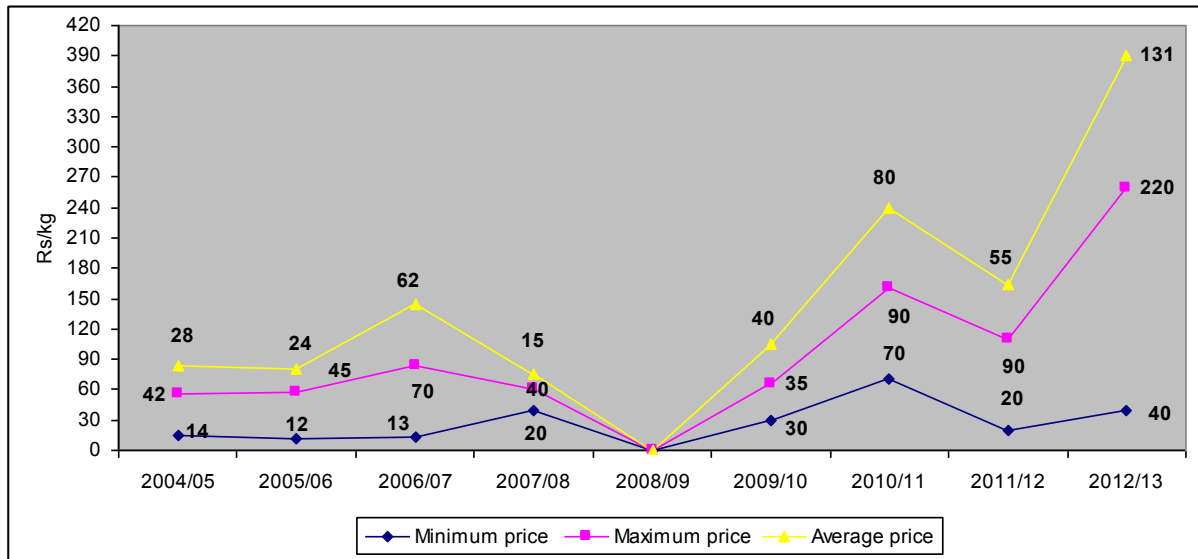
Source: Computed from database of Kalimati market, 2011

Figure 2.10: Sale Volume of Small Tomato in Kalimati Market



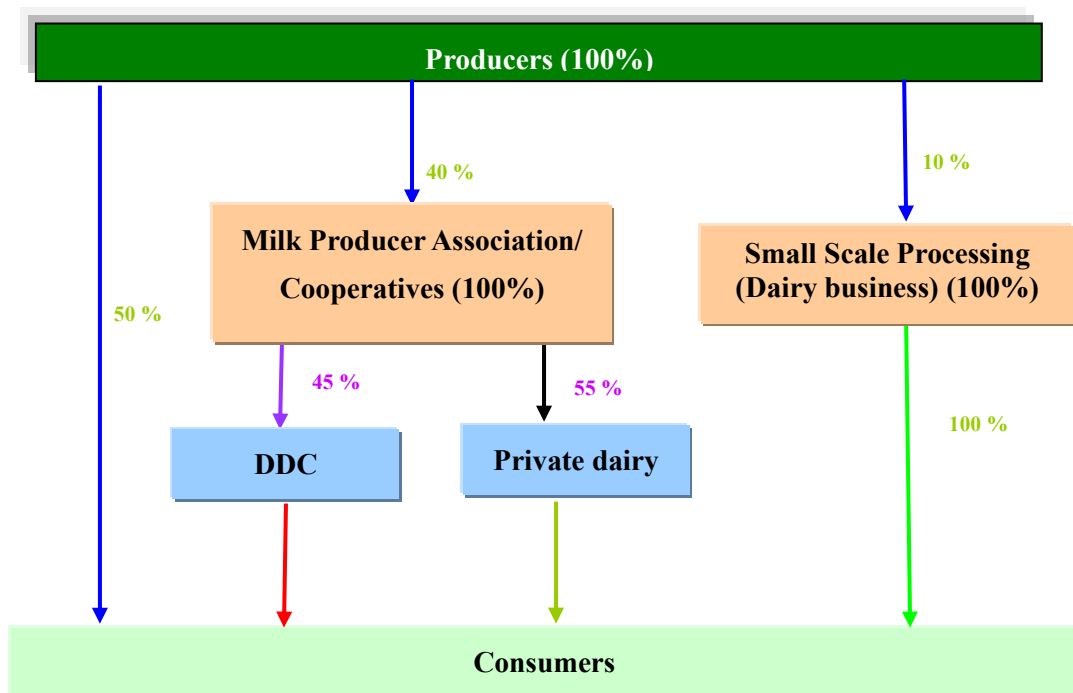
Source: Field Consultation, 2009

Figure 2.11: Distribution System of Junar in Study District



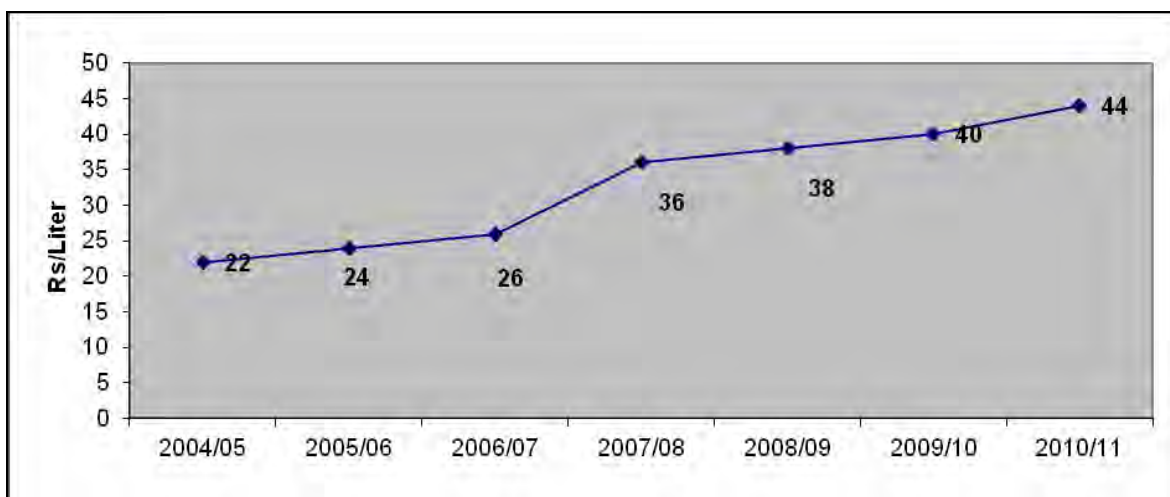
Note: Price information of 2008/09 is not available. However, this does not mean that Junar did not arrive in Kalimati market
 Source: Computed from database of Kalimati market, 2013

Figure 2.12: Wholesale Price of Junar in Kalimati Market



Source: Field Consultations, 2009

Figure 2.13: Distribution System of Milk in Study District



Source: Computed from Agriculture Marketing Information Bulletin of ABPMDD, DoA, (2005 & 2011).

Figure 2.14: Retail Price of Milk of Dairy Development Corporation (DDC)

3. DEVELOPMENT CONSTRAINTS FOR COMMERCIAL AGRICULTURE IN SRC DISTRICTS¹

Horticultural Crops

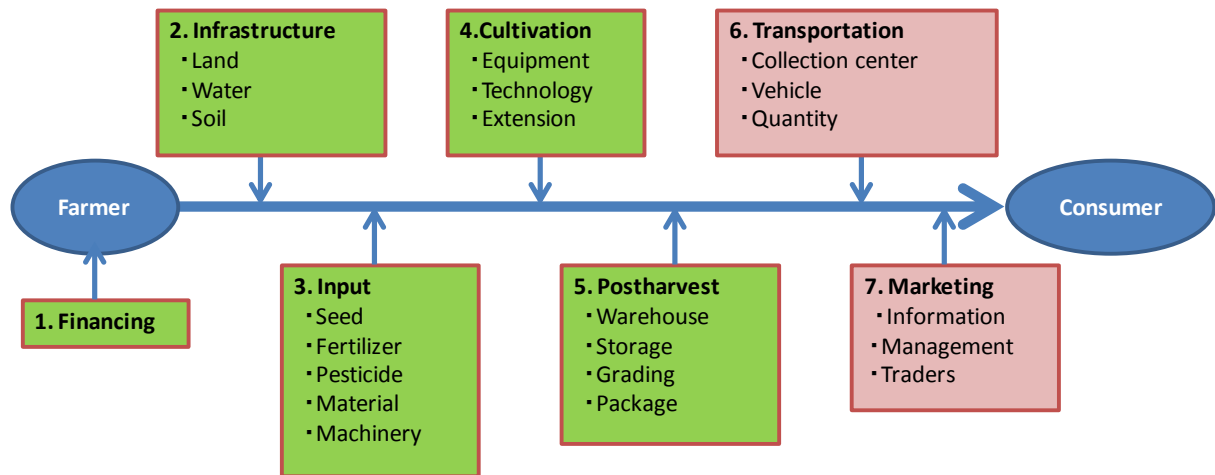
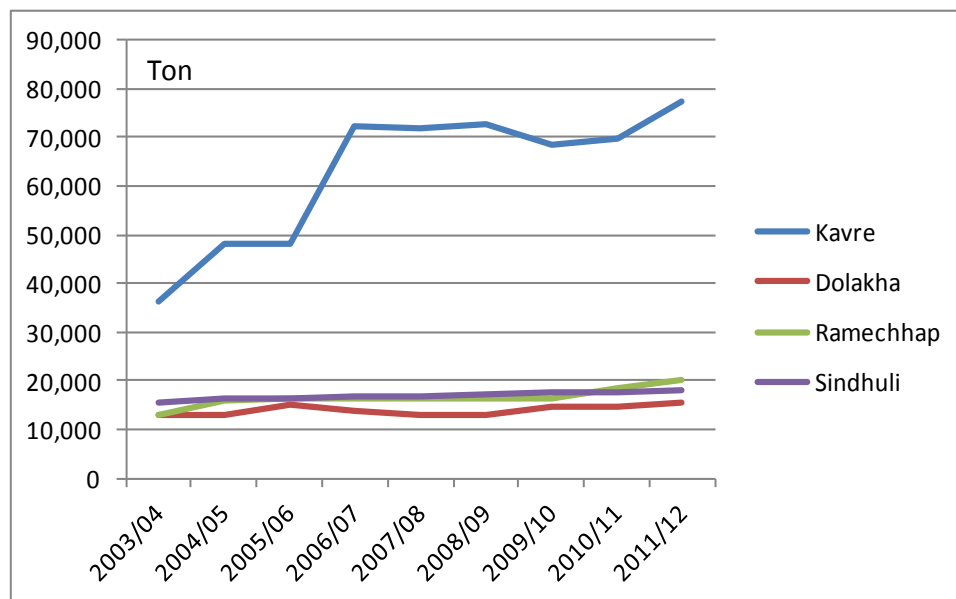


Figure 3.1: Constraints within the Supply Chain of Vegetables, Fruits and Spices

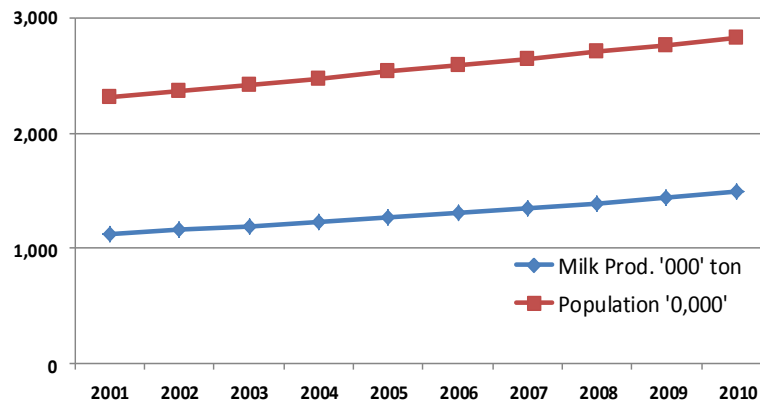


Source: Various issues of statistical information on Nepalese Agriculture of different years, MOAD

Figure 3.2: Milk Production in Study Districts (2003/04-2009/10)

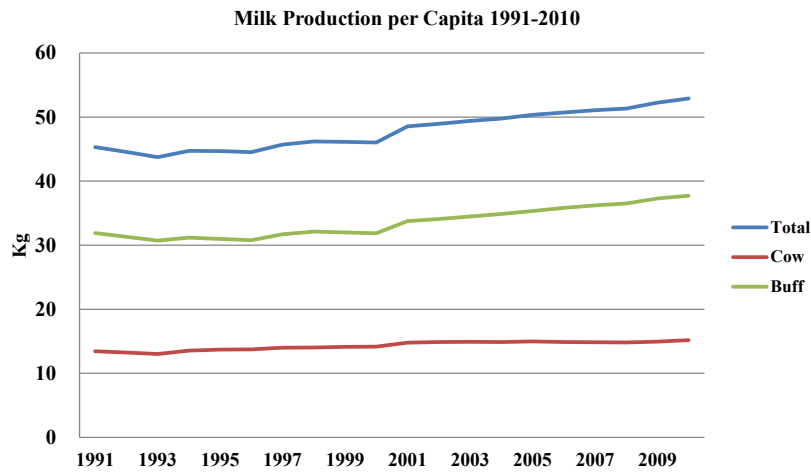
¹ With regard to NTFPs, due mainly to its vast variety and limitation of information in general, analyses of constraints were not conducted at this stage. It will be conducted at later stage of the Study after certain NTFPs were identified as high potential commodity.

Livestock and Livestock Products



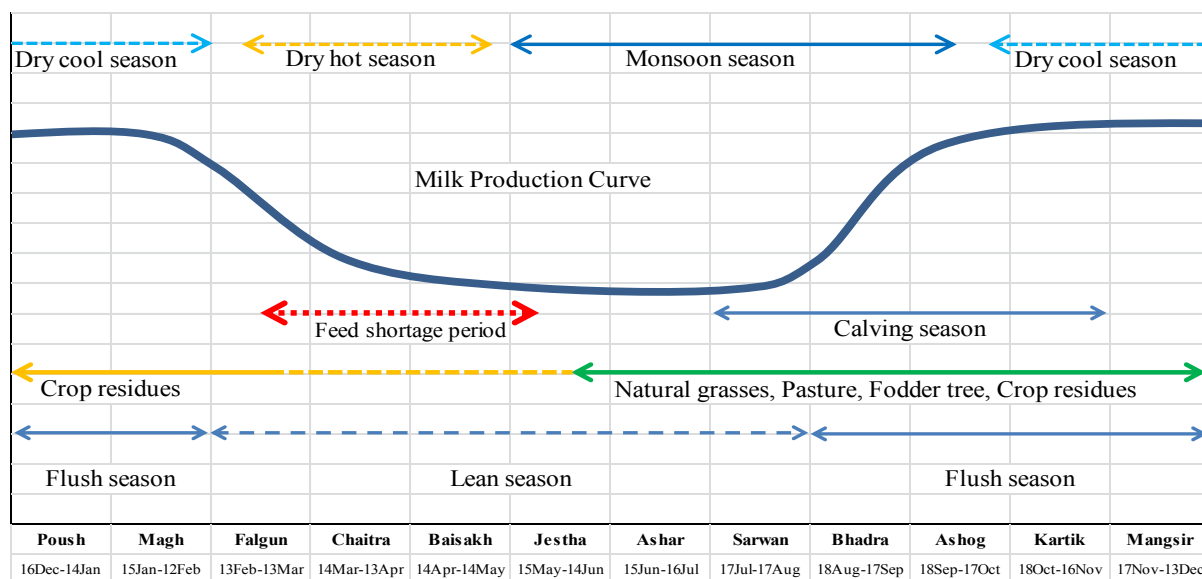
Source: Statistical Information on Nepalese Agriculture, MOAD, 2009/2010

Figure 3.3: Total Milk Production and Population for 10 years (2001-2010)



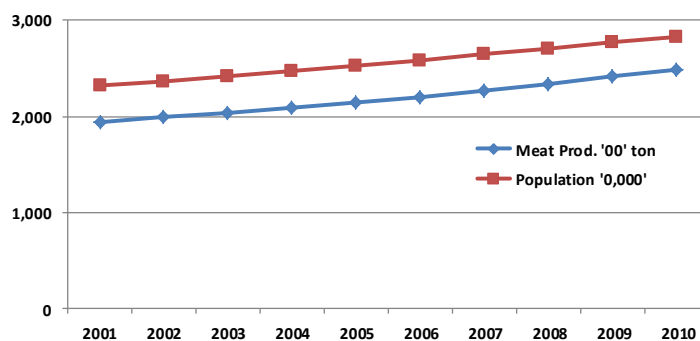
Source: Statistical Information on Nepalese Agriculture, MOAD, 2009/2010

Figure 3.4: Per Capita Milk Production for 20 Years (1991-2010)



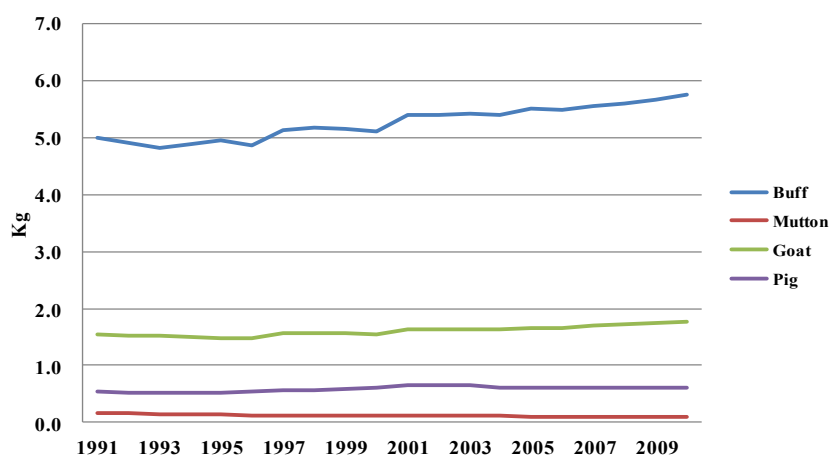
Source: Study Team

Figure 3.5: Seasonal Fluctuation of Milk Production and Feed Availability



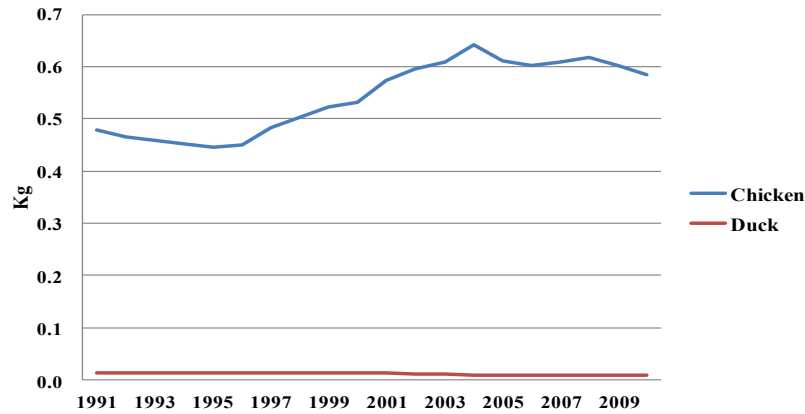
Source: Statistical Information on Nepalese Agriculture, MOAD, 2009/2010

Figure 3.6: Total Meat Production and Population for 10 years (2001-2010)



Source: Statistical Information on Nepalese Agriculture, MOAD, 2009/2010

Figure 3.7: Per Capita Meat Production for 20 Years (1991-2010)



Source: Statistical Information on Nepalese Agriculture, MOAD, 2009/2010

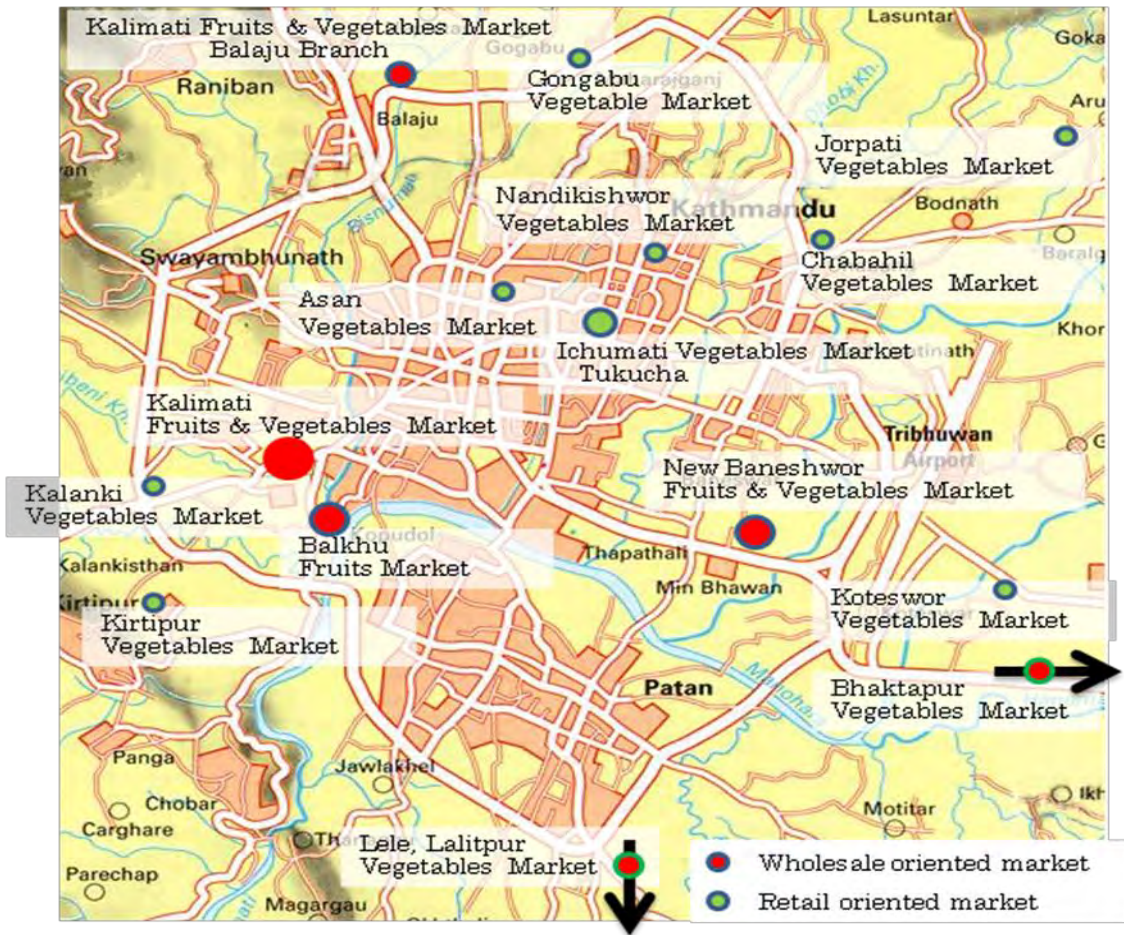
Figure 3.8: Per Capita Fowl Meat Production for 20 Years (1991-2010)

Marketing (facilities, information, etc.)



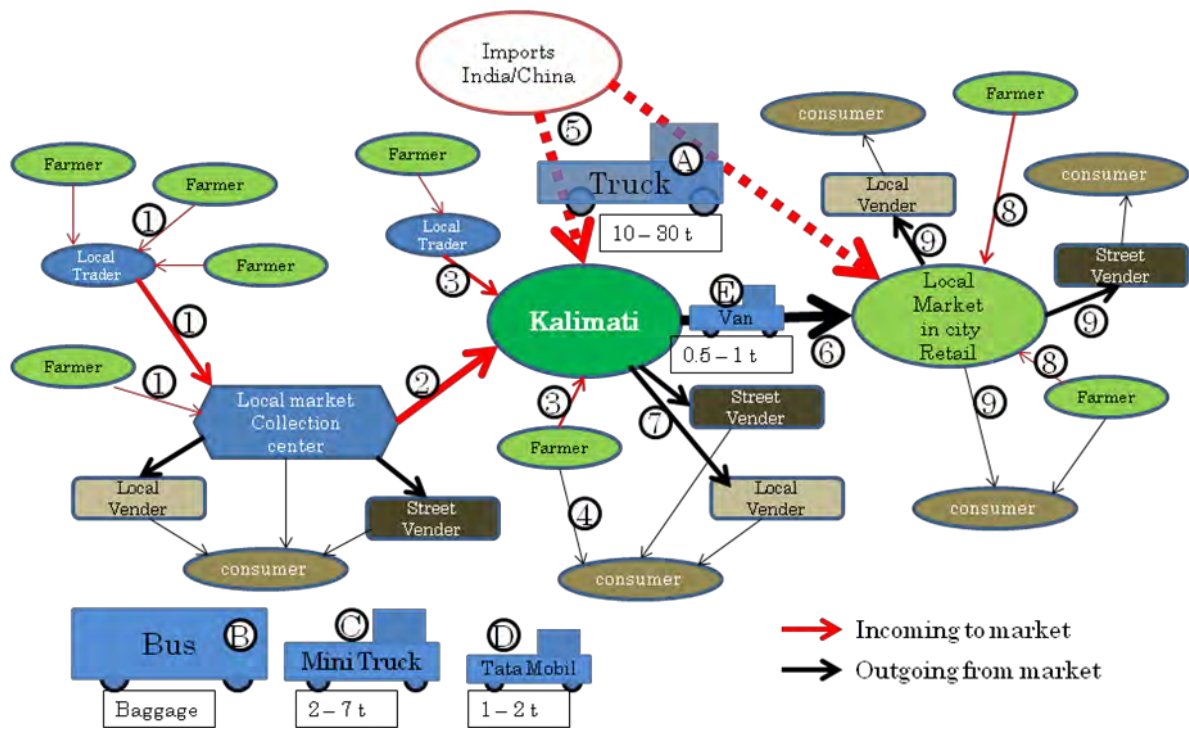
Source: Study Team

Figure 3.9: Location and Distance of Supply Areas of Fruits and Vegetables for Kathmandu



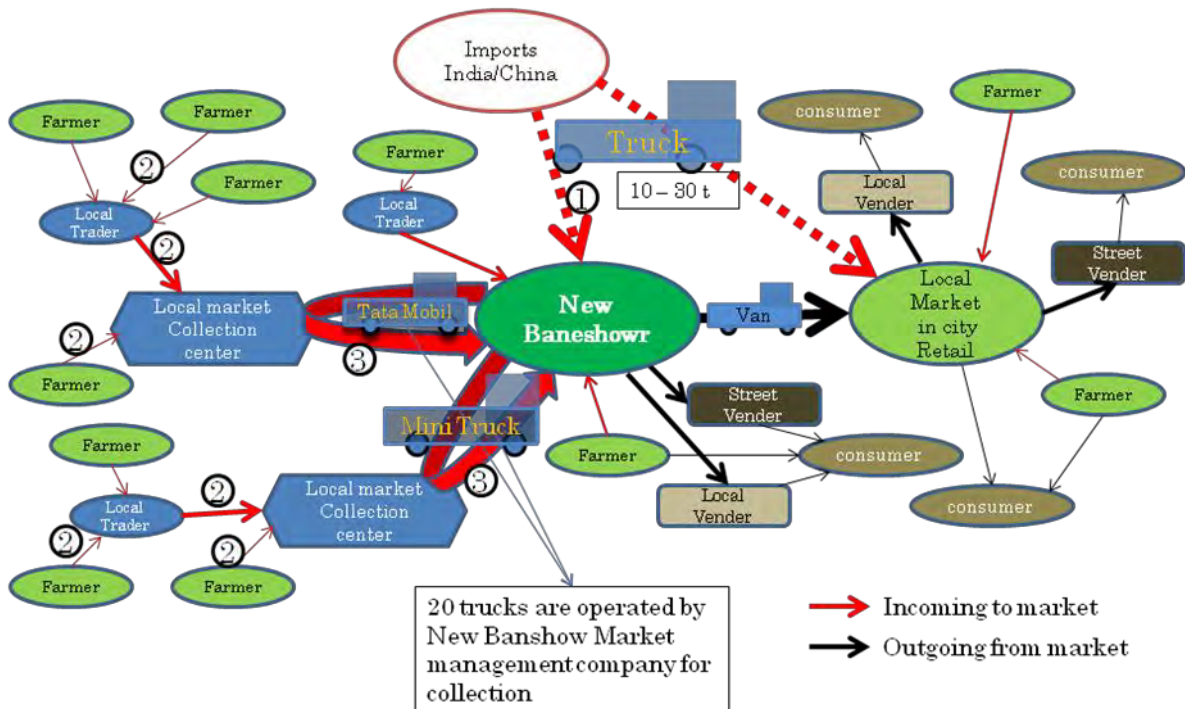
Source: Study Team

Figure 3.10: Market Location Map of Kathmandu



Source: Study Team

Figure 3.11: Marketing Structure of Kalimati Central Market

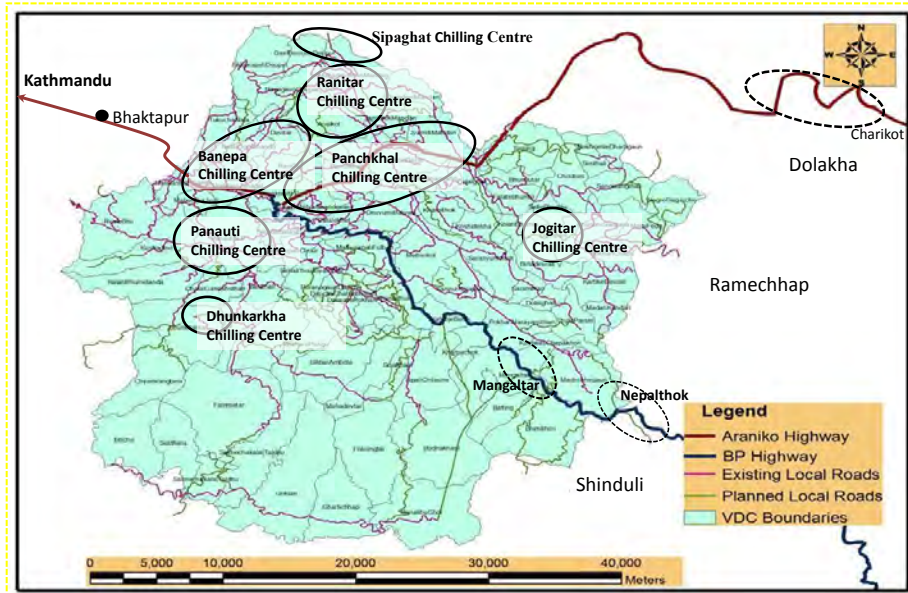


Source: Study Team

Figure 3.12: Marketing Structure of New Baneshowr Vegetables and Fruits Market

4. DEVELOPMENT POTENTIALS FOR COMMERCIAL AGRICULTURE IN SRC DISTRICTS

Potential Development Activities for the Agricultural Commercialization in SRC Districts



Source: Dairy Development Corporation Report 2009/2010

Figure 4.1: Location of Existing Chilling Centre Managed by DDC

Section 2: Agricultural Statistics

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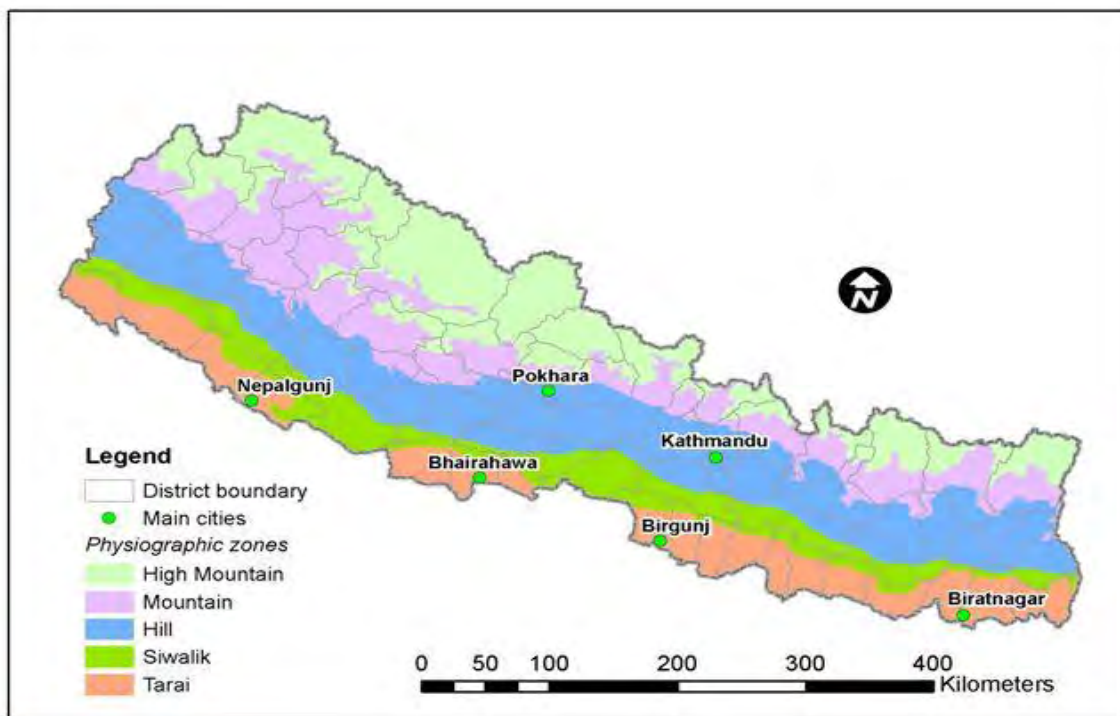
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1. BRIEF OVERVIEW OF THE AGRICULTURE SECTOR IN NEPAL

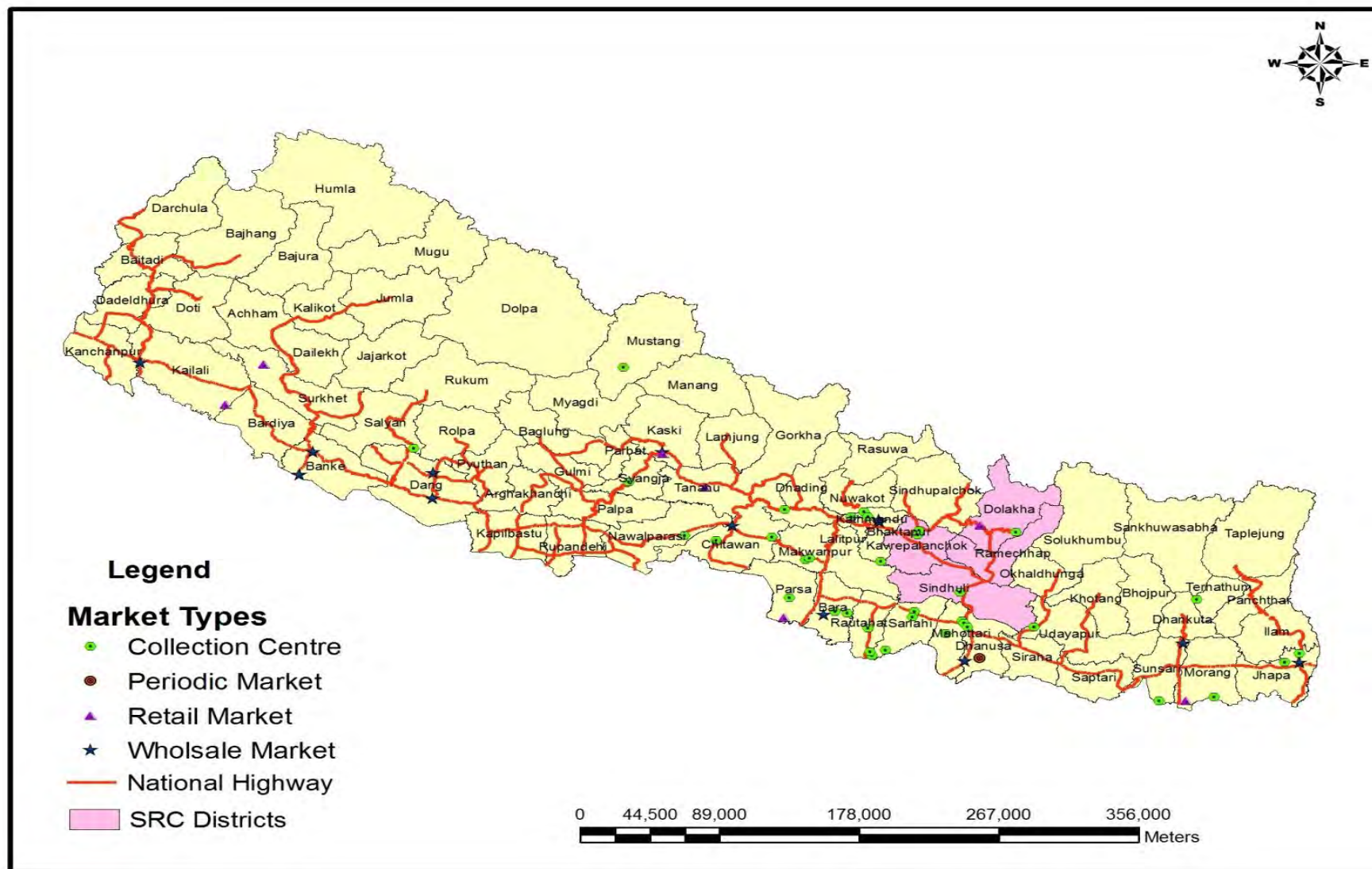
Agricultural Production in Nepal

Map 1.1: Different Physiographic Regions of Nepal with Major Cities



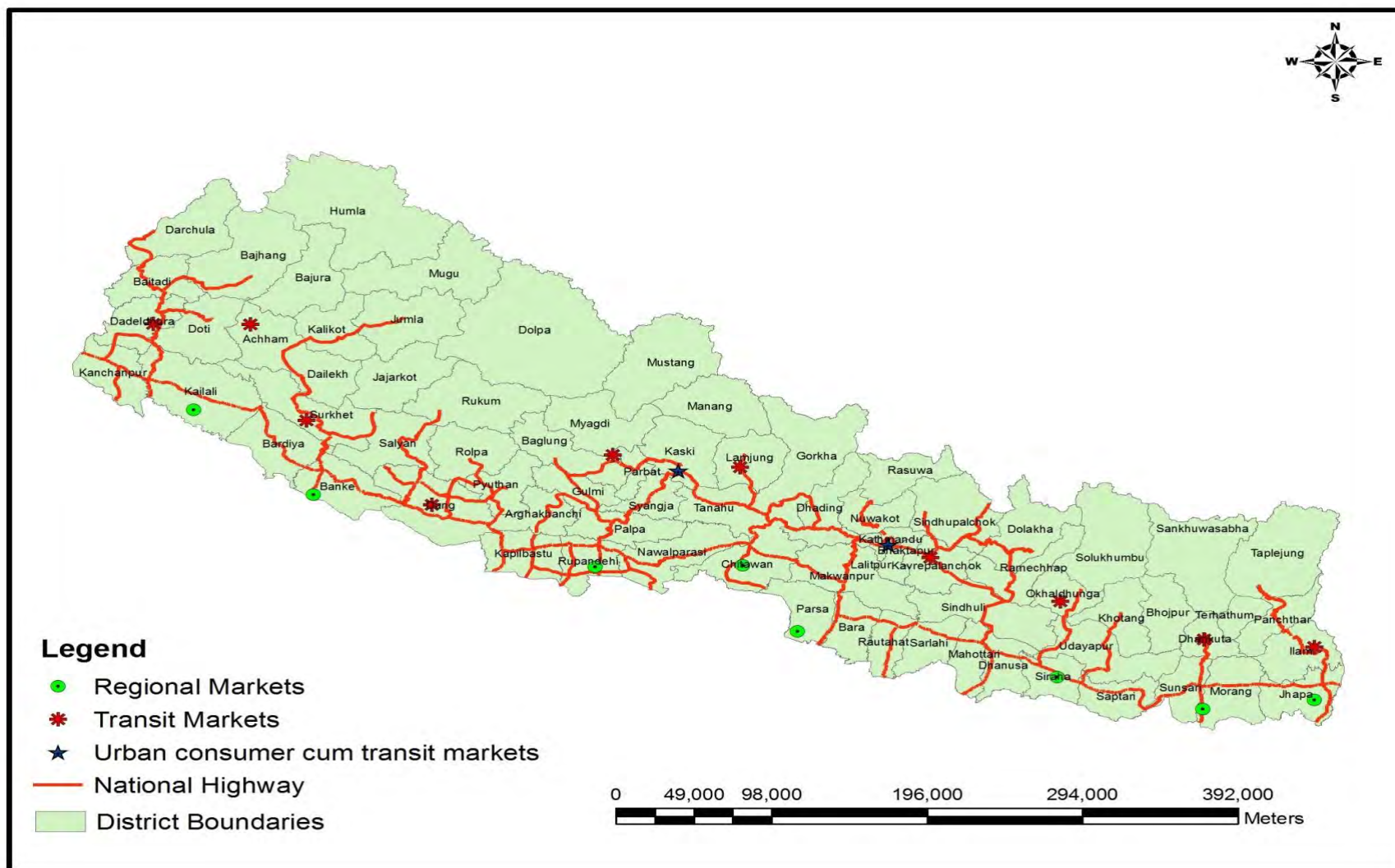
Source: Computed from GIS database, Department of Survey 1986

Map 1.2: Road Network and Major Agricultural Market



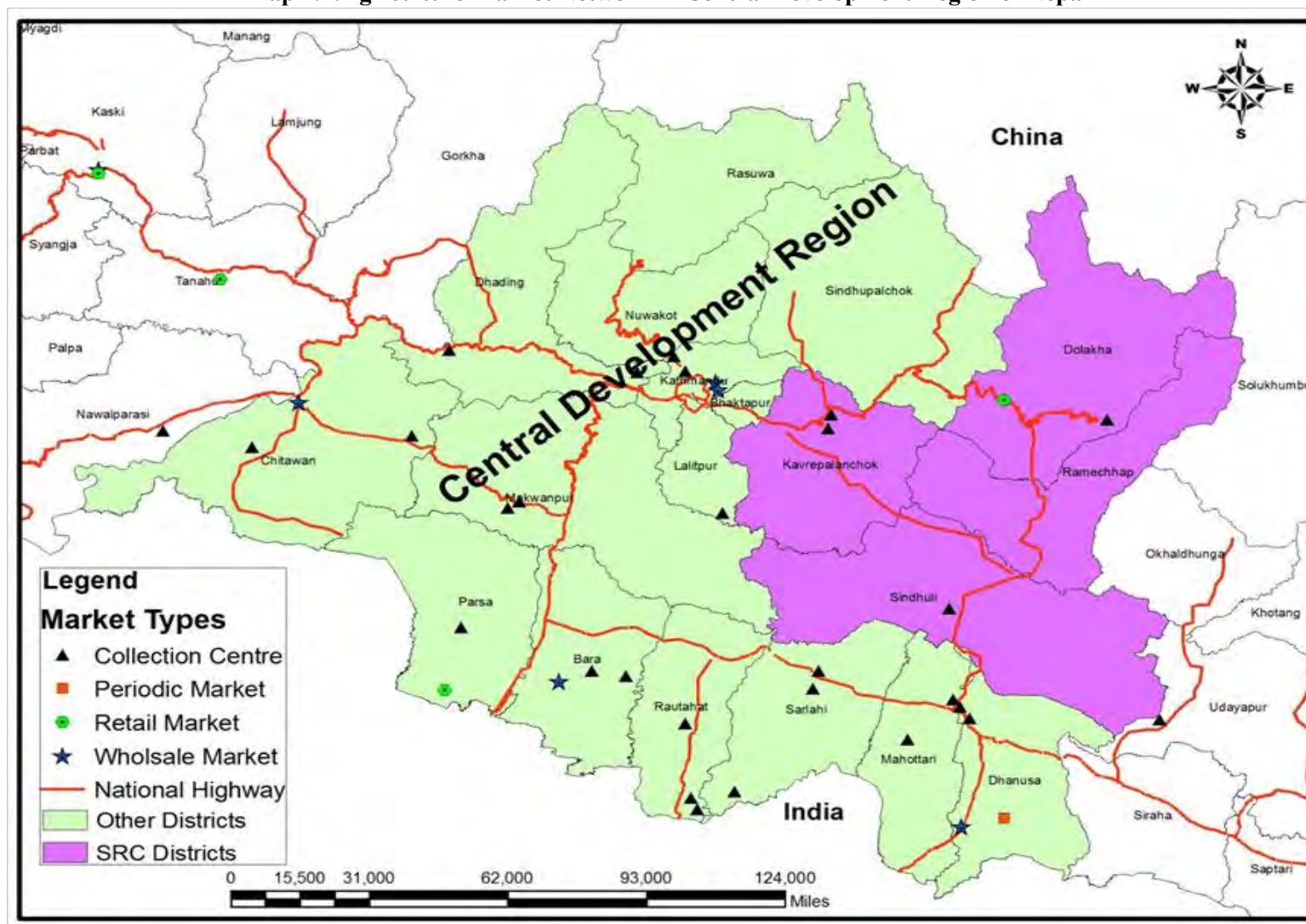
Source: Food and Agricultural Markets in Nepal, UN WFP, Nepal and Food and Agriculture Organization of the United Nations, Nepal, February 2000

Map 1.3: Map of Nepal Showing the Agriculture Market Network



Source: Map prepared based on Market information provided in Agriculture Marketing Bulletin, 2012; Agriculture Business promotion and Market Development Division, Department of Agriculture, Kathmandu, Nepal

Map 1.4: Agriculture Market Network in Central Development Region of Nepal

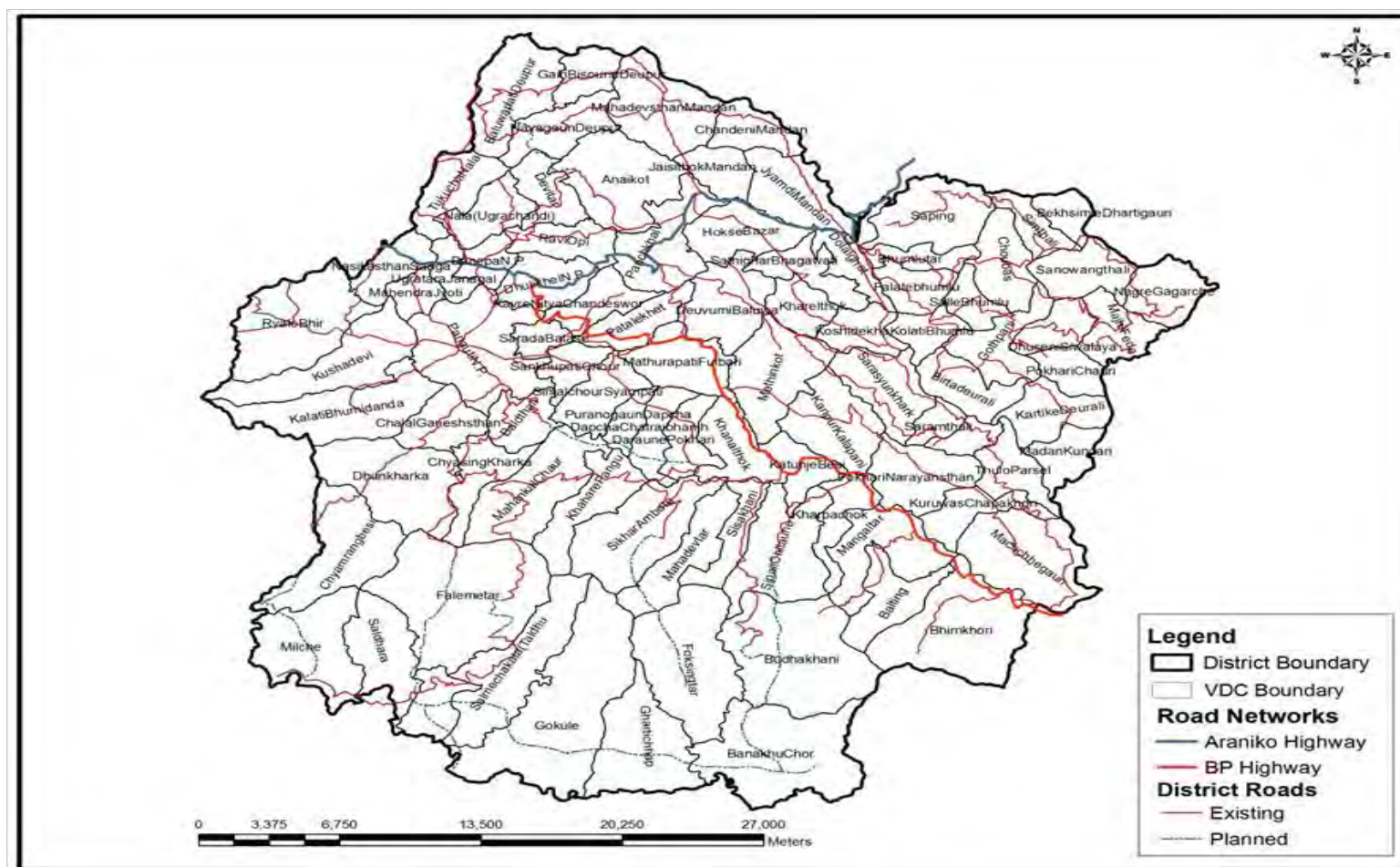


Source: Map prepared based on Market information provided in Agriculture Marketing Bulletin, 2012; Agriculture Business promotion and Market Development Division, Department of Agriculture, Kathmandu, Nepal

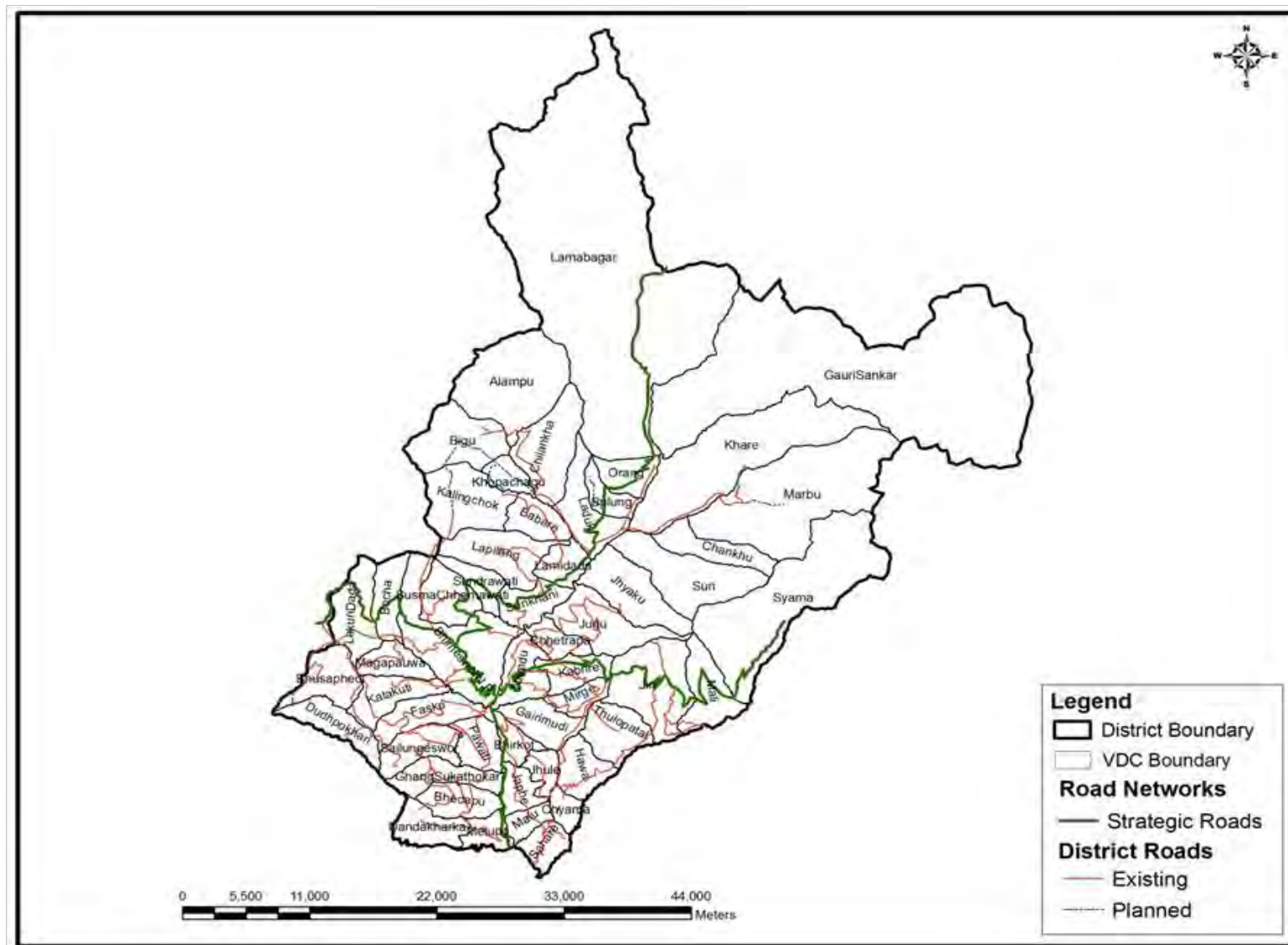
2. AGRICULTURE DEVELOPMENT IN SRC DISTRICTS

Position of SRC Districts in Entire Nepal

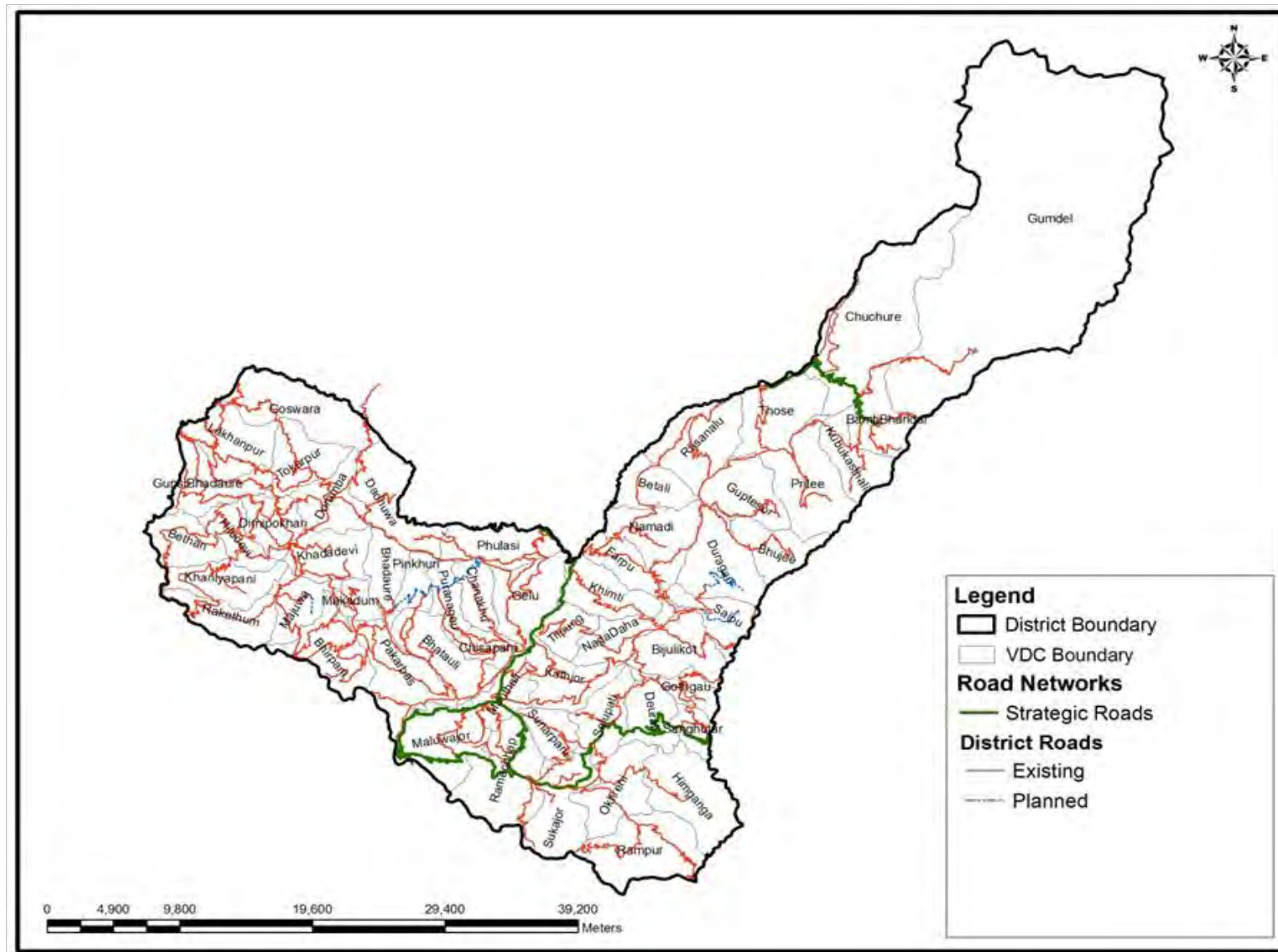
Map 2.1: Map of Kavrepalanchok District with Road Network



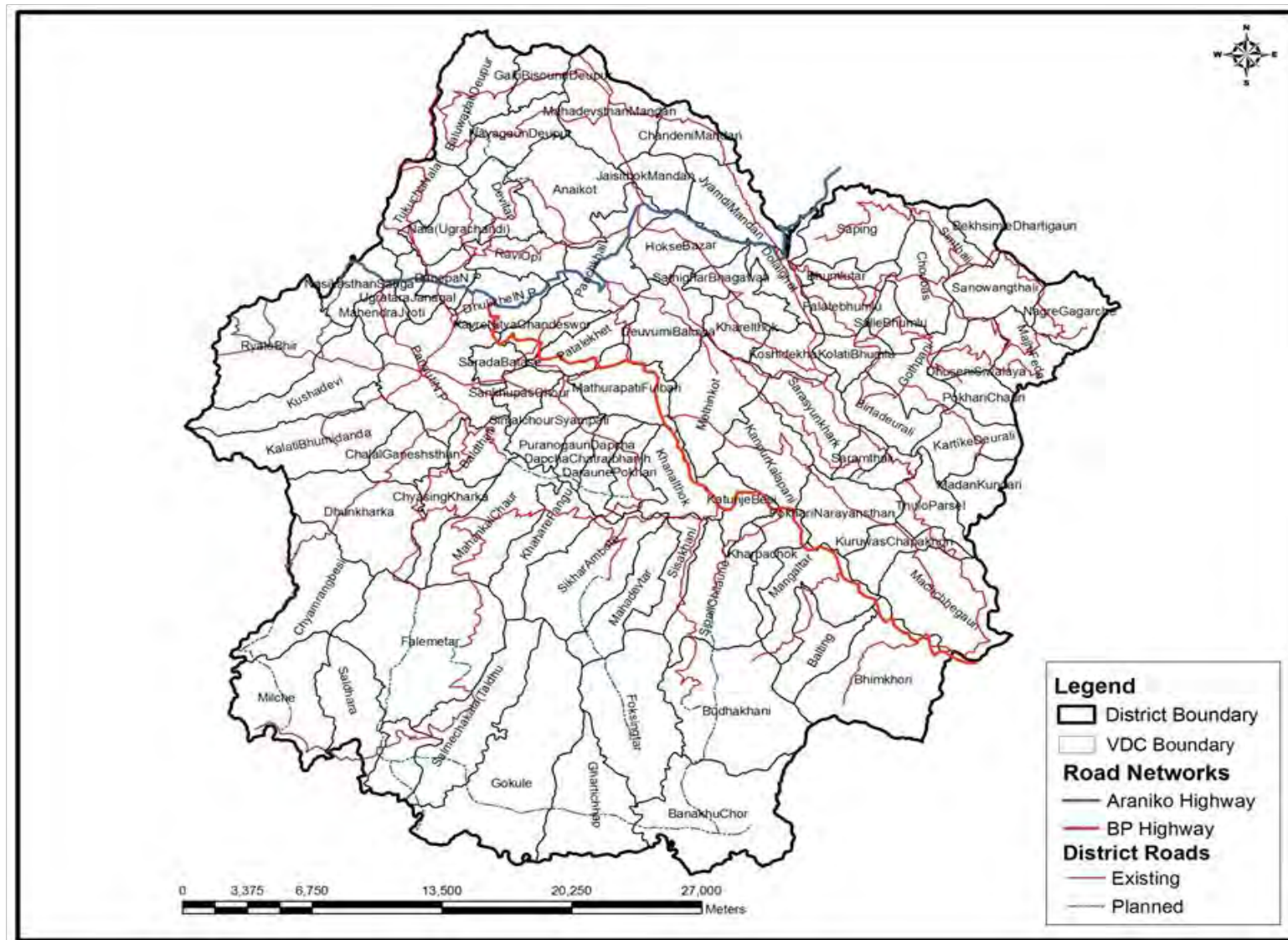
Map 2.2: Map of Dolakha District with Road Network



Map 2.3: Map of Ramechhap District with Road Network

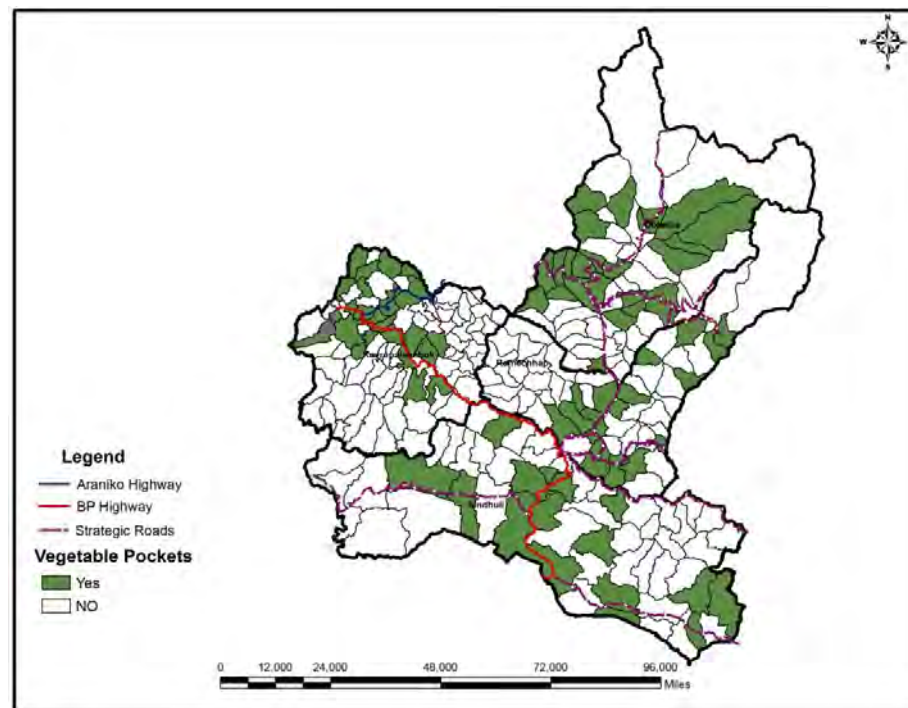
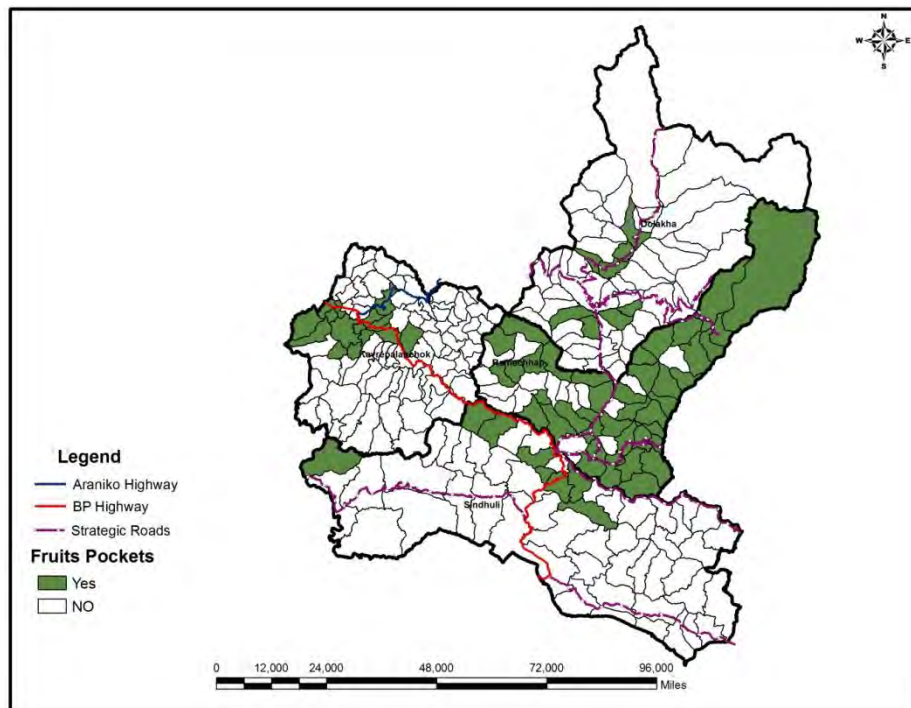


Map 2.4: Map of Sindhuli District with Road Network

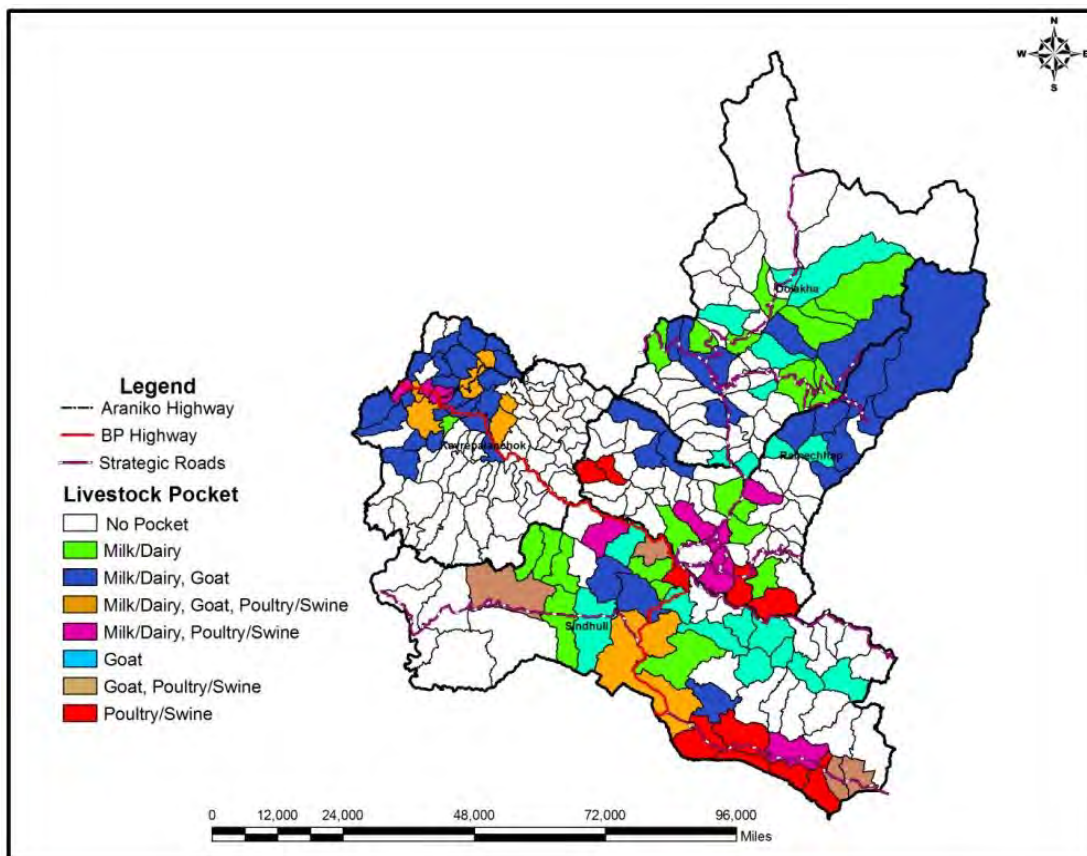


District Development Plans for Agriculture Sector in SRC Districts

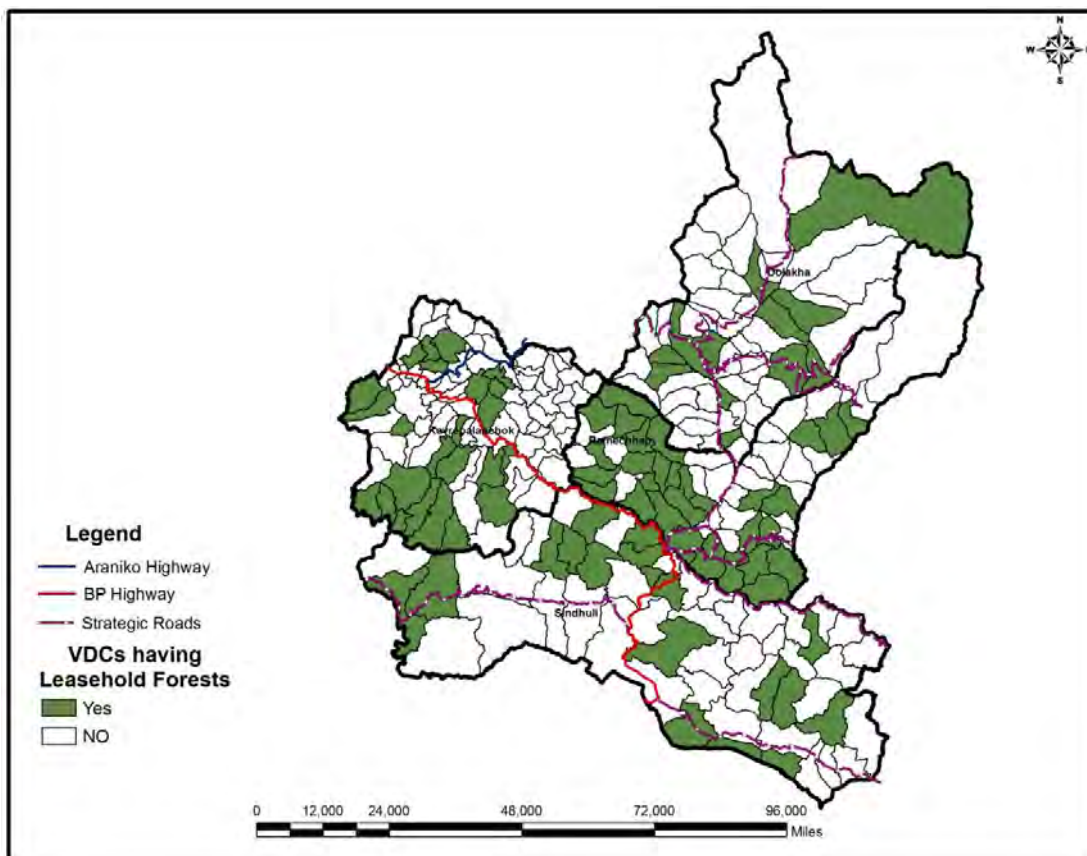
Map 2.5: Pocket Areas in Study Districts by Agriculture Commodities and VDCs



Map 2.6: Pocket Areas in Study Districts by Livestock Commodities and VDCs

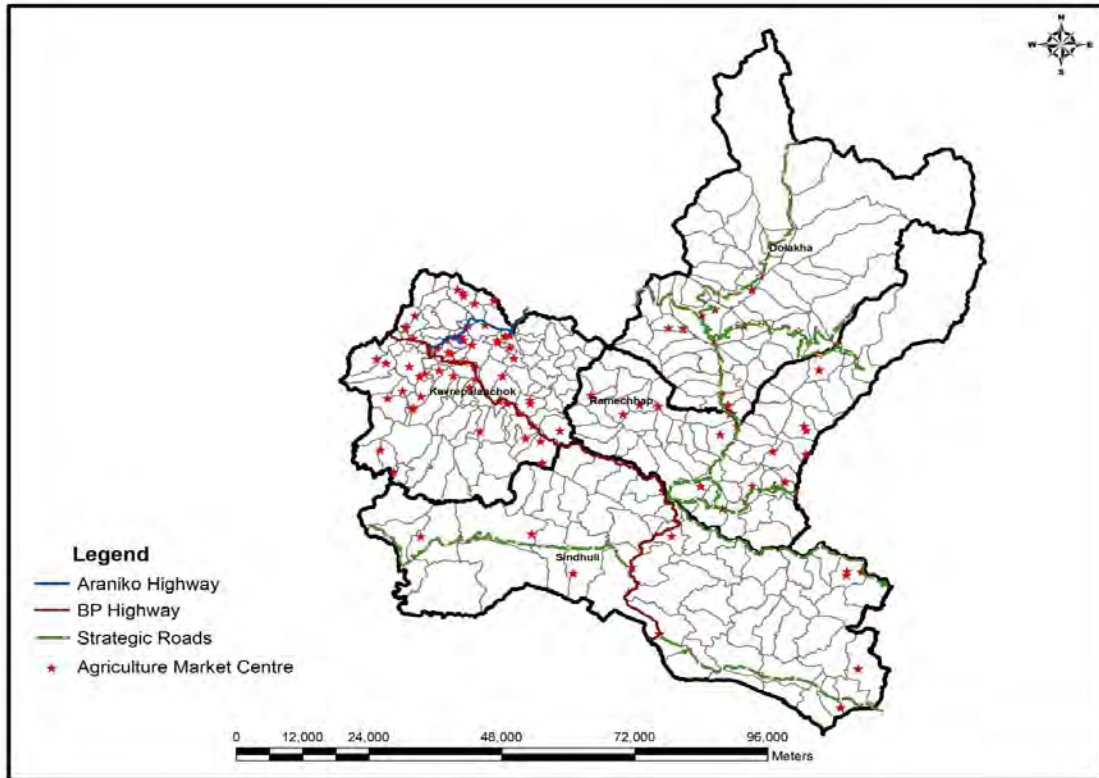


Map 2.7: Location of the Leasehold Forestry Programme in Study Districts

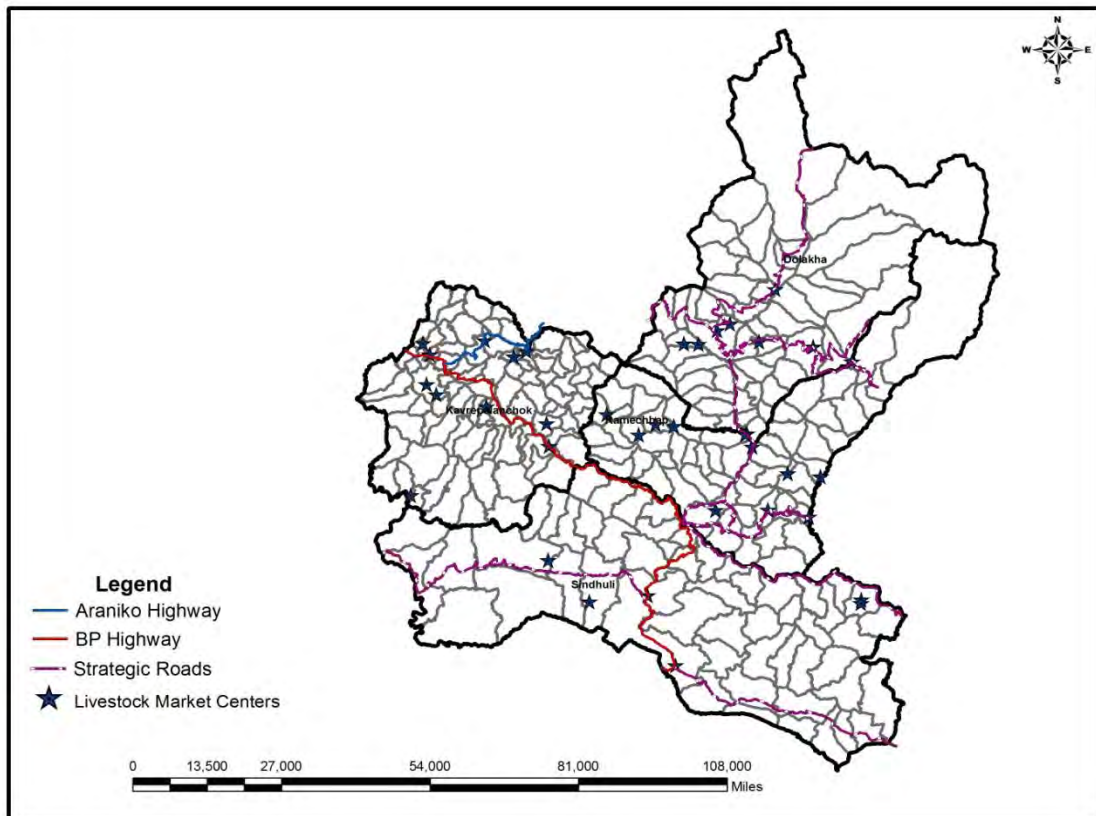


Post Harvest Handling in SRC Districts

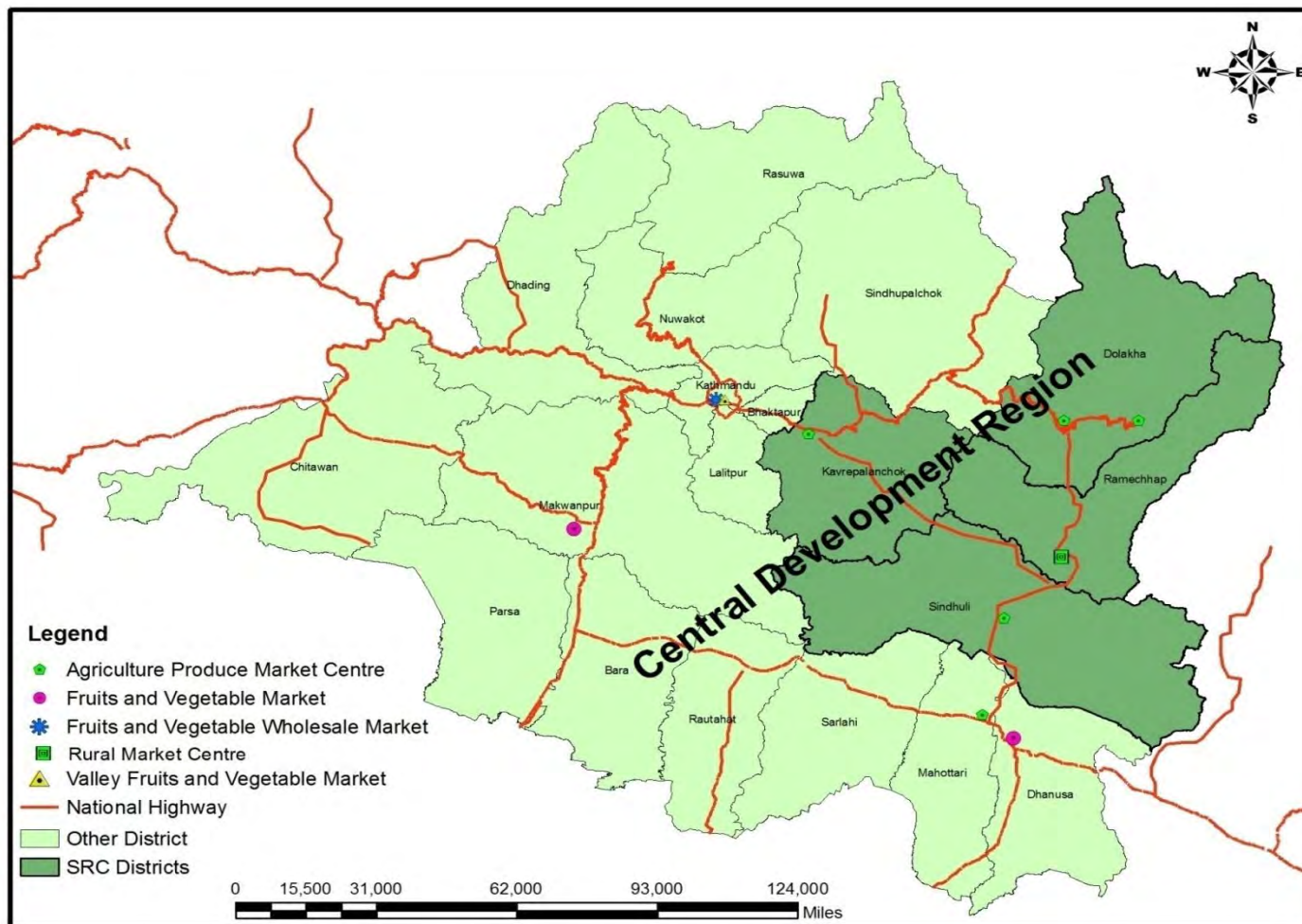
Map 2.8: Location of Agricultural Markets in the Study District



Map 2.9: Location of Livestock Markets in the Study District

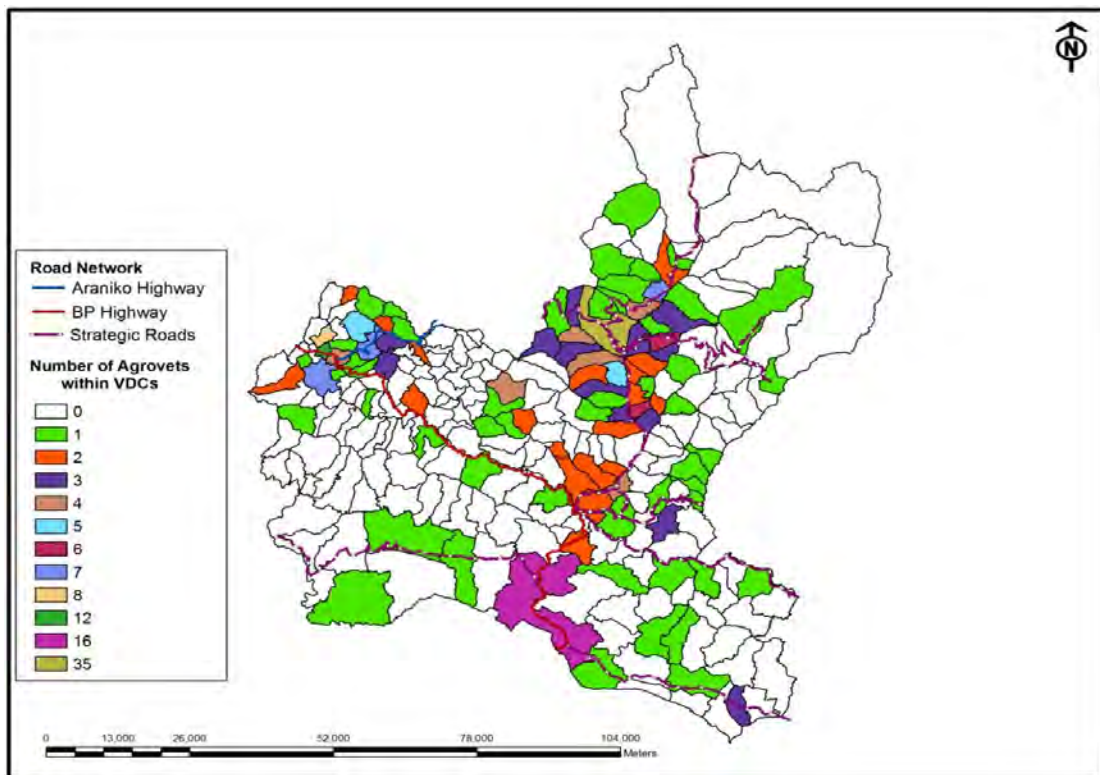


Map 2.10: Location of Studied Market Center

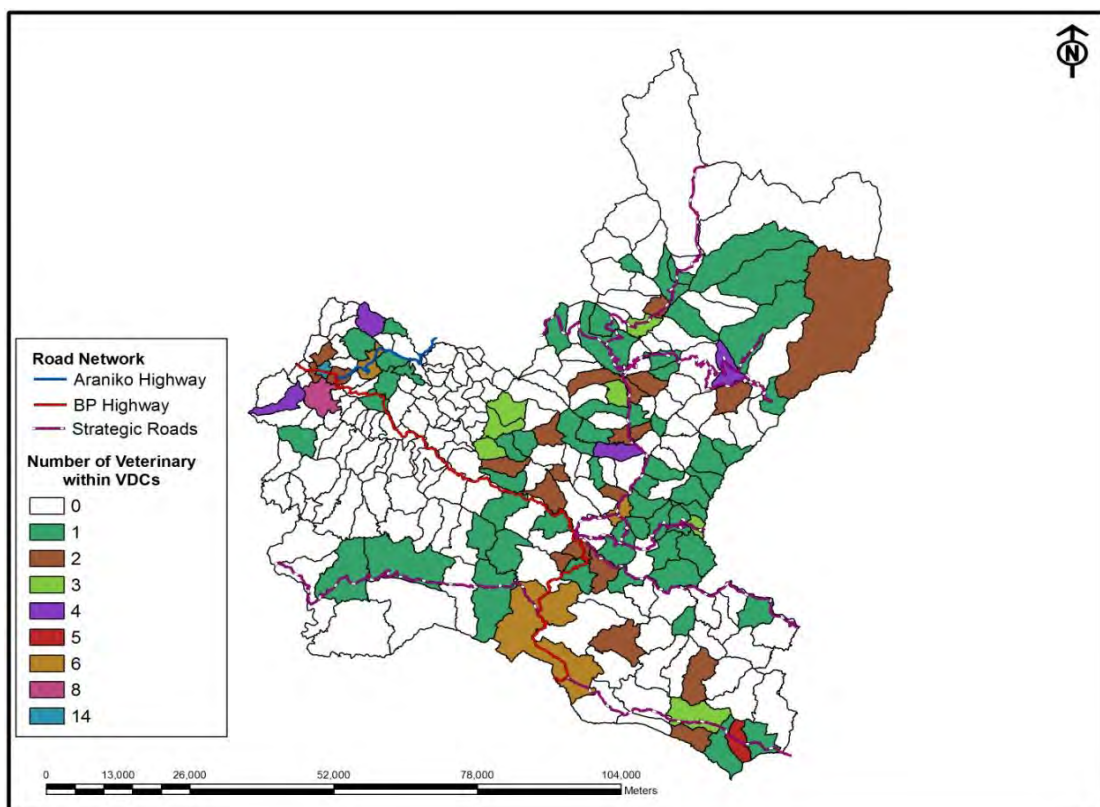


Key Players in Agricultural Value Chains in SRC Districts

Map 2.11: Number of Agriculture Related Agro-vets in Study Districts



Map 2.12: Number of Livestock Related Agro-vets in Study Districts



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