

AGRICULTURE SECTOR PROFILE



GOVERNMENT OF NEPAL
OFFICE OF THE INVESTMENT BOARD



GOVERNMENT OF NEPAL
MINISTRY OF INDUSTRY

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Publisher

Investment Board Nepal
Office of the Investment Board
ICC Complex, New Baneshwor,
Kathmandu, Nepal
Phone: 977-1-4475277, 977-1-4475278
Fax: 977-1-4475281
Email: info@ibn.gov.np
Website: www.ibn.gov.np

Government of Nepal

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Investment Board Nepal
Office of the Investment Board, ICC Complex,
New Baneshwor, Kathmandu, Nepal

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business.pentagram@gmail.com

FOREWORD

The promulgation of the constitution last year has punctuated Nepal's long political transition to a Federal Republic. The conclusion of this process marks the beginning of another process, that of economic transformation. The Government of Nepal has realized that its sources of funds, alone, will not meet the capital required to transform Nepal. Private investments, both domestic and foreign, will be key to Nepal's growth agenda.

In the recent years, Nepal has made great strides towards attracting private sector investments. The Investment Board, chaired by the Right Honourable Prime Minister, was established in order to fast-track large investments and act as a one-window facilitation agency. Similarly, Nepal is in the process of amending various laws and regulations to make them more investment friendly.

In an effort to attract investment, Investment Board Nepal, with the support from Ministry of Industry, has produced "Nepal Investment Guide". Building on to this initiative, the Investment Board has again taken lead to come up with this publication. This document highlights sector-specific opportunities for investment, policy environment, incentive structures, and licensing processes. This sector profile

has been produced at a very opportune time as Nepal embarks on the path of economic transformation.

I am confident that this document contains sector-specific information you would want to know in your search for potential investment destinations. Similarly, I believe that this document will give you a basic understanding of the issues and concerns you, as a potential investor, may have.

I would like to thank the Department for International Development (DFID) and Japan International Cooperation Agency (JICA) for providing financial support for this publication. Similarly, I would like to thank the staff at the Office of the Investment Board, Mr. Rob Taylor, Chief of Party, NHDPP (peer reviewer), and others who have, directly or indirectly, contributed to the production of the document.

MAHA PRASAD ADHIKARI
CEO, Investment Board Nepal

ACRONYMS

ADS	Agriculture Development Strategy
APP	Agriculture Perspective Plan
BFI	Banking and Financial Institution
BIPPA	Bilateral Investment Protection and Promotion Agreement
DTAA	Double Taxation Avoidance Agreement
GDP	Gross Domestic Product
GoN	Government of Nepal
LDC	Least Developed Country
MoAD	Ministry of Agriculture Development
NRB	Nepal Rastra Bank
NTIS	Nepal Trade Integration Strategy
REE	Research, Education, and Extension
NTFP	Non-Timber Forest Products
MAP	Medicinal and Aromatic Plants
PC	Photo Sanitary Certificate
POY	Partially Oriented Yarn
CTC	Crush, Tear, Curl
EU	European Union

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COUNTRY PROFILE

COUNTRY OVERVIEW

Country profile

Table 1. Country Profile

Country name	Nepal (Federal Democratic Republic of Nepal)
Region	South Asia
Capital	Kathmandu, located in central Nepal
Population	28.5 million ¹
Area	147,181 square km
Altitude	59 - 8,848 m (Mt Everest)
Standard time	GMT + 5:45 hours
Governing system	Republic: multi-party parliamentary democracy with elected prime minister accountable to the parliament as executive head; constitution promulgated in 2015
Language	Nepali, written in Devanagari script; English is widely used in business
Religion	Secular state; Hinduism 81.3%, Buddhism 9.0%, Islam 4.4%, Kirat 3.1%, Christianity 1.4%
Geography (south to north)	Terai region: Altitude 59–700 m Hilly region: Altitude 700–3,000 m Mountain region: Altitude 3,000–8,848 m
Currency	Nepali rupee (NPR), 1 USD = 108 NPR (as of 1 January 2017), 1 INR = 1.6 NPR (fixed rate)
ISD code	+ 977
Climate	Terai region: tropical/sub-tropical, hilly region: moderate, mountain region: sub-alpine/alpine

Economic indicators

Table 2. Economic indicators of Nepal

PARTICULARS	2011	2012	2013	2014	2015
Population (million)	27.2	27.5	27.8	28.2	28.5
GDP (USD billion)	18.9	19.2	19.4	19.8	21.2
GDP growth rate (%)	3.4	4.8	4.1	5.9	2.7
GNI per capita (USD)	610	690	730	740	730
GNI PPP per capita (USD)	2,050	2,170	2,270	2,440	2,500
Agriculture value added (% GDP)	38.3	36.5	35.0	33.8	33.0
Industry value added (% GDP)	15.4	15.5	15.7	15.4	15.4
Service value added (% GDP)	46.3	48.0	49.2	50.7	51.6
Workers' remittances (USD billion)	4.2	4.8	5.6	5.9	6.7
Inflation consumer prices (%)	9.3	9.5	9.0	8.4	7.9

Source: World Development Indicators, 2016

¹ Estimated population in 2015

ECONOMIC OVERVIEW

Nepal is strategically located between India and China, two of the largest economies in the world. In 2015, the country adopted a new constitution that embraces multiparty democracy, federalism and private sector-led liberal economics. The government is committed to the promotion of foreign investment, providing a unique opportunity for foreign direct investment (FDI) in Nepal.

Although Nepal is classified as a least developed country (LDC) by the United Nations, its goal is to graduate from this status by 2022 and transition to a middle income country by 2030. To achieve these targets, an economic growth rate of 7–8% and investment in infrastructure of USD 13–18 billion by 2020 will be required. The Ease of Doing Business Index 2017 by the International Finance Corporation (IFC), World Bank Group places Nepal second only to Bhutan among all South Asian countries.² Nepal's investment potential, combined with these feature, have led to an increase in interest in FDI in recent years.

Nepal has also put in place fiscal incentives and other arrangements to facilitate global trade. As a member of the World Trade Organization (WTO), Nepal offers one of the lowest import duties in the region. Nepal has also signed Double Taxation Avoidance Agreements with 10 countries and concluded Bilateral Investment Protection and Promotion Agreements (BIPPAAs) with 6 countries. Fol-

lowing the entry into force of the Nepal-India Trade and Transit Treaty, Nepal enjoys duty and quota-free access to India's massive and growing market. China's rapidly growing economy also provides duty free access to approximately 8,000 products.

As a result of its prolonged political transition and inadequate infrastructure, Nepal's economic growth rate has remained at 3.8%, on average, for the past 10 years, which is below the South Asian average. Remittances continue to play a critical role in GDP growth for consumption. In FY 2015/16, remittances comprised approximately 29.6% of GDP. Remittances help to increase aggregate demand in the local market, despite low economic growth.³ Over the last decade, disposable income has increased by 14.4% per year on average, which has led to a comparable increase in consumption.

At present, with foreign currency reserves of USD 9.8 billion (as of July 2016), Nepal is in a good position to receive finance imports. However, the trade deficit, which reached 31.3% of GDP in FY 2015/16, continues to be of concern. It is expected that FDI will stimulate domestic production and gradually close this gap. Despite the catastrophic earthquake of 25 April 2015 and the transport blockade of the border that followed, Nepal has begun to rebuild and continues to be a highly attractive destination for FDI in various sectors.

² World Bank (2017) *Doing Business 2017: Equal Opportunity for All*. World Bank Publications

³ Rastra Bank Nepal (2016) *Current Macroeconomic and Financial Situation of Nepal 2015/16*. Available at: <https://nrb.org.np.ofg/current-macroeconomic>

THE AGRICULTURE SECTOR

OVERVIEW

Agriculture is the mainstay of Nepal's economy. It comprises one-third of the nation's GDP and provides employment for two thirds of the population. Among Nepal's natural gifts are agricultural diversity and varied topographical, altitudinal and temporal conditions, making the land suitable for, among any others, medicinal herbs and essential oils. Nepal's altitude ranges from just 59 meters at Kechana Kalan in the Jhapa district to 8848 meters at Mt. Everest, the world's highest point. The country also shares an open border with five adjoining Indian states comprising approximately 350 million people, a huge, duty-free market for agricultural products.

Despite being a major contributor to the nation's economy, Nepal's agricultural sector depends heavily on the annual monsoon rains. Between 2011/12 and 2015/16 the agricultural sector's growth rate was static at 2.41%. Over the last five decades, population growth has increased and put the pressure on productivity. One result of this pressure has been a decrease of the average size of land holdings from 1.1 hectares to 0.7 hectares.² While Nepal imported agricultural products worth \$1.298 billion in fiscal year 2013/14, its exports amounted to only \$ 268.91 million.³

Institutional Arrangement

Policy Level

- Ministry of Agriculture Development

Regulatory and Implementation Level

- Department of Agriculture
- Nepal Agriculture Research Council
- Nepal Tea and Coffee Development Board

Projected Food Grain Production Increment (%)

The growth rate in non-agriculture sectors has been stronger than that of agricultural sector and as a result, there has been a steady decline in the sector's percentage of contribution to GDP. Nevertheless, it remains a source of livelihood to about 76 % of households,⁴ further signalling the need to increase the sector's output and productivity.

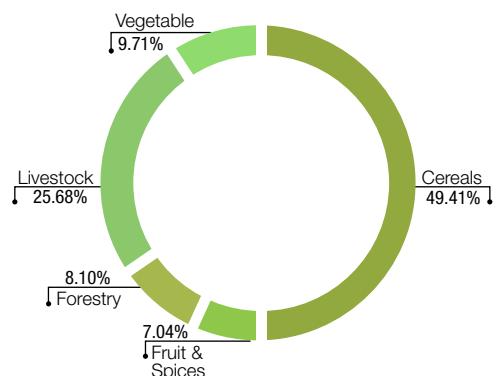
Table 3. Grain Production in 2015, 2020, 2025

Food Production	2015	2020	2025
Cereal grain production	8.2	19.5	41.9
Pulse production	6.5	14.0	22.8
Total food grain production	8.2	19.3	41.3

Source: Estimation based on (MoAC, 2010) and (Economic Survey, 2010)

Composition of AGDP

Figure 1. Composition of agriculture GDP



Source: (MoAD, 2014)

² Population Monograph of Nepal, 2014.

³ TEPC, 2014.

⁴ Nepal Living Standard, 2014.

Agro-Ecological Landscape

Nepal has three major agro-ecological zones: the terai or plains region in the south, the hill country in the nation's midsection, and the mountainous region in the north. The diverse and distinct geological, climatic and hydrological characteristics of these zones are responsible for country's distinct and varied agricultural land uses.

Terai region

Sometimes described as the "granary", this region comprises 23% of the nation's land area, a flat and fertile zone, ranging from 59-700 meters in the Mahabharata foothills. Over 40% of the available agricultural land in the Terai is cultivated and can be irrigated throughout the year. This region has a great potential for greater productivity as well as increased access to irrigation when technology permits, than do the nation's other regions. The Terai produces a variety of crops including rice, wheat, maize, sugarcane, jute and vegetables.

Hilly region

Lying between 700 and 3,000 meters in elevation, the hills are comprised of sloping lands and small valleys. Although this zone comprises 42% of the nation's land mass, only 20% is currently under cultivation. Maize and wheat are the two most important crops in the hill country, while livestock farming also accounts for a large part of the region's agricultural activity.

Mountain region

Located more than 3,000 meters above sea level, this region is characterized by steep, rugged terrain. Only 5% of the land in this zone is suitable for cultivation and for that reason livestock farming is the main agricultural activity. Owing to weather conditions, cultivation activities are limited to one crop per year or in optimal conditions, three crops in two years.

INVESTMENT OPPORTUNITIES

INPUT MARKET

There are more than 214 medium and large agribusinesses and have fixed capital investment of more than \$ 3 million in Nepal. Agriculture sector in Nepal is gradually transitioning its growth from subsistence to commercial scale. The Government of Nepal (GON) has taken an integrated value chain approach in its

development efforts and has encouraged its development partners to do the same in order to increase agricultural growth. Sector opportunities can be classified into two broad categories – the input market and agricultural production and processing.

Table 4. Investment by Agriculture Department Bank Limited in different Agriculture Sub-sector, 2013/14

S.N.	Purpose	Disbursement (Amount in Rs. '000)
1	Other Agriculture & Agro Service	54,91,341
2	Livestock/Livestock Related	34,76,113
3	Crop & Crop Services	2,79,251
4	Tea/Coffee	97,972
5	Irrigation	31,342
6	Jute	27,439
7	Forestry	20,075
8	Tobacco	5
Total		94,23,540

Source: ADBL, 2014

Fertilizer

The Ministry of Agriculture Development estimates that the annual demand for fertilizers in Nepal is approximately 700,000 metric tons. Of that, 500,000 metric tons comprise the current effective demand, that is, where consumers are buying at the current market price. At that point, the existing supply stands at 300,000 metric tons. In the FY15/16 the GON has allocated \$57.4 million in subsidies for chemical and organic fertilizers. It has also improved seed and mechanization of agriculture.⁵

Despite longstanding discussions, Nepal has no chemical fertilizer manufacturing facility. However,

since the GON has made its intention to encourage investment into the chemical fertilizer industry, there is a very good chance that there will be private sector entrants into the market. Although currently there are some small producers, they lack market sophistication and the technical and financial ability to take advantage of the opportunities being made available.

Infrastructure

Physical infrastructures such as irrigation canals, roads and electrical power are prerequisites for the nation's agricultural development. According to the Department of Irrigation, out of the country's 14.7 billion-hectare area, only 2.6 million hectares are

⁵ GoN, 2016.

arable and only 1.8 million hectares are irrigable. Of the irrigable land, more than three-fourths of it lies in the Terai region.

Agricultural extension services in Nepal, focusing on food quality, regulations, marketing and agribusiness development are extremely limited. This constrains agricultural commercialization and growth. These services principally focus on new technologies that will lead to higher productivity. They do not, however, consider other related areas such as profitability, sustainability, post-harvest operations, grading, packaging and marketing. As a result, the country is greatly in need of infrastructures and facilities including agricultural farms, cold storage units, collection centres laboratories (seed, soil and plant protection), agriculture training centres and plant quarantines that can support the extension of services. These also are obvious opportunities for private investment.

Agricultural Machine, Tools and Technology

Technological advancements in the agriculture sector open the door to private sector participation in manufacturing and the supply of agricultural-related equipment and tools. Local innovations, including modifying agricultural equipment to suit local conditions, also hold investment opportunities. Although the GON provides a number of extension services, increasingly, commercial farmers are turning to the private sector to provide required services.

In the agricultural sector, Nepal needs many improvements. For example, it needs to increase the volume and quality of products and to improve compliance with sanitary and phytosanitary standards. Finally, it needs to improve agricultural practices for agro-food and to improve designing, branding and merchandising, and packaging for processed goods.

Agriculture Financing

Modernizing the agricultural sector will require a significant amount of investment. Institutions that specialize in agricultural sector financing and related financial instruments will have to be developed and adapted. With the goal of enhancing the productive capacity of the private sector the GON and the central bank have put in place a number of concessional financing schemes for the agricultural sector. As of 2013, credits allocated to the agriculture sector through banking and financial institution (BFIs) amounted to \$377.8 million⁶. In order to facilitate credit flows to agricultural activities, the NRB has issued a directive to commercial banks to provide 20 % of loans to productive sectors, including agriculture. According to the Agriculture Census, 22 % of farmers reported taking credits and 42 % of farmers reported the need for even more.⁷

Seeds

The country is producing 4,700,000 MT of rice, whereas the nation's requirement is 5,400,000 MT. The shortage of 700,000 - 800,000 MT of paddy can be replenished if we could increase the production by 0.50 MT per hectare.

There is a growing awareness among agriculture stakeholders that hybrid vegetable seeds are gaining popularity. This is another opportunity for the private sector to produce and supply hybrid seeds. Despite the increasing demand for hybrids, research in hybrid development has been limited by a lack of training in both the public and private sectors.

The growing trend of employing commercial livestock farming in Nepal highlights the increasing need for forage and pasture seeds. Another area for private sector investment lies in the development of organized nurseries that can maintain international quality standards. Currently in Nepal, such nurseries are small in scale and geographically scattered.

⁶NRB, 2013, ⁷ CBS, 2013.

PRODUCTION AND PROCESSING

Tea

Nepal, with its favorable soil conditions, high altitude, and excellent climate is favorably situated to grow tea. Tea from Nepal is widely recognized to be superior in aroma, taste, and color to most teas. Indeed, it is quite similar to the famous Darjeeling tea. The reason is clear. Tea farming is concentrated in Nepal's eastern hilly districts, which are not only close to Darjeeling but have very similar agro-climatic, geographical and topographical conditions. The same quality tea can also be grown in Nepal. Despite its many similarities with Darjeeling in terms of soil, altitudes and climate, Nepali tea will nevertheless have its own character and uniqueness.

Nepal grows three varieties of tea, (i) *Camellia assamica*, (ii) *C. assamica* spp *lasiocalyx* for CTC (Crush, Tear, Curl), and (iii) *Camellia sinensis* for orthodox tea. Most tea estates are located in the eastern hilly districts, namely Ilam, Jhapa, Panchthar, and Taplejung.

The availability of thousands of hectares of virgin soils unspoiled by any chemical fertilizers suitable for tea cultivation in Nepal means that there is also an enormous scope for organic tea farming. Large markets for such orthodox tea exist in, among others, Germany, Japan and other EU countries. For their parts, Pakistan and the Gulf States are potentially large markets for CTC tea. Nepalese tea also has a strong potential to penetrate the U.S. and European markets if the number of organic certified producers increases to meet the growing demand for organic tea. Building a strong brand around Nepalese tea to attract the attention of potential buyers requires the production of consistently high-quality tea as well as the development of quality collection and processing centers.

Beyond the prospects of exporting tea leaves, there also exists a huge and not fully tapped domestic market. The rapidly increasing demand for organic green tea, silver twig tea, and golden tip teas also provide unique opportunities for tea-related enterprises.

Tea Market Analysis

It is estimated that approximately 10,000 hectares of land, almost all in the hilly districts, is available for tea cultivation. Total tea production 2020 is forecast to be approximately 54.7 million kg, of which CTC will account for 22.5 million kg and Orthodox tea, 32.2 million kg. In total, the area for tea cultivation could expand to 62,800 hectares within the next 15 years. According to NTIS, in 2016, the export value of Orthodox tea was approximately \$2.7 million in 2013 and targets to reach approximately \$6 million in 2017. Clearly, tea is a product with a lot of potential for the international market therefore investment, both public and private could further improve the quality of the product and enhance its market growth.

Coffee

Coffee is one of the highest traded commodities in the international market. There are two important species of coffee in the world- *Coffea Arabica* (Arabica coffee) and *Coffea Canephora* (Robusta coffee). Among these, the self-pollinating Arabica coffee is perhaps the most highly acclaimed species. All Nepalese coffee is Arabica coffee. This high value cash crop is becoming extremely popular among Nepalese farmers. Coffee plantations have now spread to over 40 districts in the Nepal's hill country, and more than 30,000 households are now involved, either individually or through cooperatives.

Coffee is among the few commodities in which Nepal has a consistent trade surplus. Lately, however, exports have decreased possibly indicating an increased consumption on the domestic market. In contrast to exports in 2011/12 of 109 tons, total exports for 2012/13 were only 85 tons, for all categories of coffee⁸. Nevertheless, coffee remains a significant investment opportunity. The existing 1760 hectares of land under coffee cultivation barely makes 0.14 % of the area (within 800m-1600m) of the country's potential coffee growing area.

Coffee Market Analysis

Coffee production area has expanded from approximately 424 hectares in 2000/01 to 1760 hectares in 2011/12. The production has increased from 89 tons of dry cherry to 418 tons of green beans (equivalent to 523 tons of dry parchment) during the same period. Global price of coffee has been on an increasing trend therefore investments in the processing, packaging and branding of coffee is recognized as an investment opportunity

Honey

Owing to the country's unique climatic conditions and its vast floral inventory, Nepalese honey, with its unique taste, is considered to be one of Nepal's prized exports. Most of the honey produced in Nepal is sold in the domestic market (as a food and for Ayurvedic medicine), with only a very small quantity being exported. The major honey producing districts of Nepal are Chitwan, Nawalparasi, Rupandehi, Kapilbastu, Dang, Sarlahi, Sunsari, Mahotari, Makwanpur, Banke, Bardia, and Kanchanpur.

During honey's many stages of processing, approximately 3-8% of the product is lost. This is largely due to the continuing use of traditional processing practices, a lack of technical knowledge on processing and a scarcity of proper processing equipment⁹. Elimination of these problems could save as much as 50% of lost product. For this reason, investment in modern production and processing facilities is considered to be an attractive option.

Honey Market Analysis

The potential for honey production potential is estimated to be in the range of 10,000 to 20,000 MT per year¹⁰. This is to be compared with the current production of only 1,625 MT. Today the major export markets of Nepali honey are India, China, Japan, European countries and the US. More than 50,000 households are involved in beekeeping and farmers recognize beekeeping as a viable economic activity.

Ginger

In the hill country of Nepal and particularly in the eastern part of the country, a large number of small farmers are involved in ginger farming. Ginger is one of the agriculture products identified by Nepal Trade Integration Strategy (NTIS) 2010 as having export potential. It is a one of the important high-value spice crops of Nepal. However, the share of ginger in the total agricultural exports of Nepal is currently only about 3 to 4 %. Nepal enjoys free access to India's market for ginger trade.

According to Vegetable Development Directorate, 2009/10, the major ginger producing districts are Ilam, Salyan, Nawalparasi, Palpa, Doti, Morong, Kailali, Surkhet, Tanahu, and Kaski. The increased use of contract farming in ginger has had a significant positive impact on unit profits. Contract ginger farmers can count on a profit of approximately \$0.19 per kilogram. Profits for lentil farmers has also increased by 22.5% for different specifications, also due to contract farming. Sutho (dry ginger) is the major processed product made out of fresh ginger. However, Nepalese farmers continue to make Sutho using labor intensive and tedious traditional techniques. In addition, the lack of automated ginger peelers and mechanical dryers continues to pose major post-harvest and export problems. Investing in and establishing modern processing facilities could result in the mass production of ginger for export to international markets.

⁸ MoAD, 2014. ⁹ AFC, 2006., ¹⁰ NTIS, 2010.

Ginger Market Analysis

Nepal is the third-largest producer of ginger in the world (with 11% of the global share in 2013). For their parts, India and China have 31.9 % and 18.2 % respectively. The share of ginger in the gross cropped area of Nepal has increased from 0.08 % in 1991 to 0.39 % in 2013. The value of production ginger has, as a result, risen from approximately 0.95 % in 1991 to 3.23 % in 2013. According to NTIS 2016, 235,000 MT of ginger were produced in 2013, of which 65 % was exported. NTIS 2016 forecasts to produce at least 300,000 MT of ginger by 2017 and 70 % of which will be for export. The export price for Nepali ginger is US\$ 217/MT which is 20 % of China's price and 60 % of India's price. NTIS 2016 forecasts to increase the price of Nepalese exports to 75 % of the Chinese export price. Ginger is a product for which the trend of export has been largely positive and investment in this sector would further allow it to enhance its market growth.

Cardamom

According to NTIS 2016, Nepal is one of the largest producers and exporters of large cardamoms. Cardamom has a strong export potential, particularly to India. Cardamom oil is widely used as a food preparation ingredient, as well as in perfumes, health foods, medicines and beverages. Today a large volume of dried but un-graded cardamom is traded in the Indian and Pakistani markets. It has market potential in the international market owing to forecast growth in demand for plant-based cosmetics and flavours.

Cardamom Market Analysis

Currently in Nepal, approximately 12,000 hectares in over 40 hill country regions are under cardamom cultivation and the estimated annual production is 6,000 metric tons. In 2012/13 5,750 MT of large cardamom were produced. NTIS 2016 forecasts the production of 6,500 MT of large cardamom by

2017. The price (US\$/MT) of Nepalese large cardamom is currently 50 % of that of Indian exports, but by 2017 NTIS forecasts an increase in price to 75 % of that of Indian exports.

Non-Timber Forest Products (NTFP)

Non-timber forest products are comprised of materials harvested from forests for a variety of purposes other than timber. Medicinal and aromatic plants, bamboo and rattan, nuts, fruits, wild vegetables, spices, plant-derived pesticides, tannin, dyes, gums, resins, and incense are just some of the major NTFPs currently originating in Nepal. Nepal has 35 different types of forests and their 118 ecosystems are home to over 2 % of the world's flowering plants, as well as an estimated 7,000 species of higher value plants.

Amala, Atis, Chiraito, Tejpat, Guchhichyau, Jatamansi, Jhyau, Kutki, Pipla, Ritha, Sugandhawali, SugandhaKokila and Timur are the major NTFPs exported to India. High quality Yarsagumba (*Cordyceps sinensis*), found in the high mountains of Nepal, are highly valued. Mountain districts such as Darchula, Jumla, and Dolpa have been receiving over \$9.828 million annually from its sale.¹¹ Another high value product which has only recently been identified is called Bodhichit Briksha (*Zizyphus budhhensis*). An individual medium sized tree of this species fetches approximately \$35,000.¹¹ In addition, taxol, which is extracted from LauthSalla (*Taxus wallichiana*), has been proven to be beneficial in the treatment of cancer.¹¹

As a sector, NTFP holds immense potential for Nepal and can be an object for private investment. It is to be noted; however that NTFP investment requires close coordination with community forestry user groups.

Essential oils are the major commodity derived from processed herbs. They are extracted from more than 18 plants and various products. These

¹¹ DoF, 2014.

products generated export revenue in the amount of \$1.135 million in 2010/11. Similarly, agricultural-based handicraft products generated export revenues in the amount of \$47.173 million in fiscal year 2014/15.

Non-Timber Forest Products (NTFPs) Market Analysis

About 85 % of Nepal's Medicinal and Aromatic Plants (MAP) are collected from the mid-western and far-western regions.¹² Around 300,000 families are directly or indirectly involved in the collection of MAPs in 58 districts of Nepal.¹³ The United

States is the largest importer of MAPs globally. Among the top 10 importers, demand for MAPs has been growing steadily in the United States, Japan, China, Chinese Taipei and Canada. Nepal has historically exported MAPs to these countries in varying quantities. There is significant untapped potential in these markets. India is, by far, the largest exporter of essential oils in the world. It also exports almost 20 % of the total world exports of essential oils. Essential oils other than those of citrus fruits is the major essential oil that Nepal exports which comprises more than 60 % of the total value of essential oils exported in 2012.¹⁴

Table 5. NTFPs by Ecological Zones

NTFPs by ecological zones		
NTFPs/MAPs of High Altitude	NTFPs/MAPs of Mid Hill	NTFPs/MAPs of Terai
Jatamansi, Kutki, Atis, Bis-jara, Bishma, Nirmasi, Dhupi, Nagbeli, Padamchal, Pan-chaule, Yarsagumba, Silajeet, Gucchichau, Somlata, Satuwa, Sunpati, Laghupatra, Sugandhawal, Seabukthorn, Olive, Deodar, etc.	Timur, Tejpat/Dalchini, Chiraito, Pakhanbed, Ioth Salla, Rudraksha, Kanchur, Ritha, Majitho, Dhatureo, Kuchila, Asuro, SugandhaKokila, Indrayani, Bojho, Ban Lasun, Ghiu Kumari, Thulo Okhati, Bhyakur, Allo, Lokta, Jhyau, Alaichi, etc.	Harro, Barro, Amala, Satwari, Sikakai, Sarpagan-dha, Pipla, Tetepati, Khayar, Asuro, Bhyakur, Banmara, Gurjo, Bel, Rajbrikchha, Jiwanti, Dhatureo, Ghodtapre, Kantakari, Neem, Bet, Chhatiwan, Musli, etc.

Source: Pyakurel et al 2014

¹² UNEP, 2012., ¹³ MoCS, 2010., ¹⁴ SAWTEE, 2015

Vegetables

The practice of growing off-season vegetables in Nepal has served to increase areas under cultivation and production. In particular, the vegetable sector has grown considerably over the last 10 years, primarily as farmers diversify away from staple crops. Overall, vegetable production increased by an average of 6.9 % per annum keeping well ahead of overall average population growth of 1.47 % over the period 2000 to 2010¹⁵. Per capita consumption demand for fresh vegetables is forecast to grow at 1.9 % annually from 2001 to 2020¹⁶. As a consequence, the total volume of vegetable demand in those markets is forecast to grow at 8.2 % during the same period.

Despite the government and non-government support in Nepal's vegetable seed production, the sector remains unorganized and relies on traditional methods and inefficient technologies. From production to processing, storage, transport and marketing there are opportunities to improve the value chains and their constituent processes are evident. Under current processing at the farmers' level there is an estimated seed loss of around 10-15 %, largely resulting from hand processing with traditional equipment. Therefore, establishing and investing in seed processing (cleaning) other technologies should result in increased efficiency and growth opportunities

Vegetable Market Analysis

The volume of vegetable production is forecast to grow by 6.1% in 2014/15 to 3,629,000 MT from previous year's yield of 3,421,000 MT. The area under vegetable cultivation is estimated to be 245,000 hectares.¹⁷

Floriculture

Nepal has approximately 636 floriculture businesses that provide employment for more than 40,000 people. Domestic production of a number of floriculture products is sufficient to meet three-quarters of the national demand. The demand for flowers soars in the festival season. During that time the gap between the supply and demand is met by the imports from India. In addition, products such as live trees and other plant related products, including hybrid seeds, bulbs, roots, ornamental foliage, and cut flowers are imported from countries other than India. Similarly, cut flowers are mainly imported from Thailand, Italy, and India. The export of recently commercialized floriculture products to these markets is possible, upon the submission of phytosanitary certificate (PC) issued by the authorities in Nepal

Floriculture Market Analysis

According to Floriculture Association, Nepal 2013, the floriculture transactions in Nepal amounted to approximately \$10.7 million. The demand has risen from 100-150 sticks per day in 1992/93 on average to 7000-9000 (2013) sticks per day in Kathmandu.¹⁸ Due to increased urbanization, rose markets have been explored and extended in other parts of the country including Pokhara, Narayanghat, Biratnagar, and Butwal. About 8.8 hectare land is covered under rose cultivation in Nepal.¹⁹

¹⁶World Bank, 2013., ¹⁷HVAC, 2002., ¹⁸HVAP, 2011., ¹⁹FAN, 2013.

LAWS AND REGULATIONS

LAWS AND REGULATIONS

For a number of decades the GON has put extensive efforts into developing Nepal's agricultural sector. It has incorporated changed market circumstances into its plans, policies and programs including GON's 20 Year Agriculture Perspective Plan (APP) 1995/6-2014/15, periodic plans and annual budgetary programs. Nepal's new constitution has placed emphasis on the efficient use of lands, revising the land use policy to increase the productivity and the production of agriculture produce. It also stresses proper management, commercialization, industrialization, diversification, and modernization of the agricultural sector.

The GON's periodic three-year plans have identified a number of subsectors that fall within agricultural priorities. While historically, tea, coffee, grains, vegetables, and fruits have been priorities, more recently the focus has shifted towards floriculture, fishery and livestock, medicinal and aromatic plants.

The current three-year plan (2013-2016) focuses on:

- Increasing the production and productivity of agricultural and livestock products
- Commercialisation of the agriculture and livestock products
- Development and dissemination of environment-friendly agro-technologies and mitigating the adverse effects of the climate change due to agricultural processes and technologies
- Protection and use of the agricultural biodiversity

Agriculture Perspective Plan (APP)

The APP was drafted as a 20-year plan starting in 1995. This was the GON's primary policy for agriculture growth and modernization. The APP focused on technology driven growth and prioritized technology, electrification, roads, irrigation and fertilizers as its input priorities and placed high value crops and agri-business as output priorities. The APP also emphasised the fact that the development of agriculture depends on the development of other sectors such as roads, electricity, irrigation, forestry, and soil and water conservation.

With the implementation of the APP, some improvement has been seen in rural road infrastructure, community forest and horticulture. Irrigation has also been considerably expanded. Similarly, livestock (dairy processing and poultry) has performed quite well. The mixed performance of the APP has resulted in a request by GON to formulate a new long-term strategy, the Agriculture Development Strategy (ADS).

Agriculture Development Strategy (ADS)

The ADS is expected to guide Nepal's agriculture sector for the next 20 years. The emphasis of the ADS will not only be in the production sectors (crops, livestock, fisheries, forestry) but also in processing sector, trade and other services (storage, transportation, logistics, finance, marketing, research and extension).

The ADS, which will be implemented from FY 2017, has recommended spending NRs. 50 billion (USD 500 million) annually over the course of 10 years. This

includes an 11 % contribution from the private sector and other international donors. The ADS focuses on agricultural transformation of Nepal and ensures that the process of the transformation is accelerated to achieve the desired target.

ADS can be summarized as follows:

- Accelerate investment in Science and Technology. Invest in the Knowledge Triangle – research, education, and extension (REE).
- Ensure broad-based and inclusive agricultural growth. Invest in programs to moderate social and geographic inequalities.
- Integrate smallholder farmers with competitive value chains that are able to meet the more demanding requirements of growing urban population in Nepal and abroad.
- Promote rural infrastructure and rural agro-enterprises that energize the economic texture of rural Nepal.

The ADS is quite optimistic and has set for a target that within 20 years agriculture trade balance of Nepal shall continue to be approximately at \$690 million surplus while the cereal self-sufficiency will be at 0-5 % surplus state.

Nepal Trade Integration Strategy (NTIS)

The Nepal Trade Integration Strategy (NTIS) prepared and implemented since 2010 is reviewed in 2016 and is Nepal's third in a series of strategies which seek to address the outstanding trade and competitiveness challenges faced by the country's export sector. It has identified priority export potential goods and services based on the two broad criteria- (i) export performance and (ii) inclusive and sustainable development. For its part, NTIS focuses on developing action plans to address protracted constraints in a number of cross-cutting areas which including:

- Institutional capacity building for trade, including capacity for trade negotiations
- Business environment for investment and trade
- Trade and transport facilitation
- Standards and technical regulations
- Sanitary and phyto-sanitary measures
- Intellectual property rights
- Issues related to trade in services

To increase exports, the NTIS has identified 12 priority products. Out of which, 4 products are Agro-based products:

- Cardamom
- Ginger
- Tea
- Medicinal and Aromatic Plants (MAP)

ANNEX 1 : INVESTMENT INCENTIVES

Category	Incentives and Subsidy Provision
Income tax	<ul style="list-style-type: none"> Income generated by the primary agro-producers other than a firm, company or partnership engaged in agriculture within the land limit prescribed by the Land Act, 1965 is exempt from income tax. Similarly, income earned by agriculture cooperatives engaged in silk farming, fruit farming, fruit producing and refining, animal husbandry, dairy industries, poultry farming, bee keeping, fishery, tea, coffee, medicinal herbs farming and processing, vegetable seed producing, rubber farming, agro forestry, cold storage for vegetables, animal fodders, pesticides, fertilizers and agricultural tools is exempt from income tax and dividend tax. Industry based in agriculture sector that provides direct employment to at least 100 Nepalese national during a whole year, the effective tax rate is 70 % of applicable tax rate. Exemption of dividend tax in case special industry, industry based in agriculture and tourism sector capitalizes its profit (issues bonus shares) for the purpose of expansion of capacity of industry. 40 % tax exemption for fruit based brandi, wine, cider-producing industries established at under developed areas specified by GON.
Value Added Tax	<ul style="list-style-type: none"> No value added tax is levied on the primary and basic agricultural goods. VAT exemption facility for agro-based cold storages. VAT exemption for spare parts imported by jute industries on recommendation of Department of Industries. 25 % VAT square off facility for all-purpose flour industries. 50 % VAT square off facility for mustard oil and Vanaspati ghee producing industries, dairy industries and tea producing and refining industries. 90 % VAT square off facility for sugar producing industries. There shall be an exemptions of VAT in the premium paid for agriculture and livestock insurance
Custom Duty Concessions	<ul style="list-style-type: none"> Fertilizers (As defined in chapter 31 of custom tariff 2015/16.) Raw jute imported by jute industries. (As defined in Chapter 53 of custom tariff 2015/16.) Import of partially oriented yarn (POY) and all kinds of manmade staple fiber by Industry registered in VAT.
Others	<ul style="list-style-type: none"> Interest on loans extended for commercial vegetable, poultry, mushroom and herbs farming, fishery, dairy business, establishment of storage facilities, meat business and slaughter houses not to exceed 6%. 50% interest subsidy on loans acquired for the purpose of carrying out commercial farming in 10 hectares of land in hilly region and 20 hectares of land in the Terai region. 75% interest subsidy on loans extended by cooperatives operated by small and marginalized farmers. Any private or cooperatives borrowing loans to establish and operate cold storage and food storage facilities within the directives issued by the MoA shall be provided with the exemption of 100 % interest payment for a period up to five years.

ANNEX 2 : RELEVANT AGENCIES AND ORGANIZATIONS

OFFICE OF THE PRIME MINISTER AND COUNCIL OF MINISTERS

Singh Durbar, Kathmandu, Nepal
 Tel: +977-1-4211000, 4211025
 Email: info@nepal.gov.np
 Website www.opmcm.gov.np

MINISTRY OF INDUSTRY

Singh Durbar, Kathmandu, Nepal
 Tel: +977-1-4211889, 4211991
 Fax: +977-1-4211877
 Email: info@mole.gov.np
 Website: www.mole.gov.np

MINISTRY OF SCIENCE, TECHNOLOGY AND ENVIRONMENT

Singh durbar, Kathmandu, Nepal
 Tel: +977-1-4211661, 4211641
 Fax: +977-1-4211954
 Email: info@moste.gov.np
 Website: www.moste.gov.np

MINISTRY OF AGRICULTURAL DEVELOPMENT

Singh durbar, Kathmandu, Nepal
 Tel: +977-1-4211905, 4211950
 Fax: +977-1-4211935
 Email: memoad@moad.gov.np
 Website: www.moad.gov.np

MINISTRY OF FORESTS AND SOIL CONSERVATION

Tel: +977-1-4211567
 Fax: +977-1-4211868
 Email: info@mfsc.gov.np
 Website: www.mfsc.gov.np

INVESTMENT BOARD NEPAL

Office of the Investment Board
 ICC Complex, New Baneshwor,
 Kathmandu, Nepal
 Tel: +977-1-4475277, 4475278
 Fax: +977-1-4475281
 Email: info@ibn.gov.np
 Website: www.ibn.gov.np

NATIONAL PLANNING COMMISSION SECRETARIAT (NPCS)

Singh Durbar, Kathmandu
 Phone: +977-1-4211136
 Fax: +977-1- 4211700
 Email: npcs@npic.gov.np
 Website: www.npc.gov.np

NEPAL RASTRA BANK

Central Office, Baluwatar
 Kathmandu, Nepal
 Tel: +977-1-4410158, 4410201
 Fax: +977-1-4410159
 Email: nrbcu@nrb.org.np
 Website: www.nrb.org.np

NEPAL AGRICULTURAL RESEARCH COUNCIL (NARC)

Singh Durbar , Kathmandu
 Tel: 977-1-4256837, 4262650
 Fax : 977-1-4262500
 Email : ednarc@ntc.net.np
 Website: www.narc.gov.np/narc

NATIONAL TEA AND COFFEE DEVELOPMENT BOARD

New Baneshwor, Kathmandu
 Tel: 977-1-4495792, 4499786
 Fax: 977-1-4497941
 Email: ntcboard@wlink.com.np
 Website: www.teacoffee.gov.np

DEPARTMENT OF INDUSTRY

Tripureshwor, Kathmandu
 Tel: +977-1-4261203, 4261302
 Fax: +977-1-4261112
 Email: info@doind.gov.np
 Website: www.doind.gov.np

OFFICE OF THE COMPANY REGISTRAR

Tripureshwor, Kathmandu, Nepal
 Tel: +977-1-4259948, 4263089
 Fax: +977-1-4259961
 Email: info@ocr.gov.np
 Website: www.crm.gov.np

DEPARTMENT OF IMMIGRATION

Kalikasthan, Dillibazar
Tel: +977-1-4429659
Fax: +977-1-4433935
Email: mail@nepalimmigration.gov.np
Website: www.nepalimmigration.gov.np

DEPARTMENT OF AGRICULTURE

Hariharbhawan, Lalitpur
Tel: +977-1-5521323, 5521356
Email: info@doanepal.gov.np
Website: www.doanepal.gov.np

DEPARTMENT OF CUSTOMS

Tripureshwor, Kathmandu
Tel: +977-1-4259861
Fax: +977-1-4259808
Email: csd@customs.gov.np
Website: www.customs.gov.np

INLAND REVENUE DEPARTMENT

Lazimpat, Kathmandu
Tel: +977-1-4415802, 4410340
Fax: +977-1-4411788
Email: mail@ird.gov.np
Website: www.ird.gov.np

DEPARTMENT OF LABOUR

Minbhawan, Baneshwor
Tel: +977-1-4107194
Fax: +977-1-4107288
Email: info@dol.gov.np
Website: www.dol.gov.np

DEPARTMENT OF FOOD TECHNOLOGY AND QUALITY CONTROL

Babarmahal, Kathmandu
Tel: +977-1-4262369/ 4262741
Fax: +977-1-4262337
Email: info@dftqc.gov.np
Website: www.dftqc.gov.np

FEDERATION OF NEPALESE CHAMBERS OF COMMERCE AND INDUSTRY (FNCCI)

Pachali Shahid Shukra FNCCI Milan Marg, Teku, Kathmandu
Tel: +977-1-4262061, 4262218
Fax: +977-1-4261022
Email: fncci@mos.com.np
Website: www.fncci.org

CONFEDERATION OF NEPALESE INDUSTRIES (CNI)

Trade Tower, 5th Floor Thapathali Kathmandu
Tel: +977-1-5111122, 5111123
Fax: +977-1-5111122
Email: cni@wlink.com.np
Website: www.cnind.org

INVESTMENT BOARD NEPAL

Office of the Investment Board, ICC Complex,
New Baneshwor, Kathmandu, Nepal
Tel: 977-1-4475277, 4475278
Fax: 977-1-4475281
Email: info@ibn.gov.np
Website: www.ibn.gov.np

MINISTRY OF INDUSTRY

Singh Durbar, Kathmandu, Nepal
Tel: 977-1-4211579
Fax: 977-1-4211619
Email: info@moi.gov.np
Website: www.moi.gov.np