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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED GRANT

IN THE AMOUNT OF (SDRXX/EURXX/OTHER) MILLION
(US\$ 22.7 MILLION EQUIVALENT)

TO THE

FEDERAL DEMOCRATIC REPUBLIC OF NEPAL}

FOR A

FOOD AND NUTRITION SECURITY ENHANCEMENT PROJECT

{RVP/CD CLEARANCE DATE}

Agriculture Global Practice
South Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective {May 07, 2018})

Currency Unit = Nepalese Rupees (NPR)

NPR 107.03 = US\$1

US\$ 1.43 = SDR 1

FISCAL YEAR

July 16 – July 15

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ABBREVIATIONS AND ACRONYMS

AER	Agro-Ecological Region
AFSP	Agriculture and Food Security Project
BCC	Behavior Change Communication
BG	Beneficiaries Groups
BMI	Body Mass Index
CF	Community Facilitator
CPF	Country Partnership Framework
CSO	Civil Society Organizations
CIP	Country Investment Plan
DoA	Department of Agriculture
DFTQC	Department of Food Technology and Quality Control
DoHS	Department of Health Services
DLS	Department of Livestock Services
DADO	District Agriculture Development Office
DADC	District Agriculture Development Committee
DESMC	District Environment and Social Management Committee
DFNC	District Food and Nutrition Committee
DHS	Demographic Health Survey
DIME	Development Impact Evaluation Initiative
DLSO	District Livestock Services Office
ESMF	Environmental and Social Management Framework
FFS	Farmer Field School
FG	Farmers Group
GAFSP	Global Agriculture and Food Security Program
GDP	Gross Domestic Products
GEED	Gender Equity and Environment Division
GoN	Government of Nepal
GRM	Grievance Redressal Mechanism

HVAP High Value Agriculture Project

IWRMP Irrigation and Water Resources Management Project

IYCF Infant and Young Child Feeding

LDO Local Development Officer

LSIE Livelihood and Social Inclusion Expert

MCPSU Municipality Cluster Project Support Unit

MDGs Millennium Development Goals

MNP Micronutrient Powder

MoAD Ministry of Agricultural Development

MoALMC Ministry of Agriculture, Land Management and Cooperatives

MoCPA Ministry of Cooperatives and Poverty Alleviation

MoFAGA Ministry of Federal Affairs and General Administration

MoHP Ministry of Health and Population

MPPWTM Ministry of Physical Planning and Works and Transport Management

NPC National Planning Commission

NARC Nepal Agricultural Research Council

NLSS Nepal Living Standard Survey

NGO Non Governmental Organization

NTFP Non-Timber Forest Products

PAF Poverty Alleviation Fund

PD Project Director

PDO Project Development Objective

PESMC Project Environment and Social Management Committee

PIM Project Implementation Manual

PMIS Project Management Information System

PMU Project Management Unit

PMT Project Management Team

PTCC Project Technical Coordination Committee

RPCC Regional Project Coordination Committee

RPF Resettlement Policy Framework
RPSU Regional Project Support Unit
SA Social Assessment
SDG Sustainable Development Goal
SE Supervising Entity
SLCC State Level Coordination Committee
SMF Social Management Framework
TA Technical Assistance
USAID United States Agency for International Development
VAHW Village Animal Health Worker
VDC Village Development Committee



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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Nepal	Food and Nutrition Security Enhancement Project	
Project ID	Financing Instrument	Environmental Assessment Category
P164319	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
26-Jul-2018	30-Jun-2023

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The Project Development Objective (PDO) is to enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder farming communities in selected areas of Nepal.



Components

Component Name	Cost (US\$, millions)
Climate and Nutrition Smart Technology Adaptation and Dissemination	7.00
Income Generation and Diversification	7.00
Improving Nutrition Security	5.00
Project management, communication and M&E	3.70
Contingency Emergency Response	0.00

Organizations

Borrower: Federal Democratic Republic of Nepal
 Implementing Agency: Ministry of Agriculture, Land Management, and Cooperatives (MoALMC)

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	28.70
Total Financing	28.70
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Counterpart Funding	6.00
Borrowing Agency	6.00
Trust Funds	22.70
Global Agriculture and Food Security Program	22.70



INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture

Contributing Practice Areas

Health, Nutrition & Population

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Moderate
8. Stakeholders	● Moderate
9. Other	
10. Overall	● Substantial



COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No

Safeguard Policies Triggered by the Project

Yes

No

Environmental Assessment OP/BP 4.01

✓

Performance Standards for Private Sector Activities OP/BP 4.03

✓

Natural Habitats OP/BP 4.04

✓

Forests OP/BP 4.36

✓

Pest Management OP 4.09

✓

Physical Cultural Resources OP/BP 4.11

✓

Indigenous Peoples OP/BP 4.10

✓

Involuntary Resettlement OP/BP 4.12

✓

Safety of Dams OP/BP 4.37

✓

Projects on International Waterways OP/BP 7.50

✓

Projects in Disputed Areas OP/BP 7.60

✓

Legal Covenants

Conditions



I. STRATEGIC CONTEXT

A. Country Context

1. **Nepal is a landlocked, low-income country with varied agro-ecological areas, high poverty levels, diverse socio-ethnic fabric and poor nutritional status.** Nepal is one of the poorest countries in the world with per capita income of US\$ 762 in 2015. Eighty % of Nepal's population reside in rural areas, and 66 % are engaged in agriculture. Nepal ranks 197th in terms of GDP per capita and 145th out of 186 countries in terms of Human Development Index. The country's agro-ecological areas are very diverse; they span the lowlands of Terai to the high mountains of the Himalaya through the mid-level hills area; these areas have specific potential for agro-economic development, and are populated by diverse ethnic groups with varied social norms. The nutritional status of Nepal's population is poor; it ranks 118 out of 162 in the world with an average daily dietary energy consumption of 2340 kilocalories per day¹.

2. **A new government, backed by a historic majority in Parliament, took up office on February 15, 2018.** This follows elections for all three tiers (local, state and federal) of the state architecture defined by the new constitution, marking a protracted but successful conclusion of a political transition that began with the signing of the Comprehensive Peace Agreement in November 2006. State governments largely mirror the coalition at the center. At the sub-national level, funds, functions and functionaries hitherto managed by the central, district and village authorities are moving to the seven new states and 753 local governments for which new legislation, institutions and administrative procedures are being formalized as constitutionally prescribed. Meanwhile, the central level authority is being streamlined with a focus on oversight. These exercises at state restructuring are expected to result in improved outreach and service delivery but will likely take time before they become fully operational.

3. **Over the past decade, Nepal's economy has performed reasonably well.** Growth averaged 4.3 percent (at market prices) over 2005-15. Although declining as a share in the economy, agriculture continues to play a large role, contributing one third of value-added. The service sector has grown in importance, accounting for more than half of value-added in recent years. Industry in general, and manufacturing has grown more slowly and its relative share in the economy is falling. Similarly, exports continue to struggle, while imports are fueled by remittances which reached 30 percent of GDP. Inflation was in single digit for most of the past decade, with the peg of the Nepalese rupee to the Indian rupee providing a nominal anchor. Fiscal balances remained sustainable owing to strong revenue growth and modest spending. The incidence of poverty measured against the national poverty line fell by 19 percentage points from 2003/04 to 2010/11, and in 2010/11², 25 percent of the population was counted as poor. Most multidimensional indicators of poverty also showed improvements across regions in Nepal. However, these gains remain vulnerable to shocks and setbacks, like the 2015 earthquakes which were followed by trade disruptions resulting in the lowest economic growth in 14 years in 2016.

4. **Economic activity, which rebounded strongly in FY2017, following two challenging years, has once again been disrupted by floods affecting more than one-third of the country.** The rebound in FY2017 stemmed partly from a base effect, as well as a favorable monsoon boosting agricultural output and earthquake reconstruction gathering speed to raise investment. High inflation in the past two years moderated sharply. Government revenue continued to perform well, and spending has also picked up

¹ Hunger Portal, FAO, 2012

² Recent data not available



significantly in FY2017 compared to previous years. Nevertheless, ambitious expenditure targets envisioned in the budget have not been met and the quality of spending has not improved with 60 percent of the capital spending occurring in the last quarter. In the first half of the FY2018, the spending pressures have increased due to fiscal transfers, election spending, capital goods and expenditure to implement federalism. Inflation in February 2018 has increased to 5.0 percent (y/y)³ percent from 2.7 percent (y/y) in August 2017. Meanwhile, rapid credit growth in early 2017 has slowed but deposits growth has continued to decline, pushing up the interest rates. On the external side, the cumulative effect of a sharp trade balance deterioration and a slow growth of remittances, is putting a significant pressure on the current account. Economic activity, which was expected to progress well in FY2018, has been affected by the worst floods in decades particularly affecting the agriculture output.

B. Sectoral and Institutional Context

5. **Agriculture is a major driver of Nepal's economy and the dominant source of employment; in the last two decades, agriculture growth has been instrumental for reducing poverty but insufficient to ameliorate people's nutritional status.** Over that period poverty rates declined from 42% in 1994/95 to around 25% in 2015 (ADS⁴), mainly driven by raising agricultural incomes in rural areas. However, most of this income growth can be attributed to increased commodity prices (78 %), rather than productivity increases (22%). As high global commodity prices have now largely abated, it becomes even more imperative to unlock agriculture productivity and value-addition potential as the key engine for growth, poverty reduction, and shared prosperity. Poverty is overwhelmingly rural and most of the country's poor are small-scale farmers with low nutritional status. Increase in rural incomes will continue to drive poverty reduction and improved nutrition over the medium- term.

6. **The agriculture sector exhibits persistent vulnerability to shocks, including climate change.** Agriculture's vulnerability was evidenced by the 7.8 magnitude earthquake of April 2015 which set back the country's development. The rural areas were particularly hard hit, with crop and livestock related losses and loss of post-harvest storage infrastructure. A joint GoN-UNDP assessment found that the agriculture, livestock and the small irrigation sector has experienced about 10 billion NR of losses due to the earthquake, with more than 50% of the losses attributable to the livestock sector. In September 2015, a second shock to the economy came in the form of a near complete disruption of external trade by a seven-month long blockade of borders following the adoption of the new Constitution. These events contributed to a slowdown in agricultural growth to less than 1 % in FY 2015 and 1.3 % in FY 2016, vs. annual growth rates for agriculture GDP over the previous decade of about 3 % per annum; they further exacerbated the wide fluctuation of output experienced at that time. The Climate Smart Agriculture Country Profile (2017) points to climate projections for Nepal which suggest a continued increase in mean annual temperature, a faster warming of the country's western regions, (compared to the eastern region), changes in precipitation during the monsoon period (with variations from -14 to 40%), as well as the increased likelihood of heavy precipitation events. Changes in precipitation patterns are likely to affect rainfed agricultural activities, causing significant annual yield variability, deterioration of pasture land, and higher production risks. Nepal's food system is extremely vulnerable to climate change, ranked 145 out of 188 countries in the ND-GAIN index. Climate change is also expected to increase the frequency of weather related hazards (e.g. droughts and floods), further affecting croplands and yields. Costs associated with the impacts of climate variability and extreme events are

³ Year on year

⁴ Agriculture Development Strategy (ADS, 2015).



estimated at US\$ 270-360 million/year (expressed in 2013 prices), representing 1.5 to 2% of the country's GDP.

7. **Nepal's agriculture remains characterized by subsistence farming**, the use of traditional crops and methods and an excessive dependence on weather outcomes. The underperformance of the traditional systems points to the need to modernize and expand agriculture, with the view to making it more responsive to both market requirements and the nutritional needs of the domestic population. This should be achieved through a combination of increased productivity of traditional crops and animal husbandry practices, supportive inputs and services, diversification to customized, more efficient and nutritionally sensitive agriculture enterprises, and better access to market outlets.

8. **Nepal has been undergoing a gradual "feminization" in the agriculture sector**, as male farmers continue to move out of agriculture, migrating to urban areas and abroad in search of more remunerative employment opportunities. The proportion of the labor force in the agriculture sector fell from 76% in 1998/99 to 74% in 2008, and women workers occupied a majority (84%) of that share (CBS 2011). However, women continue to face extremely low gains when it comes to ownership over assets, access to resources, ability to take part in decision making processes in development initiatives, benefit from capacity building, and economic gains. The recently conducted Country Gender Assessment of Agriculture and Rural Development (FAO 2017) in Nepal shows that more than three-quarters (76.4%) of women engaged in agriculture work as unpaid family labor while 10.4% only receive in-kind payment, and 13.2% receive cash and in-kind payments. Furthermore, only 31% of female farmers received extension services in comparison to 69% of male farmers. To ensure gender equity and citizen engagement, the project will specifically target female farmers with gender focused interventions, and integrate women and other vulnerable beneficiary groups in all aspects of the project cycle, from planning, implementation to monitoring the results.

9. **The agriculture sector faces multi-faceted challenges, including, *inter alia*:** (i) low availability of good quality seed, improved animal breeds, and other farmer-level inputs; (ii) thinly spread and inadequate research & extension support and agri-met services with weak farmer linkages; (iii) low investment in productive assets, including supplementary irrigation infrastructure to reduce rain-dependence ; (iv) poor market linkages due to high transfer and transaction costs and weak market leverage and access to rural financial service by small farmers; and (v) lack of resilience of farmers to shocks due to disease outbreaks, climate and market related shocks and weak nutrition sensitiveness of agricultural interventions.

10. **Poor nutrition, food insecurity, and malnutrition continue to pose risks to Nepal's population**, despite the country's progress in reducing stunting in under five years children from 57 per cent in 2000 to 37.3 per cent in 2014 and 36 per cent in 2016 (NDHS 2016, MICS, 2014). During this period, income progressively rose and the country implemented a range of social programs addressing multiple underlying causes of malnutrition including water sanitation and hygiene (WASH), open defecation free (ODF) campaigning, family planning, medical services, deworming, and homestead food production. However, according to the Nepal Demographic and Health Survey (NDHS, 2016)⁵, stunting rates remain at a high of 36% among children under age 5, largely associated with income (49% compared to 17% of the highest wealth quintile) and with mother's education. Ten percent of children are wasted, and 27% underweight. More than half (53%) of the children age 6-59 months and 41% of the women age 15-49 are anemic (NDHS, 2016). Stunting rates peak among children aged 24-35 months (45%), when women likely discontinue breastfeeding

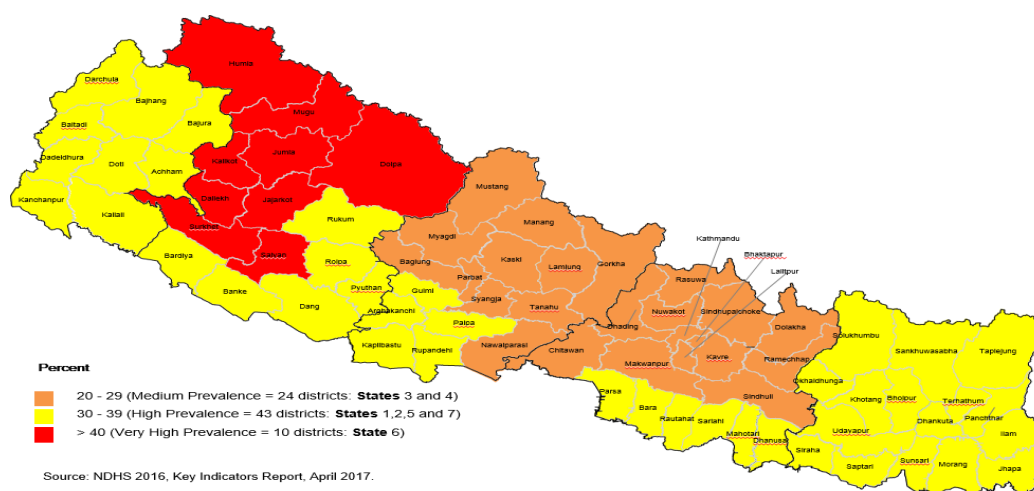
⁵ Demographic Health Survey. 2016: <https://dhsprogram.com/publications/publication-FR336-DHS-Final-Reports.cfm>



and the child is reliant on a balanced food bowl. While the prevalence of diarrhea among children under 5 has decreased over time from 14% in 2011 to 8% in 2016, it increases with age. Six percent of children less than 6 months and 15% of children 6-11 months, suffered from diarrhea two weeks prior to the survey. This is also when children are typically introduced to complementary foods. Maternal malnutrition is a major concern in Nepal. In 2016, about 17 percent of women in the 15–49 age group were undernourished—as defined by a BMI of less than 18.5 (NDHS 2016). In 2011, 18 percent of women were undernourished (NDHS 2011). Anemia continues to be a significant problem for women and children in Nepal; 53 percent of children and 41 percent of women were anemic in 2016. It is for this reason that the project focuses on addressing practices before and during the 1,000 days (from conception to two years of age) to prevent long-term high stunting rates and related impaired health, physical and cognitive development.

11. The manifestations and underlying causes of malnutrition differ drastically across provinces and agro-ecological zones. Inadequate maternal, infant and young child feeding (MIYCF) practices, untreated episodes of acute malnutrition, infections, inadequate access to a balanced food basket, lack of potable water, and micronutrient deficiencies all constitute immediate and underlying causes of malnutrition in Nepal. While the highest stunting rates are documented in the mountainous regions of the country, even within urban areas, rates do not dip below 32%. The terai ranks highest in incidence of diarrhea and anemia and lowest in Body Mass Index, Minimum Acceptable Diet, and consumption of meat, eggs, green leafy vegetables, Vitamin A rich fruits and vegetables. Evidence from the region suggests that coordinated efforts are required from nutrition-sensitive and specific sectors to effectively reduce stunting sustainably and particularly among the most vulnerable populations. Improving nutrition is therefore an important area as the country confronts various forms of nutritional problems ranging from deficits in energy intake to imbalances in consumption of specific macro and micronutrients. Furthermore, malnutrition has additional economic costs through cognitive delays in children and lower economic productivity in adults. The distribution of stunting severity across different provinces is depicted in Figure 1.

Figure 1: Severity of stunting in different provinces in Nepal



12. Achieving food and nutrition security and reducing poverty are national goals of the Government of Nepal (GoN), in line with commitments to realize the Sustainable Development Goals (SDGs) and Zero



Hunger Challenge (ZHC). The country's agricultural development priorities are aligned with these two main goals and the Sustainable Development Agenda – particularly SDG1 and SDG2 - focusing on access to increased employment opportunities, sustainable management of natural resources, supportive infrastructures development, new avenues creation for economic growth, coping with emerging effects of climate change, social inclusion, and the development of farmer-responsive governance. Nepal has set a target of reducing stunting to 24.2% by 2025 (from 36% in 2016), in line with the World Health Assembly (WHA) target of reducing number of stunted children to 25 per cent by 2025. This will require coordinated efforts from both nutrition-specific and nutrition-sensitive sectors and differentiated approaches by region.

13. **Nepal's Agricultural Development Strategy (ADS) provides the main policy framework for the sector.** The ADS was endorsed by the cabinet of ministers in 2015 to support the GoN's vision of "A self-reliant, sustainable, competitive, and inclusive agricultural sector that drives economic growth and contributes to improved livelihoods and food and nutrition security." The ADS calls for a 4 % growth in Agriculture GDP by 2020 and 6 % by 2025, by intervening across four strategic pillars: (i) improving governance, with clear targets for improved credibility of policy commitment, engage leading stakeholders (both from government and civil society) in the formulation, implementation, and monitoring of results on the ground; (ii) increasing productivity, by developing effective agricultural research and extension, efficient use of agricultural inputs, promoting efficient and sustainable practices and use of natural resources (land, water, soils, and forests), and building increased resilience to climate change and disasters; (iii) profitable commercialization, by transforming the agricultural sector from subsistence farming towards a more commercialized sector, connected to the local, national, and international markets and (iv) enhancing competitiveness, by capturing the energy, innovation and inventiveness of the private sector and cooperative sector to spur growth and development in the sector.

14. **The ADS is aligned with the Government's 14th Periodic Plan and the Multi-Sector Nutrition Plan (MSNP).** The 14th Periodic Plan covers the period 2016/17-2018/19. It aims to make the agriculture sector competitive and move towards self-reliance through sustainable and commercial agriculture development. In addition, the 2nd phase of the MSNP guides the GoN's investment in nutrition for the period of 2018 to 2022, and details the roles of respective Ministries, including Ministry of Agriculture, Ministry of Livestock, Ministry of Health and Population, Ministry of Education, Ministry of Federal Affairs and Local Development, Ministry of Urban Development, Ministry of Women, Children and Social Welfare under the leadership of the National Planning Commission. The Agriculture Development Strategy (ADS) also includes a flagship report on Food Security and Nutrition, identifying a number of priority activities to improve FSN across the country. The alignment of the ADS with the Periodic Plan and the MSNP is evidence that the GoN is committed to achieving both agriculture sector development, and food security and nutrition objectives through concerted efforts. The ranking of Nepal under the Hunger and Nutrition Commitment Index⁶ (8th out of 45 countries) further testifies to the strong commitment of the GoN to tackle hunger and malnutrition. Under that index, the country-level estimates⁷ of domestic allocation to nutrition ranged from 0.06 to 9.23 % in 2016 with a mean allocation of 2.1 %; Nepal ranked in the top five countries with a 3.59 % allocation.

C. Relevance to Higher Level Objectives

⁶The Hunger and Nutrition Commitment Index (HANCI) ranks governments on their political commitment to tackling hunger and under-nutrition. (www.hancindex.org)

⁷As mentioned in the Global Nutrition Report 2016



15. **This GAFSP financed project is well aligned with the three focus areas of the FY2019-2023 Nepal Country Partnership Framework (CPF)**, which will support Nepal’s transition to a federal system that can deliver on higher sustained growth for poverty reduction, inclusive development, and shared prosperity. The CPF identifies three prioritized focus areas: public institutions, private-sector led jobs and growth, and inclusion and resilience. The proposed project, therefore, directly contributes to achieving the overall objective of the CPF, as it will contribute to the GoN’s capacity to deliver agriculture extension services at the decentralized level, enhance and diversify income opportunities for the targeted rural poor deriving the bulk of their livelihoods from agriculture, mitigate climate risk exposure and potential loss of incomes, improve nutritional outcomes, and mainstream women empowerment. It will increase the resilience and reduce the environmental footprint of production by mainstreaming climate smart agriculture (CSA) practices throughout project activities. The project aligns also well with the World Bank Group's twin goals (poverty reduction and shared prosperity) and key priority areas of the World Bank's Agriculture Global Practice (inclusive value chains, job creation, and economic resilience).

16. **The project is also aligned with the Bank’s Climate Change Action Plan (CCAP)** which explicitly highlights climate-resilient agriculture and water management as key priorities for climate adaptation in the South Asia Region (SAR). The project will directly contribute to WBG’s commitment to increase the climate-related share of its portfolio from 21 to 28% by 2020 in response to client demand.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

17. The Project Development Objective (PDO) is **to enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder farming communities in selected areas of Nepal.**

18. **Climate resilience** in this project is defined as beneficiaries’ ability to withstand and recover from climatic shocks, particularly droughts and rainfall. This would be achieved through the application of CSA practices as well as diversification in crops grown, and additional income generated. The project will deliver on CSA’s “triple-wins” through: (i) sustainable increase in productivity and farm incomes (food security); (ii) enhanced resilience to impacts of climate change and variability (adaptation); and (iii) reduced GHG emissions per unit of product, and increased carbon sequestration (mitigation). This approach will help: (i) optimize the management of different CSA interventions depending on local natural resources and livelihood systems (agriculture, livestock); (ii) take into account the external environment (devolved governance structure, policies, strategic plans, regulations, markets, among others) that might influence relationships between stakeholders; and (iii) encourage inclusive stakeholder consultations (farmer groups, vulnerable and marginalized groups, service providers, input suppliers, CBOs, and government agencies, among others) to strengthen institutional capacity (at national, municipality and community levels) and enhance service delivery.

PDO Level Indicators

- Farmers adopting improved agricultural technologies (including CSA) of which female (CRI);
- Farmers reached with agricultural assets/ services, of which female (CRI)



- Increased crop and animal productivity by direct beneficiaries (disaggregated by crop and animal species);
- Household income (farm and off-farm) (GAFSP core indicator)
- Improved score on the Food Insecurity Experience Scale (FIES⁸) by direct beneficiaries (gender disaggregated);
- Improved dietary intake for:
 - pregnant and nursing mothers; and
 - children between 6-24 months

B. Project Components

19. **The project will follow a holistic approach** to improve the food and nutritional situation and the productive, income generating capacities of targeted poor and vulnerable smallholder farming communities in the project areas. This will be achieved by promoting climate resilience, sustainable production practices, and commercial viability as well as increasing availability and access to diverse food. The project activities will go beyond a traditional food supply chain approach and be integrated in a food system approach that considers the provision of safe and nutritious food as the foundation for human health and well-being, physical and cognitive development and economic productivity. The design of the components of the project is based on the lessons learnt from the implementation of ongoing projects including the recently closed Agriculture and Food Security Project (AFSP) funded by the Global Agriculture and Food Security Program (GAFSP). Other lessons and experiences from other similar projects in Nepal were also considered to identify the components for this project. The operational modality and approach is multi-disciplinary, engaging different GoN agencies across sectors (Agriculture, Livestock, and Health Ministries), in line with Nepal's Multi-Sectoral Nutrition Plan (MSNP).

20. The Project will have four interrelated components: (i) *Climate and Nutrition Smart Technology adaptation and dissemination*; (ii) *Income generation and diversification*; (iii) *Improving nutrition security*; and (iv) *Project management, communication and M&E*. These components combined will enhance the role of the agriculture sector in contributing to socio-economic development, including sustained improvement in the key dimensions of food and nutrition security (i.e., availability and stability of food supply), accessibility and food safety. Gender equity, social inclusion and citizen engagement, building resilience to climate and other risks, will be crosscutting themes across all components.

COMPONENT A: Climate and Nutrition Smart Agriculture Technology Adaptation and Dissemination (US\$ 7 million).

21. Component A's objective is to improve productivity and post-harvest management of crops and livestock by promoting appropriate climate smart and nutrition sensitive technologies through improved extension and research services and efficient dissemination to producer groups. Particular attention will be given to ensure inclusion of women and youth, and other vulnerable segments of the rural population, in addition to strengthening the decentralized government structures to ensure effective service delivery at the local level. This component will consist of 2 sub-components, i.e.:

⁸ FIES was selected based on the use of extensive validation criteria focusing on whether the indicator: (1) correlates highly with the SDG nutrition indicators (such as stunting), (2) is relatively low cost to collect information, and (3) can have wide country coverage.



22. Sub-component A1: Technology adaptation and testing: will focus on appropriate CSA and nutrition sensitive agriculture technologies, improved inputs (foundation seeds, and animal breeds) and improved agronomic, husbandry and post-harvest practices, taking into account nutrition value and food safety considerations, including responsible use of antibiotics to reduce resistance risks and crop storage and management practices to reduce aflatoxin risk. This sub-component will entail active collaboration with the Nepal Agricultural Research Council (NARC), and the Department of Food technology and Quality Control (DFTQC), and private seed and breed multiplier farmer groups.

23. Sub-component A2: Technology dissemination and farmers' skills development. This sub-component's objective is to enable farmers to master the management skills (Good Agricultural Practices-GAPs) required for sustainable production diversification and intensification of agriculture practices and post-harvest processing. It aims to give farmers the practical skills required for informed decision-making based on accurate problem analysis in their local contexts. Under this sub-component the project will support (a) streamlined FFS for crop and livestock production and adoption support, (b) demonstrations and field days, and (c) strengthening of advisory services and skill development.

24. **COMPONENT B: Income Generation and Diversification (US\$ 7 million).** Component B's objective is to improve and diversify the income generating capacity of targeted beneficiaries by reducing transaction costs through investments in critical business skills and productive assets, supporting value-added activities, and building market linkages. This component will consist of 2 sub-components, i.e.:

25. Sub-component B1: Strengthening Producer Groups: which aims to organize and strengthen producer groups representing the targeted farmers by organizing them around commodities of common interest, and enhance their capacity in terms of governance, leadership skills, group dynamics, decision-making, problem-solving and risk management, book-keeping, meeting organization, agricultural seasonal planning, marketing, value addition, food safety, preparation of simple business plans, and simple monitoring and evaluation.

26. Sub-component B2: Market linkages through Productive Alliances (PAs): which aims to consolidate the linkages between Producer Organizations (POs) and Agri-Business Enterprises (ABEs) supporting both input and output markets, including micro, small and mid-size enterprises (MSMEs), traders, and Rural Financial Institutions (RFIs) through the provision of financing for simple business plans developed under Sub-Comp. B1. A Matching Grant (MG) scheme will be implemented to finance eligible business plans (BPs) that demonstrate real potential for marketing and income generation for the target beneficiaries; contribute to building climate resilience; and include investments to enhance food safety.

27. **COMPONENT C: Improving Nutrition Security (US\$ 5 million).** This component aims to help address the underlying causes of malnutrition by making the food system responsive to these causes with the view to providing adequate, safe, diversified and nutrient-rich food. Under the new federalized context, the project will support an enabling environment for improved service delivery including technical backstopping and strengthened coordination. Building extensively on the experience gained from ASFP and the World Bank supported Social Safety Nets-Poverty Alleviation Fund (SSNP-PAF) pilot on nutrition interventions, the project will work directly with communities including Female Community Health Volunteers (FCHVs) using a community-driven, skill-based learning approach known as 'Nutrition Field School' to remove barriers for improved dietary and care practices by supporting a package of inputs and services complemented by behavior change communication for improved utilization of available foods, care practices, food safety, access



to public health services etc. This component will consist of 2 sub-components, i.e.:

28. Component C1: Institutional Capacity Strengthening: based on a capacity needs assessment and a participatory diagnostic of the causes of malnutrition, the project will support sub-national government nutrition and food security coordination networks and public outreach delivery in the project areas.

29. Component C2: Nutrition Field School (NFS) and Home Nutrition Gardens (HNG): under this sub-component, a skill-based learning approach, known as NFS, will be supported in each target community, following behavior change theory in order to remove barriers and identify catalysts for improved food-based nutrition practices. Building on Nepal's long tradition of users' group formation and social mobilization, the project will work with and strengthen current community institutions, particularly women's groups through the Female Community Health Volunteers (FCHV).

30. **Component D: Project management, communication and M&E (US\$ 3.7 million).** Component D's main objectives are to: (i) ensure effective strategic and operational planning, implementation, and Monitoring & Evaluation of project activities, and attendant efficient use of funds, as well as coordination of interventions across components A, B and C implemented by participating stakeholders and strategic partners (e.g. FAO); (ii) evaluate the Project's outcomes and impacts on beneficiary groups, with special focus on mid-term and final results; and (iii) communicate efficiently to various public and private entities on project activities, outcomes, best practices and lessons learnt.

31. **COMPONENT E: Contingency Emergency Response (US\$0 million).** In accordance with the World Bank's operational policy (OP10.00, paragraphs 12–14), for situations of urgent need of assistance that may arise during the life of this project, this component will allow for rapid reallocation of project proceeds in the event of a natural or man-made disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact. To trigger this component, the government must declare an emergency or provide a statement of fact justifying the request for the activation of the use of emergency funding. To allocate funds to this component, the government may request the Bank to reallocate project funds to support response and reconstruction. If the World Bank Group agrees with the determination of the disaster and associated response needs, this proposed component would allow the government to request the Bank to re-categorize and reallocate financing from other project components to cover emergency response and recovery costs. This component could also be used to channel additional funds should they become available because of an emergency.

C. Project Beneficiaries

32. The project will focus on 8 vulnerable rural municipality clusters (corresponding to the old "districts") of Nepal, in the (mid-) hills and Terai, using the following criteria on the pre-selected 14 districts in the original proposal: i) Earthquake affected (losses); ii) Climate change vulnerability ranking; iii) HDI ranking; iv) Incidence of malnutrition; v) Food security status; and vi) Poverty status. The project will target the following "districts": for the (mid-) Hills; Dhading, Gorkha, Dolakha, and Sindhupalchok, and for the Terai: Saptari, Siraha, Mahottari, and Dhanusha. The project will primarily target vulnerable (earthquake affected, acute food insecure, disadvantaged, marginalized and women headed) households, and aims to reach approximately 65,000 direct beneficiaries. The nutrition interventions will mainly target households with young children, adolescent girls, pregnant and lactating women. At least 65% of the direct beneficiaries are expected to be female. The beneficiary targeting methodology will be done in collaboration with the World Bank's



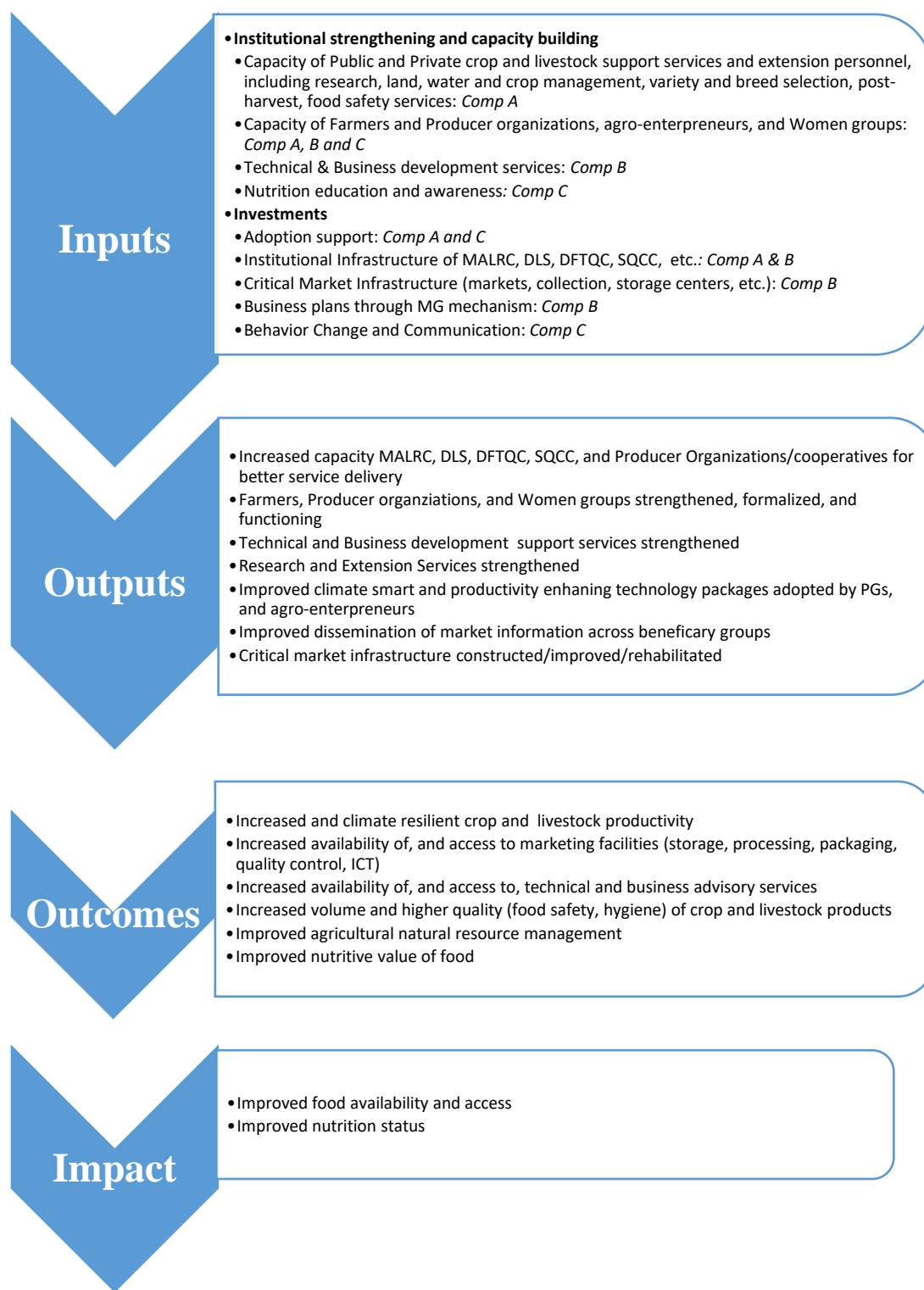
Development Impact Evaluation (DIME) team, based on a set of criteria to be identified using a Proxy Means Test (PMT) to ensure that the set of variables chosen are the best possible ones for beneficiary targeting.

D. Results Chain

33. A schematic depiction of the project's results chain is provided in Figure 2. The project's components, notwithstanding their distinct and separate functions, are closely intertwined and have been designed to complement each other to address the key challenges that need to be overcome to spur agricultural productivity and attain the desired nutrition outcomes in the targeted areas by : i) inducing the Nepal agriculture research system to adapt relevant technologies and practices for use by the targeted beneficiaries in their socio-economic and bio-physical environment; ii) aligning extension efforts and targeted TA to support the dissemination of these technologies; iii) ensuring adequate supply of quality seed and breed stock at smallholder farmers' level to promote effective adoption by farmers; iv) supporting investments in productive and market assets at the beneficiary level to enhance resource use efficiency and profitability; and v) ensuring that production and profitability gains translate into consumption of a more diverse diet and improved nutrition outcomes. Lessons learned from AFSP and other similar projects has shown that positively influencing nutritional behavior change is more effective if agriculture-related and income enhancing activities are integrally linked with the nutrition and health related awareness raising and training through Behavior Change and Communication interventions, particularly with mother groups. The increased food availability and access to more diverse nutritious food will thus be enabled by Components A and B, while Component C is designed to capitalize on these gains to elicit changes in consumption patterns and improved nutrition outcomes. In sum, the combined effect of the project's interventions across the 3 components add to more than the sum of the individual parts to ensure that key aspects of food security and nutrition, tackling synergistically issues of food availability, access, and utilization, thus allowing the project beneficiaries to improve their food security status and nutritional outcomes.



Figure 2: Results Chain FANSEP





E. Lessons Learned and Reflected in the Project Design

34. **The project will build on the achievements of the current GAFSP project in Nepal.** The assessment and evaluation from the implementation of this project have resulted into several lessons learned in terms of technologies generation and dissemination, and their effectiveness to attain desired outcomes. First, Farmer Field Schools (FFS) for instance were found to be a successful approach for disseminating new techniques of farming, test innovations and integrate new ideas on good agriculture or animal husbandry practices. Moreover, FFS has helped empower the local community, especially giving voice to female farmers. Second, Farmer groups and women groups were found to be an effective platform to deliver nutrition education and behavior change communication (BCC) interventions. Third, Village Model Farms and Home Nutrition Gardens (HNG) have been effective to engage women groups in the production of vegetables high in micronutrients and establishing HNG for increased availability of nutrient-rich foods at the household level. In addition, this recently closed project also provides a template for effective coordination among agencies from 3 different ministries, building capacity of GoN functionaries for implementation, monitoring, and training of agricultural and health frontline workers on agri- and food based nutrition interventions.

35. **The implementation of other agriculture projects in Nepal also provided valuable lessons to the design of the proposed project** (i.e. PACT; IWRMP, PAF, USAID's Suaahaara project; Sunaula Hazar Din-Community Action for Nutrition Project; HKI's Enhanced Homestead Food Production Project; Heifer International's goat and dairy value chain program; and SPRING/Bangladesh Farmer Nutrition School model). First, grassroots organizations, particularly farmer groups and cooperatives that are adequately supported by service providers, can substantially improve their performance and achieve tangible results. The proposed project will ensure effective capacity building at the grassroots level. A second lesson is that involving both state and non-state actors for service provision proves to be more effective and efficient than public sector service provision alone; for that reason, the proposed project will also rely on non-state service providers while simultaneously reinforcing public capacity to provide for key mandated services such as planning, research and extension, sanitary and phytosanitary controls, and monitoring and evaluation (M&E). Partnerships will be actively pursued to provide an appropriate mix of complementary expertise to the targeted beneficiaries. Third, where it is difficult for producers to obtain credit, as continues to be the case in Nepal, a well thought out and targeted matching grant scheme can effectively assist small-scale producers to build their assets and increase their productivity. In the proposed projects areas, matching grants are highly unlikely to compete with the rural financial services industry; rather, matching grant schemes may assist producers and producer groups to develop the requisite asset base to elicit more interest from credit providers.

36. **Other lessons pertinent to the design of this project come from the World Bank's experience in financing productive alliances** to effectively link smallholder farmers to markets. A review of these projects by the World Bank's Independent Evaluation Group identified the critical elements needed for value chains to develop, including, inter alia: (i) the importance of supporting initiatives to enhance production and productivity; (ii) the need for strong marketing and market infrastructure; (iii) the importance of well-targeted, sustained technical assistance; and (iv) the need to support both the quantity and quality of production while improving access to markets and credit in order to consolidate the productive investments. The experience with productive alliances in Latin America and elsewhere also revealed that the creation of consultation forums/dialogue platforms that involve producer organizations, buyers, sellers, agro-dealers, and rural finance institutions could improve the commercialization of products and the supply of inputs, leverage credit,



and ultimately contribute to strengthening value chains. Producer organizations were most successful when they had a collective production and marketing strategy, defined in a business plan that included marketing arrangements for the produce (for example, with a trader or an agro-processing firm). These business plans have increased the integration of small producers in agricultural supply chains and reinforced their connection to markets. The design of the proposed project clearly contains key elements of these lessons.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

37. The implementation arrangements will follow the existing arrangements for the ongoing GAFSP project, but will build in sufficient flexibility to accommodate the changing institutional setup of the governance structures in the country. The Ministry of Agriculture, Land Reform, and Cooperatives (MALRC) will be the executing ministry and will work closely with the MoHP to implement the project. At the central level, the project will include: i) the existing AFSP Steering Committee (SC), strengthened by a representative of the Ministry of Federal Affairs and General Administration (MoFAGA), will provide strategic oversight and guidance, ii) a Technical Coordination Committee (TCC) to provide technical guidance and recommendations to the SC, and iii) a PMU for day-to-day project administration and management. At the decentralized level, the project will have: i) State level Coordination Committees (SLCCs, 3) to ensure cross-sectoral coordination and quality assurance at the State level, ii) Municipality Cluster Project Support Units (MCPSUs, 4) in each of the targeted municipality clusters to ensure smooth activity implementation, monitoring, and coordination at the local (ward) level. For the implementation of specific interventions, the Project will collaborate closely with specialized technical departments (Department of Agriculture, Department of Livestock Services, Department of Irrigation, Department of Health Services, Department of Food Technology and Quality Control, etc.), other relevant public agencies (Nepal Agricultural Research Council, National Seed Board), and non-governmental organizations. All requisite short or long term national/international consultants will be appointed to support the project units at various levels.

B. Results Monitoring and Evaluation Arrangements

38. The existing M&E system of the ongoing AFSP will be strengthened and implemented to track progress on a continuous basis. The project Management Information System (MIS) will be upgraded and put in place at the PMU level. The project will further build the existing capacity of PMU to use the MIS and be able to produce reports at agreed intervals. Progress towards achieving the specific milestones will be tracked as stipulated in the results framework (Annex 1). Furthermore, the PMU, with inputs from MCPSUs, will produce Implementation Progress Reports per trimester. Data needed for impact evaluation purposes will be collected in project and non-project areas in collaboration with DIME. DIME will thus contribute to institutional capacity and skills development by strengthening the local capacities for IE related activities through the necessary baseline, mid-term and impact evaluation activities. In addition, the project M&E function will include periodic beneficiary assessments to track the project's progress and ensure a systematic approach to citizen engagement. The M&E system will also allow for specific studies to be commissioned to complement data gathered from the regular monitoring where needed. The project implementation manual (PIM) will detail the organizational and technical setup that will govern the project's M&E procedures. A mid-term evaluation will be conducted halfway through the project life-cycle and an implementation completion report no later than six months before Project completion. The project will ensure that gender considerations and citizen



engagement are fully integrated in impact evaluation studies, and engage local beneficiaries to take part in the mid-term and final evaluations.

C. Sustainability

39. Project sustainability is anchored on several considerations. First, the GoN commitment to this project is strong, as evidenced by its expected contribution of about 21 percent of total project costs. Agriculture and nutrition are very high on the development agenda of GoN, with increased budgetary allocations towards this sector. The project is fully aligned with the GoN's Agriculture Development Strategy, and its operational modality is designed in such a way to enhance the capacity of the targeted beneficiaries, relevant government institutions and human resources to be able to take full ownership of the project's interventions and results. The approach adopted will align the project activities with the existing programs/interventions from the government system, embedding delivery mechanism in the local systems and by designing interventions to be self-sustaining. This will be achieved by involving the beneficiaries and concerned stakeholders actively from the start, supporting demand-based services, developing the skills of beneficiaries, post-project monitoring and adopting a mechanism to strengthen the service delivery systems. Second, the Project aims to increase the overall sustainability of agricultural value chains by strengthening market linkages and supporting technically and financially viable proposals, which should in turn enable to increase incomes and improve nutrition outcomes in a sustainable way. Third, given the prevailing vulnerabilities to climate change in Nepal, the Project will support climate smart agriculture productivity growth, and proposes to do so by stimulating farmers to validate CSA technology options on their own fields and farms. This would ensure the selection of the most valued crop and livestock technologies from the farmers' perspective, and greatly increase the likelihood that farmers will continue to use their preferred improved technologies. The built-in feed-back mechanism will ensure that the technology supply chains (from research to market) are aware of farmers' choices and preferences.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis (if applicable)

40. **Technical:** The Project is designed with the intended complexity to support several dimensions related to agriculture and rural institutions and services, and enhance crop and livestock productivity, food security, and nutrition outcomes of the targeted households, keeping farmers' groups in the center of the project, and paving the way for building climate resilience and safeguarding the livelihoods of the beneficiaries. It recognizes critical areas that need to be addressed to overcome the inter-locking constraints to climate and nutrition smart agricultural development in the targeted areas by : i) inducing the Nepal agriculture research system to adapt relevant technologies and practices for use by the targeted beneficiaries in their socio-economic and bio-physical environment; ii) aligning extension efforts and targeted TA to support the dissemination of these technologies; iii) ensuring adequate supply of quality seed and breed stock at smallholder farmers' level to promote effective adoption by farmers; iv) supporting investments in productive and market assets at the beneficiary level to enhance resource use efficiency and profitability; and v) ensuring that production and profitability gains translate into consumption of a more diverse diet and improved nutrition outcomes by promoting essential nutrition-focused , homestead food production, health, and hygiene actions. The design of interventions is in line with approach proposed by the GoN in its grant application to GAFSP.



41. **Economic and Financial Analysis:** Project costs and benefits analysis⁹ was done to quantify project benefits from different project interventions such as investment in technology development/dissemination, adoption of improved technologies¹⁰ / management practices in crops, vegetables and livestock farming and off-farm enterprises. Major sources of quantifiable benefits will come from incremental production of crops, vegetables and livestock products as a result of adoption of improved technology and management practices. The productivity growth will be gradual till the fifth year of the project with increase in productivity of major crops (rice, maize, wheat, and lentil) to increase by 25%, potato by 50% and vegetable by 30% over the base year productivity. Likewise of productivity of milk (cattle and buffalo) will increase by 35%, meat (goat) by 40% and meat (poultry) by the end of the 5 year of project implementation. Increase in output will continue after five years, though to a lesser extent, as a result of adoption of modern technology and management practices by other farmers in the project area. The project benefits were estimated at 2016/17 prices over a period of 15 years with 12 percent as the opportunity cost of capital. Financial analysis was done at project level using market prices. For economic analysis of the project taxes are deducted from financial prices. For the traded products such as rice, maize and wheat market prices are considered to reflect economic prices. For non-traded products conversion factor of 0.9 is used and shadow price of labor (wage) including human and animal is considered to be 75 percent of ongoing wage rate.

42. **Benefits:** Incremental project benefits, expected from diffusion of production management technologies, as a result of project interventions taken together are quantified. The project-led agriculture benefits are quantified by using crop budgets for the project focus crops such as paddy, wheat, maize, lentil and potato with improved variety/seed quality and production technology based on farm models for hills and Terai. Livestock benefits were quantified through appropriate activity budgets formulated for cattle and buffaloes (milk), goats (meat) and poultry (eggs and meat) production specifically for the project area. Crop budgets were formulated for both of the regions, i.e., Hill and Terai. Crop benefits under with and without project are quantified by region and then aggregated. For full technology adopters, incremental financial gross margin per ha varied from NRs 23,448 for maize to NRs 590,511 for vegetables (combination of vegetables over summer, winter and spring seasons). Incremental net benefits due to adoption and diffusion of crop technologies is estimated at NRs 1,678 million per annum at full development.

43. Project interventions will cover 12,350 cattle farmers, 12,350 buffalo farmers, 17,500 goat farmers and 8,125 poultry farmers (with several overlaps). Breed improvement, feed management and health care support will be comprehensively integrated to generate productivity impacts. Mixed farming is predominant in the project area. Based on the livestock ownership data in the project districts, rural HHs keeps one buffalo / cow, two goats and ten poultry birds. The projected livestock productivity increases over base productivity of milk is estimated to increase by 50%, goat meat by 45% and poultry eggs by 60% for the project beneficiaries at full development. Incremental net benefits from livestock interventions are projected at NRs 732 million per annum at full development of project development impacts.

44. The project will support 190 households in establishing off-farm enterprises in the project districts.

⁹ The project's C/B analysis was based on 'with/without' assumptions. Data were collected from multiple sources, i.e. agriculture census survey 2011, Agribusiness Promotion and Marketing Development Directorate, and Agribusiness promotion and statistics division, MoAD.

¹⁰ Adoption of technology is a slow process due to challenging agro-climatic and socio-economic environment of the project area. It has been assumed that technology adopting farmers will take four to five years from introduction of technology in their farms to realize full technology benefits. The flow of technology benefits is aligned with phased demonstration-cum-adoption-support approach proposed in the project design. Based on this approach, 50% of project beneficiaries are expected to reach and sustain full adoption and productivity levels from Year-5 and additional 35% in 10th year of project implementation. Thus, a total of 55,250 households out of targeted 65,000 will be adopting improved technology and farm management practices.



Combined net benefit of those enterprises by the end of 5th year of project implementation is estimated to be NRs 19 million per annum. The phased-wise intensive demonstration-cum-adoption support of the project to propagate crop production technologies, will result in adoption of location specific technologies supported by quality seed in a sustainable way. About 55 thousand food grain producing farmers (60% in hills and 40% in Terai) will be exposed directly to these technology interventions. Crop productivity realized by the technology adopters in the project area is projected to modestly improve by 25% to 35% for cereals (paddy, maize, wheat and lentil), 50% to 60% for potato and 30% to 40% for vegetables. Similarly, livestock productivity of milk is expected to increase by 30% to 40%, goat meat by 35% to 44% and poultry eggs by 50% to 60%.

45. **Returns on Investment:** Effective transfer, adoption and diffusion of location specific potential technologies covering agriculture crops, vegetables, livestock and off-farm enterprises are expected to generate FIRR of 23.4 percent, with a NPV of USD 16.4. Economic analysis of the project is done after adjusting prices of inputs, outputs and wages to represent real value to the society. The analysis shows that economic internal rate of return (E IRR) will be 27.4 percent and net present value of US\$ 22.25 M).

46. **Sensitivity Analysis:** Sensitivity analysis considering the impact of escalation in cost of production of targeted commodities by 10%, shortfall of products by 10% and combination of both is done. Across these sensitivity scenarios considered, ERR came down to lower levels varying from 15.3% if outputs fall by 10%, 18.3% if cost of production increase by 10% to 0.4% if output fall by 10% and cost of production increase by 10% at the same time. The result shows that returns to investment are highly sensitive to changes in benefits than costs.

47. **GHG Accounting:** The project will have -1,909,026 tCO₂e emission (net carbon balance). In line with the High-Level Commission on Carbon Prices and recommendation of World Bank GHG accounting guidance note, shadow price of GHG was done using low and high estimate of carbon price starting at US\$40 and 80, respectively, in 2020 and increasing to US\$50 and 100 by 2030 . Given that the High-Level Commission report does not prescribe any specific carbon price values beyond 2030, the low and high values on carbon prices are extrapolated from 2030 to 2050 using the same growth rate of 2.25% per year that is implicit between the 2020 and 2030, leading to values of US\$78 and \$156 by 2050 , and this price was used from 2030 onwards.

48. Returns on Investment taking into account the shadow price of Carbon: Effective transfer, adoption and diffusion of location specific potential technologies covering agriculture crops, vegetables, livestock and off-farm enterprises are expected to generate FIRR of 23.4 percent, with a NPV of USD 16.4. Economic analysis of the project is done after adjusting prices of inputs, outputs and wages to represent real value to the society including reduction on GHG emission a low price and high price trajectory as discussed above. The analysis shows that (i) economic internal rate of return (EIRR) of 45.3 percent and net present value of US\$ 43.5 million at low price trajectory and (ii) RIRR of 68.36% and ENPV of US\$ 58.3 million at high price trajectory.

B. Fiduciary

(i) Financial Management

49. The PMU will be responsible for overall financial management of the Project supported by the 4 MCPSUs responsible for financial management of the respective municipality clusters. The major procurements will be centralized in PMU. The MCPSUs' financial management will be limited to small



procurements, grants and training to beneficiaries. The expenditures incurred by MCPSUs will be monitored by PMU. An Accountant (Government Official) deployed to each MCPSU together with the Cluster Chief will be the signatories to make payments from the Government treasury funds for the MCPSU level expenditures. The financial management for the Project will be limited to MCPSU level. PMU and the MCPSUs will coordinate with various Departments/Agencies as required. The Project will significantly benefit from continuation of the existing PMU of the AFSP. The financial management of the Project will be based on the country systems, policies and procedures. The additional control measures as required will be included in the PIM. The PIM will also include details on budgeting, funds flow, accounting, reporting, internal controls, monitoring etc. The PMU will prepare consolidated financial reports based on reports from MCPSUs. Such financial reports will be submitted on a trimester basis no later than forty-five days after the trimester-end. The external audit report for the Project will be submitted by six months from the FY end. The Project will benefit from FMIS already developed under AFSP to ensure timely and updated reporting. Based on AFSP experience, financial monitoring needs to be emphasized in the Project. An FM consultant is required specifically for monitoring in addition to FM consultant for support on other financial management aspects.

(ii) Procurement

50. The Bank's Procurement Regulations for IPF Borrowers, July 2016 (Revised November 2017) and the provisions stipulated in the Financing Agreement will be applicable for procurement of Goods, Works, Non-Consulting and Consulting Services. The PMU will be responsible for overall procurement management of the Project and the 4 MCPSUs established for the respective municipality clusters will do their part of local level procurement. The major procurement including selection of consulting firms, individual consultants, procurement of office equipment, vehicles, etc. required for the project including for MCPSUs will be centralized in PMU. The MCPSUs' procurement will be limited to small procurements for seeds and logistics, grants and training to beneficiaries, etc. Procurement of goods, works, and non-consulting services, as agreed in the Project Procurement Strategy for Development (PPSD) and Procurement Plan, may be carried out using national procurement procedures, that is, in accordance with the National Competitive Bidding as per Nepal's Public Procurement Act, 2007 (1st Amendment), and regulations made thereunder, along with any additional IDA-prescribed caveats. The PPSD and the Procurement Plan for the first 18 months have been prepared. The PMU will prepare a procurement manual as a part of the PIM, and arrange from time to time, training and orientation programs to staff involved in procurement initiation, review, and decision-making processes to ensure effective procurement management.

51. The Bank team has conducted the procurement risk assessment of the implementing agency (PMU) and provided necessary mitigation measures in the report. The full assessment report will be uploaded in the P-RAMS system (Procurement Risk Assessment Management System) of the Bank. The Project will significantly benefit from the experience of the existing PMU of the Agriculture and Food Security Project (AFSP). As in the AFSP, a procurement consultant is required even from the project preparation period (under retroactive financing arrangement) for effective procurement management and smooth project implementation.

C. Safeguards

(i) Environmental Safeguards

52. The proposed project aims to improve agricultural productivity and improve nutrition practices of targeted smallholder farming communities and will consist of small scale subprojects/activities which may



have adverse impacts on natural environment, human health and safety. Conflict over water sources, soil erosion, increase in use of pesticides/insecticides, over grazing, deforestation and water pollution are some of the impacts envisaged during the project interventions.

53. The Bank umbrella policy on Environmental Assessment (OP/BP 4.01) is triggered considering that the project will support small civil works, farmers' irrigation schemes and husbandry etc. which will have minor impacts but the cumulative impacts from these activities cannot be overlooked.

54. As of now the proposed project is expected to primarily focus on about 8 districts of Nepal, however the exact locations for sub-project interventions are not known, therefore, an Environmental and Social Management Framework (ESMF) has been prepared to provide guidance for management of environmental and social issues. This ESMF has been built on the ESMF of the recently closed NAFSP project, and includes experiences and lessons learnt from the earlier project to ensure better safeguard performance. Furthermore, the framework will include necessary provisions to determine additional safeguards tools which will be used throughout the project life. It also identifies the requirements and responsibilities for preparing Environmental and Social Impact Assessment (ESIA) as a precondition for individual investments that are likely to have high environmental impacts which will also include detailed process for the corresponding consultations, reviews and clearances.

55. The Policy on Natural Habitats OP/BP 4.04 has been triggered as a precautionary step in case there are protected areas/known natural habitats in specific project locations. Similarly, policy on Forests (OP/BP 4.36) is triggered because there is likely to be pressure on forests from livestock promotion and possibility of construction of micro-infrastructure in forested areas. Considering that the activities aimed at increasing agriculture productivity could induce use of (or increase) agro-chemicals (pesticides/insecticides), policy on Pest Management (OP/BP 4.09) is triggered although the project is not envisaged to support purchase of chemical pesticides. The ESMF incorporates information, identifies issues and provides management guidance to address the impact on natural habitats, forest and on the use of pesticides. The ESMF is a living document which will be periodically revised and updated throughout the project cycle as and when required.

(ii) Social Safeguards

56. The project is designed to ensure enhanced level of community consultations and participation with emphasis on inclusion, empowerment and equity. More specifically, the project is expected to benefit the grassroots communities, particularly the small holders through increased community mobilization and extension support, vulnerability reduction strategies, support to Producer/Enterprise Groups through technical assistance on research, business development, marketing, extension, skills training etc. eventually contributing to enhanced employment, production and returns to the farmers.

57. Involuntary Resettlement: The project does not envisage construction of major civil works that would require land acquisition and involuntary resettlement. However, some project activities, not identified at this stage, might include supports for minor infrastructures such as construction or improvement of minor irrigation, collection and processing centers, chilling centers, seed or grain storage and market facilities etc which could potentially lead to some adverse impacts including loss of land or structures, loss of access to resources for livelihoods, elite capture, and exclusion of vulnerable communities from project benefits, among others. As a precautionary measure to avoid, minimize and mitigate these probable impacts, the Involuntary



Resettlement Policy (OP/BP 4.12) has been triggered. It is further envisaged that the land requirements for minor infrastructures would be made available through donations complying fully with the donation principles specified in the ESMF.

58. **Indigenous People Development:** The population structure of Nepal is complex with several caste and ethnic groups involving many indigenous communities, minority and vulnerable groups such as Dalits, women headed households and marginalized communities. These groups are widely spread across many districts and settlements and normally tend to be more resource poor, food insecure, socially excluded and lack access to public services. The potential presence of these groups in many subproject sites, which are not known at this stage, cannot be ignored. In view of this, the World Bank's Indigenous People Development Policy (OP/BP 4.10) has been triggered to ensure that the project activities are culturally appropriate to the vulnerable groups without any harm and that the Bank's policy of free, prior and informed consent is applied while designing the activities at subproject level.

59. **Environmental and Social Management Framework:** Considering the potential issues associated with involuntary resettlement and indigenous people, the Project has developed an ESMF as a guiding document for planning and implementation of Bank's safeguards measures. The Project is committed to use the ESMF to identify, plan and mitigate issues related to involuntary resettlement and indigenous/vulnerable people.

(iii) Other

60. **Citizen Engagement:** FANSEP will base its citizen engagement activities around effective participatory approaches throughout the preparation and implementation of the project, involving all key stakeholders from beneficiary households at the ward level, to the central level. The project will rely on the partnership with the local civic groups/organization such as women groups, farmer organizations groups and co-operatives and engage in a variety of citizen engagement activities. Extensive communications and outreach campaigns will mobilize local-level actors including the community based organizations, agriculture and livestock service providers, and social mobilizers. Consultations based on focus group discussions will be carried out at different project cycles. Grievance Redress Mechanism will be put in place at multiple levels - ward, municipality, state and federal. The Cluster Project Support Unit can set up the GRM at the ward and municipality level. The State Level Coordination Committee, as the nodal Committee can coordinate the local issues with the Project Technical Coordination Committee at the federal level. Complaint Resolution Subcommittee will have representatives from different groups at the community level including farmer groups, mothers' groups or cooperatives. Participatory planning will be incorporated especially with local governments to test and validate technologies, disseminate methods, improve market access and change dietary behavior.

61. **Gender:** The recently conducted Country Gender Assessment of Agriculture and Rural Development (FAO 2017) in Nepal shows that while the country has made remarkable progress in the socio-economic sphere over the last two decades, significant gender gaps remain, especially in agriculture, which has also shown an increasing feminization trend. More than three-quarters (76.4%) of women engaged in agriculture work as unpaid family labor while 10.4% only receive in-kind payment, and 13.2% receive cash and in-kind payments. Furthermore, only 31% of female farmers received extension services in comparison to 69% of male farmers.



62. Some of the project's proposed actions to address identified gender gaps are as follows:
- i) The project will ensure at least 65 percent of women participation in the beneficiary farmers' organizations given their important presence in agriculture and rural areas, in addition to a minimum requirement of 33% female representation in the governing committees of these organizations. This is to address limited access to these organizations by women, and their relatively limited presence in the decision-making bodies. The project will therefore pay extra attention to target producer groups that are led by women or have higher number of women members and aforementioned minimum quotas will be placed for number of women who participate in FFS.
 - ii) The project will plan capacity buildings/trainings sessions that at least 65% of women can attend, and will prepare and deliver gender-sensitive training contents, taking into account prevailing bottlenecks preventing women's participation in these sessions (e.g. by ensuring close proximity to their homesteads, organizing child care service during the training sessions, avoidance of overly time-consuming sessions, etc.).
 - iii) The project will ensure women's involvement in initial data gathering activities for capacity needs assessments, situational analysis, etc. from the on-set in order to minimize potentially biased information on the food security and nutrition issues in the targeted project areas, thus safeguarding the quality and comprehensiveness of the information gathered.
 - iv) The project will focus on introducing technologies targeted at the tasks that women are involved in (will be part of the criteria for selection and testing these technologies. In addition, skills development activities will cater to the needs of women in terms of their specific needs, timing and teaching methods.
 - v) The project will include clear gender criteria in the selection process of small grant proposals and financing of business plans to ensure that the project benefits accrue to them proportionally to reflect their important presence in agriculture and rural areas in Nepal. The project will also provide additional support to help women-led producer groups or small agro-businesses to improve linkage with markets.
63. The project will promote gender equity in its approach, implementation arrangements and activities focusing specifically on women as a key target group. In addition, where relevant, the project will take into account factors that may compound women's vulnerability, including, but not limited to, social status, marital status, age, ethnicity and caste. To facilitate this, (a) an in-depth gender and vulnerability assessment will be undertaken at the onset in the project areas to get a better understanding of, inter alia, gender roles, intra-household division of labor, women's work burden, inequalities in access to inputs, services and resources and participation in decision-making; based on this, (b) a gender strategy for the project will be designed to ensure that all project activities, staff and implementation arrangement consistently and coherently contribute to achieving the gender objectives and targets of the project with at least 65% out of 65,000 beneficiaries expected to be women. The in-depth gender and vulnerability assessment will provide a forward-looking analysis not limited to a gender strategy to only meet project objectives but also identifies policy changes (such as access to land, contract farming laws; access to finance etc.) that can feed into an enabling policy environment for women in Nepal agriculture. The project will therefore pursue a deliberate and broader dissemination strategy of this analysis, beyond stakeholders directly involved in the project. The gender strategy will also take into account the possible differentials between the proposed Terai and hill target districts, and be in synch with Nepal's Agriculture Development Strategy (2015-2035) and its Gender Equity and Social Inclusion (GESI) strategy framework 2016.



64. **Climate Change and GHG Accounting:** The project was screened for climate risk using the WB's Climate and Disaster Risk Screening Project Level Tool (CDRST). The CDRST provides early stage due diligence on climate and disaster risks at the concept stage of project development. The tool uses an exposure - sensitivity - adaptive capacity framework to consider and characterize risks from climate and geophysical hazards, based on key components of a project and its broader development context. The outcomes of the screening point to the fact that mean annual temperatures are projected to increase between 1.3-3.8°C by the 2060s and 1.8-5.8°C by the 2090s, and this warming is expected to occur more rapidly during the dry months (December-May). In addition, mean rainfall has significantly decreased on an average of 3.7 mm (-3.2%) per month per decade, and this decrease is particularly significant during the monsoon period between June- September. Droughts are becoming more frequent occurrences in Nepal, particularly during the winter months and in the Terai plains, which are already characteristically quite dry because of the late arrival of the monsoons. In 2006-2007, when monsoon rainfalls fell to 16% below normal, the following months of drier conditions reduced rice cultivation by 21-30%. Reduced water availability during dry periods could exacerbate agricultural water needs, as an estimated 64% of the country's farmers rely on water from rains of the monsoons. Planting and harvesting seasons have been slowly changing in Nepal, due to the shifting monsoon, and these shifts are likely to become more erratic under a changing climate. The outcomes of the screening were used to strengthen the climate considerations in the project design, including promoting an enabling environment for CSA through institutional strengthening and capacity building of targeted beneficiaries, as well as investments in climate smart productive technologies and assets (short duration/drought tolerant cultivars, micro-irrigation and storage systems, improved pastures and feed management, etc.).

65. The Climate Smart Agriculture Country Profile (2017) points to climate projections for Nepal which suggest a continued increase in mean annual temperature, a faster warming of the country's western regions compared to the eastern region, changes in precipitation during the monsoon period (with variations from -14 to 40%), as well as the increased likelihood of heavy precipitation events. Changes in precipitation patterns are likely to affect rainfed agricultural activities, causing significant annual yield variability and higher production risks. Climate change is also expected to increase the frequency of weather related hazards (e.g. droughts and floods), further affecting croplands and yields. Costs associated with the impacts of climate variability and extreme events are estimated at US\$ 270-360 million/year (expressed in 2013 prices), representing 1.5 to 2% of the country's GDP. The project will follow the concrete recommendations of the CSA country profile on how to put climate smart agriculture into practice. In this regard, the project is expected to coordinate with the Climate-Smart Village program currently put in place by the GoN, in collaboration with the Consultative Group on International Agricultural Research's (CGIAR) Program on Climate Change, Agriculture and Food Security (CCAFS). The envisaged establishment of Community Agriculture Extension Service Centers under the newly operational Federal structure will provide a promising avenue to mount a CSA service delivery mechanism to apply the agriculture and livestock husbandry practices in the project's target areas.

66. **GHG Accounting:** Climate change adaptation and enhancement of resilience in the agricultural sector remain priorities for Nepal. At the same time, the importance of achieving mitigation co-benefits is acknowledged in the country's Nationally Determined Contribution to the United Nations Framework Convention on Climate Change (UNFCCC), which was submitted by the GoN in February 2016. Nepal plans to formulate a "Low Carbon Economic Development Strategy" that will envision the country's plan to promote economic development through low carbon emission, particularly focusing on: (i) energy; (ii) agriculture and livestock; (iii) forests; (iv) industry; (v) human settlements and wastes; (vi) transport; and (vii) commercial



sectors.

67. The World Bank has a corporate mandate to conduct greenhouse gas (GHG) emissions accounting for investment lending. The quantification of GHG emission is an important step in managing and ultimately reducing GHG emission, and is becoming a common practice for many international financial institutions. To estimate the impact of agricultural investments on GHG emission and carbon sequestration, the World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), which was developed by the Food and Agriculture Organization of the United Nations (FAO) in 2010. EX-ACT allows the basic assessment of a project's net carbon-balance, defined as the net balance of CO₂ equivalent GHG that were emitted or sequestered as a result of project implementation compared to a without project (WOP) scenario. EX-ACT estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO₂ per hectare and year. For the proposed project, the GHG analysis considered activities along the various commodities (crop and livestock) targeted, as well as the proposed improved crop, pasture, and livestock management activities. First results are based on assumptions about improved crop management and livestock interventions and show that the project has a potential to be a net carbon sink of -1,909,026 tCO₂e emission over a period of 20 years or -95,451 tCO₂e emission annually.

(iv) Grievance Redress Mechanisms

68. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

V. KEY RISKS

69. **The project's overall risk rating is Substantial.** Nepal's transition has been characterized by frequent government changes. The country has constitutionally adopted a federal government system; however, it is currently facing the challenging task of managing a smooth transition from the old system to the new one. The new system in principle provides the opportunity to decentralize development benefits and make service delivery more effective. The risks of jurisdictional overlap between the national and sub-national government systems, lack of clarity and coherence between policies and devolved powers, and duplication of efforts will remain high in the coming few years. Other risks are related to fiduciary aspects, and relatively weak institutional capacity of the government bureaucracy and stakeholders. The summary table and a more detailed description of the various risks and proposed mitigation measures are given below.



Table 1: Systematic Operations Risk-rating Tool (SORT)

Risk Category Rating	
1. Political and Governance	High
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate
OVERALL	Substantial

70. The overall risk rating is Substantial. Critical risks and mitigating measures proposed are summarized as follows:

71. **Political and Governance risks are rated as High.** In contrast to the frequent changes in government that characterized Nepal’s decade-long transition to federalism, the new government enjoys a historic three-fourths majority in Parliament. Along with new constitutional checks and far fewer number of political parties, there is a much greater degree of optimism for stability in the coming years. However, state restructuring on this scale is uncharted territory for Nepal and smoothening the transition from the previous unitary system to the new federal one will remain a daunting task. The new system, in principle, provides opportunities to decentralize development benefits and make service delivery more effective and accountable. However, the risks of jurisdictional overlap between the three tiers of government, lack of clarity and coherence between policies and devolved powers, and duplication of efforts will remain high during the coming few years. Key aspects of the new system require further definition and may continue to be contested by different population groups.

72. **Technical design of project or program risk is Substantial.** The thematic areas of food security and nutrition requires good coordination between multiple actors, in addition to the usual project management skills, particularly in view of the multi-sectoral approach promoted by the project, requiring both Agriculture and Health Ministry personnel to work together in a seamless fashion. Mitigation: the project will build on the existing institutional arrangements for the ongoing GAFSP project and provide close coordination oversight during both the preparation and implementation of activities in the targeted municipalities. The project will build on successful experiences in advisory services gained through existing initiatives for the selection and training of local service providers.

73. **Institutional Capacity for Implementation and Sustainability risk is rated Substantial.** Targeting several agriculture commodities, including crops and livestock in the same project is a challenge for the implementation as it requires different technical expertise. In addition, the involvement of multiple agencies, aligned with different line Ministries (Agriculture, Livestock, Health) adds to the complexity. To mitigate against this, the project will provide strong and tailored technical support to the implementing agency to develop strong leadership and coordination capacities of its PMU to achieve the objectives of the project, and build on the successful experience of the ongoing GAFSP project, and FAO TA expertise in advisory services.



74. **Fiduciary Risk is rated Substantial**, given the complexity of the project, which includes a decentralized level of implementation and sub-projects management. The roles and responsibilities of the decentralized implementation structures as well as the procurement framework will be discussed and agreed with the Bank during the preparation. The implementing entities will be strengthened by recruiting fiduciary expertise to ensure that all applicable Bank Fiduciary Guidelines are followed under the project, and adequate fiduciary management and monitoring systems are put in place.

75. **Environmental and Social risk is Moderate**. This rating is due to the fact that some of the activities that would be financed by this project require changes in behaviors and currently held practices regarding use of agro-chemicals, natural resources management, and other traditional practices. To mitigate against these risks, an Environmental and Social Management Framework (ESMF) has been developed, and will be closely followed to ensure their implementation. Furthermore, the costs of the implementation of the environmental and social risk mitigation measures are integrated in the project budget, and form a key requirement for Sub-Project selection under the matching grant schemes. The MALRC already has some knowledge and experience in implementing Bank's safeguard policies. Nevertheless, environmental and Social Safeguard management capacity of directly involved institutions will be further strengthened for effective compliance. The ESMF will outline the institutional arrangements required and propose appropriate capacity strengthening measures. In addition, with the country transitioning to federalism there is need to exercise additional caution and put adequate measures in place to assess and mitigate the safeguard issues at the decentralized levels.



VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

Project Development Objectives(s)

The Project Development Objective (PDO) is to enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder farming communities in selected areas of Nepal.

PDO Indicators by Objectives / Outcomes	DLI	CRI	Unit of Measure	Baseline	Intermediate Targets					End Target
					1	2	3	4	5	
Enhanced Climate Resilience										
Farmers adopting improved agricultural technology		Yes	Number	0.00	0.00	6,000.00	16,000.00	28,000.00	31,800.00	31,800.00
Farmers adopting improved agricultural technology - Female		Yes	Number	0.00	3,900.00	6,000.00	10,400.00	18,200.00		20,670.00
Farmers adopting improved agricultural technology - male		Yes	Number	0.00	0.00	2,100.00	5,600.00	9,800.00		11,130.00
Farmers reached with agricultural assets or services		Yes	Number	0.00	5,000.00	15,000.00	30,000.00	50,000.00		65,000.00
Farmers reached with agricultural assets or services - Female		Yes	Number	0.00	3,250.00	9,750.00	19,500.00	32,500.00		42,250.00
Improved Agriculture Productivity										
Increased crop and animal productivity by direct beneficiaries			Percentage	0.00						32.50
Crops (food grains)			Percentage	0.00	0.00	10.00	15.00	25.00		25.00



PDO Indicators by Objectives / Outcomes	DLI	CRI	Unit of Measure	Baseline	Intermediate Targets					End Target
					1	2	3	4	5	
			ge							
Crops (vegetables)			Percentage	0.00	15.00	20.00	30.00			30.00
Livestock (meat)			Percentage	0.00	5.00	15.00	25.00			40.00
Livestock (milk)			Percentage	0.00	5.00	15.00	25.00			35.00
Household income (farm and off-farm)			Percentage	0.00	10.00					25.00
Improved Nutrition Practices										
Improved score on the Food Insecurity Experience Scale (FIES) by direct beneficiaries			Percentage	0.00	15.00					40.00
Improved Dietary intake (% over baseline)			Percentage	0.00	10.00					20.00
Pregnant and nursing women (Minimum Dietary Diversity Score for Women, MDD-W)			Percentage	0.00	10.00					20.00
Children between 6-24 months			Percentage	0.00	10.00					20.00



Intermediate Results Indicators by Components	DLI	CRI	Unit of Measure	Baseline	Intermediate Targets				End Target
					1	2	3	4	
Intermediate Result (Component A) – Climate and Nutrition Smart Technology Adaptation and Disseminat									
Promising CSA and nutrition sensitive technologies developed through on-farm adaptation trials			Number	0.00	0.00	5.00	15.00	20.00	20.00
Farmers accessing technology dissemination services delivered by the project.			Number	0.00	5,000.00	15,000.00	25,000.00	35,000.00	39,750.00
Farmers accessing technology dissemination services delivered by the project-Female			Number	0.00	3,250.00	9,750.00	16,250.00	22,750.00	25,838.00
Improved seed replacement rate			Percentage	0.00	12.00				25.00
Intermediate Result (Component B) – Income Generation and Diversification									
Number of producer-based organizations supported (number)-GAFSP core indicator			Number	0.00	200.00	600.00	1,000.00	1,400.00	1,590.00
Number of post-harvest facilities constructed and/or rehabilitated-GAFSP core indicator			Number	0.00	20.00	80.00	140.00	184.00	184.00
Number of sub-projects (business plans) financed by the project on a matching grant basis			Number	0.00	0.00	100.00	250.00	400.00	448.00
Improving Nutrition Security									
People receiving improved nutrition services and products - GAFSP core indicator			Number	0.00	5,000.00	15,000.00	30,000.00	50,000.00	57,500.00
Household Dietary diversity score including nursing mothers and children under two years (1000 day mother target)			Percentage	0.00	10.00				20.00



Project management, communication and M&E										
Grievances registered addressed within the delay set by the project GRM			Percentage	0.00	75.00					95.00
Periodic reports submitted on time			Number	0.00	3.00	5.00	8.00	10.00		13.00

Indicators to be mapped	DLI	CRI	Unit of Measure	Baseline	End Target
Intermediate Outcome Indicators					
Household income (farm and off-farm), increase over baseline			Percentage	0.00	25.00

Monitoring & Evaluation Plan: PDO Indicators	
Indicator Name	Farmers adopting improved agricultural technology
Definition/Description	
Frequency	Annually
Data Source	Progress reports, annual report, Household Survey, Technical & economic monitoring
Methodology for Data Collection	Household Survey
Responsibility for Data Collection	TA/PMU



Indicator Name	Farmers adopting improved agricultural technology - Female
Definition/Description	
Frequency	Annual
Data Source	Progress reports, annual report, Household Survey, Technical & economic monitoring
Methodology for Data Collection	Household Survey, Technical & economic monitoring
Responsibility for Data Collection	TA/PMU
Indicator Name	Farmers adopting improved agricultural technology - male
Definition/Description	
Frequency	Annual
Data Source	Progress reports, annual report,
Methodology for Data Collection	Household Survey, Technical & economic monitoring
Responsibility for Data Collection	TA/PMU



Indicator Name	Farmers reached with agricultural assets or services
Definition/Description	
Frequency	Annual
Data Source	Progress reports, annual report, Household Survey, Technical & economic monitoring
Methodology for Data Collection	Household Survey.
Responsibility for Data Collection	TA/PMU
Indicator Name	Farmers reached with agricultural assets or services - Female
Definition/Description	
Frequency	Annual.
Data Source	Progress reports, annual report, Household Survey, Technical & economic monitoring.
Methodology for Data Collection	Household Survey
Responsibility for Data Collection	TA/PMU



Indicator Name	Increased crop and animal productivity by direct beneficiaries
Definition/Description	The indicator measures improvements in Production per ha or animal through the average increase in units of production (kg, MT, l) per land area and/or animal, resulting from improvements in production practices through project inventions.
Frequency	Annual
Data Source	Progress reports, annual report, Household Survey, Technical & economic monitoring
Methodology for Data Collection	Household Survey, Technical & economic monitoring
Responsibility for Data Collection	TA/PMU
Indicator Name	Crops (food grains)
Definition/Description	
Frequency	Annual
Data Source	Progress reports, annual report, Household Survey, Technical & economic monitoring
Methodology for Data Collection	Household Survey
Responsibility for Data Collection	TA/PMU



Indicator Name	Crops (vegetables)
Definition/Description	Annual
Frequency	Progress reports, annual report, Household Survey, Technical & economic monitoring
Data Source	Household Survey
Methodology for Data Collection	Household Survey
Responsibility for Data Collection	TA/PMU
Indicator Name	Livestock (meat)
Definition/Description	Annual
Frequency	Progress reports, annual report, Household Survey, Technical & economic monitoring
Data Source	Household Survey
Methodology for Data Collection	Household Survey
Responsibility for Data Collection	TA/PMU
Indicator Name	Livestock (milk)
Definition/Description	



Frequency	Annual
Data Source	Progress reports, annual report, Household Survey, Technical & economic monitoring
Methodology for Data Collection	Household Survey
Responsibility for Data Collection	TA/PMU
Indicator Name	Household income (farm and off-farm)
Definition/Description	Income is measured through a production-based approach (revenues minus costs), and home-produced food that is not sold but home consumed is valued as income.
Frequency	At start, mid-term, and end of project
Data Source	Baseline, Midline, and End-line Survey Reports
Methodology for Data Collection	Baseline, Midline, and End-line Survey questionnaire
Responsibility for Data Collection	DIME/TA/PMU
Indicator Name	Improved score on the Food Insecurity Experience Scale (FIES) by direct beneficiaries
Definition/Description	The FIES is a measure of access to food at the level of individuals or households. It measures severity of food insecurity based on people’s responses to specific questions about constraints on their ability to obtain adequate food.
Frequency	At start, mid-term, and end of project



Data Source	Baseline, Midline, and End-line FIES Survey questionnaire
Methodology for Data Collection	Baseline, Midline, and End-line FIES Survey questionnaire
Responsibility for Data Collection	External Survey Firm
Indicator Name	Improved Dietary intake (% over baseline)
Definition/Description	
Frequency	
Data Source	
Methodology for Data Collection	
Responsibility for Data Collection	
Indicator Name	Pregnant and nursing women (Minimum Dietary Diversity Score for Women, MDD-W)
Definition/Description	The Minimum Dietary Diversity for Women (MDD-W) is a dichotomous indicator of whether or not women 15–49 years of age have consumed at least five out of ten defined food groups the previous day or night. The proportion of women 15–49 years of age who reach this minimum in a population can be used as a proxy indicator for higher micronutrient adequacy, one important dimension of diet quality.
Frequency	At start, mid-term, and end of project
Data Source	Baseline, Midline, and End-line Survey report



Methodology for Data Collection	Baseline, Midline, and End-line Survey questionnaire
Responsibility for Data Collection	External Survey Firm
Indicator Name	Children between 6-24 months
Definition/Description	Measured by percent of children 6-24 months with minimum acceptable diet (MAD). The indicator measures both the minimum feeding frequency and minimum dietary diversity, as appropriate for various age groups.
Frequency	At start, mid-term, and end of project
Data Source	Baseline, Midline, and End-line Survey report
Methodology for Data Collection	Baseline, Midline, and End-line Survey questionnaire
Responsibility for Data Collection	External Survey Firm

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Promising CSA and nutrition sensitive technologies developed through on-farm adaptation trials
Definition/Description	The indicator measures the number of technologies (crop and livestock) validated on farm. Technology testing, adjusting and validation new technologies are a precondition for dissemination.
Frequency	Annual



Data Source	Progress reports, annual report, Technical & economic monitoring
Methodology for Data Collection	NARC Technical & economic monitoring reports
Responsibility for Data Collection	TA/PMU/NARC
Indicator Name	Farmers accessing technology dissemination services delivered by the project.
Definition/Description	Technology dissemination services include on farm demonstration, farmer field schools, Field days and training organized by the project
Frequency	Annual
Data Source	Progress reports, annual report
Methodology for Data Collection	Technical & economic monitoring
Responsibility for Data Collection	TA/PMU
Indicator Name	Farmers accessing technology dissemination services delivered by the project-Female
Definition/Description	Number of females reached with technology dissemination services, including on farm demonstration, farmer field schools, Field days and training organized by the project
Frequency	Annual



Data Source	Progress reports, annual reports
Methodology for Data Collection	Technical & economic monitoring
Responsibility for Data Collection	TA/PMU
Indicator Name	Improved seed replacement rate
Definition/Description	Seed replacement rate for each of the four major crops (paddy, maize, wheat, and potato).
Frequency	At start, mid-term, and end of project
Data Source	Baseline, Midline and Endline report
Methodology for Data Collection	Household Survey
Responsibility for Data Collection	External Survey Firm
Indicator Name	Number of producer-based organizations supported (number)-GAFSP core indicator
Definition/Description	This indicator measures the number of producer based organizations created or supported under the project. The baseline value of this indicator will be zero
Frequency	Annual
Data Source	Progress reports, annual reports
Methodology for Data Collection	Technical & economic monitoring



Responsibility for Data Collection	TA/PMU
Indicator Name	Number of post-harvest facilities constructed and/or rehabilitated-GAFSP core indicator
Definition/Description	This indicator measures the number of facilities developed by the project that support activities such as improved storage/improved packaging house technologies, investments to comply with sanitary/phytosanitary and other food safety standards
Frequency	Annual
Data Source	Progress reports, annual reports
Methodology for Data Collection	Technical & economic monitoring
Responsibility for Data Collection	TA/PMU
Indicator Name	Number of sub-projects (business plans) financed by the project on a matching grant basis
Definition/Description	This indicator measures the cumulative number of contracts signed and sub-projects completed under the matching grant scheme.
Frequency	Annual
Data Source	Progress reports, annual reports
Methodology for Data Collection	Technical & economic monitoring
Responsibility for Data Collection	TA/PMU



Indicator Name	People receiving improved nutrition services and products -GAFSP core indicator
Definition/Description	The indicator is calculated from the increase in the number of people with access to a defined basic package of nutrition services as a result of project investment.
Frequency	Annual
Data Source	Progress reports, annual reports
Methodology for Data Collection	Technical & economic monitoring
Responsibility for Data Collection	TA/PMU
Indicator Name	Household Dietary diversity score including nursing mothers and children under two years (1000 day mother target)
Definition/Description	Dietary diversity is a qualitative measure of food consumption that reflects household access to a variety of foods, and is also a proxy for nutrient adequacy of the diet of individuals.
Frequency	At start, mid-term, and end of project
Data Source	Baseline, mid-line, and end-line reports
Methodology for Data Collection	Dietary Diversity questionnaire
Responsibility for Data Collection	External Survey Firm



Indicator Name	Grievances registered addressed within the delay set by the project GRM
Definition/Description	The indicator measures the proportion of grievances received by the Grievance Redress Mechanism system (GRM) set up by the project actually addressed within the standard period set up by the GRM system.
Frequency	At mid-term, and end of project
Data Source	Progress reports, Mid-line and end-line reports
Methodology for Data Collection	Survey questionnaire
Responsibility for Data Collection	TA/PMU for the progress reports; External survey firm fro the mid-line and end-line reports
Indicator Name	Periodic reports submitted on time
Definition/Description	
Frequency	Semi-annual and annual
Data Source	Progress reports, annual reports, baseline, mid-line and impact reports
Methodology for Data Collection	
Responsibility for Data Collection	TA/PMU



ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Nepal

Food and Nutrition Security Enhancement Project

Project Institutional and Implementation Arrangements

1. The implementation arrangements will follow the existing arrangements for the ongoing GAFSP project, but will build in sufficient flexibility to accommodate the changing institutional setup of the governance structures in the country. The MALRC will be the executing ministry and will work closely with the MoHP to implement the project. At the central level, the project will include: i) the existing AFSP Steering Committee (SC), strengthened by a representative of the Ministry of Federal Affairs and General Administration (MoFAGA), will provide strategic oversight and guidance, ii) a Technical Coordination Committee (TCC) to provide technical guidance and recommendations to the SC, and iii) a PMU for day-to-day project administration and management. At the decentralized level, the project will have: i) State level Coordination Committees (SLCCs, 3) to ensure cross-sectoral coordination and quality assurance at the State level, ii) Municipality Cluster Project Support Units (MCPSUs, 4) in each of the targeted municipality clusters to ensure smooth activity implementation, monitoring, and coordination at the local (ward) level. For the implementation of specific interventions, the Project will collaborate closely with specialized technical departments (Department of Agriculture, Department of Livestock Services, Department of Irrigation, Department of Health Services, Department of Food Technology and Quality Control, etc.), other relevant public agencies (Nepal Agriculture Research Council, National Seed Board), and non-governmental organizations. All requisite short or long term national/ international consultants will be appointed to support the project units at various levels.

Project Management Unit (PMU)

2. The PMU will be headed by a Gazetted class one level officer, designated as Project Director (PD - Joint Secretary level of the agriculture service) deputed from the MALRC. The PD would be operationally and managerially in-charge of the organization structure established at the central, provincial and ward levels and for implementing the project. The PD will have the authority to make decisions related to the project administration as well as financial management. There will be two positions of Gazetted class two level officers (one with crop background and the other with livestock background) designated as Senior Planning Officer and Senior Monitoring and Evaluation Officer. These officers will also be deputed from MALRC for the entire project period (Under Secretary level position of the agriculture service). There will be five Technical Officers (Gazetted class three level officers with crop science, livestock, agri-economics, food safety, and nutrition background) to assist in the smooth functioning of the project's management, along with Account Officer, Accountant and Administrative assistant deputed as core staff as per GoN regulation. Computer operators, office secretary, office assistants and drivers will be hired for the project period on service contracts.

State level Coordination Committees (SLCCs)

3. The SLCCs will be headed by either the Provincial Director of Agriculture or the Provincial Director of Livestock Services, as designated by MALRC. SLCCs will be established in the project provinces and will be supported by a project M&E officer and a technical officer of the directorate will be designated as the counterparts (or nodal officer) for carrying out SLCC functions smoothly. Operating under the overall guidance of the PMU, the



SLCCs will be responsible for: (i) facilitating provincial level program planning and implementation of all project activities within their respective Provinces, (ii) coordination with relevant implementing line departments and agencies and stakeholders, (iii) organize periodic progress review, (iv) guiding municipality cluster level implementation offices to work in accordance with the spirit and principles of the project, (v) monitoring and supervising the work being done in the field, (vi) maintaining appropriate records, financial and project progress reporting, and (vii) ensuring due attention to safeguards issues, and (viii) ensuring appropriate governance and accountability, including through management of a suitable grievance redressal system.

Municipality Cluster Project Support Units (MCPSUs)

4. In all four project municipality clusters, there will be a MCPSU designated by the MALRC. MCPSU's role will be entrusted to the staff of either ADO or LSO. The MCPSU will help to coordinate municipal level project activities with line agencies and other partners. MCPSU will also provide technical backstopping for implementation at the ward/field level, as well as follow up progress reporting. There will be additional technical staff (technical officer as well as technicians for the project duration) at the MCPSU in implementation of project activities. The technical staff to be posted at the MCPSU will be hired through the TA service provider. Some of the project interventions envisaged by the project such as Matching Grants – will be implemented and facilitated by the MCPSU. Furthermore, MCPSU will be responsible for (i) coordinating the project activities at the municipal level, (ii) encourage participation of farmers' organization (farmer groups, farmer cooperatives), and NGO federation and other relevant stakeholders, (iii) facilitating planning and inter-agency coordination, (iv) assisting in selection of project sites and beneficiaries and participatory monitoring (ensuring involvement of different stakeholders such as CSO, media as part of the team), (v) organizing public hearing, media briefing/ media trip and stakeholder monitoring activities, and (vi) ensuring appropriate governance and accountability, including through management of a suitable grievance redressal system. The MCPSUs will also coordinate with and support the Food and Nutrition Security Committees.

Project Staff for Implementation Support

5. To support implementation activities at the farm level, the project will hire two kinds of staff through service providers. There will be project facilitators and technical service providers (technicians). The technicians will devote most of their time to implementing field level activities. These staff will be hired only for the lifetime of the project and positioned at the ward offices. Hiring this cadre of staff will enhance the capacity of implementing agencies – by providing both an adequate number of staff to handle the increased workflow and the relevant skill mix to execute the technical tasks – to adequately support and backstop project activities at the farm level. In village areas, within the wards, the project facilitators will mobilize farmers group and coordinate with line departments and will provide technical support activities that would principally include crop/livestock demonstrations, farm water management and management of group/community productive assets.

FAO Implementation Support.

6. The GoN has identified FAO as the main provider of technical assistance to the project, building on the successful collaboration under AFSP. The technical assistance from FAO is geared towards improving project performance, incorporating best practices, and document lessons learnt. Three specific areas have been identified for FAO technical assistance based on their comparative advantage and experience: (i) support to the further development of the extension services and dissemination of improved technology packages through FFS; (ii)



developing market linkages for the targeted smallholder farmers; (iii) supporting the rollout of the Nutrition Field Schools; and (iv) quality assurance. The Technical assistance (TA) activities are designed to strengthen the capacities of the public service providers and targeted beneficiaries of the project and to enhance the effectiveness of the project interventions.

- The FFS approach will be modified to suit the targeted areas in terms bio-physical and socio-economic characteristics, working within the framework of the new federal extension. Capacity development will target farmer and producer groups, cooperatives. Relevant technical guidelines and ToT manuals will be developed. This will also encompass TA support to the implementation of the farmer-led micro-irrigation investments that will include assessing the feasibility and suitability of the small scale irrigation kits for different agro-ecological sites and by providing capacity building on using the technologies and operation and maintenance. The capacity development will include training on land husbandry under irrigated production using the FFS approach.

- In terms of establishing market linkages, TA from FAO will be extended to strengthen farmer organizations to improve their “Farming as a Business” skills and help them build knowledge and acumen to make their farm operations more profitable. This entails support to organizational management, business planning and making market led production decisions. Specific emphasis will be given to building women leadership skills. In addition, TA support will be provided for value chain development strategies, including market exploration, and strengthening contract negotiations. Building farmers’ business and investment planning skills will also ease the implementation of farmer co-financing modalities of physical assets and small-scale market infrastructure, including collection, storage and processing facilities as proposed under Component B.

- TA will also be provided to the implementation of the interventions related to nutrition improvement at household level, including the scaling up of improved kitchen gardens models, introducing backyard poultry, and the establishment of Nutrition Field Schools. Building on ongoing efforts, the TA will thus support the practical application of dietary guidelines in conjunction with the DoH and DFTQC, promoting nutrition education and creating menus based on the locally available seasonal food items. The TA aims to increase dietary diversity as well as the coping mechanisms for food deficit periods through promoting new ways of preserving and processing nutrition dense food. Project management support will be provided for implementation and monitoring of nutrition outcomes at household level.

- With respect to quality assurance, FAO is expected to support needs assessment (HR gaps and training needs), development and integration of monitoring and reporting systems, and other technical support services as requested.

Financial Management

9. **Financial Management (FM) Capacity.** The Project will significantly benefit from continuation of the present PMU of AFSP. The current staffing of Finance Chief (Under Secretary), Finance Officer and Accountant will be continued for the Project. It has been agreed to finance FM Consultant retroactively to have well established financial management system to ensure implementation can commence with Project effectiveness. Based on AFSP experience, an additional FM consultant has also been agreed dedicated for monitoring (to be hired by 3 months of effectiveness). As activities related to beneficiaries, e.g. sub-grants and training for farmers will be implemented by MCPSUs, FM consultant will ensure effective monitoring and oversight from PMU. An Accountant each will be deployed at the MCPSUs by two months of Project effectiveness.



10. **Planning and Budgeting.** The proposed project will follow the government planning and budgeting procedure. The PMU will prepare overall budget and work program based on inputs from the respective MCPSUs. The budget will be proposed through the Line Ministry Budget Information System (LMBIS), which ensures the detailed basis of required activities and nature of expenditures for the budget preparation. The PMU will provide budget authority to each MCPSU with guidelines and specifications of activity/work programs and expenditure line items to ensure effective cluster-level financial management. Implementation of these budgets and work programs will be monitored by the PMU and reported on a trimester basis through the Interim Unaudited Financial Reports (IUFs). The PMU of AFSP will prepare budget for the FY 2018/19 when the Project is expected to be effective.

11. **Funds Flow.** As is the general practice in projects in Nepal, most of the payments are expected to be pre-financed from the Government's treasury accounts. A Designated Account (DA), managed by PMU, will be established at Nepal Rastra Bank to facilitate disbursements. Direct payments to payees can also be made from the DA or directly from the Bank. Direct reimbursement to the Government Treasury can also be made from the Bank.

12. The funds flow management of the Project funds will be limited up to the MCPSUs level. The funds flow with the Bank will be managed by the PMU, including for the MCPSUs. There will be no transfer of Bank funds to the MCPSUs. The MCPSUs will be pre-financing from the Government's treasury based on the budget authority provided. At the MCPSUs level, the assigned Accountant of each MCPSU will be managing project funds. The MCPSUs funds flow management will be monitored from the PMU. Based on the reports received from MCPSUs, PMU will reimburse MCPSUs expenditure amounts to the Government treasury (through DA or direct reimbursement from the Bank) and also manage direct payments for the MCPSUs, if required. The Government's Financial Administration Regulation will be followed for overall funds management. Roles and responsibilities for fund management are clearly described in the Regulation, based on which FM staff/ consultants (both at the central and MCPSUs) will help ensure that the project funds are effectively managed.

13. **Accounting, Financial Reporting and Internal Controls.** The Government's cash basis accounting system will be followed. Based on the same, the Interim Unaudited Financial Reports (IUFs) will be prepared on a trimester basis. The format and the content of IUFs will be agreed during Negotiation. Accounting information is maintained in FMIS in PMU which was developed under AFSP. The FMIS will also be implemented in all MCPSUs by two months from Project effectiveness. No expenditures will be incurred in the respective MCPSUs before implementation of FMIS. The Project accounts will be maintained separately by each MCPSUs preferably with real time online connectivity in FMIS or at least reported on a monthly basis to the PMU by the seventh day of each preceding month. Based on the report received of the expenditures incurred at the MCPSUs, the PMU will maintain accounts for all the project expenditures. The IUFs with consolidated information from all of the MCPSUs will be prepared by the PMU and submitted to the Bank within forty-five days from the end of each trimester. All the required ledgers related to Bank disbursement including the Designated Account Ledger, Grant Register etc. will be maintained at the PMU. The internal control process of the Government will be applied, including internal audit. As per the Government policy, emphasis will be placed on ensuring that internal audit is conducted on a trimester basis, which is an important tool of the internal control system. The FM staff/ consultants hired for the Project will help ensure timely and quality accounting, financial reporting and effective internal controls. The dedicated FM



Consultant hired for monitoring will help ensure establishment and operationalization of effective monitoring mechanism. The required details of monitoring mechanisms and periodicity will be developed in the Project Implementation Manual. These and other specific aspects for effective project operations and internal controls required in addition to the Government’s existing regulations will be included in the Project Implementation Manual. The Project Implementation Manual acceptable to the Bank will be included as Project Effectiveness condition.

14. For the sub-grants, the local bodies will be involved in selection and certification process as per Government policy while the funds flow will be limited to MCPSUs. There will be reporting of grant expenditures to the PMU after which documentation of expenditure would be done with the Bank. The details will be included in the Project Implementation Manual and the required arrangements will be included in the Memorandum of Understanding (MOU) between the PMU and the local bodies if required. The required records to be maintained by the beneficiaries and reported to the respective MCPSUs/ PMU will be detailed in the PIM. The PIM will also include details of monitoring mechanism for sub-grants. The sub-grants payment will be made in the bank account of the respective beneficiaries.

15. **External Audit.** The project financial statements including Statement of Expenditures (SOE) and Designated Account statements will be audited by the Office of the Auditor General (OAG). The external audit report for each year of project implementation will be submitted to the Bank within 6 months from the end of each fiscal year. To avert delays in audit report submission, PMU will coordinate with OAG by May of each year to ensure that the Project’s audit (including MCPSUs expenditures) is scheduled in a timely manner. There is no overdue audit report from the Ministry of Agriculture.

16. **Supervision Plan.** Project implementation progress will be closely monitored by the PMU and the Bank. Key FM fiduciary work includes: (i) implementation support to the project including participation in supervision missions and informing the task team of FM issues or required improvements; and (ii) review of financial/audit reports and preparing summaries of such reports for further action if required.

17. The integrated fiduciary risk is assessed as “Substantial” considering the scope of the Project in the federal context whereby the financial management extends to MCPSUs.

Disbursements

18. **Allocation of Grant proceeds.** Disbursement under the proposed funding will be made as specified in the following Table, which indicates the amounts and percentages of financing.

Category	Amount of the Grant Allocated (in USD)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consultants’ services, training and workshops , incremental operating cost.	13,100,000	100%
(2) Sub-project Grants	9,600,000	60%



TOTAL AMOUNT	22,700,000
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19. **Disbursement Arrangements.** The disbursements from the Bank will be based on Statement of Expenditures (SOEs). To facilitate disbursement, segregated Designated Account (DA) in USD will be opened at Nepal Rastra Bank. The DA will be operated under joint signatures of the designated Officials of PMU. An advance not exceeding the threshold specified in the Disbursement Letter will be provided in the DA. Direct payments to various payees or reimbursement to the government treasury can be made from the advance provided in the DA. The DA will be replenished through Withdrawal Application to maintain the specified amount in the DA. For larger amounts above the threshold specified in the Disbursement Letter, direct payments to various payees or direct reimbursement to the government treasury can also be requested directly from the Bank.

Procurement

20. The Bank’s Procurement Regulations for IPF Borrowers, July 2016 (Revised November 2017) and the provisions stipulated in the Financing Agreement will be applicable for procurement of Goods, Works, Non-Consulting and Consulting Services. The PMU will be responsible for overall procurement management of the Project and the 4 MCPSUs established for the respective municipality clusters will do their part of local level procurement. The major procurement including selection of consulting firms, individual consultants, procurement of office equipment, vehicles, etc. required for the project including for MCPSUs will be centralized in PMU. The MCPSUs’ procurement will be limited to small procurements for seeds and logistics, grants and training to beneficiaries, etc. Procurement of goods, works, and non-consulting services, as agreed in the Project Procurement Strategy for Development (PPSD) and Procurement Plan, may be carried out using national procurement procedures, that is, in accordance with the National Competitive Bidding as per Nepal’s Public Procurement Act, 2007 (1st Amendment), and regulations made thereunder, along with any additional IDA-prescribed caveats. The PPSD and the Procurement Plan for the first 18 months have been prepared. The PMU will prepare a procurement manual as a part of the PIM, and arrange from time to time, training and orientation programs to staff involved in procurement initiation, review, and decision-making processes to ensure effective procurement management.

21. The Bank team has conducted the procurement risk assessment of the implementing agency (PMU) and provided necessary mitigation measures in the report. The full assessment report will be uploaded in the P-RAMS system (Procurement Risk Assessment Management System) of the Bank. The Project will significantly benefit from the experience of the existing PMU of the Agriculture and Food Security Project (AFSP). As in the AFSP, a procurement consultant is required even from the project preparation period (under retroactive financing arrangement) for effective procurement management and smooth project implementation.

Environmental and Social (including safeguards)

19. The proposed project aims to improve agricultural productivity and improve nutrition practices of targeted smallholder farming communities and will consist of small scale subprojects/activities which may have adverse impacts on natural environment, human health and safety. Conflict over water sources, soil erosion, increase in use of pesticides/insecticides, over grazing, deforestation and water pollution are some of the impacts envisaged during the project interventions. Bank’s umbrella policy Environmental Assessment (OP/BP 4.01) is triggered considering that the project will support small civil works, farmers’ irrigation schemes and husbandry etc. which will have minor impacts but the cumulative impacts from these activities cannot be overlooked.



20. As of now the proposed project is expected to primarily focus on about 8 districts of Nepal, however the exact locations for sub-project interventions are not known, therefore, an Environmental and Social Management Framework (ESMF) has been prepared to provide guidance for environmental and social assessment and management. This ESMF builds on the ESMF of the recently closed NAFSP project and includes experiences and lessons learnt from the earlier project for better safeguard performance. Furthermore, the framework will include necessary provisions to determine additional safeguards tools which will be used throughout the project life. It will also identify the requirements and responsibilities for preparing Environmental and Social Impact Assessment (ESIA) as a precondition for individual investments that are likely to have high environmental impacts which will also include detailed process for the corresponding consultations, reviews and clearances.

21. Policy on Natural Habitats OP/BP 4.04 has been triggered as a precautionary step in case there are protected areas/known natural habitats in specific project locations. Similarly, policy on Forests (OP/BP 4.36) is triggered because there is likely to be pressure on forests due to livestock promotion and some micro-infrastructure may be in forested areas. Considering that the activities aimed at increasing agriculture productivity could induce use of (or increase) agro-chemicals(pesticides/insecticides) policy on Pest Management (OP/BP 4.09) is triggered although the project is not envisaged to support purchase of chemical pesticides. The ESMF has incorporated information, identify issues and provide management guidance to address the impact on natural habitats, forest and on the use of pesticides. The ESMF is a living document which will be periodically revised and updated throughout the project cycle as and when required.

22. The project is designed to ensure enhanced level of community consultations with emphasis on inclusion, empowerment, equity, participation, and accountability. More specifically, the project is expected to benefit the grassroots communities, including vulnerable groups, through increased community mobilization and extension support, vulnerability reduction strategies, support to Producer/Enterprise Groups through technical assistance on research, business development, marketing, extension, skills training etc. eventually contributing to enhance employment, production and returns to the farmers.

23. Involuntary Resettlement: The project does not envisage construction of major civil works that would require land acquisition resulting in involuntary resettlement. However, some project activities might include supports for minor infrastructures such as construction or improvement of minor irrigations, collection centres, processing, chilling centres, seed or grain storage and market facilities etc which are not identified at this stage but could potentially lead to some adverse social impacts including loss of land or structures, loss of access to resources for livelihoods, elite capture, and exclusion of vulnerable communities from project benefits, among others. As a precautionary measure to avoid, minimize and mitigate these probable impacts, the Involuntary Resettlement Policy (OP/BP 4.12) has been triggered. It is, however, anticipated that the small amount of land required for community facilities will be made available through donations and in such case the project will comply with the donation principles as specified in the ESMF. The project will also maintain documentations of donated lands viz the amount of donated land, MOUs signed between land-donor and communities for use of land and legal transfer of land where possible.

24. Indigenous People Development: The population structure of Nepal is complex with several caste and ethnic groups involving many indigenous communities, minority and vulnerable groups such as Dalits, women headed households and marginalized communities. These groups are widely spread across many districts and settlements and normally tend to be more resource poor, food insecure, socially excluded and lack access to public



services. The potential presence of these groups in many subproject sites, which are not known at this stage, cannot be ignored. In view of this, the World Bank's Indigenous People Development Policy (OP/BP 4.10) has been triggered to ensure that the project activities are culturally appropriate to the vulnerable groups, do not harm to these groups and that the Bank's policy of free, prior and informed consent is applied while designing the activities at subproject level.

25. Environmental and Social Management Framework: Considering the potential issues associated with involuntary resettlement and indigenous people affecting their livelihoods, the Project has prepared ESMF as a guiding document for planning and implementation of Bank's safeguards measures. The Project has prepared the ESMF which fully provides guidance to identify and address issues related to involuntary resettlement and indigenous/vulnerable people in case these people are affected adversely by project interventions. The ESMF constitutes adequate safeguards measures incorporating the Resettlement Policy Framework (RPF) and Vulnerable Community Development Framework (VCDF).

Monitoring and Evaluation

26. The existing M&E system of the ongoing AFSP will be strengthened and implemented to track progress on a continuous basis. The project Management Information System (MIS) will be upgraded and put in place at the PMU level. The project will further build the existing capacity of PMU to use the MIS and be able to produce reports at agreed intervals. Progress towards achieving the specific milestones will be tracked as stipulated in the results framework (Annex 1). Furthermore, the PMU, with inputs from MCPSUs, will produce Implementation Progress Reports per trimester. Data needed for impact evaluation purposes will be collected in project and non-project areas by a third party (DIME). DIME will thus undertake the necessary baseline, mid-term and impact evaluation activities. In addition, the project M&E function will include periodic beneficiary assessments to track the project's progress and ensure a systematic approach to citizen engagement. The M&E system will also allow for specific studies to be commissioned to complement data gathered from the regular monitoring where needed. The project implementation manual (PIM) will detail the organizational and technical setup that will govern the project's M&E procedures. A mid-term evaluation will be conducted halfway through the project life-cycle and an implementation completion report no later than six months before Project completion. The project will ensure that gender considerations and citizen engagement are fully integrated in impact evaluation studies, and engage local beneficiaries to take part in the mid-term and final evaluations.

Strategy and approach for Implementation Support

1. The strategy for supporting project implementation will focus on successfully mitigating the risks identified at various levels and supporting the risk management proposed in the SORT. The approach entails close monitoring of the project's technical design and implementation and governance, fiduciary, and safeguard issues. Implementation support will focus in particular on: (i) enhancing the coordination across multiple agencies involved in implementation; (ii) address institutional weaknesses of those agencies, including with respect to implementing Bank projects; (iii) eliciting regular feedback from project beneficiaries at the local level to pre-empt any implementation issues that may arise at the grassroots level; and (iv) the need to ensure that project inputs are targeted effectively and transparently. It will consist of: (i) implementation support missions carried out jointly with FAO when technical needs arise and (ii) technical assistance in areas of weaknesses and where new approaches/procedures have been introduced.



2. **Implementation support missions.** The biggest implementation challenge identified is the overall low capacity. To respond to this challenge, and to ensure that project resources are being used effectively to achieve the PDO, the supervision strategy will use a number of instruments to review progress and respond to implementation issues, including:

a. *Implementation Support (IS) Missions:* The World Bank Task Team will conduct semi-annual review and implementation support missions to review FANSEP implementation performance and progress toward the achievement of the PDO. Given the overall design and scope of the project, a multi-disciplinary team comprised of technical specialists, along with fiduciary, environmental, social, and operations specialists will be needed to support the Government of Nepal in implementing the project. Support from technical partners, such as FAO, will be sought when needed. The first implementation support mission will take place as soon as possible after effectiveness to provide start-up support through direct and timely feedback on the quality of implementation plans and their likely soundness and acceptability.

b. *Mid-term review (MTR):* An MTR will be carried out mid-way in the implementation phase. It will include a comprehensive assessment of the progress in achieving the project's objectives as laid out in the Results Framework. The MTR will also serve as a platform for revisiting design issues that may require adjustments to ensure satisfactory achievement of the project's objective.

c. *Other reviews:* Each year, the World Bank and the Ministry of Finance will consider the need for additional analytical, advisory, and knowledge sharing activities and/or third-party reviews. Such reviews will be planned for over and above the semi-annual IS missions if and when the need arises.

d. *Implementation completion:* At the close of the project, the World Bank will carry out an implementation completion review to assess the success of the project and draw lessons from its implementation.

3. **Objective of implementation support missions.** The implementation support and oversight missions would have the combined aim of reviewing the quality of implementation, providing solutions to implementation problems, and assessing the likelihood of achieving the PDO. More specifically, they would: (i) review implementation progress by component, including institutional development aspects; (ii) provide solutions to implementation problems as they arise; (iii) review with the PMU the action plan and disbursement programs for the next six months; (iv) review the project's fiduciary aspects, including disbursement and procurement; (v) verify compliance of project activities with the Bank's environmental and social safeguard policies; (vi) review case studies and survey results to measure results indicators to determine progress toward the PDO against the targets set within the Results Framework and the quality of implementation; and (vii) review the quality of capacity-building activities, which are crucial for an effective implementation of the project. The missions would combine field visits, field-based focus group discussions and interactive workshops with stakeholders for feedback, and regional workshops as well as national workshops to highlight implementation issues, pick up emerging implementation lessons, and share mission recommendations, including agreements on actions moving forward. It will also include reviews of quarterly/annual reports and various studies.

4. Implementation support will include technical support from the World Bank, FAO, and possibly other agencies for critical aspects of the project, for ensuring proper financial management / procurement, as well as for monitoring social and environmental safeguards. The objective of the technical support would be to help the



project teams to internalize good practices and to resolve implementation bottlenecks as they are identified during IS missions. Technical assistance will include training workshops to develop core resource teams within implementing units and project teams, helping to finalize manuals, and reviewing and advising on terms of reference for required studies and technical support missions.

Implementation support plan

5. **Technical support.** Some of the investments foreseen under the project are relatively complex from a technical standpoint, especially in terms of ensuring that the activities to be funded actually result in expected efficiency improvements. In addition to the Bank’s core supervision team and the FAO Investment Center, other consultants with specific technical expertise may be mobilized periodically to provide technical assistance to implementing agencies in the form of hands-on training and mentoring.

6. **Focus of support.** The first two years of implementation would see more technical support, and later the focus would change to more routine monitoring of progress, trouble-shooting, and assessments based on the Results Framework. The support missions will be complemented by regular short visits by individual specialists to follow up on specific thematic issues as needed.

7. **Fiduciary support.** The Bank’s financial management specialist based in the country office will review the FM systems, including capacity for continued adequacy; evaluate the quality of the budgets and implementing agencies’ adherence thereto; review the cycle of transaction recording until the final end of report generation; evaluate the internal control environment, including the internal audit function; review IFRs and/or annual Financial Statements; follow up on ageing of the advance to the Designated Account as applicable; follow up on both internal and external audit reports; and periodically assess the project’s compliance with the FM manual as well as the financial agreement. On the procurement front the Bank will provide implementation support to the client through a combination of prior and post reviews, procurement training to project staff and relevant implementing agencies, and periodic assessment of the project’s compliance with the procurement manual. Implementation support missions will be geared toward: (i) reviewing procurement documents; (ii) providing detailed guidance on the Bank’s Procurement Guidelines; and (iii) monitoring procurement progress against the detailed Procurement Plan. Following the recommendations of the fiduciary assessments of the Implementing Agencies, and in addition to the prior review supervision to be carried out from the Bank office, the semi-annual supervision missions will include field visits, of which at least one mission will involve post review of procurement actions.

8. **Safeguards support.** The Bank specialists in Social and Environmental Safeguards based in Kathmandu will have responsibility for supervising safeguard activities. Each year, they will conduct supervision of the project’s safeguard activities, participate in regional meetings to discuss findings, and draft action plans to improve implementation.

9. Table 1 summarizes the main focus of implementation during the life of the project.

Table 1: Main focus of implementation support missions



Time	Focus	Skills needed
First 12 months	<ul style="list-style-type: none"> • Project start up • Support to implementation activities (sensitization, communes/community consultations and planning, capacity building, strengthening implementation capacity including M&E) • Guidance on applying safeguard instruments • Development of impact evaluation methodology and oversight of baseline survey • Procurement, FM, M&E and safeguards training of staff at all levels • Establishing coordination mechanisms with complementary projects (MLSIP, PAF, Suhaara) 	<ul style="list-style-type: none"> • TTL + co-TTLs + + operation officer • Crop specialist • Livestock specialist • Nutrition Specialist • NRM • Market access/VC specialist • Financial management • Procurement • Environment • Gender • M&E specialist • Communication • Monitoring and evaluation
12-48 months	<ul style="list-style-type: none"> • Monitoring implementation performance including progress • Review of annual work plans and disbursement schedule • Review strength of Farmer and Producer Groups and cooperatives, Health Mother Groups, quality of participatory process and capacity building activities • Review quality of quarterly/annual reports, data and various produced studies • Assess quality of implementation process • Assess quality of M&E system (including quality of data collected) • Review of audit reports and IFR • Review adequacy of the FM system and compliance with financial management covenants • Assess quality of safeguards instruments and their application 	<ul style="list-style-type: none"> • TTL + co-TTLs + + operation officer • Crop specialist • Livestock specialist • Nutrition Specialist • NRM • Market access • Financial management • Procurement • Environment • Gender • M&E specialist • Communication • Monitoring and evaluation

Table 2: Skill mix required for FANSEP implementation support (per year)

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Team leader Sr. Agric Economist	15	2	Myanmar based



Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Co-TTL Sr. Agric Specialist	12		CO based
Co-TTL Sr. Health Specialist	12		CO based
Value chain specialist	6	2	Consultant
NRM specialist	6	2	Consultant
Operation officer	6	2	DC based
Procurement specialist	6		CO based
Financial management specialist	6		CO based
Environmental safeguard specialist	6		CO based
Social safeguard specialist	6		CO based
M&E specialist	6		CO based
Communication specialist	4		CO based
Gender specialist	4	2	DC based

10. **Resource Implications:** Funding for implementation support (“supervision”) of FANSEP will be entirely provided by GAFSP.



ANNEX 2: Detailed Project description

COUNTRY: Nepal

Food and Nutrition Security Enhancement Project

I. General project features and Theory of Change

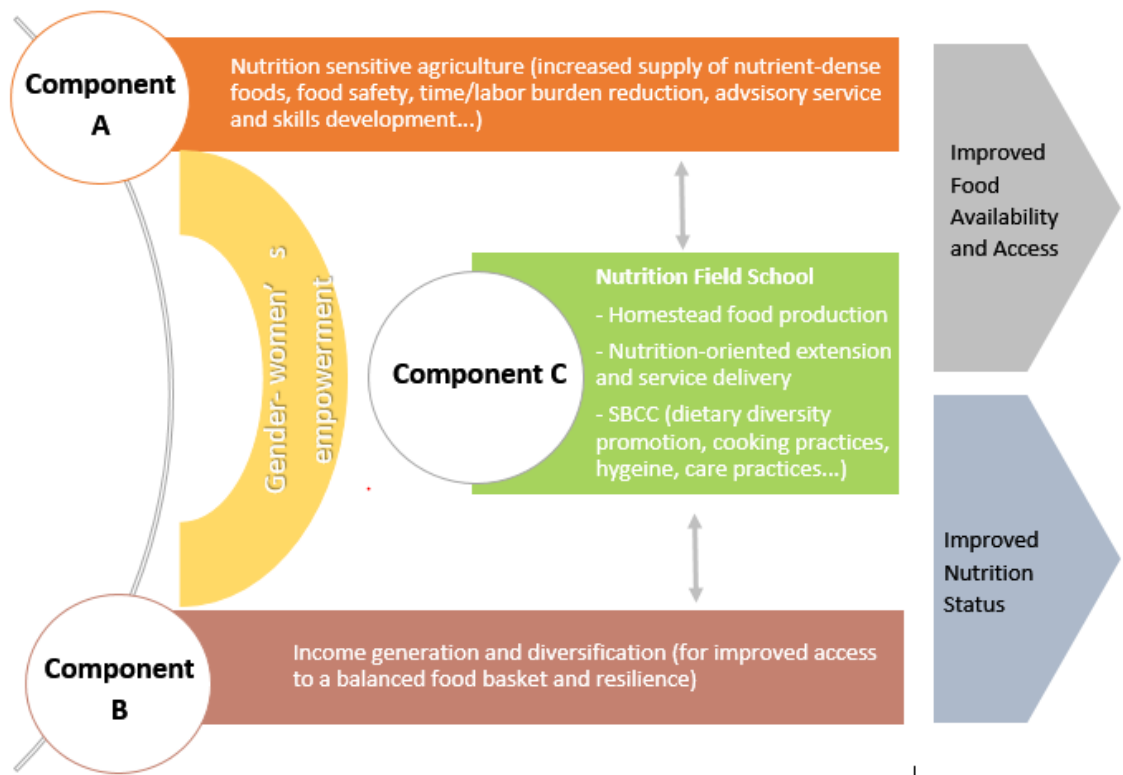
1. **The project follows a demand-driven approach**, to drive investments at the household and community levels. It also intervenes at relevant points in the research-extension continuum to improve service delivery. The project design is based on the following core principles:

- (a) *Participatory Development approach*: The project will adopt a bottom-up, participatory approach rather than a top-down, prescriptive approach to support investment decision making. In all components, the project will empower households and communities to enable them identify their priority demands and investments, and prepare and implement activities aimed at securing access to CSA technologies and practices. The project will build on established participatory processes, successfully implemented by the ongoing World Bank projects and other development partners in the country. Needs assessment and consultation processes will be important/central elements of the interventions aiming at improving productivity and nutrition status of the targeted beneficiaries. Producer groups will receive targeted training and technical advice to enable them to develop viable business plans that will be eligible for financing through the MG system. In addition, these PGs will also benefit from the project activities geared towards establishing enduring productive partnerships with other actors in the value chain, particularly the buyers and FIs.
 - (b) *Knowledge-based*. Knowledge management will be instrumental. Research results and innovations for building climate resilience in the crop and livestock production systems, improved dietary practices, etc., developed by NARC, FAO, and CIMMYT, and other institutions will be explored and scaled up. The project will facilitate knowledge transfer, and build capacities of the targeted households and their communities. This will include, *inter alia*, activities to expose the beneficiary communities to experiences and best practices from other areas in the region and/ beyond.
 - (c) *Gender inclusive*. The project has been designed to integrate issues and the needs particular to women. Special care will be paid to ensure that interventions do not contribute to increased drudgery and burden for women. All interventions undertaken under FANSEP must demonstrate that gender issues have been considered whenever possible. A gender assessment will be conducted as part of the mid-term review, and its results will be used to adjust and improve the project's design as necessary. It is expected that gender facilitators and social mobilizers will be engaged to ensure that women are able to actively participate in the decision-making process. Capacity building activities will specifically include gender criteria for short and long-term training to achieve an equitable balance. In addition, the criteria for the selection of business plans to be financed under component B.2 will take into account gender composition of the Producer Groups (PGs) submitting the business plans (BPs) to be financed.
2. *Nutrition-informed*. A balanced human nutrition, particularly during the early years of life, is important to the poor not only because of its contribution to human development outcomes, but also because of its economic contribution further down the line, as malnutrition has additional economic costs through cognitive delays in children and lower economic productivity in adults. In addition to specific nutrition interventions, the anticipated increased productivity and income levels of the targeted beneficiaries would enable them to diversify their food intake.



3. **Theory of change:** The project seeks to address the availability, access and utilization of food in support of the PDO. The project's components, notwithstanding their distinct and separate functions, are closely intertwined and have been designed to complement each other to address the key challenges that need to be overcome to spur agricultural productivity and attain the desired nutrition outcomes in the targeted areas. Lessons learned from AFSP and other similar projects has shown that positively influencing nutritional behavior change is more effective if agriculture-related and income enhancing activities are integrally linked with the nutrition and health related awareness raising and training through Behavior Change and Communication interventions, particularly with mother groups. The increased food availability and access to more diverse nutritious food will thus be enabled by Components A and B, while Component C is designed to capitalize on these gains to elicit changes in consumption patterns and improved nutrition outcomes. In sum, the combined effect of the project's interventions across the 3 components add to more than the sum of the individual parts to ensure that key aspects of food security and nutrition, tackling synergistically issues of food availability, access, and utilization, thus allowing the project beneficiaries to improve their food security status and nutritional outcomes.

4. The project's theory of change is based on UNICEF's conceptual framework of malnutrition which helps to classify causes of malnutrition: (i) immediate causes (inadequate food intake and diseases); (ii) underlying causes (household food security, adequate care and feeding practices, water sanitation and hygiene -WASH, access to health services); and (iii) basic causes (including economic assets, social capital, environmental conditions, and political issues). Given differing manifestations and underlying causes of malnutrition, the project's development objective and targets can only be attained through a convergence of activities envisaged under Component A, B and C that will support (i) household access to a balanced food basket through crop and animal productivity (building up asset base) and income generation through agricultural activities, (ii) improved access to services particularly quality agriculture extension and health services through demand-driven approaches, and (iii) skills-based community-driven nutrition education following a behavior change communication approach. The project will therefore support the following key impact pathways: income generation, climate and nutrition smart crop and livestock productivity (including improving food safety), and nutrition knowledge, whilst promoting gender equality and women empowerment throughout. Project interventions will be delivered to leverage the impact of these pathways by providing additional support to ensure nutrition-sensitive technical backstopping and access to quality services, strengthened animal and crop productivity at household level depending on dietary needs and agro-ecological zone, and nutrition-promoting behaviors. The flow chart below depicts these complementarities:



5. The key elements underpinning the project’s theory of change are as follows:

i) *Nutrition-sensitive agriculture*: Studies demonstrate that an optimal diet is widely unaffordable, physically inaccessible due to long distances and poorly functioning markets, and not always preferred in Nepal . The Enhanced Homestead Food Production (EHFP) project spearheaded by Helen Keller International showed that a combination of nutrition-sensitive interventions can help reduce anemia and underweight in hill areas through the production of nutrient-rich foods (particularly eggs and vegetables) at household level, providing Infant and Young Child Feeding counselling and encouraging pregnant and lactating mothers to seek health services . Household-level agriculture diversification may be more important in areas characterized by difficult terrain where improved income cannot guarantee access to a balanced food basket or health care services. However, this does not mean that such an approach is irrelevant to the terai. In fact, due to high levels of anemia and inadequate access to animal-based and iron-rich plant food, Heifer International implemented a livestock support program, which has shown some success in distributing a pair of goats to each beneficiary after 1 year of participation in the program, increasing household income, dietary diversity and consumption of animal-source foods in children 6–59 months old , . The overall project will encourage nutrition sensitive agriculture, i.e. biofortified crops, livestock raising, and iron and vitamin A-rich fruits and vegetables and more targeted nutrition activities will complement these efforts to support homestead crop production and livestock raising as well as processing to reduce seasonalities. In the hills, crop diversification accompanied by some livestock may be most relevant whereas in the terai, livestock raising and income generation may be more relevant. All packages will be demand-driven and part of a comprehensive package (Nutrition Field School).

ii) *Income*: Findings derived from PoSHAN (Policy of Science, Health and Nutrition) Community Studies



confirm results from a Cost of the Diet Survey conducted in 2016 across all three zones that shows that the “household common diet lacks sufficient [...] calcium and iron in the hills; vitamin A, calcium, and iron in the terai. Adding fish to the mountain and hill diets and increasing dark green leafy vegetable consumption in all zones yielded nutritional adequacy. Optimal diets are more expensive than the common diet in the mountains and hills but less expensive in the terai”. A wide range of foods are consumed in the terai at a lower price (possibly facilitated by cross-border trade and relatively good infrastructure) but this diet is not adequate (hardly includes egg, and limited amounts of meat, fruits and vegetables), as evidenced by sustained rates of malnutrition (particularly anemia) and perhaps further confounded by inadequate WASH and other practices. Authors conclude that improved diets may not always be a function of income or agriculture diversification in the terai and instead require extensive social behavior change to accompany livestock raising and income generation. In the hill areas, even though optimal diets are widely unaffordable, it is not guaranteed that income alone can ensure access to a balanced food basket and therefore may require a convergence of household level food production, processing and SBCC.

iii) Gender: Decisions on what to produce, buy and eat are often mediated by gender roles and as women are usually the primary caretakers in the household (though often eating last and least amounts of nutrient-rich foods), gender cannot be ignored as a fundamental impact pathway. The Suaahara program heavily focuses on women’s empowerment, specifically labor and time burden, access to credit, and autonomy in production. A RCT of the program found that women’s empowerment was positively associated with length-for-age z-scores among children less than 2 years of age . “Women’s empowerment was also identified as an effect modifier of the association between production and consumption diversity in Nepal” . These activities were largely delivered through Female Community Health Volunteers (FCHVs) and mother’s groups. The AFSP was successful in contributing to a 200% increase in mother's health group membership indicating the need to support and strengthen the capacities of FCHVs and social mobilizers to help promote women’s empowerment through community groups.

iv) Nutrition Field School (NFS): The NFS, pioneered by USAID’s SPRING/Feed the Future program in Bangladesh, combines three evidenced-based strategies: essential nutrition and hygiene actions, homestead food production and farmer field school. This learning-by-doing approach has had demonstrable effects on women’s dietary diversity (increasing from 3.9 to 6 out of 10 food groups over the project period). Consumption of egg increased from 28% to 62% and diet inadequacy dropped from 72% to 16%¹¹. While elements of Nutrition Field Schools in Nepal are not novel, they have not always been implemented as a full package. Under the FANSEP, NFS activities will follow a theory of behavior change over the course of a two year period including sessions on the identification of locally-available nutrient-dense foods (e.g. in terai particularly iron-rich foods), nutrition-sensitive agriculture, food safety, HNG, hygiene and WASH education, improved cooking techniques, complementary feeding practices, and promoting households to avail government services, particularly health services for deworming, supplementation, institutional delivery, antenatal and post-natal consultations, vaccinations etc. In short, NFS are an adaptive approach to facilitate communities to identify relevant actions for improved nutrition behaviors. For effective delivery, the project will support agriculture and health service delivery including technical backstopping and strengthened coordination.

II. Project description

COMPONENT A: Climate and Nutrition Smart Technology Adaptation and Dissemination (US\$ 7 million).

¹¹ https://www.spring-nutrition.org/sites/default/files/countries/factsheets/spring_bangladesh_fact_sheet.pdf



5. This component will directly support the PDO through the introduction and promotion of climate smart and nutrition sensitive agricultural practices by availing adapted technologies, better performing plant and animal genetic resources, and capacitating farmers to master skills for improved agronomic and animal husbandry practices.

6. Major reasons for the low agricultural productivity in Nepal include (a) lack of access to quality inputs (improved varieties, breeds, seeds and fertilizers), (b) inefficient production and farming practices and disease related losses, (c) insufficient and unreliable irrigation supporting crop production, and (d) high post-harvest losses, estimated at 25 to 30 percent. This is further compounded by the impacts of climate change. Agricultural productivity in Nepal is among the lowest in the region. Only about 5 percent of the cropped area is covered by improved seeds while the government target is to achieve 20 to 25 percent. It is estimated that varietal improvement can increase potato yields in old seeds by 40-50 percent and in main cereals by at least 10-15 percent in project locations. Current estimates of good quality seed replacement rates are low: 5.4 percent for paddy and 5.6 percent for wheat. This component will therefore address these four critical deficiencies covering crop and livestock production and post-harvest practices by following a two-pronged approach: i) ensure supply and access to good quality seed and improved livestock breeds at the beneficiary level, taking into account the requisite institutional arrangements to be put in place, and ii) stimulate adoption of improved agronomic (soil, water and plant management) and animal husbandry (feed and waste management, animal health, and housing) practices with better use of locally available resources within the targeted agro-ecologies. Special focus will be given to crops with high nutritional value, including the introduction of bio-fortified crop varieties to address nutritional issues. The inclusion of women and youth, and other vulnerable segments of the rural population, will feature prominently in the approach to technology adaptation and dissemination. In addition, this component will provide support to strengthen the decentralized government structures to ensure effective service delivery at the local level.

7. This component will consist of 2 sub-components, i.e.: i) Technology adaptation and testing, and ii) Technology dissemination and farmers' skills development.

Sub-component A1: Technology adaptation and testing

8. This sub-component will support testing and adapting appropriate climate smart and nutrition sensitive agricultural technologies, improved inputs (seeds fodder and livestock breeds) and improved agronomic, husbandry and post-harvest practices and technology access. This sub-component will make available cultivars and technologies that are best suited for the project area context and farmer needs. The target crops are rice, wheat, maize, finger millet and potato (staples), and highly nutritious crops such as buckwheat, pulses, beans and vegetables, while target livestock species include poultry, goats, and dairy. Technology adaptation and testing will focus on appropriate CSA and nutrition sensitive technologies, improved inputs (e.g. foundation seeds, and animal breeds) and improved agronomic, husbandry and post-harvest practices, taking into account nutritional value and food safety considerations. This sub-component will entail active engagement of the NARC, the DLS, and the DFTQC to implement the activities under this sub-component, in coordination with the agriculture extension service providers in the respective municipalities.

9. Activities to be supported include (a) testing of climate smart and nutrition sensitive crop and livestock technologies, (b) development of improved package of crop and livestock practices, (c) improve seed and breed replacement rate for crops and livestock (goats and poultry), and (d) training and capacity development.



10. *Testing of climate smart and nutrition sensitive crop and livestock production technologies:* The project will build upon the achievements of its predecessor, the Nepal AFSP, which has identified and successfully tested 16 new cultivars¹², Boer cross-bred goats, dual -purpose scavenger type backyard poultry and improved management practices in the mid- and far-western regions of Nepal. In addition, the project draws from the 2017 CSA country profile¹³ which outlined potential CSA practices, including short duration/drought tolerant cultivars, and adapted agronomic practices for crops (minimum tillage, intercropping, time of sowing, spacing, fertilizer placement, cropping patterns, soil moisture management, disease and nutrient management), and livestock (animal health, feed and breed management, stall feeding and improved sheds). To close the research-extension-farmer gap, the validation, testing of new technologies, cultivars (including high nutritional value crops), and performance recording and maintenance of breeds will be done in conjunction with the project supported FFS under sub-component A2. There will be at least two validation trials in each FFS group in the project area. Accepted technologies will be further promoted through “demonstrations and adoption support” to the members of FFS who will showcase the new technologies in their field during the following season. This sub-component will test the newly released and promising varieties and technologies from the NARC and NSB for further multiplication in the project area. The project aims to test and identify at least 10 varieties and 10 technologies suitable to the targeted project areas. NARC will identify high performing staple and non-staple crop varieties which are potentially suitable to the specific needs of the project area and which are at an advanced stage of research station evaluation. The project will support participatory evaluation and variety selection in the targeted areas to confirm their adaptability and local acceptance. Selection criteria will include, *inter alia*: tolerance to drought, pests and diseases, yield, nutritional value, and organoleptic qualities.

11. *Development of improved package of practices:* To support the adoption of new cultivars, improved breeds and technologies, the project will develop package of practices for target crops, breeds by agro-ecologies and beneficiary typologies. These packages will be prepared in such a way that they are simple and easy to understand and adapted to the farmers’ circumstances. The packages will include Integrated Crop Management (ICM), Integrated Disease Management (IDM) and Integrated Pest Management (IPM) models, including weed management, soil health management, pest and disease management, conservation agriculture, cropping systems (rotation, intercropping), post-harvest management, seed treatment, and soil moisture/water harvesting techniques. Special attention will be given to packages which entail a reduction of women’s drudgery and work/time burden. An assessment carried out by IWRMP reported up to 50 percent savings in cost and labor by using power tillers, threshers mini tractors and winnowing machines¹⁴. The packages will also include information on required investments and return, sources of inputs and market for targeted crops, improved breeds and commodities to allow farmers to make informed decision. This will help to validate cost-effective practices for the targeted beneficiaries, to increase productivity, cropping intensity and crop diversification. For the livestock packages, the focus will be on the refinement of feeding packages for goats and dairy animals (stall feeding, silvi-pasture management, feed supplementation and storage) and poultry (low cost feed mix, shelters), by developing an inventory of locally available feed resources, and ethno-veterinary practices in the project area and supporting community seed banks for forage, agroforestry, and pasture germplasm. Animal health will be further supported with; simple diagnostics tools for disease targeting and treatment, particularly for parasitic diseases; vaccination for priority infectious diseases; and promoting responsible use of antibiotics to reduce resistance risks and crop storage and management practices to reduce aflatoxin risk and associated food safety risks.

¹²12 For rice (5); potato (2); wheat (2); buckwheat (2); maize (3) and finger millet (2).

¹³13 Climate Smart Agriculture in Nepal (2017). CIAT, CGIAR, CCAFS, Li-BIRD and World Bank.

¹⁴14 Spreading the gains from mechanization: learning from IWRMP; (2017). Irrigation and Water Resources Management Project, Department of Agriculture, Nepal.



12. *Improving seed and breed replacement rate for crops and livestock (goats and poultry).* One of the key reasons for low productivity of agriculture in Nepal is the continued use of old degenerated seed stock, inbreeding, and unimproved breed resources. To increase the use of quality seeds and breeds, the project will support seed multiplication and breed distribution programs locally through select farmer groups in a community based seed production system under an output based contract, with technical backstopping by NARC, and quality assurance and control through the Seed Quality Control Centre (SQCC) under the MALRC. It is expected that the project will cover at least 10 per cent of the targeted crop area under improved rice, wheat, maize and potato varieties through such mechanism. Similarly, livestock breeds, particularly Boer goats and improved kuroiler chicken, will be propagated through livestock farmer multiplier herds/units following the successful approach followed under AFSP, with technical backstopping by NARC and DLS. The project will support a breed improvement program to meet the high demand for improved Boer bucks and kuroiler poultry by establishing an open nucleus breeding scheme for Boer goat, with a particular focus on establishing farmer managed multiplier herds. For kuroiler, day old chicks will be sourced from the private sector and raised by smaller scale out-grower units established by small scale entrepreneurs who will in-turn supply to target beneficiaries..

13. *Training and capacity building:* In coordination with sub-component A2, the project will build the capacity of outreach and extension agents at all levels, from the ward, municipality to state and federal government levels. To pursue this, a comprehensive capacity needs assessment will be carried out based on which an appropriate training and capacity development plan will be developed. The assessment process will be highly consultative to include farmers, agro-vets and other service providers to ensure that project supported training and activities addresses farmer priorities and needs. Particular attention will be paid to ensure that training needs for women are well addressed. To speed up the transfer of new knowledge and skills, the project will promote the use of ICT for distance learning, and adopt a Training of Trainers (ToT) model to ensure that the trained facilitators go back to their respective locations and train/facilitate other groups.

Sub component A2: Technology dissemination and farmer skill development

14. The main aim of this sub component is to enable farmers' adoption of improved Climate Smart Agriculture (CSA) technologies by mastering the management skills (Good Agriculture Practices – GAPs) required for sustainable production increases and post-harvest processing. It aims to give farmers the practical skills required for informed decision making based on accurate problem analysis in their local context.

15. This sub-component will engage TA for technology dissemination and farmer skill development. TA will review FFS curricula, cost of FFS, select and train FFS facilitators, scale up the adoption support, implement block demonstrations and develop leader farmers, who will also work as Farmer Facilitators. Promotion and dissemination of the new technologies will be guided by an assessment of types of services required and available at the local level, typology of farmers, cropping patterns and markets. This will help the project in identifying the best way to reach farmers and in speeding up the dissemination of improved cultivars and technology packages, complementing the activities under sub-component A1.

16. Under this sub component the project will support: (a) a streamlined FFS for crop and livestock production and adoption support, (b) demonstrations and field days, and (c) strengthening of advisory services and skills development.

17. *Streamlined FFS and adoption support:* The project will promote participatory learning, skills development



and dissemination through FFS. To contextualize FFS the existing AFSP curriculum will be revised to suit the project area and farmers' needs. FFS is a well-established extension approach focused on 'learning by doing' which builds upon principles of adult education and experiential participatory learning and will be used to implement the package of practices and demonstrate climate and nutrition smart agricultural and livestock husbandry practices and deliver targeted training programs and integrated extension services to the targeted farmers for field and horticultural crops, including pulses, oilseeds, rice, maize, potatoes, beans, and vegetables. FGs will thus be enabled to see and assess the benefits first-hand, and make informed decisions as to which technologies and practices are most suitable to their farming systems. The FFS will also disseminate best practices on food safety, nutrition and post-harvest management to minimize storage losses. Following the rollout of FFS, the members will be provided with adoption support which includes seeds, breeds, fodder resources, fertilizers, and basic tools to promote the newly acquired skills in their fields in the following season. Particular attention will be given to women's participation and prioritize their empowerment and meaningful engagement not just as a participant but also ensure their active role in decision making processes, including the selection of topics of experiential learning as per their needs and choice.

18. *Demonstrations and field days:* Demonstrations have been found to be one of the best ways to disseminate tested information and technologies to a large group of farmers at affordable cost in a short period of time. Thus, in addition to FFS, this sub-component will establish demonstration plots for proven technologies and varieties. Lead farmers will be identified and trained in each community following pre-agreed selection criteria to establish demonstration plots of promising and relevant CSA technologies and practices (including drought-resistant high value crop varieties, more efficient micro-irrigation techniques, integrated soil fertility and crop & livestock management techniques, fodder nurseries, etc.). These farmers will be provided with basic inputs such as seeds, fertilizers, pesticides free of cost. Field days will be organized where farmers will be invited to demonstration and/or FFS sites where they will have an opportunity to observe the performance of recommended technologies on the ground as well as allowing the farmers to interact with fellow farmers. To promote season and off-season vegetable cultivation, which are important for both cash income and household nutrition, the project will replicate the use of poly-house farming systems already tested in AFSP districts, in conjunction with the use of more efficient micro-irrigation systems, which has been reported to increase the yield of vegetables by 30 percent in addition to conserving water.

19. *Strengthening advisory services and skill development:* Under the new federal governance structure in Nepal, the agriculture and livestock service centers, sub-centers and contact points, previously managed by the district agriculture and livestock offices, are expected to be transferred to the Economic Development Section of rural municipalities. Though the transition into the federal structure has been initiated, it is expected that it will take at least 3 to 4 years before these agriculture and livestock centers become fully functional. The project will therefore provide support to strengthen the capacity of extension services at the municipality level to ensure effective service delivery during this transition. The project will carry out a comprehensive training needs assessment (CNA) to ensure effective delivery of extension and outreach services. In addition to the government staff, the training will also include agro-vet dealers, leader farmers and social mobilizers who play important role in the extension system. While CNA will identify specific training needs, some of the pre-identified topics include (a) integrated pest management, (b) off-season vegetable cultivation linking with market, (c) grain storage management, (d) FYM management and soil fertility improvement, (e) social mobilization, including group strengthening and household level planning of farmer groups, (f) field data recording and reporting from the field. In addition, this project will strengthen the capacity of the DFTQC to ensure regular monitoring and enforce required minimum standards in food safety and in certifying the food and food products developed through the



project activities. Related to this, the project will also train the extension agents, agro-vet dealers and farmers in safe use of pesticides and chemicals in addition to promoting IPM practices in the project areas. Given good network coverage in the project areas, the project will introduce and utilize ICT innovations. extension services centers will be equipped with basic internet facilities, and extension staff will be trained to use digital tablets to provide extension and outreach services, beneficiary monitoring, and facilitate access to information and service providers.

COMPONENT B: Income Generation and Diversification through Market Access and Climate Risk Management (US\$ 7 million).

20. This component will contribute to the achievement of the PDO by strengthening household and community capacities in managing their productive assets more efficiently, stimulate market linkages, raising their income and build their resilience to climate risk. Component B's objective is to improve and diversify the income generating capacity of targeted beneficiaries by reducing transaction costs through investments in critical business skills and productive assets, supporting value-added activities, and building market linkages. This component will consist of 2 sub-components, i.e.:

Sub-component B1: Strengthening Producer Groups

21. This sub-component aims to organize and strengthen producer groups representing the targeted smallholder farmers by organizing them around commodities of common interest in PGs, and enhance their capacity in terms of good governance and leadership skills, group dynamics, decision-making, problem-solving and risk management, book-keeping, meeting organization, agricultural seasonal planning, marketing, value addition, preparation of simple business plans, and simple monitoring and evaluation.

22. Technical Assistance will be used to strengthen PGs to improve their “Farming as a Business” skills and help build their knowledge and business acumen to make their farm operations more profitable. This support is expected to lead to better organizational management, business planning and making market led production decisions. Specific emphasis will be given to building women and youth leadership skills.

23. Under this sub-component the project will provide capacity-building support tailored to the different PG typologies in the targeted areas, and complementing the agro-technical skills acquired under Component A. Training on methodologies for gender mainstreaming will also be integrated to assist PGs in identifying gender issues and formulating strategies for addressing them both at PG and household level. The project will thus strengthen PGs to reach organizational, management, and financial sustainability and to empower them to deliver effective services to their members. Training of PG representatives in organizational, governance, and entrepreneurship skills will include the following areas: (i) Leadership and governance, (ii) Business management (e.g., bookkeeping, liquidity management, and simple financial reporting); (iii) Participatory design of simple business plans, specifying their strategy adapted to their socio-economic environment, modalities of implementation, and simple financial projections; and (iv) Negotiation skills with buyers for collective marketing of farmers’ produce, and input suppliers for bulk purchases of inputs. The component will build on Component A, by working with the producer groups to increase their market orientation, complementing the productivity enhancing skills acquired through the FFS approach.

Sub-component B2: Market linkages through Productive Alliances (PAs)



24. This sub-component aims to consolidate the linkages between PGs and market actors, including micro, small and mid-size enterprises (MSMEs), traders, and Microfinance Institutions (MFIs) by: i) deepening the understanding of agriculture value chains and markets in the targeted areas, ii) developing a multi-stakeholder dialogue platform bringing together the producer base and market actors, iii) the provision of financing for simple BPs developed under Sub-Component B1 through a MG scheme, and iv) financing the upgrade/rehabilitation of critical market infrastructure. The MG scheme will be implemented to finance eligible BPs that demonstrate real potential for marketing and income generation for the target beneficiaries, contribute to building climate resilience, and include investments to enhance food safety. To facilitate the inclusive development of the targeted value chains, this sub component will finance the following activities:

25. **Technical Assistance (TA) to conduct value chain analyses, market studies, and diagnostics in the targeted rural municipality clusters.** This will help identify the commodities with the greatest market potential and improve the understanding of supply and demand by identifying, characterizing, and mapping producers, potential buyers, input and service providers, MFIs, barriers to and lessons learnt from earlier initiatives, etc. The information thus generated will feed into an ICT-based information system on markets, prices, services, financial products, and technology that will be open to all key value chain actors in the targeted areas.

26. **Establish a multi-stakeholder dialogue platform among key actors in value chains.** A multi-stakeholder dialogue platform will be developed to provide a mechanism for identifying key issues, setting priorities, and coordinating actions along agriculture commodity chains. This activity will also support knowledge sharing and exposure trips for selected PG representatives to disseminate information related to good practices that can be replicated, market opportunities, and results.

27. **Financing simple business plans through matching grants:** The matching grants will be accessible to eligible smallholder producers in groups or cooperatives, to finance the simple business plans developed under sub-component B1. The matching grant instrument is included in the project based on indications that market failures limit credit access to small-scale emerging farmers who are willing to invest some of their own capital in productive on-farm investments in crop and livestock. In addition, the grants provide a unique opportunity to support and incentivize access to privately provided technical services where needed. Eligible BPs may include, inter alia, group/cooperative infrastructure (e.g., crop and livestock commodities storage facilities, collection centers, produce cooling and processing equipment, packaging equipment, etc.), improved crop varieties and breeds (e.g. drought resistant crop varieties, breeds and technologies tested and validated under Component A, etc. The BPs will be financed through a combination of project financing (grant element), a contribution from the PGs (in cash), and, where feasible, short to medium-term credit provided by participating MFIs. The mobilization of the grant element will be subject to the mobilization of the PGs own resources and the credit extended by the MFIs (where applicable). A separate MG manual will be developed and included as an annex to the PIM. A conditionality mechanism will be built into the MG to ensure that the sub-projects do not generate negative externalities, and will be screened for potential adverse effects on the environment and public health, as well as to ensure minimum gender participation within the grant recipients (65% of all grant recipients will need to be female). In order to guide MFIs involvement, the matching grant mechanism will adhere to the following principles, which will be detailed in the PIM: i) participating MFIs will need to pass due diligence as prescribed by the GoN and the World Bank; ii) MFIs will be pre-screened to ascertain solvability; iii) MoU needs to be signed between PIU (GoN) and participating MFIs, specifying the service fee and joint monitoring and supervision by PIU and MFI; iv) Interest rate will be the market rate to avoid distortionary effects; and v) In case of failure/default,



MFIs can pursue loan recovery through first charge over beneficiary assets.

28. The eligibility criteria will include a financially and technically sound PG business plan detailing the investment costs and financing; the operational and general costs; technologies considered; targeted markets and input/output price assumptions; organizational and capacity-building needs and proposed activities; operational, environmental; and social risks and mitigation measures. A key objective of the matching grant scheme is to consolidate the productive partnerships with buyers and agri-business; for that reason, project resources earmarked for matching grants will be allocated contingent on the existence of (in-) formal off-take arrangements with buyers, as the matching grants should be allocated to match existing demand of buyers and not be based on market forecasts or speculation. The project envisages to establish Municipality Cluster Level Selection Committee (MCLSC) to undertake the screening of ideas of Sub-Projects/Business Plans from the beneficiary producers' groups. The selection committee will comprise of members from the Cluster Office, Municipalities, local farmers' association, and MFIs that will provide financial support to fund eligible proposals. It is expected that the beneficiaries will contribute matching fund of around 15% of the total cost of the scheme. This cost sharing (cash or kind) strategy is proposed considering the poverty and vulnerability level of the target groups. The MG provision (grant element will be maximum \$5,000) aims to enhance participation of a greater number of Producer Groups.

29. **Critical market infrastructure:** The project will invest in market infrastructure rehabilitation (“haat bazaars”) to support a better integration of smallholders in agriculture value chains and facilitate their access to market opportunities. The exact locations of these investments will be based on a Market Infrastructure Inventory and Needs Assessment to ascertain a clear need or public good requirement which is not being met by other infrastructure projects currently under implementation. These investments will particularly focus on market rehabilitation which complement the business plans funded under the matching grant scheme. Operation and maintenance (O&M) activities and related capacity building will be provided for the rehabilitated market infrastructure. The project will train farmer groups to manage these facilities to ensure their profitability and sustainability. In addition, the project will facilitate the quality control and certification of the above infrastructure per relevant standards and requirements. The provision of this market infrastructure will be done through grant agreements taking into account contributions from farmers and farmer groups. It is expected that these investments will also promote the adoption of advanced quality management systems by exposing the PGs to model markets, handling and processing facilities. This will improve the overall food safety and hygiene conditions across the commodity chain through demonstration effects. These investments in different locations across the project area will thus serve as learning centers for different stakeholders to work together in improving basic market infrastructure and marketing management practices and replicate the successful lessons.

COMPONENT C: Improving Nutrition Security (US\$ 5 million).

30. This component aims to help address the underlying causes of malnutrition by making the food system responsive to these causes with the view to providing adequate, safe, diversified and nutrient-rich food. To leverage income, productivity, and women’s empowerment impact pathways for improved dietary diversity and care practices, the project will support a set of activities at community and local government level. Under the new federalized context, the project will support an enabling environment for improved service delivery including technical backstopping and strengthened coordination. Building extensively on the experience gained from ASFP and the World Bank supported Social Safety Nets-Poverty Alleviation Fund (SSNP-PAF) pilot on nutrition interventions, the project will work directly with communities including Female Community Health Volunteers (FCHVs) using a community-driven, skill-based learning approach known as 'Nutrition Field School' to remove barriers for improved dietary and care practices by supporting a package of inputs and services complemented by



behavior change communication for improved utilization of available foods, care practices, hygiene and sanitation, food safety, access to public health services, etc. This is summarized in two sub-components: Institutional Capacity Strengthening and Nutrition Field Schools.

Component C1: Institutional Capacity Strengthening

31. In order to systematically address the underlying determinants of malnutrition, institutional coordination and capacity development is required. In most sub-national government bodies, the health sector has identified key nutrition issues but often not the immediate or underlying causes. With a long term perspective of improving local food systems for improved dietary and care practices and supporting smallholders to graduate from subsistence agriculture, the existing subnational nutrition and food security networks under MSNP II will require strengthening to effectively coordinate efforts between nutrition-sensitive and nutrition-specific sectors. Furthermore, public outreach services (including livestock, agriculture, food safety and health), Female Health Community Volunteers and social mobilizers for mother's groups will require support to come to a common understanding of local nutrition impact pathways and to delineate respective roles and responsibilities according to MSNP II. This will be important for the effective delivery and sustainability of sub-component C2 as Nutrition Field School groups will be encouraged to avail technical backstopping to make best use of the granted package of inputs and services by the project.

32. The sub-national government coordination networks and public outreach delivery, the nutrition and food security network under MSNP II will be supported with the aim of closing existing dietary gaps and improving issues such as food safety. A participatory diagnostic of the causes of malnutrition will be facilitated in each sub-national entity as well as the identification of respective roles and responsibilities according to MSNP II. This is crucial to address the range of underlying causes of malnutrition that may include issues such as women's drudgery and work/time burden, availability of animal-sourced and nutrient-dense foods, food safety etc. Secondly, building on the AFSP model, a nutrition module will be included in the Training of Trainers for public outreach services to strengthen their capacity to deliver services with the aim of improving nutrition. Lastly, an assessment of locally available and utilized/underutilized nutrient-rich foods (including food composition analysis as required) and a qualitative assessment of local dietary practices will be conducted to adapt dietary recommendations and recipes to hill and terai areas.

33. With support of technical assistance (TA), the subnational network for Nutrition and Food Security's as well as for public outreach services' capacity will be enhanced through a facilitated participatory training and learning approach for a malnutrition diagnostic and identification of respective roles and responsibilities. Secondly, TA will be further availed to integrate a nutrition module into the larger package of sub-national service providers supported by the project.

34. In terms of analytical work, DFTQC will continue to support the project as was done under AFSP, to adapt recommendations and recipes to the project areas based on local dietary habits, food environment, and energy needs. This will be undertaken in coordination with the Ministry of Health and may include a food exchange list (which may require limited food composition analysis).

Component C2: Nutrition Field School (NFS) and Home Nutrition Gardens (HNG)

35. The experience of the AFSP has demonstrated that an integrated community-based approach is a successful model for addressing the multiple underlying causes of malnutrition faced by rural populations in diverse agro-ecological zones. Under this new project, a skill-based learning approach, known as Nutrition Field



Schools (NFS), will be supported in each target communities, following behavior change theory in order to remove barriers and identify catalysts for improved food-based nutrition practices. Building on Nepal's long tradition of users' group formation and social mobilization, the project will work with and strengthen current community institutions, particularly women's groups. Since 1988, each ward has been supported by a Female Community Health Volunteer (FCHV), who acts as a bridge between the community and health facilities to enhance access to health services and support family planning (Cunningham et al., 2017). FCHV's, as volunteers, have served as frontline workers for many projects, mainly focused on nutrition-specific support but also increasingly nutrition-sensitive issues. Cognizant of this workload, additional support will be required to further mobilize expertise on issues related to addressing underlying causes (including livestock, agriculture etc).

36. The target group of the NFS, will include existing mother's groups, the FCHV, and women of reproductive age, particularly those in the 1,000 days as well as influencers/change agents. A NFS curriculum will be developed, including materials already developed under the AFSP. A cadre of facilitators will be trained and their first assignment will be to conduct a participatory identification of barriers faced at community level for improving women's dietary diversity and complementary feeding practices. Based on prioritized behavioral barriers and possible solutions identified, each selected community will submit a proposed plan for inputs and services (from a package similar to AFSP) such as iron and vitamin-rich seeds for home gardens, fast maturing fruit sapling material, livestock and backyard poultry to improve access to animal-based foods, small processing technologies to grind for example complementary cereal mix, or bore holes for sanitation and watering of homestead gardens. Amenities required to reduce drudgery for women may also be part of these proposals as well as child care facilities. The proposals will be financed by the project on an output-basis and will be implemented by the NFS members with technical backstopping from local service providers (mobilization for these services will be supported by the community mobilizers/facilitators and TA for technical backstopping will be included in sub-component C1 as indicated above). Lastly, the project will advocate for the promotion of a balanced food plate as research is currently ongoing.

37. The NFS will follow a theory of behavior change, focusing on skill-based nutrition education over the course of a two year period including sessions on the identification of locally-available nutrient-dense foods (for example moringa in the Terai), cooking demonstrations, promoting biofortified crops as relevant, food safety, home nutrition garden (HNG), hygiene and WASH education, complementary feeding practices, and promoting households to avail government services, particularly health services for deworming, supplementation, preparing fortified mixes, institutional delivery, antenatal and post-natal consultations, vaccinations etc. The FCHV will play a crucial role to follow-up with house visits to ensure adoption of good practices. Due to the importance of engaging a strong cadre of frontline workers, digital M&E will be important to follow-up and cater BCC approaches accordingly, including the prioritization of key behaviors. To complement this package of interventions, Information Education Communication (IEC) materials will be further disseminated via a number of media platforms (similar to AFSP) and a pilot will be conducted on integrated school garden linked with nutrition education.

38. Implementing staff will be supported by technical assistance (TA) to deliver the above activities and receive a series of Training of Trainers (ToT), similar to AFSP. Each NFS will run for two years and each locality will have two NFSs within the project period in order to engage at least 2 cycles of 1,000 day women. One social mobilizer will be responsible for 4-5 communities and deliver a training in each at least once per month according to curriculum (or mobilize respective outreach staff to deliver training). TA will support the delivery of the following activities:



- a) NFS curriculum development, building on existing materials developed under the AFSP and with inputs from agriculture, livestock, food safety, and health sectors, a NFS curriculum will be developed. Simultaneously, existing IEC materials for skill based nutrition education and behavior change communication related to the topic described above will be adopted and printed.
- b) A facilitator for maximum of 5 communities will be hired and trained on the curriculum. The facilitators will establish the NFS by registering mother's groups, the FCHV, and women of reproductive age, particularly those in the 1,000 days and influencers/change agents/champions in the school. The role of the facilitators will be:
 - ii. To engage with the NFS members and identify barriers to access for diversified food and help NFS to submit proposals of maximum value US\$3000 (to be determined) for package of services needed to remove those barriers.
 - iii. To impart skill based nutrition education for behavior change. In the second round, champions who participated in the first batch of training will be given a co-facilitator's role and offered the opportunity to share lessons in neighboring villages.

39. To provide supportive supervision to the NFS members by seeking help from relevant government agencies for technical backstopping to implement their proposals for the duration of the NFS and report back to the project. The proposals submitted by the NFS will be scrutinized by the subnational project supporting units with the help of relevant stakeholders, if necessary, and approved for funding or sent for revision. The fund will be transferred in two tranches to the NFS based on outputs. The first tranche could be given for a sound proposal and the second tranche could be given after submission of a completion report verified by the social mobilizer/facilitator working in the respective community.

Component D: Project management, communication and M&E (US\$ 3.7 million).

40. Component D's main objectives are to: (i) ensure effective strategic and operational planning, implementation, and Monitoring & Evaluation of project activities, and attendant efficient use of funds, as well as coordination of interventions across components A, B and C implemented by participating stakeholders and strategic partners (e.g. FAO); (ii) evaluate the Project's outcomes and impacts on beneficiary groups, with special focus on mid-term and final results; and (iii) communicate efficiently to various public and private entities on project activities, outcomes, best practices and lessons learnt.

41. This component will contribute to attainment of the PDO by ensuring that (i) interventions undertaken under the project are properly planned, coordinated and aligned with project design and development objectives; (ii) implementation and institutional arrangements and activities are in line with relevant fiduciary and safeguards policies, procedures and standards; and (iii) there is due communication, monitoring, oversight and reporting of project implementation and the resulting outputs and outcomes. The project will finance the operation of (i) a Project Management Unit (PMU) in Kathmandu, and (ii) State Level Coordination Committees (SLCCs) in each project state. At the municipality level, major implementation responsibilities will be through the Municipality Cluster Project Support Units (MCPSUs) established to facilitate stakeholder coordination, project orientation and coordination of joint planning and participatory monitoring, involving stakeholders. Activities to be financed under this component include: (i) establishing and supporting project units at national, state, and municipality levels; (ii) specialized support services relating to key activities such as external audit, financial accounting, procurement, M&E, and communication; and (iii) training of staff involved in project implementation.

COMPONENT E: Contingency Emergency Response (US\$0 million).



42. In accordance with the World Bank’s operational policy (OP10.00, paragraphs 12–14), for situations of urgent need of assistance that may arise during the life of this project, this component will allow for rapid reallocation of project proceeds in the event of a natural or man-made disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact. To trigger this component, the government must declare an emergency or provide a statement of fact justifying the request for the activation of the use of emergency funding. To allocate funds to this component, the government may request the Bank to reallocate project funds to support response and reconstruction. If the World Bank Group agrees with the determination of the disaster and associated response needs, this proposed component would allow the government to request the Bank to re-categorize and reallocate financing from other project components to cover emergency response and recovery costs. This component could also be used to channel additional funds should they become available as a result of an emergency.