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Report No:PAD2706

INTERNATIONAL DEVELOPMENT ASSOCIATION

Project Appraisal Document

ON A

PROPOSED GRANT

IN THE AMOUNT OF US$22.7 MILLION

TO

NEPAL

FOR A

FOOD AND NUTRITION SECURITY ENHANCEMENT PROJECT

September 4, 2018

Agriculture Global Practice

South Asia Region

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| CURRENCY EQUIVALENTS  |
| (Exchange Rate Effective June 26, 2018) |
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| --- | --- |
| Currency Unit = | Nepalese Rupees (NPR) |
| NPR 109.04 = | US$1 |
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 |
| FISCAL YEAR |
| July 16 – July 15 |

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| ABBREVIATIONS AND ACRONYMS |

|  |  |
| --- | --- |
| ADS | Agriculture Development Strategy |
| AFSP | Agriculture and Food Security Program |
| BCC | Behavior Change Communication |
| BMI | Body Mass Index |
| BP | Business Plan |
| CBS | Central Bureau of Statistics |
| CGIAR | Consultative Group on International Agricultural Research () |
| CNAA | Capacity Needs Assessment |
| CPF | Country Partnership Framework |
| CRI | Corporate Result Indicator |
| CSA | Climate Smart Agriculture |
| CIMMYT | Centro International de Mejoramiento de Maiz y Trigo (International Maize and Wheat Improvement Center)  |
| DA | Designated Account |
| DFTQC | Department of Food Technology and Quality Control |
| DIME | Development Impact Evaluation |
| DLS | Department of Livestock Services |
| DoH | Department of Health |
| EHFP | Enhanced Homestead Food Production  |
| EIRR | Economic Internal Rate of Return |
| ERR | Economic Rate of Return |
| ESIA | Environmental and Social Impact Assessment  |
| ESMF | Environmental and Social Management Framework |
| EX-ACT | Ex-Ante Carbon-Balance Tool |
| FANSEP | Food and Nutrition Security Enhancement Project |
| FAO | Food and Agriculture Organization |
| FCHV | Female Community Health Volunteer  |
| FFS | Farmer Field School |
| FIES | Food Insecurity Experience Scale  |
| FIRR | Financial Internal Rate of Return |
| FM | Financial Management |
| FMIS | Financial Management Information System |
| FSN | Food Security and Nutrition |
| FY | Fiscal Year |
| FYM | Farm Yard Manure |
| GAFSP | Global Agriculture and Food Security Program |
| GAP | Good Agriculture Practice |
| GDP | Gross Domestic Product |
| GESI | Gender Equity and Social Inclusion |
| GHG | Greenhouse Gas |
| GoN | Government of Nepal |
| GRM | Grievance Redress Mechanism |
| GRS | Grievance Redress Service |
| HDI | Human Development Index |
| HKI | Heller Keller International |
| HNG | Home Nutrition Garden |
| ICM | Integrated Crop Management |
| ICT | Information and Communication Technology |
| IEC | Information, Education, and Communication |
| IFR | Interim Financial Report |
| IPM | Integrated Pest Management |
| IRRI | International Rice Research Institute  |
| IS | Implementation Support |
| IUFR | Interim Unaudited Financial Report |
| IWRMP | Integrated Water Resources Management Project |
| M&E | Monitoring and Evaluation |
| MAD | Minimum Acceptable Diet |
| MFI | Microfinance Institution |
| MG | Matching Grant |
| MIS | Management Information System |
| MoALD | Ministry of Agriculture and Livestock Development |
| MoFAGA | Ministry of Federal Affairs and General Administration |
| MoHP | Ministry of Health and Population |
| MOU | Memorandum of Understanding |
| MSMEs | Micro, Small, and Medium Enterprises |
| MSNP | Multi-Sector Nutrition Plan |
| NARC | Nepal Agricultural Research Council |
| NDHS | Nepal Demographic and Health Survey |
| NFS | Nutrition Field School |
| NGO | Nongovernmental Organization |
| NLSIP | Nepal Livestock Sector Innovation Project |
| NPV | Net Present Value |
| NRM | Natural Resources Management |
| NSB | National Seed Board |
| O&M | Operation and Maintenance |
| OAG | Office of the Auditor General |
| PA | Productive Alliance |
| PAF | Poverty Alleviation Fund |
| PCU | Project Cluster Unit |
| PD | Project Director |
| PDO | Project Development Objective |
| PG | Producer Group |
| PIM | Project Implementation Manual |
| PMU | Project Management Unit |
| PO | Producer Organization |
| PPSD | Project Procurement Strategy for Development |
| P-RAMS | Procurement Risk Assessment Management System |
| RCT | Randomized Controlled Trial |
| SC | Steering Committee |
| SDG | Sustainable Development Goal |
| SLCC | State-Level Coordination Committee |
| SOE | Statement of Expenditure |
| SORT | Systematic Operations Risk-Rating Tool  |
| SSNP | Social Safety Nets Project |
| TA | Technical Assistance |
| TCC | Technical Coordination Committee |
| ToT | Training of Trainers |
| TTL | Task Team Leader |
| UN | United Nations |
| UNICEF | United Nations Children's Fund |
| USAID | U.S. Agency for International Development |
| WASH | Water, Sanitation and Hygiene  |

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| --- | --- |
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| DATASHEET |

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| **BASIC INFORMATION** |

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| BASIC\_INFO\_TABLE |
| 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** |
| [ ] Multiphase Programmatic Approach (MPA) | [ ] Contingent Emergency Response Component (CERC) |
| [ ] Series of Projects (SOP) | [ ] Fragile State(s) |
| [ ] Disbursement-linked Indicators (DLIs) | [ ] Small State(s) |
| [ ] Financial Intermediaries (FI) | [ ] Fragile within a non-fragile Country |
| [ ] Project-Based Guarantee | [ ] Conflict  |
| [ ] Deferred Drawdown | [ ] Responding to Natural or Man-made Disaster |
| [ ] Alternate Procurement Arrangements (APA) |
|  |
| Expected Approval Date | Expected Closing Date |
| 27-Sep-2018 | 30-Jun-2023 |
| Bank/IFC Collaboration  |
| No |

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| **Proposed Development Objective(s)** |

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| 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. |

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| **Components** |

|  |  |  |
| --- | --- | --- |
| **Component Name** | **Cost (US$, millions)** |  |
| Climate and Nutrition Smart Agriculture 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 |  |

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| **Organizations** |

|  |  |
| --- | --- |
| Borrower:  | Nepal |
| Implementing Agency: | Ministry of Agriculture and Livestock Development (MoALD) |

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| **PROJECT FINANCING DATA (US$, Millions)** |

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| **SUMMARY-NewFin1** |
| **Total Project Cost** | 28.70 |
| **Total Financing** | 28.70 |
| **of which IBRD/IDA** | 0.00 |
| **Financing Gap** | 0.00 |
|  |

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| **DETAILS-NewFinEnh1** |
| **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 |
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| **INSTITUTIONAL DATA** |

|  |  |
| --- | --- |
| **Practice Area (Lead)** | **Contributing Practice Areas** |
| Agriculture | Health, Nutrition & Population |

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| **Climate Change and Disaster Screening** |
| This operation has been screened for short and long-term climate change and disaster risks |

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| **Gender Tag** |
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| **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 |

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| **SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)** |

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| --- | --- |
| **Risk Category** | **Rating** |
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| --- | --- |
| 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 |

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| --- | --- |
| 6.Fiduciary | ⚫⚫⚫⚫⚫Substantial |

|  |  |
| --- | --- |
| 7.Environment and Social | ⚫⚫⚫⚫⚫Moderate |

|  |  |
| --- | --- |
| 8.Stakeholders | ⚫⚫⚫⚫⚫Moderate |

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| --- | --- |
| 9.Other | ⚫⚫⚫⚫ |

|  |  |
| --- | --- |
| 10.Overall | ⚫⚫⚫⚫⚫Substantial |

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| **COMPLIANCE** |

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| **Policy** |
| Does the project depart from the CPF in content or in other significant respects? |
| [ ] Yes [✓] No |
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| Does the project require any waivers of Bank policies? [ ] Yes [✓] No |
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| **Safeguard Policies Triggered by the Project** | **Yes** | **No** |

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| 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 |   | ✔ |

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| **Legal Covenants** |

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|  Sections and Description |
| The Recipient shall, within 2 months of the Effective Date, establish and thereafter maintain, throughout the period of implementation of the Project, the Project Steering Committee with functions, composition, and resources acceptable to the Association, as set forth in the Project Implementation Manual (PIM), to provide policy guidance and support to the Project Management Unit (PMU) and carry out inter-ministerial/inter-agency coordination to facilitate Project implementation |
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|  Sections and Description |
| The Recipient shall maintain, throughout the period of implementation of the Project, a PMU, within the Ministry of Agriculture and Livestock Development (MoALD), headed by a Project Director supported with adequate professional and administrative staff in numbers and with qualification and experience and under terms of reference satisfactory to the Association, and provided with resources and powers as shall be required for it. |
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|  Sections and Description |
| The Recipient shall, by no later than two (2) months after the Effective Date, have prepared and adopted the Project Implementation Manual, in a manner and substance satisfactory to the Association. |
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| **Conditions** |

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| 1. STRATEGIC CONTEXT
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| A.Country Context |

1. **Nepal is a landlocked, low-income country with varied agroecological 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$1,004 in 2018.About 80 percent of Nepal’s population reside in rural areas, and 66 percent are engaged in agriculture. Nepal ranks 197 in terms of gross domestic product (GDP) per capita and 145 out of 186 countries in terms of Human Development Index (HDI).
2. **A new government, backed by a historic majority in Parliament, took 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 Government composition at the center. At the subnational level, funds, functions, and functionaries hitherto managed by the central, district, and village authorities have moved to the seven new states and 753 local bodiesfor 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 it is declining as a share in the economy, agriculture continues to play a large role, contributing 30 percent of valueadded. The service sector has grown in importance, accounting for half of the valueadded in recent years. In general, industry 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.However, remittance, as a share of GDP, has recently been on a declining trend due to lower oil prices that have affectedeconomic prospects in those countries with large Nepalese migrants. 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 between 2003/04 and 2010/11, and in 2010/11, 15 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, as evidenced by the 2015 earthquakes which were followed by trade disruptions resulting in GDP growth of 0.6 percent in 2016, the lowest in 14 years.
4. Data released by the Central Bureau of Statistics (CBS, consisting of a revision of the FY2017 growth rate and an updated estimate for FY2018) show that growth has been strong despite the external shock from floods.In mid-August 2017, the worst flood in decades destroyed 64,000 ha of standing crop, contributing to an estimated reduction in the agriculture growth rate from 5 percent to 2.8 percent (in FY2017 and FY2018, respectively).This contributed to a reduction in overall GDP growth from 7.9 percent to 6.3 percent in FY2018.Government revenue continued to perform well.However, spending also picked up 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.Also, spending pressures have increased in the first half of FY2018 due to fiscal transfers and spending on elections, capital goods, and federalism.High inflation in the past two years has moderated sharply due to moderating inflation in India and improving supply-side constraints.Inflation slowed to 4.2 percent (year on year) in December 2017 but increased to 6 percent (year on year) in March 2018 owing to a sharp uptick in vegetable prices.Meanwhile, credit growth slowed in early 2018 to 16.7 percent (year on year) compared to its peak of 31.9 percent in 2017, but deposits growth continued to decline, pushing up interest rates. On the external side, the cumulative effect of a sharp trade balance deterioration and a slow growth of remittances is putting significant pressure on the current account. Economic activity has been affected by the worst floods in decades particularly affecting agriculture output. This contributed to a slowdown in growth from its peak of 7.9 percent in FY2017 to an estimated 6.3 percent in FY2018.

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| B. Sectoral and Institutional Context |

1. **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 42percent in 1994/95 to about25percent in 2015 (ADS[[1]](#footnote-3)), mainly driven by raising agricultural incomes in rural areas.However, most of this income growth can be attributed to increased commodity prices (78 percent), rather than productivity increases (22percent).
2. **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 postharvest storage infrastructure, incurring a loss of nearly NPR 10 billion, with more than 50percent 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 percent in FY2015 and 1.3 percent in FY2016 versus annual growth rates for agriculture GDP over the previous decade of about 3 percent per year.
3. **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 76percent in 1998/99 to 74percent in 2008, and women workers occupied a majority (84percent) of that share (CBS 2011). The recently conducted Country Gender Assessment of Agriculture and Rural Development (FAO 2017) in Nepal shows that more than three-quarters (76.4percent) of women are engaged in agriculture work as unpaid family labor withonly 10.4percent receiving in-kind payment and 13.2percent receiving cash and in-kind payments.Furthermore, only 31percent of female farmers received extension services compared to 69percent of male farmers.
4. **Theagriculture sector faces multifaceted challenges, including, among others,** (a) low availability of good quality seed, improved animal breeds, and other farmer-level inputs; (b) thinly spread and inadequate research and extension support and agri-met services with weak farmer linkages; (c) low investment in productive assets, including supplementary irrigation infrastructure to reduce raindependence; (d) poor market linkages due to high transfer and transaction costs and weak market leverage and access to rural financial and insurance services by small farmers; and (e) lack of resilience of farmers to shocks due to disease outbreaks, climate and market-related shocks, and weak nutrition sensitiveness of agricultural interventions.
5. **Nepal’s ADS provides the main policy framework for the sector.** The ADS calls for a 4 percent growth in agriculture GDP by 2020 and 6 percentby 2025, by intervening across four strategic pillars: (a) improving governance, (b) increasing productivity, (c) supporting profitable commercialization, and (d) enhancing competitiveness.The ADS is aligned with the Government’s 14th Periodic Plan (2016/17–2018/18) and the Multi-Sector Nutrition Plan II (MSNP II, 2018–2022).The 14th Periodic Plan aims to make the agriculture sector competitive and move toward self-reliance through sustainable and commercial agriculture development. MSNP II guides the investment of Government of Nepal (GoN) in nutrition and details the roles of respective ministries, including the Ministry of Agriculture; Ministry of Livestock; Ministry of Health and Population (MoHP); Ministry of Education; Ministry of Federal Affairs and Local Development; Ministry of Urban Development;and Ministry of Women, Children, and Social Welfare under the leadership of the National Planning Commission. The ADS also includes a flagship program on food security and nutrition (FSN), identifying priority activities to improve FSN across the country.The ranking of Nepal under the Hunger and Nutrition Commitment Index[[2]](#footnote-4) (8 out of 45 countries) further testifies to the strong commitment of the GoN to tackle hunger and malnutrition.

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| C. Relevance to Higher Level Objectives |

1. **This Global Agriculture and Food Security Program (GAFSP)-financed project is well aligned with the three focus areas of the FY2019–2023 Nepal Country Partnership Framework (CPF),[[3]](#footnote-5)** 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, privatesector-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 also aligns 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).
2. **The project is also aligned with the World Bank’s Climate Change Action Plan,** which explicitly highlights climate-resilient agriculture and water management as key priorities for climate adaptation in the South Asia Region. The project will directly contribute to World Bank Group’s commitment to increase the climate-related share of its portfolio from 21 percent to 28percent by 2020 in response to client demand.

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| 1. **PROJECT DESCRIPTION**
 |
| A. Project Development Objective |

**PDO Statement**

1. **The PDO isto enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder farming communities in selected areas of Nepal**.
2. **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 ‘triplewins’ through (a) sustainable increase in productivity and farm incomes (food security), (b) enhanced resilience to impacts of climate change and variability (adaptation), and (c) reduced greenhouse gas (GHG) emissions per unit of product and increased carbon sequestration (mitigation).

**PDO-Level Indicators**

* Farmers adopting improved agricultural technologies (including CSA) of which female (CRI)[[4]](#footnote-6)
* Increased crop and animal productivity by direct beneficiaries (disaggregated by crop and animal species)
* Increased household income (farm and off-farm) (GAFSP core indicator, gender disaggregated)
* Improved score on the Food Insecurity Experience Scale (FIES[[5]](#footnote-7)) by direct beneficiaries (gender disaggregated)
* Improved dietary intake for
	+ - Pregnant and nursing mothers; and
		- Children between 6 and24 months

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| B. Project Components |

1. **Component A: Climate and Nutrition Smart Agriculture Technology Adaptation and Dissemination (US$7 million).**The objective is to improve productivity and postharvest management of crops and livestock by promoting appropriate climate-smart and nutrition-sensitive technologies through improved extension and research services and efficient dissemination to producers. 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 for effective service delivery at the local level. There are two subcomponents.
2. **Subcomponent A1: Technology Adaptation and Testing.**This will focus on appropriate CSA and nutrition-sensitive agriculture technologies; improved inputs (foundation seeds, drought-tolerant varieties, and animal breeds); and improved agronomic, husbandry, and postharvest practices[[6]](#footnote-8) to enhance resilienceto climatic shocks and trends at the household and landscape level, 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.
3. **Subcomponent A2: Technology Dissemination and Farmer Skills Development.**The objective is to enable farmers to master the management skills (Good Agriculture Practices-GAPs[[7]](#footnote-9)) required for sustainable production diversification and intensification of agriculture practices and postharvest processing, thereby achieving climate resilience and mitigation. Under this subcomponent, the project will support (a) strengthening of advisory services and skill development of agricultural public extension staff and private service providers, (b) streamlined farmer field school (FFS) for crop and livestock production and adoption support, and (c) demonstrations and field days.
4. **Component B: Income Generation and Diversification (US$7 million).**The 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 two sub-components.
5. **Sub-component B1: Strengthening Producer Groups.**This subcomponent aims to organize and strengthen producer groups (PGs) representing the targeted farmers by organizing them around commodities of common interest and enhance their capacity in terms of governance, leadership skills, group dynamics, decisionmaking, problemsolving and risk management, bookkeeping, meeting organization, agricultural seasonal planning considering changing climate trends and risk, marketing, value addition, food safety, preparation of simple business plans (BPs), and simple monitoring and evaluation (M&E).
6. **Subcomponent B2: Market Linkages through Productive Alliances (PAs[[8]](#footnote-10)).**This subcomponentaims to consolidate the linkages between Producer Organizations (POs) and Agri-Business Enterprisessupporting both input and output markets, including micro, small, and medium enterprises (MSMEs), traders, and rural financial institutions through the provision of financing for simple BPs developed under Subcomponent B1.A Matching Grant (MG) scheme will be implemented to finance eligible BPs that demonstrate real potential for marketing and income generation for the target beneficiaries and contribute to building climate resilience, considering efficient energy and resources use, and include investments to enhance food safety.
7. **Component C:Improving Nutrition Security (US$5 million).** This component aims to address the underlying causes of malnutrition by making the food system responsive to these causes to provide adequate, safe, diversified, and nutrient-rich food.This component will consist of two subcomponents.
8. **Subcomponent C1: Institutional Capacity Strengthening.**Based on a capacity needs assessment (CNAA)and a participatory diagnostic of the causes of malnutrition, the project will support subnational government nutrition and food security coordination networks and public outreach delivery in the project areas.
9. **Subcomponent C2: Nutrition Field School (NFS) and Home Nutrition Gardens (HNGs).**Under this subcomponent, a skill-based learning approach, known as NFS, will be supported in each target community, following behavior change theory to remove barriers and identify catalysts for improved food-based nutrition practices and provide packages of inputs and services to target beneficiaries.
10. **Component D: Project management, communication, and M&E (US$3.7 million).**The main objectives are to (a) ensure effective strategic and operational planning, implementation, and M&E 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 (for example,Food and Agriculture Organization of the United Nations [FAO]); (b) evaluate the project’s outcomes and impacts on beneficiary groups, with special focus on midterm and final results; and (c)communicate efficiently to various public and private entities on project activities, outcomes, best practices, and lessons learned.

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| C. Project Beneficiaries |

1. The project will focus on eight vulnerable rural municipality clusters (corresponding to the old ‘districts’) of Nepal, in the (mid-) hills and terai, using the following criteria on the preselected 14 districts in the original proposal: (a) earthquake affected (losses),(b) climate change vulnerability ranking,(c) HDI ranking,(d) incidence of malnutrition,(e) food security status, and (f) 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. Smallholder and marginal farmers who constitute the majority of the poor in Nepal will be prime beneficiaries. The beneficiaries will also include landless families and agricultural wage laborers who will receive skill trainings and may be benefitted in terms of real wages as a result of increased productivity and demand for labor. The nutrition interventions will mainly target households with young children, adolescent girls, and pregnant and lactating women. At least 65percent of the direct beneficiaries are expected to be female.In addition, farmers from adjacent communities are expected to be indirect beneficiaries as they will learn from project-supported farmers, adapt the technologies through farmer-to-farmer extension, and benefit from information delivered by the project.Similarly, rural agricultural laborers, for whom both demand for labor and income generation are expected to go up, will indirectly benefit from the project as farm-level productivity increases.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 to ensure that the set of variables chosen are the best possible ones for beneficiary targeting.

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| D. Results Chain |

1. The project’s components 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 (a) inducing the Nepal agriculture research system to adapt relevant technologies and practices for use by the targeted beneficiaries in their socioeconomic and biophysical environment, taking into account challenges related to climate change and climatic shocks; (b) training and developing skills of public agricultural extension staff and private agricultural service providers, aligning extension efforts and targeted technical assistance (TA) to support the dissemination of these technologies; (c) ensuring adequate supply of quality seed and breed stock at smallholder farmers’ level and strengthening farmers’ capacity and skills to promote effective adoption by farmers; (d) supporting investments in productive and market assets at the beneficiary levelto enhance resource and energy use efficiency, profitability and resilience to climate change and shocks; and (e) ensuring that production and profitability gains translate into consumption of a more diverse diet and improved nutrition outcomes by behavior change communication (BCC) and providing additional nutrition-related packages of inputs and services.Lessons learned from the Agriculture and Food Security Program (AFSP) and similar projects have 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 BCC 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.A schematic depiction of the project’s results chain is provided in section VI.

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| E. Rationale for Bank Involvement and Role of Partners |

1. The project is financed by the GAFSP, which is a multidonor financing mechanism. Under the rules of GAFSP engagement, the World Bank has been designated by the GoN as the supervising entity for this project, given its extensive country experience of investment in development sectors and its strong position to support the GoN for increased, inclusive, and sustainable growth and development in Nepal. The World Bank has successfully provided support for investments in agriculture, rural development, food and nutrition security, and health sector projects and programs in Nepal and can draw from its vast international and regional experience, in addition to the World Bank’s convening power. TheWorld Bank’s technical support for project management, M&E, and partnership experience with different government agencies and other development partners continues to be instrumental in the country. As such, the project has been prepared and implemented in accordance with the rules and procedures of the World Bank. The FAO, as a development partner, has been closely involved in the original GAFSP proposal prepared by the GoN. The GoN has indicated that there will be a role for the FAO as a sole source TA provider during project implementation on account of the FAO’s knowledge, experience, and technical expertise in the agriculture sector of Nepal.Other partners, including the European Union (EU), U.S. Agency for International Development (USAID), Action Aid, and other development partners have also supported the preparation of this project.USAID is financing a separate operation in the rural areas of Nepal under its Feed the Future initiative. The project willtherefore continue to coordinate and ensure convergence of interventions proposed under this project with those under the USAID and other donor-funded operations.

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| F. Lessons Learned and Reflected in the Project Design |

1. **The project will build on the achievements and lessons learned from the current GAFSP in Nepal.**First, FFSs for instance were found to be a successful approach for disseminating new techniques of farming, testing innovations, and integrating new ideas on good agriculture or animal husbandry practices. Moreover, the 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 BCC interventions. Third, village model farms and HNGs have been effective in engaging women groups in the production of vegetables high in micronutrients and establishing HNGs 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 three 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.
2. **The implementation of other agriculture projects in Nepal also provided valuable lessons to the design of the proposed project** (that is,Project for Agriculture Commercialization and Trade,Integrated Water Resources Management Project[IWRMP], Poverty Alleviation Fund[PAF], USAID’s Suaahaara project, Sunaula Hazar Din-Community Action for Nutrition Project,Heller Keller International’s Enhanced Homestead Food Production [EHFP]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 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 MG scheme can effectively assist small-scale producers to build their assets and increase their productivity.
3. **Other lessons pertinent to the design of this project come from the World Bank’s experience in financing PAs** 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, among others (a) the importance of supporting initiatives to enhance production and productivity; (b) the need for strong marketing and market infrastructure; (c) the importance of well-targeted, sustained TA; and (c) the need to support both the quantity and quality of production while improving access to markets and credit to consolidate the productive investments. The experience with PAsin Latin America and elsewhere also revealed that the POs were most successful when they had a collective production and marketing strategy, defined in a BP that included marketing arrangements for the produce (for example, with a trader or an agro-processing firm). These BPs 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.

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| 1. IMPLEMENTATION ARRANGEMENTS
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| A. Institutional and Implementation Arrangements |

1. The implementation arrangements will follow the existing arrangements for the recently closed 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 and Livestock Development (MoALD) will be the executing ministry and will work closely with the Ministry of Health and Population (MoHP) to implement the project. At the central level, the project will include (a) the existing Agriculture and Food Security Program (AFSP) Steering Committee (SC), strengthened by a representative of the Ministry of Federal Affairs and General Administration (MoFAGA), to provide strategic oversight and guidance; (b) a Technical Coordination Committee (TCC) to provide technical guidance and recommendations to the SC; and (c) a Project Management Unit (PMU) for day-to-day project administration and management. At the decentralized level, the project will have (a) State-level Coordination Committees (SLCCs)to ensure cross-sectoral coordination and quality assurance at the state level and (b) Project Cluster Units (PCUs) 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 the Nepal Agricultural Research Council (NARC);specialized technical departments (Department of Agriculture, Department of Livestock Services [DLS], Department of Irrigation, Department of Health Services, Department of Food Technology and Quality Control [DFTQC], and so on); other relevant public agencies (for example, National Seed Board [NSB]); and nongovernmental organizations (NGOs). All requisite short- or long-term consultants will be appointed to support the project units at various levels.

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| B. Results Monitoring and Evaluation (M&E)Arrangements |

1. The existing M&E system of the recently closed 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 toward achieving the specific milestones will be tracked as stipulated in the Results Framework (section VI). Furthermore, the PMU, with inputs from the PCUs, will produce Implementation Progress Reports per quadrimester.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 impact evaluation-related activities through the necessary baseline, midterm, 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 midterm evaluation will be conducted halfway through the project lifecycle and an Implementation Completion and Results Report no later than six months afterproject closing. The Project will ensure that gender considerations and citizen engagement are fully integrated in impact evaluation studies and will engage local beneficiaries to take part in the midterm and final evaluations.

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| C. Sustainability |

1. 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 high on the development agenda of the GoN, with increased budgetary allocations toward this sector. The Project is fully aligned with the GoN’sADS, and its operational modality is designed in 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 by embedding delivery mechanism in the local systems and 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, conducting 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, to address prevailing vulnerabilities to climate change in Nepal, the project will support Climate Smart Agriculture (CSA) productivity growth and proposes to do so by stimulating farmers to validate CSA technology options in 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 feedback mechanism will ensure that the technology supply chains (from research to market) are aware of farmers’ choices and preferences.

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| 1. PROJECT APPRAISAL SUMMARY
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| A. Technical, Economic and Financial Analysis |

1. **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 interlocking constraints to climate and nutrition smart agricultural development in the targeted areas by (a) inducing the Nepal agriculture research system to adapt relevant technologies and practices for use by the targeted beneficiaries in their socioeconomic and biophysical environment,(b) aligning extension efforts and targeted TA to support the dissemination of these technologies,(c) ensuring adequate supply of quality seed and breed stock at smallholder farmers’ level to promote effective adoption by farmers; (d) supporting investments in productive and market assets at the beneficiary levelto enhance resource use efficiency and profitability, and (e) 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.
2. **Economic and financial analysis.** Project costs and benefits analysis[[9]](#footnote-11) was done to quantify project benefits from different project interventions such as investment in technology development/dissemination, adoption of improved technologies[[10]](#footnote-12)/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) by 25percent, potato by 50percent, and vegetable by 30percent over the base year productivity. Likewise, productivity of milk (cattle and buffalo) will increase by 35percent and meat (goat and poultry) by 40percent by the end of the fifth 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 the 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 the ongoing wage rate.
3. **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 the regions, that is, hills 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 hectare varied from NPR 23,448 for maize to NPR 590,511 for vegetables (combination of vegetables over summer, winter, and spring seasons). Incremental net benefits due to adoption and diffusion of crop technologies are estimated at NPR 1,678 million per year at full development.
4. 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 households keep 1buffalo/cow, 2goats, and 10poultry birds. The projected livestock productivity increases over base productivity of milk is estimated to increase by 50percent, goat meat by 40percent,and poultry eggs by 60percent for the project beneficiaries at full development. Incremental net benefits from livestock interventions are projected at NPR 732 million per yearat full development of project development impacts.
5. The project will support 190 households in establishing off-farm enterprises in the project districts. Combined net benefit of those enterprises by the end of the fifth year of project implementation is estimated to be NPR 19 million per year. The phase-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 55,000 food grain producing farmers (60percent in hills and 40percent in the 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 25percent for cereals (paddy, maize, wheat, and lentil); 50percent for potato; and 30percent for vegetables. Similarly, livestock productivity of milk is expected to increase by 35percent, goat meat by 40percent, and poultry eggs by 60percent.
6. **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 financial internal rate of return(FIRR) of 23.4 percent, with a net present value (NPV) of US$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 the economic internal rate of return (EIRR) will be 27.4 percent and NPV US$22.25 million.
7. **Sensitivity analysis.** Sensitivity analysis has been done considering the impact of escalation in cost of production of targeted commodities by 10percent, shortfall of products by 10percent, and combination of both.Across these sensitivity scenarios considered, economic rate of return (ERR) came down to lower levels, varying from 15.3percent if outputs fall by 10percent and 18.3percent if cost of production increases by 10percent to 0.4percent if outputs fall by 10percent and cost of production increases by 10percent at the same time. The result shows that returns to investment are highly sensitive to changes in benefits than costs.
8. **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 the World Bank’s GHG accounting guidance note, shadow price of GHG was done using low and high estimate of carbon price starting at US$40 and US$80, respectively, in 2020 and increasing to US$50 and US$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 2.25percent per year that is implicit between 2020 and 2030, leading to values of US$78 and US$156 by 2050, and this price was used from 2030 onwards.
9. Returns on investment take 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 an FIRR of 23.4 percent, with an NPV of US$16.4. Economic analysis of the project is done after adjusting prices of inputs, outputs, and wages to represent real values to the society, including reduction in GHG emission at a low price and high price trajectory as discussed earlier. The analysis shows (a) an EIRR of 45.3 percent and an NPV of US$43.5 million at low price trajectory and (b) an EIRR of 68.36percent and an estimated NPV of US$58.3 million at high price trajectory.

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| B.Fiduciary |

**Financial Management**

1. The PMU will be responsible for overall financial management (FM) of the project, supported by the fourPCUs responsible for FM of the respective municipality clusters. The major procurements will be carried out atthe PMU level. The PCUs’ FM will be limited to small procurements, grants, and training to beneficiaries. The expenditures incurred by the PCUs will be monitored by the PMU. An Accountant (Government Official) deployed to each PCU together with the Cluster Chief will be the signatories to make payments from the Government treasury funds for the PCU-level expenditures.The FM for the project will be limited to the PCU level. The PMU and the PCUs will coordinate with various departments/agencies as required. If required, advance will be provided to agencies such as the NARC and the DFTQCwhile the project budget and execution will remain with the PMU and the PCUs. The project will significantly benefit from continuation of the existing PMU of the AFSP.The FM 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,and so on. The PMU will prepare consolidated financial reports based on reports from the PCUs.Such financial reports will be submitted on a quadrimester basis no later than 45 days after the end of the quadrimester. The external audit report for the project will be submitted within six months from the FY end. The project will benefit from thefinancial management information system (FMIS) already developed under the AFSP to ensure timely and updated reporting. Based on AFSP experience, financial monitoring needs to be emphasized in the project. A Financial Management(FM) consultant is required specifically for monitoring in addition to FM consultant for support on other FM aspects.

**Procurement**

1. The World 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, and non-consulting and consulting services. The PMU will be responsible for overall procurement management of the project and the fourPCUs 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, and so on, required for the project including for the PCUs will be carried out atthe PMU level. The PCUs’ procurement will be limited to small procurements for seeds and logistics, grants and training to beneficiaries, and so on. 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 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 for staff involved in procurement initiation, review, and decision-making processes to ensure effective procurement management.
2. The World 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 Procurement Risk Assessment Management System (P-RAMS) of the World Bank.The project will significantly benefit from the experience of the existing PMU of the AFSP. As in the AFSP, a procurement consultant is required for effective procurement management and smooth project implementation.

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| C.Safeguards |

**Environmental Safeguards**

1. The proposed project aims to improve agricultural productivity and 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.
2. The World Bank umbrella policy on Environmental Assessment (OP/BP 4.01) is triggered considering that the project will support small civil works, farmers’ irrigation schemes, husbandry, and so on, which will have minor impacts but the cumulative impacts from these activities cannot be overlooked.
3. As of now, the proposed Project is expected to primarily focus on about eight districts of Nepal; however, the exact locations for subproject 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 AFSP and includes experiences and lessons learned 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 an 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.
4. 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, the 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), the 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 and forests and 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.

**Social Safeguards**

1. 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 smallholders through increased community mobilization and extension support, vulnerability reduction strategies, support to producer/enterprise groups through TA on research, business development, marketing, extension, skills training, and so on eventually contributing to enhanced employment, production, and returns to the farmers.
2. **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 support for minor infrastructures such as construction or improvement of minor irrigation, collection and processing centers,chilling centers, seed or gain storage and market facilities,and so on,which could potentially lead to some adverseimpacts 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 policy on Involuntary Resettlement (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.
3. **Indigenous Peoples 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, and socially excluded and lack access to public services. The potential presence of these groups in many subproject sites cannot be ignored. In view of this, the World Bank’s policy on Indigenous Peoples (OP/BP 4.10) has been triggered to ensure that the project activities are culturally appropriate to the vulnerable groups and without any harm and that the World Bank’s policy of free, prior, and informed consent is applied while designing the activities at the subproject level.
4. **ESMF.** 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 World 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.

**Other**

1. **Citizen engagement.**The Food and Nutrition Security Enhancement Project(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 cooperatives 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 (GRM) 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 SLCC as the nodal committee can coordinate the local issues with the project TCC at the federal level. The Complaint Resolution Committee 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.
2. **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 socioeconomic 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 (76.4percent) of women are engaged in agriculture work as unpaid family labor withonly 10.4percent receivingin-kind payment and 13.2percent receiving cash and in-kind payments.Furthermore, only 31percent of female farmers received extension services compared to 69percent of male farmers.The project’s proposed actions to address identified gender gaps are presented in table 2.1 of annex 2.
3. 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 an in-depth gender and vulnerability assessment will be undertaken at the onset in the project areas to get a better understanding of, among other things, gender roles, intra-household division of labor, women’s work burden, inequalities in access to inputs, services, and resources and participation in decisionmaking.Based on this, a gender strategy for the project will be designed to ensure that all project activities, staff, and implementation arrangements consistently and coherently contribute to achieving the gender objectives and targets of the project with at least 65percent 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 meet project objectives and identify policy changes (such as access to land, contract farming laws, access to finance, and so on) that can feed into an enabling policy environment for women in Nepal agriculture.The Project will therefore pursue a broader dissemination strategy of this analysis, beyond stakeholders directly involved in the project, and be in sync with Nepal's Agriculture Development Strategy (ADS) and its Gender Equity and Social Inclusion (GESI) strategy framework 2016.
4. **Climate change and GHG accounting.**The project was screened for climate risk using the World Bank’s Climate and Disaster Risk Screening Tool. 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 (−3.2percent) per month per decade, and this decrease is particularly significant during the monsoon period between June and September. Droughts are becoming more frequent 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 rainfall fell to 16percent below normal, the following months of drier conditions reduced rice cultivation by 21–30percent.Reduced water availability during dry periods could exacerbate agricultural water needs, as an estimated 64percent of the country’s farmers rely on water from monsoonrains.
5. **GHG accounting.** 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 FAO in 2010. EX-ACT allows the basic assessment of a project’s net carbonbalance, 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 scenario. For the proposed project, the GHG analysis considered activities along the various commodities (crop and livestock) targeted and the proposed improved crop, pasture, and livestock management activities. The 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.

**Grievance Redress Mechanisms**

1. 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](http://www.inspectionpanel.org/).
2. KEY RISKS
3. **The project’s overall risk rating is Substantial.**The summary table and a more detailed description of the various risks and proposed mitigation measures are given in the following paragraphs.

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** |

1. The overall risk rating is Substantial. Critical risks and mitigating measures proposed are summarized in the following paragraphs.
2. **Political and Governance risks are rated High.**In contrast to the frequent changes in government that characterized Nepal’s decade-long transition to federalism, the new government enjoys a historic supermajority in Parliament.Along with new constitutional checks and a far fewer number of political parties, there is a much greater degree of optimism for stability in the coming days.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.
3. **Technical Design of Project or Program risk is Substantial.**The thematic areas of FSN require good coordination between multiple actors, in addition to the usual project management skills, particularly in view of the multisectoral approach promoted by the project, requiring both Agriculture and Health Ministry personnel to work together in a seamless fashion. To mitigate against this,the project will build on the existing institutional arrangements for the recently closed GAFSP 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.
4. **Institutional Capacity for Implementation and Sustainability risk is rated Substantial.**Targeting several agriculture commodities, including crops and livestock, in the same projectis 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 recently closedGAFSP and the FAO TA expertise in advisory services.
5. **Fiduciary risk is rated Substantial,** given the complexity of the project, which includes a decentralized level of implementation and subprojects management.The roles and responsibilities of the decentralized implementation structures and the procurement framework were discussed and agreed with the World Bank during the preparation. The implementing entities will be strengthened by recruiting fiduciary expertise to ensure that all applicable World Bank Fiduciary Guidelines are followed under the project and adequate fiduciary management and monitoring systems are put in place.

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| 1. RESULTS FRAMEWORK AND MONITORING
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| **Project Development Objectives (PDO):**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 Level Results Indicators** | **Core** | **Unit of Measure** | **Baseline** | **Target Values\*\*** | **Frequency** | **Data Source/****Methodology** | **Responsibility for Data Collection** | **Description (indicator definition etc.)** |
| **YR 1** | **YR 2** | **YR3** | **YR 4** | **YR5** |
| **Indicator 1**: Farmers adopting improved agricultural technologies (including CSA) of which female (CRI) | [x]  | Number | 0 | 0 | 6,000 | 16,000 | 28,000 | 31,800 | Annual | Progress reports, annual report, household Survey, technical and economic monitoring | TA/PMU | This indicator measures the number of farmers who have adopted an improved production practice promoted by the project. It is expected that the baseline value for this indicator will be zero. |
| Of which female(number) | [x]  |  Percent | 0 | 0 | 65(3,900) | 65(10,400) | 65(18,200) | 65(20,670) |
| **Indicator 2:** Increased crop and animal productivity by direct beneficiaries (disaggregated by crop and animal species)  | [ ]  | Percent |  |  |  |  |  |  | Annual | Progress reports, annual report, household survey, technical and economic monitoring | TA/PMU | The indicator measures improvements in production per ha or animal through theaverage increase in units of production (kg, MT, L per land area and/or animal,resulting from improvements in production practices through projectinventions.  |
| **Crops (food grains)** |  | Percent | 0 | 0 | 10 | 15 | 25 | 25 |
| **Crops (vegetables)** |  | Percent | 0 | 0 | 15 | 20 | 30 | 30 |
| **Livestock (meat)** |  | Percent | 0 | 0 | 5 | 15 | 25 | 40 |
| **Livestock (milk)** |  | Percent | 0 | 0 | 10 | 20 | 30 | 35 |
| **Indicator 3:**Increased household income (farm and off-farm)(GAFSP core indicator, gender disaggregated) |  |  | BL | — | — | BL+10% | — | BL+25% | At start, midterm, and end of project | Baseline, midline, and endline survey questionnaire | DIME/TA/PMU | Income is measured through a production-based approach (revenues minus costs), and home-produced food that is not sold but consumed at home is valued as income. |
| Female headed households |  |  | BL | — | — | BL+10% | — | BL+25% |
| **Indicator 4:** Improved score on the Food Insecurity Experience Scale (FIES) by direct beneficiaries (gender disaggregated) | [ ]  | Percent improvement | n.a. | — | — | 15 | — | 40 | At start, midterm, and end of project | Baseline, midline, and endline FIES survey questionnaire | External Survey Firm | 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. |
| Of which female | [x]  |  Percent | 0 | — | — | 65 | — | 65 |
| **Indicator 5:** Improved dietary intake for |  | Percent over BL |  |  |  |  |  |  |  |  |  |  |
| Pregnant and nursing women |  | BL | — | — | BL+10% | — | BL+20% | At start, midterm, and end of project | Baseline, midline, and endline survey questionnaire | External survey firm | The Minimum Dietary Diversity for Women is a dichotomous indicator of whether or not women 15–49 yearshave consumed at least 5out of 10defined 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. |
| Children between 6 and 24 months |  | BL | — | — | BL+10% | — | BL+20% | Measured by percentage of children 6–24 months old with minimum acceptable diet (MAD).The indicator measures both the minimum feeding frequency and minimum dietary diversity, as appropriate for various age groups. |
| **Intermediate Result (Component A) -Climate and Nutrition Smart Technology Adaptation and Dissemination** |  |
| Number of promising technologies validatedthrough on-farm adaptation trials (including CSA and nutrition-sensitive technologies) |  |  | 0 | 0 | 5 | 15 | 20 | 20 | Annual | Progress reports,annual report, technical and economic monitoring | TA/PMU | The indicator measures the number of technologies (crop and livestock) validated on farm. Technology testing, adjusting, and validation of new technologies are a precondition for dissemination. |
| Farmers accessing technology dissemination services delivered by the project |  |  | 0 | 5,000 | 15,000 | 25,000 | 35,000 | 39,750 | Annual | Progress reports,annual report, household survey, technical and economic monitoring | TA/PMU | Technology dissemination servicesinclude on-farm demonstration, FFSs, field days, and training organized by the project  |
| Of which female |  |  Percent | 0 | 65 | 65 | 65 | 65 | 65 |
| Farmers reached with agricultural assets/ services, of which female | [x]  | Number | 0 | 5,000 | 15,000 | 30,000 | 50,000 | 65,000 | Annual | Progress reports,annual report, household survey, technical and economic monitoring | TA/PMU | This indicator measures the number of farmers who were provided with agricultural assets or services. It is expected that the baseline value for this indicator will be 0.Assets include property, biological assets, farm and processing equipment, and so on.Services include research, extension, training, education, information and communication technologies(ICTs), production-related services (for example, soil testing, animal health/veterinary services), phyto-sanitary and food safety, agricultural marketing support services, access to farm and postharvest machinery and storage facilities, employment, irrigation and drainage, and finance. |
| Of which female | [x]  |  Percent(number) | 0 | 65(3,250) | 65(9,750) | 65(19,500) | 65(32,500) | 65(42,250) |
| Improved seed replacement rate |  |  | BL | — | — | BL+12% | — | BL+25% | At start, mid-term, and end of project | Progress reports,annual report, household survey, technical and economic monitoring | TA/PMU | Seed replacement rate for each of the four major crops (paddy, maize, wheat, and potato) |
| **Intermediate Result (Component B) - Income Generation and Diversification**  |
| Number of producer-based organizations supported (number)-GAFSP core indicator |  |  | 0 | 200 | 600 | 1,000 | 1,400 | 1,590(25 farmers per group) | Annual | Progress reports,annual report, household survey, technical and economic monitoring | TA/PMU | This indicator measures the number of producer-based organizations created or supported under the project. The baseline value of this indicator will be 0. |
| Number of postharvest facilities constructed and/or rehabilitated (number)-GAFSP core indicator |  |  | 0 | 20 | 80 | 140 | 184 | 184 | Annual | Progress reports,annual report, household Survey, technical and economic monitoring | TA/PMU | This indicator measures the number of facilities developed by the project that support activities such asimproved storage/improved packaging house technologies, investments to comply with sanitary/phytosanitary, and other food safety standards. |
| Number of subprojects (business plans) financed by the project on a matching grant basis. |  |  | 0 | — | 100 | 250 | 400 | 448 | Annual | Progress reports,annual report, household survey, technical and economic monitoring | TA/PMU | This indicator measures the cumulative number of contracts signed and subprojects completed under the MG scheme. |
| **Intermediate Result (Component C) - Improving Nutrition Security** |
| People receiving improved nutrition services and products, gender disaggregated, age disaggregated (number of people)-GAFSP core indicator |  |  | 0 | 5,000 | 15,000 | 30,000 | 50,000 | 57,500 | Annual | Progress reports,annual report, household survey, technical and economic monitoring | TA/PMU | 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. |
| Household dietary diversity score including nursing mothers and children under two years (1,000 days mother target) |  |  | BL | — | — | BL+10% | — | BL+20% | At start, mid-term, and end of project | Dietary diversity questionnaire | TA/PMU | Dietary diversity isaqualitativemeasureoffood consumption that reflects household access to a variety of foods and is also a proxy for nutrient adequacy of the diet of individuals. |
| **Intermediate Result (Component 4) - Project management, communication, and M&E** |
| Grievances registered addressed within the delay set by the project GRM |  | Percent | 0 | 60 | 75 | 85 | 85 | 85 | Annual | Sample survey | TA/PMU | The indicator measures the proportion of grievances received by the GRM system, set up by the project,and addressed within the standard period set up by the GRM system. |
| Periodic reports submitted on time |  | Number(cumulative) | 0 | 3(3) | 2(5) | 3(8) | 2(10) | 3(13) | Semiannual and annual | Progress reports,annual report, baseline and impact reports | PMU |  |

**Results Chain FANSEP**

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| ANNEX 1: Implementation Arrangements and Support Plan |
| **COUNTRY: NepalFood and Nutrition Security Enhancement Project** |

**Project Institutional and Implementation Arrangements**

1. The implementation arrangements will follow the existing arrangements for the recently closedAgriculture Food Security Program (AFSP)but will build in sufficient flexibility to accommodate the changing institutional setup of the governance structures in the country. The MoALDwill be the executing ministry and will work closely with the MoHP to implement the project.At the central level, the project will include (a) the existing AFSP SC, strengthened by a representative of the MoFAGA, toprovide strategic oversight and guidance;(b) a Technical Coordination Committee (TCC) to provide technical guidance and recommendations to the SC; and (c) a Project management Unit (PMU) for day-to-day project administration and management. At the decentralized level, the project will have (a) SLCCs to ensure cross-sectoral coordination and quality assurance at the state level and (b) PCUs 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 the NARC, specialized technical departments (Department of Agriculture, DLS, Department of Irrigation, Department of Health Services, DFTQC, and so on); other relevant public agencies (for example,NSB); and NGOs. All requisite short- or long-term consultants will be appointed to support the project units at various levels.

*Project Management Unit*

1. The PMU will be headed by a gazetted Class 1 level officer, designated as project director (PD),joint secretary level of the agriculture service, deputed from the MoALD. 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 FM. There will be two positions of gazetted Class 2 level officers designated as senior planning officer and senior M&E officer. These officers will also be deputed from the MoALD for the entire project period (undersecretary level position of the agriculture service). There will be five technical officers (gazetted Class 3 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 a senior accounts 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*

1. The SLCCs will be headed by the State-level Secretary of Agriculture, Land Management, and Cooperatives. SLCCs will be established in the project states and will be supported by a project M&E officer and a technical officer of the State Ministry of Agriculture, Land Management, and Cooperatives 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 (a) facilitating provincial-level program planning and implementation of all project activities within their respective States; (b) coordinating with relevant implementing line departments and agencies and stakeholders; (c) organizing periodic progress review; (d) guiding PCUs to work in accordance with the spirit and principles of the project; (e) monitoring and supervising the work being done in the field; (f) maintaining appropriate records, financial, and project progress reporting; (f) ensuring due attention to safeguards issues; and (g) ensuring appropriate governance and accountability, including through management of a suitable grievance redressal system.

*Project Cluster Units*

1. In all four project municipality clusters Units ( to be added), there will be a PCU designated by the MoALD. The PCU’s role will be entrusted to the staff of either the Agriculture Knowledge Centers or the Veterinary Hospital and Livestock Specialized Centers. The PCU will help coordinate municipal-level project activities with line agencies and other partners. The PCU 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 officers as well as technicians for the project duration) at the PCU in implementation of the project activities. The technical staff to be posted at the PCU will be hired through the project. Some of the project interventions envisaged by the project, such as MGs, will be implemented and facilitated by the PCU. Furthermore, the PCU will be responsible for (a) coordinating the project activities at the municipal level; (b) encouraging participation of farmers’ organizations (farmer groups and farmer cooperatives) and NGO federation and other relevant stakeholders; (c) facilitating planning and inter-agency coordination; (d) assisting in selection of project sites and beneficiaries and participatory monitoring (ensuring involvement of different stakeholders such as Civil Society Organizations (CSOs) and the media as part of the team); (e) organizing public hearing, media briefing/media trip, and stakeholder monitoring activities, and (f) ensuring appropriate governance and accountability, including through management of a suitable grievance redressal system. The PCUs will also coordinate with and support the Food and Nutrition Security Committees.

*Project Staff for Implementation Support*

1. To support implementation activities at the farm level, the project will hire two kinds of staff. 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 groups 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*

1. The GoN has identified the FAO as the main provider of TA to the project, building on the successful collaboration under the AFSP. The TA from the FAO is geared toward improving project performance, incorporating best practices, and documenting lessons learned. Four specific areas have been identified for the FAO TA based on its comparative advantage and experience: (a) support for the further development of the extension services and dissemination of improved technology packages through the FFS; (b) development of market linkages for the targeted smallholder farmers; (c) support for the rollout of NFSs; and (d) quality assurance. The 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.
2. The FFS approach will be modified to suit the targeted areas in terms of biophysical and socioeconomic characteristics,working within the framework of the new federal extension. Capacity development will target farmer and producer groups andcooperatives. Relevant technical guidelines and Training of Trainers (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 (O&M). The capacity development will include training on land husbandry under irrigated production using the FFS approach.
	* In terms of establishing market linkages, TA from the 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 of 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 facilitiesas proposed under Component B.
	* TA will also be provided to the implementation of the interventions related to nutrition improvement at the household level, including the scaling up of improved kitchen garden models, introductionof backyard poultry, and the establishment of NFSs. Building on ongoing efforts, the TA will thus support the practical application of dietary guidelines in conjunction with the Department of Health (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 the household level.
	* With respect to quality assurance, the 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**

1. **FM capacity.**The project will significantly benefit from continuation of the present PMU of the AFSP. The current staffing structure of finance chief (undersecretary), finance officer, and accountant will be continued for the project. It has been agreed to finance an FM consultant to have a well-established FM system to ensure implementation can commence with project effectiveness. Based on the AFSP experience, it has been agreed to have an additional FM consultant dedicated for monitoring (to be hired by 3 months of effectiveness). As activities related to beneficiaries, for example, sub-grants and training for farmers, will be implemented by PCUs, an FM consultant will ensure effective monitoring and oversight from the PMU. An accountant will be deployed at each of the PCUs by two months of project effectiveness.
2. **Planning and budgeting.**The proposed project will follow the government planning and budgeting procedure. The PMU will prepare the overall budget and work program based on inputs from the respective PCUs. The budget will be proposed through the Line Ministry Budget Information System, which ensures the detailed basis of required activities and nature of expenditures for the budget preparation. The PMU will provide budget authority to each PCU with guidelines and specifications of activity/work programs and expenditure line items to ensure effective cluster-level FM. Implementation of these budgets and work programs will be monitored by the PMU and reported on a quadrimester basis through the interim unaudited financial reports (IUFRs). The PMU of the AFSP will prepare the budget for the FY2018/19 when the project is expected to be effective.
3. **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 the PMU, will be established at Nepal Rastra Bank to facilitate disbursements. Direct payments to suppliers, contractors, and service providers can also be made from the DA or directly from the World Bank. Direct reimbursement to the Government treasury can also be made from the World Bank. Direct payment to United Nations (UN) agencies can be made from the World Bank through UN Commitment based on the Memorandum of Understanding (MOU)/contract between the PMU and the concerned UN agency.
4. The funds flow management of the project funds will be limited up to the PCU level. The funds flow with the World Bank will be managed by the PMU, including for the PCUs. There will be no transfer of World Bank funds to the PCUs. The PCUs will be pre-financed from the Government’s treasury based on the budget authority provided. At the PCU level, the assigned accountant of each PCU will manage project funds. The PCU’s funds flow management will be monitored from the PMU. Based on the reports received from PCUs, the PMU will reimburse PCUs’ expenditure amounts to the Government treasury (through DA or direct reimbursement from the World Bank) and also manage direct payments for the PCUs, 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 PCU level) will help ensure that the project funds are effectively managed.
5. **Accounting, financial reporting, and internal controls.** The Government’s cash basis accounting system will be followed. Based on the same, the IUFRs will be prepared on a quadrimester basis. The format and the content of IUFRs has been agreed. Accounting information is maintained in the FMIS in the PMU which was developed under the AFSP. The FMIS will also be implemented in all PCUs by two months from project effectiveness. No expenditures will be incurred in the respective PCUs before implementation of the FMIS. The project accounts will be maintained separately by each PCU preferably with real-time online connectivity in the FMIS or at least reported monthly to the PMU by the seventh day of each preceding month. Based on the report received of the expenditures incurred at the PCUs, the PMU will maintain accounts for all the project expenditures. The IUFRs, with consolidated information from all of the PCUs, will be prepared by the PMU and submitted to the World Bank within 45 days from the end of each quadrimester. All the required ledgers related to World Bank disbursement, including the DA Ledger, Grant Register, and so on, will be maintained at the PMU. The internal control process of the Government will be applied, including internal audit. According to the Government policy, emphasis will be placed on ensuring that internal audit is conducted on a quadrimester 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 PIM. 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 PIM. The PIM acceptable to the World Bank will be included as a dated covenant.
6. For the sub-grants, the local bodies will be involved in the selection and certification process according to Government policy while the funds flow will be limited to PCUs. There will be reporting of grant expenditures to the PMU, after which documentation of expenditure would be done with the World Bank. The details will be included in the PIM and the required arrangements will be included in the MOU between the PMU and the local bodies if required. The required records to be maintained by the beneficiaries and reported to the respective PCUs/PMU will be detailed in the PIM. The PIM will also include details of the monitoring mechanism for sub-grants. The sub-grants payment will be made in the bank account of the respective beneficiaries.
7. **External audit.** The project financial statements,including the Statement of Expenditures (SOE) and DA 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 World Bank within 6 months from the end of each FY. To avert delays in audit report submission, the PMU will coordinate with the OAG by May of each year to ensure that the project’s audit (including PCUs expenditures) is scheduled on time. There is no overdue audit report from the MoALD.
8. **Supervisionplan.** Project implementation progress will be closely monitored by the PMU and the World Bank. Key FM fiduciary work includes (a) implementation support to the project, including participation in supervision and informing the task team of FM issues or required improvements, and (b) review of financial/audit reports and preparing summaries of such reports for further action if required.

**Disbursements**

1. **Allocation of grant proceeds.** Disbursement under the proposed grant will be made as indicated in table 1.1, which indicates the percentage of financing for different categories of expenditures of the project. The total project cost is US$28.7 million, of which the GAFSP contribution is US$22.7 million and Government contribution is US$6 million. Government financing under Category 1 will be parallel financing and cover the PMU and incremental operating costs other than those covered by the incremental operating costs definition in the Grant Agreement (estimatedUS$3.63 million), while the other 2 categories will be joint financing of the MGs(estimated US$1.40 million) and small grants schemes (estimated US$970,000), respectively.Disbursement under the proposed funding will be made as specified in table 1.1, which indicates the amounts and percentages of financing.Project financing under Category 1 covers costs under all project components apart from the MGs under Subcomponent B2 and the small grants under Subcomponent C2 of the project, which fall under Category 2 and 3, respectively.

Table 1.1. Disbursement under the Proposed Funding

|  |  |  |
| --- | --- | --- |
| **Category** | **Amount of the Grant Allocated (US$)** | **Percentage of Expenditures to be Financed****(inclusive of taxes)** |
| 1. Goods, works, non-consulting services, consultants’ services, training and workshops, and incremental operating cost
 | 18,910,000 | 100.0 |
| 1. Matching GrantsComp. B2
 | 2,240,000 | 61.5 |
| 1. Small grants Comp. C2
 | 1,550,000 | 61.5 |
| TOTAL AMOUNT | 22,700,000 |  |

1. **Disbursement arrangements.** The disbursements from the World Bank will be based on SOEs.To facilitate disbursement, segregated DA in U.S. dollars will be opened at Nepal Rastra Bank. The DA will be operated under joint signatures of the designated officials of the PMU. An advance not exceeding the threshold specified in the Disbursement Letter will be provided in the DA. Direct payments to various suppliers, contractors, and service providers or reimbursement to the Government treasury can be made from the advance provided in the DA. The DA will be replenished through withdrawal applications 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 World Bank.

**Procurement**

1. The World 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 fourPCUs 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, and so on, required for the project including for thePCUs will be centralized in the PMU. The PCUs’ procurement will be limited to small procurements for seeds and logistics, grants and training to beneficiaries, and so on. Procurement of goods, works, and non-consulting services, as agreed in the PPSD and Procurement Plan, may be carried out using national procurement procedures, that is, in accordance with 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 forstaff involved in procurement initiation, review, and decision-making processes to ensure effective procurement management.
2. The World 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 of the World Bank.The project will significantly benefit from the experience of the existing PMU of the AFSP. As in the AFSP, a procurement consultant is required for effective procurement management and smooth project implementation.

**Environmental and Social (including safeguards)**

1. The proposed project aims to improve agricultural productivity and nutrition practices of targeted smallholder farming communities and will consist of small-scale subprojects/activities which may have adverse impacts on naturalenvironment, 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.The World 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, and so on, which will have minor impacts but the cumulative impacts from these activities cannot be overlooked.
2. As of now the proposed project is expected to primarily focus on about eightdistricts of Nepal; however, the exact locations for subproject interventions are not known.Therefore, an ESMF has been prepared to provide guidance for environmental and social assessment and management. This ESMF buildson the ESMF of the recently closed GAFSP andincludes experiences and lessons learned 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 an 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.
3. 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, the 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) agrochemicals(pesticides/insecticides),the 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, identified issues, and provided management guidance to address the impact on natural habitats and forests and 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.
4. 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 TA on research, business development, marketing, extension, skills training, and so on eventually contributing to enhanced employment, production, and returns to the farmers.
5. **Involuntaryresettlement.** 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 support for minor infrastructures such as construction or improvement of minor irrigation, collection andprocessing centers, chilling centers, seed or gain storage and market facilities, and so on, 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 policy on Involuntary Resettlement (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 cases, the project will comply with the donation principles specified in the ESMF. The project will also maintain documentations of donated lands,that is, the amount of donated land, and MOUs signed between land-donors and communities for use of land and legal transfer of land where possible.
6. **Indigenous peoplesdevelopment.** 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, and 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 policy on Indigenous Peoples (OP/BP 4.10) has been triggered to ensure that the project activities are culturally appropriate to the vulnerable groups and do not harm these groups and that the World Bank’s policy of free, prior, and informed consent is applied while designing the activities at the subproject level.
7. **ESMF.** Considering the potential issues associated with involuntary resettlement and indigenous people affecting their livelihoods, the project has preparedan ESMF as a guiding document for planning and implementation of the World Bank's safeguards measures. The ESMF 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 and Vulnerable Community Development Framework.

**Monitoring and Evaluation**

1. The existing M&E system of the recently closed AFSP will be strengthened and implemented to track progress continuously. The project MIS will be upgraded and put in place at the PMU level. The project will further build the existing capacity of the PMU to use the MIS and be able to produce reports at agreed intervals. Progress toward achieving the specific milestones will be tracked as stipulated in the Results Framework (Section VI). Furthermore, the PMU, with inputs from PCUs, 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, midterm, 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 PIM will detail the organizational and technical setup that will govern the project’s M&E procedures.A midterm evaluation will be conducted halfway through the project life-cycle and an Implementation Completion and Results Report no later than six months afterProject 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 midterm 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 (a) enhancing the coordination across multiple agencies involved in implementation; (b) addressinginstitutional weaknesses of those agencies, including with respect to implementing World Bank projects; (c) eliciting regular feedback from project beneficiaries at the local level to preempt any implementation issues that may arise at the grassroots level; and (d) emphasizing the need to ensure that project inputs are targeted effectively and transparently. It will consist of (a) implementation support carried out jointly with FAO when technical needs arise and (b) TA in areas of weaknesses and where new approaches/procedures have been introduced.
2. **Implementation support.** The biggest implementation challenge identified is the overall low institutionalcapacity. 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 the following:
	1. **Implementation support.** The World Bank Task Team will conduct semiannual review and implementation support to review FANSEP implementation performance and progress toward the achievement of the PDO. Given the overall design and scope of the project, a multidisciplinary team comprising technical specialists, along with fiduciary, environmental, social, and operations specialists, will be needed to support the GoN in implementing the project. Support from technical partners, such as the FAO, will be sought when needed. The first implementation support 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.
	2. **Midterm 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.
	3. **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 semiannual implementation supportif and when the need arises.
	4. **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.** The implementation support and oversight 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 (a) review implementation progress by component, including institutional development aspects; (b) provide solutions to implementation problems as they arise; (c) review with the PMU the action plan and disbursement programs for the next six months; (d) review the project’s fiduciary aspects, including disbursement and procurement; (e) verify compliance of project activities with the World Bank’s environmental and social safeguard policies; (f) 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 (g) review the quality of capacity-building activities, which are crucial for an effective implementation of the project. This 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 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 FM/procurement, and for monitoring social and environmental safeguards. The objective of the technical support would be to help the project teams internalize good practices and resolve implementation bottlenecks as they are identified during implementation support. TA 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.

**Implementation Support Plan**

1. **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 World Bank’s core supervision team and the FAO Investment Center, other consultants with specific technical expertise may be mobilized periodically to provide TA to implementing agencies in the form of hands-on training and mentoring.
2. **Focus of support.** The first two years of implementation would requiremore technical support, and later the focus would change to more routine monitoring of progress, troubleshooting, and assessments based on the Results Framework. The implementation support will be complemented by regular short visits by individual specialists to follow up on specific thematic issues as needed.
3. **Fiduciary support.** The WorldBank’s FM specialist based in the country office (CO) will (a) review the FM systems, including capacity for continued adequacy; (b) evaluate the quality of the budgets and implementing agencies’ adherence thereto; (c) review the cycle of transaction recording until the final end of report generation; (d) evaluate the internal control environment, including the internal audit function; (e) review interim financial reports(IFRs)and/or annual financial statements; (f) follow up on ageing of the advance to the DA as applicable; (g) follow up on both internal and external audit reports; and (h) periodically assess the project’s compliance with the FM Manual as well as the Financial Agreement.On the procurement front, the World 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 will be geared toward (a) reviewing procurement documents, (b) providing detailed guidance on the World Bank’s Procurement Guidelines, and (c) 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 World Bank office, the semiannual supervision will include field visits, of which at least one will involve post review of procurement actions.
4. **Safeguards support.** The World 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.
5. Table 1.2 summarizes the main focus of implementation during the life of the project.

Table 1.2. Main Focus of Implementation Support

| **Time**  | **Focus** | **Skills Needed**  |
| --- | --- | --- |
| First 12 months  | * Project start-up
* Support to implementation activities (sensitization, communes/community consultations and planning, capacity building, and 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 (Nepal Livestock Sector Innovation Project, PAF, Suhaara)
 | * Task team leader(TTL), co-TTLs, and operation officer
* Crop specialist
* Livestock specialist
* Nutrition specialist
* Natural resources management (NRM)
* Market access/value chainspecialist
* FM
* Procurement
* Environment
* Gender
* M&E specialist
* Communication
* M&E
 |
| 12–48 months | * Monitorimplementation performance including progress
* Review annual work plans and disbursement schedule
* Review strength of farmers and PGs and cooperatives, health mother groups, quality of participatory process, and capacity-building activities
* Review quality of quarterly/annual reports, data, and various studies
* Assess quality of implementation process
* Assess quality of M&E system (including quality of data collected)
* Review audit reports and IFRs
* Review adequacy of the FM system and compliance with FM covenants
* Assess quality of safeguards instruments and their application
 | * TTL, co-TTLs,and operation officer
* Crop specialist
* Livestock specialist
* Nutrition specialist
* NRM
* Market access
* FM
* Procurement
* Environment
* Gender
* M&E specialist
* Communication
* M&E
 |

Table 1.3. Skill Mix Required for FANSEP Implementation Support (per year)

| **Skills Needed** | **Number of Staff Weeks** | **Number of Trips** | **Comments** |
| --- | --- | --- | --- |
| Team leader senior agricultureeconomist | 15 | 2 | Myanmar based |
| Co-TTL senioragriculturespecialist | 12 |  | CObased  |
| Co-TTL seniorhealth specialist | 12 |  | CO based |
| Value chain specialist  | 6 | 2 | Consultant  |
| NRM specialist  | 6 | 2 | Consultant  |
| Operation officer  | 6 | 2 | Washington, DCbased  |
| Procurement specialist  | 6 |  | CO based  |
| FM 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 | DCbased  |

1. **Resourceimplications.** Funding for implementation support (‘supervision’) of FANSEP will be entirely provided by the GAFSP.

|  |
| --- |
| ANNEX 2: Detailed Project Description |
| **COUNTRY: NepalFood and Nutrition Security Enhancement Project** |

**General Project Features and Theory of Change**

1. **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.
2. **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 percent in 2000 to 36 percent in 2016 (Nepal Demographic and Health Survey [NDHS] 2016).[[11]](#footnote-13)During this period, income rose progressively and the country implemented a range of social programs addressing multiple underlying causes of malnutrition including water, sanitation and hygiene (WASH); open-defecation-free campaigning; family planning; medical services; deworming; and homestead food production. The current high stunting rate of 36percent among children under five years is largely associated with income (49percent compared to 17percent of the highest wealth quintile) and with mother’s education. About 10 percent of children are wasted and 27percent underweight. More than half (53percent) of the children 6–59 months and 41percent of the women ages 15–49 are anemic (NDHS 2016). Stunting rates peak among children 24–35 months (45percent), when women likely discontinue breastfeeding and the child is reliant on a balanced food bowl. Diarrhea, which affected 8percentof children in 2016, increases with age. About 6percent of children less than 6 months and 15percent of children 6–11 months suffered from diarrhea two weeks before 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 body mass index (BMI) of less than 18.5 (NDHS 2016). In 2011, 18 percent of women were undernourished (NDHS 2011). Anemia is also a significant problem for women and children in Nepal, as 53 percent of children and 41 percent of women were anemic in 2016.
3. The manifestations and underlying causes of malnutrition differ drastically across states and agro-ecological zones. Inadequate maternal, infant, and young child feeding 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 32percent.The terai ranks highest in incidence of diarrhea and anemia and lowest in BMI;MAD; and consumption of meat, eggs, green leafy vegetables, and 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, particularly among the most vulnerable populations.
4. **Achieving food and nutrition security and reducing poverty are the national goals of the GoN,** in line with commitments to realize the 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 24.2percent by 2025 (from 36percent in 2016), in line with the World Health Assembly target of reducing number of stunted children to 25 percent by 2025.This will require coordinated efforts from both nutrition-specific and nutrition-sensitive sectors and differentiated approaches by region.
5. **The project follows a demand-driven approach** to drive investments at the household and community levels. It also intervenes at relevant points in the researchextension continuum to improve service delivery. The project design is based on the following core principles:
6. **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. PGswill receive targeted training and technical advice to enable them to develop viable BPs that will be eligible for financing through the MG system.In addition, these PGs will also benefit from the project activities geared toward establishing enduring productive partnerships with other actors in the value chain, particularly the buyers and financial institutions.
7. **Knowledge-based approach.**Knowledge management will be instrumental. Research results and innovations for building climate resilience in the crop and livestock production systems, improved dietary practices, and so on developed by the NARC, FAO, International Rice Research Institute (IRRI),Centro International de Mejoramiento de Maiz y Trigo (CIMMYT, International Maize and Wheat Improvement Center) 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, among other things, activities to expose the beneficiary communities to experiences and best practices from other areas in the region andbeyond.
8. **Gender-inclusive approach.** 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 the FANSEP must demonstrate that gender issues have been considered whenever possible. A gender assessment will be conducted as part of the MTR, 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 theBPs to be financed under Subcomponent B.2 will consider gender composition of the PGs submitting the BPs to be financed.
9. **Nutrition-informed approach.** 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.
10. **Theory of change.**The project seeks to address the availability, access, and utilization of food, as well as enhance beneficiaries’ climate resilience 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 resilient to climate change and shocks and attain the desired nutrition outcomes in the targeted areas.
11. Climate projections for Nepal suggest that annual temperatures will increase; precipitation patterns’ change and frequency of weather-related hazards are expected to increase Nepali farmers’ vulnerability. Costs associated with the impacts of climate variability and extreme events are estimated at US$270–360 million per year (expressed in 2013 prices), representing 1.5 to 2percent of the country’s GDP.The project will follow the concrete recommendations of the CSA country profile on how to put CSA 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.
12. To enhance farmer’s climate resilience, the adoption of CSA practices and technologies such as no tillage, mulching, crop diversification and crop rotation, integrated soil and water management, improved pasture management, drought-resistant seeds varieties and breeds, integrated pest and diseases management, efficient micro-irrigation techniques, and fodder and agroforestry nurseries are supported under Component A.Climate-smart livestock practices will include improved feeding, improved housing, and improved animal health practices to enhance the feedconversion ratio and productivity and ultimately the resilience of animals to adverse conditions. These practices are expected to support ecosystem services and functioning (for example, increase soil health and soil water retention capacity, reduce drought risk, improve nutrient cycling, increase agro-biodiversity and pollination through on-farm diversification, and restore degraded land) and reduce natural resources and energy use per production unit (for example, efficient water management, efficient fertilizer application systems), thus enhancing the adaptive capacity of the agro-ecosystem to adverse climate and weather-related changes and shocks. In addition, these practices are expected to support climate change mitigation by enhancing existing carbon pools and reducing GHG emission per unit of commodity (for example, enhance emissions intensity in livestock products).Improved agro-ecosystems enhance crop productivity, increasing the volume and diversity of production, and decrease variability, with a potential to reduce production inputs (for example, reduced synthetic fertilizer or pesticide amounts, reduced labor cost). The resulting increased, less variable, and more diversified production allows farmers to sell more at broader range of markets at reduced production costs, thus increasing average income and decreasing income variability at the household level. As a result, diversified food at larger quantities is available at local markets and can be accessed by the community. Increased income and diverse food availability on farm and at the community level enhance beneficiaries’ adaptive capacity to withstand and recover from climatic shocks.
13. Lessons learned from the 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 BCC 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 three components add to more than the sum of the individual parts to ensure the key aspects of FSN, tackling synergistically issues of food availability, access, and utilization, thus allowing the project beneficiaries to improve their food security status and nutritional outcomes.
14. The project’s theory of change is based on the United Nations Children's Fund’s conceptual framework of malnutrition, which helps classify causes of malnutrition: (a) immediate causes (inadequate food intake and diseases); (b) underlying causes (household food security, adequate care and feeding practices, WASH, access to health services); and (c) basic causes (including economic assets, social capital, environmental conditions, and political issues). Given differing manifestations and underlying causes of malnutrition, the PDO and targets can only be attained through a convergence of activities envisaged under Components A, B, and C that will support (a) household access to a balanced food basket through crop and animal productivity (building up asset base) and income generation through agricultural activities, (b) improved access to services particularly quality agriculture extension and health services through demand-driven approaches, and (c) skills-based community-driven nutrition education following a BCC 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 while 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 the household level depending on dietary needs and agro-ecological zone, and nutrition-promoting behaviors. Figure 2.1 depicts these complementarities.

Figure 2.1. Flow Chart Theory of Change



1. The key elements underpinning the project’s theory of change are as follows:
2. **Climate-smart agriculture** is not a new agricultural system or set of practices. FAO (2017)[[12]](#footnote-14) refers to it as an “innovative approach for charting development pathways that can make the agriculture sectors more productive and sustainable and better able to contribute to climate change adaptation and mitigation.” It has three objectives: to sustainably increase agricultural productivity and the incomes of agricultural producers; to strengthen the capacities of agricultural communities to adapt to the impacts of climate change; and, where possible, to reduce and/or remove GHG emissions. The goals of CSA are prioritized according to the local context and beneficiary needs. In Nepal, the aim to achieve adaptation and improve food security and resilient food systems isprioritized over the goal of achieving mitigation, which is thus viewed as a co-benefit.CSA interventions include a range of practices and technologies which need to be adjusted to the local agricultural context and may include crop rotation, diversification, improved varieties, integrated nutrient management, conservation agriculture, agroforestry micro-irrigation, and improved water management. While the potential benefits of CSA are recognized, also in policies and strategy, recent research shows that implementation capacities on institutional and on-farm level are weak, required inputs are not always available, and farmers often cannot afford to adopt certain practices. These are shortcomings the project aim to undress to unlock the full potential of CSA in Nepal.[[13]](#footnote-15)
3. **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 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 the 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 one 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, that is, biofortified crops, livestock raising, and iron and vitamin Arich 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 demanddriven and part of a comprehensive package (NFS).
4. **Income.**Findings derived from 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 show 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 BCC.Research has found that increased income can enhance resilience to climate change and shocks. Increased income boosts households’ adaptive capacity and their ability to save, which enhances their ability to invest in shock and risk-absorbing strategies (for example, insurances).
5. **Gender.** Decisions on what to produce, buy, and consumeare 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 Randomized Controlled Trial (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 200percent 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.Table 2.1 summarizes how the project addresses the gender gaps identified throughout the three components.

Table 2.1. Project’s Gender and Development Matrix

| **Gender Gaps Analysis** | **Strategy** | **Actions** | **Indicator** |
| --- | --- | --- | --- |
| **PDO:**To enhance climate resilience, improve agricultural productivity and nutrition practices of targeted smallholder farming communities in selected areas of Nepal. |
| Women are much less likely to use agriculture technology | Tailor technologies to meet the needs of female agricultural workers and to make them affordable for women to access. | Introduce technologies targeted at the tasks that women are involved in (will be part of the criteria for selection and testing these technologies). | 65% of 31,800 farmers adopting improved agricultural technologies are female. |
| Women continue to face extremely low gains when it comes to ownership over assets | Gender strategy of the project will include ownership of assets | An in-depth gender and vulnerability assessment will be carried out to get a better understanding of gender roles, intra-household division of labor, ownership over assets and resources  | 65% of 65,000 farmers reached with agricultural assets are female. |
| **Component A:** Climate and Nutrition Smart Agriculture Technology Adaptation and Dissemination  |
| While only about one-third of female farmers receive extension services, the service is received by 69% of male farmers. | Design gender-inclusive extension services | Carry out a comprehensive training needs assessment to ensure effective delivery of extension and outreach services thatare gender friendly. | 65% of 39,750 farmers accessing technology dissemination services delivered are female. |
| Prevailing bottlenecks prevent women’s participation and their capacity to benefit from capacity building  | Include gender criteria in capacity-building activities for short- and long-term training to achieve an equitable balance and will include session on gender. | Cater to women’s needs in trainings in terms of timing and teaching methods (for example, ensuring proximity to women trainees’ homesteads, organizing child care service during the training sessions, avoiding overly time-consuming sessions) and deliver gender-sensitive contents.Place minimum quotas for a number of women who participate in the FFS. | At least 65% women can attend the capacity buildings/trainings sessions. |
| **Component B:** Income Generation and Diversification  |
| Benefit from economic gains accrue to women disproportionally | Develop a separate MG manual and build in a conditionality mechanism to ensure minimum gender participation within the grant recipients. | Include clear gender criteria in the selection process of small grant proposals and financing of BPs. | 65% of all grant recipients will need to be female. |
| Limited access to beneficiary farmers’ organizations including presence and ability to take part in decision making by women | (a) Strengthen PGs with specific emphasis given to building women and youth leadership skills.(b) Provide additional support to help women-led PGs or small agro-businesses to improve linkage with markets.(c). Assist PGs in identifying gender issues and formulating strategies for addressing them both at the PG and household level. | (a)Engage gender facilitators and social mobilizers to ensure that women are able to actively participate in the decision-making process and not just as a participant.(b)Take into account gender composition of the PGs submitting the BPs to be financed as the criteria for the selection of the BPs to be financed under Subcomponent B.2.(c) Integrate training on methodologies for gender mainstreaming to PGs. | At least 65% of women’s participation in the beneficiary farmers' organizations, in addition to a minimum requirement of 33% female representation in the governing committees of these organizations. |
| **Component C:**Improving Nutrition Security |
| In 2016 (NDHS), about 17 percent of women in the 15–49-age group were undernourished. 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. | Support a skill-based learning approach (NFS) in each target community to identify catalysts for improved food-based nutrition practices. | 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 as the target group of the NFS. Train a cadre of facilitators to conduct a participatory identification of barriers faced at the community level for improving women’s dietary diversity and complementary feeding practices. | 57,500 people receiving improved nutrition services and products, gender disaggregated, and age disaggregated |
| **Component D:** Project Management, Communication, and M&E |
| Lack of enabling policy and program environment | (a)Integrate women and other vulnerable beneficiary groups in all aspects of the project cycle.(b) Promote gender equity in its approach, implementation arrangements, and activities.(c) Ensure that all project activities, staff, and implementation arrangement consistently and coherently contribute to achieving the gender objectives and targets of the project. | (a) Data collection for CNAAs, situational analysis, and so on from the onset to minimize potentially biased information.(b) Carry out an in-depth gender and vulnerability assessment to identify policy changes (such as access to land, access to finance,and so on) that can feed into an enabling policy environment.(c) Design a gender strategy, in sync with Nepal’s ADS (2015–2035) and its GESI strategy framework 2016.  | Periodic reports to capture gender disaggregated data and reporting on gender achievements |

1. **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 FFS. 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 28percent to 62percent and diet inadequacy dropped from 72percent to 16percent.[[14]](#footnote-16) While elements of NFSs 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 locallyavailable nutrient-dense foods (for example, in the 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, and so on.In short, NFS is 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.

**Project Description**

1. The project will have four interrelated components: (a) Climate and Nutrition Smart Technology Adaptation and Dissemination, (b) Income Generation and Diversification; (c) Improving Nutrition Security; and (d) Project Management, Communication,and M&E. These components combined will enhance the role of the agriculture sector in contributing to socioeconomic development, including sustained improvement in the key dimensions of food and nutrition security (that is, availability and stability of food supply), accessibility, and food safety. Gender equity, social inclusion and citizen engagement, and building resilience to climate and other risks will be cross-cutting themes across all components.

***Component A: Climate and Nutrition Smart AgricultureTechnology Adaptation and Dissemination (US$7 million)***

1. This component will directly support the PDO through the introduction and promotion of climate-smart and nutrition-sensitive agricultural practices by availing adapted technologies and better performing plant and animal genetic resources and capacitating farmers to master skills for improved agronomic and animal husbandry practices.
2. 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 postharvest 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 at about 12percent for cereals.This component will therefore address these four critical deficiencies covering crop and livestock production and postharvest practices by following a two-pronged approach: (a) 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 (b) 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. Both strategies are expected to enhance beneficiaries’ climate resilience by ensuring enhanced agro-ecosystem resilience, increasing and less variable productivity, and diversified production resulting in increased and stable household income.In addition, adoption of improved practices has the potential to enhance existing carbon pools, increase natural resources and energy efficiency, and reduce GHG emissions. Special focus will be given to crops with high nutritional value, including the introduction of biofortified 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.
3. This component will consist of two subcomponents, that is,(a) Technology Adaptation and Testing and (b) Technology Dissemination and Farmers’ Skills Development.

*Subcomponent A1: Technology Adaptation and Testing*

1. This subcomponent will support testing and adapting appropriate climate-smart and nutrition-sensitive agricultural technologies; improved inputs (seeds, fodder and livestock breeds, drought-resistant varieties); and improved agronomic, husbandry; and postharvest practices and technology access. This subcomponent 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 (for example, foundation seeds, drought-resistant varieties, and animal breeds); and improved agronomic, husbandry and postharvest practices, taking into account nutritional value and food safety considerations. This subcomponent will entail active engagement of the NARC, DLS, and DFTQC to implement the activities under this subcomponent, in coordination with the agriculture extension service providers in the respective municipalities. The promoted improved agriculture technologies and practices are expected to enhance existing carbon pools; increase efficiency in the use of production inputs (for example, energy, water, and fertilizer); and reduce the GHG emissions intensity of livestock products through improved feedconversion ratio.
2. 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) improved seed and breed replacement rate for crops and livestock (goats and poultry), and (d) training and capacity development.
3. **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 cultivars,[[15]](#footnote-17) Boer cross-bred goats, dual-purpose scavenger type backyard poultry, and improved management practices in the mid and farwestern regions of Nepal.In addition, the project draws from the 2017 CSA country profile[[16]](#footnote-18)thatoutlined 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 support beneficiaries’ adaptation to climate change and increasing climate resilience. 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 Subcomponent 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 the FFS who will showcase the new technologies in their field during the following season. This subcomponent will test the newly released and promising varieties and technologies from the NARC and the 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.The NARC will identify high-performing staple and non-staple crop varieties which are potentially suitable to the specific needs of the project area, are climateresilient (for example, drought-resistant varieties), and 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*,* among other things,tolerance to drought, pests and diseases, yield, nutritional value, and organoleptic qualities.
4. **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, Integrated Disease Management, and Integrated Pest Management (IPM) models, including weed management, soil health management, pest and disease management, conservation agriculture, cropping systems (rotation and intercropping), postharvest management, seed treatment, and soil moisture/water harvesting techniques. The packages are expected to enhance beneficiaries’ climate resilience and also demonstrate mitigation potential through improving existing carbon pools and reducing GHG emissions through more efficient input application, water, and energy use. Special attention will be given to packages thatentail a reduction of women’s drudgery and work/time burden.An assessment carried out by the IWRMP reported up to 50 percent savings in cost and labor by using power tillers, threshers, mini tractors, and winnowing machines.[[17]](#footnote-19)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 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 promotion of responsible use of antibiotics to reduce resistance risks and crop storage and management practices to reduce aflatoxin risk and associated food safety risks.
5. **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 local breeds.To increase the use of quality seeds, including drought-tolerant varieties, 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 the NARC, and quality assurance and control through the Seed Quality Control Center under the MoALD. It is expected that the project will cover at least 10 percent of the targeted crop area under improved rice, wheat, maize, and potato varieties through such mechanism.Similarly, livestock breeds, particularly Boer goats and improved New Hampstead and Black Austrolop chicken, will be propagated through livestock farmer multiplier herds/units following the successful approach followed under the AFSP, with technical backstopping by the NARC and the DLS.The project will support a breed improvement program to meet the high demand for improved Boer bucks and New Hampstead and Black Austrolop poultry by establishing an open nucleus breeding scheme for Boer goat, with a particular focus on establishing farmer-managed multiplier herds. For poultry, day old chicks will be sourced from Government farms and raised by smaller-scale outgrower units established by small-scale entrepreneurs who will inturn supply to target beneficiaries.
6. **Training and capacity building.** In coordination with Subcomponent 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, as well as private sector agricultural service providers. To pursue this, a comprehensive CNAA 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 address 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 ToT model to ensure that the trained facilitators go back to their respective locations and train/facilitate other groups.

*Subcomponent A2: Technology dissemination and farmer skill development*

1. The main aim of this subcomponent is to enable farmers’ adoption of improved CSA technologies and practices by mastering the management skills (GAPs) required for sustainable production increases and postharvest processing. It aims to give farmers the practical skills required for informed decision making based on accurate problem analysis in their local context.
2. This subcomponent will engage TA for technology dissemination and farmer skill development. TA will review FFS curricula, cost of the 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 Subcomponent A1.
3. Under this subcomponent, 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 of agricultural public extension staff and private service providers.
4. **Streamlined FFS and adoption support.**The project will promote participatory learning, skills development, and dissemination through the FFS. To contextualize the FFS, the existing AFSP curriculum will be revised to suit the project area and farmers’ needs and include a specific focus on climate change adaptation and resilience building. The 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.Farmer groups will thus be enabled to see and assess the benefits firsthand 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 postharvest management to minimize storage losses. Following the rollout of the 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 toprioritize 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.
5. **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 the FFS, this subcomponent 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 and livestock management techniques, fodder nurseries, and so on).These farmers will be provided with basic inputs such as seeds, fertilizers, and 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 and allow 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 polyhouse 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.
6. **Strengthening advisory services and skill development.**Under the new federal governance structure in Nepal, the agriculture and livestock service centers, subcenters, 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 three to four 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 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 comprehensive training needs assessment will identify specific training needs, some of the pre-identified topics include (a) IPM; (b) off-season vegetable cultivation linking with market; (c) grain storage management; (d) farm yard manure management and soil fertility improvement; (e) social mobilization, including group strengthening and household-level planning of farmer groups;and (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(US$7 million)***

1. This component will contribute to the achievement of the PDO by strengthening household and community capacities in managing their productive assets more efficiently, stimulating market linkages, raising their income, and building their resilience to climate risk.The objective of Component B 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 two subcomponents.

*Subcomponent B1: Strengthening Producer Groups*

1. This subcomponent aims to organize and strengthen PGs representing the targeted smallholder farmers by organizing them around commodities of common interest and enhance their capacity in terms of good governance and leadership skills, group dynamics, decisionmaking, problemsolving and risk management, bookkeeping, meeting organization, agricultural seasonal planning, marketing, value addition, preparation of simple BPs, and simple M&E.
2. TA 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.
3. Under this subcomponent, the project will providecapacity-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 the 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: (a) leadership and governance; (b) business management (for example, bookkeeping, liquidity management, and simple financial reporting); (c) participatory design of simple BPs, specifying their strategy adapted to their socioeconomic environment, modalities of implementation, and simple financial projections; and (d) 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 PGs to increase their market orientation, complementing the productivity-enhancing skills acquired through the FFS approach.

*Subcomponent B2: Market Linkages through Productive Alliances (PAs)*

1. This subcomponent aims to consolidate the linkages between PGs and market actors, including MSMEs, traders, and microfinance institutions (MFIs) by (a) deepening the understanding of agriculture value chains and markets in the targeted areas, (b) developing a multistakeholder dialogue platform bringing together the producer base and market actors, (c) providing financing for simple BPs developed under Subcomponent B1 through an MG scheme, and (d) 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 subcomponent will finance the following activities:
2. **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 learned from earlier initiatives, and so on. 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.
3. **Establish a multistakeholder dialogue platform among key actors in value chains.** A multistakeholder 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.
4. **Financing simple BPs through the MGs.** The MGs will be accessible to eligible smallholder producers in groups or cooperatives to finance the simple BPs developed under Subcomponent B1. The MG 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 and investments to support commodity value addition. In addition, the grants provide a unique opportunity to support and incentivize access to privately provided technical services where needed. Eligible BPs may include, among other things, group/cooperative infrastructure (for example, crop and livestock commodities storage facilities, collection centers, produce cooling and processing equipment, packaging equipment), thereby ensuring that energy-efficient solutions and renewable energy solutions are considered in the BPs and adopted along the value chain;improved crop varieties and breeds (for example, drought-resistant crop varieties, breeds, and technologies tested and validated under Component A).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 the 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 subprojects 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 (65percent of all grant recipients will need to be female).To guide MFIs’ involvement, the MG mechanism will adhere to the following principles, which will be detailed in the PIM: (a) participating MFIs will need to pass due diligence as prescribed by the GoN and the World Bank; (b) the MFIs will be pre-screened to ascertain solvability; (c) an MOU needs to be signed between the PIU (GoN) and participating MFIs, specifying the service fee and joint monitoring and supervision by the PIU and the MFI; (d) interest rate will be the market rate to avoiddistortionary effects; and (e) in case of failure/default, the MFIs can pursue loan recovery through first charge over beneficiary assets.
5. The eligibility criteria will include a financially and technically sound PG BP 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; potential to enhance beneficiaries’ climate resilience and adaptation; potential to achieve climate change mitigation (for example, introducing energy-efficient facilities). A key objective of the MG scheme is to consolidate the productive partnerships with buyers and agri-business; for that reason, project resources earmarked for the MGs will be allocated contingent on the existence of (in-) formal off-take arrangements with buyers, as the MGs should be allocated to match existing demand of buyers and not be based on market forecasts or speculation.The project envisages establishinga Project Cluster Level Selection Committee to undertake the screening of ideas of sub-projects/BPs from the beneficiary producers’ groups. The selection committee will comprise members from the cluster unit, municipalities, local farmers’ association, and the MFIs that will provide financial support to fund eligible proposals. It is expected that the beneficiaries will contribute matching fund of around 15percent 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 US$5,000) aims to enhance participation of a greater number of PGs.
6. **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 BPs funded under the MG scheme. 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.It is expected that these investments will also promote the adoption of advanced quality management systems by exposing the PGs to model markets and 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)***

1. 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 the 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 the AFSP 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 the 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 BCC for improved utilization of available foods, care practices, hygiene and sanitation, food safety, access to public health services, and so on. This is summarized in two subcomponents: Institutional Capacity Strengthening and Nutrition Field School (NFS) and Home Nutrition Gardens (HNGs).

*Subcomponent C1: Institutional Capacity Strengthening*

1. To systematically address the underlying determinants of malnutrition, institutional coordination and capacity development is required. In most subnational 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 Subcomponent C2 as theNFS groups will be encouraged to avail technical backstopping to make best use of the granted package of inputs and services by the project.
2. The subnational 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 subnational 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. Second, building on the AFSP model, a nutrition module will be included in the ToT 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.
3. With the support of 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 fora malnutrition diagnostic and identification of respective roles and responsibilities. Second, TA will be further availed to integrate a nutrition module into the larger package of subnational service providers supported by the project.
4. In terms of analytical work, the DFTQC will continue to support the project as was done under the 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).

*Subcomponent C2: Nutrition Field School (NFS) and Home Nutrition Gardens (HNGs)*

1. 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 (NFSs), will be supported in each target communities, following behavior change theory 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 an FCHV, who acts as a bridge between the community and health facilities to enhance access to health services and support family planning. FCHVs, as volunteers, have served as frontline workers for many projects, mainly focused on nutrition-specific support andincreasingly 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,and so on).
2. The target group of the NFS, will include existing mothers’ groups, the FCHV, and women of reproductive age, particularly those in the 1,000 days as well as influencers/change agents. An 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 the 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 the 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; bore holes for sanitation and watering of homestead gardens; or improved cookstoves which are expected to have a significant health impact in target communities. Amenities required to reduce drudgery for women may also be part of these proposals and child care facilities. The proposals will be financed by the project (small grants) 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 Subcomponent C1 as indicated earlier). Lastly, the project will advocate for the promotion of a balanced food plate as research is currently ongoing.
3. 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 locallyavailable nutrient-dense foods (for example; moringa in the terai), cooking demonstrations and improved cooking practices (for example, switching stoves, avoiding cooking indoors), promotionof biofortified crops as relevant, food safety, HNG, hygiene and WASH education, complementary feeding practices, and promoting of households to avail government services, particularly health services for deworming, supplementation, preparation of fortified mixes, institutional delivery, antenatal and post-natal consultations, vaccinations,and so on.The FCHV will play a crucial role to followup 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, andcommunication (IEC) materials will be further disseminated through a number of media platforms (similar to the AFSP) and a pilot will be conducted on integrated school garden linked with nutrition education.
4. Implementing staff will be supported by TA to deliver the above activities and receive a series of ToT, similar to the AFSP. Each NFS will run for two years and each locality will have two NFSs within the project period to engage at least two cycles of 1,000-day women. One social mobilizer will be responsible for four to five 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:
5. Building on existing materials developed under the AFSP and with inputs from agriculture, livestock, food safety, and health sectors, an NFS curriculum will be developed. Simultaneously, existing IEC materials for skill-based nutrition education and BCC related to the topic described earlier will be adopted and printed.
6. A facilitator for maximum of five 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
	1. To engage with the NFS members and identify barriers to access for diversified food and help the NFS to submit proposals of maximum value US$3,000 (to be determined) for package of services needed to remove those barriers;
	2. 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.
	3. 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 grant will be transferred in two tranches to the NFS based on progress made with the implementation of the proposal activities. The first tranche will be given for a sound proposal and the second tranche will be given after submission of a progress report verified by the social mobilizer/facilitator working in the respective community.

***Component D: Project Management, Communication,and M&E (US$3.7 million)***

1. The main objectives are to (a) ensure effective strategic and operational planning, implementation, and M&E 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 (for example,FAO); (b) evaluate the project's outcomes and impacts on beneficiary groups, with special focus on midterm and final results; and (c)communicate efficiently to various public and private entities on project activities, outcomes, best practices and lessons learned.
2. This component will contribute to attainment of the PDO by ensuring that (a) interventions undertaken under the project are properly planned, coordinated, and aligned with project design and development objectives; (b) implementation and institutional arrangements and activities are in line with relevant fiduciary and safeguards policies, procedures, and standards; and (c) there is due communication, monitoring, oversight, and reporting of project implementation and the resulting outputs and outcomes. The project will finance the operation of (a) a PMU in Kathmandu and (b) SLCCs in each project state. At the municipality level, major implementation responsibilities will be through the PCUs 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 (a) establishing and supporting project units at the national, state, and municipality levels; (b) supporting specialized support services relating to key activities such as external audit, financial accounting, procurement, M&E, and communication; and (c) training of staff involved in project implementation.
3. Under this component, a comprehensive communication strategy will also be developed and implemented for the project as a whole, which will significantly contribute to M&E activities and enhance social accountability, as this will also be targeted tokey stakeholders in the broader rural development community (CSOs, cooperatives, rural entrepreneurs, and so on). The communication strategy of the FANSEP will focus on improving knowledge and understanding (awareness) of FANSEP activities, including areas of challenges within the project, by sharing good practice and lessons learned from implementing the project activities and improving accountability and transparency through effective communication of beneficiaries’ rights and responsibilities.
1. Agriculture Development Strategy (ADS 2015). [↑](#footnote-ref-3)
2. The Hunger and Nutrition Commitment Index ranks governments on their political commitment to tackle hunger and undernutrition (www.hancindex.org). [↑](#footnote-ref-4)
3. Report No. 121029-NP. [↑](#footnote-ref-5)
4. CRI = Corporate Result Indicator. [↑](#footnote-ref-6)
5. The FIES was selected based on the use of extensive validation criteria focusing on whether the indicator (a) correlates highly with the Sustainable Development Goal (SDG) nutrition indicators (such as stunting), (b) is relatively low cost to collect information, and (c) can have wide country coverage. [↑](#footnote-ref-7)
6. The type of CSA practices which will become relevant in the project are described in annex 2. [↑](#footnote-ref-8)
7. GAPs include both production practices and post-harvest (processing, and so on) practices. [↑](#footnote-ref-9)
8. A PA is defined as an agreement between a group of organized farmers and a buyer, for the provision of a certain good, in a specified quantity and quality. [↑](#footnote-ref-10)
9. The project’s cost-benefit analysis was based on ‘with/without’ assumptions. Data were collected from multiple sources, that is, Agriculture Census Survey 2011, Agribusiness Promotion and Marketing Development Directorate, and Agribusiness Promotion and Statistics Division, MoAD. [↑](#footnote-ref-11)
10. Adoption of technology is a slow process due to challenging agro-climatic and socioeconomic 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 percent of project beneficiaries are expected to reach and sustain full adoption and productivity levels from Year5 and additional 35 percent in Year 10 of project implementation. Thus, a total of 55,250 households out of targeted 65,000 will be adopting improved technology and farm management practices. [↑](#footnote-ref-12)
11. Demographic Health Survey. 2016.<https://dhsprogram.com/publications/publication-FR336-DHS-Final-Reports.cfm>. [↑](#footnote-ref-13)
12. FAO. 2017. Climate-Smart Agriculture Sourcebook. [↑](#footnote-ref-14)
13. Reliefweb. 2016.“Scaling-up Pathways for Climate-Smart Agriculture Technologies and Practices in NEPAL.”[www.adaptation-undp.org](http://www.adaptation-undp.org)*.* [↑](#footnote-ref-15)
14. https://www.spring-nutrition.org/sites/default/files/countries/factsheets/spring\_bangladesh\_fact\_sheet.pdf. [↑](#footnote-ref-16)
15. For rice (5), potato (2), wheat (2), buckwheat (2), maize (3), and finger millet (2). [↑](#footnote-ref-17)
16. Climate Smart Agriculture in Nepal (2017). CIAT (Centro International de Agricultura Tropical), CGIAR, CCAFS, Local Initiatives for Biodiversity, Research and Development (Li-BIRD), and World Bank. [↑](#footnote-ref-18)
17. Spreading the gains from mechanization: learning from IWRMP. 2017. Irrigation and Water Resources Management Project, Department of Agriculture, Nepal. [↑](#footnote-ref-19)