

INTEGRATED SAFEGUARDS DATA SHEET

CONCEPT STAGE

Report No.: ISDSC13598

Date ISDS Prepared/Updated: 22-Sep-2015

Date ISDS Approved/Disclosed: 29-Sep-2015

I. BASIC INFORMATION

A. Basic Project Data

Country:	Bhutan	Project ID:	P155513
Project Name:	Agricultural Growth and Nutrition Security Project (P155513)		
Task Team Leader(s):	Winston Dawes		
Estimated Appraisal Date:		Estimated Board Date:	26-Feb-2016
Managing Unit:	GFA06	Lending Instrument:	Investment Project Financing
Sector(s):	Irrigation and drainage (25%), Crops (25%), Agro-industry, marketing, and trade (30%), Agricultural extension and research (20%)		
Theme(s):	Water resource management (20%), Nutrition and food security (20%), Rural markets (20%), Rural services and infrastructure (25%), Trade facilitation and market access (15%)		
Financing (In USD Million)			
Total Project Cost:	10.43	Total Bank Financing:	0.00
Financing Gap:	0.00		
Financing Source			Amount
Borrower			1.40
Global Agriculture and Food Security Program			8.00
LOCAL BENEFICIARIES			1.03
Total			10.43
Environmental Category:	B - Partial Assessment		
Is this a Repeater project?	No		

B. Project Objectives

16. The proposed Project Development Objective (PDO) is to (i) increase agricultural productivity and enhance market linkages and (ii) improve nutritional security in six of the poorest rural dzongkhags in south-west Bhutan. The PDO is to be achieved by raising agricultural yields

through improved irrigation and on-farm water management, farm mechanization, adoption of nutrition sensitive agriculture, and improved production technology. Market linkages will be developed and strengthened by improving post-harvest and marketing infrastructure and strengthening value chains, combined with improving market information systems using ICT solutions. Nutrition security will also be enhanced through the school feeding program, improved communication, awareness raising and nutrition education. Technical assistance will be provided to support project management and institutional capacity.

C. Project Description

2. Overall Design: Agriculture in Bhutan is typically characterized by smallholder, traditional and subsistence farming. At the individual household level, current scale and scope of farming typically provides employment and produces food for only part of the year. The proposed project will seek to address the inter-connected problems faced in enhancing agricultural production and productivity and commercialization through a set of integrated, area-specific interventions that respond to local problems, potentials and priorities. This project will seek to identify opportunities for private sector engagement in the provision of supplies/inputs, services and market linkages. Emphasis will be laid on the provision of small infrastructure support, supporting farm mechanization and appropriate technologies, formation of relevant skills, strengthening value chains, and linking farmers to markets. The key foundation for this project will be the strengthening and capacity building of farmers' groups in order to build ownership and sustainability of project interventions. All project interventions will take gender into consideration and ensure women's equal participation in project activities, their representation in farmer groups and involvement in decision making. This project draws from the lessons learnt through previous projects and builds on the gains made through prior investments. Special focus will be given to developing public private partnerships as this is a key ingredient that is currently missing in the RNR sector in Bhutan.

3. Gender mainstreaming: Bhutan has made significant progress in closing gender gaps. However, women still face challenges of lower education enrollment at higher levels, sex segregation in the labor market, and requirements of traditional gender roles in household chores and child care. This results in very limited sectors for jobs for women and explains the higher percentage of women in the agricultural workforce. The Bhutanese women in general enjoy relatively equal status in terms of access to property, including agricultural land, as a result of the matrilineal inheritance system practiced in some regions in Bhutan. At the national level, 60% of rural women have land registered under their names. Women play a key role in both the production and marketing of farm products. Increasing migration of male members of the household and their engagement in off-farm activities are expanding the responsibilities of women in agriculture beyond their previous roles. All project interventions will take this key factor into consideration and ensure women's equal participation in project activities, their representation in farmer groups, and active involvement in decision making. There will be additional focus in areas where women's proactive engagement is expected, such as nutrition improvement, farm mechanization, access to extension services, capacity building and skills development activities, and other labor saving technologies. Gender-disaggregated data will be tracked and collected during project monitoring.

4. Proposed Areas of Intervention and Target Group: The target area for the proposed project will be selected geogs in six chosen dzongkhags in south-west Bhutan—Chukka, Dagana, Haa, Samste, Sarpang, and Zhemgang—which border Northeast India and could readily take advantage of demand for off season vegetables, thus producing more nutritious foods for local markets as well. This area is located near to the Siliguri pass, which is a focal area for a series of investments to open trade in the Northeastern corridor between Bangladesh, Bhutan, India, and Nepal. While the project will focus on

this area, due to its combination of need and potential trade opportunities, it will follow a value chain approach, which may require investments along the value chain beyond the geographic target area. This will be outlined during preparation. Selection of the target group will take into consideration both poverty; and the production and marketing potential of agricultural products. From the lessons learned from past and ongoing projects, this project will promote synergies across different activities in order to maximize benefits and sustain outcomes. Even though the Bank has supported interventions in all of the chosen six dzongkhags under previous projects, more efforts are needed to enhance productivity and commercialization of agriculture in these dzongkhags. For example, only one dzongkhag out of these six (Dagana) has had significant irrigation interventions. Two have no infrastructure interventions, and three have only a few, very small irrigation interventions. The total area that is covered by irrigation schemes in these six dzongkhags is almost half of the total agriculture land that still needs irrigation. Moreover, market infrastructure in these six dzongkhags is almost nonexistent. Without supporting the market in these areas, any gains made previously for improved irrigation and agricultural productivity will not have proportional effects on increasing farming income and the overall growth of the agriculture sector.

5. Reasons for changing the area of intervention from Eastern Bhutan: Initial GAFSP proposal indicated that the project would be implemented in six eastern dzongkhags. However, the reason for this change to the south-west is based on multiple considerations: On the one hand, there is a need to build upon the gains made under previous projects that were also operating in some of these dzongkhags; and on the other hand, compared to the previous eastern dzongkhags, the chosen dzongkhags in the south-west are worse off. Moreover, IFAD already has significant presence in the East, with a project in the pipeline, an ongoing project and two other completed agriculture projects.

6. Lessons Learnt from DRDP and RRCDP: (i) Successful project implementation requires a strong project management team, led by an experienced project coordinator. Equally important is having in place a robust monitoring and evaluation system led by a competent M&E officer to monitor, collect and document project data (quantitative and qualitative), and accurately report on project achievements beneficiary impact. (ii) Previous projects focused more on infrastructure development and overlooked the softer components on strengthening the beneficiaries in terms of creating ownership and management of the assets for sustainability. (iii) The encouragement of double cropping/crop diversification should accompany the provision of irrigation services. (iv) Institutional capacity building is a key factor in sustainability example, the training of National Seed Center (NSC) staff led to the propagation of high quality disease free basic seeds of potato, banana and maize. (v) Multiple fragmented interventions do not yield the impact as a focused saturated intervention. (vi) Organized community farmer groups such as the community-based seed producer (CBSP) groups have significantly increased seed production. This model could be replicated by future projects and (vii) Access to markets as a result of farm roads is important by not sufficient. Organized marketing infrastructure, with linkages to buyers, fair pricing and guarantee markets is a key ingredient for increasing agriculture production.

7. Based on experience from DRDP and RRCDP, the team is better informed about the implementation systems preferred by the Government and the constraints that exist at the dzongkhag level. Therefore, program design will work more closely with existing country systems for implementation, with technical assistance and capacity building targeting engineering units in the dzongkhags. While this project will target a particular dzongkhags, it will take a value chain approach to (1) maximize the production of commercially viable and nutritionally valuable crops (fruits and vegetables); and (2) help develop the conditions and infrastructure for improved market access.

Proposed Project Components

The proposed project will consist of four components:

Component 1: Increasing Agricultural Productivity (USD 4.0 million)

8. The objective of this component is to increase agricultural productivity which is vital for improving food security and enhancing rural income. Under this component, the project will support irrigation and water management schemes in close conjunction with other interventions, promote the cultivation of high value commercial crops, use of hybrid and high yielding seeds; promote farm mechanization to increase efficiency, and support new technologies focusing on high value and climate smart crops.

Sub-components:

1A. Irrigation and Water Management: Irrigation remains the biggest constraint in enhancing production, productivity and the commercialization of agriculture in the country. This sub-component will consist of (i) development and modernization of irrigation infrastructure with a focus on introducing improved water management technologies through an integrated approach to selected areas and (ii) introduction and planned promotion of water-saving and efficient technologies like mini-sprinkler and drip irrigation (micro irrigation) along with other water harvesting technologies to support the production of high value cash crops like greenhouse vegetables, fruit, citrus and cardamom. Wherever possible, micro-irrigation will utilize simple gravity fed low pressure designs to minimize capital and operating costs. The cost of traditional flood irrigation in Bhutan for just a single annual crop is simply too high - therefore this project will support those schemes that manage water efficiently to provide irrigation to second and third crops, with a careful focus on integrating irrigation interventions with other interventions in the project including farm mechanization, greenhouses and other protected cropping structures. Where possible a watershed approach would be assessed on a per dzongkhag basis.

1B. Farm Mechanization: This sub-component will support farm mechanization through the Agriculture Machinery Centre (AMC) of the MoAF, in order to address labor shortages; reduce the cost of production and increase efficiency; create potential employment in rural areas, especially for the youth; and raise farm incomes. Bhutan's agriculture is under-mechanized compared to other South Asian countries. The key impacts of mechanization are: the reallocation of agricultural labour from power intensive to management intensive tasks; cost reductions for tillage and reaping of cereal and vegetable crops; increased germination rates and the resulting savings in seed costs, increasing yields by reducing the number of days in the critical turnaround time between crops, and an increase in employment in the supporting service infrastructure (tractor rental operators, service mechanics and small scale dealers). Savings in production costs as high as 53% have been reported in Bhutan with the use of machinery on farms. Machines supported through the project will include (i) power tillers, power reapers, mini combines, and transplanting machines. (ii) Through the Japanese Social Fund (JSDF) youth from target communities will be trained as mobile service providers in the operation, repair and maintenance of these machines, and they will be trained in micro-business management to enhance sustainability. (iii) Opportunities for the private sector to participate in mechanization development will also be explored during project preparation, drawing on lessons learned elsewhere in the region such as from Bangladesh. This may involve a concessionary financing arrangement, technical capacity building of the dealer network, particularly for the 2-wheel

power tillers and mini-tillers. Particular attention will be paid to ensure women's equal participation in the trainings as well as entry into this job market.

1C. Improved Technologies for Agricultural Commercialization: This sub-component will introduce technologies to support the increased productivity of high-value crops through (i) innovative participatory irrigation management schemes to improve irrigation scheduling, delivery and efficiency by user groups; (ii) new seed varieties that are market preferred, highly productive and have improved disease tolerance; (iii) improved extension services with better access to knowledge resources and work planning tools; (iv) electric fencing to mitigate human-wildlife conflict; and (v) climate-smart agriculture including for efficient use of fertilizer, water, and integrated pest management, and protected cropping structures for high value crop; and use of greenhouse technologies such as plastic tunnels/houses. Fruit and vegetable crops with high commercial and nutritional value such as nuts, temperate fruits, citrus, cardamom, potato, tomato, cauliflower, broccoli, and asparagus will be targeted. Where irrigation is not feasible, conservation farming practices such as the use of mulching, cover cropping, use of short duration varieties and water harvesting techniques will be promoted.

Component 2: Linking Farmers to Markets (USD 2.1 million)

9. The objective of this component is to improve and promote market access to enhance commercial agriculture production. The component will support the development of an organized/structured marketing system for agricultural products that will involve the strengthening of value chains, creation of food marketing centers, and improvements to the post-harvest infrastructure.

Sub-components:

2A. Improving Market Access and Value-Addition: This sub-component will organize community groups into marketing networks in order to facilitate the production, organization, and marketing of RNR products. This will enable farmer groups/cooperatives to engage in profitable market-oriented production and to promote partnerships and market linkages with other value chain participants and agribusinesses. The project will support and strengthen (i) farmer marketing groups/cooperatives including in collaboration with the Department of Agricultural Marketing and Cooperatives (DAMC); (ii) provide capacity building on group management including the standard group or corporate governance roles of chairperson, secretary and treasurer, and the project will provide mentoring support to facilitate compliance with procedures required by the Registrar of associations and cooperatives; and (iii) support commercial farm management skill development with training and mentoring (e.g. financial literacy, book keeping, business plan development, agricultural marketing management). The project will also support (iv) demand-driven support to acquire targeted and well-justified low-cost post-harvest and small storage technologies, handling, packaging, grading and value addition equipment, including through mechanisms such as matching grants to attract linkages with agribusiness and private sector. The success of market based farming will depend on the ability of farmers to respond to market demand. The project will promote seasonal planning workshops where farmers will be assisted by the extension workers to plan and grow crops with market potential. The potential export market for Bhutanese produce is large. India and Bangladesh in particular offer vast markets for vegetables, fruits, spices and potato.

2B. Market Infrastructure: The agricultural marketing system in Bhutan is unorganized and poorly developed, lacking marketing facilities and other post-harvest infrastructure. This situation is augmented by unplanned urbanization by local authorities having no clear policies on developing

facilities to meet future needs. This sub-component will support (i) urban planning processes for agricultural market infrastructure including zoning of suitable land and supply of facilities such as water, waste management, electricity and access; (ii) the establishment of marketing infrastructure identified by the planning processes in participation with local private sector or municipal authorities, and also those jointly identified with Food Corporation Bhutan Limited (FCBL) and dzongkhag stakeholders (e.g. collection sheds, sales outlets, packing houses, storage houses, local market outlets and market facilities) which may be under leasing, grant or other financial support arrangements, (iii) construction of new or support of existing “One Stop Farmers Shops” to improve access to, and cost efficiency in, supply of improved farm inputs and grade, pack and on-sell commodities.

2C. Market Information and Improved ICT: The 11th Five Year Plan recognized ICT as an important means for information and communication in the agricultural sector. All the dzongkhags and geogs in project areas have access to various kinds of ICT facilities. According to the International Telecommunications Union 2013 data, while Bhutan has a relatively high mobile phone subscriber penetration rate of 72%, not counting prepaid users, only 16% of Bhutanese have mobile broadband subscriptions, therefore information services would need to be adapted to an appropriate level of technology. The objective of this sub-component is to provide farmers with market information, to link farmers/farmer groups with markets and private sector stakeholders, and to pilot improved ICT-based knowledge management and information exchange systems at the field level. Potential activities will include (i) establishing a market information system for farmers in coordination/linkage with market infrastructure support and deploying the system via SMS and mobile applications appropriate to the phones used by farmers; (ii) including an SMS-based alarm or early warning system to send weather advisories or other emergency information to farmers; (iii) releasing the RGoB’s agricultural datasets (e.g. weather, prices) in open formats - machine readable, for free, and with an open license - to enable mobile phone application developers to create new information services and provide them directly to farmers either through sales or by making revenues via advertising models; (iv) developing a crowd-sourced, peer-to-peer information sharing system with varying functionality, e.g. pricing, such that farmers can report prices seen at markets; (v) creating an online, mobile-accessible clearing house linking buyers and sellers of agricultural products; and (vi) equipping extension officers with data-collecting tablets that populate information services with statistics in real time. Since information services provided by the private sector can be of higher accuracy and quality than those provided by government, public-private partnerships would be explored in all cases. Lastly, the RGoB could hold application challenges, whereby prize funding under the project is granted to top applications that address specified challenges. Application challenges tend to produce successful applications at a lower cost to government than an RFP, with multiples of effort having been expended by multiple contestants to find a solution.

Component 3: Improving Nutrition and Food Security (USD 1.1 million)

10. The objective of this component is to contribute to an enabling institutional environment and food-based nutrition awareness for improved dietary habits in select dzongkhags. Activities will be informed by participatory qualitative and quantitative assessments and build on lessons-learned from existing programs such as school linking programmes. This component will complement aspects of components 1 and 2 (improving the availability and accessibility of nutrient-rich foods) with the overall aim of improving nutrition and food security.

Sub-components:

3A. Integrated school feeding programme and food education: This sub-component will build on existing programmes that procure produce from the community (especially through farmers groups)

and introduce food/nutrition education in schools. Special emphasis will be placed on raising awareness of healthy balanced diets (to reduce under-nutrition and prevent over-nutrition) among community members and on connecting smallholder farmers with local institutions with the aim of instigating market demand for nutrient-rich foods and help meet dietary deficiencies.

3B. Communication, awareness raising, and nutrition education. The objective of this sub-component is to elicit behavior change by strengthening and/or scaling up existing nutrition education programme(s), integrating nutrition into agriculture training institutes and/or agriculture extension/farmer training, and developing media messages on healthy food preparation and eating habits. Depending on needs identified in study as described above in 3A, (i) develop training and learning materials, (ii) deliver capacity development through Training of Trainers and (iii) complement ongoing health media messaging with simple nutrition messages.

3C. Identify market opportunities and key areas of interventions which can be piloted based on recommendations from various studies and informed by Governments Policy. Such interventions may include adding value by processing and properly storing food and reducing post-harvest losses with the aim of reducing seasonal food shortages and enhancing year-round access to nutritious foods. The objective of this sub-component is to identify unmet market opportunities as well as nutritional gaps and shifting dietary preferences, which may require some further qualitative and quantitative assessments.

Component 4: Project Management and Institutional Strengthening (USD 0.8 million)

11. This component will support all aspects of project management at the national and dzongkhak levels, including M&E, communications/knowledge management and policy analysis. Activities to be supported under this component include: (i) strengthening institutional capacity across the project (trainings, exposure visits, and specific thematic/technical training); (ii) Setting up a robust M&E System, including baseline surveys, mid-term assessment, and end of project evaluation; (iii) strengthening communications and knowledge management, and (iv) supporting studies and policy analysis that would contribute to the long-term agriculture, food security and nutrition policy of the country.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

12. The project will be located in six of the poorest rural dzongkhags in south-west Bhutan. In some of these dzongkhags, two of the Bank-funded agricultural productivity projects—the Decentralized Rural Development Project (DRDP) and the Remote Rural Communities Development Project (RRCDP) are/were also operating. Experience from these projects suggests that long-term, irreversible and large-scale environmental and social safeguards risks are minimal, if any. Most of the impacts relate to effects on livelihoods due to land acquisition, use of pesticide and chemical fertilizer, over withdrawal or misuse of irrigation water.

E. Borrowers Institutional Capacity for Safeguard Policies

13. Project management would continue to be the responsibility of the existing implementation agency, the Ministry of Agriculture and Forest (MoAF). This project is designed and will be implemented using the same approach of RRCDP for environmental and social safeguards. Because of prior experience of working with Bank financed project, MoAF is familiar with the Bank's safeguard policies. However, MoAF still needs capacity improvement with regard to environmental management and to comply with Bank's safeguards requirements since the new project would

incorporate new activities that are concentrated more on nutrition, market facilitation and value addition for sustainability.

F. Environmental and Social Safeguards Specialists on the Team

Bandita Sijapati (GSURR)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>While the project is designed to provide opportunities for an overall positive impact, some interventions/activities may have adverse environmental impacts. The key environmental issues that will need to be addressed by the project are: (i) land slide/soil erosion; (ii) over-extraction or misuse of irrigation water; (iii) soil degradation; (iv) pesticide-related health and safety issues; (v) water pollution, and (v) workers and community health safety and sanitation.</p> <p>The project is classified as a “Category B” under OP/ BP 4.01 with a partial assessment as the impacts are likely to be small-scale, site specific with no irreversible impacts and mitigation measures can be designed more readily. The implementing agencies will prepare an Environmental and Social Management Framework (ESMF) which will be supported by an assessment of environmental practices of currently on-going RRCDP, institutional capacity assessment, some limited environmental baseline, as well as guidelines to carry-out sub-project specific environmental assessment, consultations, prepare site specific EMP, costing, review process, implementation, and monitoring.</p>
Natural Habitats OP/BP 4.04	No	The project will not implement any agricultural activities inside the Protected Areas (wildlife sanctuaries, national parks, etc). The infrastructure activities will be small scale. It is highly unlikely that any natural habitats formed largely by native plant and animal species would undergo transformation of use or would be affected or modified with support from the project.
Forests OP/BP 4.36	Yes	Project will not implement any activities inside in the forest or protected forests or no forestry activities are envisaged in the project. However, some activities such as irrigation schemes, market infrastructure development may involve some clearing of

		vegetation. Hence the policy is triggered. The ESMF will address any issues related to forest.
Pest Management OP 4.09	Yes	The project is expected to have minor use of nationally approved pesticides and there are no significant issues of pest management and pesticide use to be addressed in the sub-projects. The procurement and distribution of pesticides in Bhutan is well controlled through a centralized system and there will be no procurement of pesticides classified as Class Ia, Ib and II by WHO. However, in anticipation of higher yields, farmers could expand the use of chemical fertilizers, and pesticides more than what is recommended. Since the proposed GAFSP project is expected to promote sustainable production practices as a part of project design, the above issues are not considered to be critical in the project. However, as a matter of precaution to address any potential and unforeseen issues of pest and pesticide management, OP 4.09 has been triggered. The ESMF will provide guidelines on safe use of agrochemicals and promotion of green agriculture technologies such as: (i) Integrated Pest Management (IPM); (ii) balanced fertilizer use to reduce the dependence on fertilizers; and (iii) composting.
Physical Cultural Resources OP/BP 4.11	No	The project would not impact any physical and cultural resources.
Indigenous Peoples OP/BP 4.10	No	There are no known indigenous groups in the country. However, particular attention will be given to concerns of vulnerable groups including, women, poor, marginal farmers and youths.
Involuntary Resettlement OP/BP 4.12	Yes	Irrigation development and farm mechanization might require land acquisition that could potentially have impacts on livelihoods. However, due to the size and linear nature of these activities, these impacts are envisaged to be minimal.
Safety of Dams OP/BP 4.37	No	The project will not construct or rehabilitate dams larger than 10 meters in height.
Projects on International Waterways OP/BP 7.50	TBD	The project intends to enhance agricultural productivity by designing improved and efficient irrigation schemes, such as sprinkler and drip irrigation in Southwestern Dzongkhags of Bhutan. The International Waterways policy (OP 7.50) may trigger as raw water for irrigation from the existing streams will be withdrawn, stored and distributed to the agricultural fields through conveying pipes.

		Since the project area and the streams to be selected for irrigation water supply have not been identified yet and types of streams, their hydrology or morphology are not known yet, it is not confirmed that withdrawal of water from these streams will affect the neighboring country. A study will be carried out to determine whether an International Waterways (OP 7.50), in terms of affecting quantity or quality of the streams, will be triggered to this project or not. This will be determined at the appraisal stage. If the OP/BP 7.5 triggers, Bank policies will be applied.
Projects in Disputed Areas OP/ BP 7.60	No	Not triggered because the project dzongkhags are not located in any internationally disputed areas

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 30-Sep-2015

B. Time frame for launching and completing the safeguard-related studies that may be needed.

The specific studies and their timing¹ should be specified in the PAD-stage ISDS:

ESMF will be completed by September 30, 2015

IV. APPROVALS

Task Team Leader(s):	Name: Winston Dawes	
<i>Approved By:</i>		
Safeguards Advisor:	Name: Maged Mahmoud Hamed (SA)	Date: 27-Sep-2015
Practice Manager/ Manager:	Name: Shobha Shetty (PMGR)	Date: 29-Sep-2015

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.