

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC26804

Project Name	Agricultural Growth and Nutrition Security Project (P155513)
Region	SOUTH ASIA
Country	Bhutan
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%)
Lending Instrument	Investment Project Financing
Project ID	P155513
Borrower(s)	Ministry of Finance, Department of Public Accounts
Implementing Agency	Ministry of Agriculture and Forests
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	28-May-2015
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Estimated Date of Appraisal Completion	17-Dec-2015
Estimated Date of Board Approval	26-Feb-2016
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

1. Bhutan is a small landlocked nation located in an ecologically risky area high in the Himalayan mountain range and remains vulnerable to internal and external shocks. However, its diverse ecosystems provide a basis for remarkable social, economic and cultural developments. The country has a population of approximately 700 thousand people, Bhutan is divided into three altitude zones: The sub-Himalayan foothills; the inner Himalayas; and the greater Himalayas ranging from about 150 meters in the south to about 7000 meters in the north. Bhutan has a high percentage of forest cover (70.46%) - the highest proportion of forest cover of any Asian country. However, the amount of arable land is only 8% of the total land area, while areas under cultivation are only about 3%. Large areas are exposed to monsoons, floods, droughts, landslides and earthquakes. The topography and the ecology of the country is similar in the west and east. Close

proximity to India and China offers trading advantageous.

2. Bhutan has one of the highest Human Development Index (HDI) in the region and GNI index compared to South its Asian regional and lower middle income peers. However, despite progress, poverty is predominantly a rural phenomenon. Under the 10th FYP Bhutan has achieved significant social and economic development. Its unique mountainous topographical terrain makes it difficult to uplift poverty and food insecurity in lagging regions. Over 30% of Bhutan's poor live in rural areas compared to around 2% poor living in urban areas. Almost 70% of the rural population are engaged in subsistence farming, and suffer from abject poverty, and food insecurity. Around 56% of the rural households live in more than one hour, 8% more than three hours, and 12% "rural households are a day or more walking distance from nearest motor-able roads.

3. Comparative advantages in eco-climatic conditions, open trade regime, stable macroeconomic and political stability, increased private sector and donor participation has opened up internal and external markets. However, removal of supply and demand bottlenecks is imperative. The rural agriculture economy is gradually moving from subsistence farming to commercial cash crop economy. The diversity of agro-ecological zones and lack of pollution has provided opportunities for cultivating a variety of crops and rearing a wide range of livestock. Different farming systems are visible in each agro-ecological zone. On the wet sub-tropics, low-altitude rice is grown in rotation with mustard, wheat, pulses, and tropical fruits. This belt has greater potential in the future for farm mechanization that may result in large-scale production because of the flat terrain.

Sectoral and Institutional Context

4. Agriculture is arguably the most important sector of the Bhutanese economy, contributing up to nearly 16% of GDP. It also accounts for 4.3% of exports and provides a large proportion of the raw materials for industries. The sector directly employs about 59.4% of the total population and will continue to be the key determinant in the country's efforts to reduce poverty in the immediate years ahead. Agriculture is dominated by smallholder subsistence farmers who occupy the majority of the arable land and produce most of the crop and livestock products. As a result of the free trade agreements that Bhutan enjoys with India and Bangladesh, exports of commercial crops have also increased sharply. Women constitute the majority of the work force in the agriculture sector. Regional disparities still persist and poverty in rural areas at 16.7% is still significantly higher than in urban areas at 1.8%.

5. The Renewable Natural Resources (RNR) sector's growth remained insufficient to adequately address poverty, attain food security, and lead to sustained GDP growth. RNR sector growth has remained relatively slow since 2000 at around 1.6% per year with its share of GDP declining from 22% in FY 2004/05 to 11.6% in FY 2011/12. Similarly, the contribution of the RNR Sector to the national GDP at constant prices (2000) also shows a declining trend from 27.2% in 2001 to 13.2% in 2011 at 1.5% annually. This indicates predominance of subsistence agriculture and less agriculture diversification. The RNR sector will face the recurring challenges of decreasing public investment, loss of agriculture land for other development, lack of infrastructure such as irrigation and post harvest storage, labour shortage, rural urban migration (RUM), Human wildlife Conflicts and lack of credit opportunities.

6. Although RNR's share in total exports is increasing, the overall trade balances have remained negative. In 2011, exports of primary agriculture commodities contributed 4.3% of

Bhutan's formal exports earnings. When combined with informal trade in agricultural produce (believed to be considerable) the contribution of agriculture to export revenue could be much higher. Furthermore, while agriculture's contribution to growth has been modest, the export data suggests a slightly different picture. The value of exports of primary agriculture actually grew by 28.2% per year on average between 2008 and 2011 (RNR Statistics, 2012). The analysis also reveals that commodities like oranges, cordyceps, potatoes, cardamom, apples and mushrooms have been exported more than imports.

7. Given the rugged terrain in Bhutan, only 94,903 hectares of land is under agriculture, which is only 2.9% of the country's total area. Agricultural productivity is further reduced by the high proportion of unused, "fallow" land. Approximately 23% of rural households report that some of their land is fallow; with that result 26.3% of Bhutan's scarce agricultural land is unused. The proportion of fallow land is highest for dryland (30.9%), but a large proportion of high potential wetland (17.3%) and cash crop land (13.3%) is also idle.

8. The RNR Sector is the largest employer in Bhutan and even though the overall employment between 2010 and 2011 grew only by 0.9%, employment in agriculture increased by 2.2%. During the same period, rural employment expanded by 3.5% because of the increased employments of people over 45 years of age groups, despite declining employments of 15-44 years age groups. Rural agricultural employment was increased by over 3000 persons. The increased employment is mostly explained by expanded female employments of age over 45. Agricultural production relies on female workers, and female employment shows larger sized year-to-year fluctuation than of males. Over 97% of agricultural and forestry employment is explained by unpaid family and self-employed, though there is some indication that this trend is declining. The increased self-employed is likely indicating an increased number of small-scale farm-households because total farm-land area shows only a marginal sized change, hence an increased number of rural-poor.

9. Inadequate farm labor due to rural out-migration is widely viewed as a constraint to agricultural production, and therefore increased farm mechanization is needed to offset these shortages. In the agricultural census of 2008, approximately 16% listed labor shortages as one of the main constraints to agriculture. Farm labor constraints may be due to changes in the composition of the agricultural work force. While the proportion of the rural male population (over 15 years of age) active in agriculture has risen from 22% to 37%, the proportion for women has jumped from 21% to 65%. Women now significantly outnumber men in the rural work force. Hence they bear a much higher share of the farm workload, in addition to their traditional household and family responsibilities. Evidence from the 2008 agricultural census show that the poor farmers are much more vulnerable to labor shortages with 20% of farmers in the lowest quintile reporting this as their major constraint, versus 12% in the highest quintile. In 2010, only 1271 acres of land is under farm mechanization and under the 11th FYP, the RGoB plans to increase acreage under farm mechanization to 5000.

10. Challenges in enhancing food production are linked to the problem of irrigation water, with irrigation channels often not functional. Out of a total of 79,740 targeted acres under the 11th FYP, only 47,424 acres are currently irrigated. Some Chhuzhing (irrigation channels) have started experiencing competing uses of water from other sectors. In few areas, water sources have dried up. These scenarios have led to increasing cases of fallowing or under-utilization of Chhuzhing thereby affecting the domestic rice production. In the Agricultural Census of 2009, one of the major reasons that farmers' leave land idle include lack of irrigation (16.3% of farmers).

11. Efforts in production and marketing in Bhutan have not been linked together adequately and marketing has had mostly an infrastructure provision focus (e.g. farm roads, irrigation schemes, market sheds). This has resulted in a lack of sustainability and limited income increases for farmers and groups, which in turn have created little incentive for marketing group formation, cooperative- and agricultural business development. In addition the inclusive targeting approach of reaching as many geogs and households as possible, has failed to capitalize on potential high production areas in combination with ready markets. Currently, marketing infrastructure is very limited and the Food Corporation Bhutan Limited (FCBL), which is a state owned corporation designated as the marketing arm of Ministry of Agriculture and Forests to undertake the physical marketing of RNR products, is making efforts to improve the situation.

12. While nutritional indicators have improved, food security and malnutrition remains a challenge in the lagging regions. Nearly 27% of Bhutanese households consume less than the daily minimum calorific requirement of 2,124 kcal. A survey of rural households in 2007 reported that about 35 percent of the respondents faced food shortage during the year, and of this figure, 51 percent faced food shortage for more than 4 months, while 49 percent had inadequate food for 3 months or less but as of recent showing improvement. In 2011 one in seven households have limited access to food for one or more months and face acute malnutrition, However, the number of stunted and under-weight children have decreased.

C. Institutional Context

13. Bhutan has a long history of pursuing a systematic approach to planning, in all sectors of the economy. The development philosophy is in accordance with the guiding principle of Gross National Happiness (GNH). The current 11th fiscal year plan (2013-18) is the second plan under the new elected governance system. Bhutan 2020 – A Vision for Peace, Prosperity and Happiness, is recognized as the Poverty Reduction Strategy Paper (PRSP) by the World Bank that supported the 10th FYP. The country's national development goals and targets and in Bhutan 2020 are in essence fully compatible with the Millennium Development Goals (MDGs). The sector has prepared the RNR food security strategy paper and conducted a food security vulnerability mapping to achieve poverty alleviation, and has also identified the following objectives: 1) To enhance sustainable rural livelihood 2) To conserve and promote sustainable utilization of forest and water resources, 3) To promote sustainable utilization of arable agriculture and pasture land resources and 4) To enhance food security.

14. Donor funding from GAFSP is critical to bridge the financing gaps resulting from limited fiscal space, with the objective to help Bhutan achieve self-sufficiency and alleviate poverty. Bhutan's ability to galvanize international and private sector funding is of critical importance, in order to continue the growth momentum, meet the MDG goals, and eventually achieve middle income status. In November 2014, the Global Agriculture and Food Security Program (GAFSP) Steering Committee awarded the RGoB a grant in the amount of USD 8 million to fund the proposed Food Security and Agriculture Productivity Project (FSAPP). In December 2014, the RGoB confirmed and formally nominated the World Bank as the supervising entity for the execution of this grant. The 11th FYP is designed to complement, and enhance development activities through removal of constraints, and remains committed to addressing issues related to gender, environment and governance. With the help of this financial support, the project promises to

yield the expected impacts and results, and benefit a high proportion of impoverished women and children, while contributing to the overall development of Bhutan.

Relationship to CAS

15. The proposed project is well aligned with the Bank's CPS, which emphasizes that the commercialization of agriculture has been one of the key drivers towards overall poverty reduction. The Bank has invested significantly in supporting the agriculture sector to enhance agricultural productivity through two projects – the Decentralized Rural Development Project (DRDP) and the Remote Rural Communities Development Project (RRCDP). There is now a need to scale up best practices and build on the gains made through these projects by adopting a more integrated and focused approach and to support the agriculture sector in Bhutan in taking the next step forward towards modernization, commercialization, and market development.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

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.

Key Results (From PCN)

17. Achievement of the PDO and key results are proposed to be measured by the following indicators: (i) productivity (kg/ha) of targeted crops and value chains; (ii) increase in marketable surplus in selected value chains; (iii) direct project beneficiaries (number), of which female (percentage); (iv) number of farmers accessing agriculture marketing infrastructure/facilities; and (iv) improved nutritional and dietary levels/consumption of targeted households. A detailed results monitoring framework and indicators will be developed during the project preparation.

III. Preliminary Description

Concept Description

17. Overall Design: Agriculture 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 productivity and commercialization through a set of integrated, area-specific interventions that respond to local problems, potentials and priorities. 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.

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IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04		x	
Forests OP/BP 4.36	x		
Pest Management OP 4.09	x		
Physical Cultural Resources OP/BP 4.11		x	
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50			x
Projects in Disputed Areas OP/BP 7.60		x	

V. 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

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