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**United Nations Development Programme**  
**Country: Bhutan**  
**Project Document**

**Project Title:** Promoting Green Jobs in the Agriculture Sector of the Bhutan's Southern Districts  
**UNDAF Outcome:** By 2018, sustainable and green economic growth that is equitable, inclusive, climate and disaster resilient and promotes poverty reduction, and employment opportunities particularly for vulnerable groups enhanced.  
**Expected Output:** National and local institutions and individuals are better prepared and able to respond to and reduce climate change induced and other disaster risks.  
**Implementing Partner:** Department of Agriculture, Ministry of Agriculture and Forests, Royal Government of Bhutan  
**Implementing Agencies:** United Nations Development Programme

**SUBSTANTIVE AREA OF RFF REQUEST**

*(Please choose the most relevant area)*

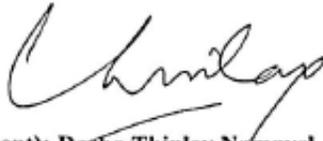
- Continued Health Crisis Support
- Governance
- Social protection
- Green economy
- Digital disruption and innovation

**PROJECT DETAILS**

**Country:** Bhutan  
**Requested amount:** US\$ 600,000  
**Gender Marker:** GEN-2  
**Project Period:** 2021-2022  
**Start date:** 1st January 2021  
**End Date:** 30<sup>th</sup> June 2022  
**Management Arrangements:** NIM/NEX  
**Atlas Award ID:** 00133601

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**Agreed by (Government): Dasho Thinley Namgyel**  
Secretary, Gross National Happiness Commission

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**Agreed by (Executing Entity): Ms. Kinlay Tshering**  
Director, Department of Agriculture, Ministry of Agriculture and Forests

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**Agreed by UNDP: Mrs. Azusa Kubota**  
Resident Representative, United Nations Development Programme

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17-Mar-2021

## 1. Situation analysis

The Royal Government of Bhutan (RGoB) imposed first lockdown on 11<sup>th</sup> August 2020 to contain the spread of COVID 19 after a case of suspected local transmission was detected. The 21 days lockdown further strained the economy that was already under pressure due to earlier restriction put in place – closure of international borders, tourism, limited trade, and including movement of people domestically. Consequently, the Gross Domestic Product (GDP) plunged to negative 2.1 percent<sup>1</sup>. This is having a serious impact on the socio-economic development of the country as unemployment, especially among the youth (11.9%<sup>2</sup>) is one of the key challenges posed by COVID 19. As of July 2020, close to 30,000 people were seeking jobs, out of which 8,000 were already jobseekers in the market and 13,000 displaced by COVID mainly from the tourism and allied sectors<sup>3</sup>. This does not include thousands who were repatriated from abroad. According to Rapid Socio-Economic Impact Assessment of COVID-19 on Bhutan’s Tourism Sector<sup>4</sup> (RSEIA) it is estimated that 40% of them were women and the report underscores vulnerability of women from such pandemic as they had fewer choices in alternative employment options and limited coping mechanisms than men.

Since the detection of the first COVID case in Bhutan, RGoB has responded with commendable initiatives to address specific socio-economic concerns. Of the many initiatives, His Majesty the King<sup>5</sup> provided direct (cash) relief support to 21,093 individuals in July 2020. Concurrently, the government also approved the implementation of the Economic Contingency Plan (ECP 2020) Series – I: Redesigning Development: Attaining Greater Heights<sup>6</sup>. The three pillar programs of the ECP 2020 – Build Bhutan Project, Tourism Resilience and Food Self-Sufficiency and Nutrition Security – are seen as critical for Bhutan’s short, medium and long term economic recovery efforts. RGoB’s aspiration to “build back better” into the new post-COVID future is therefore well articulated in the ECP, one of which is enhancing food and nutrition security with amplified focus to boost local production, employment opportunities and enterprise development. These measures resonate with the findings and recommendation of the UNDP led RSEIA to focus on creating alternative livelihood opportunities and building back better with renewed focus on the new future with agriculture and other vocational skills. Thus, improving agriculture productivity and developing skills for the future are the key elements of the future economy.

While acknowledging the challenging road ahead in terms of dealing and recovering from COVID, the Prime Minister recently outlined a “four-point formula”<sup>7</sup> for recovery, which has prioritized “**employment creation, export promotion, import substitutions, and innovation and digitization**”. These four-points formula are in line with Pillar 3: Economic Response and Recovery of the draft UN Bhutan COVID 19 Socio-

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<sup>1</sup> <https://kuenselonline.com/gdp-growth-projection-for-2020-revised-to-negative-2-1/>

<sup>2</sup> <http://www.nsb.gov.bt/publication/files/pub2yh3694oi.pdf>

<sup>3</sup> <https://kuenselonline.com/30000-bhutanese-seeking-employment-number-increasing/>

<sup>4</sup> NSB and UNDP, Rapid Socio – Economic Impact Assessment of COVID – 19 on Bhutan’s Tourism Sector – An analysis of the vulnerability of individuals, households and business engaged in the tourism sector, 2020, [https://www.bt.undp.org/content/bhutan/en/home/library/environment\\_energy/rapid-socio-economic-impact-assessment-of-covid-19-on-bhutan-s-t.html](https://www.bt.undp.org/content/bhutan/en/home/library/environment_energy/rapid-socio-economic-impact-assessment-of-covid-19-on-bhutan-s-t.html)

<sup>5</sup> [https://www.royalkidubt.com/wp-content/uploads/2020/08/Press-Release\\_DGRK-Updates\\_27-Aug.pdf](https://www.royalkidubt.com/wp-content/uploads/2020/08/Press-Release_DGRK-Updates_27-Aug.pdf)

<sup>6</sup> Royal Government of Bhutan, 2020 **Economic Contingency Plan (2020) Series – I: Redesigning Development: Attaining Greater Heights**, <https://www.pmo.gov.bt/wp-content/uploads/2019/09/ECP-2020-1-1.pdf>

<sup>7</sup> Lyonchen’s four-point formula to help the economy recover, 14<sup>th</sup> September 2020, [https://thebhutanese.bt/lyonchens-four-point-formula-to-help-the-economyrecover/?fbclid=IwAR1c8tO8eu\\_Hgu1TLMpYVhBOMptMSrmeRzXU0QbSI-4LwZormY26OmyDuo](https://thebhutanese.bt/lyonchens-four-point-formula-to-help-the-economyrecover/?fbclid=IwAR1c8tO8eu_Hgu1TLMpYVhBOMptMSrmeRzXU0QbSI-4LwZormY26OmyDuo)

Economic Response Plan (SERP): Protecting jobs, SMEs, and informal sector with emphasis on tourism and agriculture through “green recovery” pathways. The focus, improving agriculture productivity, of this proposal is also in line with UNDP’s Food and Agricultural Commodity System Strategy 2020-2030.

## **2. Proposal overview and expected outputs**

Bhutan is largely an agrarian country with 51.1% (61.7%)<sup>8</sup> of its employed population engaged in farming contributing 17.4% to the GDP (in 2018<sup>9</sup>). The subsistence nature of farming, geographical terrain of farmland, and access to water resources for irrigation, credit and inputs etc are key barrier to achieve production efficiency. Other strategic challenges include poorly developed agriculture logistics and value chain system acting as critical marketing barrier.

Bhutan therefore imports almost 50% of its food needs including fresh vegetables from neighboring countries. This exposes the country to external risks of disruption in food supply chains, which the COVID-19 has further aggravated import of some essential commodities.

These challenges have therefore stimulated RGoB’s policy responses to urgently boost domestic agriculture production and productivity, with an emphasis on vegetables enterprise promotion to provide employment and income generating avenues. This proposal will support the Government plan and intends to create green jobs for youth, men and women. In addition, the initiative will contribute to food security in Bhutan through increased vegetables production capacity.

The project will also promote use of digital technology and innovation to solve the current issues around supply chain, cold storage, and sustainable vegetable farming practices. By addressing both ex-ante and post-harvest farming practices and improving access to markets, the project will promote corporate farming and generate more green jobs in the agriculture sector. Supply chain improvements and smart agriculture practices will, among others, also provide other co-benefits such as improving irrigation water use, reducing drudgery and saving resources in the long run.

The following three interconnected outputs are designed to achieve the ECP goal and target while catalyzing agribusiness and entrepreneurship opportunities for new generation of farmers.

### **Output 1: Sustainable and smart vegetable farming operationalized through integration of innovative and smart agricultural technologies**

- The smallholder family farm production system is fragmented leading to production efficiency losses. The production landscape will be upscaled by establishing at least ten youth led vegetable farming enterprises on commercial farm modality. The project will operationalize sustainable and smart vegetable farming in 415 acres of fallow land. The land either leased or owned by the farmers group - youth and/or community will be put into commercial vegetable cultivation. Support in the form of land, including the establishment of greenhouse materials and electric fences will be provided from the project. Since irrigation water is a major concern for the farmers, smart and micro-efficient irrigation techniques such as drips, sprinkler and smart devices will be deployed using Artificial Intelligence (AI) tools – mobile application.

### **Output 2: Critical supply chain barriers addressed for improved post-harvest market access**

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<sup>8</sup> Labour force survey report, 2019

<sup>9</sup> <http://www.nsb.gov.bt/publication/files/pub7or7591tc.pdf>

- The lack of adequate storage and drying facility are some of the critical upstream value chain interventions that are identified in the ECP. These will be supported by the project including the establishment of innovative drying and storage facilities to reduce both market and supply chain barrier. Given the predominant engagement of women labor force in agriculture, addressing these supply chain constraints will ease and strengthen the role of women while addressing gender inequalities. Project will provide 206 women with access to climate resilient production technologies.

### **Output 3: Youth entrepreneurs are reskilled and upskilled for promoting green jobs in the agriculture sector**

- The target youths have very limited experience on vegetable production and hence would require hands-on practical training on all aspects of vegetable farming. Guided training and demonstration on smart agricultural technologies and skills will be provided on important aspects of vegetable cultivation, protected cultivation systems, sustainable farming, post-harvest and marketing aspects. Through these interventions, a strong technological dimension to enhance productivity and efficiency will be promoted to catalyze innovation and attract more youth participation and boost women entrepreneurship. A total of 508 employment will be generated.

### **3. Management arrangements**

The proposal will be managed by UNDP Bhutan Country Office following the National Implementation Modality (NIM) with Department of Agriculture (as implementation party) while ensuring broader programmatic support by the Gross National Happiness Commission. The Project Management Unit will be housed at DoA and be responsible for the day-to-day project implementation and fund management, including but not limited to, providing oversight and technical support. UNDP-CO will provide continuous oversight and quality assurance as per the internal UNDP framework for efficient implementation of activities. The team from the Accelerator Lab will also be engaged to spearhead the support and implementation of innovative aspects of the proposal. To ensure implementation synergies at the field level, technical team composed of the representative of the UNDP, FAO, WFP, DoA and GNHC will be formed.

### **4. Partnerships**

At the national level, UNDP will closely partner with Gross National Happiness Commission (GNHC) for overall programmatic guidance. For the overall technical guidance, the UNDP CO will partner with Department of Agriculture under the Ministry of Agriculture and Forest. At the local level, project will partner with local government and communities of the districts Dagana, Trongsa and Tsirang.

UNDP CO will also explore/pursue partnership with the Food and Agriculture Organization (FAO) and World Food Programme (WFP) to leverage both technical and financial resources in the area of digital and innovation in the agriculture sector. Further with the selected project areas already being covered through the existing projects such as ECP and the GCF approved “supporting Climate Resilience and Transformational Change in the Agriculture Sector in Bhutan” project, MoAF will ensure interventions from the project complement and build on the support from these existing projects. Project will also partner with the ongoing initiative of the World bank Food Security and Agriculture Productivity Project

(FSAPP) and World Bank managed Japan Social Development Fund project on the Youth Employment and Rural Entrepreneurship Project.

Where feasible/possible, UNDP will seek partnership with relevant CSOs to either leverage resources or to enhance implementation capacity to deliver the results. The project will seek partnership with youth group to build future farm and enterprise development while also explore future collaboration between the Department of Agriculture and Tech Park/sectors to generate digital solutions in the agriculture.

## 5. Complementarity with other funds available for COVID-19

The proposal draws strong synergy and alignment to UNDP's Beyond Recovery 2.0, UNDP's Rapid Socio-Economic Impact Assessment of COVID-19, National ECP and Vegetable Production Strategy (VPS), and UNDP's Food and Agricultural Commodity Systems Strategy 2020-2030. It also complements the existing projects supported by UNDP such as GCF Agriculture and NAPA-III projects. Noting that Agriculture is at the core of RGoB's COVID-19 Recovery Plan, the proposal responds directly to the national priorities and contributes to RGoB's 12<sup>th</sup> Five Year Plan on enhancing food, nutrition and water security as well as climate resilient development and gender equality.

In the medium and longer term, this project has huge potential for catalyzing future partnership and resource mobilization for UNDP Programme with support and growing recognition of RGoB and private sectors in area of climate resilient agriculture, innovation, digitization and entrepreneurships. Recognizing the role of women in agriculture in Bhutan, the project will foster gender responsive and transformative results in area of employment and livelihood opportunities.

At the activity level, this project is designed to build on the products and expertise developed through GCF project especially those related to agricultural practices, improved land, and water management practices. Similarly, the proposed RFF project will leverage the learning and knowledge from the GEF-LDCF funded ongoing NAPA-III Integrated Livelihoods Project. The proposed project likewise builds on support already extended under RRF and takes the findings of SEIA and UN Bhutan SERP (draft).

## 6. Risk mitigation

### **RISK: Changes to the priorities due to policy changes in response to uncertain COVID impact may affect implementation**

**Mitigation measures:** The proposal is crafted linking to national priorities and recovery plans, in which the project interventions are drawn mainly from the ECP and VPS. The proposal was widely consulted with senior management and technical stakeholders of Government's responsible parties guided by the Gross National Happiness Commission – an apex institution for national planning and coordination of socio-economic development plans and programs. While no major risk is therefore foreseen, to mitigate any such risk, activities will be reviewed frequently to ensure minimal deviation.

**RISK: Governance and Operational risk:** Due to COVID-19 imposed restrictions, the supply of essential raw materials might be disturbed. There might also be restriction on staff mobility for project implementation and oversight. This may affect project implementation.

**Mitigation measures:** In addition to the technical agency wide committee, the project will institute a Project Steering Committee – as an oversight body to guide and secure any government clearances, as

required. RGoB has instituted a COVID protocols and SOP to facilitate smooth passage and inter-district travel in the country. Since May of this year, the government has also notified a simplified procurement process under the COVID situation to expedite procurement of works identified under Economic Contingency Plan, particularly for Agriculture, Tourism, Build Bhutan Project and Farm Road Improvement.

**RISK: The project although will be managed centrally by DoA, participation of local government to the Project Steering Committee may be restricted while also limiting monitoring due to the adherence of COVID mitigation measures:**

**Mitigation Measures:** As has become the norm, the UNDP CO will encourage virtual participation and of the local government. Any movement to the field sites will be managed as per the RGoB approved COVID protocols.

## BUDGET / WORKPLAN

EXPECTED OUTPUTS	PLANNED ACTIVITIES <i>List all activities including M&amp;E to be undertaken during the year towards stated CP outputs</i>	Time frame						RESPONSIBLE PARTY	PLANNED BUDGET*			Partnership
		2020	2021				2022		Source of Funds	Budget Description	Amount (USD)	
		Q4	Q1	Q2	Q3	Q4	Q1					
<b>Output 1:</b> Sustainable and smart vegetable farming operationalized by integrating innovative and smart agricultural technologies	1.1. Land preparation and management							3 Districts	RFF/UNDP		70,400.00	<ul style="list-style-type: none"> <li>RGoB ECP contribution in three districts: USD 426,540.00</li> </ul> 1.3 Installation Cost for digital App in Dagana District to be borne by FAO. Total estimated cost is USD 3000.00.
	1.2. Procure and distribute protected agriculture equipment (greenhouses, shade-nets)							DoA/ARDC	RFF/UNDP		208,000.00	
	1.3. Procure, distribute and install micro-irrigation (fertigation using drips, sprinklers, HDPE pipes, flexible pipe)							DoA/ARDC/3 districts	RFF/UNDP		55,000.00	
	1.4. Promotion & installation of digital app and solution to manage, operate and monitor the Protected Cultivation Technology (PCT) farms							ARDC/3 districts	RFF/UNDP		46,100.00	
	1.5. Promotion of nature based Innovative water harvest solution (water storage pond, tanks)							3 Districts/ARDC	RFF/UNDP		14,700.00	

	1.6. Innovative solar e-fencing/chain link fencing to mitigate human-wildlife conflict						3 Districts/ARDC	RFF/UNDP	0	25,100.00	
<b>Output 2:</b> Critical supply chain barriers addressed for improved post-harvest market access	2.1. Promotion of resilient and nature-based agriculture practices <ul style="list-style-type: none"> <li>• Supply of Resilient vegetable seeds (USD 41,477.00)</li> <li>• Nursery materials for healthy seedling raising (USD 800.00)</li> <li>• Promotion of Mulching for efficient moisture retention and weed control (USD 16,250.00)</li> <li>• Production of organic manure and soil amendments through using biodigester /vermicomposting/EM (USD 4,063.00)</li> <li>• Integrated weed management (USD 1,710)</li> </ul>						3 Districts			64,600.00	

	<p>2.2 Support to basic post-harvest field pack house with basic structure, water supply, washing tanks, sorting grading table and temporary storage.</p> <ul style="list-style-type: none"> <li>• Crates for storage and transportation (USD 20,800)</li> <li>• Pack house (USD 27,100)</li> </ul>						DoA/3 districts	RFF/UNDP		47,900.00	2.2 FAO to provide food processing/technology expert to train/demonstrate farmers/youth entrepreneurs on technology adaptation for food processing, preservation & post-harvest management. Total estimated cost is USD 10,000.00
	<p>2.3 Promotion of locally fabricated electric dehydrator/ dryer technology to reduce food waste loss</p> <ul style="list-style-type: none"> <li>• Electric dryers (USD 9000)</li> <li>• Onion shed for curing and storage (USD 23,700)</li> </ul>						DoA/3 districts	RFF/UNDP		32,700.00	
<b>Output 3:</b> Youth entrepreneurs are reskilled and upskilled for green jobs in	<p>3.1. Initiate collaboration between DoA and Tech parks/sectors/youth entrepreneurs to generate digital solution in the agriculture sector</p>						DoA/MoAF to explore local tech agencies & private entrepreneur for collaboration & partnership	RFF/UNDP		9,000.00	

the agriculture sector	3.2. On field trainings and demonstration to youth/women entrepreneurs on installation and crop management under Protected Agriculture (PA) system						ARDC/Districts	RFF/UNDP/FAO		6,000.00	2.2 This activity will be implemented in partnership with FAO. FAO will provide TA support on agribusiness (Farmer Diary & Information Analysis, Bookkeeping,) to augment this activity. The FAO-TA support is estimated at USD 5,000.00
<b>Output 4:</b> Project Management Costs	4.1. Project Management, Monitoring and fieldworks by central and sub-regional staff						DoA	RFF/UNDP/RGoB		15,000.00	4.1 FAO to partner in M&E capacity building of ARDC and Dagana District. Total estimated cost is USD 10,000.00
	4.2. Support to project communication, results socialization, advocacy and publications						DoA/UNDP	RFF/UNDP		5,500.00	
								<b>TOTAL</b>		<b>RFF: 600,000.00</b>	<b>FAO: USD 28,000 ECP: USD 426,540</b>

*\*In line with Outputs with gender marker GEN2 or GEN3, it is recommended to allocate at least 15% of the funding to activities in support of gender equality and the empowerment of women*

## RESULTS FRAMEWORK

EXPECTED OUTPUTS	OUTPUT INDICATORS <sup>10</sup>	BASELINE		MILESTONES AND TARGETS					
		Unit	Value	2020	2021				2022
				Q4	Q1	Q2	Q3	Q4	Q1
<b>Output 1:</b> Sustainable and smart vegetable farming operationalized by integrating innovative and smart agricultural technologies	1.1. Land brought under winter vegetable production through use of climate resilient agriculture practices	Acre	112	25	250	140			415
	1.2. Households benefited with protected cultivation agriculture equipment	No.	25			226			226
	1.3. Digitally operated irrigation system promoted & installed in the PCT farms	No.	0		4	4	4	4	16
	1.4. Length of solar powered fencing and chain link	KM	0		8	5			13
<b>Output 2:</b> Critical supply chain barriers addressed for improved post-harvest market access	2.1. Enterprise and agribusiness pack house unit established for effective storage and packaging (Tangsibji & Dagana)	No.	0			1	1		2
	2.2. Promotion of locally fabricated electric dehydrator/ dryer technology to reduce food waste loss	No.	0			8	10	8	26
	2.3. Establishment of onion curing sheds	No.	0			15	20		35
<b>Output 3:</b> Youth entrepreneurs are reskilled and upskilled for green jobs in the agriculture sector	3.1. Agribusiness and entrepreneurship established	No.	0		2	3	5		10
	3.2. Women engaged in agriculture with access to climate resilient production technologies	No.	1		106	100			206
	3.3. Total no. of male and female employment generated	No.	0			200		308	508

<sup>10</sup> It is recommended that projects use output indicators from the Strategic Plan IRRF COVID-19 indicators, as relevant. Due to the nature of the COVID-19 response work, quarterly milestones and targets are recommended. Monitoring will be conducted using the COVID-19 Monitoring Dashboard. Reporting will be streamlined into the COVID-19 reporting exercise (mini-ROAR and COVID-19 indicators.) No separate reporting will be required for rapid financing facility.

