

## TERMS OF REFERENCE

### CONSULTANCY SERVICES FOR THE PREPARATION OF PRODUCTION LAYOUT DESIGNS FOR THE PROPOSED NATIONAL AGRO-PROCESSING FACILITY

#### **1. BACKGROUND**

1.01 In 2019, the Commonwealth of Dominica was one of the fastest growing island economies of the Caribbean<sup>1/</sup>, fuelled by a resurgent tourism sector after the devastation caused by Hurricane Maria in 2017. However, with the onset of the COVID-19 pandemic, the tourism sector experienced a drastic decline moving from 334,816 visitors in 2019 to 145,877 in 2020 representing a decline of over 50%. The year 2021 registered an even more dismal performance with a total of 66,164 visitors for the year. Cruise Ship tourism, in particular, was impacted more than land-based tourism and accounts for around 65–70% of tourist arrivals in Dominica and contributed to the drastic fall in tourist arrivals. Although there has been some recovery due to the introduction of vaccinations, tourism figures for the quarter ending March 2022 were still below that of 2019 by well over 50%. Stay-over arrivals, which would normally account for greatest spend, were just over a quarter of 2019 expenditures.

1.02 The agricultural sector, on the other hand, remained resilient during the onset of the COVID-19 pandemic due in part to direct fiscal support to the sector by way of supplemental income and raw material inputs to farmers. Agricultural economic output grew by 3.1% in 2020 and then by 26.4% in 2021<sup>2/</sup>. Crop production during this period accounted for the increase in output particularly as the Government of the Commonwealth of Dominica (GOCD) pursued a deliberate policy aimed at enhancing the production capacity of small-scale farmers while simultaneously improving their social and economic resilience<sup>3/</sup>. Over the last three years the agricultural sector, as a share of total real Gross Domestic Product, has grown from 8% in 2019 to 11% in 2021<sup>4/</sup>. Notwithstanding these developments, the country is particularly dependent on food imports. This makes the country highly vulnerable to international food prices and increases the island's risks to food insecurity, though compared to the rest of the Caribbean region, the incidence of the prevalence of food insecurity is much lower<sup>5/</sup>. This issue is particularly resonant as the global food sector continues to experience successive and cumulative supply disruptions as a result of the COVID-19 pandemic, and which is now being exacerbated due to the Russian-Ukraine conflict.

1.03 Situated in the hurricane belt, Dominica is vulnerable to severe weather events, which in the past have destroyed farmlands and supporting infrastructure. During the years 2014–2018, Dominica experienced ten tropical storms as well as two hurricanes which resulted in significant loss of lives, livelihood and economic progress<sup>6/</sup>. Such weather events, as well as events which inflict exogenous shocks to the economy as exemplified by the pandemic and ongoing Russia-Ukraine conflict, have the propensity

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<sup>1/</sup>The Economic Commission for Latin America and the Caribbean (ECLAC) 2020

<sup>2/</sup> <https://www.eccb-centralbank.org/statistics/gdp-datas/country-report/4>

<sup>3/</sup> Over the fiscal year, 2020/21 GOCD facilitated access to affordable inputs, quality seeds and planting material. This effort resulted in an overall increase in agricultural production with 4,409 acres being cultivated, compared to 3,320 during FY 2019/20. The National Budget of The Commonwealth of Dominica Fiscal Year 2020-2021.

<sup>4/</sup> <https://www.eccb-centralbank.org/statistics/dashboard-datas/>

<sup>5/</sup> According to the FAO Food Security Index Dominica is the second highest country in the Region with a record of 5.6% prevalence in undernourishment in the total population during the review period 2018-2020 this represents a relatively low incidence, but it has somewhat edge upwards by .2 percentage points from its previous estimate for the period 2004–2006.

<sup>6/</sup> Dominica was ranked as the fourth highest country in regards to disaster risk worldwide (World Risk Index, 2021).

to accelerate the pace of vulnerable groups slipping further into impoverished conditions and exaggerates existing inequalities, particularly access to employment, food, and other basic needs.

### **Current state of the agro-processing industry in Dominica**

1.04 The agro-processing industry comprises over 40 small cottage processors. The sole remaining large processor is the Dominica Coconut Products Successors Limited which manufactures soap products. Bello Products which ceased operations in 2017 due to the destruction of its facility by Hurricane Maria<sup>7/</sup> was one of the country's large private sector agro-processors specialising in a range of products including tropical fruit juices, drink concentrates and related preserves as well as various spices, coffee, chocolate, and food condiment sauces.

1.05 Over the years, agro-processors have formed a number of groups which serve as focal points of efforts for market penetration and business development. These processing agencies, while diverse in nature, pointed to the fact that various fresh produce were sufficiently in surplus supply and hence complimented the agricultural sector by adding value through downstream industries in the agro-food value chain.

1.06 The Ministry of Agriculture (MoA) also, in the past, operated a multi-purpose packing house and an agro-processing facility which served to benefit both upstream and downstream<sup>8/</sup> operators within the agro-food value chain. For upstream operators, the facility played the role of absorbing supply gluts in the market especially in root and tuber crops. This helped to: (1) eliminate the problem of food waste by further transforming fresh produce to finished processed goods such as flour and mash; and (2) provide opportunities to generate foreign exchange through downstream market retailers and processors including those in international markets. In 2020, Dominica exported around USD25,600 (approximately just over 36,000 tonnes) of cassava making it the 109<sup>th</sup> largest exporter of cassava. In the same year cassava was the 91<sup>st</sup> most exported product in Dominica.

1.07 The government facility also assisted small agro-processors by providing access to equipment and machinery capable of producing products by volume thereby enabling entrepreneurs to leverage market opportunities available within the economy. Notwithstanding the role played by the government-owned facility, it lacked the appropriate quality infrastructure and therefore fell short of meeting international best practices. There is therefore now an opportunity to establish an agro-processing facility which encompasses internationally recognised quality standards.

1.08 Currently GCOD through the Dominica Export Import Agency (DEXIA) plays the role of a 'clearing house' between cultivators and retailers in overseas markets for a number of food products including bananas and, root and tuber crops. Additionally, DEXIA undertakes fruit pulping for passionfruit. There is scope for the pulping of other fruits utilising the same machinery as it can be adapted for use on other fruits of similar characteristics. While there is an evident gap left due to the destruction of the government facility, the current developmental thrust in passionfruit pulp production allows for greater consideration for the design of a comprehensive planning and operational framework to fill all gaps relating to the processing of fresh fruits, along with strengthening existing capacity, not only around the root and tubers but for the agro-food value chain in general.

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<sup>7/</sup> While Hurricane Maria destroyed the Bello facility in 2017, the process towards its reconstruction was also fraught with challenges leading to protracted state of abeyance for three years leading to permanent cessation of reconstruction activity.

<sup>8/</sup> Upstream value chain operators refers to cultivators of fresh produce and downstream operators refers to agencies involved with adding value/ transforming fresh produce to produce another product.

### **Weaknesses within the Agro-food Value Chain**

1.09 The local agro-food value chain surrounding roots, tubers and fruit products and other fresh produce exhibits weaknesses which negatively impact its competitiveness, productivity, and ability to access export markets. Some of the more notable challenges associated with the agri-food value chain include the following:

- (a) Insufficient value chain coordination mechanisms between cultivators, supply of goods to markets and supply to agro-processors. This gave rise to inefficient transactional relationships resulting in either insufficient or over supply of produce from farmers. Supplies tend to be siphoned off to hucksters, who are more likely to meet the farmers' demand of immediate payments at higher prices.
- (b) Underinvestment in infrastructure for improved production quantity and quality, upskilling of employees, limited packaging and labelling enhancements and inadequate business plans to meet international best practises are a few of the circumstances facing the agro-processing industry.
- (c) Inability to provide consistent supplies to regional and international markets due to their small-scale operations.
- (d) Limited research and development in exploring advances in manufacturing processes particularly in non-established products, for both food and non-foods, in the local industry.

### **Current and needed interventions in the Agro-Food Value Chain**

1.10 Despite the challenges highlighted above, the agro-processing industry, is recognised as an important vehicle for development by GOCD. GOCD is currently pursuing interventions with international development partners such as the World Bank and the Food and Agriculture Organisation of the United Nations (FAO) to bring greater resilience to the sector through climate mitigation interventions and initiatives geared towards supporting farmer livelihood. GOCD is also embarking on a national plan through which the agricultural sector can contribute more meaningfully to macroeconomic stability while safeguarding rural livelihood, quality competitiveness. There is however a need to ensure effective development coordination between the agricultural sector, the agro-processing industry and produce retailers in Dominica. The Ministry of Trade, Commerce, Entrepreneurship, Innovation, Business and Export Development and DEXIA, together in their roles which aim to enhance overall trade performance in agro-food products, are critical to fostering a streamlined approach across all stakeholders and has the propensity to make strategic linkages across other sectors such as tourism and manufacturing. Additionally, GOCD is also endeavouring to take concrete steps towards diversifying its economy into tourism services. This would mean an increase in hotels and room stock as well as investments in connectivity and water and road networks. Such initiatives can potentially strengthen the linkage between the agricultural and agro-processing value chain. It would also signal a potential increase in agricultural and agro-process products and hence would generate foreign exchange while supporting livelihoods in these areas. However, it would also place increased pressure on suppliers and hence would need a well-structured framework to coordinate producer and supplier relationship across Dominica's agro-food supply network.

## **2. OBJECTIVE**

2.01 The objective of this consultancy is to design the layout of the National Agro-Processing Facility based on the concept envisioned under the sustainability and resource mobilisation plan.

## **3. SCOPE OF SERVICE**

3.01 The Consultant will be required to identify the equipment and material required and the most appropriate layout for the efficient operation of the Dominica agro-processing facility.

3.02 The tasks will include, but not be limited to:

- (a) Participate in project briefing with the representatives of the Ministry of Trade, Commerce, Entrepreneurship, Innovation, Business and Export Development and DEXIA and other stakeholder groups (not limited to the Ministry of Agriculture, and the Dominica Bureau of Standards).
- (b) Review the feasibility study and agreed business model and the sustainability plan proposed for the facility.
- (c) Identify the equipment required for the initial processing lines identified in the feasibility study and the sustainability plan.
- (d) Identify other supporting equipment for the operations of the facility, including refrigeration, washing and plumbing facilities.
- (e) Prepare a master annotated and analytical listing of the equipment with specifications that will inform the power and plumbing requirements.
- (f) Design the layout for the equipment.
- (g) Collaborate with the Consultant selected to prepare the engineering and structural designs of the facility with the view of finalising the proposal for the layout of equipment and process flow.

## **4. REPORTING REQUIREMENTS**

4.01 The consultant shall provide the following documents and reports to the individual designated by the ministry.

- (a) An inception report within one week of accepting the assignment. The report will contain:
  - (i) The consultant's understanding of the assignment.
  - (ii) A detailed workplan for completing the assignment.
  - (iii) Any assumptions made for the completion of the assignment.
  - (iv) Any risks identified to the successful completion of the assignment and steps proposed to mitigate those risks.

- (b) Within two weeks of the assignment, a draft list of equipment with at least three suggested suppliers, each with:
  - (i) The most recent prices.
  - (ii) As appropriate, timelines for supply.
- (c) With three weeks of the assignment:
  - (i) A finalised list of equipment.
  - (ii) Power supply and any other special needs of major equipment.
  - (iii) A draft layout plan of the equipment.
- (d) Within three weeks of the assignment a Final Report, that would take into consideration feedback from relevant stakeholders on the previous submissions. Feedback should also be included from the consultant engaged to prepare the engineering and structural designs.

## **5. QUALIFICATIONS AND EXPERIENCE**

5.01 The Consultant should possess at a minimum:

- (a) An advanced degree in food engineering, process engineering, food technology or a related field.
- (b) At least ten years' experience in the field.
- (c) Demonstrated experience in design of a food processing facility.
- (d) Experience in multistakeholder engagements.
- (e) Fluency in English.

5.02 The following knowledge and skills will be an advantage:

- (a) Previous work in the area in Dominica or countries of the OECS

## **6. IMPLEMENTATION ARRANGEMENTS**

6.01 The consultant will report to the Project Coordinator. The implementation agency with the support of DEXIA will facilitate the work of the consultant and make available all studies, reports, and data relevant to the Project.

6.02 This assignment shall be implemented within 25 workdays over a period of two calendar months.