

TERMS OF REFERENCE

CONSULTANCY SERVICES FOR THE DEVELOPMENT OF AN INFORMATION MANAGEMENT AND TRACEABILITY SYSTEM

1. BACKGROUND

1.01 St. Vincent and the Grenadines (SVG), located in the Eastern Caribbean, has a population of approximately 110,600 persons. Due to its size, both physically and in terms of human resources, SVG is faced with many challenges inherent to Small Island Developing States. Its National Economic and Social Development Plan 2013–2025 acknowledges these challenges, amongst which are a narrow economic base and high vulnerability to external shocks and natural disasters. The threat of natural disasters, in particular, manifested itself on April 9, 2021, when SVG’s La Soufriere volcano erupted. SVG officials have indicated that more than 90% of all livestock infrastructure in the red zone^{1/}, and about 40% in the orange zone, have been damaged.

1.02 The volcanic eruption followed the onset of the COVID-19 pandemic which caused the country to experience a negative growth rate of 3.3%^{2/} in 2020. The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) projected that the crisis (COVID-19 pandemic) will increase unemployment from an already high 20% pre-pandemic, to 39% post-pandemic, as the tourism sector which contributes 23.2% to total Gross Domestic Product (GDP) and 21.4% to total employment, has been hard hit. OCHA also projected that the decline in livelihood opportunities was expected to exacerbate the rate of severe poverty in the country from 2.9% pre-pandemic, to 11.9% with COVID-19^{3/}. However, with the eruption of La Soufriere, these projections may be higher.

1.03 Despite this outlook, the Government of St. Vincent and the Grenadines (GOSVG) plans to pursue opportunities for the generation of foreign exchange and savings from import substitution, through the increased production and export of poultry and poultry products. ‘Agriculture is the mainstay in the economy of SVG and contributes to food security, employment and income for rural communities’ (ECTAD, n.d.). Its contribution to GDP has fluctuated between 6–7% between 2010 and 2019^{4/}.

Overview of the Livestock Subsector

1.04 The Animal Health and Production Division (AHPD) of the Ministry of Agriculture is responsible for the livestock subsector in SVG. Its role is to facilitate the improvement in efficiency and cost effectiveness of production of livestock, for the realisation of a competitive and sustainable livestock subsector and for the promotion of human health. The livestock subsector (cattle, sheep, pig, goat and poultry), which accounts for 1.2% of GDP, or 5,605,205 Euros^{5/}, is relatively small but plays an important role in the overall agricultural production system. Poultry products are a major source of protein in the Vincentian diet and represents a significant part of its food import bill. In 2020, for instance, SVG imported 6,913,499

^{1/} The red zone is the area in which the volcano is located and extends approximately 5.5 km south of the volcano, with the orange zone extending a further 3km.

^{2/} CDB 2021 Data

^{3/} <https://www.humanitarianresponse.info/en/operations/latin-america-and-caribbean/document/saint-vincent-grenadines-country-profile-july-2020>

^{4/} <https://www.statista.com/statistics/1078947/saint-vincent-grenadines-agriculture-share-gdp/>

^{5/} Agricultural Planning Unit, Ministry of Agriculture and the Central Statistical Unit

kilograms (kgs) of poultry meat, representing 12.2% of the food import bill^{6/}. Cognizant of this fact, GOSVG, in collaboration with the Taiwanese Technical Mission constructed and opened the Dumbarton Poultry Hatchery and Breeder Unit in 2004. According to the Quarterly Agriculture Newsletter of SVG (June 2018)^{7/}, the Hatchery has contributed significantly to the provision of day-old broiler and layer chicks^{8/} to poultry farmers across the country, so that SVG is now considered self-sufficient in the supply of table eggs and has an increased capacity to produce broiler meat.

1.05 Over the period 2011–2017, egg production data indicates that the annual production of table eggs averaged 13,830,000, with production peaking at 14,700,000 in 2017. In January 2020, due to a glut of eggs on the market, GOSVG indicated that plans and strategies to address the exponential increase in supply includes further exploring export opportunities. The GOSVG also indicated that the sale of one 40-foot container to Trinidad and Tobago for example, on a weekly basis (216,000 eggs per shipment), could potentially lead to revenue of 8 million Eastern Caribbean dollars per year^{9/}. Additionally, there has been significant investment in the construction of new hotels in SVG. Within the next four years, the mainland is expected to see an increase of approximately 1,500 rooms, from major hotel brands such as Holiday Inn and Suite, Marriott, and Sandals International. This is expected to increase local demand for table eggs.

1.06 In addition to potentially being able to supply table eggs to external markets, SVG is the largest exporter of livestock in the Organisation of Eastern Caribbean States (OECS)^{10/}, with the country exporting 144,406 kgs of livestock, valued at EUR76,050, in 2019^{11/}. While this mainly consisted of cattle, it also included pigs and represents an established market to which table eggs and broiler meat can be exported. In November 2019, the Ministry of Agriculture indicated that the focus for 2020–2025 was to include OECS Member States on the established agri-export intraregional trading platform^{12/}, while attempting to increase livestock exports (which includes poultry) to other islands (OECS, 2019).

1.07 The subsector, however, has encountered its own sets of challenges related to the over production of eggs at specific periods of the year, particularly during the Christmas period. Overall, annual egg production in 2020 was estimated at 13,408,600 with demand estimated at 10,537,936. Neither the farmers nor the SVG Poultry Producers Association currently have the on-farm infrastructure for the proper storage of eggs, leading to high levels of spoilage and food safety concerns. Also, from 2013–2017, the number of birds supplied by the Hatchery fell by 52%, from 98,450 to 50,907. This is an indication that the Hatchery is not producing at full capacity of 130,000 chicks per annum, thereby limiting the ability of SVG to supply broiler meat and table eggs to external markets.

1.08 In addition to these constraints, the Government of Grenada acknowledged the existence of a Memorandum of Understanding (MOU) between that country and SVG to ‘enhance trade in commodities, originating in member states of the OECS’, but reiterated its government’s responsibility ‘to protect local

^{6/} Agricultural Planning Unit

^{7/} http://www.agriculture.gov.vc/agriculture/images/stories/PDF_Documents/AgriInfo_2_2018.pdf

^{8/} Broilers are chickens that are grown for meat purposes. Layers are birds that are reared to produce unfertilised eggs that will be sold to consumers to eat.

^{9/} <https://www.iwnsvg.com/2020/01/29/minister-explains-cause-of-egg-glut/>

^{10/} <https://pressroom.oecs.org/saint-vincent-and-the-grenadines-increases-export-of-livestock-in-2019>

^{11/} Agricultural Planning Unit

^{12/} The trading platform was designed as a systematic approach to reducing the Region’s food import bill by increasing intra-regional trade and expanding to extra-regional and international markets. It is currently used in St. Vincent and the Grenadines.

farmers and ensure that food safety requirements are met, in accordance with the regulations governing the importation of animals' (Straker, 2019). This statement underscores the importance of food safety requirements, not only at the regional level, but also at the international level, and which SVG will be required to meet in order to access external markets.

1.09 The AHPD has indicated that it is working with table egg and broiler meat producers to meet local demand and penetrate regional and international markets. However, general food safety standards do not yet exist for the Region^{13/}. There is, however, a CARICOM Regional Standard for Poultry and Poultry Products. The scope of the Standard covers requirements for primary processed poultry consisting of carcasses, poultry parts and poultry products for human consumption. It defines and distinguishes between the market classes of poultry and includes requirements for sanitation, plant hygiene, the dressing operation, grading, packaging, labelling and marketing as well as ante-mortem and post-mortem inspection of poultry products sold through commercial distribution systems. The SVG Bureau of Standards has adopted the CARICOM Regional Specification for Table Eggs nationally, and indicated that it intends to adopt the CARICOM Standard for Poultry and Poultry Products, as well as the Codex Alimentarius Code of Hygienic Practice (CHP) for Meat, Eggs and Egg Products^{14/} by January, 2022.

1.10 In fulfilment of the CHP, specifically for the safe storage of table eggs, a Draft MOU governing Public-Private-Partnership between SVG Poultry Producers Association and the Ministry of Agriculture, for the Management of a Permanent Egg Storage Facility, and Monitoring Mechanism in Good Practice in Table Egg Production and Storage will be signed to ensure business continuity. See Appendix 4 for draft MOU.

1.11 The AHPD recognises the need to focus on the development of an information management and traceability system that can provide alerts and notifications. According to the International Trade Center 'in a fiercely competitive global economy, all key markets demand product traceability, driven by issues such as biosecurity, food safety, physical security and brand/market protection. Therefore, it is important to consider implementing a traceability system, within a food safety system'^{15/}.

Challenges to Implementing Food Safety Standards

1.12 The GOSVG has indicated that in order to produce sufficient amounts of broiler meat and table eggs to meet local demand and supply external markets, assistance is required to first treat the following issues:

- (a) Limited diagnostic capabilities at the existing livestock laboratory, including a lack of equipment, material resources and personnel to undertake diagnostic work.
- (b) The absence of a traceability system for farm produce.

^{13/} In July 2018, food safety regulators of the 15 CARICOM Member States met under the aegis of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA), the Food and Agriculture Organisation of the United Nations (FAO) and the Ministry of Agriculture, Animal Husbandry and Fisheries of the Government of Suriname, where regulators committed to working together towards harmonised food safety standards for the Region.

^{14/} These Standards include guidelines for the testing of table eggs, poultry, and poultry feed, on which the GOSVG also intends to focus. Part of the AHPD's Programme objective for 2021 is to manage exotic and endemic diseases, through the provision of technical support and veterinary services. As such, the AHPD's Work Programme for the poultry subsector is geared towards achieving this objective, focusing on inter alia, building capacity in feed quality testing and in conducting tests for Salmonella and other food borne pathogens.

^{15/} Traceability in Food and Agricultural Products, International Trade Centre, Bulletin No. 91/2015

- (c) Limited capacity to deal with diseases associated with food.
- (d) The absence of a farm certification programme.
- (e) A lack of on-farm infrastructure to support the implementation of CHP for eggs and meat, required for farm certification.
- (f) Inadequately trained personnel to implement a CHP training and certification programme for livestock producers.
- (g) A shortage of equipment to store table eggs (at room temperature, eggs can be stored for up to eight weeks; with proper cooling it can be stored for up to twelve weeks).

1.13 In order to address the issues highlighted above, there is a need to conduct training in the relevant food safety standards and implement a food safety certification system that will verify that products, processes and systems in the food supply chain meet accepted Sanitary and Phytosanitary (SPS) standards^{16/}.

2. OBJECTIVE

2.01 The objective of the consultancy is to build the capacity of national authorities to improve food safety controls through the development of a web ready application to be used by poultry farmers to input farm and production information utilising a mobile application. The duration of the assignment is expected to be for a period of 15 person-days over 6 calendar months.

3. SCOPE OF CONSULTANCY SERVICES

3.01 The Consultant will carry out the activities described hereunder and any other activities necessary to accomplish the stated objectives of the consultancy assignment, whether or not a specific activity is cited in these terms of reference. Throughout the assignment, the Consultant will liaise with the Project Coordinator, which will be appointed to lead and monitor the Project.

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

- (a) Developing an information management and traceability system capable of, *inter alia*:
 - (i) Creating standard reports for display and export.
 - (ii) Normalising client data requests in a system of logical expandable tables and records that allow for systematic addition and management of data.
 - (iii) Converting data structures to tables and creating indexes.
 - (iv) Creating a login hierarchy for accountability and data protection.

^{16/} Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including, *inter alia*, end product criteria; processes and production methods; testing, inspection, certification and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety. (Source: https://www.wto.org/english/tratop_e/sps_e/spsagr_e.htm#:~:text=Sanitary%20or%20phytosanitary%20measures%20include,inclusing%20relevant%20requirements%20associated%20with).

- (v) Creating table manipulating forms using web application allowing data manipulation from anywhere on the connected network.
- (vi) Issuing alerts and notifications.
- (b) Identifying data that needs to be included in the system and defining the parameters for issuing alerts and notifications.
- (c) Developing a user manual for the efficient and effective use, editing and maintenance of the system in hard and soft copy.
- (d) Conducting training for a maximum of five persons on the use of the system.

4. DELIVERABLES AND REPORTING REQUIREMENTS

4.01 The Consultant shall report to the Project Coordinator.

4.02 The Consultant shall accomplish the following deliverables:

- (a) An Inception Report after a review of background documents and consultations with the Client. The Inception Report will contain the proposed detailed work plan for the assignment and shall be deliverable in 15 days.
- (b) A presentation of the completed system four months after the Inception Report.
- (c) Development of an user manual, deliverable four months after the Inception Report.
- (d) A training programme, to be conducted one month after presentation of the system.
- (e) A Project Completion Report seven days after completion of training of personnel in use of the system.

5. QUALIFICATIONS AND EXPERIENCE

5.01 The Consultant should possess the following:

- (a) Advanced degree in relevant fields such as Database Administration, Information Technology or Computer Science, and software applications development.
- (b) Proficient in MYSQL, JAVA, JavaScript, Python, C Sharp, C++ or similar web development technologies.
- (c) Proven experience as a system developer and/or developer of software applications.
- (d) Minimum of five years' experience in capacity building, applying innovative techniques, taking gender considerations into account.
- (e) Experience working in developing countries.

- (f) Experience in running successful training workshops and working in close partnership with all stakeholders involved.

6. SUPERVISION OF THE CONSULTANT

6.01 The AHPD will facilitate the work of the consultant and will make available all studies, reports, and data relevant to the Project. The Project Coordinator will be assigned to be the liaison between the Ministry and the consultant team.

6.02 It is estimated that this consultancy will require 15 person-days over a period of 6 calendar months.