

The header section features a dark blue background with white text. On the left, there is a circular inset showing a close-up of green banana leaves. In the center, there is a circular graphic with a yellow and green background and a white diamond shape. To the right, there are stylized, overlapping arches in shades of blue and green, and a partial view of a greenhouse structure.

# Building Climate Resilient Agriculture in Caribbean Countries: St. Vincent and the Grenadines

## St. Vincent and the Grenadines' Agriculture Sector in Context

In 2021 St. Vincent and the Grenadines (SVG) had a population of just under 111,000 and a per capita income of approximately USD 7,300. In 2020 SVG registered a slight decline in its Gross Domestic Product (GDP) to USD 0.81 billion compared to USD 0.82 billion in 2019. Agriculture plays a key role in the SVG economy, contributing an average 9.11% to GDP (inclusive of 2% for fisheries) from 2016 to 2020. In 2020 10.5% (6,335 individuals) of SVG's labour force was employed in the agricultural sector. In 2020 SVG registered a 20.27% rate of unemployment, an increase of just over 1.6 percentage points on pre COVID-19 pandemic statistics.

SVG's agriculture sector largely consists of subsistence farming, mostly on mainland St. Vincent with some farming practices on the larger Grenadine islets. SVG agriculture is mixed with livestock, crop production systems and fisheries. Arrowroot and banana, while not as prolific as in past decades, remain key to foreign exchange earnings for the country. Other priority crops are root vegetables,

coconuts, and spices, much of which is transported from rural areas into the municipal market in the capital, Kingstown. Livestock are cattle, sheep, pigs, and goats.

Despite domestic food and nutrition security and other policy concerns, SVG has a reasonable intraregional trade market for its fresh produce, primarily roots and tubers. The country boasts a strong agro-processing industry, especially for its starches such as cassava and arrowroot .

## Agriculture in St. Vincent and the Grenadines' NDC

Agriculture was identified as a priority sector for adaptation actions, while no mitigation targets were included in SVG's initial Nationally Determined Contributions (iNDC) (2016). iNDC adaptation priorities for the sector included:

- Improvement of agricultural practices, pest and disease management.
- Improvement of agriculture policies/strategies.
- SVG has not yet submitted an updated NDC as of August 2022.



Source: *St. Vincent and the Grenadines Recipes and Flavours* (blog), September 27, 2015, <http://caribbeanflavours.blogspot.com/2015/09/st.html>

## Emission Profile of St. Vincent and the Grenadines' Agriculture Sector

Agriculture accounted for 17.7% (61 Gg CO<sub>2</sub>e) of SVG's total Greenhouse Gas (GHG) emissions (excluding forestry and other land use) in 2004. The major sources of emissions for the sector are N<sub>2</sub>O from managed soils (application of nitrogen fertilisers and manure to agricultural fields), enteric fermentation and manure management. Direct N<sub>2</sub>O from soils contributes 52.1% (32 Gg CO<sub>2</sub>e) to total agriculture emissions, indirect N<sub>2</sub>O from soils contributes 33.6% (21 Gg CO<sub>2</sub>e) and enteric fermentation 7.6% (5 Gg CO<sub>2</sub>e).

## Barriers to Inclusion of CRA Actions in NDCs

The main barrier to the inclusion of climate resilient agriculture (CRA) in NDCs is the inadequacy of resources. For example, SVG, through support from the Caribbean Agricultural Research and Development Institute (CARDI), has designed a climate resilient pen for small ruminants, however the subsistent and fragmented nature of agriculture in the country prohibits its ready adoption. Other climate-smart agriculture adaptation practices such as contouring and installing vegetation barriers can also be expensive for smallholder farmers.

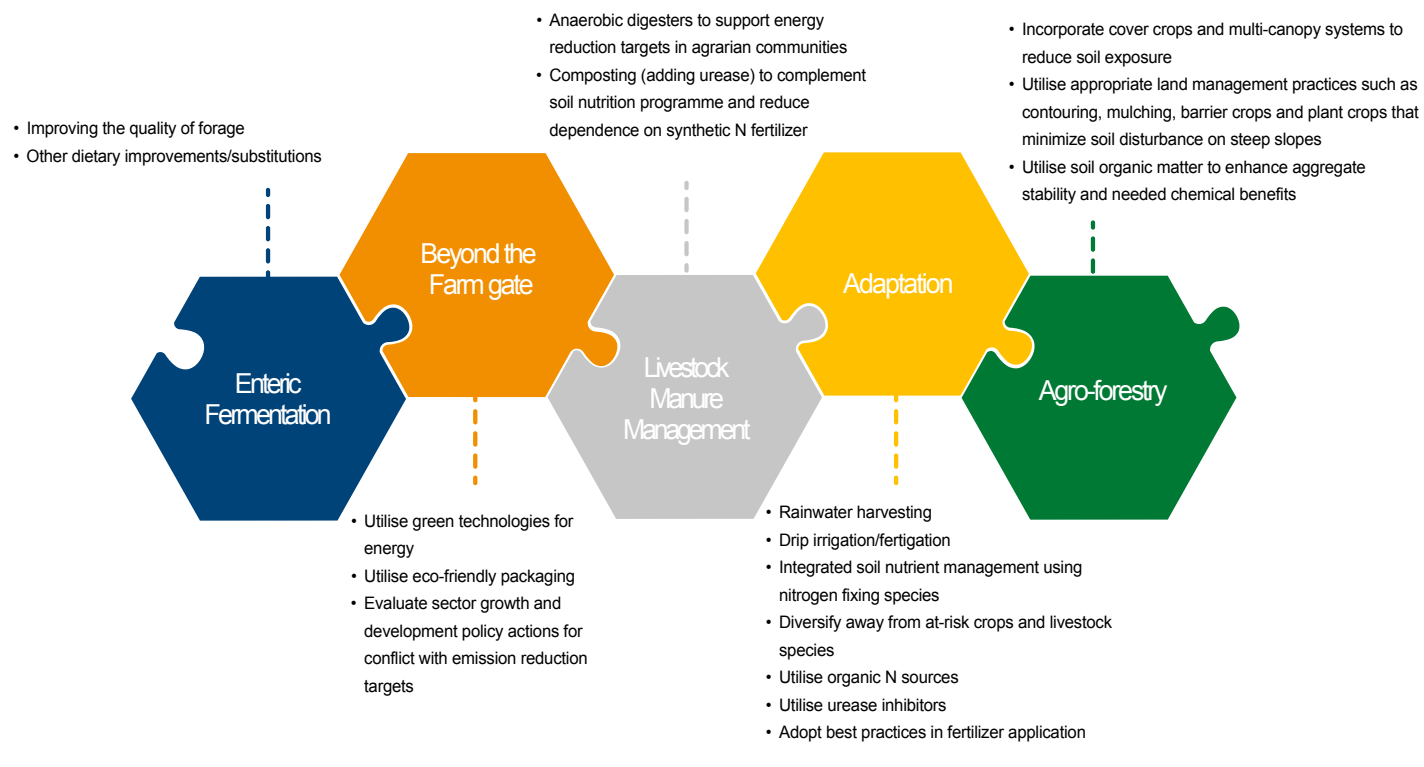
Other barriers are:

- Lack of know-how to implement CRA technologies. Where training is offered, the uptake from farmers is often low. The inability to participate is potentially linked to the general shortage of farm labour (youth not taking up agriculture) and the aging farming population.
- Inadequate extension advisory services. With the increase in the number of small farm holdings, the demand for extension services has also increased, without parallel capacity improvement in extension services.
- Inadequate capacity for application of the Farmer Field Schools (FFS) approach. Although there is an apparent preference for FFS, as exemplified by the high levels of farmer participation in the demonstrations on irrigation, organic farming, and pest and disease management, the capacity to utilise the approach more broadly is lacking.
- Communication deficiencies impacting CRA knowledge transfer. The impact of farmer training has been affected by inappropriate delivery tools, ambiguity in interpretation and lack of contextual application.
- Farmer aversion to behavioural change. The aging farmer population is often resistant to change and has a tendency to maintain traditional practices, sometimes not in keeping with CRA

## Opportunities for Building CRA and Enhancing Climate Ambition in NDCs

Direct and indirect N<sub>2</sub>O accounts for approximately 85% of SVG's agriculture sector emissions. With the government of SVG's policy to reduce its food import bill by 2025, primarily through an expansion of its poultry subsector, there will no doubt be an increase in the potential N<sub>2</sub>O emissions from manure. Consequently, policies that may threaten increased carbon footprint from the food system should consider adaptation actions with mitigation co-benefits where applicable, coupled with immediate and ongoing N<sub>2</sub>O reducing actions as outlined in the following infographic.

## Opportunities for enhancing CRA in St. Vincent and the Grenadines



## Priority Capacity Needs and Key Approaches for Enhancing Agriculture's Contribution to Future NDCs

### Capacity Needs for Building CRA in St. Vincent and the Grenadines

- Strengthen farmers' capacity for CRA through for example, incentivizing training and adoption of CRA practices such as on-the farm or structured FFS training and certification for CRA technologies.
- Create pathways for youth and women to participate in agriculture and to support the CRA transition.
- Capacity for land and soil health management at all levels.
- Implement multi-pronged financing strategies that provide support for CRA uptake and retrofitting, for e.g., mainstreaming CRA investment opportunities in a climate financing strategies.
- Establish disaster risk financing strategies (including insurance) to strengthen the sector's capacity to recover from the occurrence of climate shocks and stressors.

### Approaches and Steps to Enhancing Agriculture's Contribution to Future NDCs

- Alignment of agricultural climate targets, policies, and actions with National Adaptation Plans or Sustainable Development Goals.
- Enhancing financing for climate resilient agriculture.
- Strengthening Monitoring, Reporting and Verification (MRV) systems for better inventories, assessments of mitigation potentials or assessment of access to finance.
- Improvement of agricultural innovation and extension services.
- Identification of policies and measures to equitably clarify land tenure, protect small-scale farmers, and engage private sector in the CRA transition.
- Identification or prioritization of actions that support both mitigation and adaptation.
- Improved description of co-benefits for mitigation and/or adaptation actions.
- Link to niche markets that could incentivise sustainable, lower emission products.

The *Strengthening the Foundation for a Climate Responsive Agricultural Sector in the Caribbean Readiness Project* (CARICOM AgReady), financed by the Green Climate Fund, targets nine countries in the CARICOM region with The Ministry of Environment and Housing of The Bahamas as the lead National Designated Authority (NDA) and the Inter-American Institute

for Cooperation on Agriculture (IICA) as the delivery partner. Covering Bahamas, Belize, Dominica, Haiti, St. Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago, the project works to provide information and tools to enable greater participation from the agriculture sector in climate action and finance processes.



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