Ministry of Agro Industry and Food Security

*Climate Change and Food Security*

Agricultural Services

Agricultural Research & Extension Unit (AREU)

Forestry Service

National Parks and Conservation Service (NPCS)

Small Farmers Welfare Fund (SFWF) and

Irrigation Authority (IA), among others
Food security

- household
- national level

the production of sufficient food or economic activities that generate sufficient revenue to purchase (or import) safe and nutritious food for a healthy life.

Definition no longer valid as money does not guarantee food supply, sometimes due to export ban in supplying countries (due to local demand or low production from climate change impacts).

Increasing demand of food quantity and quality from local and tourist population puts pressure on the need for higher food supplies and security.
Import and Export
- Sugar export
- Food and feed import

Self-sufficiency in fresh vegetables and poultry products

Heavy dependency on imports of staple food – wheat, rice, pulses, dairy products, oil, and feed – maize and others
Impacts of Climate extremes on Food Security

- Changes in rainfall patterns
  - Unpredictability
  - Water deficit periods & drought
  - Flash floods
- Temperature extremes
- Cyclones

Severely affect Food Production
- Crop loss
- Crop failure
- Lower feed intake & productivity in livestock
- High mortality

Inappropriate water regime
Soil erosion and degradation,
Salinisation and loss of arable land
Pest and disease build up

Food Shortage
Sugar Cane GeneBank at the MSIRI, Réduit
Mungbean Trial at Richelieu Experimental Station
Forest in Catchment Area of La Nicolière
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Fire on Signal Mountain (Forestry Service)
Pointe D’Esny Protected Wetland - NPCS
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Mare aux Vacoas Reservoir
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Agricultural Services During World Food Day, Réduit
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Food Technology Laboratory, Réduit
R & D Activities at AREU

- Promote production of seeds & seedlings
- Screen new varieties (heat tolerant & pest & disease resistant)
- Breeding of new varieties of crops

Screening of variety  Onion seed production  Francia onion  Bellarose onion
Efficient use of irrigation water

- Sprinkler, micro-sprinkler, drip irrigation, & family drip systems

Use of Tensiometers, to monitor soil moisture for irrigation scheduling
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Soil Conservation

Mulching to conserve soil moisture

Contour planting on mountains slopes at Les Mariannes

Drainage in field at Palmar
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Improvement of Soil Health through Use of Compost/Organic Manure

Support to Solid Waste Recycling Company Ltd on composting of Municipal Solid Waste for use in food crop production

Demonstration and sensitization on different types of composting & benefits of compost
Climate Change and Livestock Production

Improved housing
- Better ventilation & stocking density

Modifying environment to minimise heat stress
- Cooling & shading
- Lower population density

Fodder production and conservation
- Cultivation of high quality fodder species
  - Silage & haymaking
Conservation & utilisation of local breeds - Creole cattle and local goats: more adapted to harsh environment conditions

Use in genetic improvement programme

Waste Management
- Biogas production & composting
Integrated Pest and Disease Management

- Maintain pest & disease surveillance
- Promote physical methods of pest control
- Promote biological control of pests

Yellow sticky trap for Leaf miner

Stable fly
Trichopria sp
DBM
Cotesia plutellae
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• Solar powered AMS to measure:
  – solar radiation, temperature (minimum and maximum), rainfall, wind speed & soil moisture

• The AMS will also allow the collection and storage of local weather data automatically to a server where they will be stored and distributed free to stakeholders
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Training workshop on ADSS components, FARC- Réduit
Provision of 6 salinity meters by AAP to planters’ association of Petit Sable, Grand Sable & Bambous Virieux to monitor the salinity of irrigation water

Training of farmers in salinity management practices by MoESD - NEL and AREU

Assistance to growers at Petit Sable, Grand Sable & Bambous Virieux in protecting the onion var. *Local Red*, project under GEF / SGP

Planting of mangroves along the Petit Sable shores by Ministry of Fisheries
Thank you for your attention