MAURITIUS METEOROLOGICAL SERVICES

National Framework for Climate Services (NFCS)

The **National Framework for Climate Services** is a crucial and structured national approach to producing and using climate information to support decision-making across a country.

To be in line with the recommendations of the World Meteorological Organisation, the MMS is embarking on an innovative approach with new products to better serve the nation.

The core idea is to ensure that vital climate information (like seasonal forecasts, drought monitoring, or future climate projections) is **usable, accessible, and relevant** for sectors that need it most.

Why is NFCS Important?

It helps societies become more resilient to climate variability and change by supporting better planning in **key socio-economic sectors**, such as:

- **Disaster Risk Reduction:** Preparing for floods, droughts, and storms.
- **Agriculture:** Deciding what crops to plant and when, based on seasonal forecasts.
- **Water Resources:** Managing reservoirs and water supply.
- **Health:** Predicting outbreaks of climate-sensitive diseases like malaria or dengue.
- **Energy:** Planning for hydropower generation or cooling demands.

Countries with NFCS

Many countries around the world are at various stages of developing and implementing their NFCS, including Switzerland, Germany, Tanzania, Malawi, and several others.

In summary, a **National Framework for Climate Services (NFCS)** is the essential national infrastructure that turns complex climate data into practical tools and information to help a country build resilience and adapt to a changing climate.

After the abolition of Slavery (1835) which was a monumental event, the end of slavery created a critical labour shortage on the sugar estates.

Indentured Labourers from India were brought to palliate the labour crisis in 1834. Over half a million arrived, fundamentally changing the island's demographic, social, and cultural fabric. Their descendants now form the majority of the population.

Sugar was cultivated as a monoculture crop. By the mid-19th century, Mauritius was a classic example of a plantation economy, with over 90% of its exports being sugar. This led to great wealth for the plantation owners (mostly Franco-Mauritians) but also made the entire economy vulnerable to the price of a single commodity.

The period between 1950s and 2000 witnessed Mauritius transform from a high-mortality, high-fertility society into a low-mortality, low-fertility society with a stable and much more prosperous population, from 501,415 in 1952 (CSO census) to 1,191,280 in 2022 (CSO census). This growing population and with increasing tourists arrivals the demand for food and energy has ever since been rising.

Specialised bodies like MSIRI, SPMPC & AREU were founded to enhance the agricultural productivity of sugar cane.

By 2020's these bodies were rebranded into MCIA, SFWF, FAREI, etc. meanwhile Mauritius witnessed its main primary economic income diversify to the services sector, particularly financial services and tourism, followed by the manufacturing industry. Agriculture, once the dominant economic pillar, now plays a much smaller role yet with increasing prices for freight, food production and impacts of climate change Mauritius has to become resilient in food production and ultimately become self-sufficient.,

Transformation and Response:

1. **Rationalization of Sugar:** Many small planters abandoned their fields. The sugar estates consolidated and transformed into real states.
2. **From Sugar to Energy:** The focus shifted from producing sugar to generating bio-electricity (bagasse). Sugar mills became power plants, supplying up to 14% of the island's electricity and providing a new, stable revenue stream.
3. Crop Diversification: Driven by the government's Food Security Fund, there was a push to grow more food locally. This included:
    - **Sub-tropical Fruits:** Pineapple, lychee, longan.
    - **Vegetables:** Potatoes, onions, tomatoes.
    - **Fisheries and Livestock.**
4. **The Rise of "Premium" Products:** The sector moved up the value chain, producing special sugars (like Special Mauritius), and promoting agricultural tourism (e.g., visiting sugar estates and rum distilleries).

Challenges and transformation in food production

- Sugar Cane: Still dominates the landscape (covering ~85% of arable land) but is now a multi-product industry (sugar, rum, bio-energy, molasses).
- Food Import Dependency: The country remains highly dependent on imported staple foods.
- Small Planters' Plight: Many small-scale planters face economic difficulties, leading to abandoned land.
- Environmental Challenges: Soil degradation, water scarcity, and climate change (cyclones, drought) pose significant threats.

The history of Mauritian agriculture is a clear narrative of adaptation—from a survivalist outpost, to a sugar colony built on indentured labour, to a modern, diversified economy where agriculture is fighting to reinvent itself in a globalized world.

The Mauritius Meteorological Services has been monitoring meteorological parameters over a century for the safety and wellbeing of the population in the Republic of Mauritius.

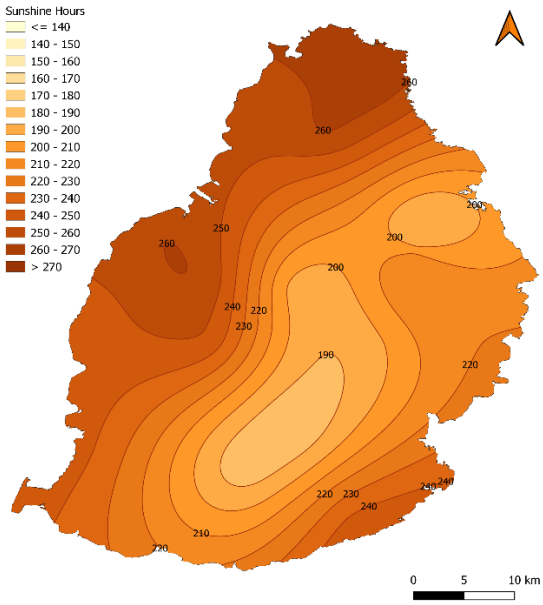
To adapt to the effects of climate change and to minimise its impacts, the MMS will be publishing monthly reports to guide stakeholders and other users.

This report is the first of this series.

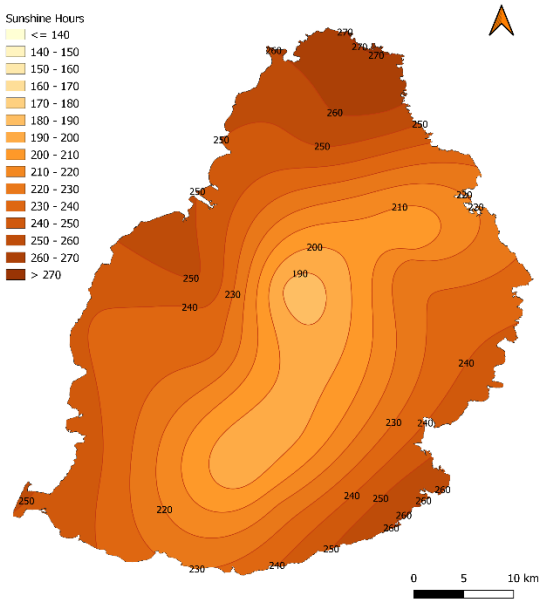
Climate Services for Agriculture

MONTHLY TOTAL SUNSHINE HOURS

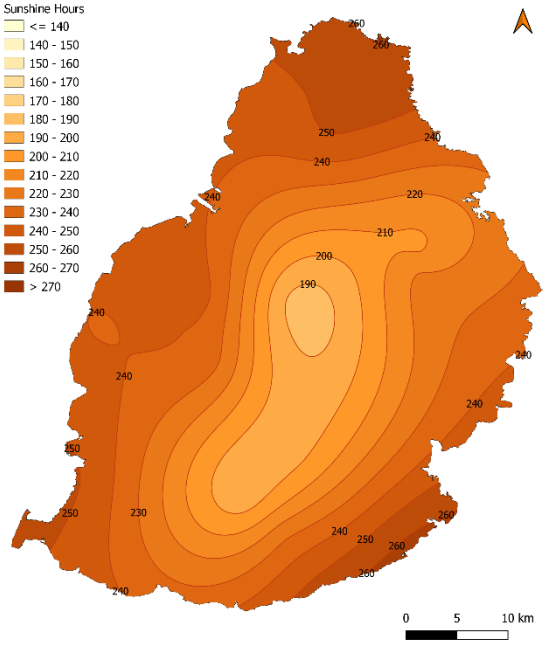
LONG TERM MEAN (1991-2020) MONTHLY TOTAL SUNSHINE HOURS FOR OCTOBER



LONG TERM MEAN (1991-2020) MONTHLY TOTAL SUNSHINE HOURS FOR NOVEMBER



LONG TERM MEAN (1991-2020) MONTHLY TOTAL SUNSHINE HOURS FOR DECEMBER



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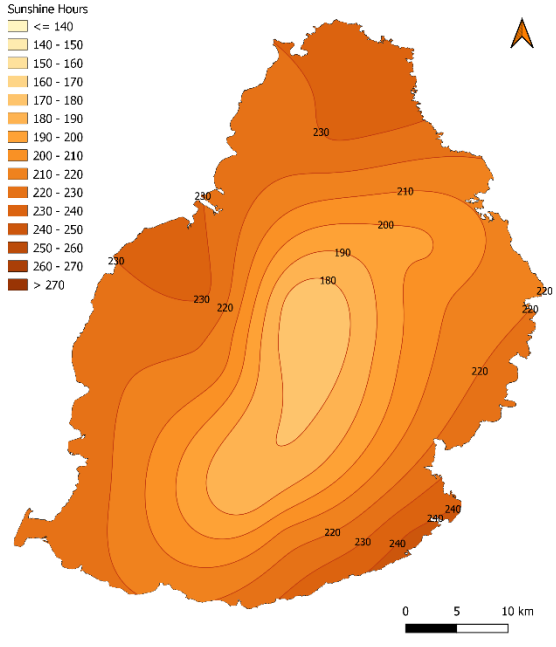

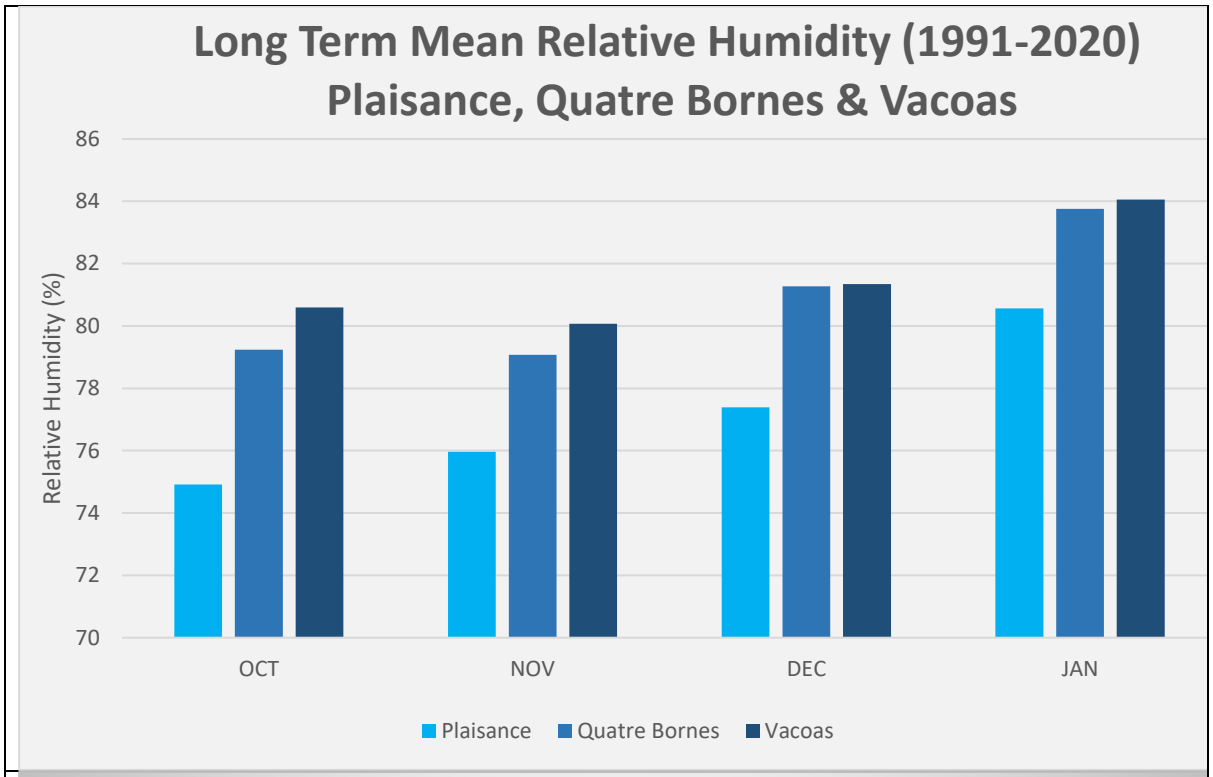

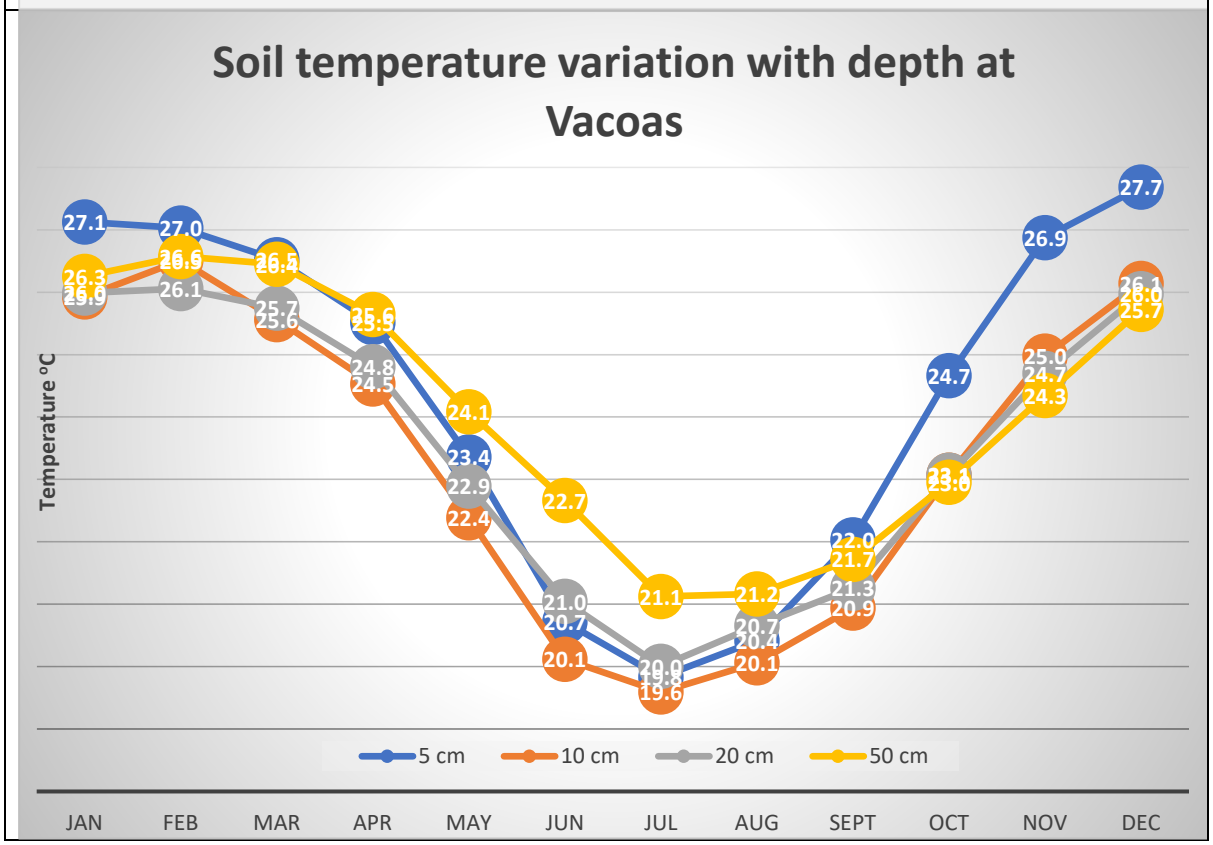

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