

# Enhancing multi-scalar mapping and research of food security risk, due to climate change in Jamaica

Jamaica Food Security & Climate  
Resilience Portal: User Manual

## Document information

Document permissions	Confidential - client
Project number	FWR706
Project name	Enhancing multi-scalar mapping and research of food security risk, due to climate change in Jamaica
Report title	Jamaica Food Security & Climate Resilience Portal: User Manual
Report number	RT005
Release number	01-00
Report date	12 August 2025
Client	Rural Agricultural Development Authority
Client representative	Ajani Allenye
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## Document history

Date	Release	Prepared	Approved	Authorised	Notes
12 Aug 2025	01-00	MCP	GMT	MCP	

## Document authorisation

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# 1 Introduction

## 1.1 About the Jamaica Food Security & Climate Resilience Portal

The Jamaica Food Security & Climate Resilience Portal has been developed by HR Wallingford for the Rural Agricultural Development Authority (RADA), with funding from the UN Climate Technology Centre & Network (CTCN).

This portal is part of a broader initiative under the project titled ***Enhancing Multi-Scalar Mapping and Research of Food Security Risk Due to Climate Change in Jamaica***. The project aims to strengthen Jamaica's capacity to monitor, understand, and respond to food insecurity in the context of climate change.

The portal is an interactive, web-based tool designed to support evidence-based decision-making by visualizing spatial patterns of food insecurity and climate vulnerability. It integrates geospatial data, survey results, and agricultural information to help stakeholders, including policymakers, researchers, and extension officers, to design and evaluate targeted interventions.

## 1.2 Purpose of the Jamaica Food Security & Climate Resilience Portal

The purpose of the portal is to:

- Provide a centralized platform for accessing and sharing food security and climate resilience data
- Enable users to visualize current and projected food insecurity risks across Jamaica
- Support planning, targeting, and evaluation of climate adaptation and food security interventions
- Facilitate collaboration and data sharing among government agencies, researchers, and development partners
- Build long-term institutional capacity for spatial analysis and evidence-based policy development

## 1.3 Contact information

For technical support, feedback, or inquiries about the portal, please contact:

Dr Gina Tsarouchi

Email: [g.tsarouchi@hrwallingford.com](mailto:g.tsarouchi@hrwallingford.com)

Phone: +44 1491 822412

Website: <https://www.hrwallingford.com/>

# 2 Getting started

## 2.1 Accessing the portal

At the time of writing this report, the Jamaica Food Security Portal is accessed through the URL: <https://food-security-jamaica.hrwallingford.com/>. The URL will take you to the page shown in Figure 2.1.

[Home](#) [Log In](#)

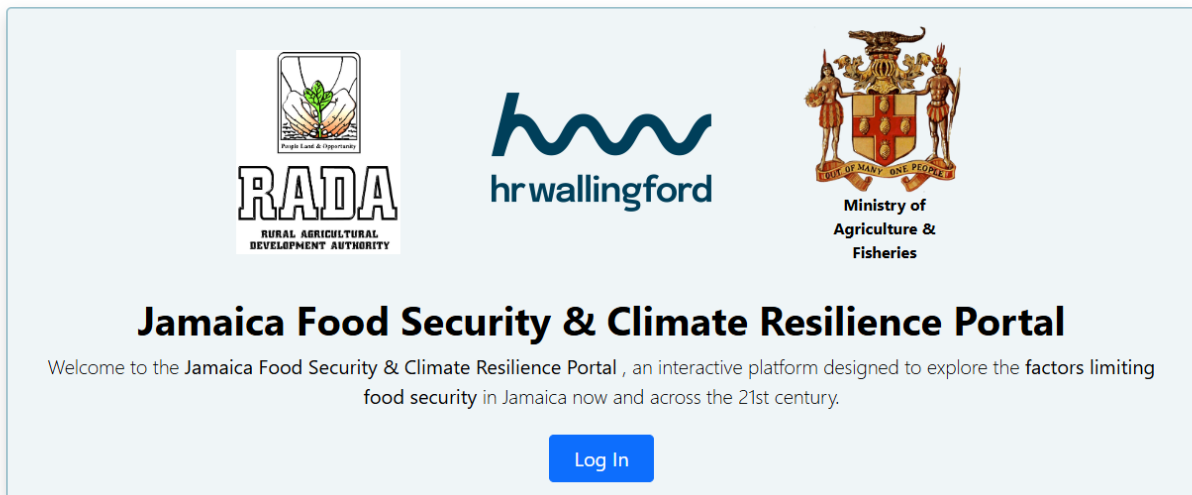


Figure 2.1: Jamaica Food Security & Climate Resilience Portal landing page

Source: HR Wallingford

In order to access the Jamaica Food Security & Climate Resilience Portal, a user is required to enter login credentials; a username and password. These login requirements will be provided and managed by RADA. Enter your personal user credentials in the boxes shown in Figure 2.2.

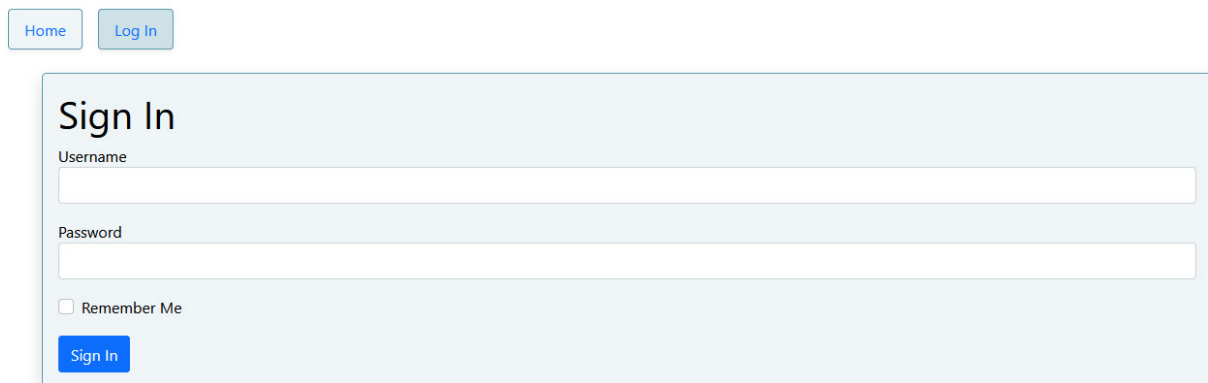


Figure 2.2: Jamaica Food Security & Climate Resilience Portal log in page

Source: HR Wallingford

After successful login, the welcome page for the Jamaica Food Security & Climate Resilience Portal will be displayed, as shown in Figure 2.3.

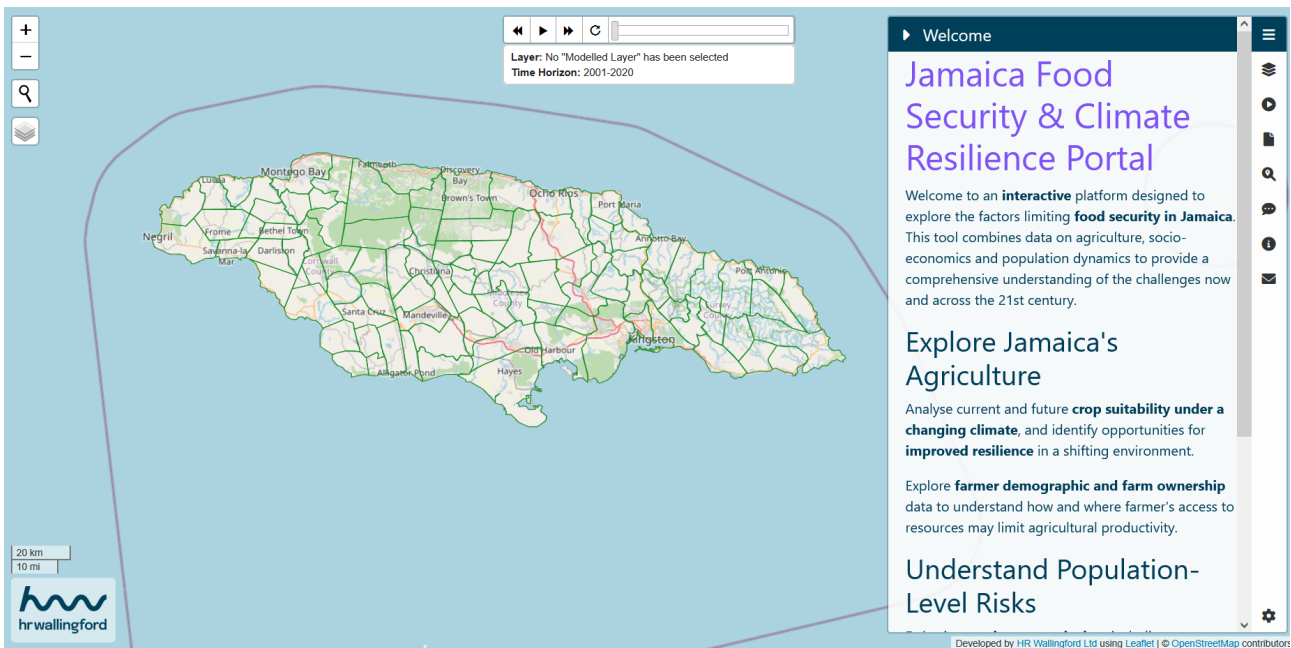


Figure 2.3: Welcome page of the Jamaica Food Security & Climate Resilience Portal

Source: HR Wallingford

## 2.2 Navigating the portal

Upon successful login to the portal, the user will be presented with the welcome page as in Figure 2.3. From this page, the user is able to select different panels from the right-hand side bar. A guide on this is provided in Figure 2.4.

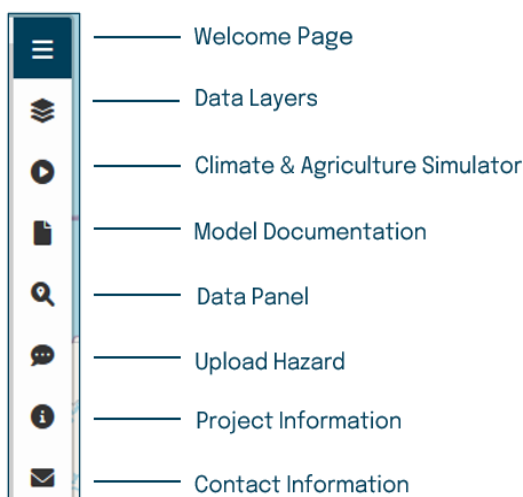


Figure 2.4: Jamaica Food Security & Climate Resilience Portal side panel options

Source: HR Wallingford

- **Welcome Page:** Introduction information about the Portal
- **Data Layers:** Lists the spatial data layers that available, enables toggling of visibility and shows data keys
- **Climate & Agriculture Simulator:** Simulator tool to explore scenarios of agricultural planning in current and future climate (see Section 7)
- **Model Documentation:** Reference information for the Climate & Agriculture Simulator
- **Data Panel:** Information for a selected location on Data Layers
- **Upload Hazards:** Feature to report an agriculture hazard (see Section 5)
- **Project Information:** Information about the project inception and funding
- **Contact Information:** Email addresses for project co-ordinators

The **Data Layers** tab displays spatial data over an OpenStreetMap basemap. You can explore the map just like any other digital map; you can zoom in to focus on specific areas of the island and pan around to navigate.

The portal initially loads with the Parish Extension Boundaries layer visible; see Figure 2.5.

An example of the Data Layers tab after selecting a layer of interest (Land cover and land use) is shown in Figure 2.6. From here, it is possible to zoom and pan around the map, in addition to loading more layers onto the map.

### How to View Data Layers


#### 1. Select a Layer

On the right-hand side menu, choose a data layer that interests you. Once selected, the map will update to show that layer's data

#### 2. Understand the Map Symbols

A legend will appear below your selected layer in the right-hand panel. This explains what the colours, lines, or symbols on the map represent

#### 3. Understand the Data Source

Click on the  icon next to the layer on the right hand panel. This will provide more information on the source of the data

#### 4. Get Local Information

Click anywhere on the map to learn more about that specific area:

- For some layers, a pop-up window will appear with details (see example in Figure 2.7)
- For others, the information will show up in the Data Panel on the right, tailored to the location you clicked (see example in Figure 2.8)

#### Top Tip!

The parish extension boundary layer is loaded as a default layer as shown in Figure 2.3; this can be deactivated by unchecking the box next to Parish Extension under Base Maps as illustrated in Figure 2.5.

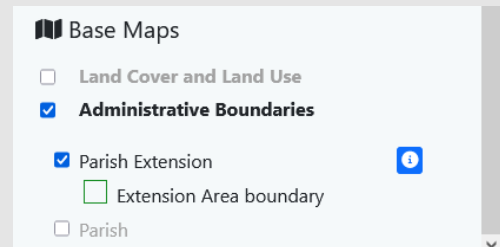


Figure 2.5: Base Maps in the Data Layers tab

Source: HR Wallingford

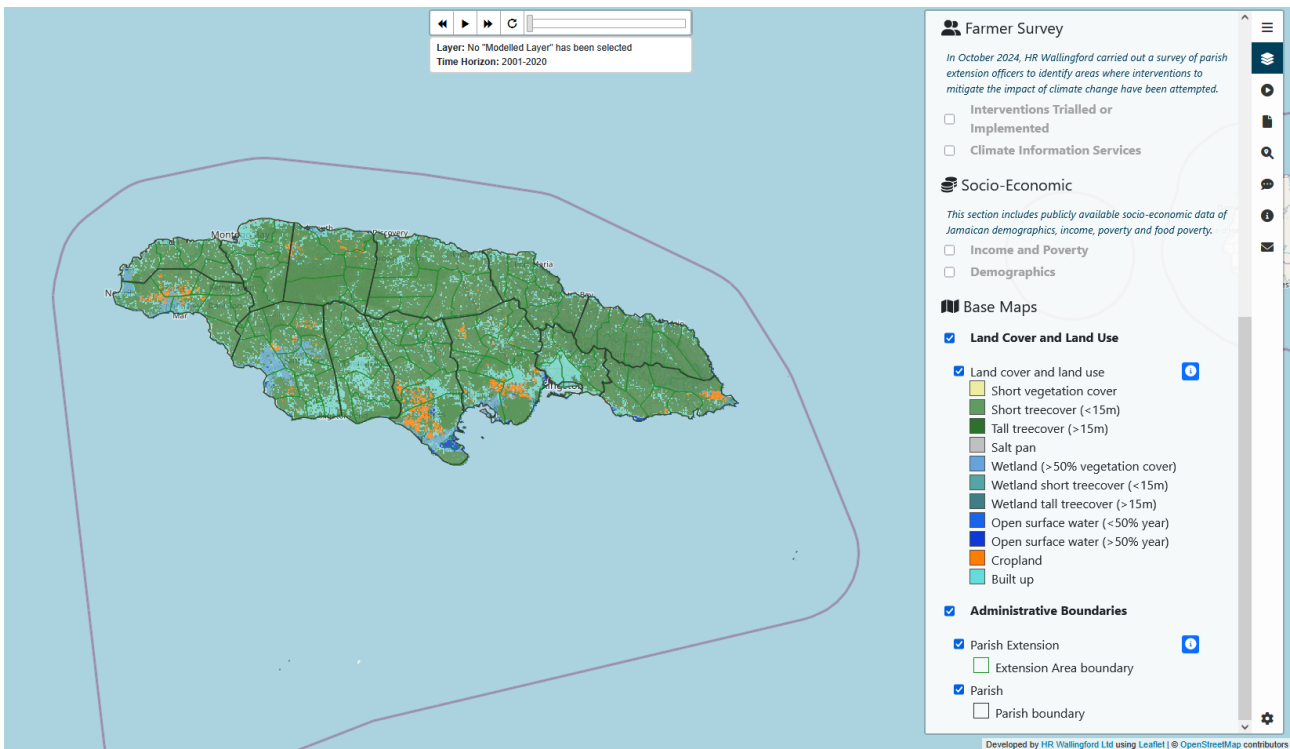


Figure 2.6: Jamaica Food Security & Climate Resilience Portal showing the land cover and land use base map

Source: HR Wallingford

### Top Tip!

To uncover deeper insights, try turning on layers from different categories...

- Investigate trends in **farming demographics** alongside **farm ownership and tenure** data. You might begin to notice interesting patterns, like does the presence of younger farmers relate to the types of land ownership in different regions? These connections can reveal where support for new farmers might be most needed
- Explore the **socio-economic layers** to compare rural and urban areas. You may find that access to resources, income levels, or food security challenges vary significantly depending on location. This can help you understand how broader social and economic conditions shape agricultural outcomes and food security
- Take a look at the **survey results** layer. These attempt to capture which agricultural interventions have been trialled or implemented in a region. By comparing with the ABIS data trends over time, we can begin to understand if these interventions are effective and where more attention is needed

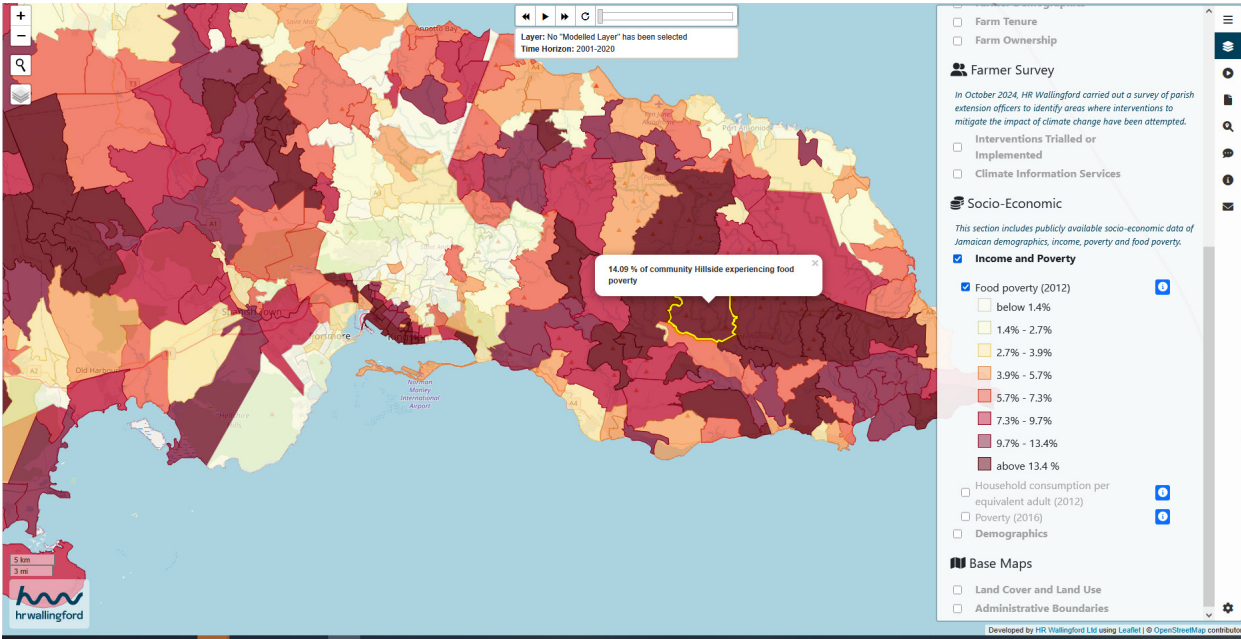


Figure 2.7: Example with a pop-up information window when selecting an area of interest

Source: HR Wallingford

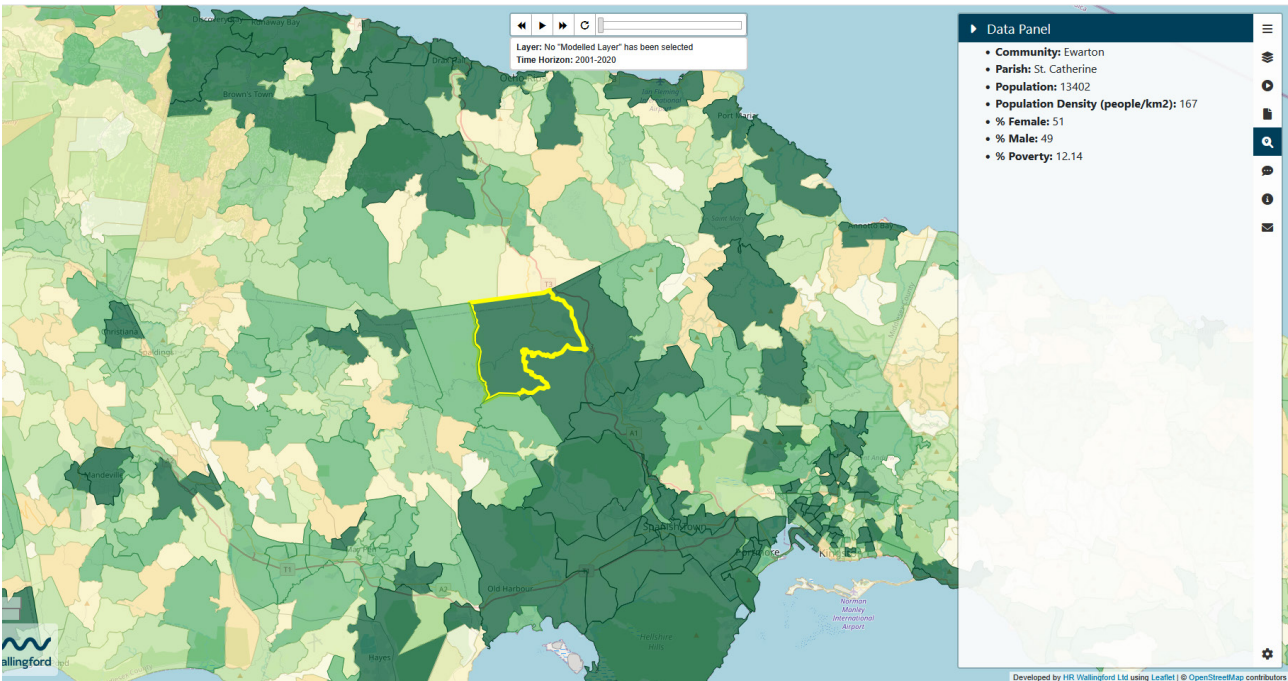


Figure 2.8: Example with a data panel tab when selecting an area of interest

Source: HR Wallingford

### 3 Data catalogue

Table 3.1 provides a full list of the available data in the portal. Please refer to the linked sections for more information, where applicable.

**Table 3.1: Jamaica Food Security & Climate Resilience Portal data catalogue**

Category	Data	Source and year	Comment
<b>Layers accessible from the Layers Panel</b>			
Reported Hazards	Reported Hazards Live	Users of the portal (live dataset)	See Section 5.
	Reported Hazards Historic	Users of the portal (live dataset)	
Farm Data (ABIS)	Crop Yield per Parish	JAMIS (2024)	See Section 4.
	Crop cultivation per parish extension	ABIS (2024)	
	Irrigation	ABIS - updated monthly	
	Farmer Demographics		
	Farm Tenure		
	Farm Ownership		
Farmer Survey	Interventions trialled or implemented in extension area Climate Information Services	HR Wallingford (2025)	See Section 6.
Socio-Economic	Food Poverty	STATIN (2012)	Incidence of Food Poverty- Percentage of Population Living in Food Poverty by Community.
	Poverty	Mona GeoInformatics Institute (2016)	% of community classified as living in poverty.
	Household consumption per equivalent adult	STATIN (2012)	Household consumption per equivalent adult - average annual Jamaican Dollars by community.
	Community population	Mona GeoInformatics Institute (2016)	
	Rural Population	STATIN (2012)	% of the population classified as living in rural areas. Calculated from STATIN 2011 census for parish population.
	Population density	Mona GeoInformatics Institute (2016)	People per km <sup>2</sup> .
Base Maps	Land Cover and Land Use	Potapov et al. (2022)	Categories have been aggregated.
Administrative Boundaries	Parish Extensions Area Boundary	RADA (2024)	Boundaries of the Parish Extension Areas.
	Parish boundaries	RADA (2024)	Boundaries of the Parishes.
<b>Layers accessible from the Climate and Agriculture Simulator Panel</b>			
Rainfall (Historic)		WorldClim v2.1	

Category	Data	Source and year	Comment
Temperature (Historic)	Historic downscaled and bias corrected 2.5 minute spatial resolution data		Aggregated to seasonal average based upon each year 2000-2001.
Rainfall (Future) Temperature (Future)	CMIP6 downscaled and bias corrected future climate projections at 2.5 minute resolution  23 global climate models (GCMs), and for four Shared Socio-economic Pathways (SSPs): 126, 245, 370 and 585  The monthly values were averages over 20 year periods (2021-2040, 241-2060, 2061-2080, 2081-2100)		Aggregated to seasonal average based upon each time horizon annual profile.
Agricultural suitability	Risk indicator reflecting the suitability of the agricultural scenario selected	HR Wallingford	Outputs of the Climate & Agriculture Simulator (see Section 7).

## 4 Link with the Agricultural and Business Information System

### 4.1 API link

The Jamaica Food Security & Climate Resilience Portal automatically pulls data from the Agricultural and Business Information System (ABIS) and presents this on the Data Layers tab underneath the header “Farm data (ABIS)”. As a result, there is no need for manual data entry within the portal itself. Data is synchronized monthly, reflecting the status of ABIS at the time of extraction. This dynamic link supports continuous analysis of agricultural trends across Jamaica, both geographically and over time. It is important to note that this process depends on the timely and accurate updating of ABIS.

The portal captures and displays data across the following categories:

#### 1. Farmer Demographics

- Number of farmers per parish extension, disaggregated by:
  - Gender
  - Age group (youth farmers (18-35 years), farmers over 35 years)

#### 2. Farm Tenure

- Number of farms per parish extension, with tenure categorised as:
  - Leased
  - Owned (Registered Title/Other)
  - Rent Free (Family Land/Other)
  - Rented

- Squatting - Government Land
- Squatting - Private Land

### 3. Farm Ownership

- Number of farms per parish extension, categorised as owned by:
  - Individual
  - Government
  - Partnership
  - Private Company
  - Co-operative
  - Other
  - Not Stated

### 4. Farmland Irrigation

- Proportion of irrigated farmland per parish extension, based on:
  - Total farm area (ha)
  - Irrigation status

The portal presents this information spatially using interactive data layers (see Figure 4.1). Users can select a specific location to explore temporal trends and compare various categories within that area, as illustrated in Figure 4.2. Please note that the public ABIS database does not provide historical data, so trends cannot be analysed retrospectively. The earliest data point available corresponds to the initial API data retrieval.

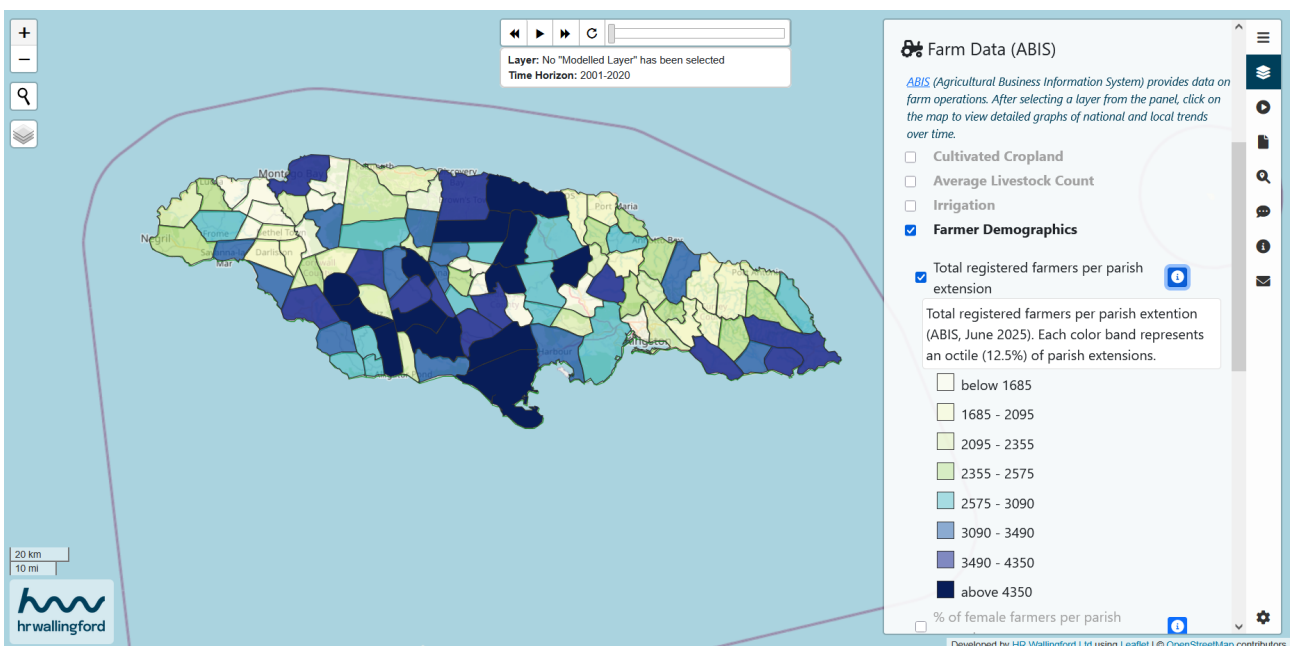


Figure 4.1: Screenshot from the Jamaica Food Security & Climate Resilience Portal highlighting the number of farmers per parish extension in June 2025

Source: HR Wallingford, data from ABIS

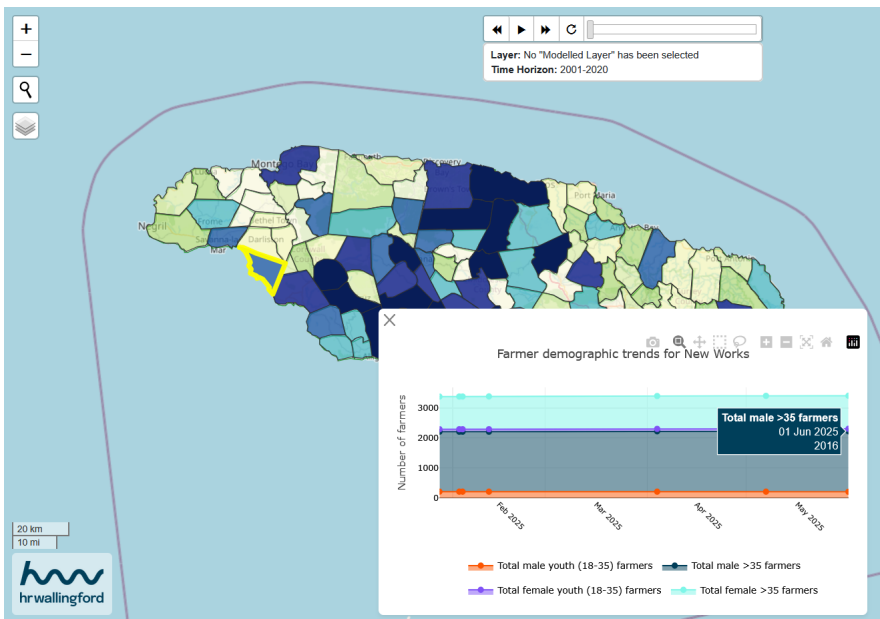


Figure 4.2: Screenshot from the Jamaica Food Security & Climate Resilience Portal highlighting the number of farmers by age and gender in a specific parish extension over time

Source: HR Wallingford, data from ABIS

## 4.2 Static data

Data for livestock has been aggregated to a parish extension. Unlike the datasets listed in Section 4.1, this data is not updated live. This is because analysis of available data showed that there was inconsistent spatial and temporal data coverage and therefore presenting a live dataset could be misleading.

The data presented represents the total cropland cultivated per crop group for 2024. This is intended to be indicative of production across Jamaica. It is recommended that RADA reviews the data on ABIS to ensure that it can be accurately incorporated into the portal in future.

JAMIS (Jamaica Market Information System) provided crop yield and crop cultivation acreage at the parish extension level. JAMIS produces annual reports of this data. The 2024 data has been uploaded to the portal.

## 5 Hazard reporting

### 5.1 About the hazard reporting feature

The Jamaica Food Security & Climate Resilience Portal includes a community-driven feature that allows users to report agricultural hazards they observe in their local areas. Each report captures essential details such as:

- The type of hazard (eg, bushfire, flood)
- The date it occurred
- Its current status
- The user who submitted the report

Over time, these entries will build a valuable, crowdsourced database that helps identify trends, highlight high-risk regions, and support more targeted and effective interventions.

This feature is grounded in the principles of Participatory GIS (PGIS)—a method that empowers communities to contribute to spatial knowledge by mapping their own experiences. PGIS has been widely used to support local planning, knowledge sharing, and community resilience.

Within the portal, any registered user can log an agricultural hazard by opening the ‘Upload Hazard’ sidebar pane, pinpointing the location on the map and then selecting a category from a dropdown menu, providing a brief description, and indicating the current status. This collective input enables:

- Real-time monitoring of agricultural hazards across Jamaica
- Visualization of spatial patterns and hotspots
- Community-driven insights to guide policy and response efforts

By integrating PGIS into the portal, the tool not only enhances data collection but also strengthens community engagement in climate resilience and food security planning.

The default hazard categories available on the portal are listed below. If you wish to add more hazard categories to the portal, please contact your system administrator at RADA who will be able to action this for you:

- Hurricane or storm damage
- Flooding
- Drought and extreme heat
- Bushfires
- Pests and crop diseases
- Sea level rise or saltwater intrusion
- Theft or vandalism
- Water quality issues
- Soil contamination
- Invasive species

## 5.2 Adding a hazard

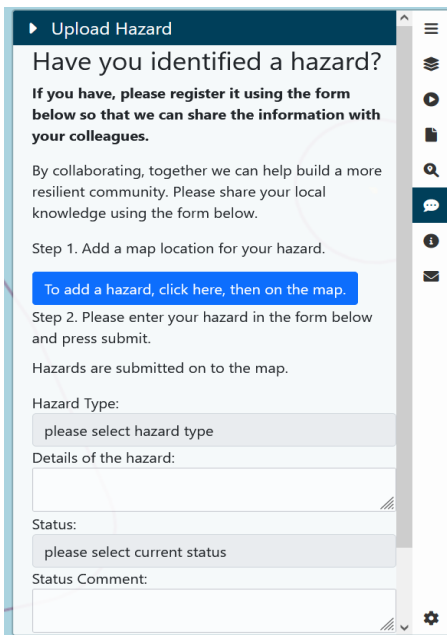


Figure 5.1: Screenshot of the “Upload Hazard” tab in the Jamaica Food Security & Climate Resilience Portal

Source: HR Wallingford

### 1. Open the Upload Hazard Panel

Click the speech bubble icon on the right-hand side of the screen. This will open the “Upload Hazard” panel.

### 2. Select the Location

Click the **blue location box**. This activates the map. Navigate to your area of interest and click on the exact location where the hazard occurred.

### 3. Enter Hazard Details

From the “**Hazard Type**” dropdown menu, select the appropriate category (e.g., bushfire, flood, pest outbreak) as shown in Figure 5.2.

In the text box below, provide a **brief description** of the hazard.

### 4. Set the Status

Choose the current status of the hazard from the “**Status**” dropdown.

When first reporting a hazard, it is recommended to select “**New**” as the default status.

### 5. Submit the Hazard

Click “Submit Hazard” to save your entry.

The hazard will now appear under the “Hazards Notifications – Live” tab (see Figure 5.3).

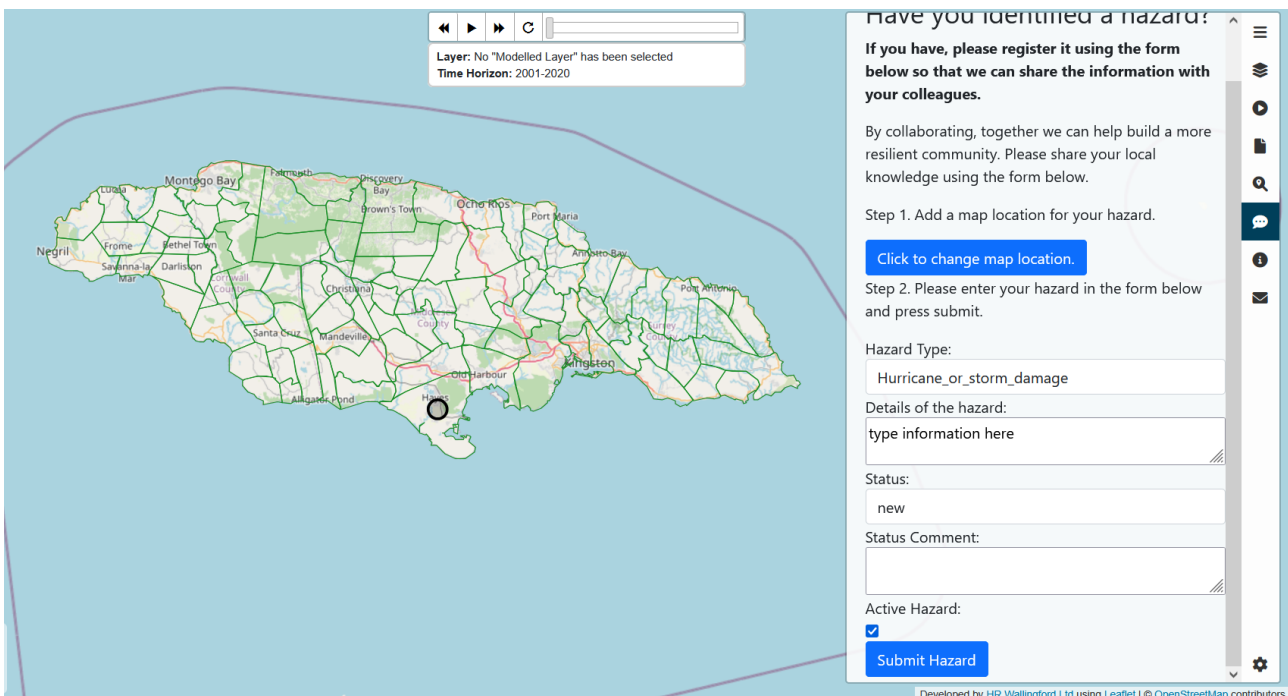


Figure 5.2: Screenshot showing how to add hazard information within the “Upload Hazard” tab in the Jamaica Food Security & Climate Resilience Portal

Source: HR Wallingford

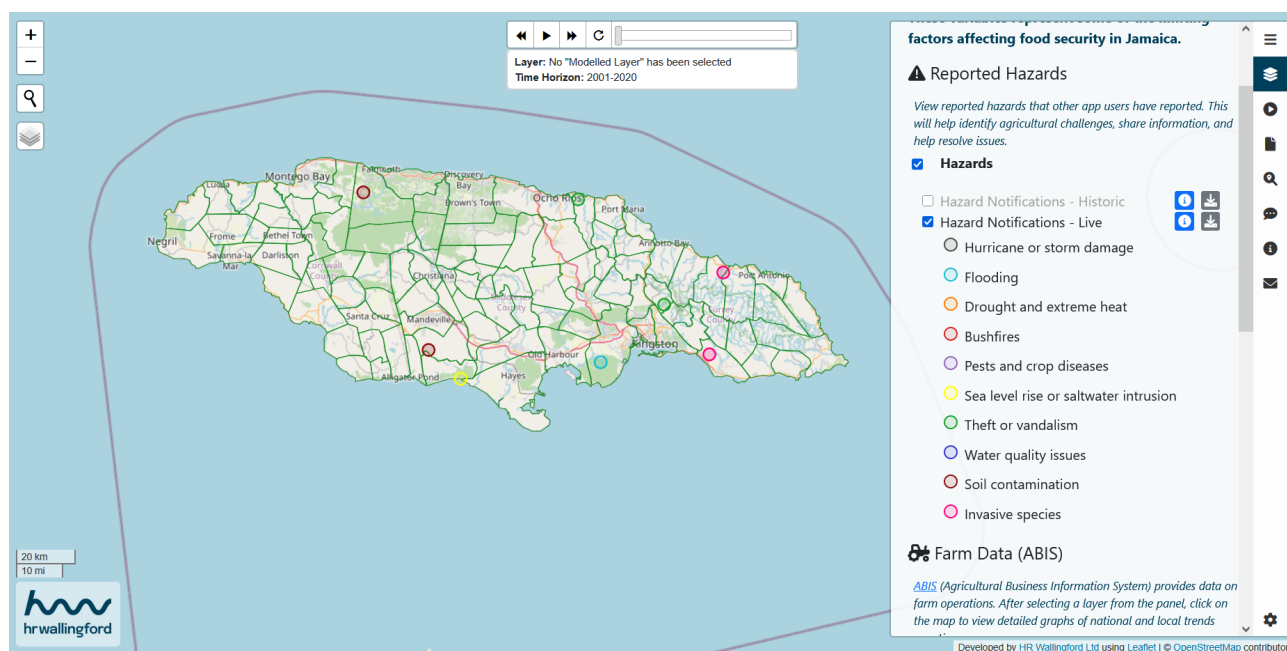


Figure 5.3: Screenshot showing the “Hazard Notifications – Live” layer “Layers” tab in the Jamaica Food Security & Climate Resilience Portal

Source: HR Wallingford

### 5.3 Edit a hazard

If the status of a reported hazard changes (e.g., it has been resolved), it’s important to update the record. It is possible to update any hazard, regardless of which user submitted the original report.

To edit an existing hazard:

- 1. Activate the Hazard Notifications Layer**  
Ensure the Hazards layer is active on the map
- 2. Select the Hazard**  
Click on the hazard you want to update. This will open the hazard details panel (see Figure 5.4)
- 3. Update the Information**  
Change the status and/or add a comment to reflect the current situation.  
If the hazard has been resolved, uncheck the “Active Hazard” box. This will move the entry to the “Hazard Notifications - Historic” section

**Top Tip!**

After reporting a hazard, don’t forget to check back and update its status if the situation changes—especially if the issue has been resolved. Keeping hazard records current helps maintain an accurate picture of agricultural risks across the island.

Even if you didn’t submit the original report, you can still update any hazard entry. This ensures that everyone using the platform has access to the most reliable and up-to-date information. Accurate records help decision-makers and responders focus their efforts where they’re needed most, and avoid wasting resources on issues that have already been addressed.

A quick update—like changing the status or adding a comment—can make a big difference in how effectively hazards are tracked and managed.

#### 4. Deleting a Hazard

If a hazard was submitted in error and needs to be removed entirely, please contact your system administrator. Only administrators have permission to delete hazard entries

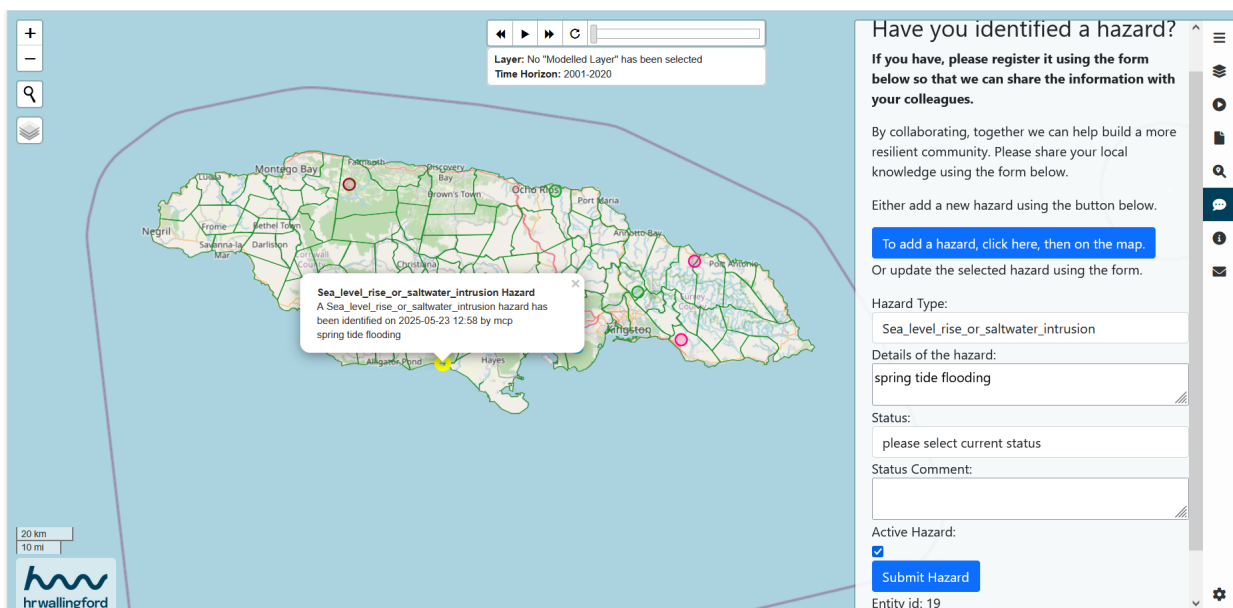


Figure 5.4: Screenshot showing how to edit a hazard information within the “Upload Hazard” tab in the Jamaica Food Security & Climate Resilience Portal

Source: HR Wallingford

## 6 Parish extension officer survey

### 6.1 About the survey

As part of the broader programme titled Enhancing Multi-Scalar Mapping and Research on Food Security Risk Due to the Impacts of Climate Change on Rural and Urban Environments in Jamaica, HR Wallingford conducted a survey targeting parish extension officers. The primary objective of this survey was to assess the current state of agriculture across the island. It focused on identifying the most significant crops and livestock varieties, as well as understanding the key challenges that farmers face in sustaining and improving their livelihoods.

The findings from this survey are available on the Jamaica Food Security & Climate Resilience Portal, under the section titled “Farmer Survey.” For more detailed information, please refer to the accompanying report: Summary of baseline survey results on agricultural productivity and food security (HR Wallingford, 2025).

Survey results are presented at the parish extension level. Figure 6.1 illustrates the geographic distribution of responses across Jamaica. While the limited response coverage constrains the comprehensiveness of the findings, the results are intended to serve as a valuable starting point for evaluating the effectiveness of current and future interventions.

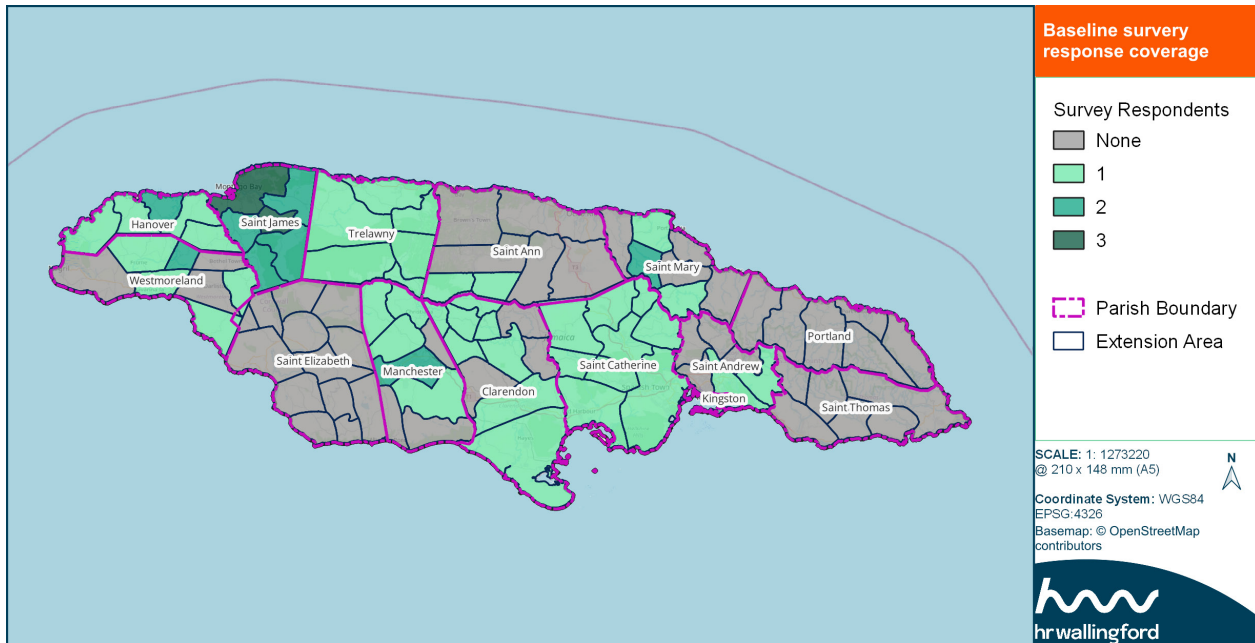


Figure 6.1: Baseline survey response coverage per extension area

## 7 Climate & Agriculture Simulator

### 7.1 About the model

The Climate & Agriculture Simulator consists of two main components: a **Crop Suitability Model** and a **Scenario Explorer**.

The Crop Suitability Model evaluates how climate conditions—specifically temperature and precipitation—affect the viability of 44 key crops grown in Jamaica. It uses crop-specific climate thresholds and climate model data to calculate a climate suitability score (0–100) for each crop, location, and month.

This score is based on the proportion of the growing season that falls within the optimal or absolute climate boundaries for each crop. The final suitability score at each location is determined by the lower of the two scores (temperature and precipitation), reflecting the most limiting factor. The model focuses solely on climate and does not account for other influences such as soil conditions, pests, or diseases.

The Scenario Explorer builds on the crop suitability data by incorporating scenario-specific information about the distribution of crops across different regions of Jamaica and the presence of any agricultural interventions (eg, irrigation) selected in a given scenario. For example, the Business-as-Usual (ABIS) scenario uses crop distribution patterns based on 2024 data, reflecting current agricultural practices. In contrast, the Uniform Cropping scenario assumes the same set of crops is cultivated uniformly across all regions, enabling comparison across different spatial and management assumptions.

An overview of the Climate & Agriculture Simulator workflow is presented in Figure 7.1.

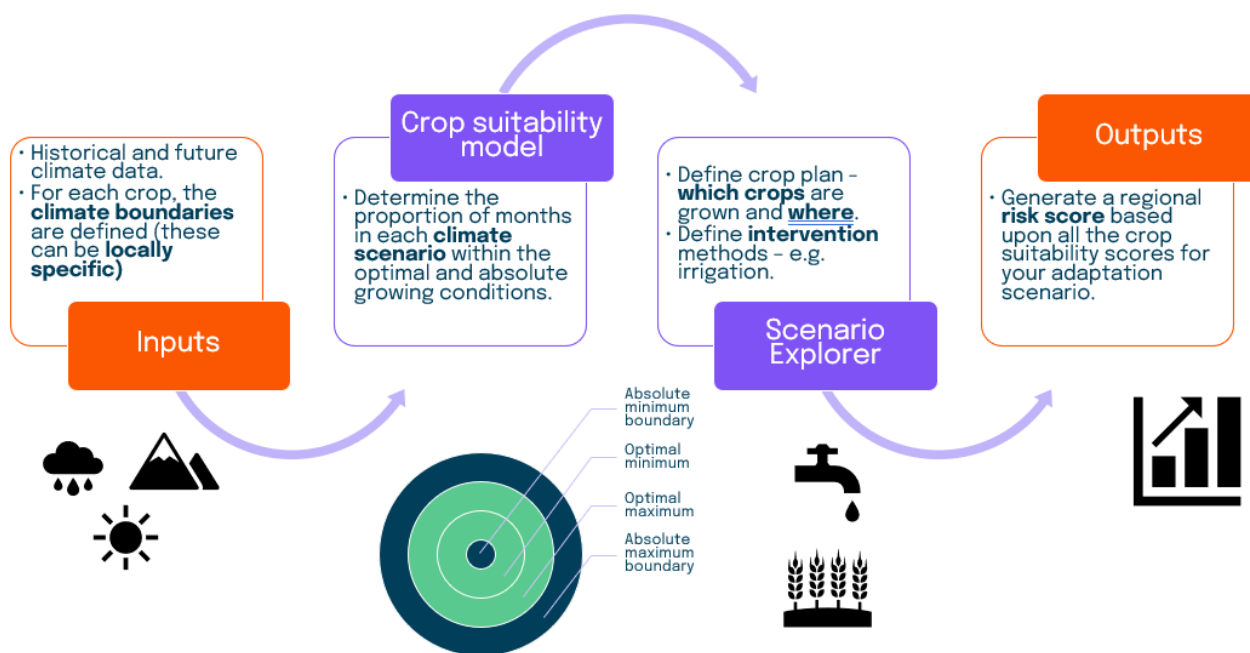


Figure 7.1: Conceptual diagram of the Climate & Agriculture Simulator workflow

Source: HR Wallingford

## 7.2 Understanding Climate Projections

Shared Socioeconomic Pathways (SSPs) describe possible global development paths based on factors such as population growth, economy, inequality, and energy use. These pathways inform climate models under the CMIP6 framework, helping researchers assess future climate impacts and adaptation strategies.

Different SSPs correspond to different CO<sub>2</sub> emissions scenarios:

- **SSP 1 ("Sustainability")** – A low emissions trajectory (forcing level: **2.6 W/m<sup>2</sup> by 2100**)
- **SSP 2 ("Middle-of-the-Road")** – A moderate development trajectory (forcing level: **4.5 W/m<sup>2</sup> by 2100**)
- **SSP 3 ("Regional rivalry")** – A development trajectory with rapid population increase but slow-economic growth and weak international collaboration development trajectory (forcing level: **7.0 W/m<sup>2</sup> by 2100**)
- **SSP 5 ("Fossil-fuelled development")** – A high-emissions scenario with rapid economic growth leading to **severe global warming** (forcing level: **8.5 W/m<sup>2</sup> by 2100**)

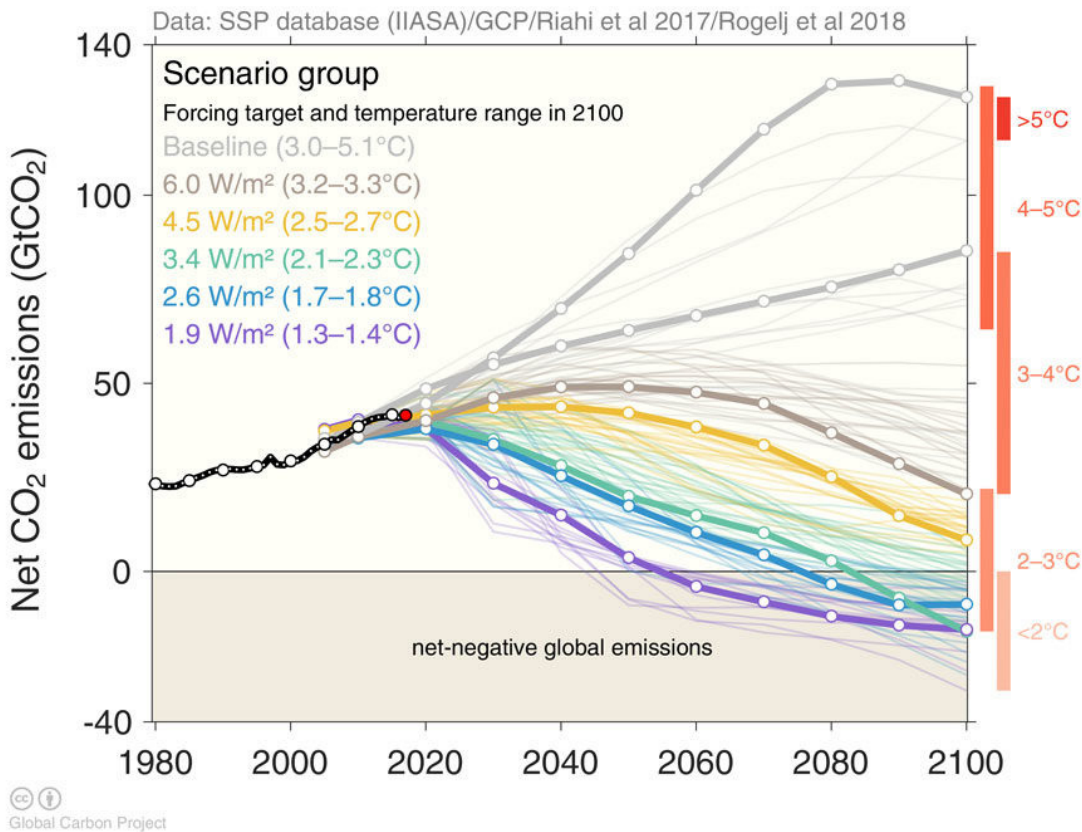


Figure 7.2: SSP emissions pathways showing the net CO<sub>2</sub> emissions and warming projections

Source: SSP database (IIASA)/GCP/Riahi et al., 2017, Rogelj et al., 2018

This project uses downscaled CMIP6 SSP climate projections from WorldClim. Future climate data is bias-corrected using WorldClim v2.1 as the baseline:

- **Time Periods:** Averages over 20-year periods (2021–2040, 2041–2060, 2061–2080, 2081–2100)
- **Resolution:** 2.5-minute spatial scale (~5 km for Jamaica)
- **Uncertainty:** The crop suitability model is computed for the CMIP6 climate model ensemble members. The median (P50) and quartiles (P25, P75) results are provided to indicate the CMIP6 range

### 7.3 Running a scenario

The Climate & Agricultural Simulator is accessed by selecting the tab on the portal menu panel (Figure 2.1).

The user must select an option for each of the following scenarios:

#### 1. SSP Climate Projections

- Select a future emissions projection (refer to Section 7.2)
- The simulator uses this information to determine the crop suitability for all crops in the given climate scenario. As described in Section 7.1, the

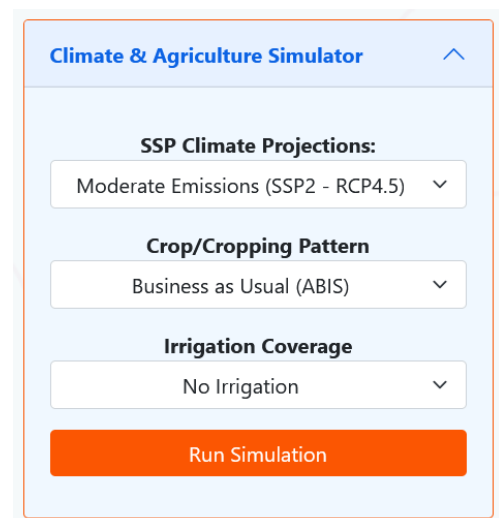


Figure 7.3: Climate & Agricultural Simulator menu panel

Source: HR Wallingford

score is based upon the proportion of the growing season in optimal or absolute rainfall and temperature conditions in the given climate scenario

- The corresponding future climate scenario temperature and rainfall data will also be loaded under the subheadings “Projected Rainfall” and “Projected Temperature)

## 2. Cropping pattern

- Here, the user has the option to select a cropping pattern. This can be for a specific crop (i.e. understanding the climate suitability of only one crop) or look at 2024 cropping patterns (the business as usual scenario determined from the ABIS database)
- If the selected cropping pattern is the Business as Usual scenario, the risk score is calculated as a weighted average of each crop’s climate suitability score based on the area planted in each parish extension
- If the selected cropping scenario is the Uniform Distribution, the risk score is calculated as the average climate suitability of the 44 most widespread crops in Jamaica

## 3. Irrigation Coverage

- Irrigation scenarios are incorporated into the model by modifying the influence of rainfall on the overall climate suitability score for each crop. The core assumption is that, where irrigation is available, low rainfall is no longer a limiting factor for crop growth. Instead, the model shifts focus to other climatic constraints—specifically, temperature and the risk of excessive rainfall
- When irrigation is applied, the component of the rainfall score that reflects low rainfall is removed, depending on the level of irrigation coverage. This means that crops are no longer penalized for insufficient rainfall, under the assumption that irrigation compensates for this deficit. However, the model still considers the impact of heavy rainfall—such as storms or flooding—which can negatively affect crop performance even when irrigation is present
- For example, in a scenario where 100% irrigation coverage is assumed, the model omits the low rainfall component entirely. The rainfall suitability score is then based solely on the heavy rainfall component. The overall climate suitability score for the crop is determined by whichever is lower: the temperature score or the adjusted rainfall score. This ensures that the model still reflects potential climate-related limitations, even when irrigation is available
- Dry season irrigation (works by removing the low season penalty in December to April)
- It is important to note that this method provides a simplified representation of irrigation impacts. It is intended as a high-level planning tool to identify areas where irrigation could be most beneficial. The model does not account for localized drainage conditions, small-scale irrigation systems, or variations in irrigation efficiency. As such, while useful for strategic decision-making, it should be complemented with more detailed assessments for site-specific planning

## 7.4 Interpreting the results

The output of the Climate & Agriculture Simulator is a **Regional Agricultural Suitability** score, ranging from 0-100. A score is assigned to each parish extension. This can be interpreted as a risk score with the following implications.

Table 7.1: Climate & Agriculture Simulator Risk Score Analysis

Score Range	Interpretation	Implications
0-20	Very High Risk	Crops are highly likely to fail under projected conditions.
21-40	High Risk	Crop yields are expected to be poor and unreliable.

Score Range	Interpretation	Implications
41-60	Moderate Risk	Some crops may perform adequately, but variability is high.
61-80	Low Risk	Most crops are likely to grow well with minimal stress.
81-100	Very Low Risk	Optimal conditions for crop growth; high yield potential.

This provides insight into

- Which crops can grow well (and where) under current and future climate conditions
- The limiting factors inhibiting crop growth
- Which crops may require interventions (eg, irrigation, shade)
- Regional crop variation across Jamaica

We recommend exploring other data layers in this web tool, such as farmer demographics and farm tenure, to better understand non-climatic limiting factors affecting agricultural production.

It is also important to note that the risk score is intended to be a high level score to guide agricultural strategies. It does not provide insight into short term planting strategies due to the inherent uncertainty of the climate projections.

**Top Tip!**

Explore the map in the Agriculture & Climate Simulator to understand how the agriculture climate suitability varies spatially and through time.

Explore different scenarios to see how changing the available interventions can reduce the risk score.

After loading the Agricultural Suitability Score, users can click on a parish extension to view a time-series graph. This graph displays how the risk score changes over time and across different SSP climate scenarios for the selected location.

Figure 7.4 provides an example for Lionel Town, showing:

- Historical Trends (2000–2020): The score remains in the Very Low Risk category, but there is noticeable year-to-year variation
- Future Projections: The graph illustrates increasing uncertainty as projections extend further into the future. Each SSP scenario includes:
  - A solid line representing the median (50th percentile) of CMIP6 climate model projections
  - Shaded bands showing the interquartile range (25th–75th percentile), which reflect the spread of possible outcomes (see Section 7.2 for more details)
- This example also highlights how more severe emissions scenarios tend to reduce agricultural suitability—though this trend may vary depending on the crop

The graph is interactive, allowing users to:

- Zoom in and out for detailed views
- Toggle visibility of individual SSP projections and uncertainty bands for clarity

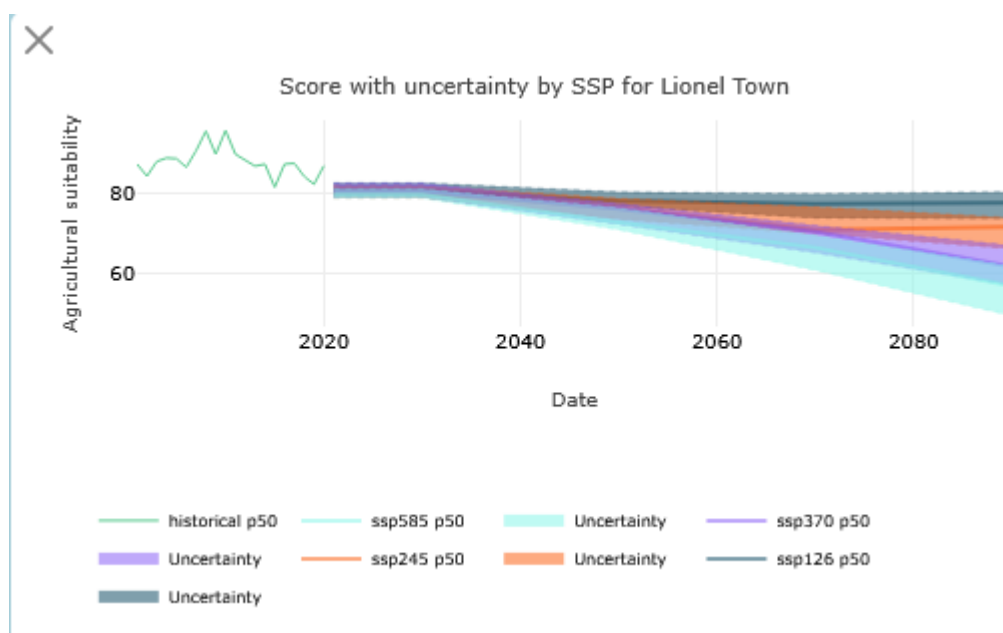


Figure 7.4: Agricultural Suitability Score timeseries graph example for Lionel Town

Source: HR Wallingford

## 7.5 Limitations

- **Monthly climate data** is used because daily data at the necessary spatial resolution is unavailable for Jamaica. This means extreme daily events (eg, heatwaves, heavy rainfall) are **smoothed out**, leading to a **conservative estimate** of risks
- **Climate projections have inherent uncertainties**, as future conditions depend on **complex socio-economic and environmental factors**
- The model does **not** account for variations in **local topography, soil fertility, and land use**

## 8 Disclaimers

### 1. Informational use only

The Jamaica Food Security & Climate Resilience Portal is intended for informational and planning purposes only. While every effort has been made to ensure the accuracy of the data and analyses presented, the portal does not guarantee the completeness, reliability, or suitability of the information for any specific purpose

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### 4. Non-primary data repository

The portal is not intended to serve as the primary storage location for institutional or operational datasets. It is a platform for sharing selected, standardized data with other users and stakeholders

### 5. Subject to change

The portal and its contents are subject to updates and revisions. Users are encouraged to consult with relevant authorities or data providers for the most current information

### 6. External links and third-party content

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### 7. User conduct

Users are expected to use the portal responsibly and in accordance with applicable laws and data-sharing agreements. Misuse of the portal or its data may result in restricted access

## 9 References

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