

# GREENCAP™

## Sustainable Lending Platform



**Fostering Sustainable Lending**  
**Ensuring Climate Change Resiliency**

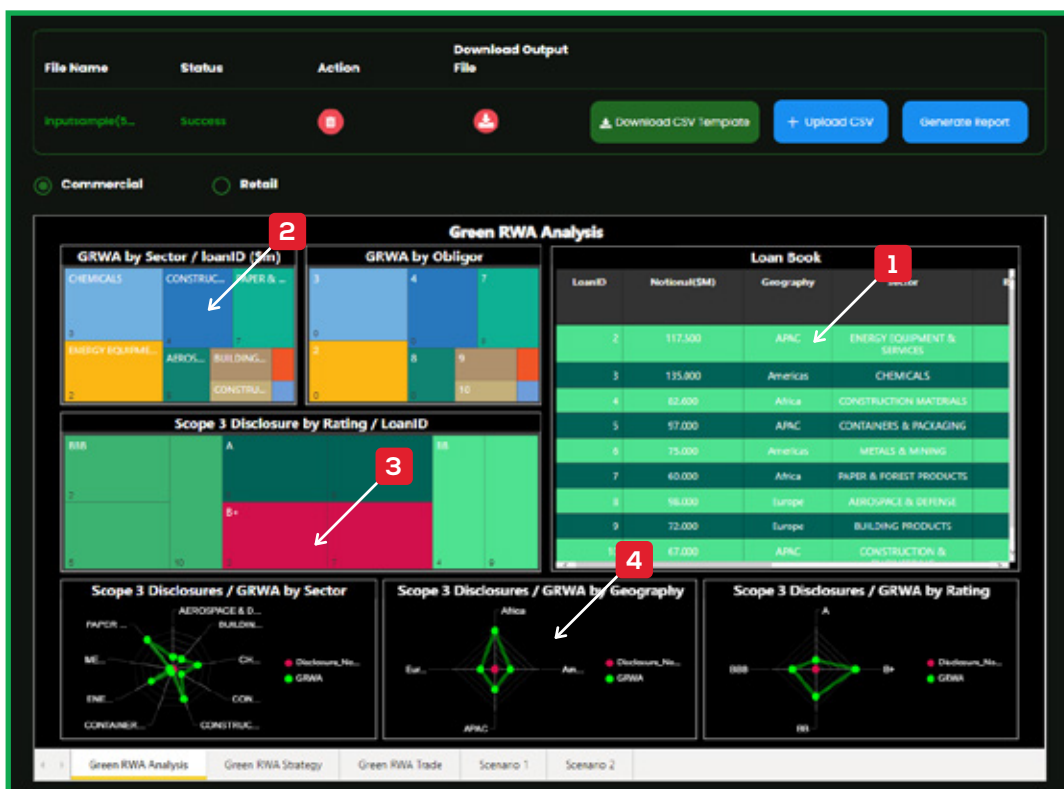




## GREENCAP™ is a turnkey solution, designed to address five key needs of banks for sustainable lending and risk management

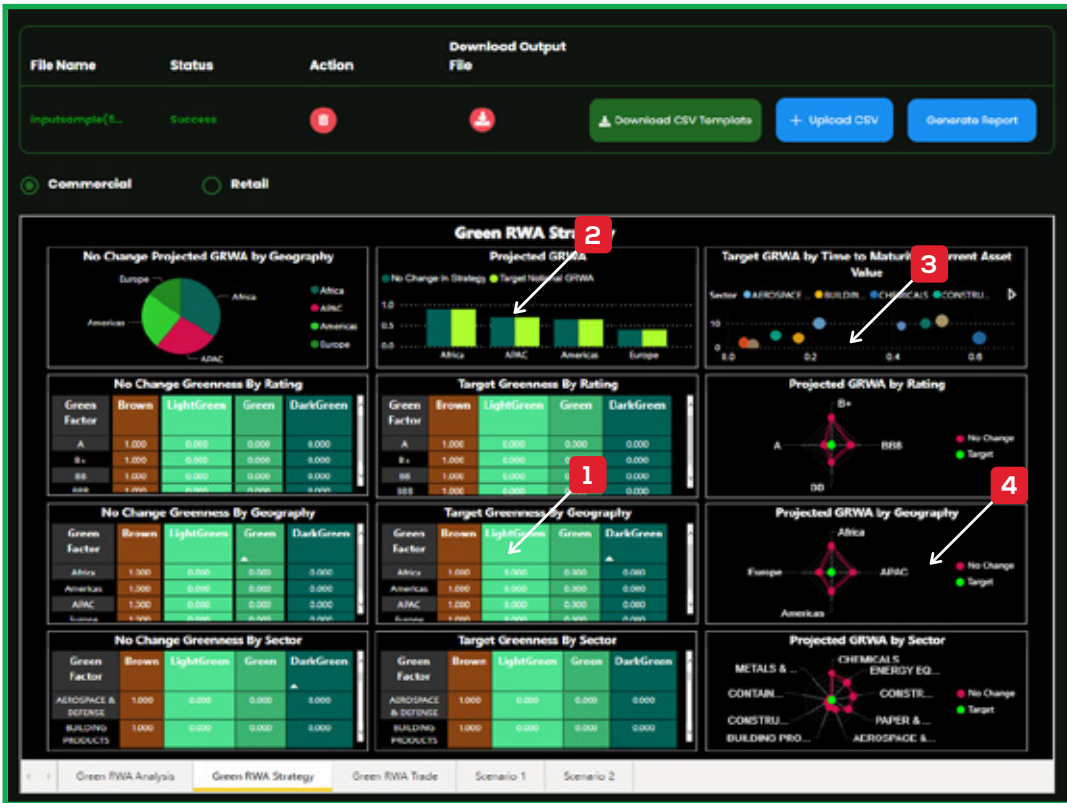
- Create multiple meaningful climate scenarios for assessing and projecting loan portfolio risks.
- Analyze existing loan portfolios to assess changing risk metrics against transitional and physical climate change.
- Price loans with incorporation of "green" risk factors.
- Intuitive, comprehensive, and seamless reporting for internal and external stakeholders.

### Commercial Loan Portfolio Report 1



- 1 Balance Sheet details, including green risk value.
- 2 Graphical breakdown of portfolio by green risk.
- 3 Graphical breakdown of portfolio by scope 3 disclosures.
- 4 Intuitive comparison between green financial risk and scope 3 disclosures.

### Commercial Loan Portfolio Report 2



- 1 Target greenness by geography, industry and rating.
- 2 Graphical breakdown of portfolio vs target greenness.
- 3 Target greenness by time to maturity.
- 4 Target limit monitoring across sectors.

### Commercial Loan Portfolio Report 3



- 1 New deal impact on specific green targets and limits.
- 2 Graphical breakdown of new deal effect on targets, before and after.
- 3 Ability to add new loans or remove existing packets of loans.
- 4 Easy navigation around GreenCap™ system outputs.

# Meaningful Climate Scenarios

Climate change data is evolving at a rapid pace with global bodies such as Intergovernmental Panel on Climate Change (IPCC) creating

pathways for arresting climate change. These pathways have been recreated and costed by the NGFS, along with regional government policy plans.

**GREENCAP™ enables banks to represent multiple climate pathways segregated by:**

- Impact and losses by country and targeted industries.
- Associated losses from upstream and downstream supply chains for specific/targeted industries.

## Scenario Creation Dashboard

The dashboard is divided into two main sections: 'Scenario' and 'Parameters'.

**Scenario Table:**

Scenario Name	Updated On	Action
Base	10/05/2022 11:53:01	[Icons: Check, Stop, Play, Refresh]
Scenario 1	09/05/2022 09:58:43	[Icons: Check, Stop, Play, Refresh]
Scenario 2	09/05/2022 09:03:25	[Icons: Check, Stop, Play, Refresh]

**Parameters Section:**

Global Parameter (Selected):

- Green Collateral: No
- Physical Risk (Current): -0.9%
- Transition Risk (after 10 years): -3.53%
- Downturn (After 10 years): -6.84%
- Loss Given Default: 70%
- Transition Scaler: Min Value 0, Max Value 0.12

Regional Parameter:

- Economic Risk (Current): -3.46%
- Physical Risk (after 10 years): -1.7%
- Epsilon (Non-Systematic): 0
- Downturn Green (Current): -6.63%
- Balancesheet Costs: 0.21%
- Physical Scaler: Min Value 0, Max Value 0.12

Global Parameter (Unselected):

- Economic Risk (after 10 years): -3.48%
- Transition Risk (Current): -0.98%
- Downturn (Current): -6.99%
- Downturn Green (After 10 year): -6.53%
- Asset Value Correlation: 1
- Economic Scaler: Min Value 0.12, Max Value 0.24

- 1 Economic impacts of Transition risk.
- 2 Economic impacts of physical risk.
- 3 Specific geographic settings within scenarios.
- 4 Multiple scenarios available to the user.

Supply chain impacts are calculated within GREENCAP™ by correlating non-targeted and targeted industry returns.



# Loan Portfolio Analysis

Transitional plans from the IPCC and governments around the world will impact most sectors of banks' loan portfolios. Once scenarios

that reflect real world plans have been designed in GREENCAP™, they are applied to commercial and retail sectors of the respective loan portfolios.

**GREENCAP™ analyzes each loan individually from the following perspectives:**

- Transitional impact on the sector.
- Specific climate adaptations made by each obligor to mitigate transition impact of climate change.
- Relative exposure of the obligor to physical climate impact.

## Loan Book Editing Dashboard

The screenshot displays the 'Loan Book Data' dashboard with the following fields and values:

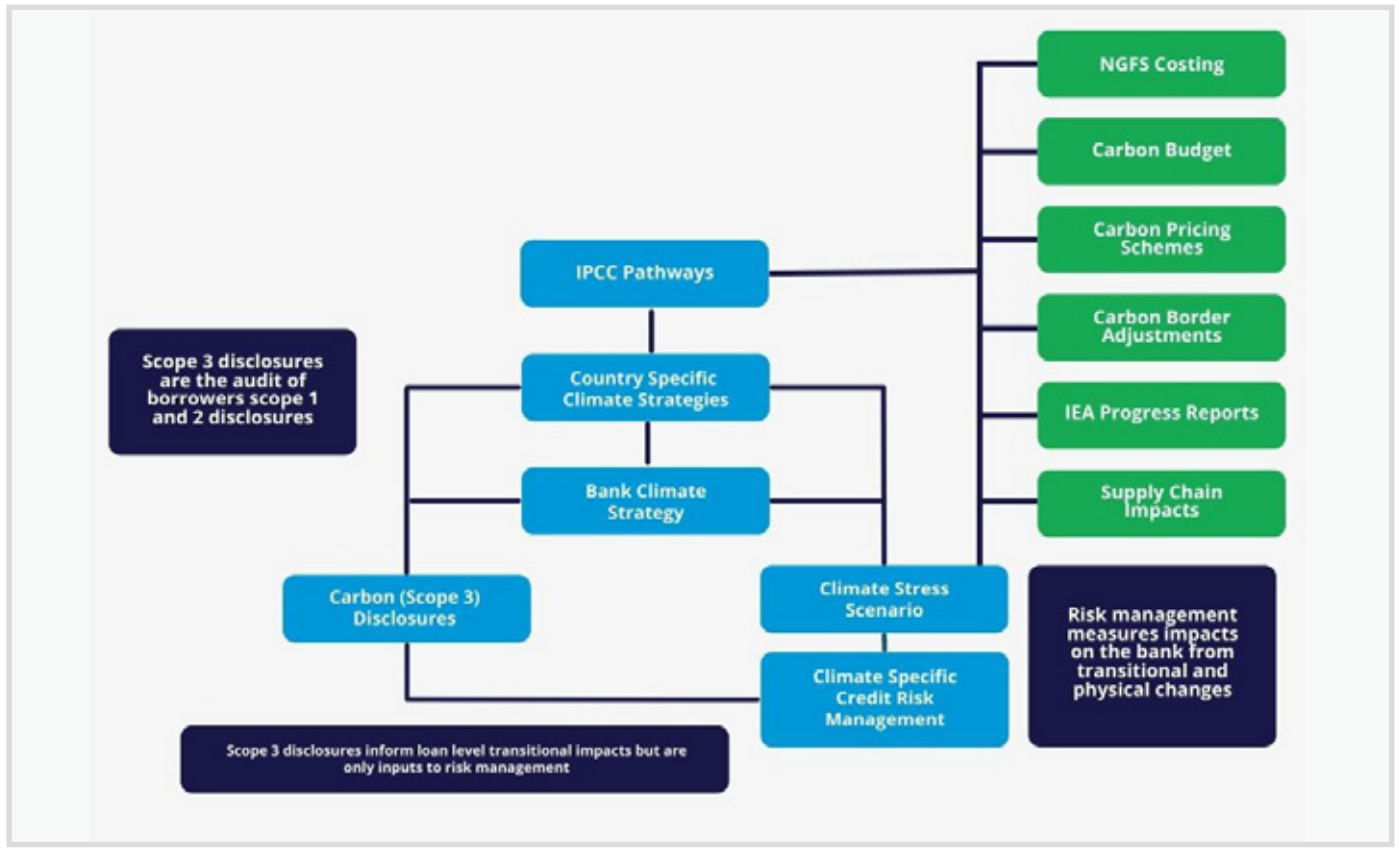
- Loan ID:** 1
- Loan Type:** Retail
- Credit Score/Rating:** 300
- Sector:** AG RE Farmland
- Geography:** Europe
- Notional (Million \$):** 97.0
- Disclosure:** 85,000
- Time to Maturity:** 8.00
- Return of held assets (HCA):** 60.0
- Return on Equity (ROE):** 45.0
- Current Profitability:** 82.0
- Interest:** 0.85
- Amortized loan:** Y
- Loan Type Funding:** Amortized
- Default Value:** (empty)
- Green Collateral:** No
- Economic Risk (Current):** -3.43%
- Economic Risk (after 10 years):** -3.45%
- Physical Risk (Current):** -0.9%
- Physical Risk (after 10 years):** -1.7%
- Transition Risk (Current):** -0.88%
- Transition Risk (after 10 years):** -3.53%
- Epsilon (Non-Systematic):** 0
- Loss Given Default:** 78.8%
- Downturn (Current):** -6.99%
- Downturn (After 10 years):** -3.84%
- Downturn Green (Current):** -6.52%
- Downturn Green (After 10 years):** -6.53%
- Riskiness Cost:** 0.1%
- Asset Value Correction:** 1
- Use Loan level value:** (radio button)
- Use Green Cap. Matrix (Sector) value:** (radio button)
- Scorecard value:** (radio button)
- Physical Risk (Correlation):** 1
- Transition Risk (Correlation):** 1
- Hazard Zone:** Hazard Zone 5
- Adaptation:** Adaptation 1, Adaptation 3, Adaptation 2 (Total 100% : 30%)
- Adaptation List:**
  - Adaptation 1
  - Adaptation 2
  - Adaptation 3
  - Adaptation 4
  - Adaptation 5

- 1 Loan details taken from the portfolio.
- 2 Economic settings taken from the scenarios.
- 3 Hazard zones attributed for local 'physical risk'.
- 4 Adaptations to reduce the impact of 'transition risk'.

**GREENCAP™ quantifies change in risk capital that can be expected by loan and sector. This is identified and highlighted in the system, including all contributing scenario details.**

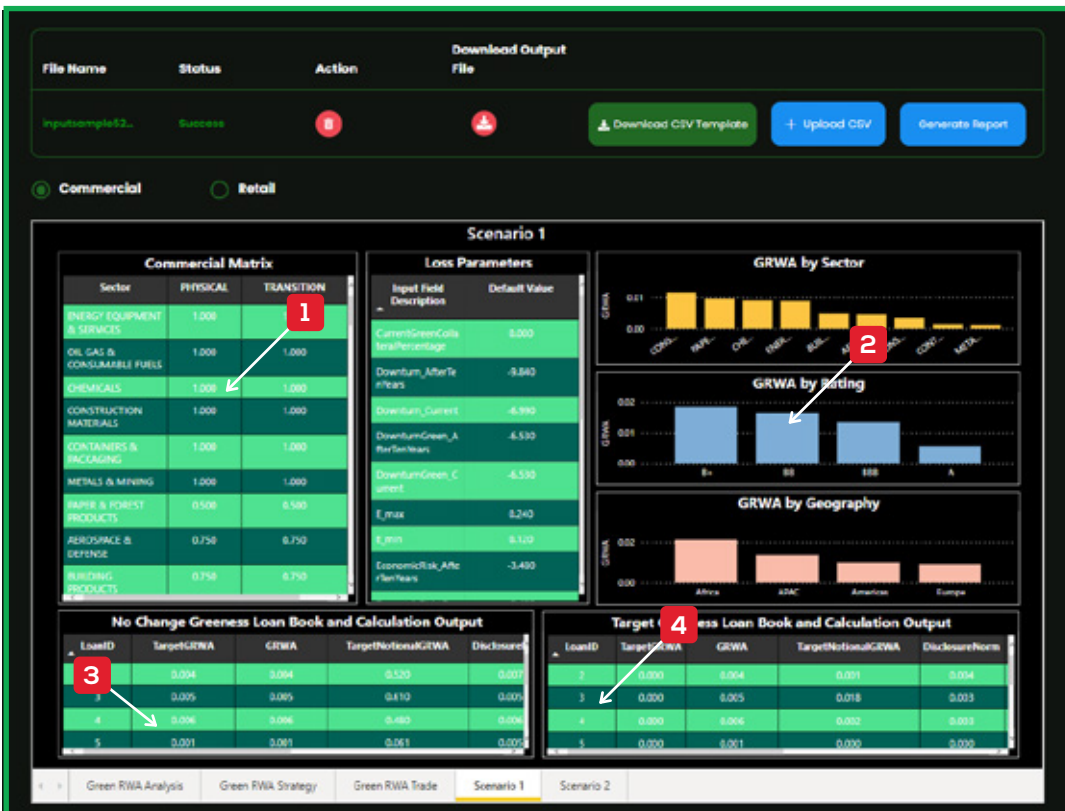
# Potential Climate Scenarios

## Scenarios Within Climate Risk Management



## Sample Scenario

### Scenario Report 1



- 1 Scenario details shown with results.
- 2 Loan portfolio, shown with green impacts.
- 3 Graphical breakdown of impacts of the scenario.
- 4 Evaluation of green targets, under the specific scenario.

# Climate Strategy

Specific climate mitigation strategies employed by banks are complex and diverse. Banks strategies typically involve CO2 emissions and equivalent auditing with specific goals of

reaching funding and other targets by preset dates. Banks strategies do not typically reflect the risk of the transition itself and its consequential costs.

**GREENCAP™ allows a bank's climate strategy to be specified into the system in terms of its 'greenness' by sector and associated differences across future time periods.**

## Target Modification Dashboard

**Target Greenness by Credit Score/Rating** ← 1

Green Factor	Light Green	Green	Dark Green	Brown
A	0	0	0.1	0.9
BBB	0	0	0	1
BB	0	0	0	1
B+	0	0	0	1
B	0	0	0	1

**Target Greenness by Geography** ← 2

Green Factor	Light Green	Green	Dark Green	Brown
Europe	0	0	0	1
APAC	0	0	0	1
Americas	0	0	0	1
Africa	0	0	0	1

**Target Greenness by Commercial Sector** ← 3

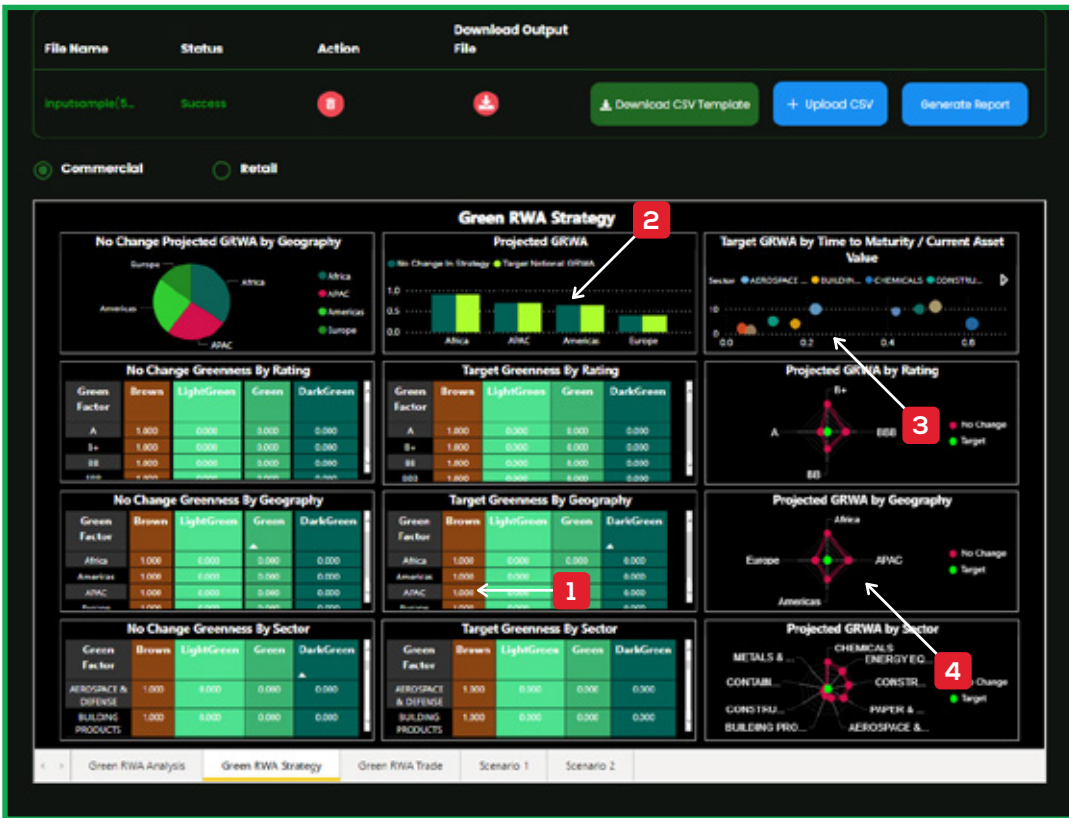
Green Factor	Light Green	Green	Dark Green	Brown
ENERGY EQUIPMENT & SERVICES	0	0	0	1
CHEMICALS	0	0	0	1
CONSTRUCTION MATERIALS	0	0	0	1
CONTAINERS & PACKAGING	0	0	0	1
METALS & MINING	0	0	0	1
PAPER & FOREST PRODUCTS	0	0	0	1
AEROSPACE & DEFENSE	0	0	0	1
BUILDING PRODUCTS	0	0	0	1
CONSTRUCTION & ENGINEERING	0	0	0	1

**Target Greenness by Retail Sector** ← 4

Green Factor	Light Green	Green	Dark Green	Brown
AG RI Farmland	0	0	0	1

- 1 Green impact targets set by current credit rating.
- 2 Green impact targets set by geographic region.
- 3 Green impact targets set by commercial sector.
- 4 Green impact targets set by retail sector.

### Green RWA Strategy Report



- 1 Target greenness by geography, industry and rating.
- 2 Graphical breakdown of portfolio vs target greenness.
- 3 Target greenness by time to maturity.
- 4 Target limit monitoring across sectors.

GRENCAP™ identifies climate risks and targets by industry, borrower, and time to maturity. Through the system banks can clearly and predictably identify the most effective paths to reaching their targets.

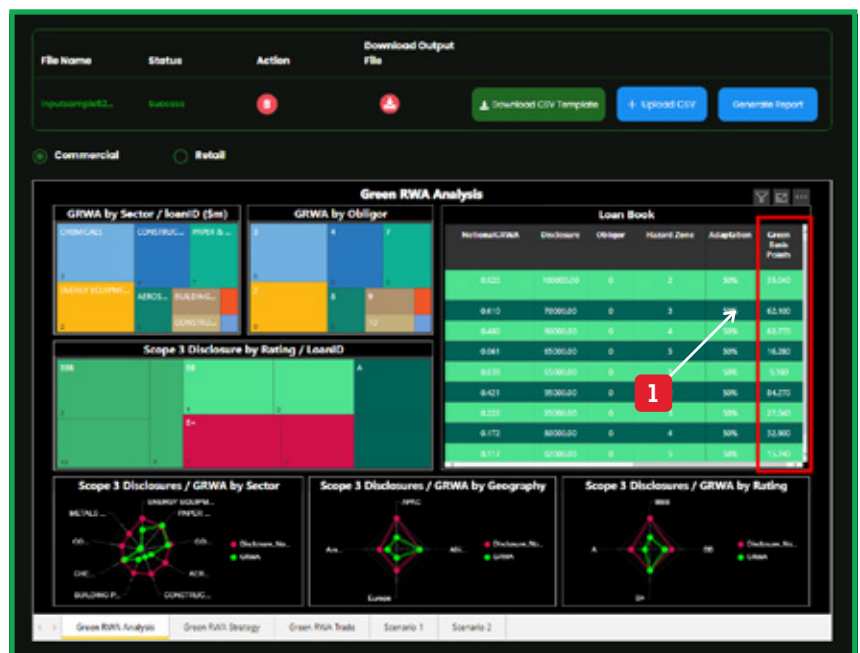
## Loan Pricing

Climate risk creates incremental capital requirements for the bank. The consequent capital and funding increases are converted into basis-point changes in loan spreads.

GreenCap™ provides comprehensive pricing models that compute spread changes at loan level scenarios.

- 1 Additional risk capital requirements are converted into a spread on each loan.

### Loan Pricing Basis Point Report



GRENCAP™ enables banks' to price new loans, reprice existing ones and portfolios to incorporate climate risks and quantify establish 'green' premiums for loans that support their sustainability goals.

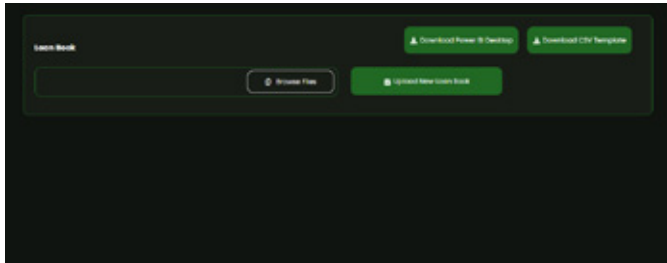


# Intuitive System Design

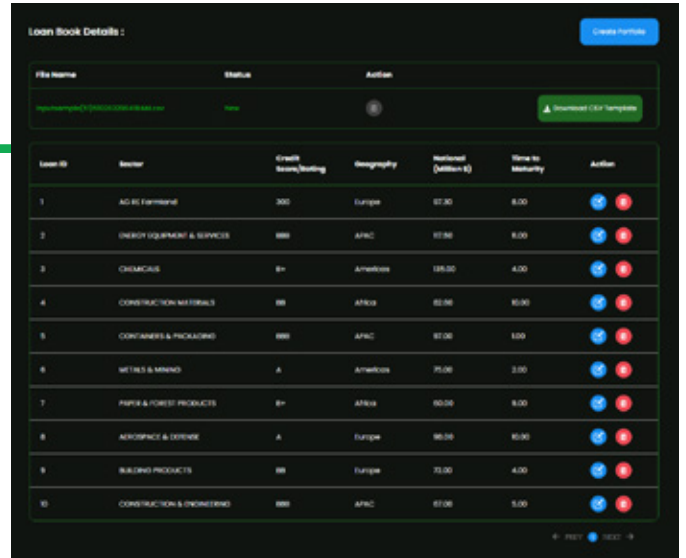
GreenCap™ is designed from the ground up as a secure cloud-based turnkey solution. The path from loanbook through climate scenarios to full

climate related risk analysis is mapped in Power BI dashboards for intuitive and best-in-class user experience.

## 1. Upload CSV File



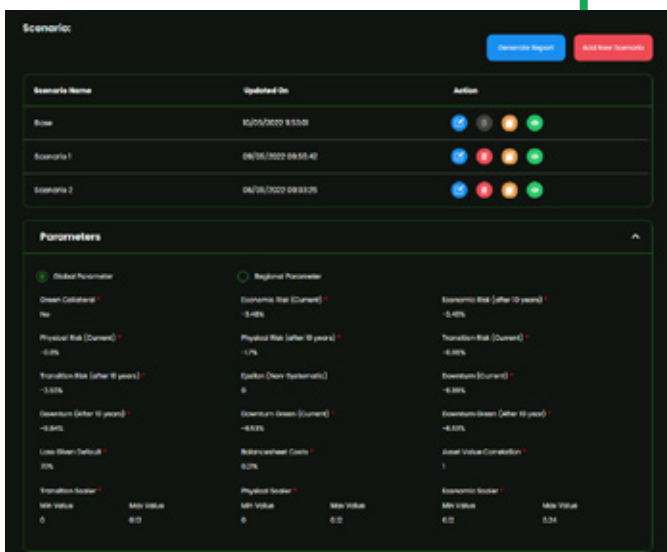
## 2. Loan Book Dashboard



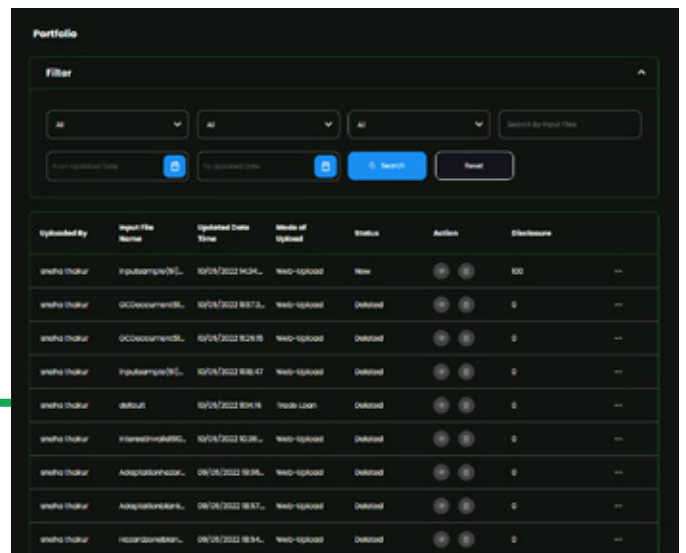
## 3. Target Change Dashboard



## 4. Scenario Dashboard



## 5. Portfolio Dashboard



## 6. Settings Dashboard



# GreenCap™ Services

We have built a system to assist banks in accurately and systematically classify climate risks and apply them to their loan portfolios along potential climate scenarios.

- › Works with banks on methodologies to build climate scenarios.
- › Conducts scenario design workshops to continually align and enhance system design and workflows.

GREENCAP™ has capacity to represent NGFS and local climate pathways.

Banks can add their own scenarios or modify those that are already populated. Our team also

- › Builds additional parameters as requirements evolve.



**GreenCap™ is committed to creating a global platform for financing sustainability over the foreseeable future.**



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