

STRATEGIES TO ADDRESS CLIMATE RISKS AND CAPTURE OPPORTUNITIES

Executive summary for agricultural finance institutions



Environmental
Defense
Fund

Deloitte.

EXECUTIVE SUMMARY



In 2022, Environmental Defense Fund and Deloitte conducted a global [survey of 167 agricultural finance institutions on risks and opportunities associated with climate change](#). The survey found that 87% of agricultural finance institutions expect climate change to pose a material risk to their business, including negative impacts to the financial situation of their farmer clients (56%). Fifty-nine percent of respondents expressed that climate change will also present opportunities for their institutions. While the vast majority of agricultural finance institutions expect climate change to impact their businesses and clients, only a quarter of responding institutions stated that they currently consider climate change impacts significantly in their decision-making.

Some agricultural finance institutions have taken steps to prepare for climate change impacts by gathering climate-related data, creating climate-related roles and responsibilities within their management structure, setting climate change goals, and partnering with external organizations on climate risk topics. But many agricultural finance institutions face challenges preventing them from taking further action to manage climate risks and opportunities, including a need for more significant resources such as knowledge on climate topics, data to support climate risk assessment and the development of financial products, and educational opportunities for employees and leadership.

This guide provides agricultural finance institutions with strategies to address climate risks and capture climate opportunities

This guide was informed by the [EDF and Deloitte survey](#) of agricultural finance institutions and interviews with agricultural finance providers of different sizes that are approaching the topics of climate risk and opportunity in various ways. This guide aims to provide mid-level and senior-level agricultural finance professionals with an introductory understanding of the risks to agriculture stemming from climate change, the current and potential future effects of those risks on agricultural finance institutions, and a range of approaches for managing and responding to these risks. The strategies outlined in this guide will help agricultural finance institutions navigate the challenges posed by climate change and support their farmer borrowers to sustainably produce food and other agricultural products into the future.

Five strategies to integrate climate risk management at agricultural finance institutions

In particular, this guide is a useful resource for risk, lending and sustainability teams within commercial banks, agricultural banks, financial cooperatives, development banks and government-sponsored financial institutions.

The following five strategies combine to form a holistic approach to understanding and managing climate risk in agricultural finance. They were identified from existing financial sector pre-competitive guidance and publicly disclosed climate strategies from leading banks, governments and climate-modeling companies.



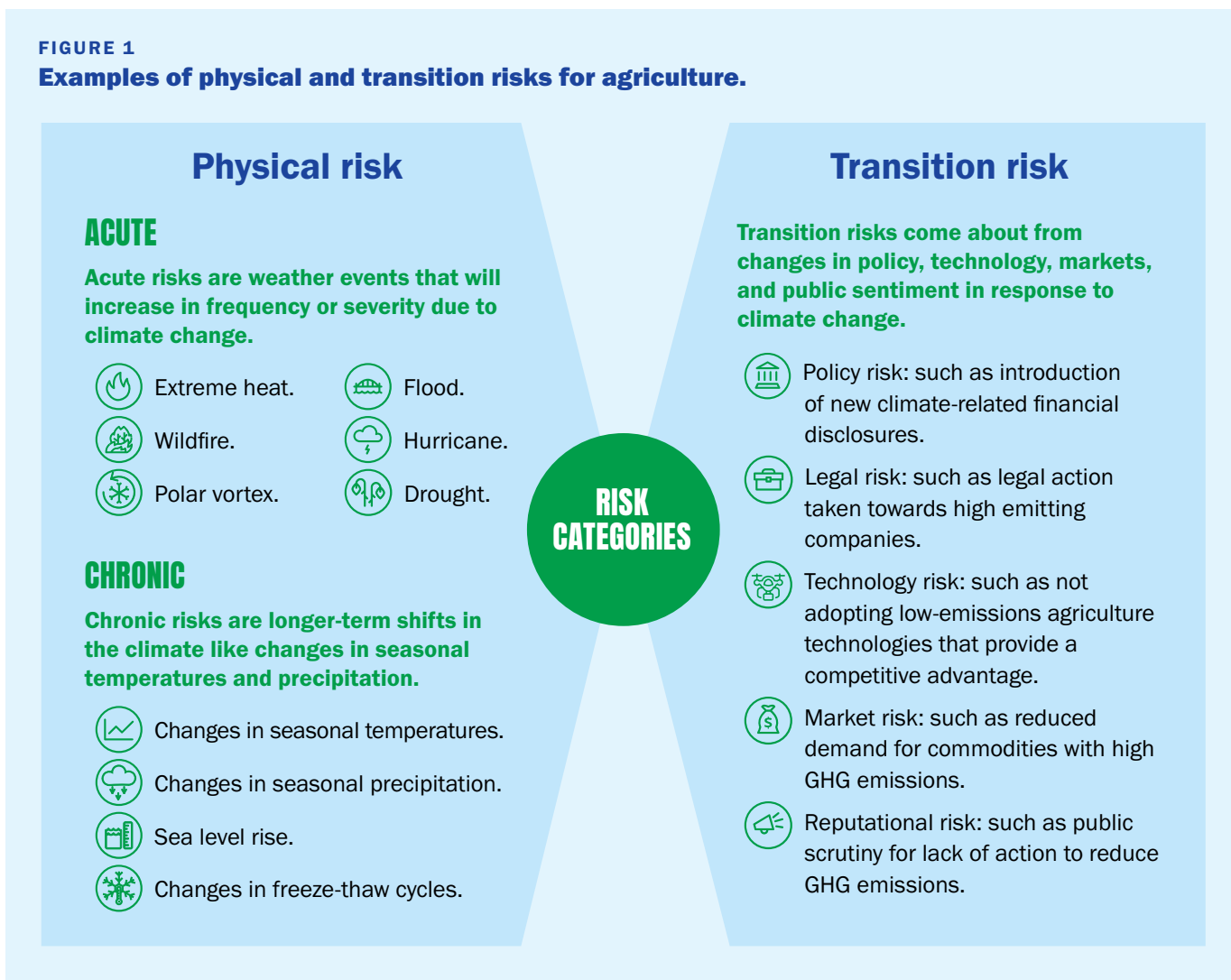
1 Understand the business risks presented by climate change.

The first step to managing climate-related risks is understanding how climate change can impact farmer borrowers and business risks at the finance institution. Climate risk is the vulnerability and exposure to extreme and non-extreme weather, climate, and policy and market events caused by climate change or in response to mitigating climate change.¹

Climate change risks can manifest through physical risks or transition risks. Physical risks are the result of the physical effects of climate change, such as changes in temperature, precipitation patterns, extreme weather events and changes in water availability. Transition risks arise when society takes action to mitigate or adapt to climate change and shift to a low-carbon economy, including risks from policy, market and technology changes.



FIGURE 1
Examples of physical and transition risks for agriculture.



The physical and transition impacts from climate change can lead to financial risks in agricultural loan portfolios through traditional risk categories. Physical and transition impacts of climate change can increase the probability of default and loss given default in agricultural finance institutions' portfolios. Climate change can create market

risks, such as changes in consumer preference and price volatility for agricultural goods. It can also present policy risks as governments pursue climate policies that could impact agriculture. Agricultural finance institutions can also face liquidity, operational, insurance and reputational risks associated with climate change.

2 Measure and evaluate climate risks in the portfolio.

Agricultural finance institutions should assess climate risks to their agricultural portfolios and integrate that assessment into their Enterprise Risk Management (ERM) framework. Assessing climate risks can help inform portfolio allocation and planning and support borrowers to reduce, adapt to and manage climate risks.

A common approach to assessing climate risks at finance institutions is called “climate change scenario analysis” or “climate risk assessment.” Climate risk assessment is an exercise that explores “what if” questions by modeling changes in climate conditions, climate policy, technology

adoption and GHG mitigation. It allows finance institutions to explore how different future conditions could impact their borrowers and their loan portfolios. The results of climate change risk assessment exercises can inform finance institutions’ risk ratings, client engagement and financial product offerings.

Agricultural finance institutions can complete a climate risk assessment using steps in Figure 2 to integrate climate risks into their existing risk identification and management structures.

FIGURE 2
Steps to complete a climate risk assessment.

- 1 Heat map climate risks to understand and rank the impact of specific climate and weather risks on agricultural lending business.
- 2 Choose a sample of borrowers to conduct a climate risk assessment and gather baseline data about location, production and financial performance.
- 3 Choose a climate model to project the changing probability and severity of climate risks based on how much warming occurs across a defined length of time.
- 4 Input projected climate outcomes into models for crop and livestock productivity to better predict borrowers’ likely yields, costs and production practice changes in the face of a changing climate.
- 5 Use projected productivity and yield changes to better understand the financial performance of individual farms, credit risk ratings and probabilities of default. After that, extrapolate those findings across an entire portfolio.

3 Establish climate risk controls.

Climate risk controls are the overarching structure of rules and processes that a company puts in place to effectively manage the risks and opportunities presented by climate change. Integrating the topic of climate risk into the existing ERM framework and executive-level oversight can help agricultural finance institutions strategically understand, measure and manage climate risks.

Agricultural finance institutions can take three steps to effectively implement climate risk controls and enable the execution of critical climate risk management processes.

- 1 Identify the processes and responsibilities required to manage climate risks.
- 2 Assign the responsibilities to a role or department. (See figure 3 for an example of this.)
- 3 Document results and set up a corresponding reporting structure.

Agricultural finance institutions can integrate climate-related responsibilities into preexisting governance teams and roles or create new ones.

FIGURE 3
Demonstration of how climate change can be added to existing layers of management.



4 Engage customers on the topic of climate change.

Agricultural finance institutions can proactively engage their agricultural customers on climate topics to support them in managing climate risks and opportunities. By engaging customers, relationship management teams will better understand their customers' awareness of climate risks, their specific needs related to climate risk, localized information about physical climate risks, and their level of climate adaptation.

Client engagement can help client relationship managers or loan officers better provide their clients with appropriate financial products and services to help farms and ranches

invest in and adopt climate-resilient practices and technologies.

Agricultural finance institutions can begin by preparing relationship managers and loan officers through climate risk trainings and workshops. They can also make climate risk resources available to relationship managers, including talking points for client engagement. After completing training and developing engagement materials, agricultural finance institutions can identify customers to engage and develop an engagement plan.

5 Develop new offerings to address risks and opportunities.

Agricultural finance institutions can support clients' changing financial needs by offering new or modified financial products that help their agricultural clients manage climate risks or take advantage of climate-related opportunities. Such products may improve the agricultural clients' and portfolios' credit risk profiles, support farmers to transition to climate-smart farming practices, reduce GHG emissions in the agricultural portfolio, and help producers participate in emerging markets for climate-smart products.

Many agricultural finance institutions are already financing farmers who have adopted climate-smart practices and technologies. But some climate risks will require agricultural finance institutions to act more proactively to support more of their clients to adapt to climate change. The approach to developing new or modified financial products should build from the finance institutions' understanding of climate risks and opportunities faced by farmers in their area, the types of practices, technologies or production shifts that can mitigate risks and capture opportunities, and any financial barriers to greater adoption of those solutions. Once an agricultural finance institution has identified the need and demand for a new or modified financial product, there are multiple models they can consider pursuing, these include:

- 1 Green loans:** Green loans are similar to standard loans except for the use of proceeds must be used to fund sustainability projects.
- 2 Sustainability-linked loans:** Sustainability-linked loans are similar to green loans, except they incentivize the borrower to meet sustainability performance targets (i.e., reduction of GHG emissions or energy efficiency improvement) over the loan term. Once the targets are met, the loans' interest rates are ratcheted down.

- 3 Green bonds:** Green bonds are similar to green loans in that funds must be used for sustainable projects. However, green bonds are typically larger in size, have associated transaction costs, and may be privately placed or listed on an exchange.

- 4 Transition loans:** A transition loan has an adjusted repayment structure to support the farmer through adopting new agricultural practices. Some lenders offer transition loans to help farmers work toward organic certification. A similar model can be used to support farmers' transition to climate-smart agriculture practices.

Turn risks into opportunities

The physical and transition impacts of climate change on the agriculture and food systems industry present various risks and opportunities for agricultural lenders. Agricultural finance institutions can implement the five steps presented in this guide to bring climate risk management into business management and client engagement.

The critical takeaway is that new approaches to agricultural finance and client relationships can help turn current and projected climate-related financial risks into opportunities for farmers and agricultural businesses and their lenders. By developing climate strategies, agricultural finance institutions can strategically position themselves as partners to agricultural producers and businesses as they navigate new climate-related challenges and emerging business opportunities.