

# Working Group of the Agricultural Public Development Banks Platform

## *What tools for Financing Adaptation to Climate Change*

24 - 25.05.2023



# What tools for Financing Adaptation to Climate Change *Working Group*

Date : 24-25.05.2023

Time zone : CET

Location : Microsoft Teams

Resource Persons for Asian and  
African countries:



Sara Belahsen (CAM,  
Marruecos)



Martial Bernoux (FAO)

Resource Persons For Latin America  
and Caribbean countries:



Erick Rodríguez (FIRA, México)



Martial Bernoux (FAO)

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What tools for Financing Adaptation to Climate Change - Synthesis | 24-25/05/2023

## Agenda :

### 24.05.2023

1. 10:30-10:35 - Welcoming remarks
2. 10:35-11:00 - Presentation of the working paper "What tools for Financing climate change adaptation"+ Q&A
3. 11:00 - 11:30 - Presentation of the Tool "Adaptation, Biodiversity and Carbon Mapping Tool – ABC-Map" by Martial Bernoux (FAO)
4. 11:30-12:00 - Presentation of "Tools implemented by Crédit Agricole du Maroc" by Sara Belahsen (CAM)
5. 12:00 - 12:30 - Q&A, Synthesis-conclusion

### 25.05.2023

1. 16:30-16:35 - Welcoming remarks
2. 16:35-17:00 - Presentation of the working paper "What tools for Financing climate change adaptation"+ Q&A
3. 17:00 - 17:30 - Presentation of the Tool "Adaptation, Biodiversity and Carbon Mapping Tool – ABC-Map" by Martial Bernoux (FAO)
4. 17:30-18:00 Presentation of "Environmental Performance Calculation Tool, Fira – Mexico" by Erick Rodriguez (FIRA, Mexico)
5. 18:00 - 18:30 - Q&A, Synthesis-conclusion

Note: this synthesis note regroups the main findings of the two Working group sessions:

#### 1. Introduction

*Christian Fusillier (IFAD)* chaired the meeting and welcomed all the participants. He explained the objective of the session, which was to discuss how the PDBs are facing the challenge of financing adaptation to climate change and identify good practices to provide a more sustainable and greener agricultural financing model.

Following a brief thank you note to all the speakers who were willing to share their experiences on this important topic, *Christian* listed the meeting schedule, and the floor was given to *Olivier Pierard* for a presentation of the Working paper.

#### 2. Working paper discussion: What tools for Financing adaptation to climate change (Presentation available) *Olivier Pierard (Consultor)*

The presentation **discusses various tools for financing adaptation to climate change, particularly in the context of agricultural development banks (Agri-PDBs)**. This Agri PDB workgroup session aims to provide concrete tools for Agri-PDBs to incorporate climate finance approaches and enhance the resilience of food-producing systems, livestock, and agro-industrial investments. This synthesis note highlights several key points which will be illustrated and expanded by the subsequent presentations from the FAO and two PDBs.

1. **No single tool for funding adaptation:** It is acknowledged that there is no singular tool for financing climate change adaptation. Instead, a sequence of process changes

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- is necessary, including the incorporation of risk analysis concepts and criteria, considering the dual materiality of risks.
2. **Taxonomy and eligibility criteria:** The use of a climate finance taxonomy is recommended. This classification system helps identify and categorize economic activities based on their contribution to adapting to climate change. It enables the guidance of green investments and the promotion of sustainability. Alongside the taxonomy, a catalogue of eligible technologies for climate finance should be developed. This catalogue specifies the criteria for each technology, such as reduced greenhouse gas emissions, positive environmental impacts, economic viability, and climate change resilience.
  3. **Climate finance strategy:** PDBs should formulate a climate finance strategy that sets objectives for reducing greenhouse gas emissions, adapting to climate change, and promoting sustainable agricultural practices. The strategy should define eligible agricultural sectors and activities for climate finance, establish eligibility criteria, outline financing modalities, integrate into internal credit management procedures, and include monitoring and evaluation mechanisms.
  4. **Risk management:** Banks must consider the **dual materiality of risks when making financing decisions**. This means assessing traditional risks such as credit and market risks, as well as environmental and social risks associated with climate change and other factors. **Establishing an Environmental & Social Risk Management System (ESRMS)** helps identify and manage risks, develop risk management plans with borrowers, and regularly supervise the process. Additionally, analyzing climate scenarios and utilizing tools like heat maps and vulnerability mapping can aid in assessing climate risks for projects.
  5. **Specific tools for adaptation finance:** The text mentions that a combination of tools and data sources can be used to predict and assess climate risks, particularly water and heat stress, for financing the agricultural sector.
  6. **Challenges faced by Agri-PDBs:** Implementing these tools may pose challenges for PDBs, such as the need to invest in data collection, cleaning, and validation, requiring training or hiring experts, balancing costs with benefits, and staying updated with compliance requirements.
  7. **Required skills:** Technical expertise is crucial within PDBs to adopt and effectively use tools for climate risk assessment. This includes strong IT teams to integrate risk management tools into banking management systems.

The introduction presentation emphasizes the importance of incorporating climate finance tools, strategies, and risk management practices within Agri-PDBs to address the challenges posed by climate change and support sustainable and resilient investments in the agricultural sector.

### Item 1: Presentation on FAO tool for climate change adaptation By Martial Bernoux (FAO)

**Assessing climate risks in agriculture requires robust evidence on climate risks, observed historical and projected future climate change and its impacts** on productive, livestock and agricultural sectors.

Characterizing local climate change risks with hazard, exposure and vulnerability information need to justify adaptation interventions with risks information, often called “climate rationale” or “climate impact potential”.

The Office of Climate Change, Biodiversity and Environment (OCB)<sup>1</sup> works to ensure that countries and stakeholders respond to the challenges of climate change, biodiversity loss, and environmental degradation, keeping food and agriculture sustainability high on the

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agenda. **OCB has produced several tools to assist identification of climatic risks: Climate risk toolbox, CAVA Platform, CAVA Analytics and MOSAICC.**

The NDC toolbox is made of three individuals, but related, tools:

- **The NDC tracking tool**, which **support countries in monitoring progress in implementing and achieving their NDCs**. The NDC tracking tool facilitates data collection of the information necessary to track the implementation of NDCs, to inform planning for strengthening NDCs at the national level, as well as contribute to the review of collective progress towards the global goals of the Paris Agreement.
- **NEXT, the Nationally Determined Contribution Expert Tool**, an excel-based comprehensive greenhouse gas accounting tool to support countries and other actors to assess and monitor past and ongoing climate actions, and to think longer term to plan and make decisions for climate change mitigation in the AFOLU sector.
- **And ABC-Map, the Adaptation, Biodiversity, and Carbon Mapping tool**, is a geospatial tool to holistically assess and monitor environmental impacts of policies and projects in the AFOLU sector.

ABC-Map was developed to address the three simultaneous deeply connected crises that the world is facing today: loss of biodiversity, climate change and land degradation.

So, **the goal of ABC-Map is to assist decision makers and project designers to address these three crises in a holistic way** and, assess the environmental impact of policies and investments in the AFOLU sector and guide them on more sustainable decisions.

To achieve this, **ABC-Map provides a set of tools and indicators related to climate adaptation, biodiversity, and carbon stock** and with these assess and evaluate the environmental impact of projects and policies.

### The adaptation tool

The **adaptation tool** provides **indicators on climatic data**, such as precipitation and extreme weather, and on **geophysical properties**, such as elevation, slope and water occurrence and shows how these have progressed around interest for the past 40 years. The two profiles (climatic and geophysical) combined provide a better understanding of the project area's climatic and geophysical challenges. Allowing for better planning and adaptation of the project activities.

### The biodiversity tool

The biodiversity tool **measures the Mean Species Abundance (MSA) and Natural Capital indicators**. MSA expresses the abundance of original species, including vegetation, for a selected area. MSA is used by IPBES and the IPPC and is one of the most widely endorsed and used indicators in biodiversity accounting. Natural Capital expresses, in dollars, the sum of all ecosystem services for a selected area. This indicator is estimated from the Ecosystem Services Values Database, a global database with more than 6000 records which is continually updated. Those indicators are used together to provide a good proxy to measure if biodiversity is improving or deteriorating.

Additionally, ABC-Map shows the current and past land uses in the area, and the biodiversity section allows users to geo-localize key biodiversity areas and protected areas and see the land use evolution within these areas. Identifying and monitoring key biodiversity areas and protected areas is a crucial step in conserving critical parts of biodiversity and ecosystems.

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ABC-Map allows users to input planned project activities and predicts, based on the interventions described the effects on these three indicators.

### The carbon tool

This tool is a simplified version the Nationally Determined Contribution Expert tool (NEXT), which was also developed by FAO, to **provide information on total carbon stock and social value of carbon**. The total carbon stock indicator gives a carbon-balance in tons CO<sub>2</sub> equivalent for a given period of analysis and ABC-map also provides a time series for this. This is calculated based on land cover data, which is matched with the IPCC land use classes and their associated carbon stocks. This indicator allows for monitoring and reporting for specific emission reductions at various points in time.

The second output of this tool is the social value of carbon, which is the discounted monetary value of future climate change damages due to one additional ton of CO<sub>2</sub>e emissions. This indicator helps actors determine whether the costs and benefits of a proposed project or investment are justified.

Similarly, to the biodiversity section, predicts the effects on the carbon stock and the social value of carbon, based on the project interventions described.

### Uses of ABC-Map

ABC-Map was designed to be used by project designers, investors, and policy makers. Due to the range of indicators that are available, ABC-Map can be used to create a baseline and identify potential focus areas for projects, as well as forecast impacts of project interventions for biodiversity and carbon. Currently, ABC-Map is being used in this way by IFAD for project ideation and design, as well as for their GEF projects. Through being used like this, they have found that ABC-Map can strengthen project proposals and funding applications.

In October 2022 IFAD became an official partner of ABC-Map and adopted the tool to measure its new Biodiversity Core Indicator 'Biodiversity improvements at ecosystem-level' which tracks changes in biodiversity because of project interventions. ABC-Map is useful in this for its ability to be used at a range of scales, to give a broad overview, as well as at finer scales for specific projects.

### ABC-Map Future Developments

ABC-Map was conceived to be dynamic and be continuously updated with updated datasets and new indicators. Here is a brief overview of some of the developments planned.

- Launching a new interface next month which will be more user friendly and intuitive, with improved performance to allow for larger scale analysis including at the national level.
- planning to develop several new indicators this year, particularly:
- A newly developed module on Adaptation, which will provide information on the climate risks and vulnerability in each location and food system of interest.
- New development on projections of crop and livestock suitability based on projected climatic changes, which will provide input on suggested adaptation actions.
- For biodiversity for the existing indicators, MSA and natural capital updating the values to increase the accuracy of the outputs.
- For carbon: integrating ABC-Map with the NEXT tool.

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- FAO also plan to develop publications which include ground-truthing of all the indicators. These papers will be released over the next few years, so they can include the indicators we are currently under development.

### Item 2 : GROUPE CREDIT AGRICOLE DU MAROC GREEN TRANSITION: (Presentation available)

#### 1. Sara Belahsen (CAM, Morocco)

**Crédit Agricole du Maroc (CAM) is committed to supporting Morocco's 2030 National Climate Plan**, which aims to reduce greenhouse gas emissions and adapt vulnerable sectors to climate change. The financial sector in Morocco, including CAM, recognizes the importance of sustainability and has adopted initiatives such as the sustainability challenge and ESG reporting to promote responsible practices and transparency.

To address the lack of clarity in defining green activities and assets, **CAM developed a green taxonomy that provides a clear framework for identifying sustainable economic activities**. This taxonomy includes renewable energies, energy efficiency, green buildings, pollution prevention, sustainable agriculture, clean transport, and more. The taxonomy enables CAM to align its financing activities with the transition to a low-carbon and sustainable economy.

CAM has partnered with AFD (Agence Française de Développement) for the ISTIDAMA program, which aims to overcome barriers to investment in emerging sectors and promote the adoption of innovative and efficient technologies for sustainable development. **The program includes the List of Eligible Equipment and Materials (LEME), which facilitates the selection of high-performance resources and streamlines the approval process** for listed projects. The LEME is regularly updated to include new materials and equipment that meet the eligibility criteria.

**An Environmental and Social Management System (ESMS) was implemented to manage its exposure to environmental and social risks**. The ESMS identifies and assesses risks, implements measures to minimize negative impacts, and monitors the effectiveness of these measures. The Global Risk Management Domain conducts E&S assessments, and the ESMS has led to the creation of the role of Environmental and Social Risk Analyst (ESRA). Training programs were conducted to ensure employees have the necessary skills to implement the ESMS effectively.

CAM's ESMS is continuously improving with the **development of new assessment tools, including the E&S Matrix and sector guides. Key performance indicators (KPIs) are used to monitor the system's performance**, and a specific tool is being developed to manage the financial risk related to water withdrawals from agricultural projects. An ESMS Gap Analysis is conducted to ensure compliance with Moroccan regulations and international norms.

CAM received technical assistance from the European Investment Bank (EIB) to integrate climate risks into its management processes. This assistance focuses on **assessing climate-related opportunities and risks, developing assessment tools, implementing reporting systems, and providing staff training**. It aims to enhance CAM's commitment to sustainable finance and effective climate risk management.

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In synthesis, **CAM is actively working towards sustainable development through initiatives such as the sustainability challenge, green taxonomy, ISTIDAMA program, ESMS, and integration of climate risks into management processes.** These efforts contribute to Morocco's transition to a low-carbon and resilient economy and promote environmentally responsible practices in the financial sector.

### **Item 3: ENVIRONMENTAL PERFORMANCE CALCULATION TOOL, FIRA – MEXICO: (Presentation available in En and Sp)**

*Erick Rodríguez (FIRA, Mexico)*

**The Environmental Performance Calculation Tool developed by FIRA in Mexico was created as part of a collaboration with the French Development Agency (AFD) and the environmental consulting company Carbon Trust.** The purpose of the tool is to assess the positive environmental impacts of FIRA's sustainable financing initiatives.

To determine these impacts, Carbon Trust identified six environmental performance indicators based on AFD's sustainability dimensions and the Sustainable Development Goals (SDGs). The study conducted by Carbon Trust **estimated the environmental effects of financing across these six indicators for each of the 55 investment concepts within FIRA's sustainable financing portfolio.**

As part of the study, **an Excel-based tool was developed to estimate the positive environmental impacts for the financing portfolio as well as for individual credits.** This estimation can be performed for all six environmental performance indicators and is specific to the 55 sustainable investment concepts outlined in FIRA's sustainable taxonomy, which form part of the credits.

The six environmental performance indicators used by the tool include additional installed renewable generation capacity, energy savings resulting from energy efficiency measures, estimated annual greenhouse gas (GHG) emissions avoided, reduced, or sequestered by the project, volume of water reduced, treated, managed, or purified, volume of waste reduced or recycled, and the area of agricultural, pastoral, or forest ecosystems where sustainable management practices have been introduced.

**The tool calculates these performance indicators using specific formulas tailored to each of the 55 investment concepts encompassed by the credits.** The input for the tool consists of the credit amount for each sustainable investment concept and the number of credits within each concept.

The calculation of the environmental performance indicators is automated within the tool, utilizing formulas and parameters derived from various sources of information. These sources include refereed publications, reports from national programs, reports from international organizations, studies and projections from the public sector, and expert opinions.

**The output of the tool includes a summary of the environmental performance indicators, indicator charts, and results for each category with their corresponding indicators.** The estimation of these indicators is based on the credit amount and specific parameters associated with each eligible investment concept. The loan amount and the number of projects serve as the basis for estimating the environmental performance of each eligible investment concept.



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It is important to note that the use of parameters in the tool has certain assumptions and limitations. For instance, the parameters are based on national-level data or data specific to a particular production chain.

To facilitate the calculation of indicators for the 55 investment concepts, methodological sheets were developed, outlining the parameters and formulas for estimating each indicator. These parameters and formulas can be updated and are designed to ensure a process of continuous improvement.

As an example, the presentation provides a calculation of sequestered greenhouse gas (GHG) emissions for a shade-grown coffee plantation. The calculation considers the carbon sequestration rate obtained from a study conducted in Colombia, which quantified the carbon sequestration in the above-ground biomass of coffee plantations. By multiplying the carbon sequestration rate by the area of the project (in hectares), the tool estimates the mitigated GHG emissions for the shade production investment concept.

**The Environmental Performance Calculation Tool developed by FIRA, in collaboration with the AFD and Carbon Trust, offers a systematic approach to estimating and evaluating the positive environmental impacts of sustainable financing.** The tool helps assess the sustainability of FIRA's investment concepts by providing insights into key environmental performance indicators.

### Synthesis-conclusion:

Following the February and May working group sessions, Christian mentioned different visions, different steps and tools that have been developed, and some of them should be adapted for the banks' needs. Additionally, he stressed that banks need to define their needs before adopting a specific tool or a combination of existing tools, and that risk assessment, monitoring, and technical assistance to rural people are necessary to meet the expectations of clients, banks, and countries. Then, Christian emphasized the need for partnerships among banks and the part of duties that can be performed externally by technical partners, for which banks should provide support.

After that, Christian stressed the importance of having the appropriate data to make good analyses. He also emphasized the need to continue working with FAO in order to make sure that Agri-PDBs have access to tools adapted to their needs. According to him, many banks with strong experience and a broad range of climate finance products could do peer-to-peer exchange on those topics, and the platform is already in place to facilitate those exchanges.

In the closing remarks, *Christian Fusillier (IFAD)* proposed to organise a new Working group session in October to discuss **“How can we operationalise and deliver concrete services to the Agri-PDBs for financing Adaptation to Climate Change?”**. Such a session would be organised for the Agri-PDBs which are interested to continue to work on that topic, so thanks to the interested ones to indicate by email their interest.

In parallel the PDB Platform propose to prepare new working group sessions on the topic **“Agri-PDBs and Agro-ecology”**, to better understand and identify concrete ways to integrate agro-ecological principles in the financial products and criteria for decision.

A **summary report of the two working group meetings** and all the presentations will be shared in the following days./