

# Climate Financial Risk Center

for Latin America and the Caribbean

December 2nd, 2022



# Motivation

## According to recent studies\*:

- Climate Change is classified as a “catastrophic risk,” considering that this is the most impactful long-term risk for LAC economies.
- Over 50% of the LAC region's population currently resides in countries with high or extreme climate vulnerability risks.
- Almost half of the LAC region's GDP originates in regions with high or extreme climate change vulnerability risks.
- Assuming the current trend in temperature increase continues (around 3°C), the six largest economies in the region (Argentina, Brazil, Chile, Colombia, Mexico, and Peru) could lose on average up to 17% of GDP by 2050.

\*Sources: NFGS, 2020; IMF, 2021; CAF, 2014, Pietro & Faruk, 2021; WEF, 2021

# Motivation



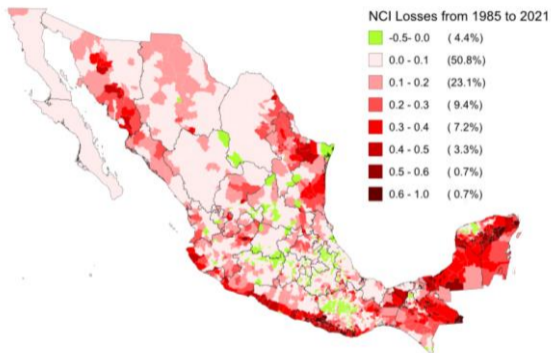
**Latin America and the Caribbean stand out as particularly affected region considering the increase in the number of meteorological, hydrological, and climatological disasters since 1960\*.**

\*Source: EM-DAT, CRED / UCLouvain, Brussels, Belgium – [www.emdat.be](http://www.emdat.be)



# Motivation

- In México, the Yucatán Peninsula and Chiapas, which hold some of the most biodiverse regions in the country, have lost 0.245 points in the Natural Capital Index (NCI) on average since 1985\*.
- Approximately, 10% of the land area in Mexico has lost more than 0.3 points of NCI.



Source: Ramos-Francia et al. (2022)

\*Data source: Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO), calculation from Ramos-Francia et al. (2022).

# Natural Capital Index (NCI)

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*Natural Capital Index = Ecosystem quantity \* Ecosystem quality*

Ecosystem quantity: percentage of remnant natural areas in a given region. Estimation based on the remaining natural vegetation.

Ecosystem quality: ecological integrity of a given region. Estimation based on the complexity of top predators relations. A healthy ecosystem is able to maintain top predators, which require vast intact areas and a base of biomass for sustenance.

Natural Capital is the stock of natural assets that provide essential benefits from nature. The Natural Capital Index integrates how much and how well that stock is preserved in a given area. All values are comprised between 0 and 1.

# How do Climate Risks Translate Into Financial Risks?

Climate-related risks pose a threat to the stability of the financial system, leading to economic losses, business disruptions, and overall consequences to the monetary and macroeconomic stability of national economies.



**Physical Risks**  
(Extreme weather events and gradual changes in climate, biodiversity loss)



**Transition Risks**  
(Policy, technology, consumer preferences)

## Economy

Business disruption

Asset destruction

Migration

Reconstruction / replacement

Lower value of stranded assets

Increase in energy prices with dislocation

Lower property and corporate asset value

Lower household wealth

Lower corporate profits, more litigation

Lower growth and productivity affecting financial conditions

## Financial system



Market losses (equities bonds, commodities)

Credit losses (residential and corporate loans)

Underwriting losses

Operational risks

Negative feedback from tighter financial conditions

# How do Climate Risks Translate Into Financial Risks?



The LAC region is highly susceptible to physical climate change of Moody's-rated sovereigns

This is due to the lack of economic diversification since it depends to a large extent on commodity sectors (agriculture, mining & energy) and tourism, which are highly vulnerable to climate change.

**This lack of diversification linked to climate change could drastically affect the fiscal balance of the countries of the region.**

Source: Adjusted from Moody's Investors Service IPCC

[https://www.moody.com/sites/products/ProductAttachments/Climate\\_trends\\_infographic\\_moody.pdf](https://www.moody.com/sites/products/ProductAttachments/Climate_trends_infographic_moody.pdf)

# How do Climate Risks Translate Into Financial Risks?

Negocios & Empresas

## Suben a más de US\$1.000M pérdidas en sector agrícola de Uruguay por sequía

Hay unos US\$ 850 millones que se explican por menores rendimientos en cosecha de soja.  
Autor: Observa.Com Anelastname | 11 June 2018

BRASIL SEQUÍA

## La crisis hídrica encogerá el PIB brasileño en un 0,11 % este año

EFE | Río de Janeiro | 3 nov. 2021

## Informe de CEPAL: Eta e Iota tuvieron un impacto de más de 45 mil millones de lempiras en Honduras

21 diciembre 2020

 **EL UNIVERSAL** MXM VIDEOS PODCAST NEWSLETTERS

🔍 Término de búsqueda

SUSCRÍBETE

## México podría perder 50% del PIB a causa del cambio climático, advierten expertos de la UNAM

De acuerdo con los académicos de la UNAM, ciudades como la Ciudad de México, Guadalajara y Monterrey tendrían pérdidas de hasta mil millones de dólares anuales

## 5 impactos económicos del cambio climático en Colombia

Presidencia 28 November 2017

El cambio climático tiene un impacto fuerte sobre el bolsillo de empresas y hogares. La factura puede terminar costando cientos de billones de pesos.



Campesino sobre caballo  
© IFC Carlos Henao Malpica / IFC

El impacto del cambio climático va mucho más allá de los fenómenos que sufre la naturaleza. Desde paralizar el campo en el trabajo de todos los colaboradores, que pagando por su comida, sus cuentas de energía y perdiendo tiempo al ser trasladado sus viajes, hasta afectar la economía por enfrentar estos desafíos, Colombia tiene que adoptar de manera urgente su implementación en todos.

En 2011 el Departamento Nacional de Planeación (DNP), la Comisión Económica para América Latina y el Caribe (CEPAL) y el Banco Interamericano de Desarrollo (BID) presentaron un estudio sobre los efectos económicos del cambio climático. Advierten que para su abatir se necesitan medidas de adaptación. [Cambio climático](#)

## Incêndios florestais no Brasil causaram prejuízo de R\$ 1,1 bilhão em seis anos

Dados são da pesquisa divulgada, nesta sexta-feira (19), pela Confederação Nacional de Municípios (CNM)



## EL ECONOMISTA

El Economista • Economía

ESTIMAN IMPACTO SOBRE LA ECONOMÍA POR 4.800 MDD

## Sequía podría restarle un punto al PIB de Argentina: estudio

El estrés hídrico ya le ocasionó a la cosecha gruesa del campo una pérdida por 2,930 millones de dólares, según un trabajo de la Bolsa de Comercio de Rosario; el Estado dejará de recaudar impuestos por 1,440 millones de dólares.

El Economista / Argentina  
17 de enero de 2022, 12:32





# How do Climate Risks Translate Into Financial Risks?

## Transition Risk

The sectors most exposed to transition risks in LAC are:



Energy



Transportation



Materials and  
construction

which account for more than **70% of carbon emissions** in the region



and represent  
**20-35%**  
of the region's GDP.



Losses associated with stranded fossil fuel assets could represent a GDP loss of USD \$300 billion (2020 – 2035), which is equivalent to approximately 0.1% of GDP per year for the LAC region.



# The Role of Central Banks and Supervisors



Why is this important for central banks and supervisors?

1.

Climate-related risks will most likely affect Central banks' /supervisors' ability to achieve their mandates.

2.

Central banks/supervisors are expected to prevent the build-up of systemic risk → should include climate-related risks in their risk management framework.

3.

Central banks/supervisors are (should be) key in the transition towards a net-zero economy by enforcing stricter climate standards in the financial sector.

# The Role of Central Banks and Supervisors

**What do central banks/supervisors in LAC need to do to address climate risks?**



Assess and quantify the extent of climate-related financial risks.



Develop and adopt flexible methodological approaches aligned with the necessities for the LAC region. Examples of this could be region-specific scenario analysis and risk-taxonomies.

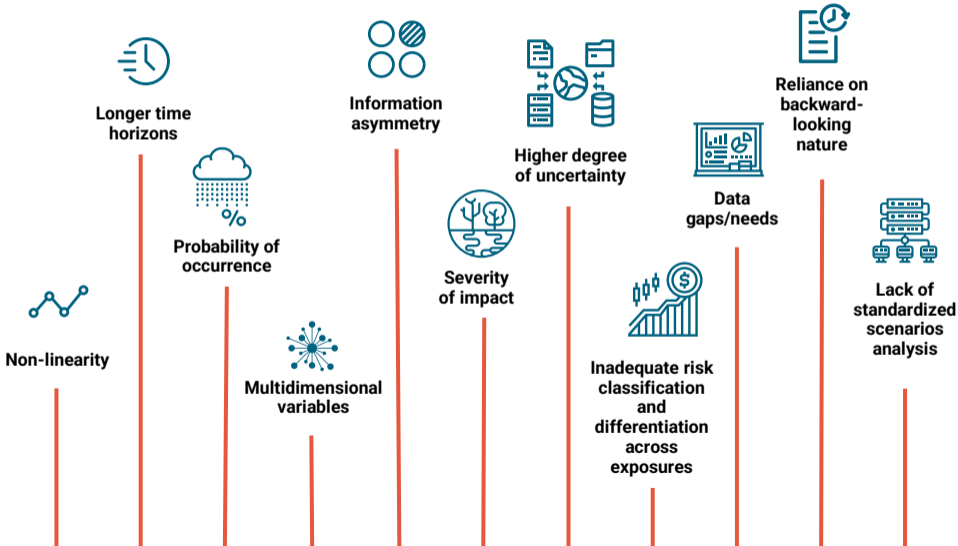


Learn and converge towards global best practices.



Develop technical capacities (human and capital resources) adapted to the challenges stemming from climate change.

# Barriers to cope with climate financial risks



# Climate Financial Risk Center for Latin America and the Caribbean



The **CFRCenter** seeks to establish a hub in which its members collaborate to promote regional convergence towards incorporating financial risks arising from climate change as a fundamental driver of policy action.

## The CFRCenter aims to:

- Promote open discussions, build capacity, and share knowledge and best practices among its members to advance their responses to financial risks stemming from climate change.
- Disseminate, discuss, and test global standards and methodologies to address climate risk into a regional context with an imperative urgency to make data and knowledge publicly available.

## Specific objectives of the CFRCenter

- The **CFRCenter** will bring together senior representatives from central banks, financial regulators and supervisors, climate data providers, Scientifics, and academics, who will address key issues around climate financial risk management

- Disseminate and highlight the importance of climate-related financial risks in the eyes of central banks and regulators helping to put these issues high in regional and domestic agendas.
- Translate the global NGFS agenda into domestic/regional realities: language, institutional constraints, geographical/economic realities, features of LAC financial systems.
- Draw lessons/conclusions from LAC that can feed global discussions on issues such as data challenges, regulation in EMEs contexts, disclosure, and governance.
- Create a platform for capacity building in assessing climate-related financial risks in the community of central banks and supervisors/regulators: courses, seminars, support of bilateral cooperations.

# Key Cornerstones of the CFRCenter



## Translation of global standards to local realities



Capacity building for the LAC region.



Adapting methodological tools to local realities.



## Evidence-based policy recommendations



Bridge data gaps for climate risks in the region.



Develop joint regional research projects.

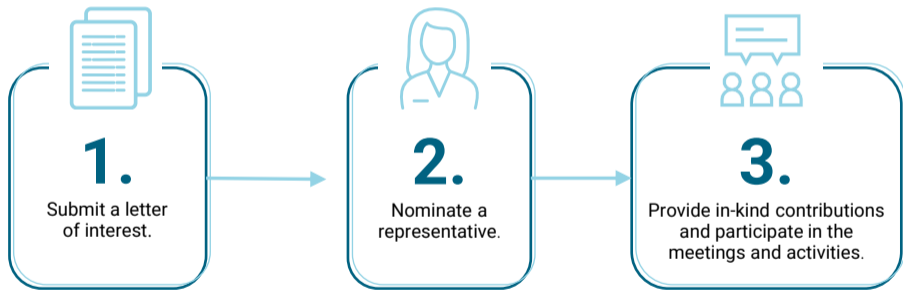
# CFRCenter Structure





# Groups Membership

CBs/supervisory and regulatory institutions that would like to join the CFRCenter as beneficiaries are expected to:

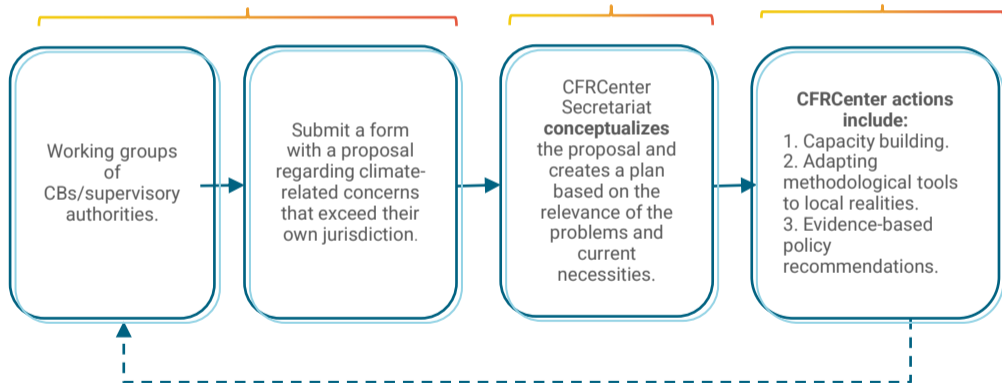


# Workflow

March 31, 2023

June 30, 2023

October 31, 2023



# Final remarks



The CFRCenter is hub in which central banks, regulatory and supervisory authorities can work in a collaborative approach to promote the regional convergence towards incorporating financial risks as a fundamental driver of policy action.



The CFRCenter is built around two cornerstone objectives: translating global standards to local realities and drawing evidenced-based policy recommendations for LAC and abroad.



The CFRCenter follows a horizontal governance structure, with the input from its members being key to define specific working plans.



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