

# Seminario Regional de Capacitación de Supervisores de Seguros de América Latina– ASSAL-IAIS

## Sesión sobre Riesgos Climáticos y Catastróficos

Act. José Ángel Villalobos  
MSc(Actl), MBA, ACII, CPCU, ARe, AAPA  
Senior Financial Sector Specialist  
Disaster and Crisis Risk Financing  
Finance, Competitiveness and Innovation Practice



Popol Vuh, "La creación del Universo", Diego Rivera, 1931, acuarela sobre papel, digitalización Raíces



# Disclaimer

©2022 World Bank

1818 H Street, N.W. Washington, D.C. 20433

Tel.: (202) 473-1000 E-mail: fab@worldbank.org Web: [www.worldbank.org](http://www.worldbank.org)

This document is a product of the staff of the World Bank and is subject to change or update at any time without notice. The views expressed herein are exclusively for knowledge-sharing purposes and intended for the exclusive benefit of the recipient. Any findings, interpretations, and conclusions expressed in this document do not reflect the views of the Executive Directors of the World Bank or the governments they represent nor shall they be deemed to represent any investment or legal advice, trade recommendation or endorsement of any market counterparty.

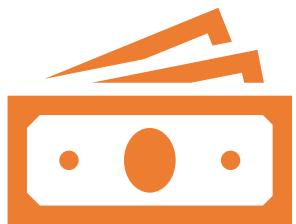
The World Bank does not guarantee the accuracy of the data included in this document.

The information contained in this document is intended only for the person to whom it is addressed and may contain material which is confidential, proprietary, privileged or otherwise protected by law. Copying and/or transmitting portions or all of its content without prior written permission of World Bank is prohibited and would be a violation of applicable law. Any unauthorized copying, disclosure, distribution, retransmission, dissemination, retention or other use of the material in this document as well as taking of any action in reliance upon, this information by persons or entities other than those intended is strictly forbidden. By receiving this document, the intended recipient agrees not to (i) disseminate, transmit or otherwise disclose this document to third parties without World Bank's prior consent and (ii) remove the World Bank logo or other identifying information in its authorized use of the document. This document should not be interpreted as a recommendation, advice or offer to purchase or sell any security, financial instrument, investment or any other product. Reference to any third party entity should not be interpreted as an endorsement of that entity by World Bank or its staff. It is the intended recipient's responsibility to seek legal and/or tax advice with respect to any potential legal or tax consequences or implications of the proposal described herein.

For permission to copy, electronically transmit or reprint all or part of this document, please send a request to the e-mail address indicated above.

# Agenda

---



Principios del financiamiento  
de riesgo de desastres



Riesgos con potencial  
catastrófico



Respuesta e innovación del  
sector (re)asegurador

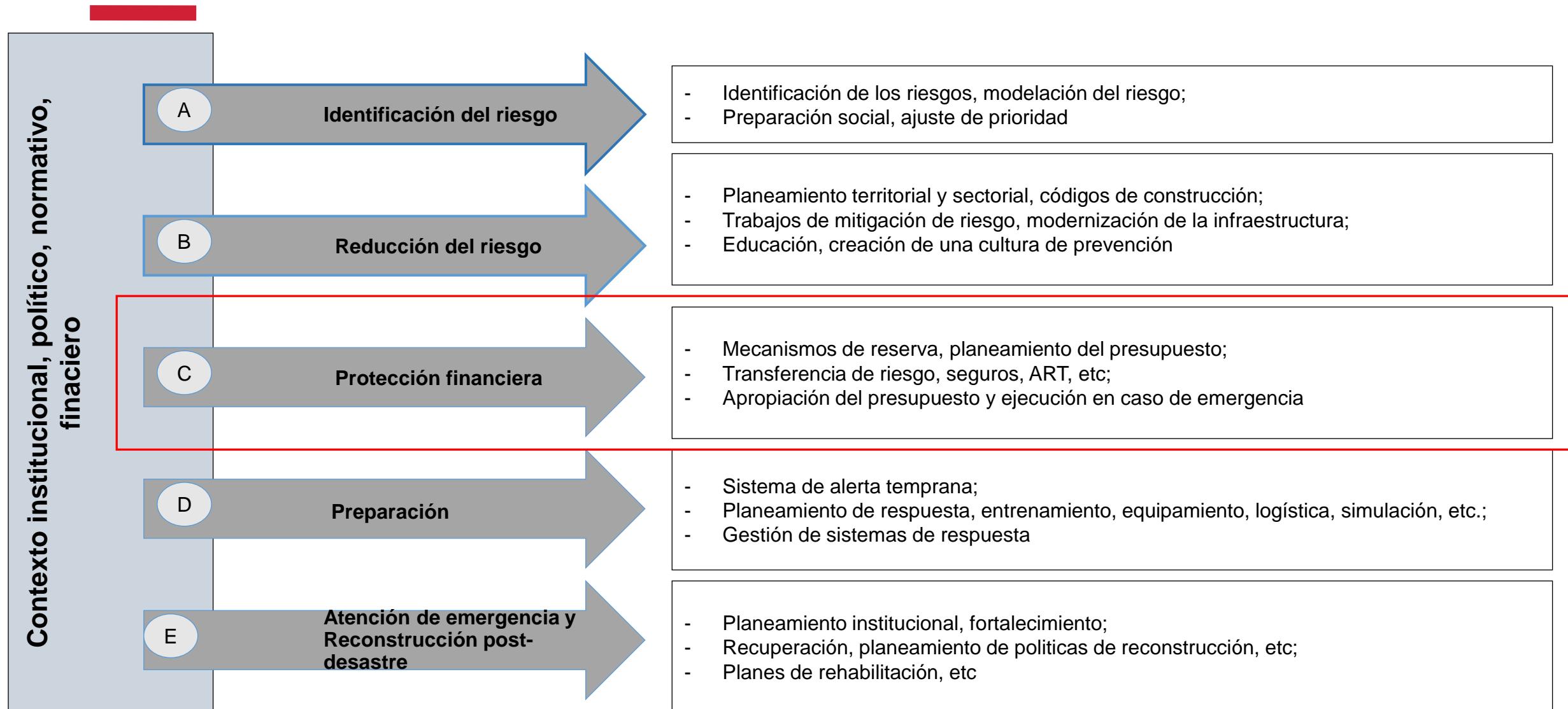
# Gestión Financiera del Riesgo de Desastres

# Algunos Principios



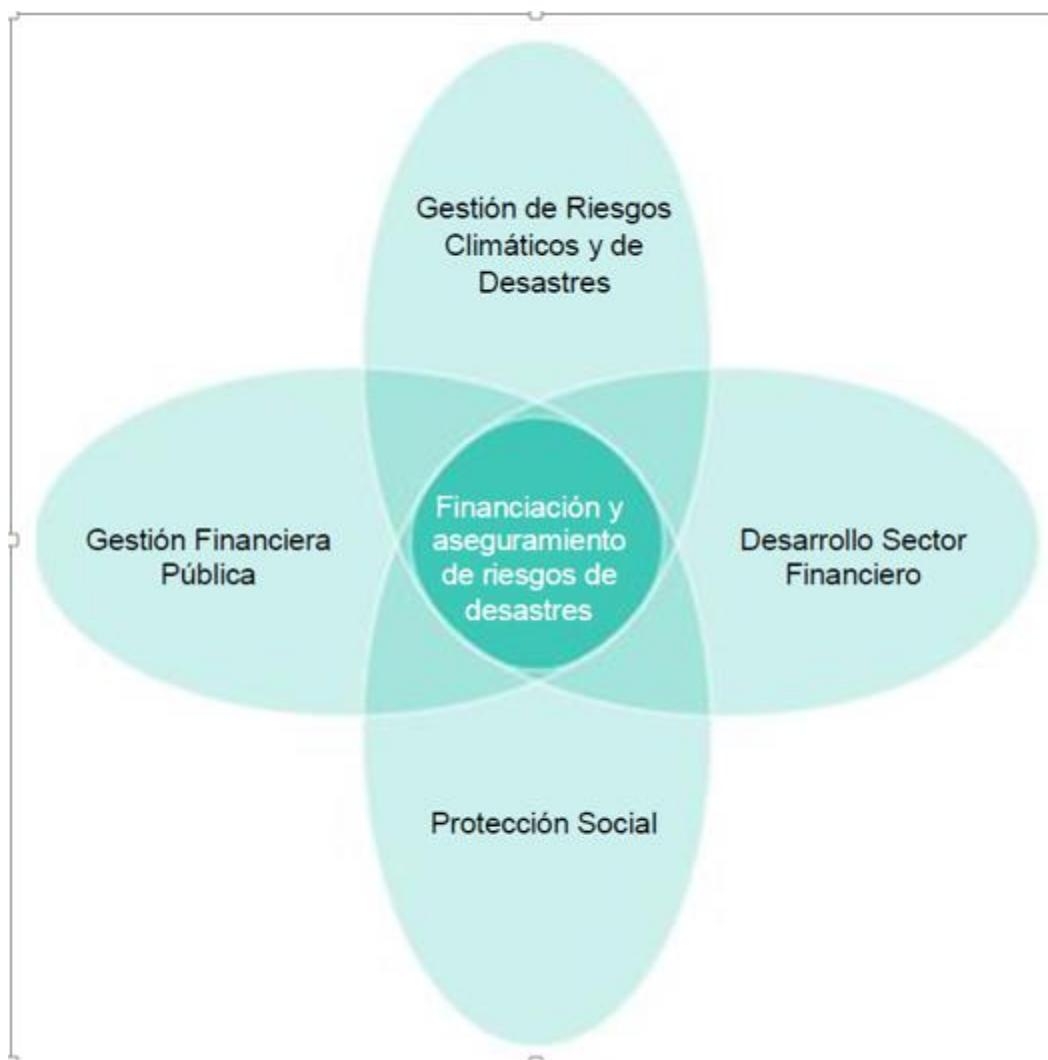
# WORLD BANK GROUP

# La GFRD es un componente esencial de la Gestión del Riesgo de Desastres (GRD)



Fuente: Grupo Banco Mundial

# Inclusión del riesgo de desastres dentro de marco integral de la gestión del riesgo

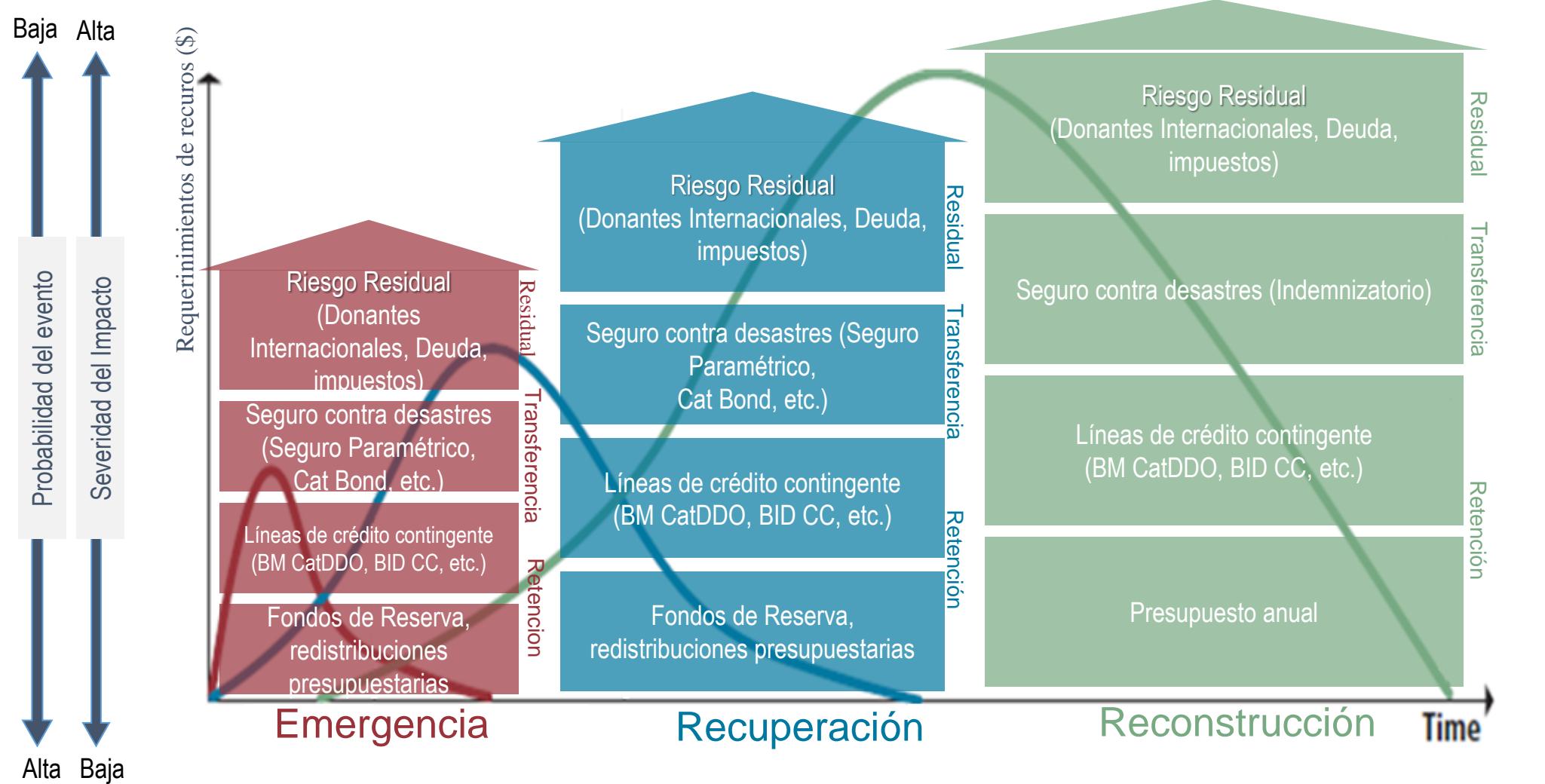


Fuente: Grupo Banco Mundial, GFDRR y SECO (2014)

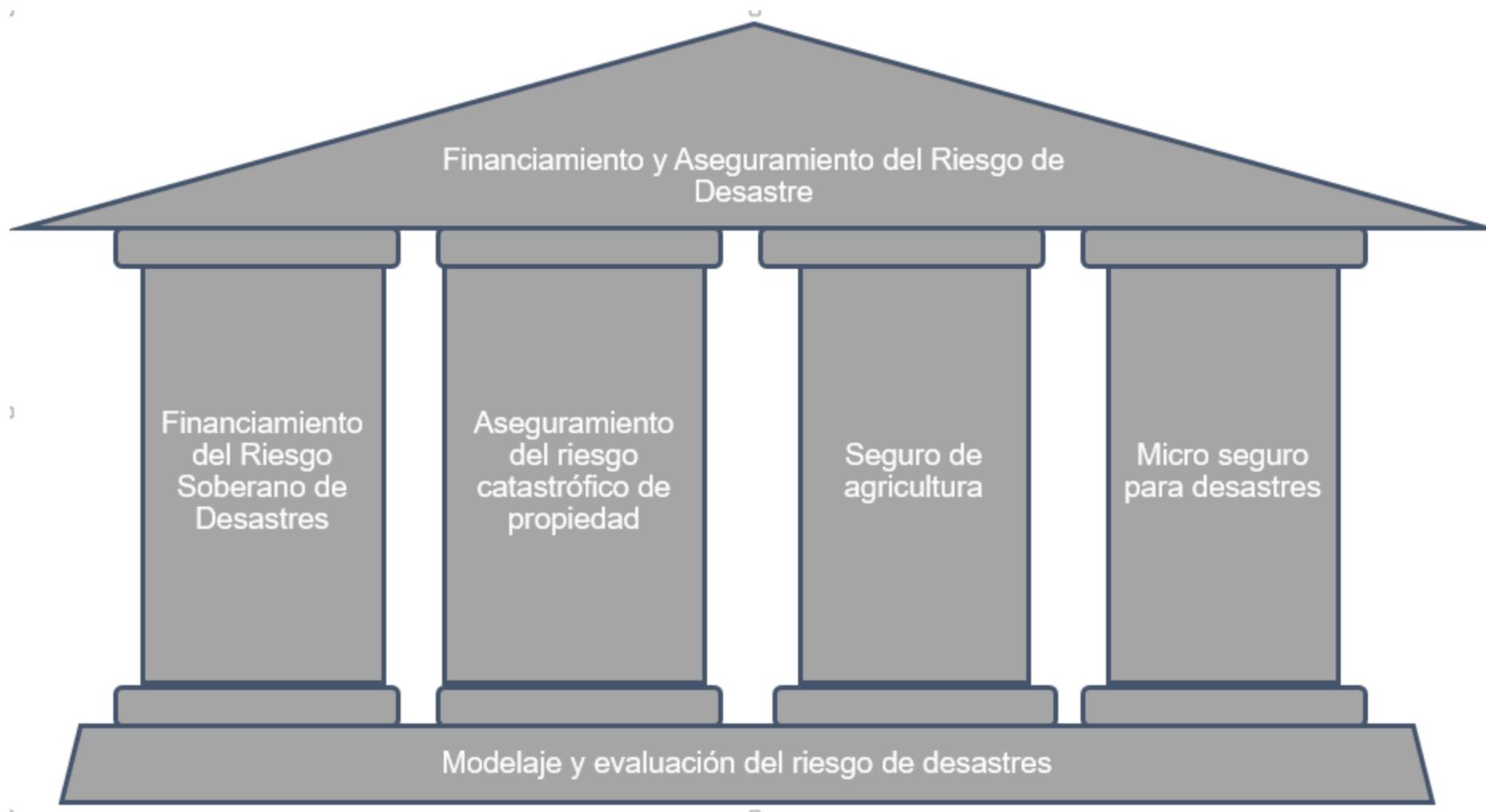
# **Principios básicos del financiamiento del riesgo de desastres**

## **1. Necesidad/disponibilidad de recursos en el tiempo.**

**2. Ningún instrumento financiero por sí solo puede abordar todos los riesgos (combinación de instrumentos en capas).**



# Aumento de la capacidad financiera y fiscal de los países para hacer frente a los desastres por fenómenos de la naturaleza





# Riesgos con Potencial Catastrófico

# Riesgos con potencial catastrófico: ¿Asegurable?

---

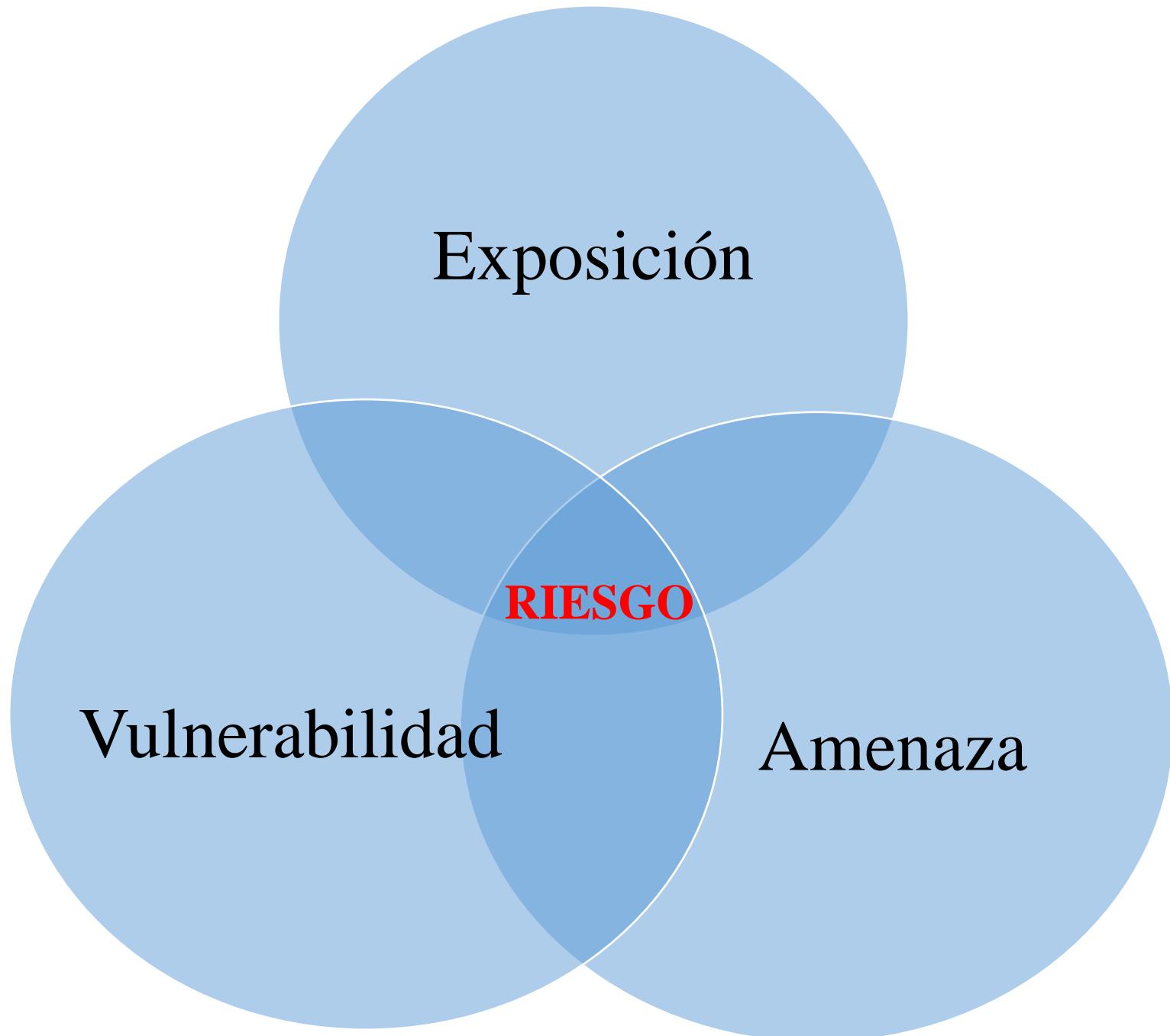


1986 aerial view of the Chernobyl nuclear plant in Chernobyl, Ukraine, shows damage from an explosion and fire in reactor four that sent large amounts of radioactive material into the atmosphere. Volodymyr Repik/AP



Hurricane Ian in the US and Cuba cost more than \$100 billion and was one of the costliest climate disasters in 2022. AP

# ¿Qué es riesgo?



# Origen Natural, origen Antrópico, Compuestos



# Pero no todo es blanco y negro...

## ¿Por qué la última prueba nuclear de Corea del Norte sigue produciendo temblores tres meses después?

Redacción  
BBC Mundo

11 diciembre 2017



Corea del Norte probó su bomba nuclear más poderosa en su sitio de prueba Punggye-ri, una zona montañosa del noroeste del país.

La prueba nuclear que Corea del Norte realizó el 3 de septiembre generó un terremoto de magnitud 6,3 y más de tres meses después sigue habiendo réplicas.

El Servicio Geológico de Estados Unidos (USGS, por su sigla en inglés) dijo el sábado que había detectado dos más.

Fuente: <https://www.bbc.com/mundo/noticias-internacional-42309219>

## Coronavirus | "No es una creación de laboratorio": cómo un grupo de científicos logró demostrar el origen natural del virus que causa covid-19

Alejandro Millán Valencia  
BBC Mundo

6 abril 2020

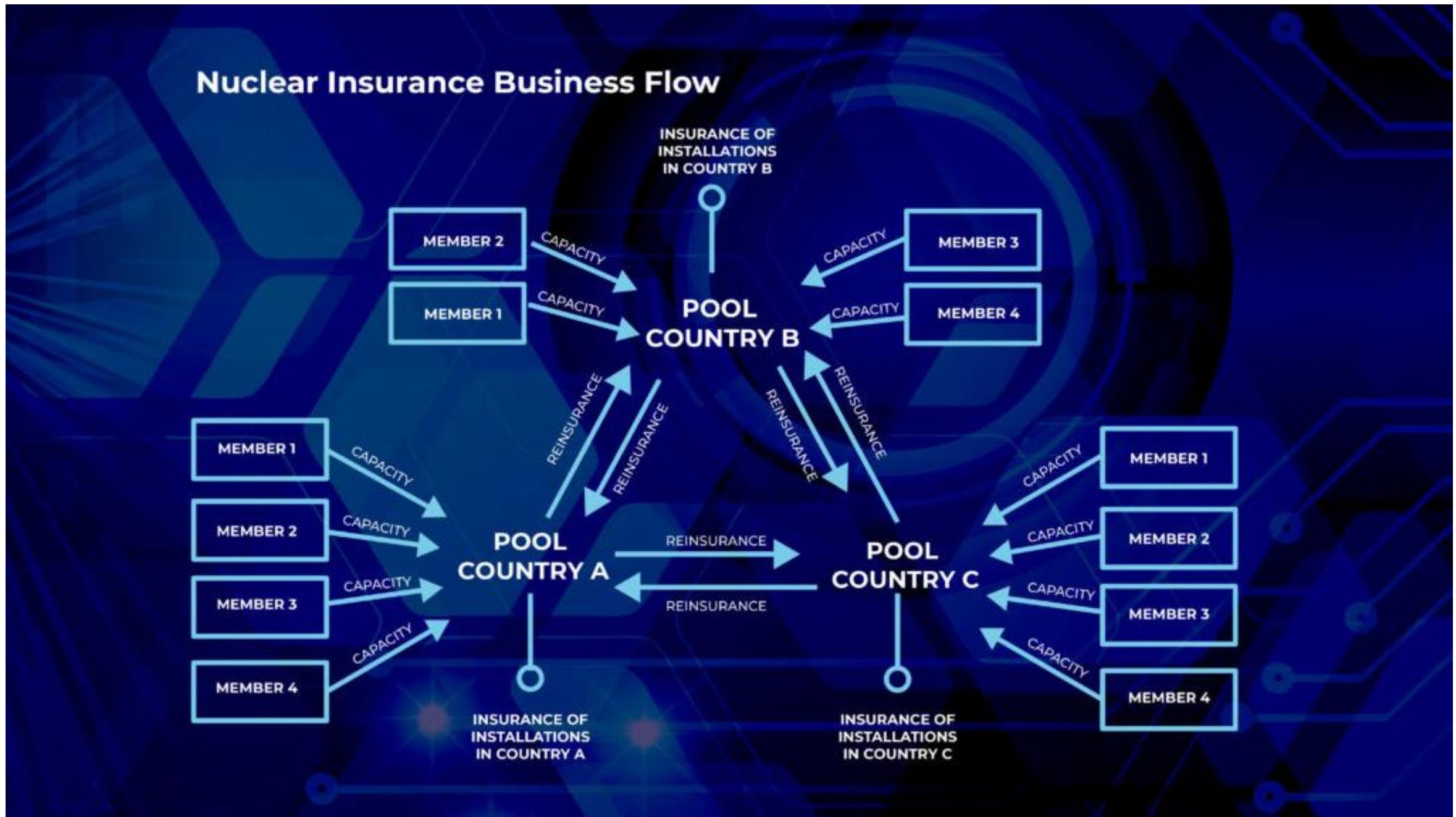


Fuente: <https://www.bbc.com/mundo/noticias-52140543>



# **Respuesta e Innovación del Sector (Re)Asegurador**

# Exclusiones absolutas – Guerra, explosiones nucleares-

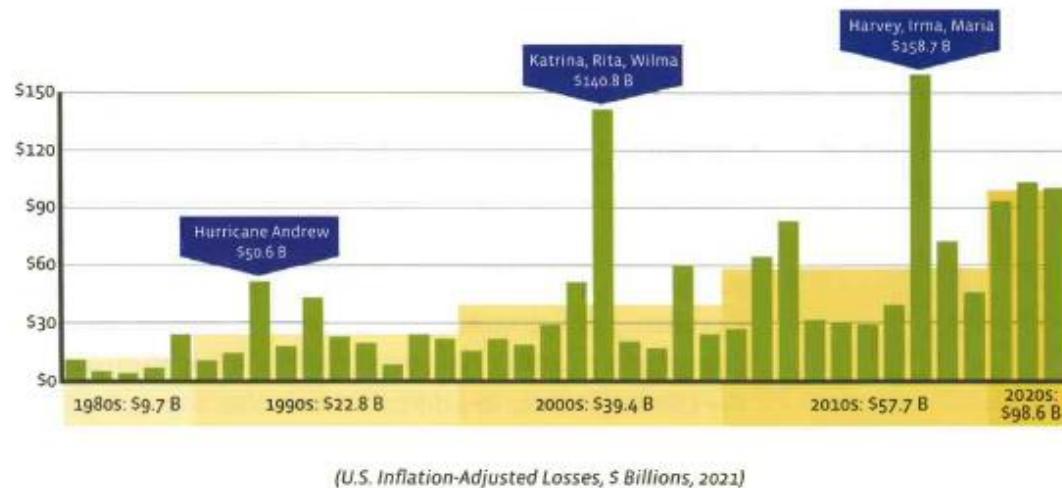


Fuente: <https://nuclear-risk.com/nuclear-pools/>

# ¿Qué es asegurable y qué no? ¿A cuál precio?

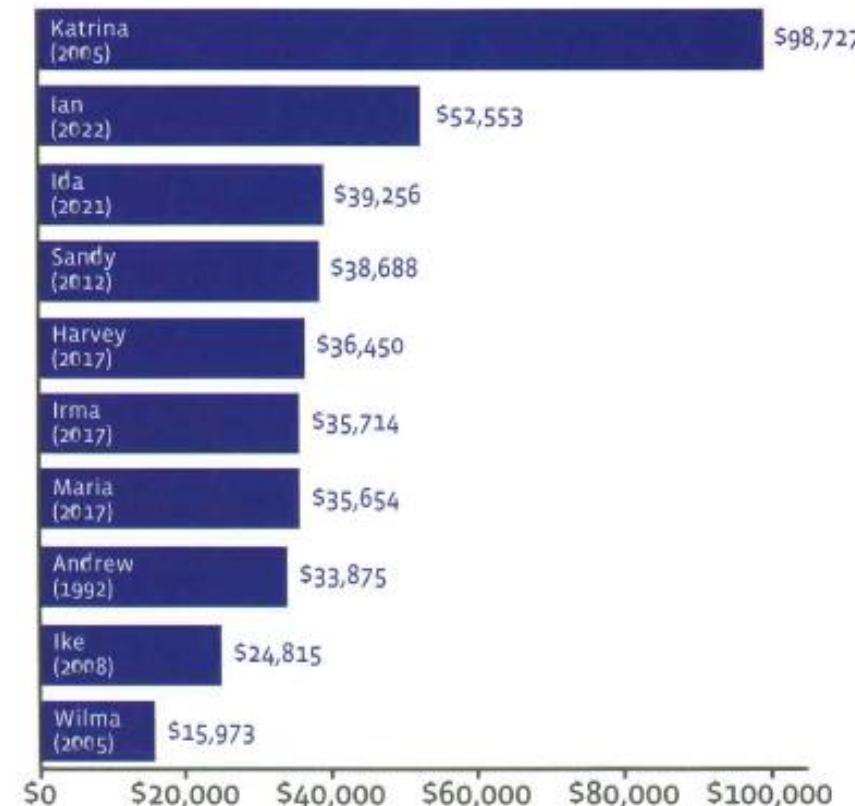
Source: Aon

## U.S. Catastrophe Losses Steadily Climbing



Includes Puerto Rico and the U.S. Virgin Islands and losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Includes hurricanes that occurred through 2022. Subject to change as loss estimates are further developed. As of January 2023. Ranked on insured losses in 2022 dollars. Adjusted for inflation by Aon using the U.S. Consumer Price Index.

## 10 Costliest U.S. Hurricanes (\$ millions, in 2022 dollars)



Fuente: CPCU Insights Fall 2023

# ¿Qué es asegurable y qué no? ¿A qué precio?

## Homeowners in California and Florida are running out of options to protect their homes

As big-name homeowners insurance companies pack up and leave, customers are forced to pay higher premiums for the few insurance options that remain.



Droughts and wildfires.  
Floods and hurricanes.

As the losses from these natural disasters skyrocket, a growing number of insurance companies are declining to offer or renew coverage in California and Florida, leaving 60 million Americans with dwindling options to comprehensively and affordably protect their livelihoods.

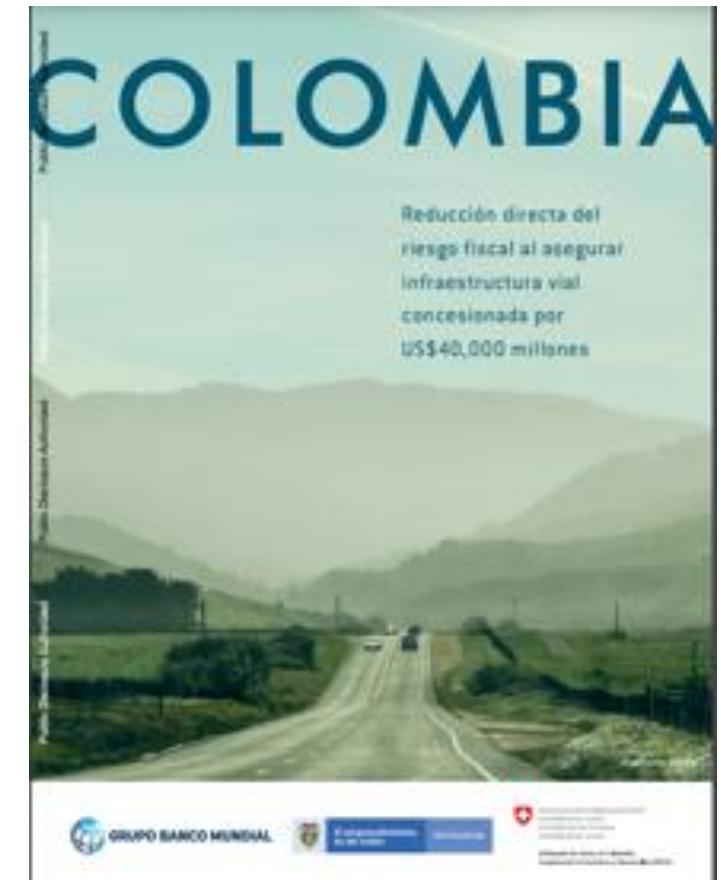
Fuente:

<https://www.nbcnews.com/business/consumer/homeowners-go-without-insurance-in-states-where-its-too-expensive-rcna88578>

# Haciendo la tarea: Aseguramiento Indemnizatorio

## Colombia: Aseguramiento infraestructura US\$40,000m

- Las fuertes lluvias de la Ola Invernal 2010-2011 causaron pérdidas por daños a infraestructura del sector transporte que representaron aproximadamente US\$ 1.700 millones, que recayeron principalmente en el Gobierno de Colombia (GdC).
- La Agencia Nacional de Infraestructura (ANI) desarrolló tres pólizas con clausulado hecho a medida para el país, considerando tanto los lineamientos técnicos del BM, como un trabajo conjunto entre entidades del sector público y empresas del sector privado.
- **Las carreteras construidas mediante Asociaciones Público-Privadas (APP) a través de la cuarta generación de concesiones (4G) han sido aseguradas por más de US\$ 40 mil millones utilizando los contratos pólizas mejoradas.** Este aseguramiento de calidad permite reducir el pasivo contingente del GdC al transferirlo al mercado local e internacional de seguros y reaseguros.



<http://documents1.worldbank.org/curated/en/224851614150967750/pdf/Colombia-Reduction-in-Fiscal-Risk-by-Insuring-40-Billion-Dollars-Road-Infrastructure-under-Concession.pdf>

# Innovación con Aseguramiento Paramétrico

---

- Relativamente nueva modalidad de aseguramiento no-indemnizatorio, basado en un modelo para estimación de pérdidas, para sector **agropecuario**, propiedad, **medio de vida**.
- Transparente y rápido.
- Potencial para complementar el aseguramiento indemnizatorio.
- Su principal desventaja es el riesgo base
- ¿Estatus legal y regulatorio en LAC?



**THE FUTURE OF PARAMETRIC INSURANCE**

Parametric is rapidly becoming a major part of the insurance industry, complementing and providing an alternative to traditional forms of insurance. From startups to insurance heavyweights, many are seeing the potential of parametric insurance – from earthquakes to crop loss, from software downtime to drought. As the global protection gap increases, data and technology capabilities advance and investors recognise the potential of parametric, the possibilities for this type of cover will only increase. ●

Fuente: The CII Journal June-July 2023



**¡Muchas gracias!**