

SEGOB SECRETARÍA DE GOBIERNO INTERIOR Y PROTECCIÓN CIVIL

SHCP SECRETARÍA DE ECONOMÍA

Rationale and genesis of the Mexican disaster risk financing strategy

Fonden ¹

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Disaster Time Line

Disaster Prevention (before)

FOPREDEN

Programmed actions: Months to years

Urgent actions: Days To Weeks

Emergency and/or Disaster (meanwhile and afterwards)

FONDEN

Immediate Fund: Hours, Days to Weeks

reconstruction: Days, Weeks to Months

How it is detonated?

EMERGENCY DECLARATION

↓

AID SUPPLIES FOR THE POPULATION

DISASTER DECLARATION

↓



FONDEN resources

New Reconstruction Fund for local entities

Occurrence of the phenomenon





All federal plans and programs are activated in order to attend the disaster



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SEGOB  **Natural Disasters Fund "FONDEN"- Background**  SHCP

In attention to the government's concern to increase their capacity to attend the damage caused by natural phenomena without altering the public finances, by 1996 the Natural Disasters Fund (FONDEN) was created.

Although with the FONDEN constitution the trouble related to avoid a lead off on the regular programs resources was in a way solved, there was not a legal regulation which provides the correct control and transparency in the money application; therefore in 1999 the first FONDEN rules were issued, which has had over the years many substantial modifications to accomplish that the procedures be held with maximum efficiency and opportunity.




Presence of disasters caused by nature  → Federal Government México  = The Natural Disasters' Fund (FONDEN) was created in 1996   3



SEGOB  **Natural Disasters Fund "FONDEN"- Structure**  SHCP

The FONDEN is integrated by the following instruments:

- I. The FONDEN program.- which has a budget line within the Federal Budget of every year and works mostly as a cash transfer to the Trust;
- II. The FONDEN Trust.- which is the financial tool thru which the reconstruction is paid and also to finance the acquisition of risk transfer instruments;
- III. The Immediate Fund for humanitarian aid.- which is financed by the FONDEN program and/or the FONDEN trust indistinctly;

Funding mechanism: Articles 19 and 37 of the Federal Budget Law



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Natural Disasters Fund "FONDEN"- Procedure

To attend the federal infrastructure, all the resources will be provided thru FONDEN, with the condition that the federal entities justified that they don't count with resources in their budgets to pay by themselves the damages. The trustee of the Federal FONDEN Trust is in charge of delivering the approved resources to the contractor businesses of the Federal entities according to the reconstruction advances.

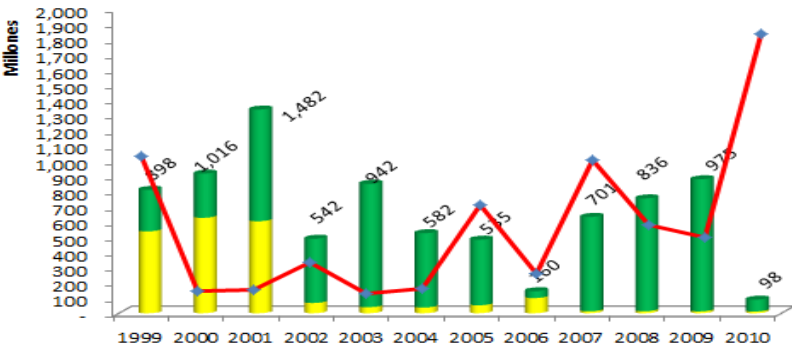
In the event of damages in the infrastructure of the States and Municipalities, the supports provided by FONDEN will be until 50% of the total cost for the reconstruction. The federal entities will be in charged of the execution of this 50% and the local governments will be responsible for the reconstruction of the other 50% with their own resources or thru a credit line from the new Reconstruction Fund for local entities.

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Natural Disasters Fund "FONDEN"- Budget vs Expenditure


The FONDEN program annual budget has remain over the years substantially inferior to the real necessities to finance the disasters.


Since 2006, the Federal Budget Law mandates that at the beginning of each year the FONDEN (both program and trust) and FOPREDEN resources can't be less than 0.4% of the total Federal Budget. This turned out to be a perverse incentive, because the minimum became always the maximum.




Year	FONDEN TRUST BALANCE (Millions)	FONDEN PROGRAM BUDGET (Millions)	TOTAL SPENT (Millions)
1999	~300	~300	998
2000	~300	~300	1016
2001	~800	~300	1482
2002	~400	~100	542
2003	~800	~100	942
2004	~400	~100	582
2005	~400	~100	515
2006	~100	~100	360
2007	~600	~100	703
2008	~700	~100	836
2009	~800	~100	975
2010	~100	~100	98

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Natural Disasters Fund "FONDEN"- Funding


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The difference between the expenditure and the reserves has been financed by oil surplus (article 19 of the Federal Budget Law), which is not a very sustainable alternative to keep depending on.

Because of that, it's necessary to insure that sufficient resources will be allocated over the years, in order to allow the FONDEN reserves to keep growing and turn into a real reserve fund, sustainable by itself and a solid mechanism to confront catastrophic years (like 2010) without affecting the public finances.

In addition we need to keep strengthening our disaster risk financing strategy, to complement and protect the FONDEN patrimony over major disasters.




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Challenges and Priorities




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- 1. The Preventive Action and the Disaster Risk Management as the central key.**
- 2. Improving of the existent financial instruments.**
 Seek in a medium time, **to merge FONDEN with FOPREDEN**, which purpose will be to finance and support the prevision, risk identification, prevention, mitigation, preparedness, emergency attention, recovery and reconstruction, all under one legal regulation and according to the DRM concept, putting the efforts altogether.
- 3. Strengthening the disaster risk financing strategy.**






Cat-Mex


In May 2006, the Mexican Government subscribed the first catastrophic bond issuance in Latin America (“Cat Mex”). Mexico searched a new scheme to complement FONDEN through the financial markets.


- “Cat Mex” was a combination of a parametric reinsurance policy and a cat-bond covering earthquakes in specific zones of the Mexican territory, which consequently provides protection to FONDEN trust capital.
- The operation covered earthquake risk for up to 450 million dollars for three years. An insurance claim payment is triggered if:
 - There’s an official state of emergency or state of disaster declaration issued by the Ministry of Interior, and
 - An earthquake with the specified magnitude and depth is recorded with its epicenter located in specific zones.

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Database


The database containing information of the five types of infrastructure that have suffered the greatest damage from natural disasters, which was obtained with the support of agencies and institutions of the federal government responsible for each sector.

The structure and content of the database was validated by the company expert data analysis and risk modeling Risk Management Solutions (RMS).



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Risk Analysis

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The modeling of risk and vulnerability assessment was conducted with technical support from the Engineering Institute of UNAM, through the development of a system that considers the risks of greater impact on the country, earthquake and hurricane.

- The system provides information on areas of greatest exposure by type of good, and the degree of vulnerability.

Also, to estimate expected losses by type of asset, risk and region

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Multi Cat Mexico 2009

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Multi Cat Mexico is a catastrophic bond that provides protection for earthquake and hurricane risks. The coverage is for a three year period (2009-2012)

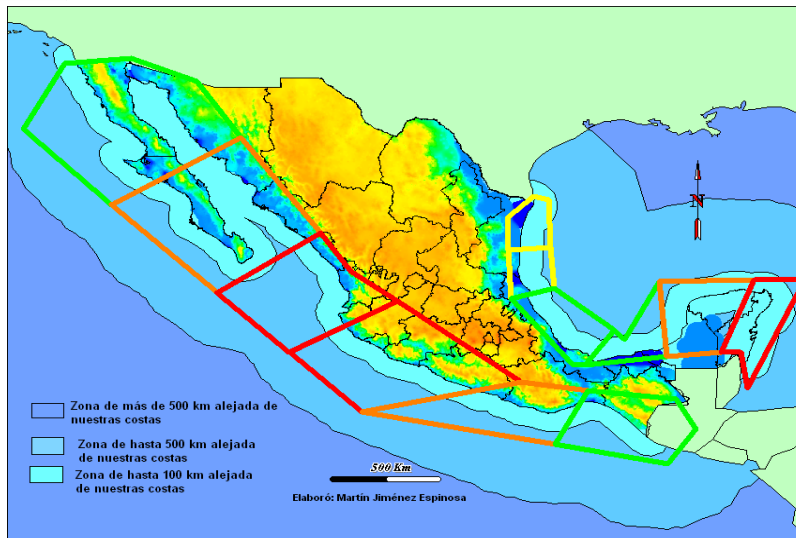
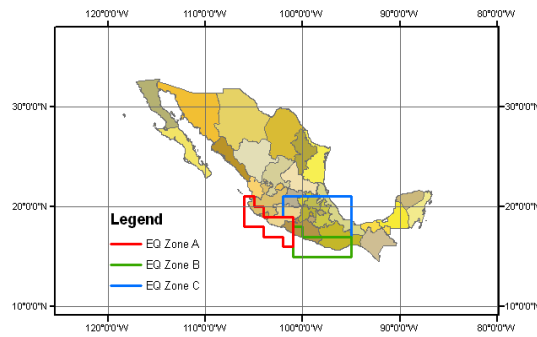
- Multi Cat represents significant improvements with respect to Cat Mex:
 - The mechanism expands coverage to Pacific and Atlantic hurricanes.
 - For the (continued) earthquake risk:
 - the level of triggers were reduced to cover more events.
 - the coverage zones were extended in order to protect a larger population.
- An insurance claim payment will be triggered with an official state of emergency declaration issued by the Ministry of Interior and an event occurs with the specific triggers.

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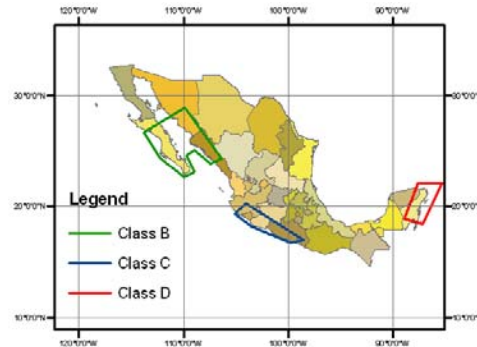
MultiCat covers 3 zones against earthquake; the coverage amount is for 140 md.

	Zone A	Zone B	Zone C
Triggers			
Magnitude (Mw)	>7.9	>7.4	>8.0
Depth (km)	200	200	200
Sum Insured		140 md	



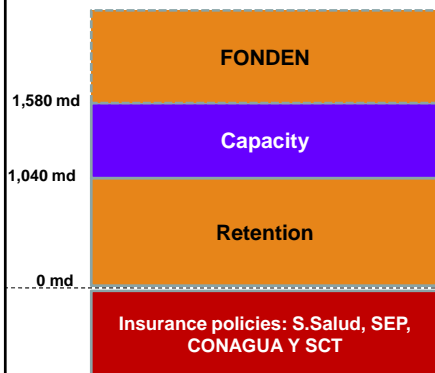
MultiCat provides financial protection for 150 md against hurricanes in two of the highest-risk zones in the Pacific Coast and the riskiest zone in the Atlantic Coast.

Trigger	Zone		
	North Pacific Area B Michoacan	South Pacific Area C B. California	Atlantic Yucatán
Category	4	4	5
Sum Insured	50 md	50 md	50 md



With the same database and risk analysis, Mexico began the develop of a risk transfer scheme for events under the layer covered by Multi Cat.

XL coverage



- Agroasemex is the insurer and the coverage will be valid for one year from June 10, 2011 and until June 10, 2012.
- Retention. The first losses up to 1,040 million dollars accumulated in the year will be paid by the Fund.
- Capacity: 400 million dollars would be paid following the international reinsurance market.
- Excess: In case of losses in excess of 1,580 million dollars Fonden will pay compensation.

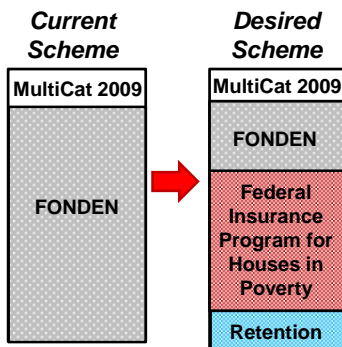


Considering these results, one of the main concerns is to extrapolate these benefits to Housing in Poverty, a sector particularly vulnerable to catastrophic events from nature.

SEDESOL

- According to SEDESOL (Social Development Secretary) there are around 24.5 million houses in Mexico, 41% classified in poverty.
- From this universe 2.8 millions are located in zones highly exposed to earthquake; and 3.2 millions are highly exposed to hurricane (wind).
- The structure and construction materials of houses in poverty increase significantly its vulnerability to events from nature.
- There are currently no financial risk transfer mechanisms placed for Mexico that provide specific coverage to these sector.

Currently, the only protection for houses in poverty in the vent of a disaster comes from FONDEN, which imposes a heavy burden to public finances when large events occur. The design of risk transfer schemes is necessary.



- Since houses are private assets the program could be implemented through FONDEN, protecting the resources label to cover losses from this sector.
- Risk information currently available could provide the element for the design of these coverage considering global or regional portfolios against earthquake and hurricane.

