

Argentinean (and Uruguayan) Drought 2018, worst in 7 decades?



Argentinean (and Uruguayan) Drought



Peruvian Floods 2017 (Niño Costero!)



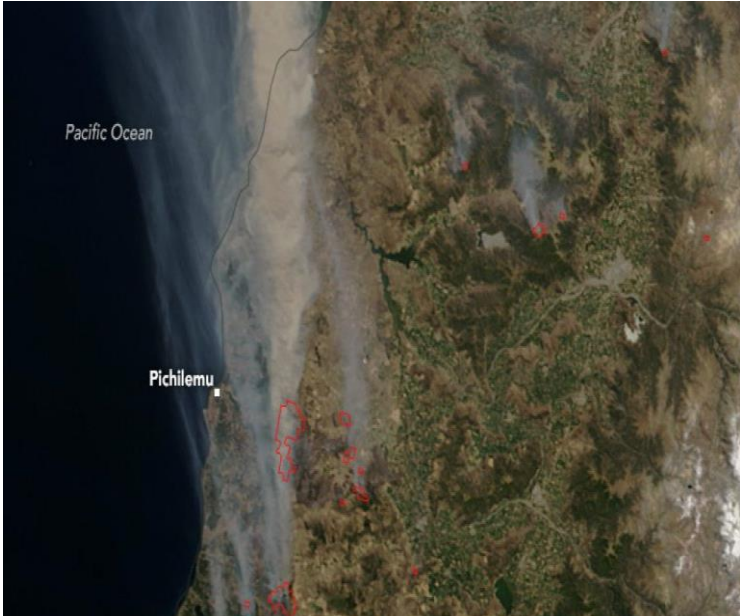
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Peruvian Floods 2017



Chilean Forestry Fires 2017







Al menos 32 campesinos se suicidan en la India al arruinarse sus cultivos

Los trabajadores tomaron la decisión después de que fuertes lluvias y granizadas destrozaran sus campos y quedaran sin recursos para pagar sus préstamos.

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CLIMATE CHANGE AND AGRO INSURANCE

7th Rio de Janeiro Reinsurance Meeting

11 April, 2018



**Thanks very much to the organization for inviting
Partner Re and myself to this prestigious conference.**

We appreciate the honor of participating.

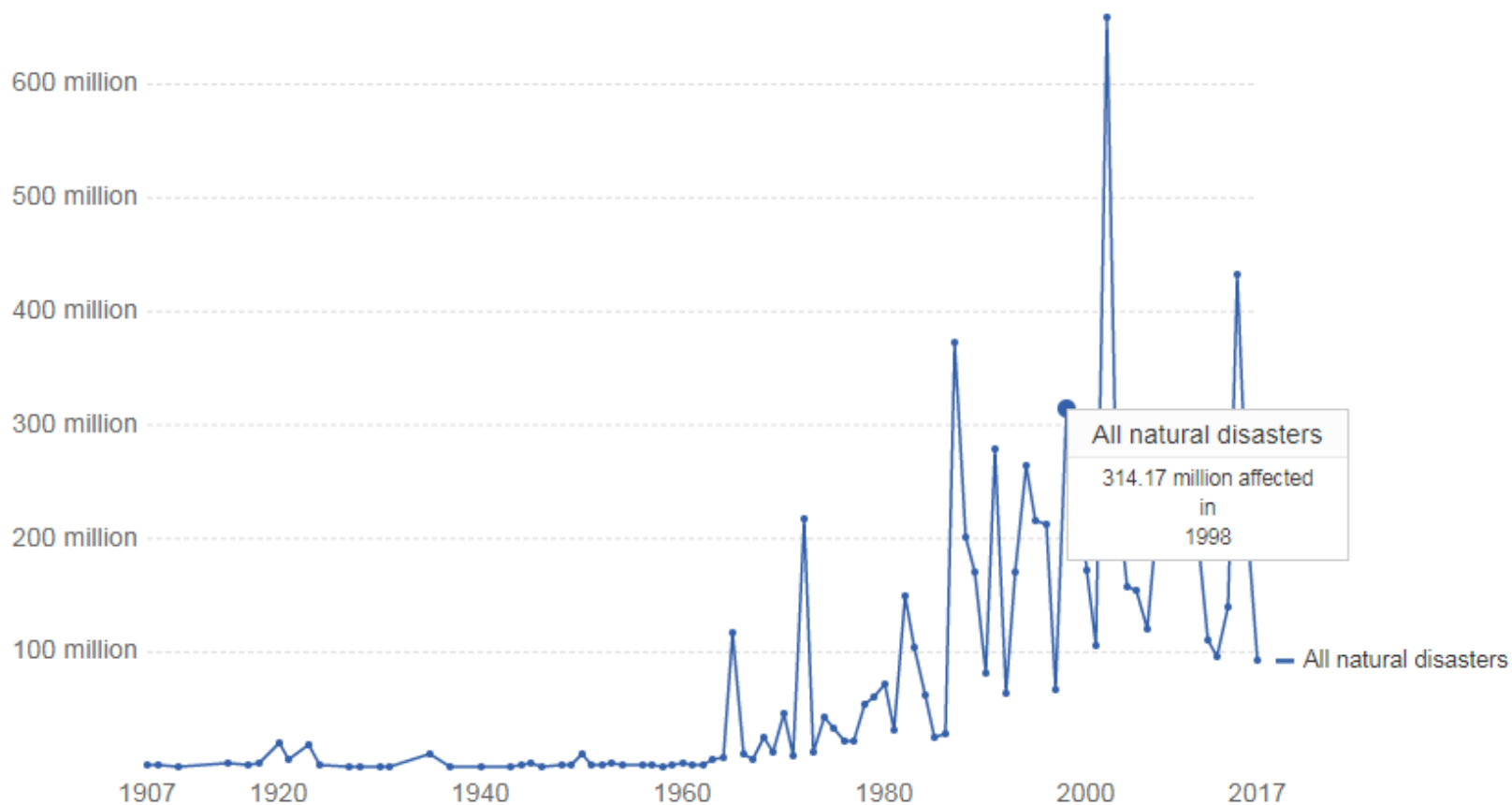


People Affected by Natural Disasters Until 2017

Number of people affected by natural disasters, All natural disasters

Global number of people affected by natural disasters. This is defined as "people requiring immediate assistance during a period of emergency, i.e. requiring basic survival needs such as food, water, shelter, sanitation and immediate medical assistance."

Our World
in Data

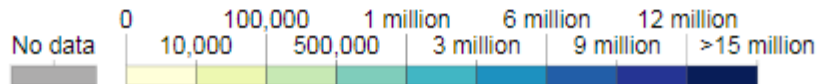
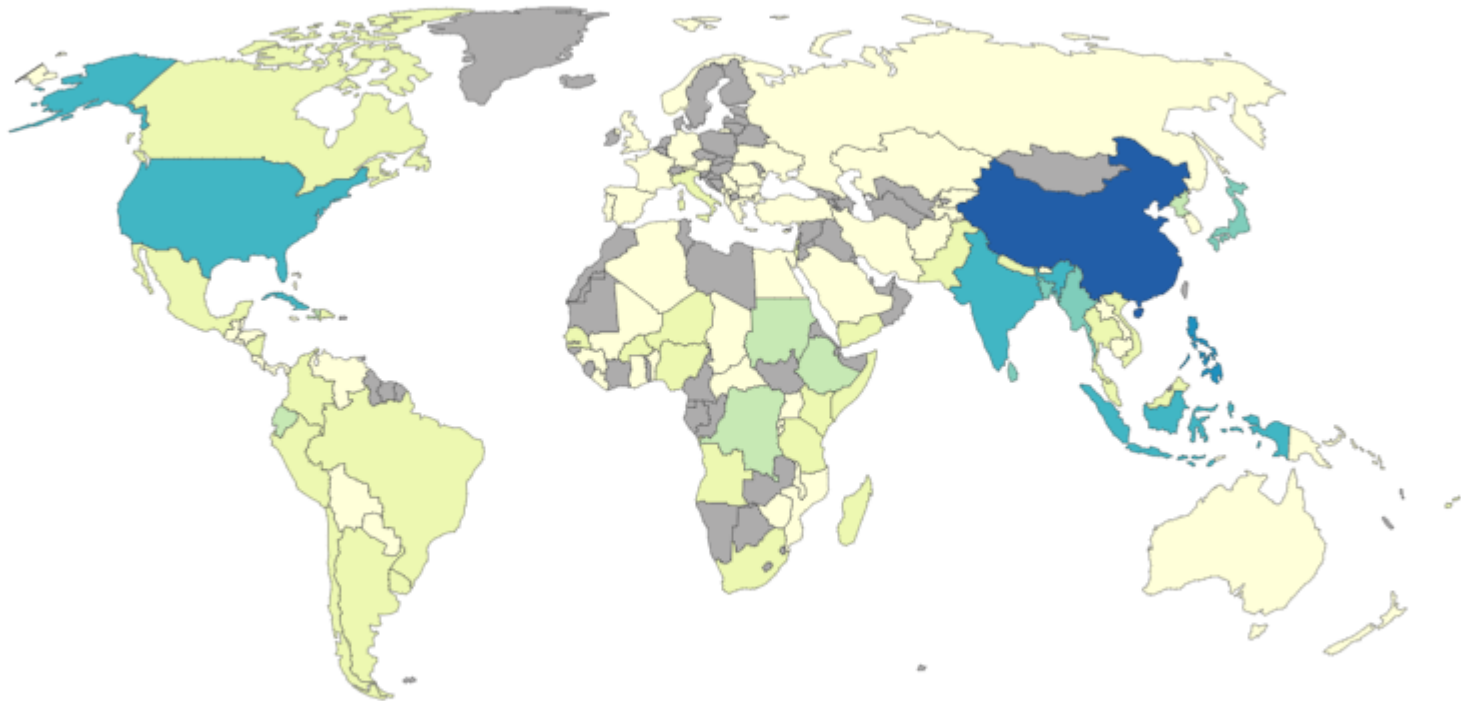


Source: EMDAT (2017): OFDA/CRED International Disaster Database, Université catholique de Louvain – Brussels – Belgium

Displaced People, year 2016

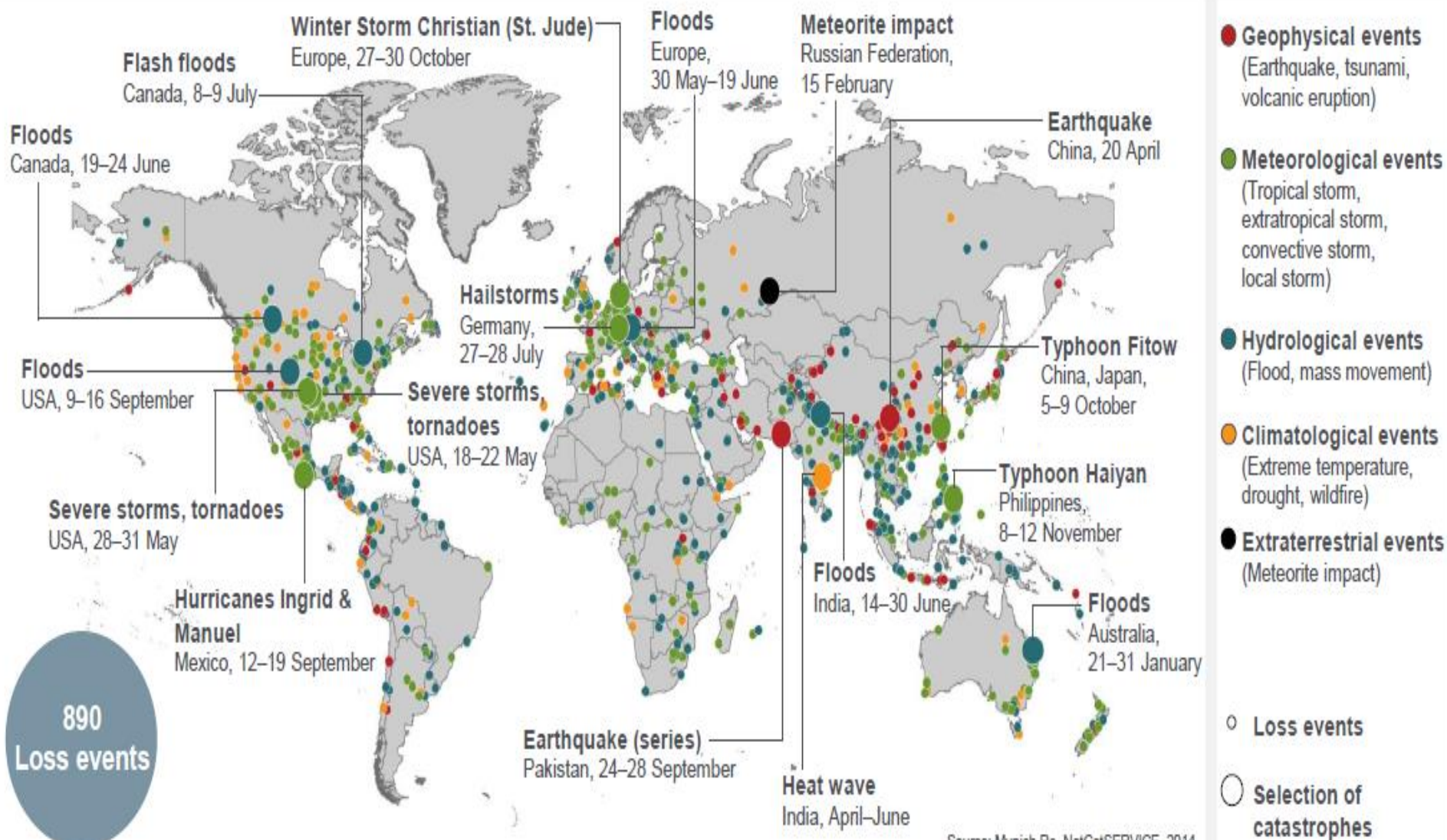
Internally displaced persons from natural disasters, 2016

Internally displaced persons are defined as people or groups of people who have been forced or obliged to flee or to leave their homes or places of habitual residence, as a result of natural or human-made disasters and who have not crossed an international border.

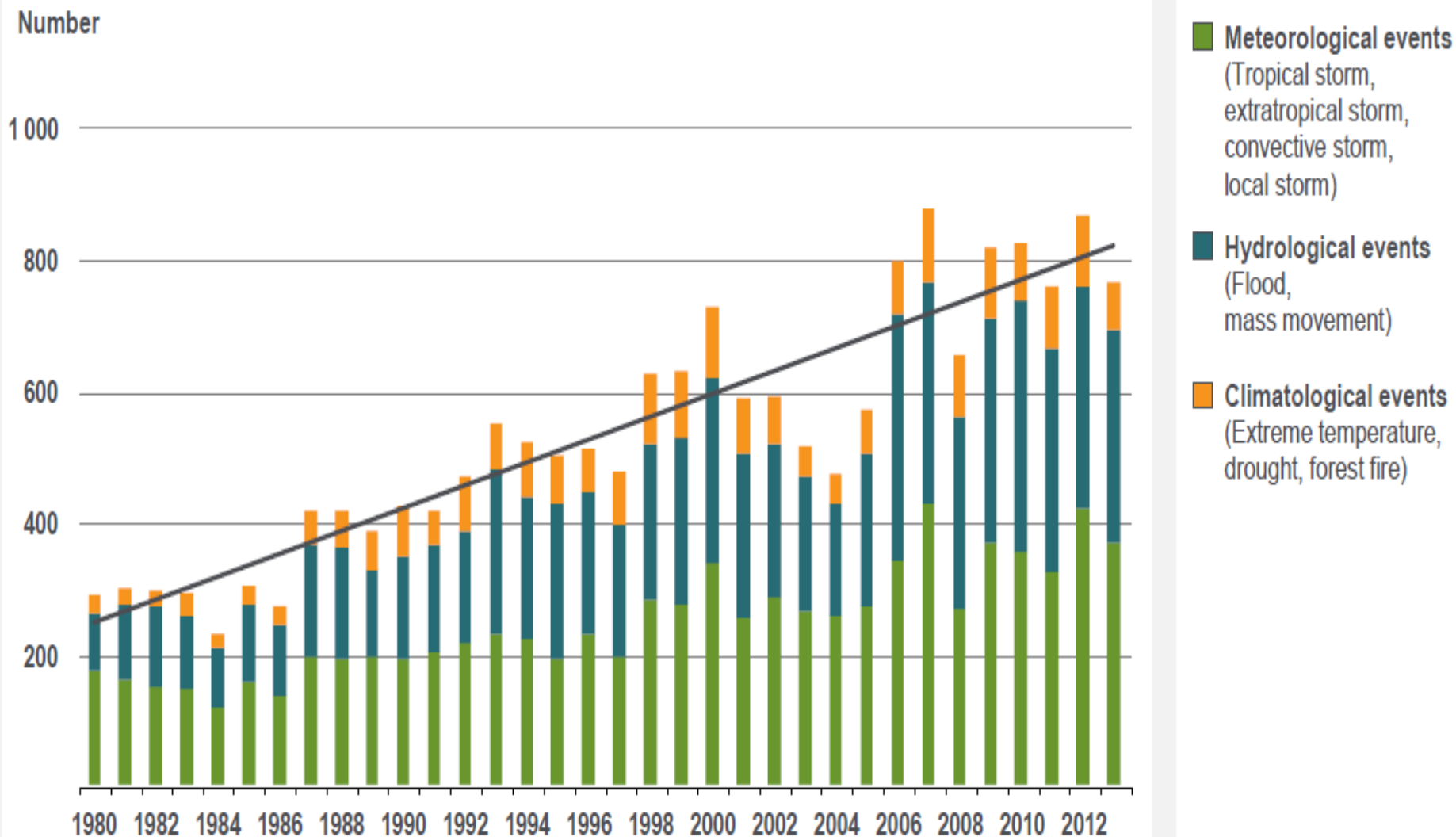


Source: World Bank – WDI

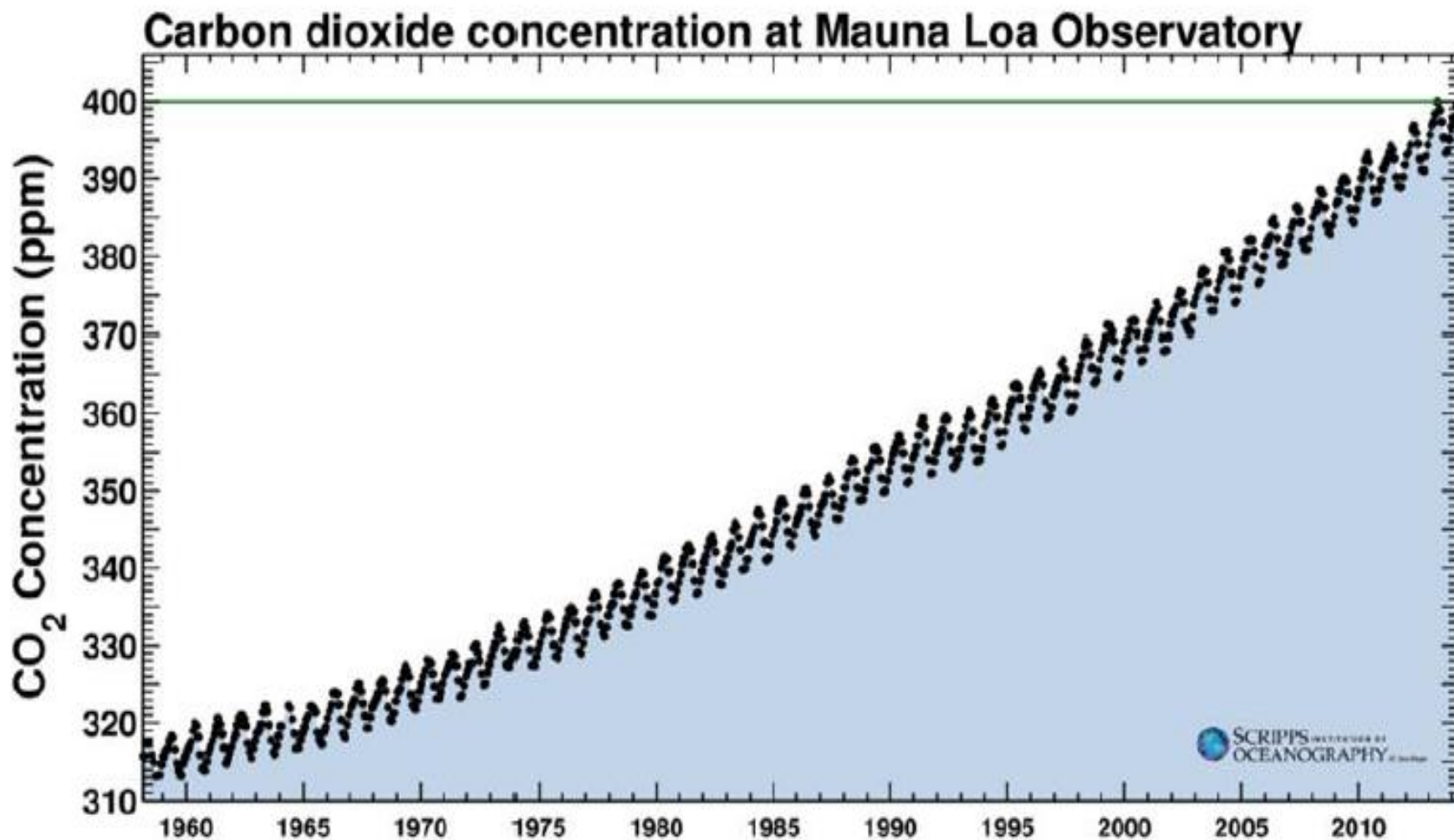
One Year Event (example 2013)



Historical events....increasing...



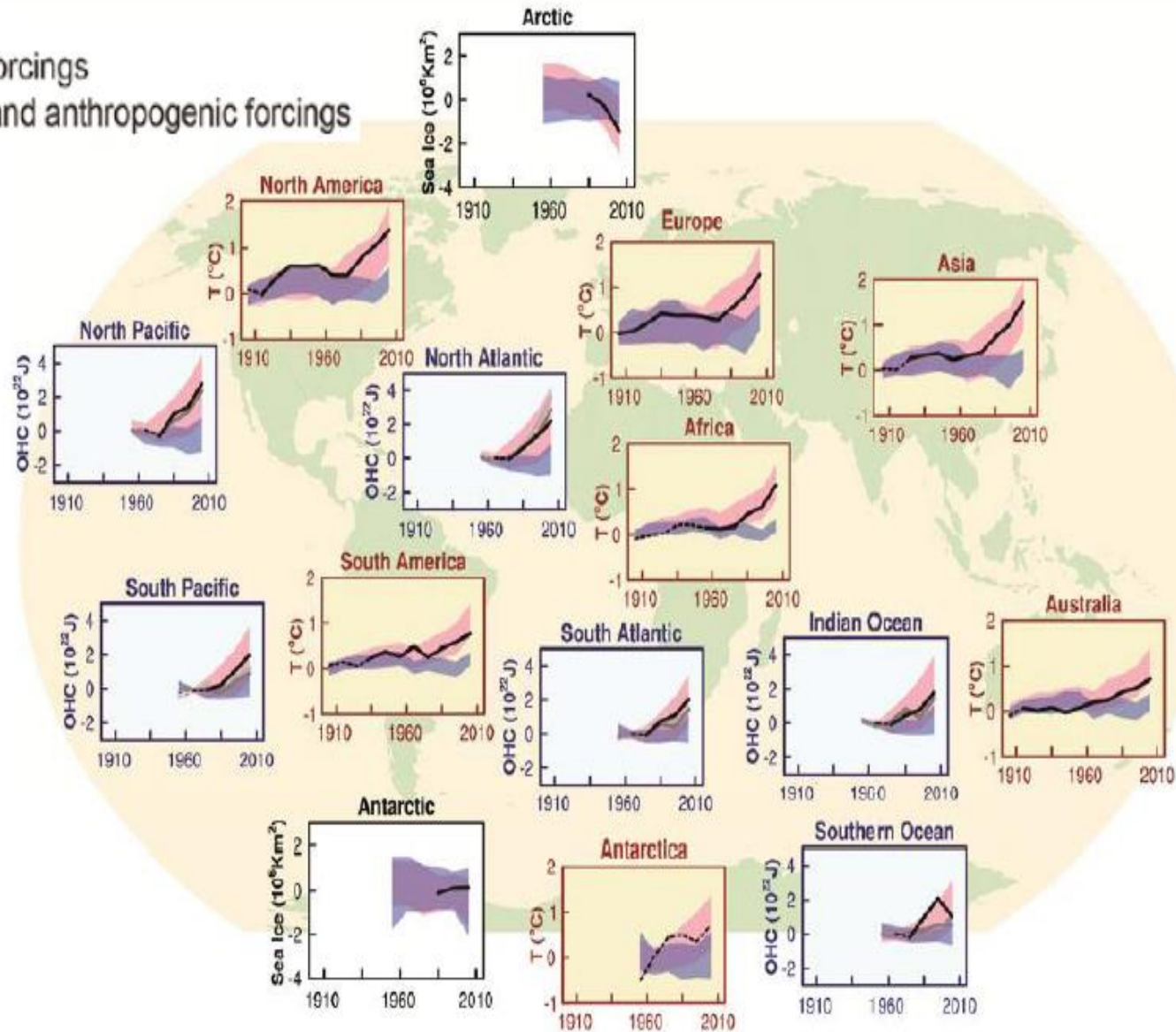
In a **VERY CHANGING WORLD!**



World Temperature IS changing (increasing!)

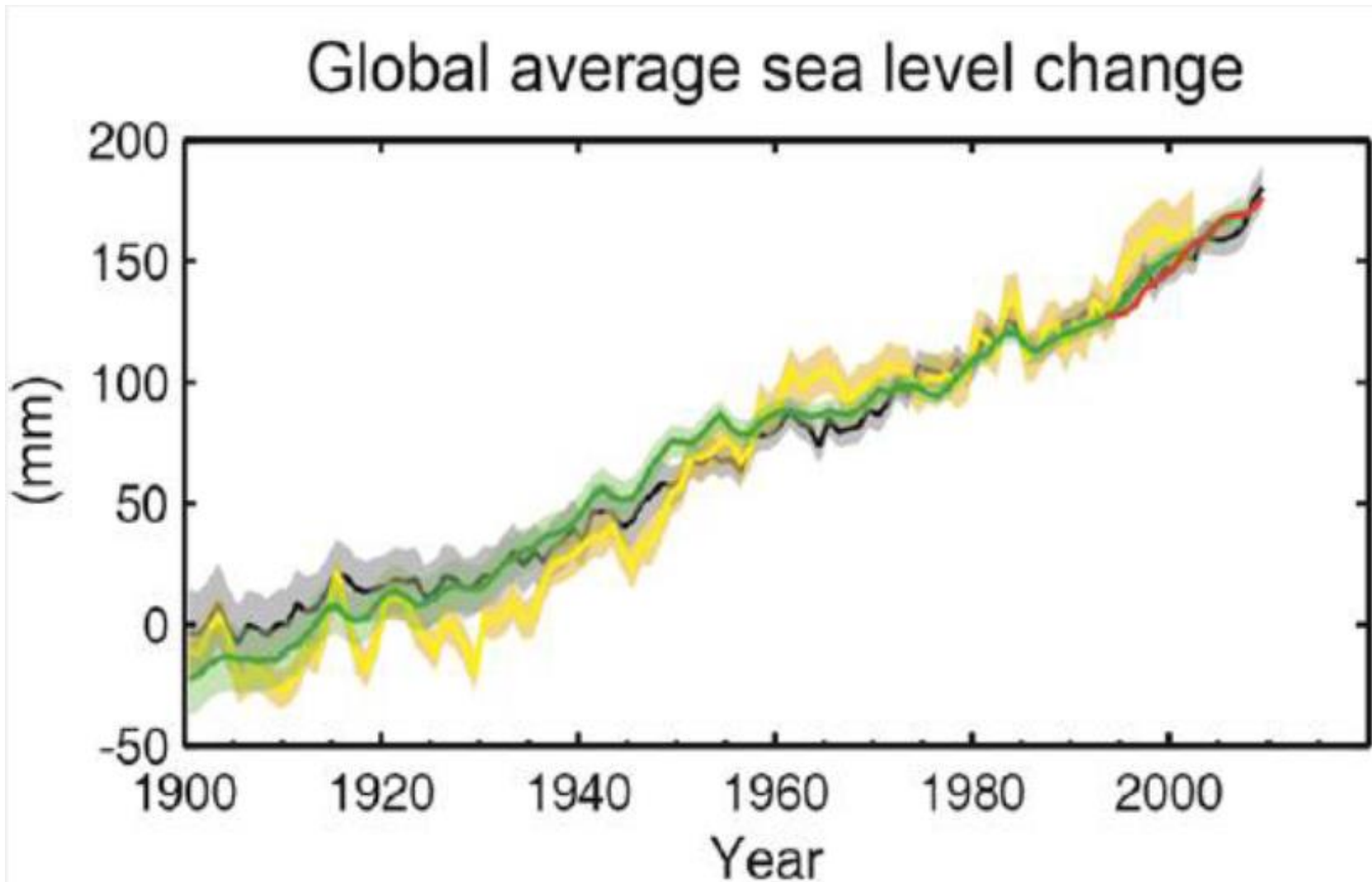
■ Models using only natural forcings
■ Models using both natural and anthropogenic forcings

Observations



IPCC AR5, 2013

Sea Level is changing (increasing!)



What will happen?

- Increased ocean temperature
- Acidification
- Algae blooms and other sea specific that will affect the...WORLD
- More frequent and intense droughts
- Massive forestry fires
- More intense and frequent rains (floods, landsliding)
- Extreme weather (cold....and hot.....)
- Perhaps more typhoons, hurricanes, monsoons?

Baaaa, nothing bad will happen to me!



But I will....really, I will disappear!



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Do we need agro insurance? Are you kidding me?

- **Argentina**
- 2008/09 and 2017/19
- 2012/13: Hail storms never seen before in Marcos Juárez
- **Brasil**
- 2012/13: Worse drought in 50 Years in Nordeste
- **Mexico**
- Feb/11: Cat frost with 800,000 has of Maíze lost
- **Colombia**
- 2010/11: Winter rain affecting 1.1 milo has . 115.000 cattle dead
- **Paraguay**
- 2012 severe drouggh in soybean, 2013 severe frost in wheat
- **Peru and Ecuador**
- 2017 severe niño costero
- **Caribbean hurricanes....what a disaster**

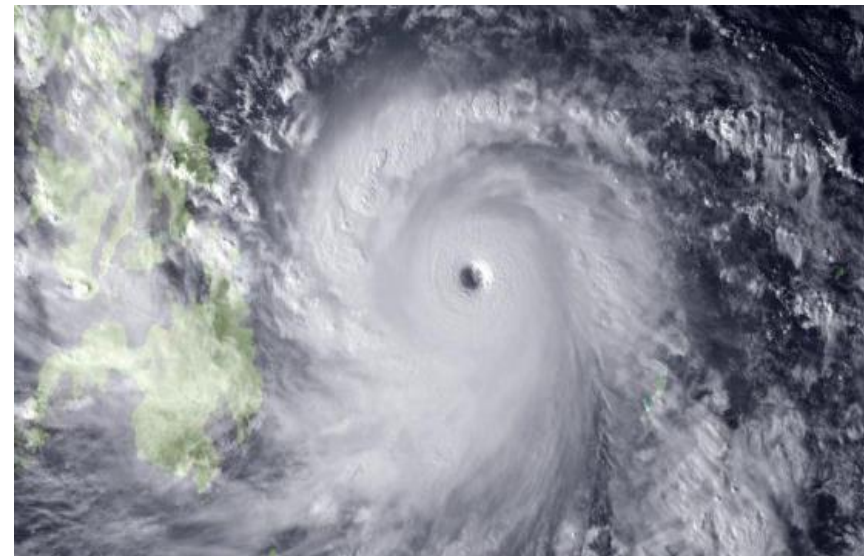
AND A BIG ETCETERA



Do we need agro insurance? Are you kidding me?



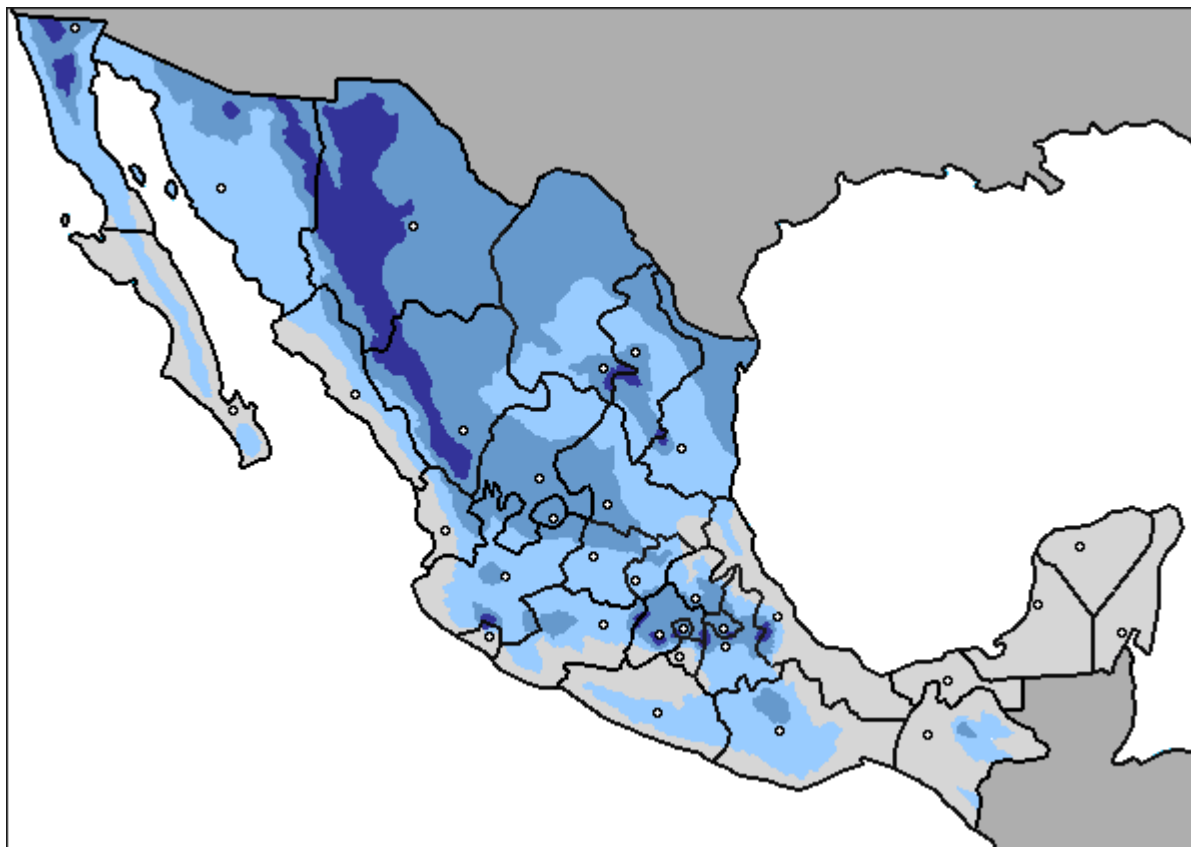
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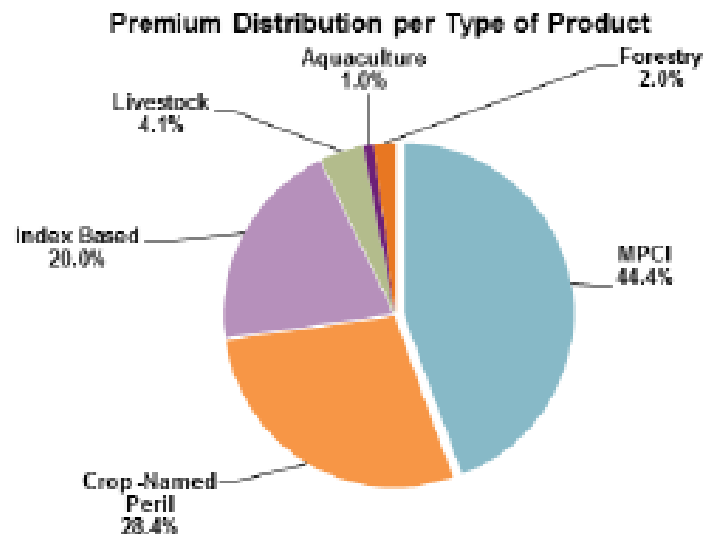
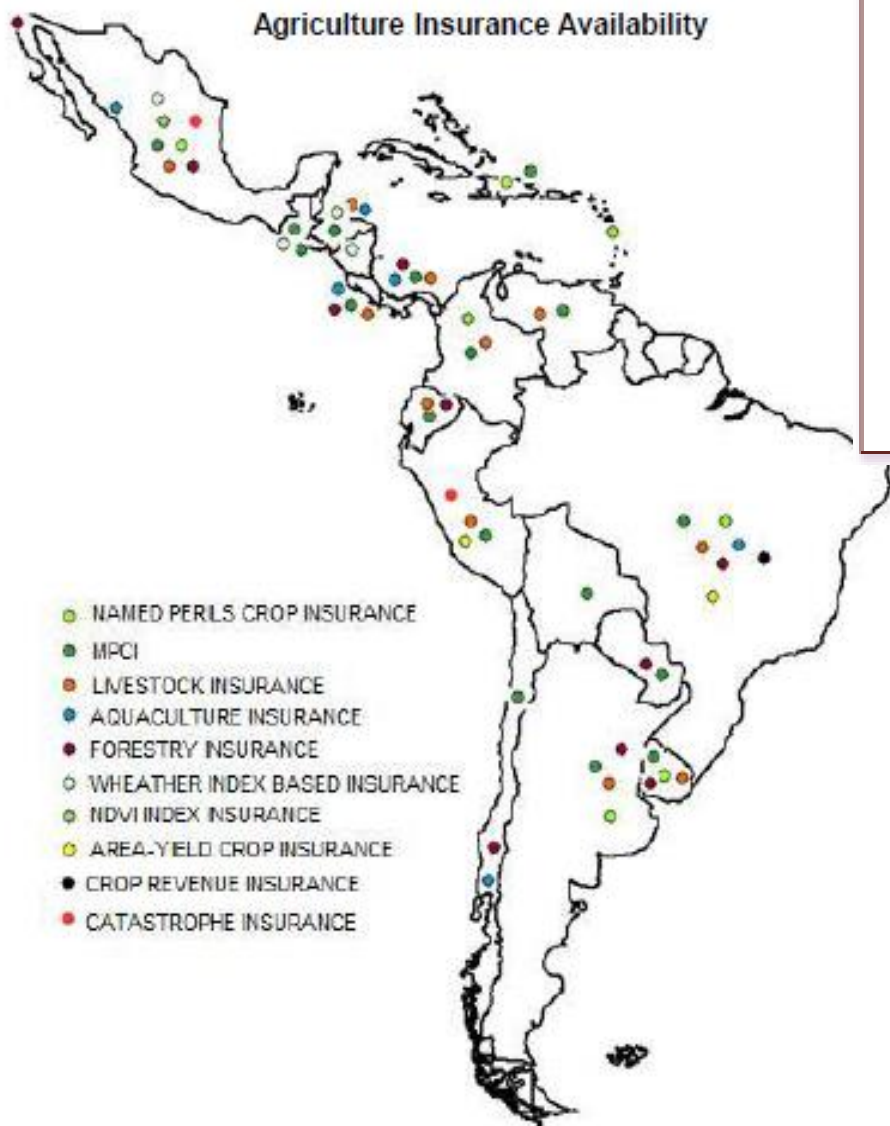
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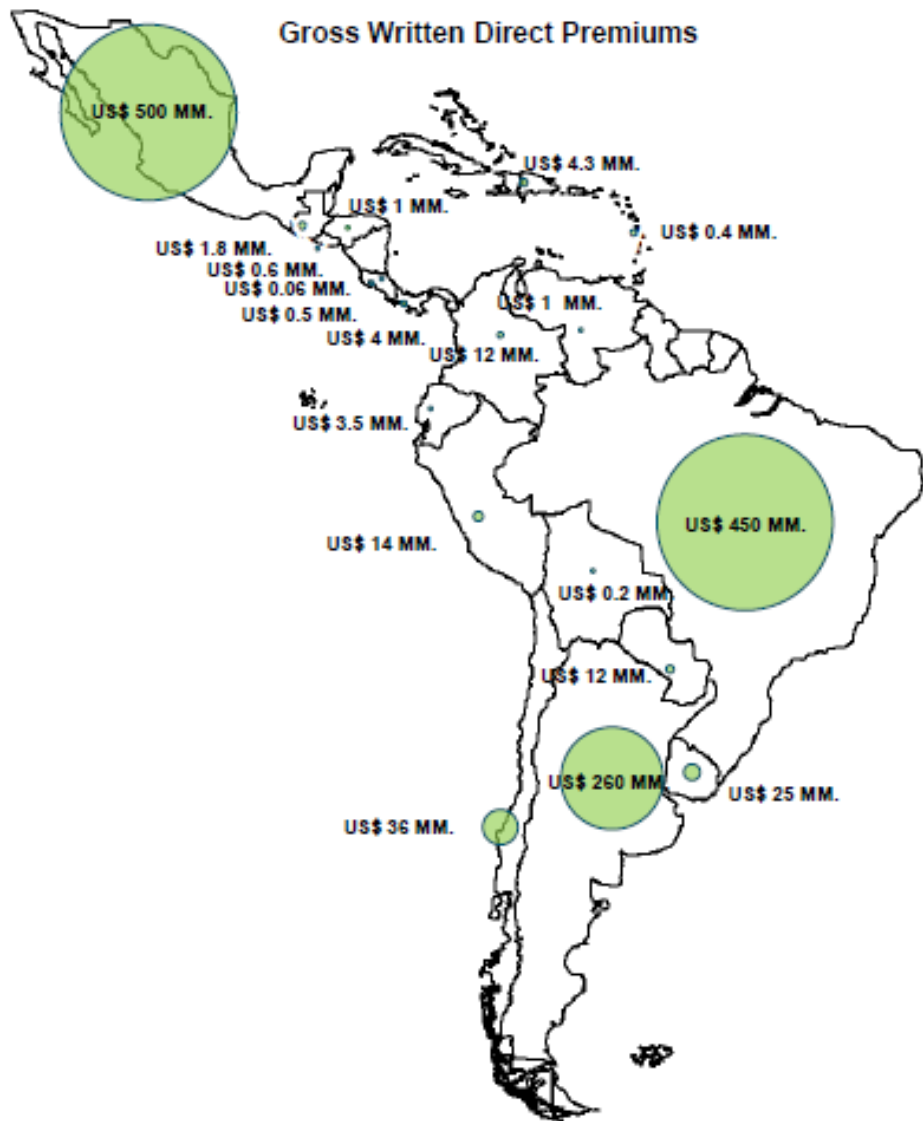
Are we doing it?



- Agro insurance available in 18 /25 countries in LATAM
- 80 insurers and 15 reinsurers offer insurance/reinsurance
- Mainly MPC I, named perils and indexed
- Proportional reinsurance with stop loss of retention

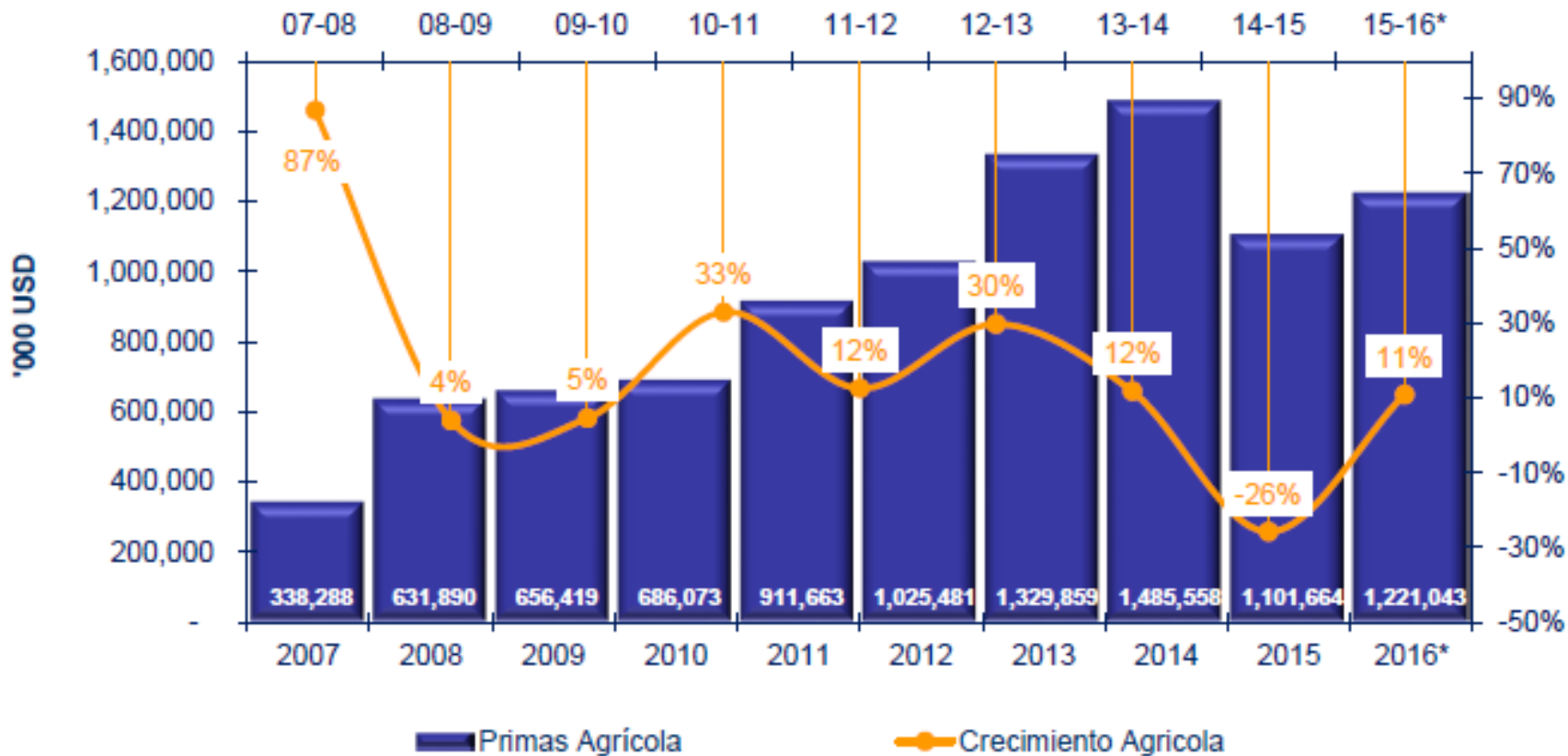
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Are we doing it?



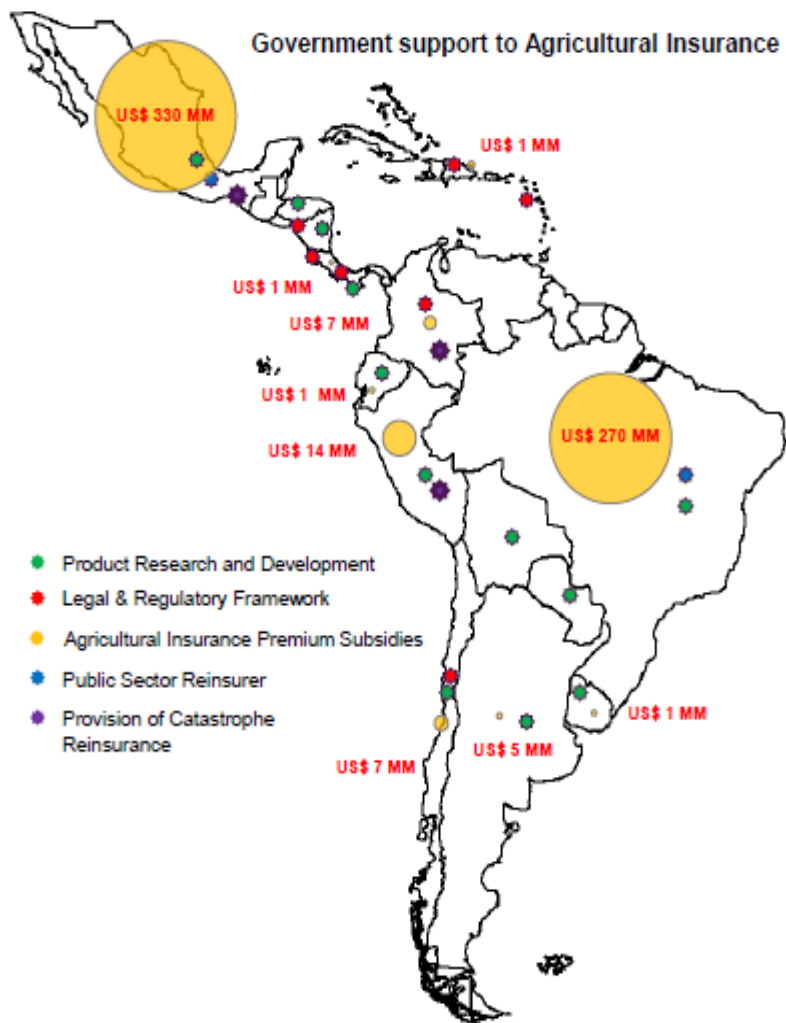
- Premium volume of approx. US\$ 1.3 Bio, 60% ceded to reinsurers
- Brazil, Mexico and Argentina have 90% of premium
- Growth was sustained until 2013 and then it has detained.
- Risk is understood as insurable and has been promoted
- Governments have understood its importance to stabilize both their budget and the stability of agro production and population

Agro Premiums



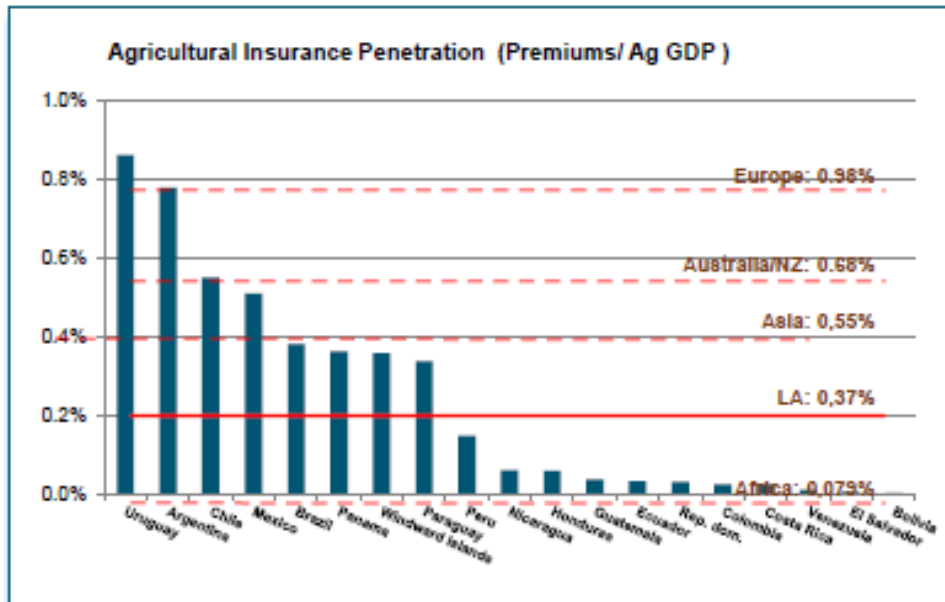
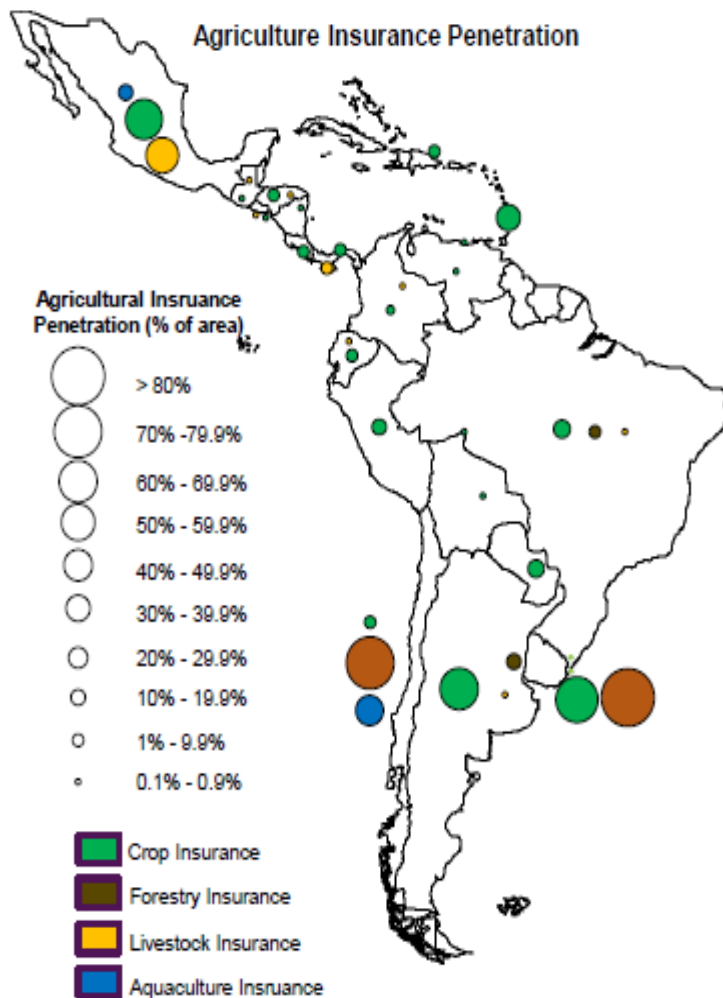
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Government Support



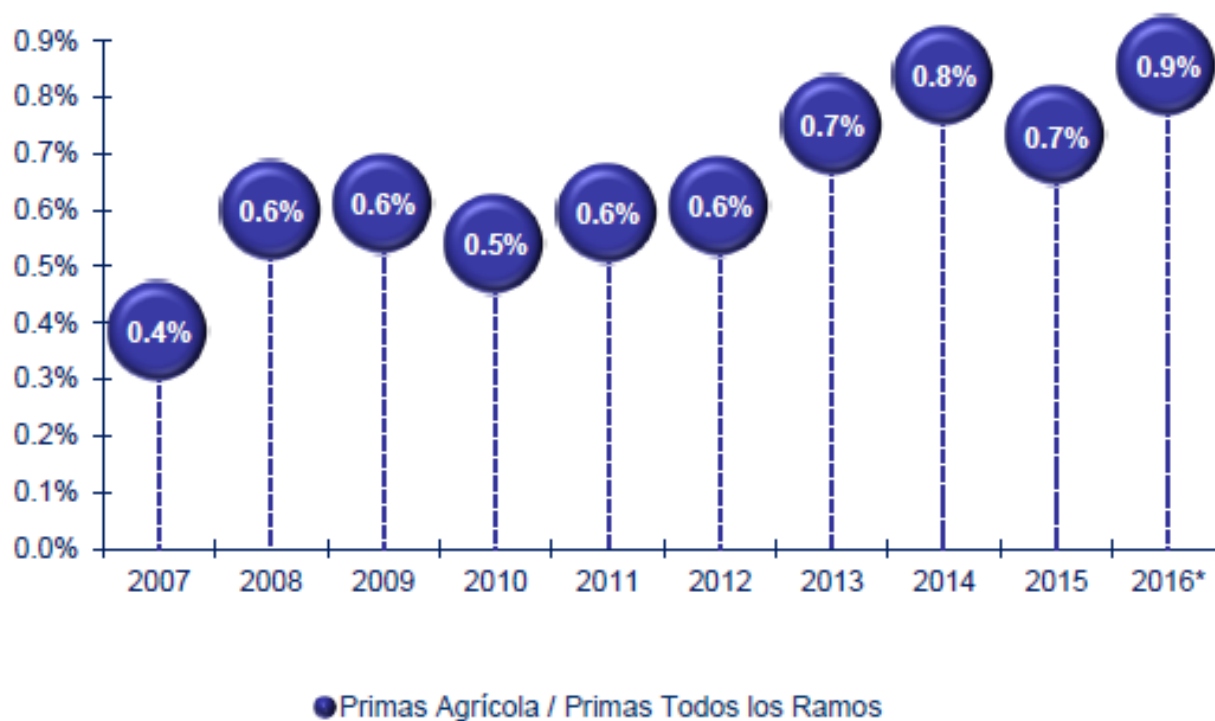
- Different mechanisms of support
- Expense of government in subsidies to agro insurance is perhaps near US\$ 600 MM
- Brazil and Mexico represent 90% of governmental expense
- Volume of premiums is directly related to governmental support

Penetration

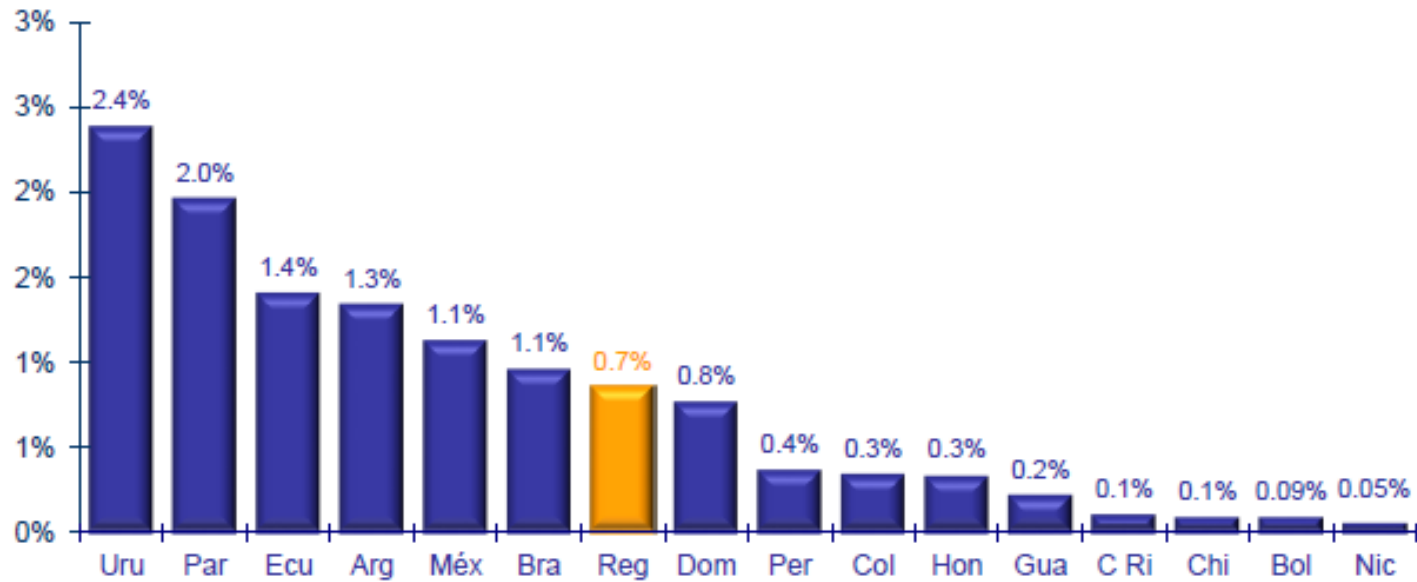


- Still very low penetration and very uneven in the different countries
- 24% of agro is insured
- 19% of forestry is insured
- 1,3% of livestock
- 28% of aquaculture

Agro Premium as a % of total

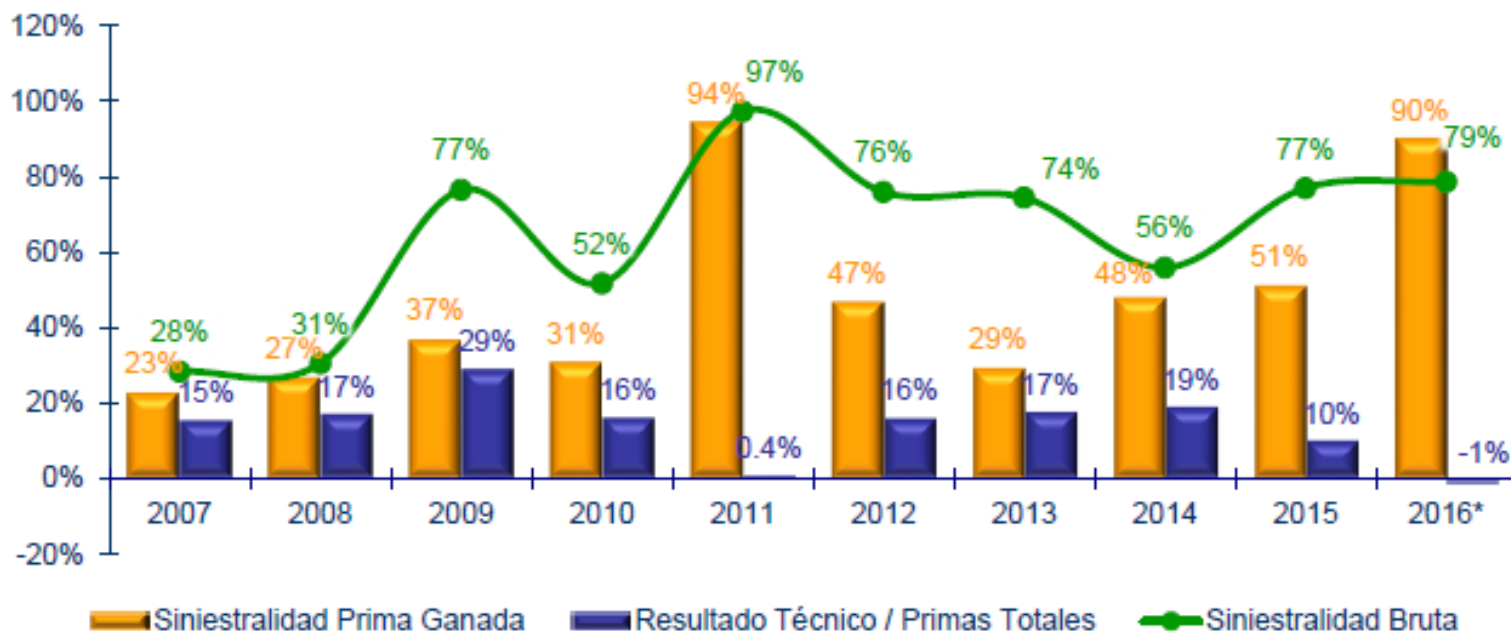


Agro Premium per Country



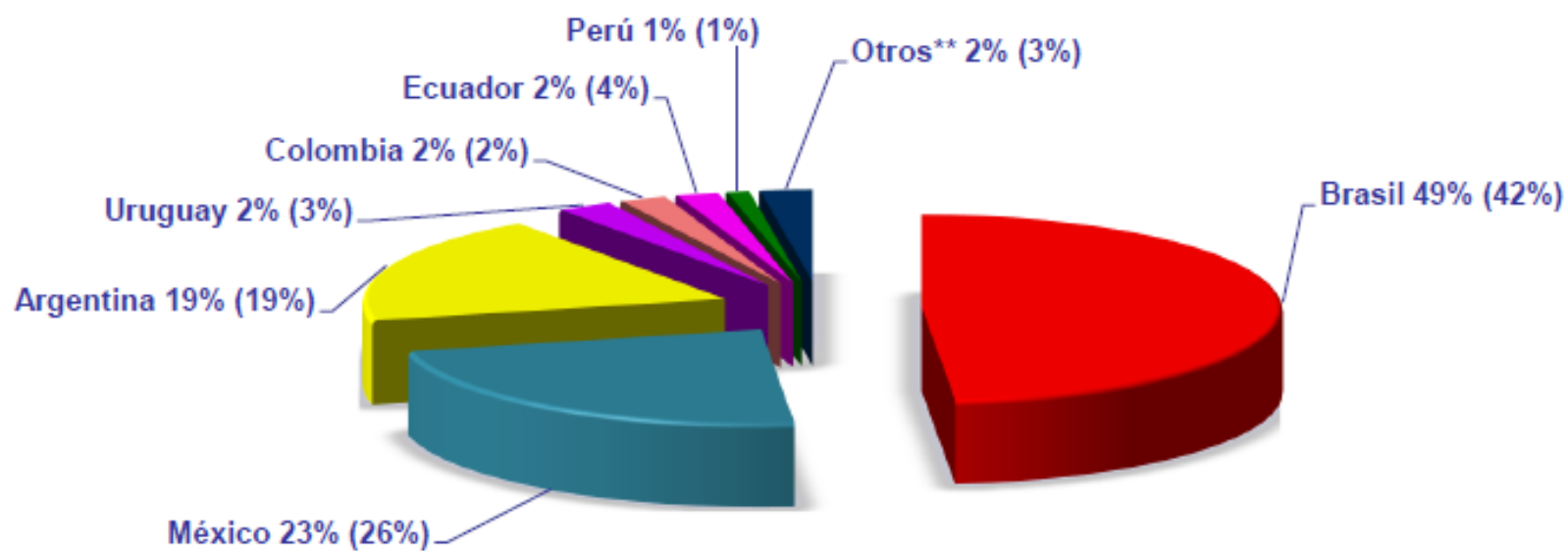
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Loss Ratio and Technical result (%)



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Share of agro insurance per country



Conclusions

- It is a profitable business for insurance companies that do it properly (highly technical)
- Governmental Support is crucial to cover MPCl and its massification. legislation, subsidies, administration costs and information are important issues for success
- Climate change implies such a risk that it is difficult to consider growth without agro insurance
- High technology in the fields will be crucial to defeat the difficulties of the future, relation with sophisticated companies helping might be key (Farmers Edge)



Thank you very much

Daniel Hammer

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