

Closing the protection
gap: Climate risk management in agriculture

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Workshop "Climate Change
Impact on Agriculture in
Croatia", Zagreb,
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Croatia Osiguranje

Protection Gap

Effects of Climate Change

Public Private Partnerships

Outlook



OSIGURANJA

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TETE

PRIJAVITE SE

Osiguranje usjeva i nasada

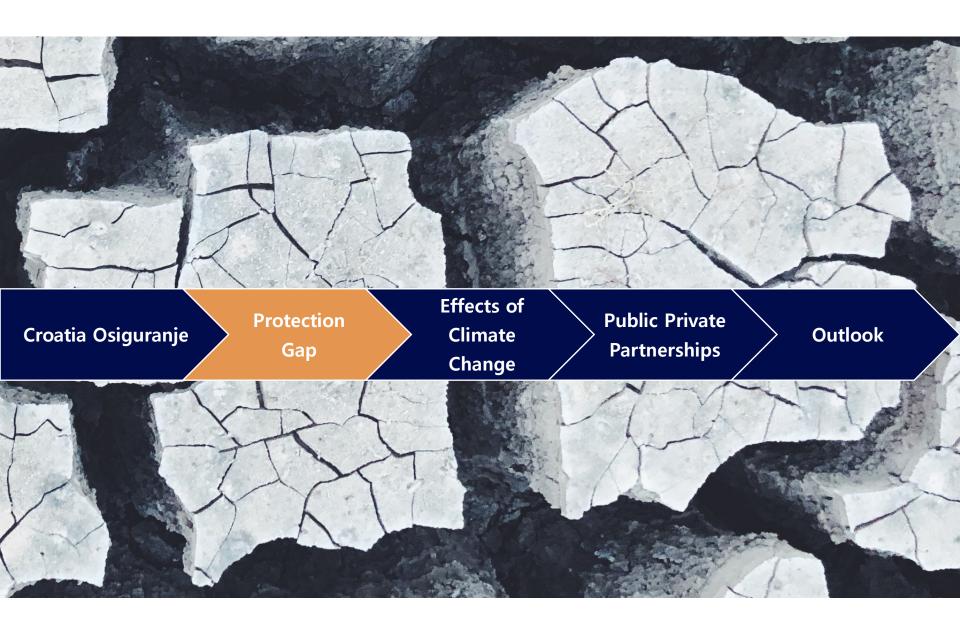
Osigurajte svoje usjeve i plodove vinograda, maslinika ili voćnjaka od šteta nastalih djelovanjem prirodnih nepogoda, a EU će vam pokriti do 70 posto premije.

ZATRAŽITE PONUDU



CROATIA OSIGURANJE HAS BEEN AROUND FOR 136 YEARS

- CROATIA osiguranje is the **oldest Croatian insurance company** and one of the oldest in Europe
- CROATIA osiguranje is the **leading insurance company in Croatia**; in the domain of professionalism and expertise, it can compete with foreign insurance companies
- CROATIA osiguranje is the leading CROP insurance company in Croatia with a market share more than 72% in 2020
- The "favourite neighbour" available at **more than 1.000 retail outlets** in every corner of Croatia (the company has an internal sales network and partners such as banks and post offices)



Protection Gap



The term "Protection gap" describes the difference between the total economic losses generated by natural catastrophes and the economic value insured over a given time period!

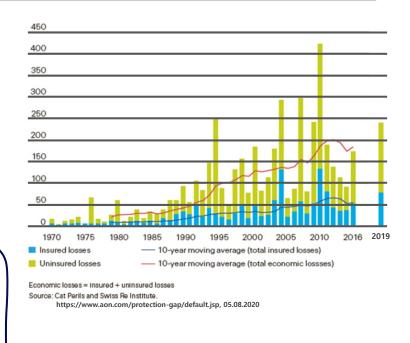
- Steadily widening in developed and emerging markets
- Agriculture in particular affected by new weather patterns (increased frequency & severity)
- Gap can be closed by managing the impacts of factors such as climate change, systemic risks, technology, etc.

"Our sector will struggle to reduce this protection gap if our response is limited to avoiding, rather than managing, society's exposure to climate risk"

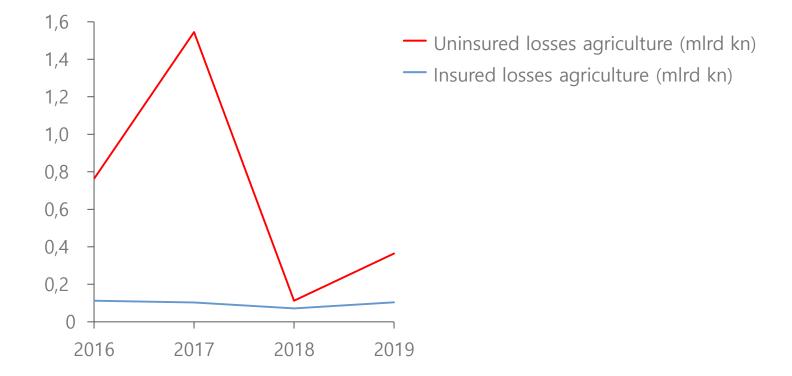
Maurice Tulloch, Chairman of Global General Insurance at Aviva

CRO Forum (2018)

"The heat is on",



Protection Gap - Croatia



Protection Gap

- Efforts addressing the various challenges facing current agriculture are often done in isolation and not holistically
- Agricultural Insurance
 - is unpopular due to "financial literacy" and limited scope → Education needed
 - does not address systemic catastrophe risks such as drought → Product innovation
 - remains unattractive when substantial amounts of disaster payments are payed by governments

Volatility of farmers'
income (natural hazards & commodity price fluctuations)

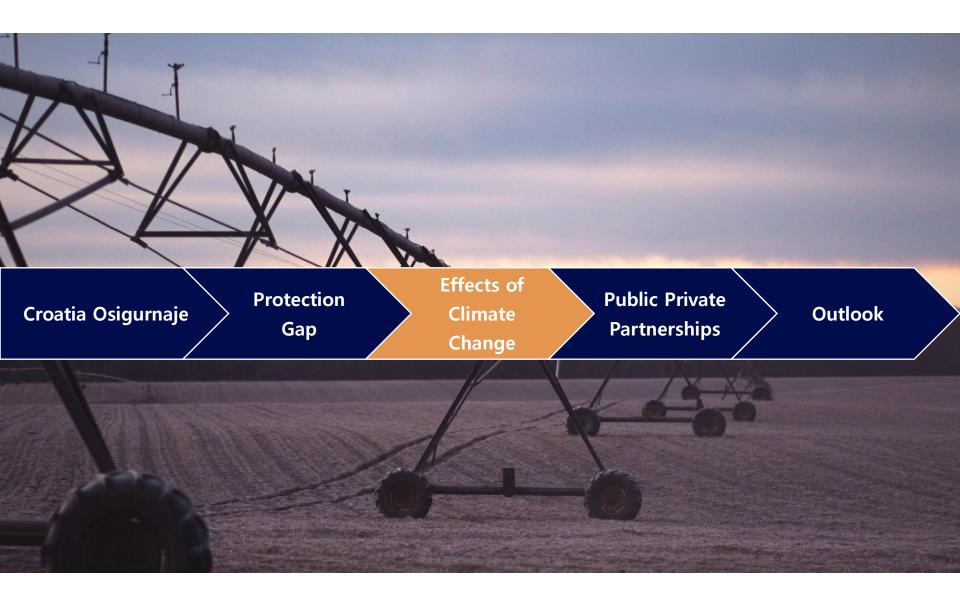


 Lack of relevant data for development of new risk management tools



 Insufficient and ineffective resilience-increasing measures by GOVT





Effects of Climate Change - Systemic Risk Drought



- Increased probability of drought years in the Mediterranean
- There is already evidence that certain extreme Events (e.g. heatwaves, **drought**) are **more frequent**
- It is estimated that 60% of global cropland may be degraded as soil moisture falls dramatically in many key regions
- **Heat stress** reduces yields from crops
- Weather damage causes cumulative destruction

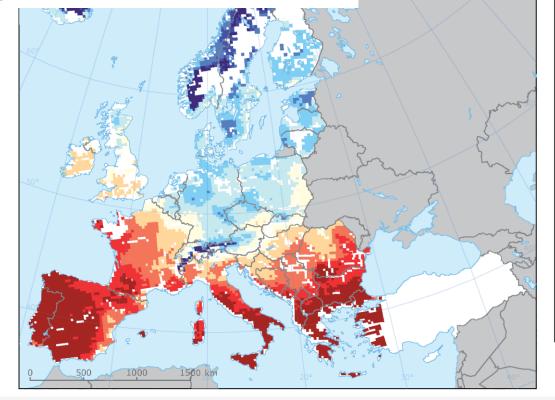


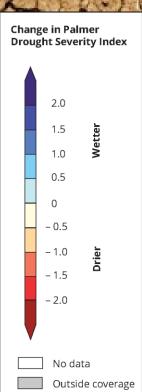
Source:

https://www.eea.europa.eu/data-and-maps/figures/changes-in-summersoil-moisture, 27.08,2020

Effects of Climate Change - Systemic Risk Drought

Projected change in summer soil moisture, EEA (2015), presented as mean multi-model change between 1961-1990 and 2021-2050





Cource:

https://www.eea.europa.eu/data-and-maps/figures/changes-in-summersoil-moisture. 27.08.2020

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Croatia Osiguranje **Protection Gap Public Private Partnerships** Outlook

Effects of Climate Change Systemic Risk Frost

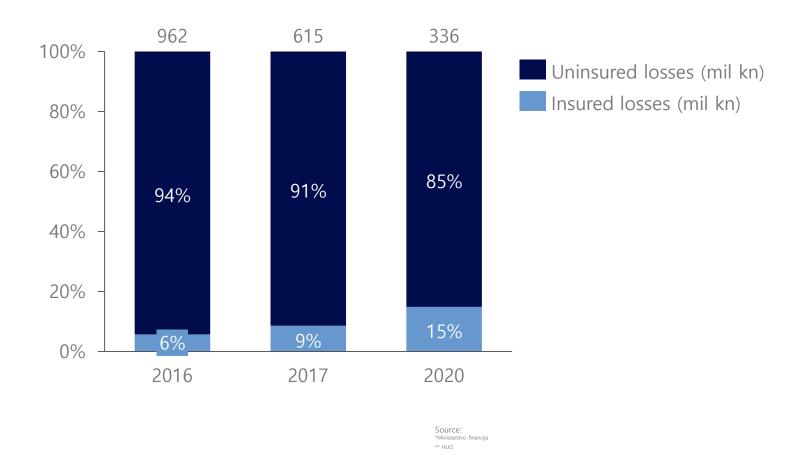


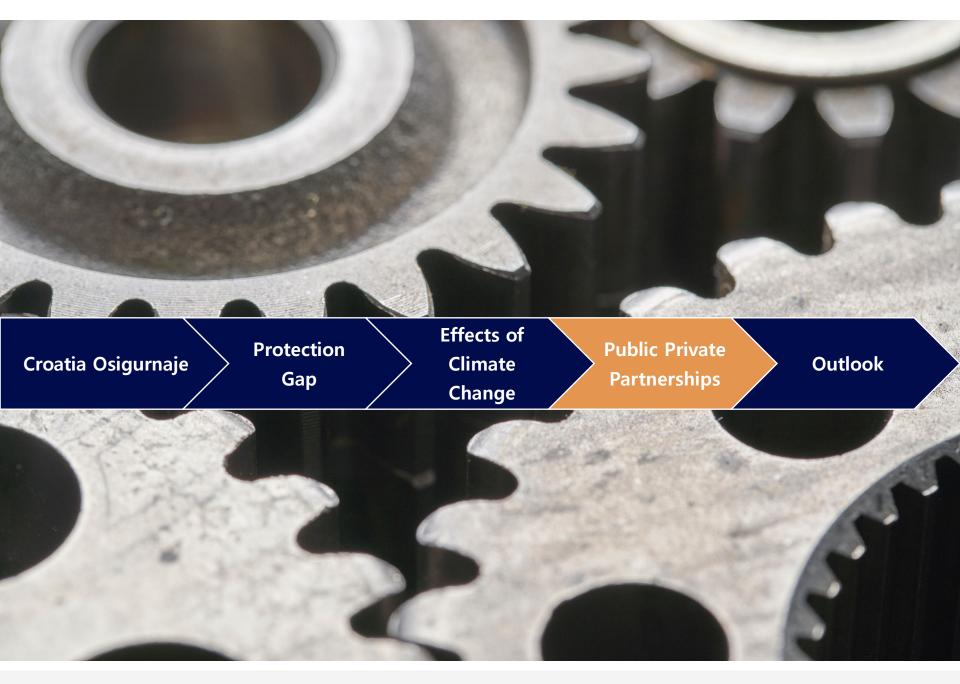
- Climate change will lead to warmer winters having serious effects on orchard production (but not limited to) in two major ways:
 - Because blossoming occurs earlier in spring, late Frost events lead more often to significant damage
 - Blossoming is less successful because the winter was too warm (blossoming depends on temperature history in winter and spring)¹
 - In 2019, exceptionally warm February (+2.0 to +4.0 °C) in Eastern Europe and very cold May throughout Europe (-2.0 to -3.0 °C below normal)²

¹Pfleiderer et al., 2019. Climatic Change 157: 515-525.

²Blunden, J. and D. S. Arndt, Eds., 2020: State of the Climate in 2019. Bull. Amer. Meteor. Soc., 101 (8), S364-S365 https://doi.org/10.1175/2020BAMSStateoftheClimate.1

Effects of Climate Change - Spring frost in Croatia

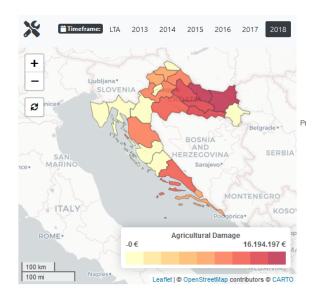




Public Private Partnerships

STATUS QUO CROATIA

- Croatia is one of the countries in the EU with the largest annual losses due to natural hazards (on average 0,2% of Croatia's GDP)
- European Funds (CAP) cover up to 70% of the total premium
- Agricultural insurance penetration is estimated to be ~15%





Rural structure factsheets:



Total population (2019) in

Predominantly rural regions: 42,6%

Intermediate regions: 37,6%

Farm holdings (2016):

Total	134.460
UAA* < 5ha	69,5%
Economic Size < 4000€	48,2%
Holder < 35 years	5.1%
Holder > 64 years	32.7%
UAA* per holding (ha)	11,6

Economic importance of Agriculture-Contribution to GDP

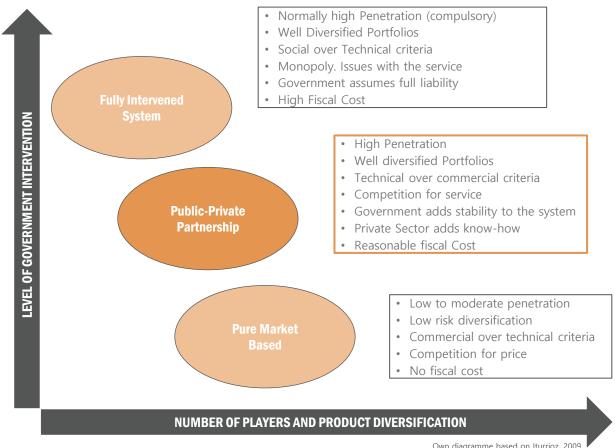
In comparison:

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Worldwide	3.8%	
EU-28	1.5%	
Croatia (2019)	2.5%	

*UAA = Utilised Agricultural Area

Public Private Partnerships

DIFFERENT INSURANCE SCHEME DESIGNS



Own diagramme based on Iturrioz, 2009

Public Private Partnerships



ADAPTATION NEEDED



The public sector and the insurance industry have to adapt to...

- ...the changing climatological and environmental situation in Croatia
- ...specific demand and requirements by the farming society
- ...changing patterns of the Agricultural sector
- ...EU regulations to be taken into account with the new CAP 2020

... by understanding, monitoring & managing the risks in the sector:

- Implementation of basic tools to monitor the risks for a market's agricultural sector
- Evaluate and model the entire spectrum of natural perils (incl. Climate change) & commercial risks (crops& livestock)
- Close cooperation involving national Insurance Industry, the Ministry of Agriculture and other stakeholders
- Design a complete risk profile & financing model across government grants, bank lending and insurance
- Provide capacity building across the entire agricultural insurance value chain

Importance of insurance for agricultural production

For Farmers

- outdoor factory
- large investments
- high risks effects of climate change
- material damage up to 100%, while at the same time current liabilities remain the same: delivery of products / services, liabilities to suppliers, payment of salaries, etc.

(Subsidised) Insurance premium should be a certain, fixed and planned cost!

For State

- higher financial stability and protection of the agricultural sector
- reducing the "dependence" of agriculture on the state in the event of natural disasters
- better strategic budget planning by the Government



Hvala na pažnji!