



HRVATSKO AGROEKONOMSKO DRUŠTVO
CROATIAN SOCIETY OF AGRICULTURAL ECONOMISTS



A holistic view on risks for farmers in Croatia

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Climate Change Impact on Agriculture in Croatia

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GENILLARD & CO
—INSURANCE FACTORY—

Discussion Points!

Risk is increasing!

- Climate risk
- Price/Market Risk

Supply of risk management instruments is insufficient or decreasing

Influencing farm income risk and competitiveness

Risk management is a key interest for

- Farmers
- Agribusiness
- Policy makers



Annual occurrence of climate-related disasters

1980 - 1990
↓
149

2004 - 2014
↓
332

Annual economic damage of climate-related disasters

1980 - 1990
↓
14 billion
USD

2004 - 2014
↓
100 billion
USD



Izvor: FAO (2016.). Damage and losses from climate-related disasters in agricultural sectors. www.fao.org/climate-change

Farming Business – Challenges!

- Climate change and extreme weather events (hail, frost, drought)
- Market and price risk
- Value chain risk (market power within the chain)
- Epidemic disease outbreak
- Institutional risk
- COVID-19 pandemic;
- **Challenges for Croatian farmers and agribusiness!**

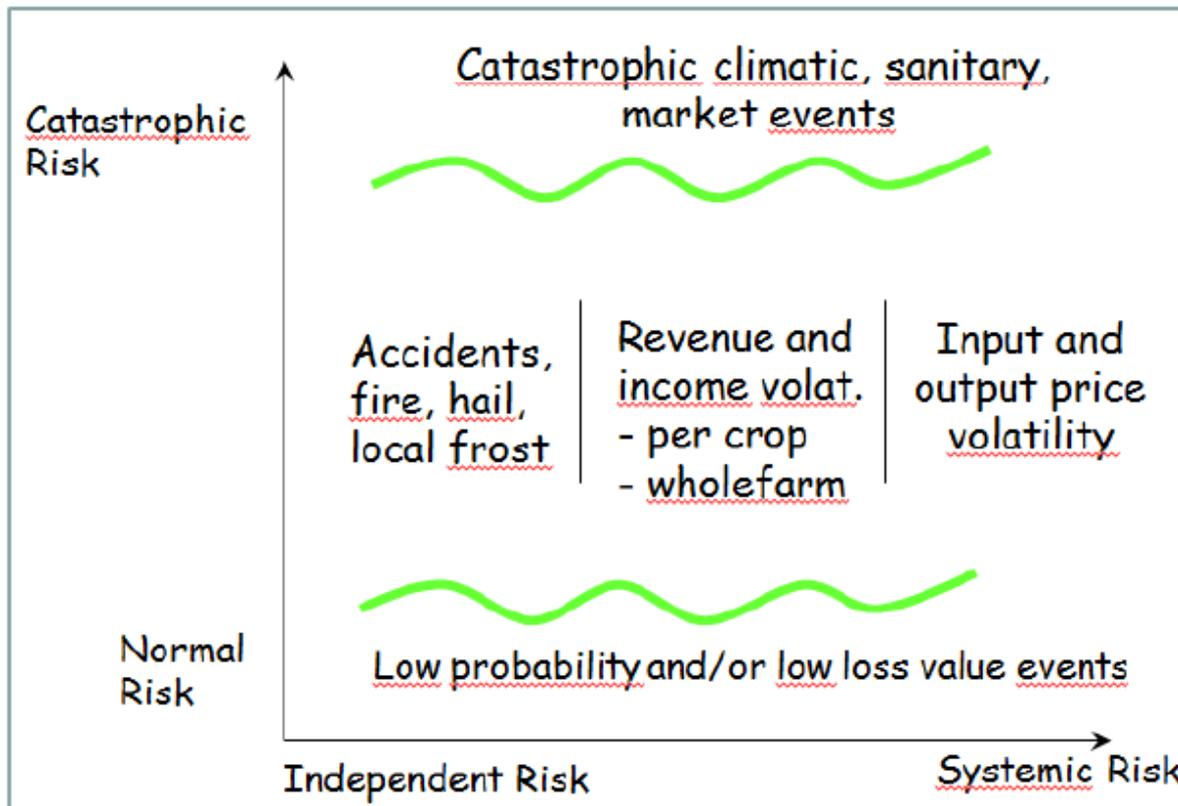
Risk Management Strategies

Ex ante strategies

- On-farm
- Market Available
 - Insurance
 - Price risk management (contracting and hedging)

Ex post strategies

Limited supply of risk management in agriculture - where is the problem?



Source: adapted from Cordier et al. 2004

Cordier, J. (2015). Comparative analysis of risk management tools supported by the 2014 US Farm Bill and the CAP

Indemnity insurance:

Only some risks and farms covered

Limited coverage especially for systemic risks

Negative selection and moral hazard



Innovation to complement indemnity insurance?

Scaling up index insurance for smallholder farmers



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



What is index insurance?

Index insurance is coverage based on an "index" correlated with farmers' losses.

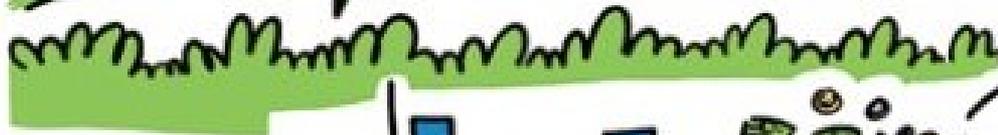


Growing season rainfall
(a "weather-based" index)

Vegetation levels
(a "satellite-based" index)



Average regional
yield losses
(an "area yield"
index)



Farmers get paid only if this index falls above or below a pre-specified threshold so it's important that the schemes:

-Accurately capture farmers' reality on the ground.



-Ensure farmers know they may not get a payout even when they suffer a loss.



Innovation in insurance - Index

- Index based on
- yield, weather (precipitation, number of sunny days...), composite index (rain, soil moisture...), satellite data (evapotranspiration...)

Price risk management

Contracting

Hedging

Price index based
hedging

Cooperatives/POs

Common Agricultural Policy

- Rural development programs
 - Investment measures
 - Disaster relief measure
 - Financial instruments
 - Risk transfer instruments
 - crop insurance,
 - mutual funds,
 - Income stabilization tools
 - Market management measures
 - **Direct payments**
- 

HOLISTIC VIEW ON RISK MANAGEMENT- WHY?

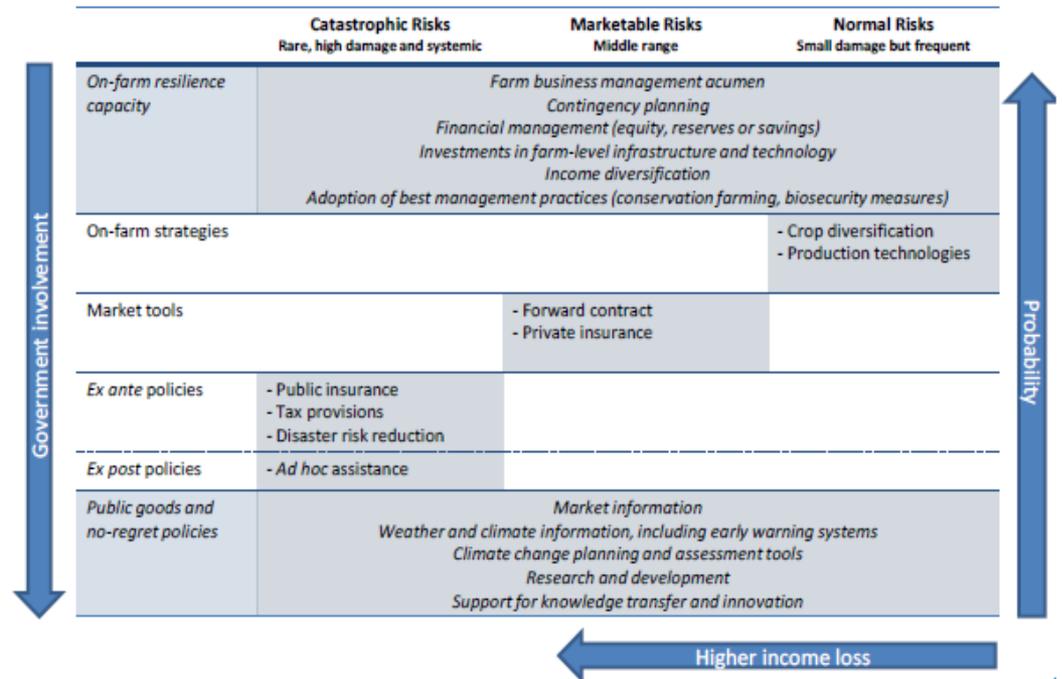
**From Linear or Silo approach
to Holistic approach!**

Maintenance of the essential functions of farming systems in the face of increasingly complex and volatile economic, environmental, social and institutional challenges through capacities of robustness, adaptability and transformability (Bullock et al., 2017).



Holistic Risk Management- How?

- Absorb
- Adapt
- Transform



Source: OECD (2020), *Strengthening Agricultural Resilience in the Face of Multiple Risks*, OECD Publishing, Paris, <https://doi.org/10.1787/2250453e-en>.

Development of holistic risk management for Croatian agriculture

- (ICT) Innovation- opportunity to support risk analysis and designing optimal risk management portfolios
- Advances in digital technologies (data collection, data analysis, data storage, data management, and data transfer and sharing)
 - Decision Support
 - Financial management benchmarks
 - A chance to develop better insurance products, increase operational quality and precision.
- A good understanding of farm risk behavior is a crucial component
- Innovative risk management tools from CAP toolbox
 - Public-Private partnership





Thank you!

