

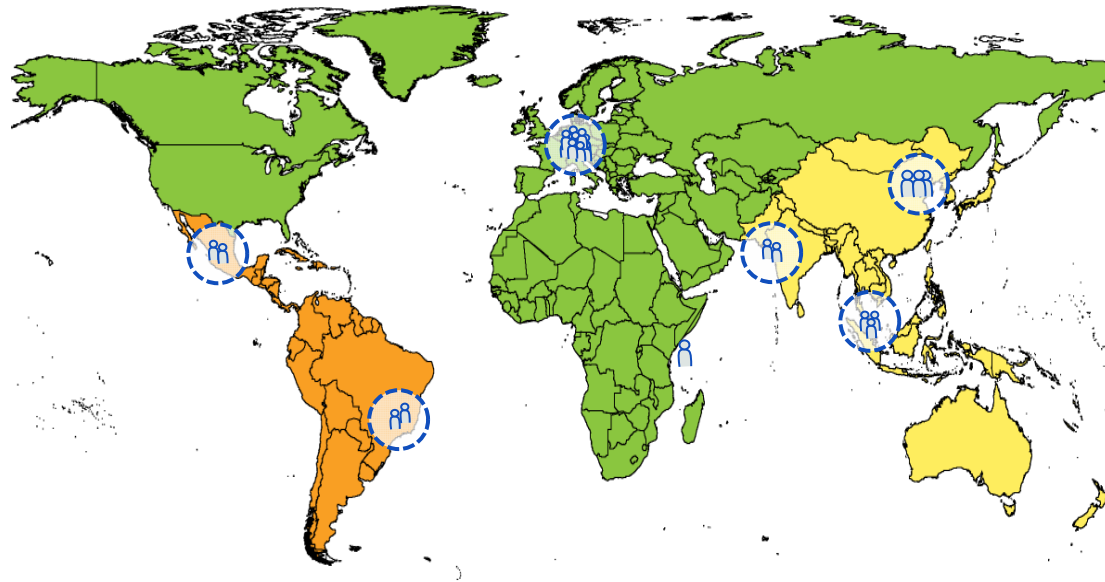
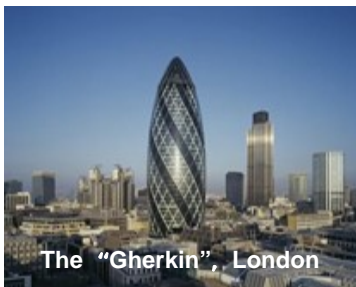
# Ingredients of a sustainable agricultural insurance scheme

Gepa Jansen-Klaus, Senior Client Manager Russia & CIS

Baku, 23th June 2016



## Swiss Re agriculture reinsurance team is global...



- Dedicated Agriculture team
- 30 people
- Zürich, Sao Paulo, Mexico City, Singapore, Mumbai, Beijing

# Risk management in agriculture

- insurance can not replace sound farm management



# Risk management in agriculture starts at the farm!

- Farm management

- Investment decisions, appropriate crops at the right location

- Diversification

- Several crops grown in rotation and in different areas

- Prevention

- Irrigation, hail nets

- Loss mitigation

- Grow crops with a second class use (wheat used for feedstuff instead of bread, apples used for juice instead of consumption)

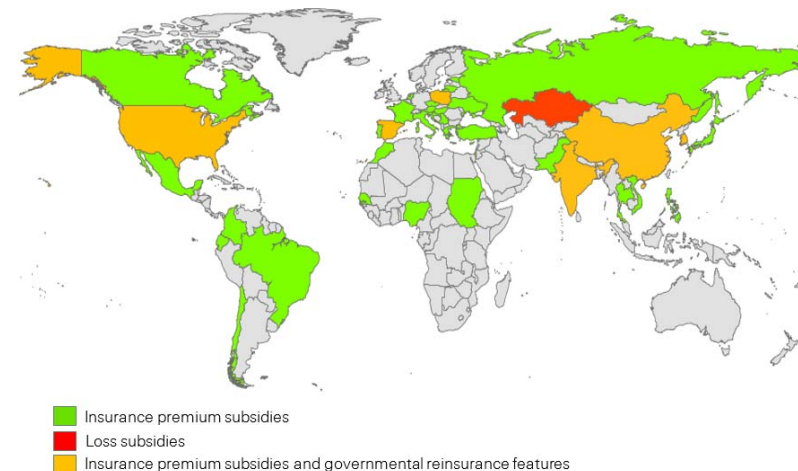
- Insurance based solutions

- Various kinds of concepts (Indemnity/multi peril crop insurance (MPCI), weather or yield Index, satellite based solutions), revenue protections including price risks



# Different types of crop insurance systems can be observed

1. Fully private w/o public support
  - Example: Germany, South Africa
2. Private insurers offering crop insurance with state subsidy
  - Example: France, Italy
3. Companies with a regional monopoly/state support
  - Example: Austria, China, Canada
4. Pool systems initiated by the insurance industry with state support
  - Example: Spain, Turkey
5. Standard insurance product, sold via different companies
  - Example: USA



## Level of state support

Level of state support	Fully private w/o public support	Private insurers offering crop insurance with a state subsidy	Companies with a regional monopoly/state support	Pool systems initiated by the insurance industry with state support	Standardized insurance product, sold via private companies
Products	Hail, MPCl	Hail, MPCl	MPCl	MPCl	MPCl, Revenue
Commercial freedom	High in all dimensions	Quite High in all dimensions	Limited, companies are (semi) public, linked to MoA/MoF	Limited to distribution	Limited to distribution and portfolio structure
Example countries	Germany, Switzerland, Scandinavia, Romania, Ukraine, Australia, S-Africa	France, Italy, Czech Republic, Slovak Republic, Brazil, Russia	Canada, China, Austria	Spain, Turkey	USA
Commercial crop insurance history	Relatively long > 50 years	In most countries relatively long > 30 years	Relatively long in Canada and Austria > 30 years, short in China < 15 years	Relatively long for hail insurance, MPCl < 10y in Turkey	Relatively long > 50 years
Insurance penetration	2% - 75%	20% - 60%	High in Canada/Austria, growing in	30% - 85%	High: up to 80%

## Pro's & Con's for various systems

Premium subsidy  
vs.  
no Premium subsidy

- The buying hurdle can be lowered as the farmer pays less than the real cost
- Higher potential for penetration increase
- Stable expenses for the subsidizing body (no ex-post payments)
- Low deductible products impact on-farm risk management

Market  
vs  
Monopoly

- Definition of how much market and competition is desired and where exactly competition shall play (on services rather than on price)
- Monopolies allow a pure actuarial view but innovation power is limited

## Pro's & Con's for various systems

Simple  
vs.  
complex products

- Start with simple products which are easy to explain, to underwrite and to monitor
- Complexity can be added over time

Unified product  
vs.  
Variation

- Reduction of options = lower cost
- Limited innovation
- Same size does not fit all over time



# Cover concepts in Agriculture

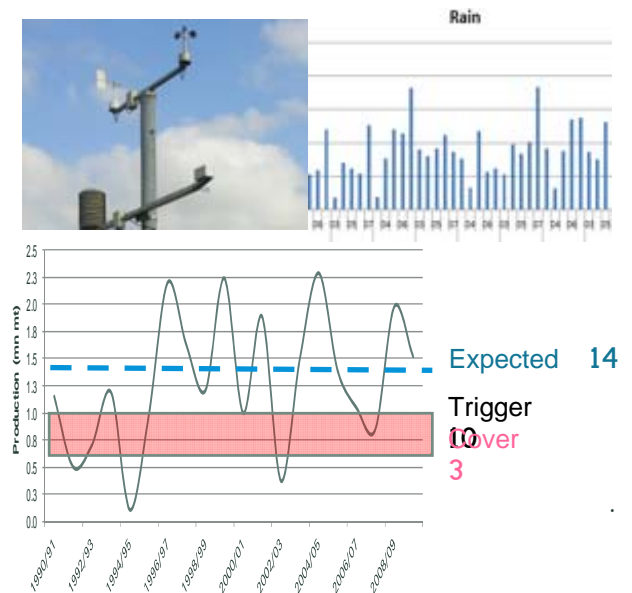
- Indemnity-based insurance

- ⇒ traditional type of insurance
- ⇒ single risk assessment and individual loss assessment (claim payments based on actual loss at insured unit level)
- ⇒ two subclasses: (1) named peril, (2) multiple perils (incl. revenue)



- Index insurance

- ⇒ payouts are not based on individual yield losses but on an independent measurement (index) correlated with field losses:
  - weather index (rainfall, temperature, ...)
  - area-yield index (average yield per geographical unit)
  - remote sensing index (e.g. NDVI for crop and livestock)
- ⇒ useful for wide spread and systemic perils with a steady loss development (i.e. drought, frost)
- ⇒ not useful for hit-or-miss perils (i.e. hail, flash floods)



## Long term view rather than hip shots

- All properly working agricultural insurance system with state support have a long history and were not designed over night
- A properly working system takes the following into account:
  - History and tradition
  - Quality and practices of the farming sector
  - Available infrastructure, expertise and data
  - Political and economical circumstances
  - Budget availability and sustainability
- All properly working systems are transparent and based upon a solid legal framework
- No copy/paste exercises of something which has been (successfully) done elsewhere but experiences from abroad should be taken into account
- A properly working system requires the buy in of major stakeholders

# Azerbaijan



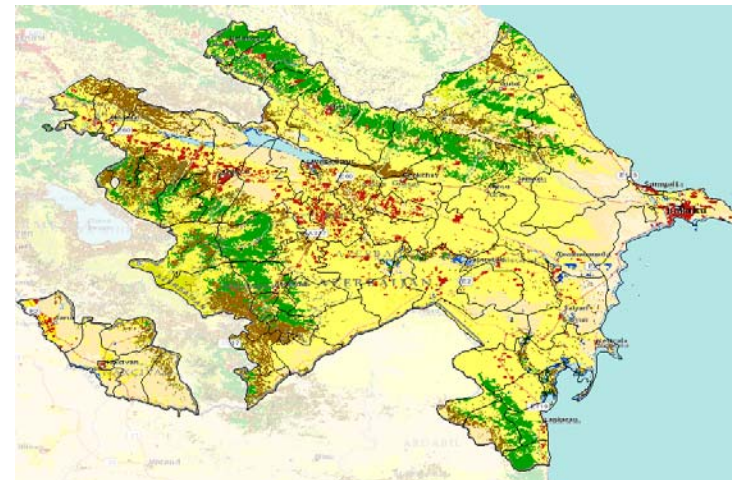
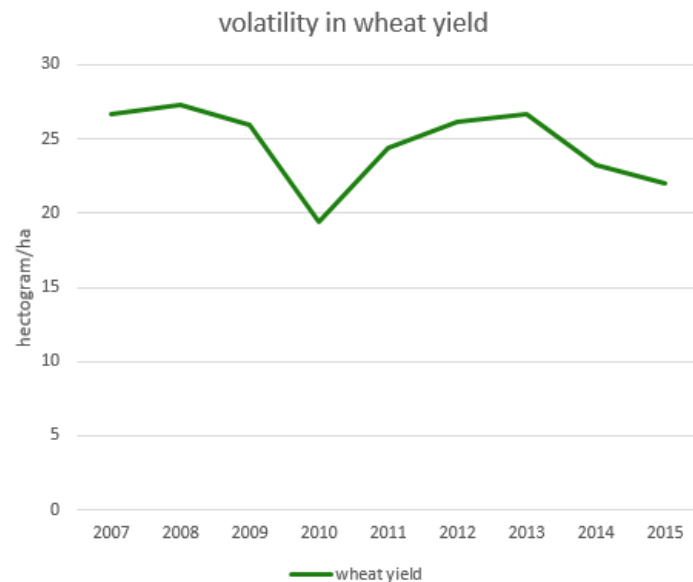
**Crops**  
**Fruits**  
**Grapes**  
**Cotton**  
**Tobacco**  
**Citrus**  
**Vegetables**  
**Wheat**  
**Sugar**  
**beets**

## Agricultural perils

**Hail**  
**Flood**  
**Drought**



# Azerbaijan



## Drought

Azerbaijan has the 18th place on UN global drought ranking.

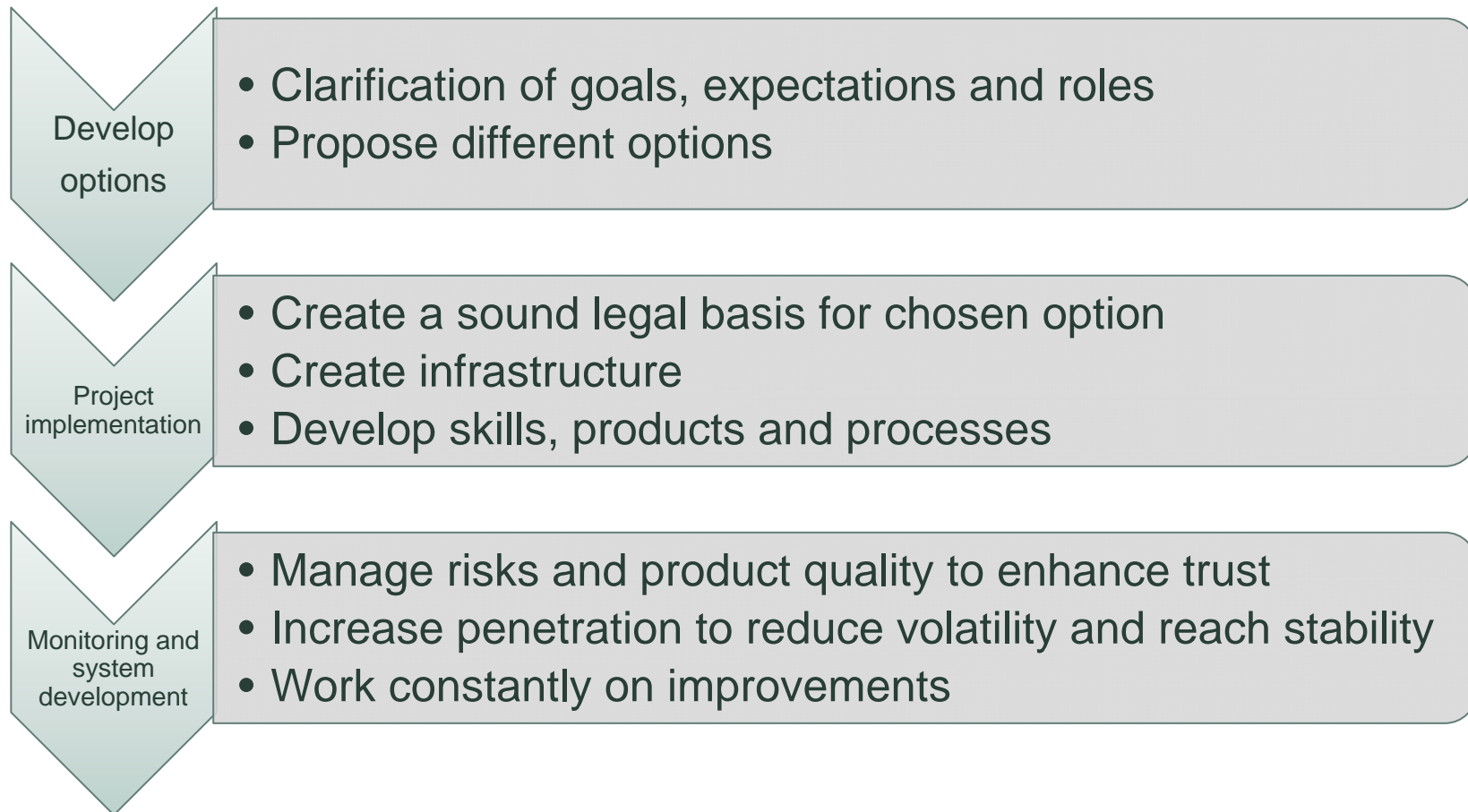
In 2014 and 2015 Drought in Azerbaijan has damaged agricultural products and destroyed crop fields in several regions. Insurance could reduce the volatility in the farmers income and allow farmers to invest more in their production.

## Agreement on roles and goals with major stakeholders

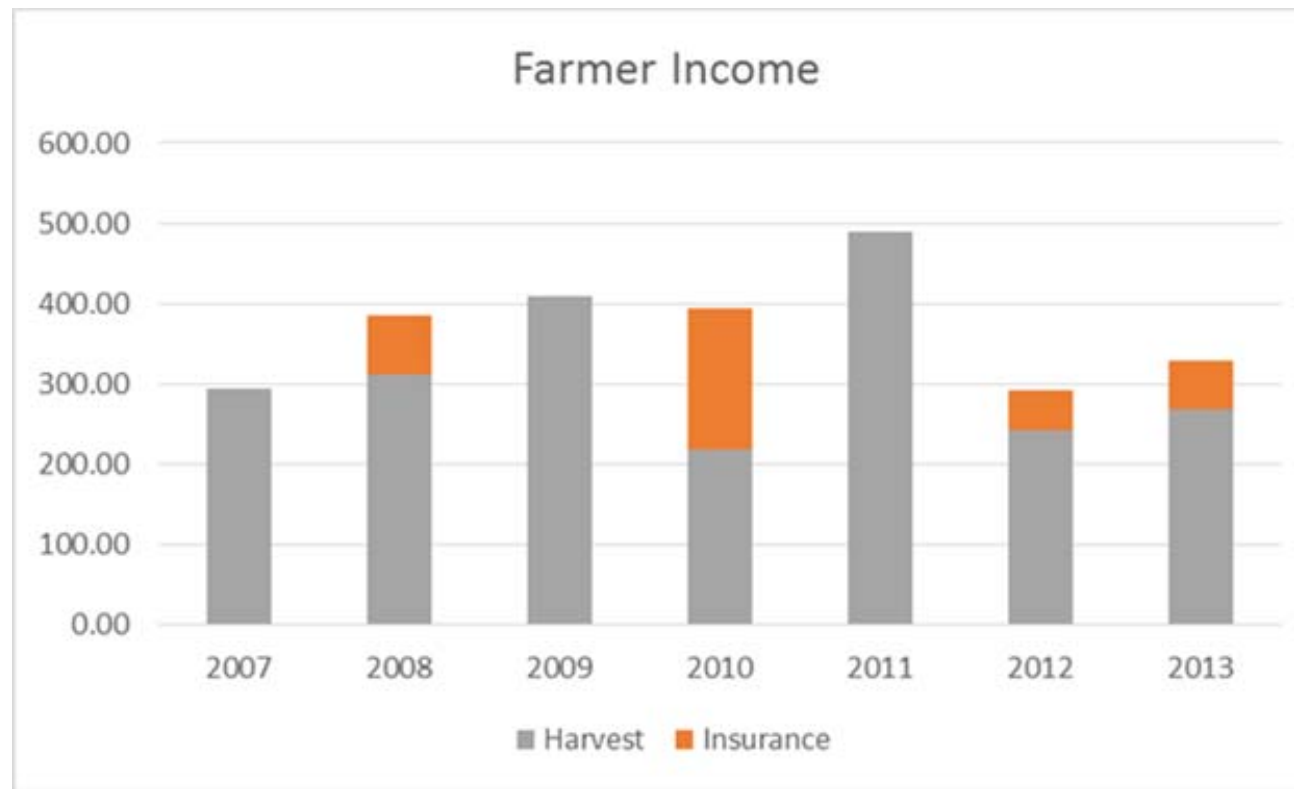




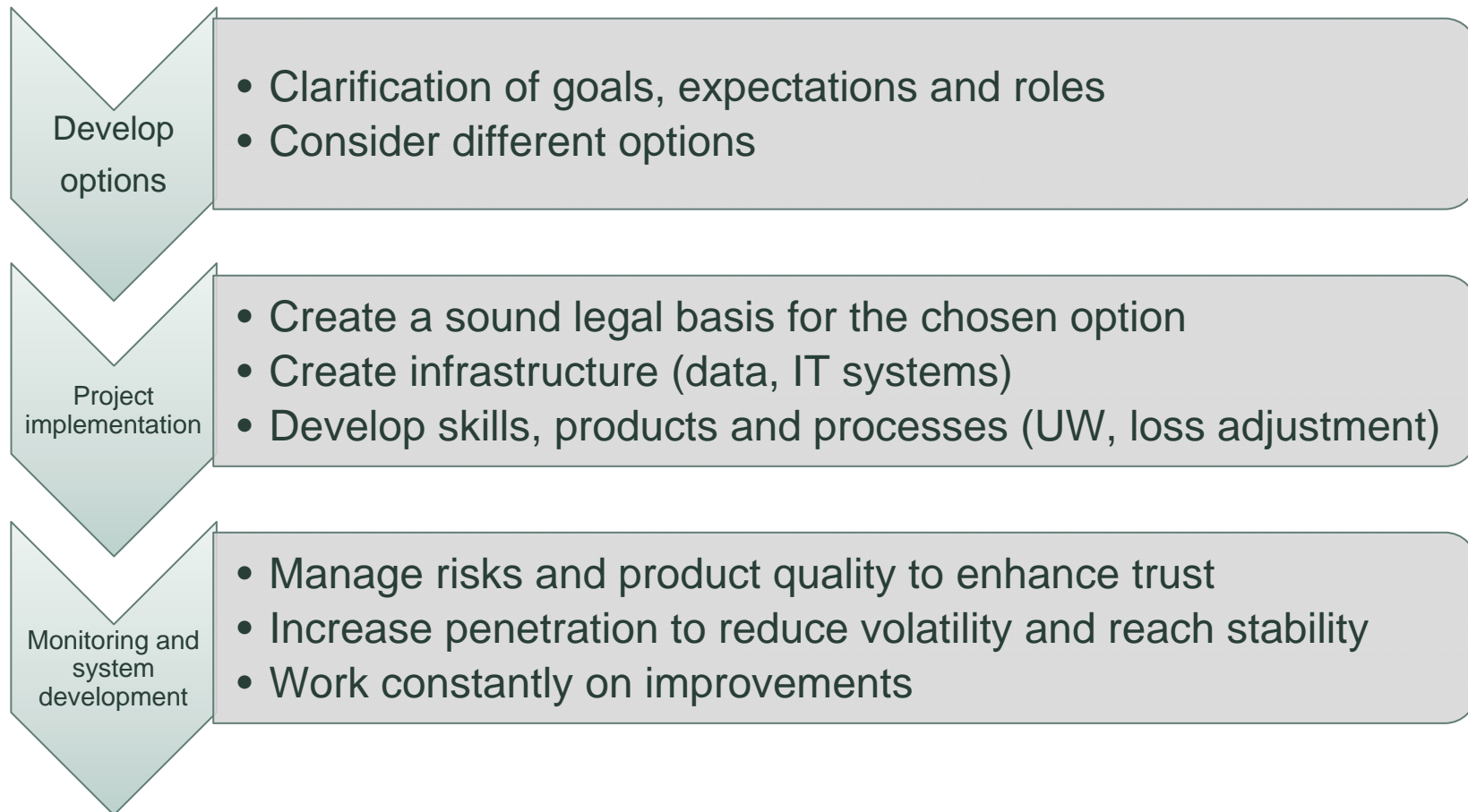
## What to do ?



## Impact on farmer's income



# Roadmap



## Your contacts at Swiss Re



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and facultative

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### Agriculture

- **Crop**  
Indemnity, Index and revenue products  
Crop hail, named perils and multi peril crop insurance
- **Forestry**  
Storm, Fire and Snowweight
- **Greenhouse**  
Structures, Contents and Business Interruption
- **Aquaculture**  
Equipment and fishstock on and off shore
- **Livestock**  
Mortality and Business Interruption
- **Bloodstock**  
Mortality, Loss of use, infertility



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Further reading under  
[www.swissre.com](http://www.swissre.com):







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