



ADaptation in Agriculture

The role of the insurance industry in promoting climate risks' prevention in the agricultural sector

the ADA (Adaptation in Agriculture) project as a case study

I Partner. Insieme per aumentare la resilienza del settore agricolo | www.lifeada.eu |



Con il contributo di LIFE, uno strumento finanziario
dell'Unione Europea LIFE: LIFE19CCA/IT/001257



THE LIFE ADA PROJECT IN A NUTSHELL

The LIFE ADA (Adaptation in Agriculture) project, coordinated by UnipolSai, aims at **increasing the resilience of the agricultural sector to the impacts of climate change** through a public-private partnership involving the public administration (Regions), insurers (UnipolSai) and producer organisations.

More specifically the objective is to **foster an innovative approach of insurers to build capacity on risk reduction to maintain insurability of farmers in the long-term** despite the increase of catastrophic and systemic risks.

LIFE ADA focuses on individual farmers and producer organisations in three value chains:

- dairy (Parmigiano cheese),
- wine,
- fruit and vegetables.



INSURANCE & RISKS PROTECTING

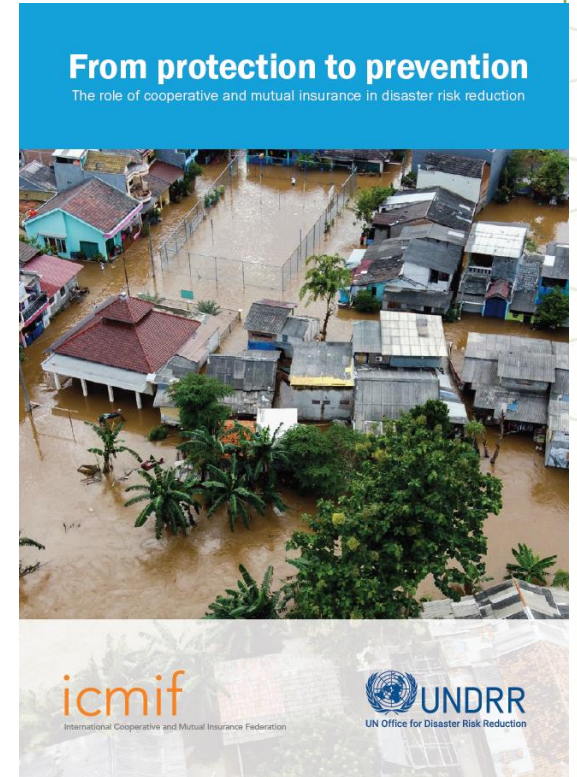
Insurance industry is not only a **risk carrier**, but it is key subject **supporting others** actors (public and private) **to implement action preventing and reducing risks** and especially adapting to climate change

In November 2019, **ICMIF** signed an agreement with **UNDRR**, to work together on the role that insurance can do to increase awareness and capacity of the various actors to improve risk prevention

This issue is very much discussed at International (OCSE) and European (UE) level

In the first phase a report of best practices has been realized, in the second one there will be some pilots on the field.

The ADA project has been developed with the idea to spread and test this approach



INSURING FARMERS

Last year we did a survey with insurers to understand the context about farmers and climate resilience in the world.

The results affirm that

- Farmers are far away to adopt a proper adaptation plan
- Insurances are shine to integrate climate change resilience in pricing and services
- Awareness is weak on both side, also if the insurance products cover many kind of climate risks



THE CHALLENGES

FOR THE AGRICULTURAL SECTOR:

- **Italy is one of Europe most vulnerable areas to climate change** and is among EU countries that suffers most from economic loss due to extreme weather conditions.
- Agricultural practices have always adapted to variation in climate condition. The increasing frequency of extreme weather events, the magnitude of climate change and the difficulties to access future climate scenarios are **challenging farmers' adaptive capacity**, increasing the need to implement adaptation strategies at farm and value chain levels.
- The **specialized agriculture**, based on quality and connected with the characteristics of the territory in which it operates, is the one that **runs the greatest climate-related risks**. EU (and Italian) agriculture are indeed characterised by a wide range of high value foods, with a high level of quality in terms of food safety, nutritional value, taste, cultural and heritage value, methods of production. Many quality chains and Geographical Indications products could cease to exist or will need to be produced with strong inputs of innovation to be preserved.
- **The activity of European farmers, despite being the most threatened by climate change, is the one where adaptation actions are still struggling to be undertaken** by individual farmers or specific Producer Organisations.

FOR THE INSURANCE SECTOR:

Insurance mechanisms represent a fundamental risk management instrument to cope with economic effects of extreme events and provide some predictability to weather risk financing for the public administration. However:

- the scale of climate change poses a **risk to affordability and insurability of climate-related risks**.
- **insurers are called upon to play a triple fundamental role**: as risk carriers (through traditional role of risk transfer), as risk managers (to boost communities' resilience by fostering capacity-building of customers, incentivising virtuous risk reduction and adaptive interventions) and as investors to mobilise the resources necessary to fund adaptation to climate change and the resilience of local communities. **Yet, at the same time, current regulation is thriving to increase insurers' control on environmental, social and governance risks, in particular to identify, assess, quantify and report the financial impacts of climate-related risks on the underwriting activities.**

THE PROJECT'S OBJECTIVES

Thanks to the collaboration with public and private Partners from various sectors (insurance, public administration, scientific institutions and producers' organisations), the LIFE ADA project is committed to increasing the ability of farmers to adapt via:

KNOWLEDGE

By transferring knowledge on climate scenarios together with risks management and adaptive measures to improve farmers' skills in addressing current and future climate risks.

TOOLS

To build proper tools to support the decision-making process in outlining efficient adaptation strategies at farm and supply-chain level.

PLANNING

By defining a coherent political strategy at regional level to support adaptive planning of farmers.

INSURABILITY

By promoting an innovative approach for insurers to strengthen the ability to reduce risks and keeping insurability of farmers in the long term, despite the increase in catastrophic and systemic risks.



ADaptation in Agriculture

ADA PROJECT: CHALLENGES AND LESSONS LEARNT

ICMIF 2023-05-10

I Partner. Insieme per aumentare la resilienza del settore agricolo | www.lifeada.eu |



Con il contributo di LIFE, uno strumento finanziario dell'Unione Europea LIFE: LIFE19CCA/IT/001257



THE MAIN FEATURES OF THE PROJECT

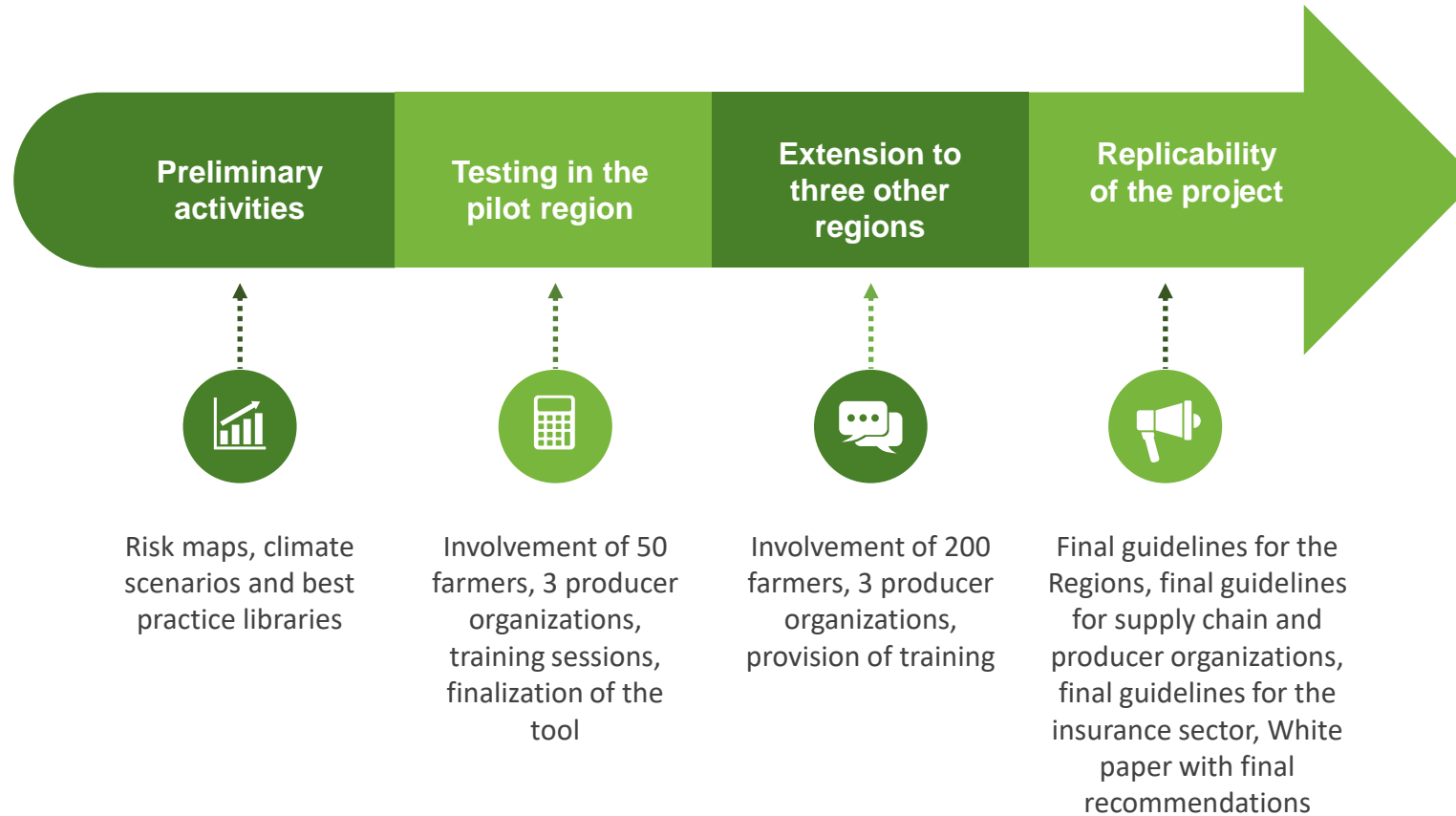
ADA aims at testing, implementing, evaluating and disseminating an innovative model to boost adaptation to climate change, by:

- increasing the resilience of individual farmers and their supply chains in three supply chains (dairy, wine and fruit and vegetables)
- implementing an innovative model of public-private partnership
- promoting an innovative role of insurers

The ADA (ADaptation in Agriculture) project is coordinated by UnipolSai. The project partnership is composed by research institutes, regional public administrations, trade organisations, a company specialized in big data analysis and an environmental NGO.

The project started with a pilot test in one Italian region and is being extended to three additional regions to reach a wider number of farmers.

MAIN ACTIVITIES AF THE PROJECT



1- KNOWLEDGE

transferring **knowledge** on climatic scenarios together with risk management and adaptive measures to enhance farmers' capacity to tackle current and future climate risks.



CHALLENGES:

Involvement of farmers.



LESSONS LEARNT:

The project diversified the channels used to reach disseminate knowledge to farmers:

Webinar;
Podcasts

2 - POLICY

framing a coherent **policy strategy** at regional level to support farmers' planning of risk prevention and adaptation actions.



CHALLENGES:

Analyse the necessary incentive schemes to implement climate adaptation action plans;

Involve various structures among the Regional public administration;

Disseminate the public-private partnership model to additional Regional public administrations in Italy.



LESSONS LEARNT:

It is difficult to align the timeframe of planning of public policies with the timeframe of business strategic planning.

3 - INSURANCE

fostering an innovative approach in the **insurance** sector aimed to build farmers' capacity on risk reduction, in order to maintain their insurability in the long-term, despite the increase of catastrophic and systemic risks.



CHALLENGES:

Move from risk protection to risk prevention

Foster climate change adaptation



LESSONS LEARNT:

Focus on climate change adaptation

Public-private partnership

4 - TOOLS

building proper **tools** to support their decision-making process in shaping efficient adaptation plans at farm and supply chain level;



CHALLENGES:

Difficulty in Italy to gather climate data at national level

Necessity to change the way farmers tackle climate change



LESSONS LEARNT:

Provide a tool that is user-friendly and exhaustive at the same time

Engage with producer organisations to involve farmers

Thank you

I Partner. Insieme per aumentare la resilienza del settore agricolo | www.lifeada.eu |

UnipolSai
ASSICURAZIONI

arpae
emilia-romagna

WA
AGRICOLTORI ITALIANI

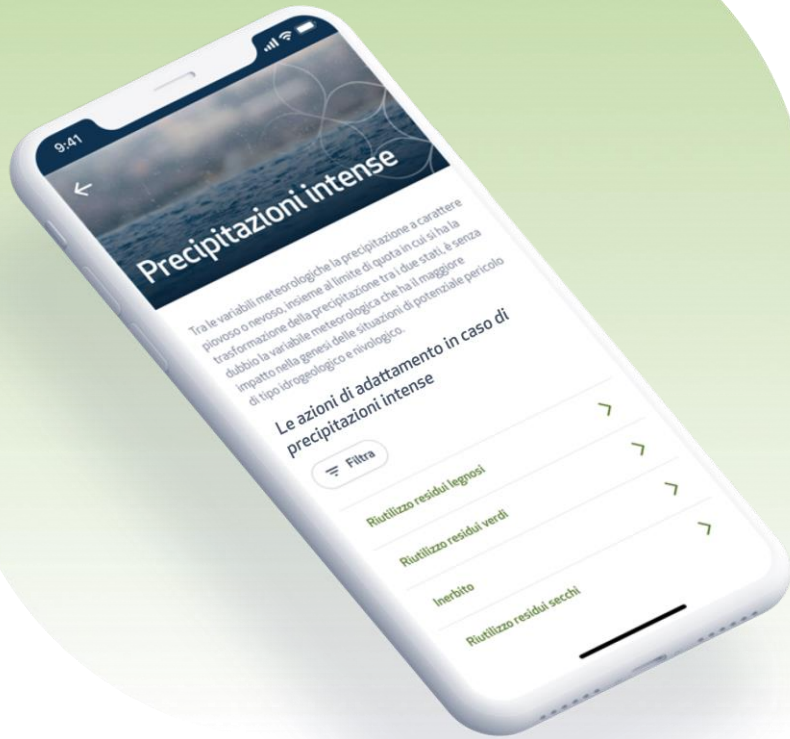
crea
Consiglio per la ricerca in agricoltura
e l'analisi dell'economia agraria

legacoop | associazione
distrettuale
agroalimentare | Nord Italia

LEGAMBIENTE

Leitha

Regione Emilia-Romagna



ADA tool: simple technology for smart farmers



With the contribution of the LIFE financial instrument of the European Community

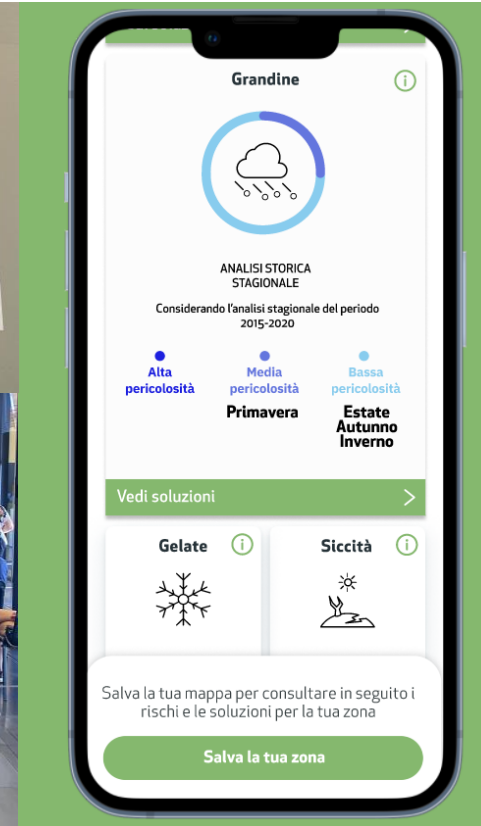


ADA tool in a nutshell

ADA tool

A **web application** for both **farmers** and **farmer's organisations**:

- Increase **user awareness** on **climate change risks** and their impacts on business
- Set up plans for climate risk **adaptation** and **mitigation**

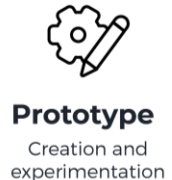




Methodology

Design thinking

- A human-centered approach to problem-solving
- An iterative process, until a final solution is reached
- Outputs can be mock-ups, software prototypes, product increments



Minimum Viable Product

- Product development strategy to validate product ideas
- Targets a first, basic version of a product
- Develop only necessary features to satisfy early customers
- Use MVP to gather feedback for further development





Technology

Behind ADA Tool

- **Serverless computing**

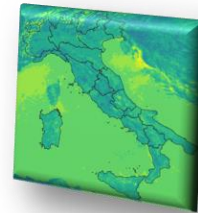
Cloud computing model born for microservices, where cloud provider manages the infrastructure required to run applications

- **Realtime geospatial analysis**

Performed on hazard maps based on historical and projected climate data

- **Modern frontend**

Optimized visualization on desktop and mobile devices





Functionalities

Farmers

A user of the Farmer type can

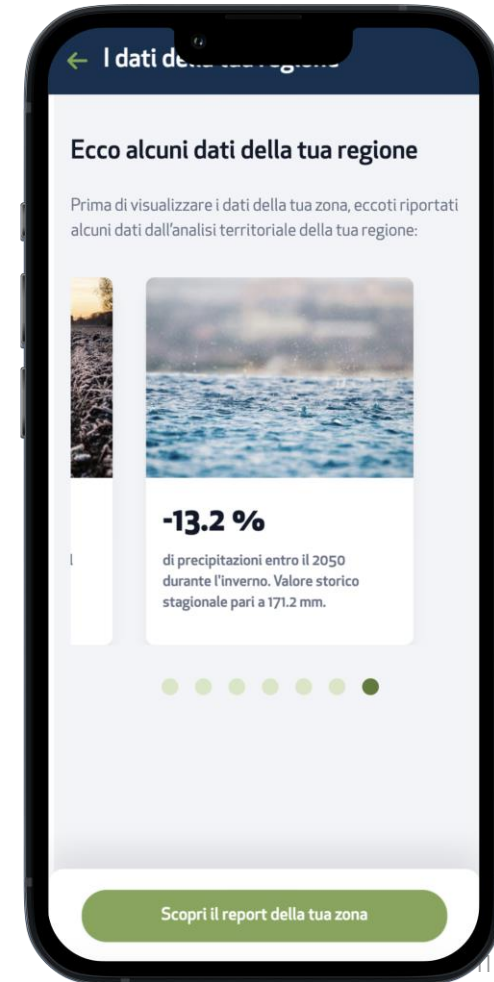
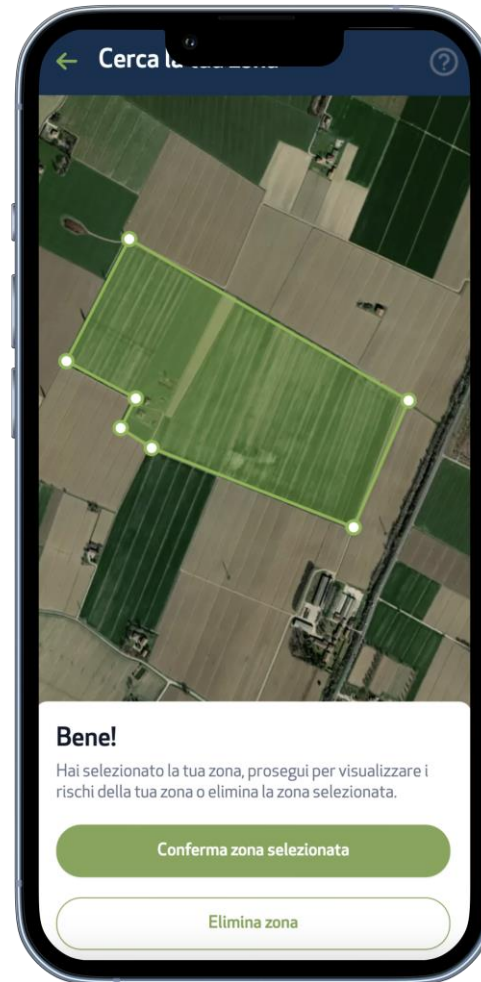
- **Select the organisations it belongs to**
- Analyse their areas of interest regarding extreme climatic events
- Visualise a set of activities for adaptation to climate risks
- Create its own climate change adaptation plan



Farmers

A user of the Farmer type can

- Select the organisations it belongs to
- **Analyse their areas of interest regarding extreme climatic events**
- Visualise a set of activities for adaptation to climate risks
- Create its own climate change adaptation plan



Farmers

A user of the Farmer type can

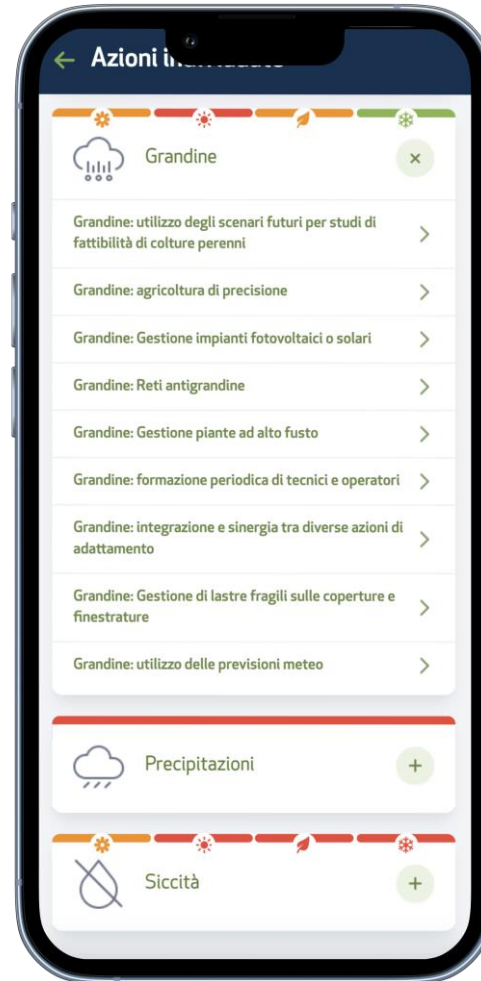
- Select the organisations it belongs to
- **Analyse their areas of interest regarding extreme climatic events**
- Visualise a set of activities for adaptation to climate risks
- Create its own climate change adaptation plan



Farmers

A user of the Farmer type can

- Select the organisations it belongs to
- Analyse their areas of interest regarding extreme climatic events
- **Visualise a set of activities for adaptation to climate risks**
- Create its own climate change adaptation plan



Farmers

A user of the Farmer type can

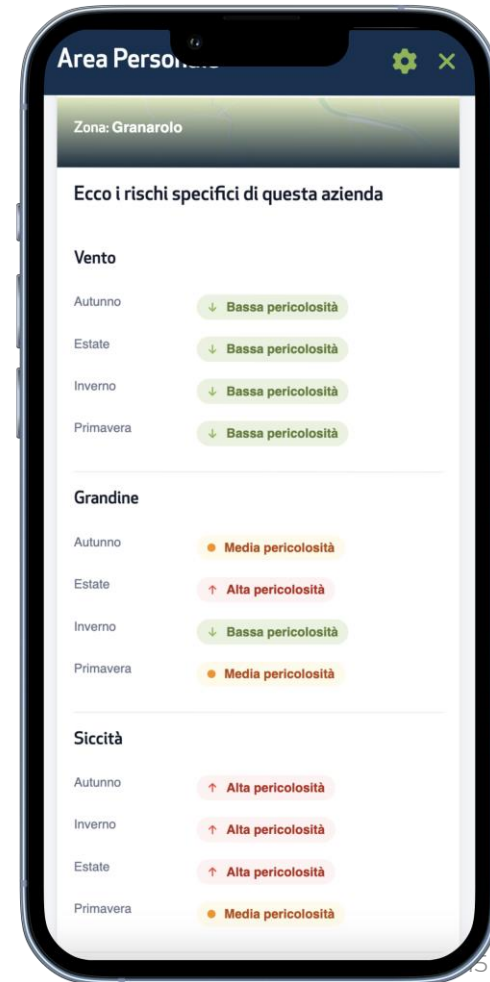
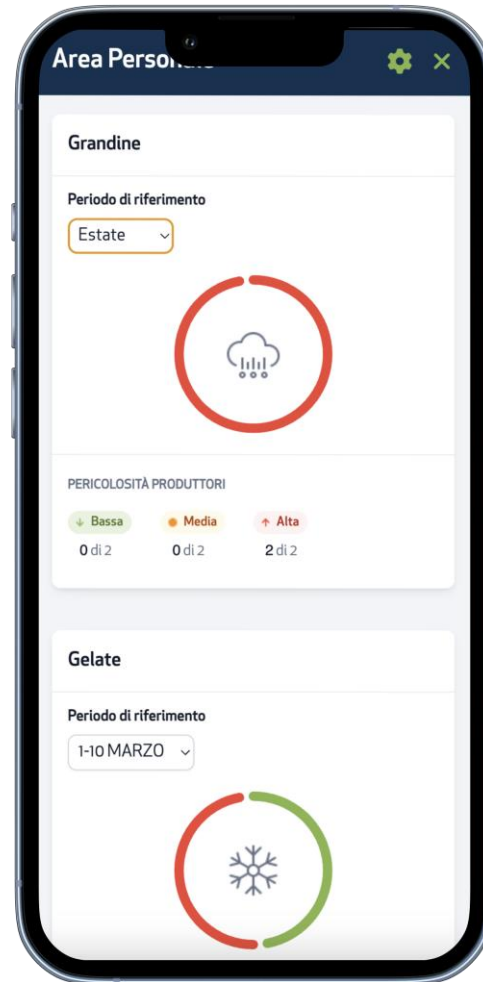
- Select the organisations it belongs to
- Analyse their areas of interest regarding extreme climatic events
- Visualise a set of activities for adaptation to climate risks
- **Create its own climate change adaptation plan**



Organisation

A user of the Organisation type can

- **View both aggregate and individual analysis of affiliated farmers**
- Check the activities proposed to farmers and those they have included in their adaptation plan
- Do everything a farmer does



Organisation

A user of the Organisation type can

- View both aggregate and individual analysis of affiliated farmers
- **Check the activities proposed to farmers and those they have included in their adaptation plan**
- Do everything a farmer does



Organisation

A user of the Organisation type can

- View both aggregate and individual analysis of affiliated farmers
- Check the activities proposed to farmers and those they have included in their adaptation plan
- **Do everything a farmer does**





Demo



Un piano d'adattamento su misura per te

La web app ADA Tool è uno strumento semplice ed immediato che dà ai produttori la possibilità di creare il proprio piano di adattamento, inoltre permette di capire:

- a quali pericoli è esposta la propria azienda agricola (Vento, Siccità, Grandine, Gelate tardive)
- quali possono essere le azioni da applicare nella propria azienda per prevenire i danni.

Inizia



With the contribution of the LIFE financial instrument of the European Community



ADaptation in Agriculture



Climate changes, agriculture reacts

Life ADA: positive growth to climate change

www.adatool.eu

With ADA Tool



Thank you!