



ADaptation in Agriculture



Layman's report

Life ADA – ADaptation in Agriculture

LIFE19 CCA/IT/001257

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



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1.1 The challenge

Italy is one Europe's most exposed areas in terms of climate risk and is one of the EU countries that suffers the greatest economic losses due to extreme weather conditions.

Climate change has a direct impact on productivity, jeopardising the profitability of farmers (especially those with small to medium-sized enterprises), and their ability to survive, and also has negative effects on the quality of production.

Life ADA – Adaptation in Agriculture – LIFE19 CCA/IT/00 1257

Budget: 1,975,000€ of which **1,084,004€** from European funding

Duration: start 01/09/2018 - end 31/12/2024

To find out more:



Website:

www.lifeada.eu

Facebook and
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1.2 Our commitment

1. To convey knowledge about climate scenarios, and to raise awareness of risk management and adaptation measures to improve the agri-food sector's resilience to present and future climate risks.
2. To develop appropriate tools to support the decision-making process for the establishment of efficient adaptation plans at the farm and supply chain level.
3. To establish a coherent policy strategy at the regional level to support farmers in the adaptation planning process.
4. To promote an innovative approach on the part of insurers to improve the risk reduction capacity, in order to maintain farmers' insurability over the long term, despite increasing catastrophic and systemic risks.

1.3 Partners



Farmers and **producer organisations** (cooperatives and consortia)

3 Supply chains involved



1.5 The phases of the project

1. Build the tools useful for decision-making and the definition of adaptation plans at the farm and supply chain level

Definition of climate scenarios

Identification of adaptation measures

ADA tool development

2. Involvement of farmers and POs in knowledge transfer, cost-benefit assessment, and support tools

Knowledge transfer and adaptation of adaptation plans

Development of regional adaptation strategy

Cost-benefit analysis of the adaptation measures

3. Ensure broad visibility for the project

Definition of a communication plan

Development of communication channels

Disclosure of project results

4. Replicability of the project

Establishment a community

Definition of guidelines and white paper

Extend the project to all of Italy



2.1 Dissemination

1. Subjects reached through the various initiatives:	600,000
2. Users that have utilised the ADA Tool:	1,612
3. People who viewed the project's video material:	119,353
4. Website visitors:	7,769
5. Events where the project was presented:	81 national, 35 international

2.2 Replicability

1

final guideline for the
insurance sector

2

final guideline
for the
regions

3

final guideline for the
supply chains

4

white paper



3.1 Introduction

In order to facilitate the elaboration and adoption of the most appropriate adaptation plans, a practical **Web App** was developed, which can be used directly from the project website via a smartphone or PC, with no need to download anything to your device.

It's simple and intuitive to use: just geo-localise your company, and select the supply chain in which you operate, and the **ADA Tool** will generate your risk analysis (considering Wind, Hail, Drought, Frost, Cumulative Precipitation, and Minimum and Maximum Temperatures).

For each hazard, the system proposes adaptation measures, drawn up with input from expert agronomists, meteorologists, climatologists, economists, and more. Each proposed measure is accompanied a number of explanations in order to allow you to assess whether they are applicable to your farm. In particular, these include: the relevant agri-food supply chains, climate risk, scope of action, extent of potential risk mitigation, technical difficulty, ideal farm size, effectiveness, time horizon, public support, and cost/benefit ratio.



The adoption of adaptation measures almost always entails a cost. This cost may consist of the initial investment and/or the operating expenses for the implemented action. In most cases, the expenses to be incurred translate into annual costs in terms of depreciation for the investment, technical means (water, energy, etc.), maintenance, labour, etc. Therefore, the decision to implement adaptation measures requires an assessment of the costs and benefits of their adoption.

Another strength of the **ADA Tool** is that the farmer can indicate whether he/she contributes to one or more producer organisations, such as a cooperative or consortium. In addition to making its own adaptation plan, thus preserving the supply chain in which it operates, the organisation can also view the reports of all its members, with their risk analyses. In particular, the organisation is able to know how many of its associates are exposed to a given hazard in aggregate form, and can also view the risks to which each individual producer is subject, and the actions they have included in their adaptation plans.

Once registered, the system will keep a record of the adaptation plan created based on the vulnerabilities of their farm, which can be amended at any time.

3.1.1 Six main hazards

High and low temperatures; Cumulative rainfall; Wind; Hail; Late frost; Drought.

The supply chain can improve its resilience by choosing from among **164** proposed **adaptation actions: 108 field activities** and **56 actions for farm structures/infrastructures**.

ADA Tool: library filters

Supply chain	Climate risk	Action area
<div>Dairy</div> <div>Wine</div> <div>Fruit and vegetables</div>	Drought	Soil
	Wind	Water
	Hail	Agronomic management
	Damage from extreme heat	Varieties and colt systems
	Damage from extreme cold	Animal welfare
	Excess water	Transformation
	Flooding	Wares
	Heavy rainfall	Machinery
	Loss of territorial suitability	Built
	Salt wedge	Infrastructure
	Erosion	Logistics
	Phytosanitary damage	

3.2 Pilot Area (Emilia-Romagna Region)

The Life ADA project's trial was carried out in the Emilia-Romagna region.

53 farms and **6 producer organisations** were involved; 53 adaptation plans (containing an average of 36 actions) and 6 supply chain adaptation plans (with an average of 32 actions selected) were drafted.

An assessment of the project's impact was carried out for each individual farm by conducting an ex-ante and ex-post analysis of the climate change adaptation plan.

This process helped test the functionality and content of the ADA Tool.


A highly innovative approach by the Emilia-Romagna Region: within the context of the procedures for the granting of investment subsidies, in the case of equal scores, priority is given to those who have demonstrated that they have an adaptation plan.

3.3 “Rewarding” of companies that tackle the problem of adaptation in a structured manner

Acknowledging the importance of developing climate change adaptation plans in order to effectively manage the relative risks, the Emilia-Romagna Region has adopted a **highly innovative approach: within the context of the procedures for the granting of investment subsidies, in the case of equal scores, priority is given to those who have demonstrated that they have an adaptation plan.**



3.4 Dissemination of knowledge

A training course, which can be fully accessed from the “Training” page of the project’s website, has been set up in order to disseminate knowledge about the risks associated with climate change and skills needed to facilitate adaptation.

- 7 technical webinars** on adaptation strategies and measures
- 3 online workshops** for the exchange of good practices and knowledge sharing among participating experts
- 3 testimonials** from local companies of excellence
- 242 participants** in total, including farmers, agronomists, and consultants/technicians
- 25 keynote experts**
- “AgriFuturo” podcast** - <https://www.lifeada.eu/it/formazione/> 











3.4.1

To learn

Topic	Resource
What is climate change	Podcast 
Past, present and future climate	Podcast 
Climate and impact on agriculture	Podcast 
Biodiversity, plant diseases and alien species	Podcast 
Climate: knowing the scenario to dominate the risk	Podcast 
Climate changes in Emilia-Romagna Region	Webinar 
Climate change: current and future projections	Webinar 
Climate change impact on agriculture	Webinar 
Adaptation strategy on water sector	Webinar 
Impacts of climate change on agriculture in Europe	Publication 
Impacts of climate change on three supply chains in Life ADA areas	Publication 
Impacts of climate change in Emilia-Romagna: analysis of the water needs in agricultural sector	Publication 





3.4.2

To adapt All supply chains

Topic	Resource
Drought	Podcast 
Extreme weather events	Podcast 
Temperature extremes	Podcast 
How the ADA Tool works	Podcast 
Good adaptive practices	Podcast 
Digital assets in the agriculture	Webinar 
Satellite data application in agriculture	Webinar 
Climate changes: adaptation strategies and Big Data analysis	Webinar 
Climate change in agriculture a cost-benefit evaluation of adaptation measures	Publication 
RRn Magazine 18: the future in a drop	Article 




3.4.3

To adapt Dairy chain

Topic	Resource
Adaptation strategies in the dairy cattle farming system as a reaction to climate change	Webinar 
Mitigation strategies in the Parmigiano-Reggiano production chain	Webinar 
Climate change impacts and adaptation strategies in the dairy production chain	Webinar 
Parmigiano-Reggiano production chain	Webinar 





3.4.4

To adapt Fruit and vegetables chain

Topic	Resource
Crops adaptation strategies	Webinar 
Strategies and tactics for land fertilization	Webinar 
Fruit and vegetable production chain	Webinar 











3.4.4

To adapt Winechains

Topic	Resource
Foliage management techniques in viticulture	Webinar 
Vineyard design	Webinar 
Common sense viticulture to tackle the fickleness of the climate	Webinar 
Wine production chain	Webinar 

3.4.1

To resist

Topic	Resource
International policies	Podcast 
National risk management tools	Podcast 
Regional risk management tools	Podcast 
Digital agriculture	Podcast 
Testimony of the sector	Podcast 
Risk management and future projections	Webinar 
Agricultural risk management, income protection and insurance tools	Webinar 
Risk management in Emilia-Romagna Region	Webinar 
Risk management in the insurance sector	Webinar 
The new CAP	Webinar 

4

The ADA

From the beginning, the project aimed for possible replicability beyond the pilot region, focusing not only on the three target regions (Tuscany, Veneto, and Lazio), but also on other Italian regions, thus strengthening the adaptation potential of the agricultural sector on a larger scale.

In order to maximize the visibility of the project and reach a qualified and highly involved audience (entrepreneurs, researchers, policy makers, agribusiness representatives, technicians and association officials), it was decided to place the presentation meetings and ADA community-building workshops within formal strategic association moments (such as assemblies, operational directorates, conferences, conventions, periodic meetings of directorates and operational structures) of Legacoop Agroalimentare Nord Italia and CIA Agricoltori Italiani. 36 meetings were held (21 in target regions, 13 in other regions, and 2 European), reaching 981 people (942 at the national level and 39 at the European level) and 44 workshops throughout Italy.

An additional qualifying element was the involvement of technicians from the POs and the trade association, who,



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thanks to the trust they enjoy among farmers, facilitated the involvement of individuals in the process of disseminating the project's contents and in the adoption of adaptation plans.

5

The future

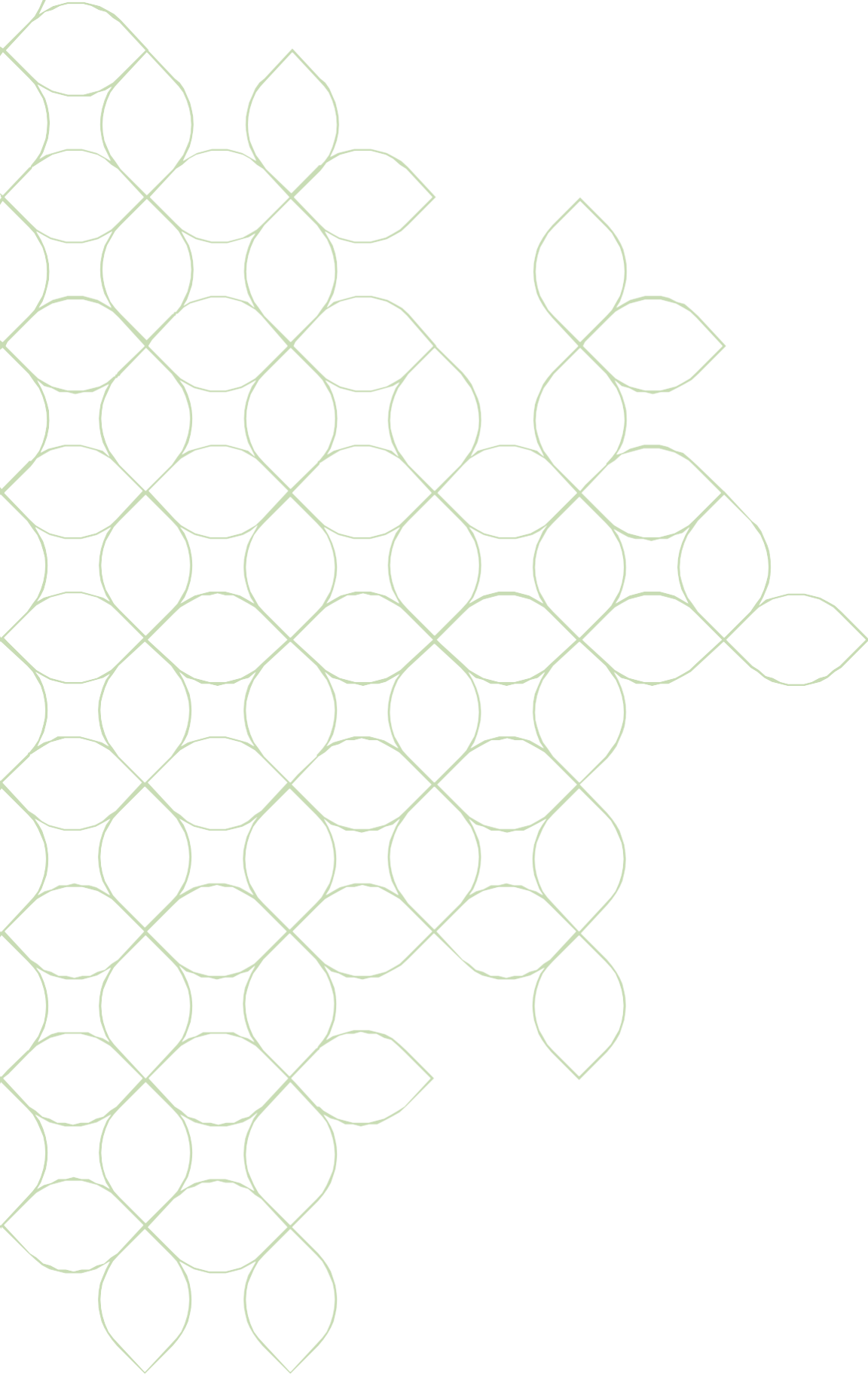
Life ADA has contributed to raising awareness of climate change and the importance of adaptation in agriculture, involving key players in the sector through simple and effective tools for dissemination and comparison.

Among the main results is the development of the ADA Tool, an innovative tool that helps producer organizations (POs) and farmers themselves to understand climate risks and build adaptation plans. The possibility of collecting and sharing the strategies adopted by multiple parties, even at the supply chain level, offers a concrete and replicable approach. The library of best practices, which collects solutions that can be adopted in the field and in business management, also represents a useful asset for anyone who wants to undertake an adaptation path.

The project's tools and results are also applicable in other European territories, thus offering an internationally transferable model.

In the five years following the conclusion of the project, activities will continue as planned in the "After-LIFE Plan," with the aim of keeping the network created alive, disseminating the results, raising awareness of new actors and promoting the use of the tools developed. Activities will include: communication and exploitation of the results (maintenance of communication channels, participation in events, networking with other projects); dissemination and awareness-raising initiatives (publication of articles and posts, territorial meetings, communication on adaptation issues with the involvement of students as well, training and awareness-raising of farmers); and development and replicability of the tools (enhancement of the ADA Tool and promotional campaign to encourage its use).

The project will thus continue to generate impact, contributing over time to making the agricultural sector more resilient and aware in the face of climate challenges.



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