

# PRIMA CYPRUS INFODAY 2023



Marco Orlando and Eda Demir  
PRIMA Project Officers

@PRIMAPROGRAM #PRIMAInfoday



**PRIMA**  
PARTNERSHIP FOR RESEARCH AND INNOVATION  
IN THE MEDITERRANEAN AREA



PRIMA is supported under  
Horizon 2020, the European Union's  
Framework Programme  
for Research and Innovation

# **PRIMA Call for Proposals**

## **Section 2 - 2023**

# SECTION 2 TOPICS

Submission deadline Stage 1: 29/03/2023



## Topic 2.1.1 RIA

New governance models to define best practices for sustainable water management and conflict mitigation



> 1.5 M€

## Topic 2.2.1 RIA



A step toward carbon-neutral farms: coupling renewable energy sources with circular farming systems.



>1.5 M€

## Topic 2.3.1 RIA



Assessing novel antimicrobial food packaging and coating materials to reduce food waste to improve safety in the Mediterranean food supply chain



>1.5 M€

# Water Management topic – Section 2



## Topic 2.1.1 RIA

New governance models to define best practices for sustainable water management and conflict mitigation



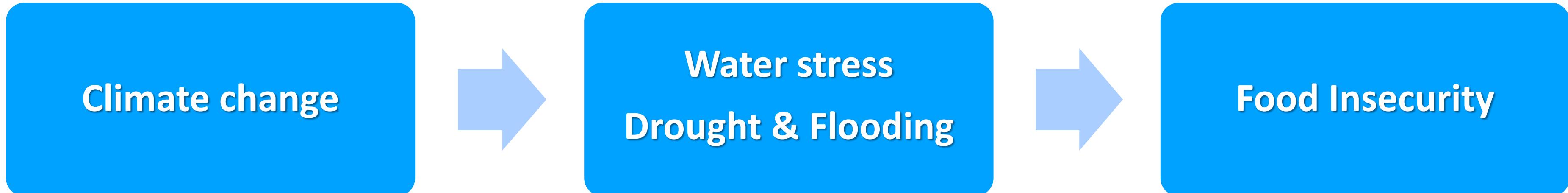
**> 1.5 M€**

**Submission deadline Stage 1: 29/03/2023**

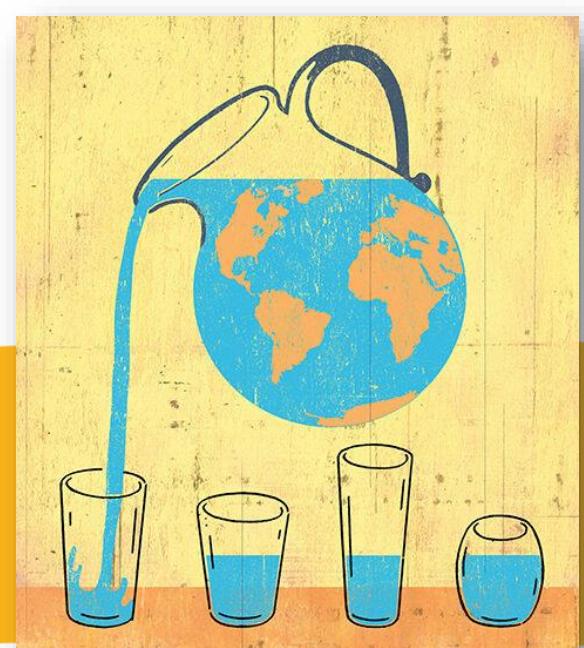
# Water Management topic – Section 2



## Challenge



- Risk of conflict when no common agreement exists on sharing water resources
- Need for new governance models based on data
- Involvement of all relevant stakeholders at the local, national or transboundary levels



# Water Management topic

## Scope



### Contribute to water sustainability & security in the MED:

Bring together;

- Stakeholders
- Administrations
- Non-state actors
- Innovative technologies

- Optimise water use
- Avoid depletion
- Create knowledgeable action
- Change dynamics of water demand & supply

- Map water resources
- Establish methodologies based on monitoring & modelling
- Technical solutions for information gaps
- Response to climate-induced risks
- Optimise water storage
- Preserve water in a circular economy context

- Examine governance solutions
- Analyse water tariff systems & prices
- Identify inefficiencies
- Identify impact on environment & water security
- Propose alternative models & instruments:
  - affordability
  - cost recovery
  - willingness to pay

- Review legal frameworks & agreements
- Propose measures that guarantee fair & sustainable access
- Balance conflicting interests
- Minimise future conflict
- Enhance stakeholder participation
- Scale-up of existing practices

# Water Management topic – Section 2

## Expected Impacts



**Mitigation and prevention of current and future water conflicts under climate change conditions through**

- developing necessary governance solutions
- fair allocation of water resources

### Basin level

Elaboration of participation and governance models resulting in improved coordination of water users & stakeholders

### Transboundary waters level

Adopt multilateral management agreements for strengthened cooperation among countries

Increased **water security** and strengthened protection of depleted water bodies & water-related ecosystems, stemming from adopting **innovative technical solutions** with appropriate legal, economic and governance instruments

# Water Management topic – Section 2



## Key Performance Indicators

Provide specific KPIs to measure the outcomes of your project:

Number of newly developed water rights systems ensuring the right allocations for water users



# Farming Systems topic – Section 2



## Topic 2.2.1 RIA



A step toward carbon-neutral farms: coupling renewable energy sources with circular farming systems.



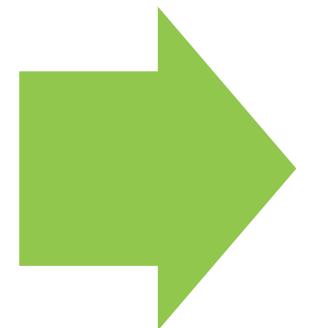
**Submission deadline Stage 1: 29/03/2023**

# Farming Systems Topic – Section 2

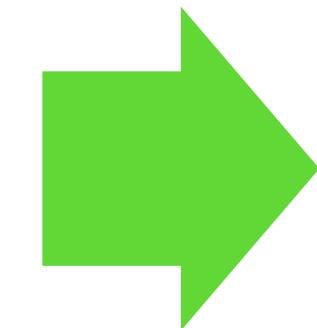
## Challenge



Non-sustainable agricultural practices



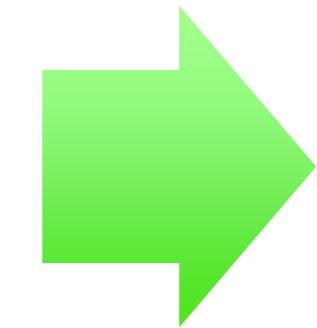
Increase in water and inputs used for irrigation and fertilisation



Increase in cost of production  
Decrease in farmers income  
Increase in GHG emissions  
Harm adaptive capacity of agro ecosystems to climate change

External factors

- COVID-19
- Ukrainian war



Increase in energy & inputs prices



Unbearable production costs for smallholders

# Farming Systems Topic – Section 2

## Scope



### Develop integrated farming systems

- Using renewable energy
  - Decrease GHG emissions
  - Maximise use/reuse of waste and inputs
- Reusing treated wastewater & sewage sludge

### Open field or protected farming systems

- Innovative, actionable and affordable
- Minimize costly use of external inputs
- Optimize resource use
- Greenhouses, aeroponic, hydroponic, aquaponic and cascade systems

### Open fields

- Eco-friendly practices
- Enhance integrated utilization of farm waste or agro-food by-products

### Greenhouse conditions

- Improve passive accumulation of heat
- Carbon dioxide enrichment

### Closed soilless farming systems

- Ensure sustainability
- Hydroponics
- Aquaponics
- Vertical farming

# Farming Systems Topic – Section 2

## Scope



**Ensure more carbon-neutral farming operations**

**Limit the impact of high energy prices on smallholders**

coupled w/  
renewable energy  
.solar,  
.geothermal,  
.wind,  
.biomass/waste

**Estimate farm's energy consumption & CO2 emissions**

- ICT
- IoT
- nano-technologies
- sensor devices

**Demonstrate socioeconomic feasibility**

- Consider complexity of new integrated farming operations
- Consider need for specific skills related to simultaneous farming of diversified products

Involve stakeholders/multi-actor approach (policymakers, public authorities, farmers)

**Living lab** - test proposed solutions

**Policy makers** - scale up, disseminate, replicate at larger scale

**Facilitate farmers' adoption** - guarantees, concessional loans, subsidies

**Capacity building**

**Awareness raising**

# Farming Systems Topic – Section 2



## Expected Impacts

Decrease in CO<sub>2</sub> equivalent emissions by using alternative sources of local and renewable energy

Improving the overall efficient use of water, fertilizers, and nutrients in Med. farming systems by adopting a circular bio-economy approach

Reduce the dependency on conventional energy suppliers

Improve the overall land productivity by integrating different cropping systems

Use of local energy from renewable sources

Reducing the impacts of climate change on Med. farming systems

# Farming Systems Topic – Section 2



## Key Performance Indicators

Number of sustainable practices applied

Reduction of external use of entrants

Number of business models

Reduction of food costs production costs

Reduction of GHG



# Agro-Food Value Chain topic – Section 2



## Topic 2.3.1 RIA



Assessing novel antimicrobial food packaging and coating materials to reduce food waste to improve safety in the Mediterranean food supply chain



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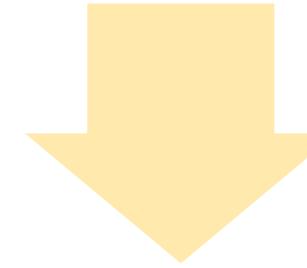
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# Agro-Food Value Chain topic – Section 2



## Challenge

Inadequate facilities  
Poor maintenance of proper conditions



-Food contamination & spoilage  
-Loss of nutrients

Environmental concerns

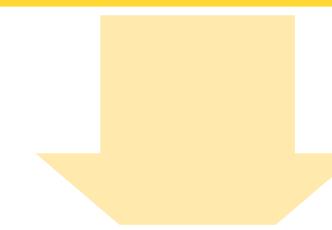


Biodegradable packaging materials



-Sustainable, env. friendly, cost-effective  
-Prevent food deterioration  
-Preserve/prolong food quality & shelf-life

New food packaging technologies



-Minimise hazards of foodborne pathogens  
-Predict & enhance shelf-life

# Agro-Food Value Chain topic – Section 2

## Scope



Novel, cost-competitive  
and versatile  
biodegradable food  
packaging/coating  
materials

- Control packaging atmosphere
- Prevent food spoilage
- Cause no env. Damage

### Bioplastics/biocomposites for food packaging

- Determine env. impact
- Eco. Feasibility

### Microbiome solutions

- Predictable and sufficient shelf life
- Substitute anti-microbial chemical agents

Tailor for different traditional Med. food categories and processing techniques/technologies

- raw
- cooking
- fermentation
- Dehydration

### ICT-based solutions

- Reduce waste
- Improve the efficiency of the supply chain
- Provide relevant actors with info on storage & transportation conditions

# Agro-Food Value Chain topic – Section 2

## Scope



### **Sound business models**

- Benefit all actors in value chain
- Maximise biomass valorisation
- Protect biodiversity/enviro nment
- Secure food systems

### **Establish local sustainability-oriented bio-based value chains**

- Demonstrate replicability in Med
- Low bio-economy activities
- Validate market acceptance

### **Multi-actor approach**

Active engagement & communication

- Stakeholders
- End-users
- Food systems – producers, retailers, households, chefs

# Agro-Food Value Chain topic – Section 2



## Expected Impacts

Introduce new environmentally-friendly techniques to reduce food waste

Demonstrate efficacy of bio-based materials for packaging to improve food safety and reduce food waste that meets market requirements.

Reduce the need for chemical treatments by using agricultural by-products and control pathogenic bacteria while preserving food's nutritive and organoleptic properties.

Job creation and job retention activities with equal gender opportunities.

# Agro-Food Value Chain topic – Section 2

## Key Performance Indicators



# of newly designed food products with enhanced shelf-life, quality and health-related beneficial properties.

# of Innovative bio-based materials from packaging to improve food safety, reduce food wastes.

# of jobs created/retained with equal gender opportunities.



# Links with EU Policies and Missions



Proposals should indicate linkages to relevant EU policies and objectives in the context of the **European Green Deal** and relevant **EU Missions and Partnerships**.

- European Green Deal
- Water Framework Directive (WFD)

- European Green Deal
- EU 2030 Energy Strategy
- Circular Economy Action Plan
- Water Reuse Regulation
- Methane Strategy

- Farm-to-Fork Strategy
- Waste Framework Directive
- EU Food 2030 R&I Policy (Circularity and resource efficiency)
- Circular Economy Action Plan
- EU Plastics Strategy

## Links with SDGs

Proposals should indicate their contribution to relevant SDGs and methodology to contribute to reporting SDG indicators.



The PRIMA programme is an Art. 185 initiative supported and founded under Horizon 2020, the European Union's Framework Programme for Research and Innovation

# THANK YOU

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