

PRIMA CYPRUS INFODAY 2023

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RESEARCH
& INNOVATION
FOUNDATION



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€

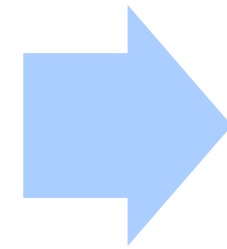
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Water Management topic – Section 2

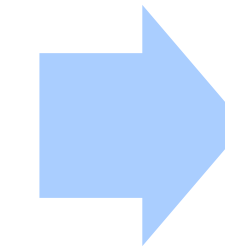
Challenge



Climate change

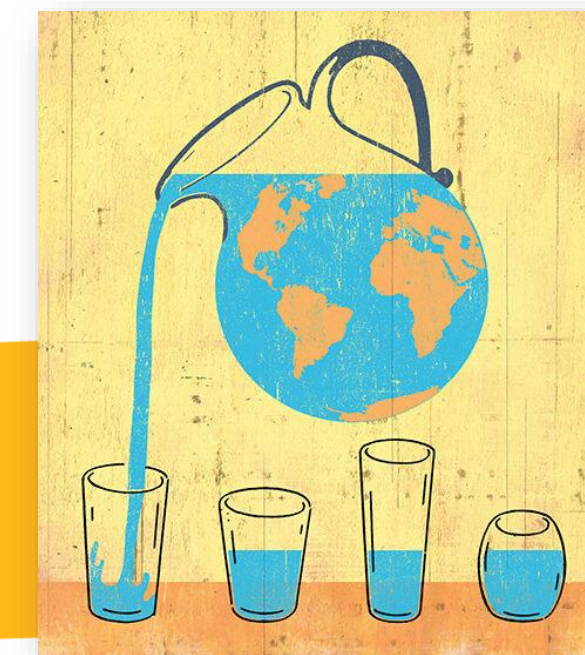


Water stress
Drought & Flooding



Food Insecurity

- 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

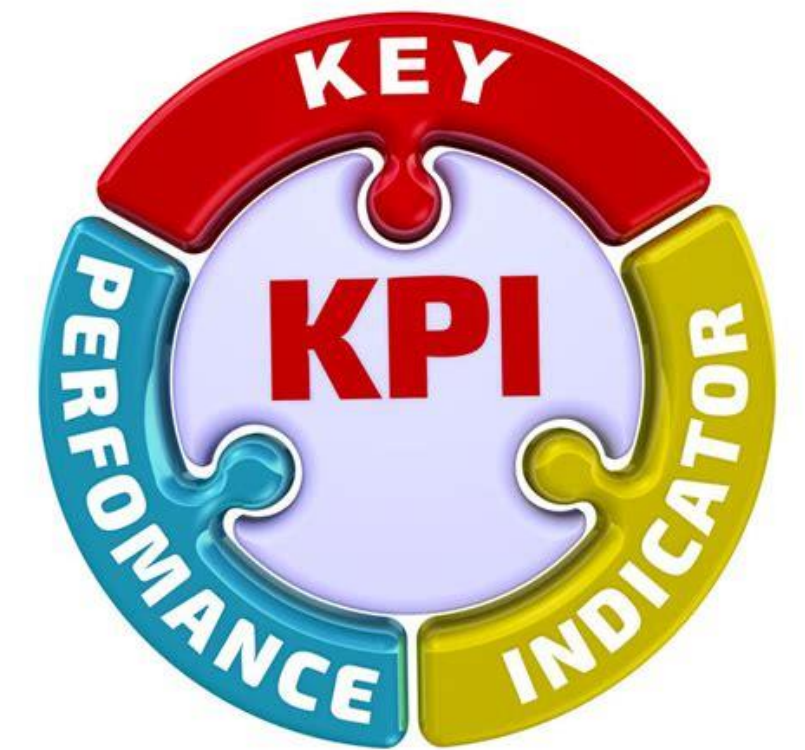
Water Management topic – Section 2

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.



>1.5 M€

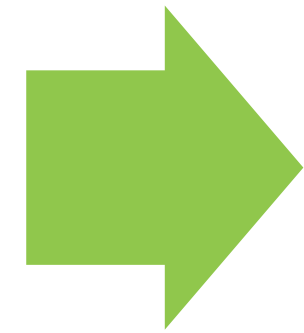
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Farming Systems Topic – Section 2

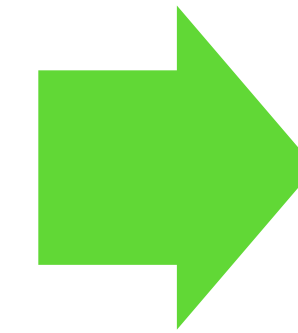
Challenge



Non-sustainable
agricultural practices



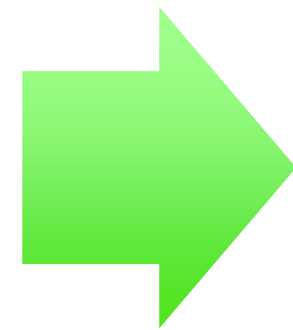
Increase in water and
inputs used for irrigation
and fertilisation



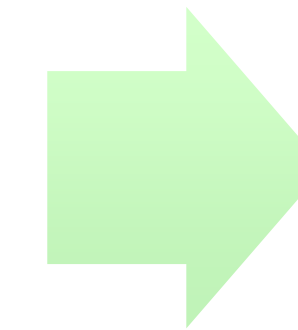
Increase in cost of
production
Decrease in farmers
income
Increase in GHG emissions
Harm adaptive capacity of
agro ecosystems to
climate change

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 CO2 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





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



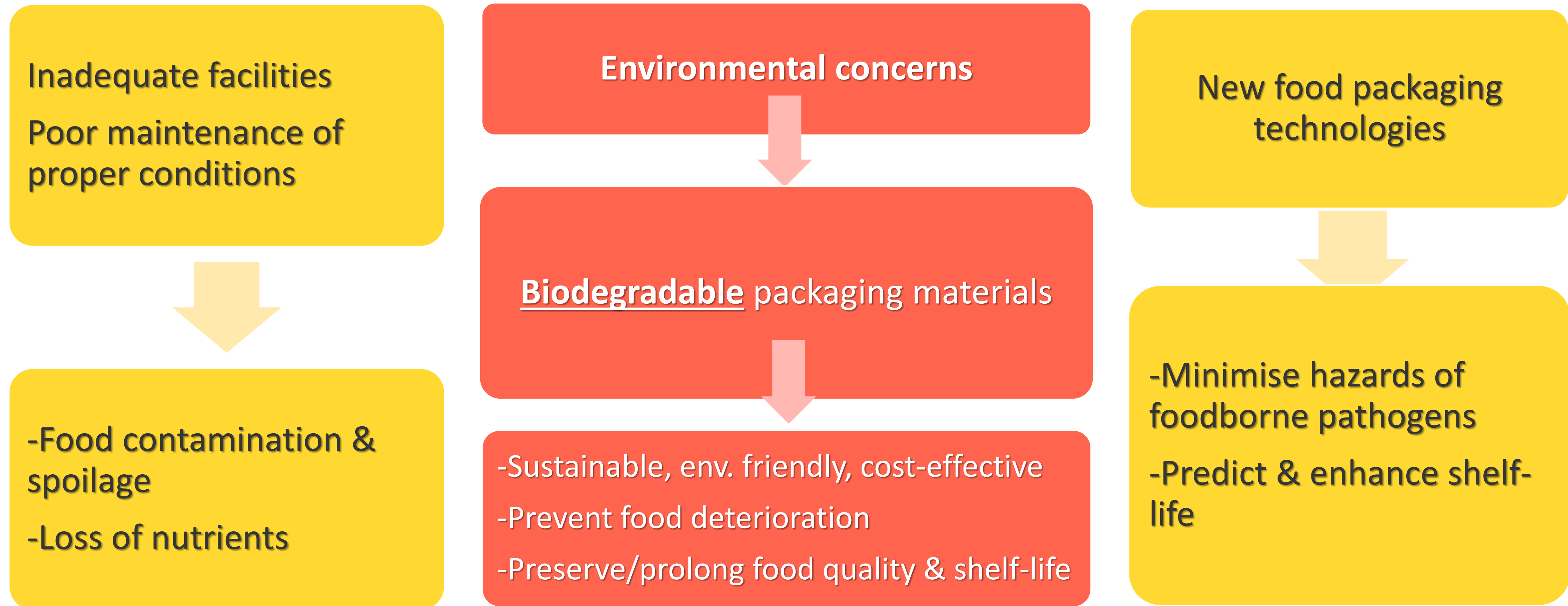
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Submission deadline Stage 1: 29/03/2023

Agro-Food Value Chain topic – Section 2



Challenge



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/environment
- 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

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