

# Pinios River Sustainability

PiRiS

**BUSINESS  
CASE**

IEOx WinterChallenge



# Case Background

## Area

The Pinios River (Greece) runs from the **Pindus Mountains** through the Thessaly plain and drains into the Aegean Sea. The basin area is **~10,700 km<sup>2</sup>**.

## Region

**Thessaly** is a productive agricultural region, with a high share of land in agriculture and a large share of irrigated agriculture.

## Water Use

**Irrigation** is the dominant water use in Thessaly (**above 91%** of annual demand) and a large share of demand is met from **groundwater abstractions**.

## Management Plan

A Drought and Water Scarcity **Management Plan** was developed for the **district**, with the purpose of quantifying drought/water scarcity, improving prediction, and proposing **response measures by risk level**.

# Case Background



**SDG 2.4.1:** “Proportion of agricultural area under productive and sustainable agriculture”.

**PiRiS** is designed to directly advance **UN Sustainable Development Goals**:



**SDG 6.5.1:** “Degree of integrated water resources management (IWRM) implementation”.



**SDG 6.4.2:** “Level of water stress”.



**SDG 15.3.1:** “Proportion of land that is degraded over total land area.”

# Project Concept Summary

Name: Pinios River Sustainability (PiRiS)

## Objective:

Increase sustainability in the basin by reducing irrigation pressure, improving soil-water retention, and strengthening drought governance.

**Improve** water stress and water allocation **performance.**

**1**

**Increase adoption** of productive and sustainable agriculture **practices.**

**2**

**Reduce** risk of land degradation outcomes.

**3**

## Type:

Basin-scale investment & reform program combining:

irrigation/water efficiency upgrades

**1**

nature-based solutions and soil-water measures

**2**

basin management instruments (data, allocation, drought response).

**3**

# Project Concept Summary

Purpose: Reduce the dominance of irrigation withdrawals and shift the basin toward higher water productivity.

Key interventions

1

Irrigation network efficiency upgrades (e.g. canal lining where appropriate, pressure management, leakage control)

2

On-farm modernization packages (drip/precision irrigation, scheduling support, soil moisture monitoring)

3

Water User Association capacity & financial sustainability package

4

Cost recovery design & affordability protection

By 2036, PiRiS aims to:

2026

2036

# Project Concept Summary

**Increase reliable water availability** for people, farms and industry, under harsher climate conditions.

**1**

**Reduce drought and flood losses** (lives, crops, infrastructure) through smarter risk management.

**2**

**Strengthen governance** and data for joint basin management.

**3**

## Inputs:

Allocation, metering, drought trigger

Irrigation modernization, scheduling

“Sponge” measures (soil-water retention, riparian buffers)

## Outputs:

Verified abstraction control

Improved application efficiency, reduced losses

Increased infiltration, reduced runoff, improved soil moisture

## Expected:

Reduced land degradation risk

Higher water productivity, stable yields

Lower groundwater stress, improved drought resilience

# Project Pillars

## Main Benefits:

avoided flood damages (crops, assets, infrastructure).

reduced pumping/energy costs from lower groundwater dependence.

improved yield stability and reduced input waste from precision scheduling.

improved basin governance performance.

reduced water-stress risk profile.

reduced land degradation risk reduction.

## Financial sustainability model

(choose one and justify)

### Option A

Public program (Sovereign/European Union-funded)

Rural development & climate adaptation streams

1

### Option B

Basin blended-finance facility

Public grants for public goods

Concessional finance for irrigation infrastructure

Performance-based payments for verified water savings / soil-water outcomes

2

Adopt fee structures that keep irrigation agencies financially viable while protecting vulnerable users.

Monetizable

Non Monetizable

# Your Role

You are a **team of strategists**

Your task is to **produce a strategic business case** for PiRiS

You need to answer:

Is PiRiS worth doing  
(economically, socially,  
environmentally)?

What is the best mix of  
investments and  
reforms?

Which financing and  
governance model  
makes it bankable?

?



# Guiding Points



## Economic and Financial Analysis

- What are the main benefit streams?
- How can fees be structured so utilities/irrigation agencies are financially viable but vulnerable households remain protected?

## Development, resilience, SDGs & gender

- What gains in water productivity and yield stability can be supported?
- How does PiRiS contribute to investment, jobs development and SDGs?

## Environmental, social & legal analysis

- How do you ensure environmental flows?
- How will you manage resettlement, land, and livelihood impacts?

## Financing, stakeholders & governance

- Compare purely sovereign-financed public programme, versus basin-level blended-finance facility.
- Who are the key stakeholders, who wins, who might block, and how do you manage them?

## Alternatives & risk

- Analyse risks: technical, financial, political, climate, social, environmental, institutional. How PiRiS mitigates/allocates each risk.

# Deliverables

Your team is expected to address the above areas. You should include:

Structured analysis based on the assignment questions

Economic models and analysis (if applicable)

Recommendations and conclusion

For your presentation, you may:

use real-world infrastructure comparisons to benchmark your analysis.

include data visualizations, charts, or maps to support your arguments.

consider both short-term and long-term impacts.

consider your audience includes local/regional governors, government and European Union representatives, banks and potential private investors.

# Instructions

1

## Video

Any format ( \*.mp4, \*.avi or \*.mkv), under 1GB

Length limit is 10 minutes

No restrictions on editing the video

The video can be captured by any available means. For example, you can use the recording option in Zoom.

2

## Slides

There are no restrictions on the number of slides

Presentation slides are to be submitted in .pdf format.

3

## Files

Names of all the files should be the same as the code of your team. (e.g.: "1234.pdf", "1234.mp4").

Keep in mind that it will take time to upload the video, so do have it ready in advance.

Business Case video and presentation files upload  
**deadline: 16th of February 2026, 23:59 UTC**

[Submit Here](#)

# Grading Parameters

- 1** Has the team identified the problems/causes and goals/issues of their assignment?
- 2** Has the team demonstrated the ability to effectively synthesize the information?
- 3** Do you recognize a broad perspective, deep analysis and inclusion of different stakeholders' interests?
- 4** Is the model of analysis complex and adequate? Has the team presented a clear structure of thoughts and arguments?
- 5** Are the underlying assumptions reasonable and realistically backed by the evidence? Do you recognize a high level of business sense and the ability to apply economic concepts?

Those are the grading parameters that everyone will use to peer-grade the solutions:

- 6** Has the team presented a well-developed strategy and made realistic recommendations? Do you recognize complete coverage of key issues?
- 7** How precise were the calculations and projections? Are they convincing?
- 8** Has the team demonstrated the ability to think outside of the box? Do you recognize imagination and creativity?
- 9** Is the presentation simple to follow? Was communication professional and proper, supporting their recommendations?
- 10** Did the team follow the instructions for the presentations, especially time limits? Is the contribution of every team member visible?



# Peer Grading

## Penalty for late replies

**25**

if peer-grading submitted 0-2 hours late

**50**

if peer-grading submitted 2-4 hours late

**75**

if peer-grading submitted 4-6 hours late

**%**

Deadline for peer  
grading: **19th of February  
2026, 23:59 UTC**

[Submit Here](#)

