



AVIATION TWIN TRANSITION CLUSTER

A EUROPEAN INITIATIVE FOR A SUSTAINABLE FUTURE

RefMap Clustering Event 2025

Advancing Sustainable Aviation & Urban Air Mobility

Seaplanes in Greece: sustainability challenges and policy objectives

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Overview

Questions

- Could seaplanes work in Greece?
- What prevents full-scale deployment?
- What is the role of the state?
- What is the role of the private sector?

Structure

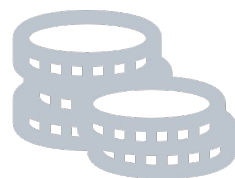
- Di-PEGASUS
- Seaplanes in Greece
- Methodology
- Results
 - Insights from applications abroad
 - Challenges
 - Recommendations



Di-PEGASUS



Digital competitive next generation aviation technologies for sustainable business models, products and services (Grant agreement ID: 101096000)



EC budget:
4.513.212,50 €

Duration:
36 months (12/23-11/26)



Objectives:

- To develop digital technologies that enable fully autonomous cost-effective and environmentally friendly aircraft operations in low altitude airspace.
- To develop digital technologies that enable cost-effective and environmentally friendly aircraft ground operations.
- To develop a tool that can be used for impact and cost-benefit analysis of future innovative technologies starting from the early development phases.
- To develop business models that, by leveraging on the innovative above technologies developed, can unlock their full potential.



The Di-PEGASUS consortium





GREECE



Mobility solutions using seaplanes in the Greek islands and mainland

- Application of innovative technologies for water airports and seaplanes that will enhance their maintenance, fleet management, and route optimisation.
- Market analysis of seaplanes in Greece.



FRANCE



Urban air mobility in the Paris area

- Part of the Paris Region Advanced Air Mobility Alliance initiative that aims to create a new ecosystem for eVTOLs.
- Enhanced capacity to develop and implement advanced UAM solutions.



ITALY



Goods transport using drones in Emilia Romagna Region

- Enhanced capacity and speed to transport goods using drones.
- Focus on transporting medical supplies during emergency and non-emergency situations.

Transport in Greece

- Island connectivity is a key issue.
- There are two main challenges:
 - Meeting increased demand over the tourist season.
 - Securing sustainable and affordable connections for island communities throughout the year.
- Currently connections are served by ferries and planes.
- Current challenges involve frequency, affordability and duration of connections.
- Both ferries and planes are heavily reliant on fossil fuels.



Seaplanes in Greece

- Seaplanes have been discussed as a transport solution in Greece for over 20 years.
- Seaplane operations were in place for a short period but ended in 2010.
- Potential benefits include increased connectivity between islands and the mainland, flexible routes, limited infrastructure required, attraction of high-end tourism.
- Efforts to re-establish full-scale seaplane operations have not been successful so far.



Method

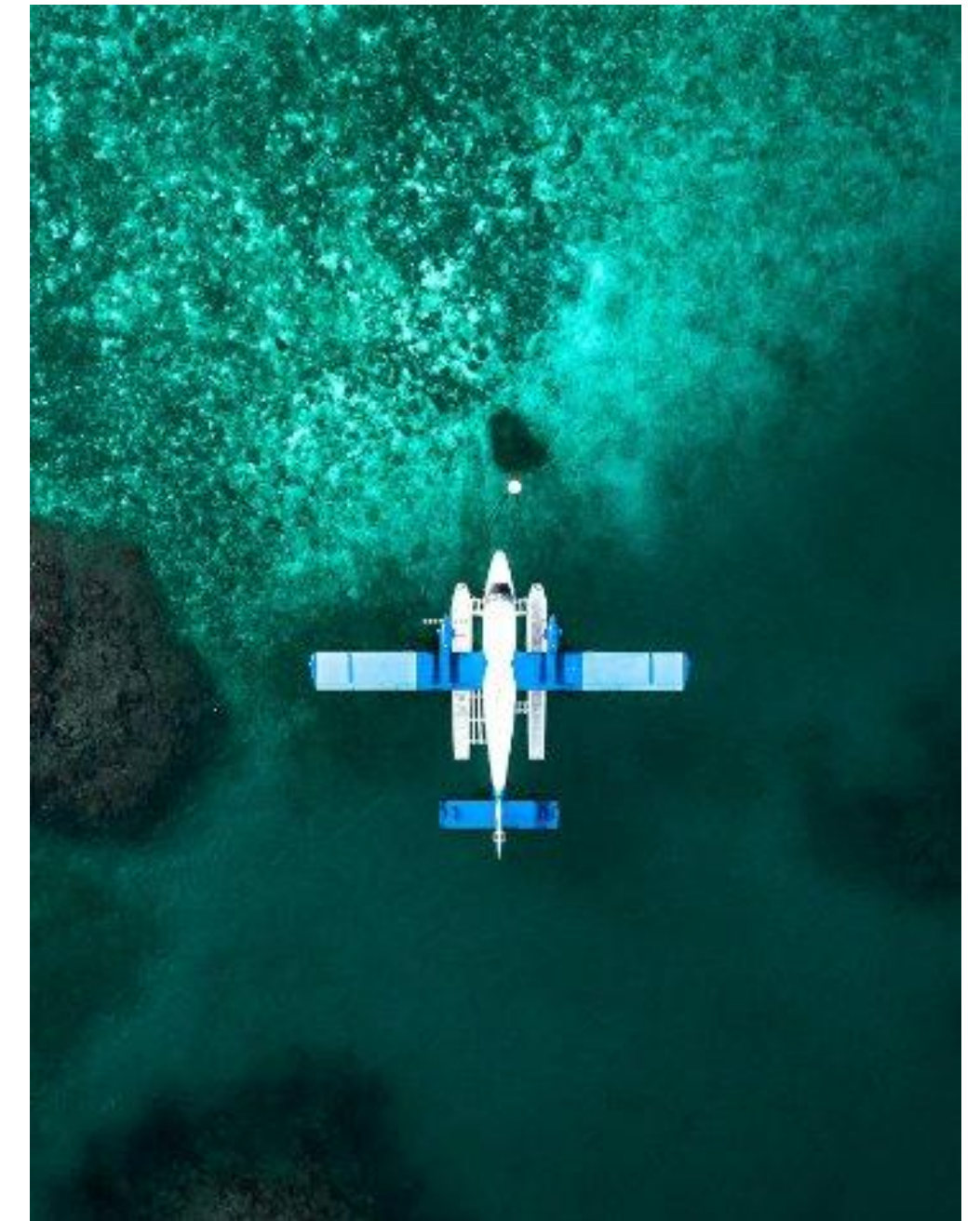
- Review of literature
- Review of legal framework in Greece
- Review of seaplane operations across the world
- Interviews with key national and international stakeholders between April 2024 and April 2025 (7 interviews, 9 interviewees)
- Qualitative data analysis

Seaplane operations across the world

- Limited applications
- Mainly focused on tourist areas (e.g. the Maldives) or in inaccessible areas where there is no transport alternative (e.g. northern Canada).
- Most popular applications are: chartered services, hotel transfers and sightseeing trips.
- Very few scheduled routes.

Operational characteristics (1/2)

- Limited capacity (10-15 people).
- Ideal flight duration is under 30 minutes.
- Ideal flight distance is about 80 nautical miles (150 km).
- A relatively slow plane with high fuel use.
- Seaplanes need frequent cleaning and maintenance due to their contact with saline water.
- High cost per seat.



«The seat costs are massively higher than any other aircraft type. It's a very slow aircraft, whether it's the twin otter or the caravan seat costs are very similar. The airplane is slow and it's small. And that dictates seat costs»

Operational characteristics (2/2)

- Seaplanes are economically efficient under specific circumstances (e.g. when they carry out the shortest possible route).
- Seaplanes are ideal for covering short distances that cannot be served in a different way (e.g. when there is no airport or road links).
- Seaplanes are often matched with other tourist services such as luxury resorts or cruises.
- Seaplanes are often used for business trips where they limit the transfer time.
- Seaplanes often serve remote areas for business purposes.



Market and infrastructure limitations

The specific conditions under which seaplanes are operationally and financially sustainable shape their market:

- Water airport networks need to be designed in a way that optimises flight time and distance.
- Seaplane operators are often individuals who own a seaplane and carry out private transfers or sightseeing trips.
- There is limited expertise in the various sectors related to seaplanes (pilots and co-pilots, engineers, policy makers).

Applications for seaplanes in Greece

“You know, you should **not only focus on catering for the tourists** who are coming to the country, you should also **focus to the local community**, providing them flexibility, providing them options to travel, which can be achieved on the seaplane, provided either the government gives the local operator the subsidy or the government can do it on their own as well. [...] I think **the government really needs to look into how the private sector and the government can work together to give the best to the community.**”

“If it's a social service, it **needs to be subsidised** by the government.”

“...due to their high cost, **seaplanes can only be successful in places where tourists are willing to spend large amounts of money** and attributed the lack of success of past operations in Europe (for example in Venice or Croatia) to the fact that they are “low disposable income destinations”.

The role of regulation and legislation

- Government support and sufficiently flexible legal frameworks are very important for the start of seaplane operations.
- However, legislation is not always the reason seaplane operations fail.
- Government subsidies may be necessary in some cases.
- At the same time, government steering is necessary if seaplanes are to become part of the transport network.

Our recommendations

- Need to better understand market conditions, potential market share and client base of seaplanes.
- Better collaboration between public and private actors, mutually supportive and reciprocal relationships.
- More interest from international investors.
- Strategic planning that examines the role of seaplanes as part of the country's wider transport system.
- More detailed understanding of which needs seaplanes need to serve and which population segments are expected to benefit from them.

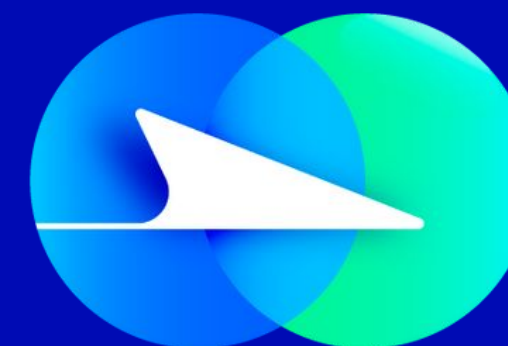
**thank you
for your attention!**

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For more information:
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**Q&A /
Closing**





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