



ICAO SEMINAR ON **GREEN AIRPORTS**

ATHENS, GREECE | APRIL 18-19, 2024





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“THE CASE OF 14 REGIONAL AIRPORTS IN GREECE”

Session 4: Taking Flight Towards Climate Resilience:
Building Adaptation Strategies for Airports



PRESENTATION OVERVIEW

01 Overview of Fraport
Greece project

02 Airports and Climate
Change

03 Fraport Greece (FG)
Climate Change approach

04 Climate Change Risk
Assessment & Fraport
Greece's experience

05 The way forward

06 Conclusions

Overview of Fraport Greece project



Fraport Greece

The project

3 companies:

- FGM: Management company (Headquarters)
- FGA: Airport Management Cluster A
- FGB: Airport Management Cluster B

40 year concession (maintenance, operation, management, upgrade and development) of 14 regional airports

5 new terminal stations / 5 extensions / 4 renovations

15 RWYs of approx. 35km length

€ 1,234 billion advance payment

Annual cost: € 22,9 million

Annual variable cost: 28,5% operating profit (EBTDA)

~ € 10 billion income for the Greek State by the end of the concession

More than 800 permanent jobs (2024)





Traffic Overview

2023 (pax)

Thessaloniki SKG	Kerkira CFU	Zakinthos ZTH	Kefallinia EFL	Aktion PVK	Kavala KVA	Chania CHQ	Rodos RHO	Kos KGS	Santorini JTR	Mikonos JMK	Mitilini MJT	Samos SMI	Skiathos JSI	TOTAL FG
7.029.957	4.068.053	2.081.931	860.533	817.156	304.414	3.648.416	6.143.813	2.954.719	2.775.804	1.659.187	497.499	477.306	552.844	33.871.632

02

Airports and Climate Change



Climate Change impact on airports

- Flight disruptions and cancellation
- Impact on infrastructure
- Economic impact



Intensity



Spatial extend

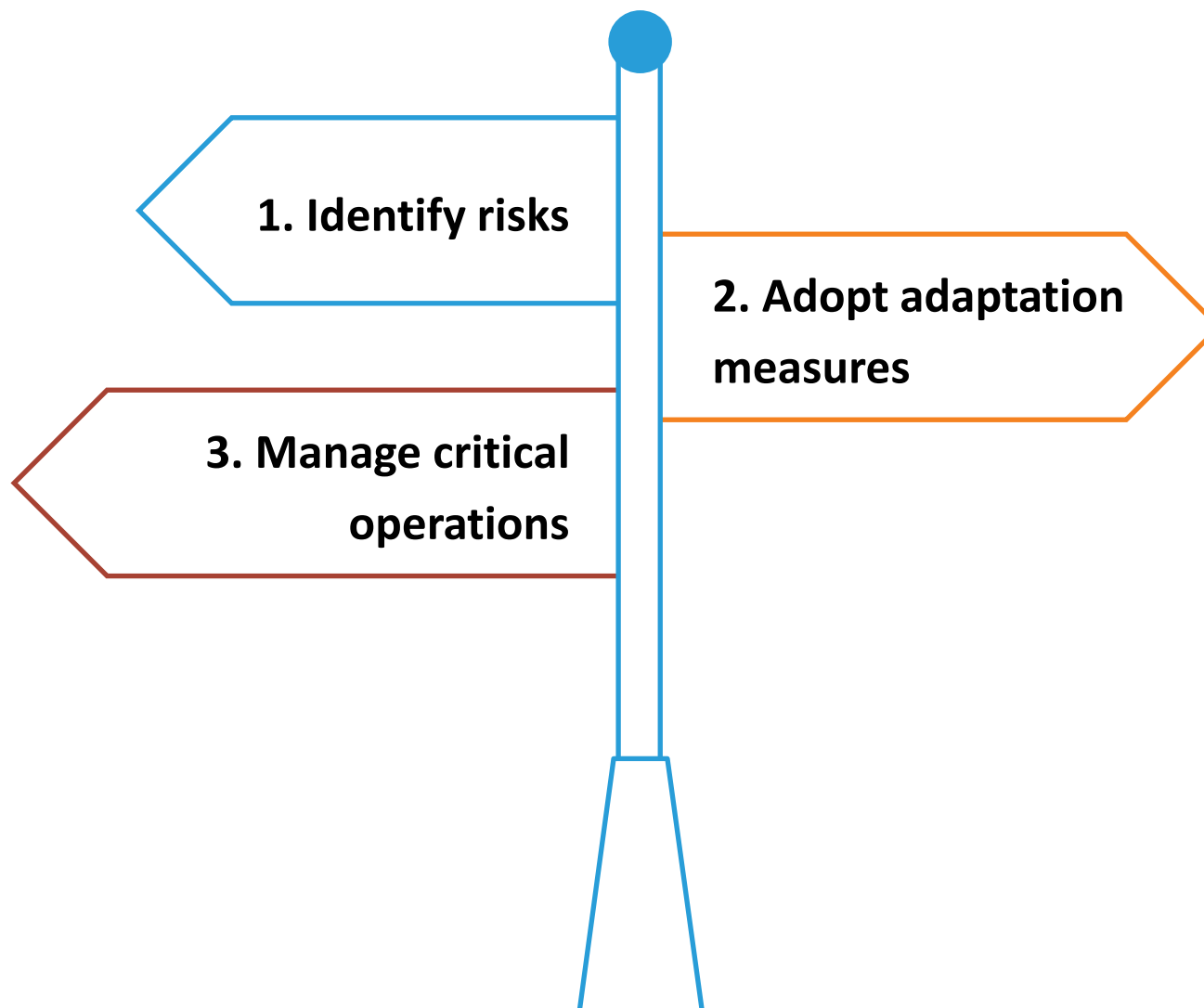


Duration



Frequency & Timing

Methodology



03

Fraport Greece Climate Change Approach



Adaptation actions

2017

Climate Change Resilience Study

2022

Update of the above mentioned study by National Observatory of Athens

2023

Study for the protection of coastline at SKG airport, Coastal Engineering of the Aristotle University of Thessaloniki (AUTH)

04-1 Climate Change Risk Assessment



Desk based due diligence review

- **SHORT TERM (2022-2031)**
- **MEDIUM TERM (2032-2041)**
- **LONG TERM (2042-2056)**

Risk source; CC indicator	Risk	Affecting: operations and/or infrastructure
Temperature; $T_{max} > 35^{\circ}\text{C}$	Flashpoint (38°C) of aviation fuel exceeded on very hot days - potential fire hazard.	Both
Fire; FWI & FWI>50	Increased fire risk due to higher temperatures and increased summer drought potential.	Both
Temperature; $T_{max} > 35^{\circ}\text{C}$	Reduced lift for departing aircraft due to 'thin air' and reduced engine efficiency in very hot weather.	Operations
Fog (warm sea & cold air)	Low visibility due to fog conditions could cause disruption and delays	Operations
Wind changes; Air speed	Wind intensity affects runway utilisation and schedules. Increased risk of wind damage to assets, standing aircraft, vehicles and injuries to staff.	Both

- **NO** risks over the short term period
- **SEA LEVEL RISE** (2050: SKG, CFU, RHO, PVK)
- **TEMP** (incl. fire) All airports
- **DROUGHT**
- **FLOODS** (SKG, KVA, ZTH, PVK, EFL, RHO, SMI)
- **SEA LEVEL RISE –ACCESS** (KVA, JSI, ZTH, SMI, MJT)
- **WIND SPIND** (CFU, RHO, SMI, MJT, JMK, JTR)
- **FOG** SKG



Coastal protection project:

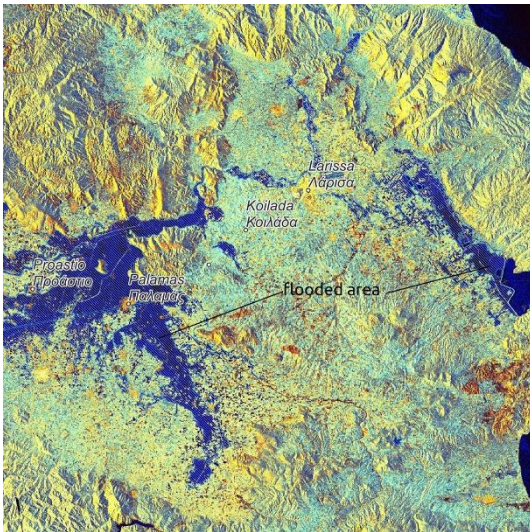
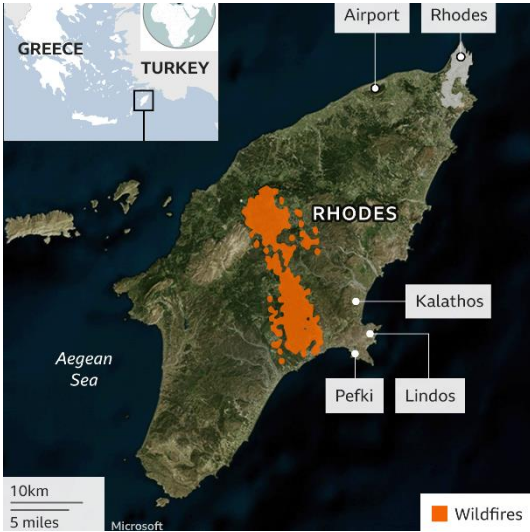
Rip-Rap Wall

- Meteorological tides
- Wave rises
- Permanent (0,30 m) sea level rise

04-2

Fraport Greece airports experience





Fraport Greece airports experience

- No impact on infrastructure
- Access/operations disruptions
- Passengers congested in airport
- Financial impact

05

The way forward



06 Conclusions





Thank You

