Global Climate Change Impacts on Airport Infrastructure on the Island of Cyprus
A Proposal for Further Research

Emmanuel Dimont

The Republic of Cyprus has two international airports serving as a gateway to the outside world. The largest one is located in the coastal town of Larnaca with two terminals, one old and one currently under construction. The old terminal which has been in operation since 1975 (latitude: 34.882°, longitude: 33.629°) is due to close to international air traffic as of November 2009. The new terminal in Larnaca to open in November will take over all international air traffic (latitude: 34.869°, longitude: 33.610°) and will function as the main, new and modernized international gateway for passengers in and out of Cyprus. The second largest international airport in Cyprus is located in the coastal town of Paphos (latitude: 34.718°, longitude: 33.487°) and acts as a gateway mainly for tourists visiting the Western part of the island. The figure below shows a satellite photograph of Cyprus with the location of both international airports in red.

![Figure 1: Location of International Airports in Cyprus](image)

As of 12th May 2006, both airports came under the new management of Hermes Airports Ltd., an international consortium of nine major shareholders who won a government tender to modernize both facilities under a 25-year Build-Operate-Transfer (BOT) concession agreement. The major shareholders are listed in the table below:
The major global climate change implication for airport infrastructure in Cyprus has been identified as global sea-level rise affecting the low-lying runways and other facilities in both Larnaca and Paphos. Reports dating back from June 26th, 1997 show that there is concern, at least at the Cyprus Meteorological Service, that if global warming continues at current levels, Larnaca and the airport located there would be flooded within 50 years. There seems to be concern in other government ministries and departments too, however as of June 22nd, 2009, no relevant reports or data was available online on this issue. This could be due to significant delays in posting materials on government websites in Cyprus. It should be noted that only recently has Cyprus’ government begun to transfer its operations online and the process is likely to take several more years to complete. These circumstances have created an environment of information drought which makes researching this issue very complicated.
Larnaca International Airport

The figure below shows a satellite photograph of the location of Larnaca International Airport, both the old and new terminals. The location of the old terminal should be noted. It is very close to the coastline with the runway touching the sandy beach. The elevation above sea level ranges from 0-1m for the runway to 3m for airport facilities. This places the old terminal at a very unfavorable and dangerous situation for future sea-level rise. It is no surprise that Hermes Airports decided to move the location of the new airport terminal deeper inland to a safer elevation of 8m above sea level. However the runway remains at sea-level throughout its length which makes it the first object to be flooded if sea levels do rise in the future.

![Figure 2: Location of the Old and New Terminals in Larnaca](image)

The figure below shows a photograph of the new terminal in Larnaca. Note the runway and the visible flat sandy beach in the background. The terminal is due to open in November 2009.

![Figure 3: New Terminal of Larnaca International Airport](image)
Paphos International Airport

The figure below shows a satellite photograph of the location of Paphos International Airport. The location of the terminal should be noted here once again. It is very close to the coastline. The runway is deeper inland than the airport facilities. The facilities are located at an elevation of 7m above sea-level, with the run-way 10m above sea-level. In this case, the airport facilities will be first to be flooded in the case of sea-level rise.

Figure 4: Location of the New Terminal in Paphos

The figure below shows a photograph of the new terminal in Paphos. Note the runway and the proximity of the airport to the sea. The terminal was opened in November 2008.

Figure 5: New Terminal of Paphos International Airport
The following is a list of some departments and people who should be involved in resolving climate change issues related to airport infrastructure in Cyprus.

Nicolas K. Shacolas  
Chairman, Shacolas Group of Companies

Daniel Rigout  
Vice Chairman, Bouygues Batiment International

Rik Joosten  
Director, Egis Projects S.A.

George Casey  
Director, YVR Airport Services Ltd

John Boland  
Director, Aer Rianta International c.p.t

Panayiotis Hadjipantelis  
Director, Hellenic Mining Group

Iacovos Iacovou  
Director, Iacovou Bros Construction Ltd & Charilaos Apostolides Public Ltd

Christophe Petit  
Director, Bouygues Batiment International

Renaud Beziade  
Director, Egis Projects & Nice Côte d’Azur

Table 2: Hermes Airports Ltd. Board of Directors[3]

Mr Alfred van der Meer  
Chief Executive Officer

Mr Eric Delehaye  
Deputy Chief Executive Officer

Mr Yanis Papastefanou  
General Manager, Larnaca International Airport

Mr Olivier Baric  
General Manager, Paphos International Airport

Mr Panicos Papadakis  
General Manager, Finance and Administration

Mr Michalis Miltiades  
General Manager, Support Services

Ms Diane Jones  
Owners Representative

Mr Emmanuel Bernard  
Manager, Finance

Mr Matthew Thomas  
Manager, Commercial

Mr Christian Escoffier  
Manager, Technical

Mr Andreas Varelias  
Manager, IT

Table 3: Hermes Airports Ltd. Managerial Team[4]

Ministry of Communications and Works
Acheon 28, 1424, Nicosia, Cyprus
Tel. No. : +357 22800288
Fax No.: +357 22776266

Department of Civil Aviation
Pindarou 27, 1429, Nicosia, Cyprus
Tel. No.: +357 22404102
Fax No.: +357 22766552
E-mail: director@dca.mcw.gov.cy

Larnaca Municipality
P.O Box 40045, 6300, Larnaca, Cyprus
Tel. No.: +357 24651088, +357 24816555
Fax No.: +357 24653384
Email: municipality@larnaka.com
References


*Please note that several issues have hindered more research for the purpose of this paper. Firstly, there is virtually nothing on sea-level rise implications on airport infrastructure in Cyprus published anywhere in the world or available online. Secondly, the author had no access to any resources on the Harvard Libraries online resource website for the duration over which this paper was written. Coupled with a severe lack of time for the preparation of this document has led to the current situation where very little in terms of references is available on the issue.