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NAVIAIR

Air Navigation Services

PRESS RELEASE

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Free choice of flight route reduces fuel burn and *CO_2 emission*

A new concept in the Air Navigation Services in the unified Danish-Swedish airspace will reduce CO_2 emission from aviation considerably.

The so-called "Free Route Airspace" (FRA) concept will be implemented by Danish Naviair and Swedish LFV Air Navigations Service providers as of 17 November. The concept is a direct result of the air traffic management cooperation in the unified Danish-Swedish airspace (DK/SE FAB) that was declared in October 2009.

With Free Route Airspace, the airliners and pilots will be able to plan a direct flight route through the Danish-Swedish airspace. Theoretical calculations based on Eurocontrol's standard models shows that the concept will give a total fuel saving of approximately 13,800 ton a year thus reducing CO_2 emission by approximately 43,600 ton. This equals the average annual emission from approximately 31,210 cars. In addition other greenhouse gases will also be reduced.

Calculations by Naviair and LFV show that the concept correspond to an average saving of 1.3 % (fuel and flying time) for the airliners that operate in Danish and Swedish airspace.

Already before the implementation of Free Route Airspace, most aircraft have in fact been given the shortest distance over Denmark and Sweden whenever possible, but until now the airliners have been obliged to plan their flight routes according to the published fixed air routes. Consequently, the aircraft had to carry extra fuel. With the new concept, the aircraft can depart with a little less fuel on board, and the reduced weight thus leads to reduced fuel consumption during the flight. Although the saving on each flight is relatively small, the total saving with approximately 950,000 flights each year becomes quite substantial with consequent positive environmental effects. Furthermore, the calculations show that airliners will save almost 7,500 flight hours per year compared to the flying time of the flight plans.

While pilots can plan for a direct flight route, it is still Naviair and LFV that provides the air traffic service and ensures the flight safety level in the Danish-Swedish FAB.

During 2012, the co-owned company NUAC (Nordic Unified Air Traffic Control) will take over responsibility of en route Air Navigations Service provision from the three control centres in Copenhagen, Malmö, and Stockholm.

Free Route Airspace has been successfully implemented in Portuguese and Irish airspace and to a certain extend also in the airspace over Holland and Belgium.

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Press release enclosures:
- Factual information
- Map of Danish/Swedish airspace

Savings from FREE ROUTE AIRSPACE in Danish/Swedish airspace

	Saved flight route (km)	Saved flying time (hours)	Saved fuel (ton)	Saved CO_2 (ton)	Saved NO_x (ton)	Saved HC (ton)	Saved CO (ton)
Per day	**16,581**	**21.3**	**39.6**	**125.2**	**0.35**	**0.06**	**13.4**
Per year	**5,786,689 [1])**	**7,434**	**13,820**	**43,695 [2])**	**122**	**21**	**4,677**

Saving calculated with a Boing737 flying in the normal route structure versus "Free Route Airspace" based on simulations made by Eurocontrol for Naviair and LFV. Some of the savings is already achieved today on tactical basis, as the air traffic controllers provides efficient and direct routings when possible.

[1]) Equals 133 flights around the earth
[2]) Equals emission from approximately 31,210 cars driving 10,000 km/year (Source: European Environment Agency, CO_2 emissions by cars 2010)

Common Danish-Swedish airspace (DK/SE FAB)
In December 2009, the Danish and Swedish airspace were declared as one unified Danish/Swedish Functional Airspace Block. Until now, the Danish/Swedish FAB is one out of the two FABs so far declared according to EU's "Single European Sky programme" and is thus among first FABs in Europe.

Co-owned company NUAC (Nordic Unified Air Traffic Control)
In 2009, Naviair and Swedish LFV established the jointly owned company NUAC HB that will take over the management of Naviair's control centre in Copenhagen and LFV's control centres in Stockholm and Malmö during 2012.

Naviair and LFV are thus on the forefront among the European companies of implementing our part of EU's SES-programme.

The total amount of annual flights in DK/SE FAB is approximately 950,000.