Two Actions to reduce the Costs Of Congestion in European Airspace

EUROCONTROL

> **Congestion in European airspace cost around €6Bn in 2006 and it is estimated that it will cost more than €50Bn by 2020, compared to a potential added value of €470Bn for the European economy. Two actions are needed to reduce these costs:**
>
> ● **Continue to support the SESAR[1] programme and a number of near-term improvements, which are delivering a safer, more efficient and more sustainable use of the available resources.**
>
> ● **Push for a more joined-up approach to air transport as a whole: in particular, a transparent and consistent process encompassing charging, airport slots, scheduling and flow management.**

Fig.1 Current rationing for safe, orderly and expeditious flight isn't joined up.

The limited resources available to air traffic are allocated through a sequence of processes, from international air services agreements at the largest scale, down to the actions of air traffic controllers and pilots who keep aircraft separated. Recent deregulation has strengthened the thread of market freedom – essentially in airline scheduling - but this takes place within a framework which remains based on non-market rationing mechanisms such as air services agreements, grandfather rights and flow management. In effect, air traffic is organised by rationing of limited physical resources. By this rationing, air transport in Europe is safe, but the airspace is still congested both on the ground and in the air: 90% of delays in 2006 were on the ground and 10% in the air at an estimated total cost of €6bn to airspace users.

To eliminate congestion is not a sensible economic goal, but the costs will climb without further action. SESAR estimates that air transport could have a total added value of €470Bn in 2020 for the European economy, but that €50Bn of that could be lost because of congestion, even without adding in delay costs. This would rise to losses of €90Bn and 1.5 million jobs in 2025, with the principal challenges arising at airports.

Opinion Paper to the European Conference of Ministers of Transport Meeting on Congestion, Sofia, May 2007 from EUROCONTROL Director of ATM Strategies.
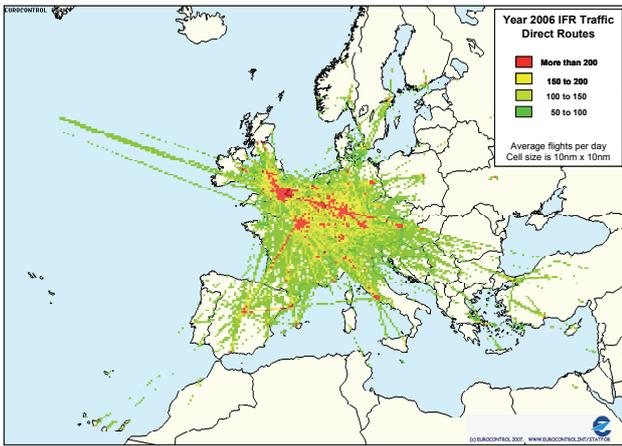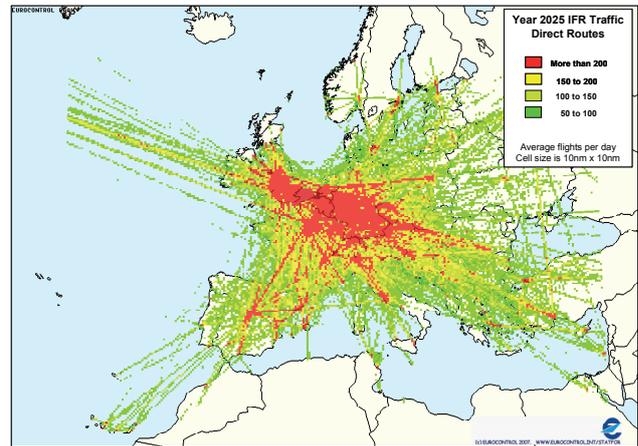
Fig.2 2006 Air Traffic Density

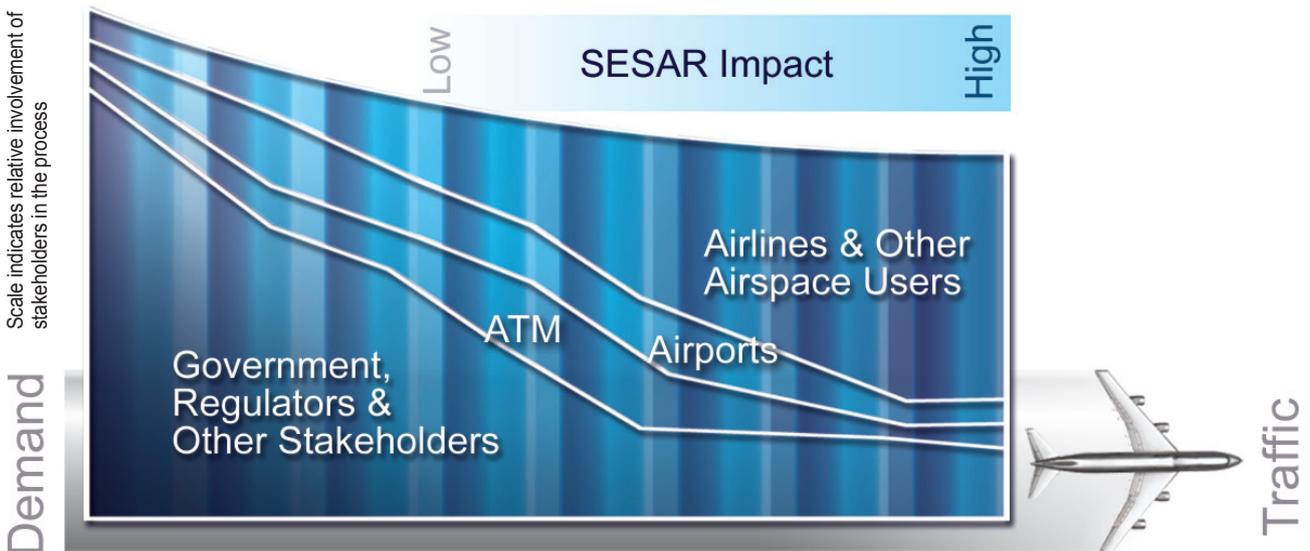**Fig.3 Forecast 2025 Air Traffic Density**

Fig.4 Joined-up rationing for better use of scarce resources

EUROCONTROL's strategic role is to help policy-makers focus on the future challenges and to support the development and delivery of solutions. From this perspective, the EUROCONTROL Agency is deeply involved in SESAR which, together with a number of near-term improvements, will deliver a safer, more efficient and more sustainable use of the resources that are available to air traffic. In the air, for example, air traffic management must enable the use of an optimum flight profile and avoid holding in order to achieve sustainable use.

On the ground, given limited opportunities for air-port expansion, emphasis must be placed on making the most of existing airport resources. Getting more airports to deliver 'best-in-class' capacity from their infrastructure remains a challenge, but work on this is in progress. What is already clear from current measurements is that making the most of the available resources requires actions which go beyond air traffic management, and are therefore outside the scope of SESAR and nearer-term improvement activities.

As discussions of an EU-USA Open Skies agreement have showed, there are many disconnections in the process of rationing (Figure 1). Removing limitations on flights in international agreements does not necessarily mean that national and local policies are supportive of the newly open market. The costs of use are inconsistent between airports and between countries, creating many market distortions. The rules on airport slots are not consistent with an open and efficient market. The airport slot process isn't designed to make airline scheduling easy. Having an airport slot doesn't guarantee the availability of air traffic capacity on the day. And air traffic controllers may be unaware of the effects of their actions on capacity elsewhere.

Some of these issues are being tackled through SESAR, but minds need to be focussed on making charging, airport slots, scheduling and flow management more transparent and integrated if the costs of congestion are not to escalate further.

In the interests of better decision-making and system management, EUROCONTROL publishes regular short-, medium- and long-term forecasts of traffic together with analysis of particular segments of the market. See www.eurocontrol.int/statfor.