

ON THE RECORD**“This regime is intent on getting a bomb.”**

Paul Leventhal, founder of the Nuclear Control Institute, echoes the view of most analysts about Iran restarting chemical processing of uranium.

“You guys now have anthrax spores once again, so do be careful.”

A dispute over property tax saw an NIH employee leave this voicemail for her Florida tax office, which promptly got her arrested.

SCORECARD**Science at the movies**

The silver screen is the latest weapon in the Pentagon's bid to bolster national defence. It is training scientists to write screenplays in the hope that films featuring glamorous researchers will draw more US students into science.

**Fight against drugs**

Official figures for illegal drug use may be way off the truth. In Italy's Po valley, 15,000 users admit to taking cocaine at least once a month. But analysing river and sewage water for a byproduct of the drug suggests that the real number is closer to 40,000 doses — a day.

**Ugly fish**

Forget size and taste, the latest goal in genetically engineered food is prettier fish. A team at the US Department of Agriculture is trying to create trout with lighter skin and smaller noses in a bid to make them more appealing to consumers.

OVERHYPED**Planet spotting**

When astronomers at the California Institute of Technology reported a Solar-System object larger than Pluto two weeks ago, the news was followed by rumours that the announcement was rushed out when a hacker threatened to scoop the discovery. On his website, lead researcher Mike Brown reveals that someone used publicly available abstracts and telescope logs to piece together where the new 'planet' was located, although there was no threat to steal the credit. Brown says that checking the logs was “chilling” and “unethical”. Maybe. Or you could just call it curiosity.

IMAGE
UNAVAILABLE
FOR COPYRIGHT
REASONS

Europe set for tough debate on curbing aircraft emissions

LONDON

Flight UA923 is a problem. When the Boeing 767 travels from London to Washington DC every week, it emits around a tonne of carbon dioxide for every passenger. The aircraft departs from a country that is intent on tackling such emissions, but lands in one that stands almost alone in resisting such measures. To further complicate matters, most of the emissions do not actually occur in the airspace of either nation. So how can UA923's emissions, and those from other flights, ever be regulated?

A first stab at an answer, at least in Europe, is likely to come soon. The European Commission (EC) is due to release a proposal on the issue in September, and details are starting to emerge. Emissions trading, already used to limit emissions from other European industries, will play a central role. New taxes are also likely. But although environmental groups and the airlines can agree on these points, a battle looms over a critical issue: the quantity of

greenhouse gases that the industry should be allowed to emit.

International aviation is a pressing environmental concern. The industry emits around 3% of global greenhouse gases and is the fastest-growing source of emissions. Yet it is omitted from the Kyoto Protocol, which regulates emissions from most industrial nations. Total emissions from the European Union (EU), for example, dropped by around 5% between 1990 and 2003 — but contributions from the booming aviation industry rose by 75%.

The EC plans would cover all flights taking off in Europe. They would either see emissions included in Europe's existing carbon trading scheme, or in a stand-alone version for airlines. Under the existing scheme, which began in January, around 13,000 European firms monitor greenhouse-gas emissions. If companies produce more than their government-allotted quota, they must buy emissions credits from others that have emitted less than allowed.



HURRICANES WHIP UP HUGE WAVES

40-metre monsters may account for mysteriously vanished ships.

www.nature.com/news

PUNCHSTOCK

Some aspects of the plan to incorporate aviation are straightforward. As air travel is international, the European Union, not individual member states, will probably set emission targets. And the targets are likely to be based on the fuel burnt during each flight, not the distance flown, so that airlines will be rewarded for using more efficient engines.

Quantifying the impact of airline emissions may prove more difficult. As well as emitting carbon dioxide, aircraft exhaust gases promote the formation of ozone, another greenhouse gas. Aircraft contrails also create cirrus clouds, which have a warming effect. Together, these are believed to have a global-warming impact around two to four times greater than that of the carbon dioxide alone.

The EC's environment directorate, which is drafting the September document, told *Nature* that it nonetheless favours including carbon dioxide emissions only, as this is the basis for the existing trading scheme.

Other emissions, such as the nitrogen oxides that promote ozone formation, would be tackled by extending existing taxes such as landing charges.

The final and thorniest part of the problem is the process of setting the industry an emissions target. An EC-commissioned report, published last month and led by a team from CE Delft, a Dutch environmental policy institute, explored the effect of setting allocations at 2008 levels. This would add only a few euros to the cost of an air ticket in the following years and is in line with industry thinking. "It's in the right ball park," says Robert Preston, executive officer of the British Air Transport Association.

But environmental groups take a different view. An analysis by the Tyndall Centre for Climate Change Research in Norwich, UK, commissioned by Friends of the Earth (FoE) and published this June, predicts that current aviation growth will more than wipe out any emissions reductions from other industries in

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coming decades. Even sticking to 2008 levels would leave airlines with much more than their current share of emissions, and possibly skew any carbon credit scheme, says Richard Dyer of FoE. The group wants airlines to cut emissions to 30% below 1990 levels by 2020, a massive challenge for an industry that is growing by 4% annually.

Better engines and improved routing are only likely to cut emissions by 1–2% per year and it is unlikely that other industries could supply airlines with enough credits to make up the difference. So FoE argues that the cuts can only be achieved by introducing extra taxes, such as passenger duty, which reduce demand by forcing up ticket prices.

With such issues to be resolved, it is no surprise that the date for implementing trading is already slipping. The UK government, which is leading the debate as part of its current EU presidency, wants trading to begin in "2008 or as soon as possible afterwards". The EC environment directorate had also backed a 2008 target, but says now that 2012 may be a more realistic goal. ■

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