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Environmental agencies must go much further in regulating aircraft emissions if they want to make a real difference.

Attitudes towards flying say a lot about someone's view on global warming. A hardy bunch of committed worriers take the train instead, whereas others still celebrate the jet-set lifestyle as a sign of success. Then there are those who fly, but feel guilty about doing so.

Aviation has become a symbol of the world's reluctance to make serious efforts to tackle climate change — perhaps unfairly, given its relatively slight (although growing) contribution to the global-warming problem. On an individual level, those who travel by air leave gigantic carbon footprints, governments continue to invest in runways and airports, and the industry remains focused on growth.

Most international frameworks to tackle carbon emissions struggle to include aviation. When the European Union tried to encompass emissions from international aviation in its emissions-trading scheme in 2012, it met with widespread protest from the industry and governments. Instead, the International Civil Aviation Organization (ICAO) — the United Nations body that oversees the skies — agreed to come up with its own measures.

The world saw the initial results of the ICAO's work last week, when the organization proposed a new global carbon dioxide standard for aircraft (see page 266). It was hardly an inspiring achievement. The proposed regulation, which is expected to be adopted later this year, is complex, but the gist is that all new aircraft would need to meet minimum fuel-efficiency standards by 2028. The ICAO says that the rule will guarantee reductions in CO_2 emissions. This may be true, but it is misleading.

An independent assessment by the International Council on Clean Transportation (ICCT) suggests that new aircraft would emit on average 4% less CO_2 when the measure takes full effect. However, each generation of new aircraft is already made to be more fuel efficient than the last, and the same independent assessment highlights that aircraft manufacturers are likely to achieve an efficiency improvement of more than 10% by the time the new standard kicks in, effectively rendering the rule redundant.

Still, the most notable thing about the global standard will be that it exists. It is both a precedent and a tool that could one day be used to push the industry further than it would go of its own accord.

Individual countries could yet adopt stricter regulations. Last year, the US Environmental Protection Agency (EPA) issued an 'endangerment' finding for aviation emissions, which represents the first step in a regulatory process under the country's Clean Air Act. The EPA is expected to finalize its finding in the coming months, and then it could launch its own regulatory proposal. The agency could, and should, go well beyond the ICAO standard on new aircraft, and introduce rules for existing aeroplanes.

The EPA will not be able to complete this process before President Barack Obama leaves office, so it will be up to whoever is elected president in November to follow through. Given the general opposition by US conservatives to any kind of action on climate change, there is little hope of getting a strong regulation from a Republican administration. Moreover, whatever the EPA proposes will surely be challenged in the courts, which can be fickle and unpredictable, as evidenced by the Supreme Court's decision last week to block implementation of Obama's power-plant regulations pending the outcome of a legal challenge. But one thing is clear: the EPA must act on flights, and environmentalists will surely take the agency to court if it does not.

"Now is a good time to invest in a much cleaner future."

Nor is the ICAO's work done. The body will now address a plan to halt emissions from international aviation at 2020 levels. This is crucial because international aviations already account for roughly 1.4% of global CO_2 emissions and are currently unregulated. Even the global climate agreement signed in December in Paris neglected to account for emissions from aviation or from international shipping, which is responsible for nearly 1.8% of the world's CO_2 emissions (see page 275).

Zero-emissions aircraft are not likely to be flying any time soon, so the key to the ICAO's idea is the use of carbon offsets. It is probable that some kind of fee would be levied on international flights to pay for emissions reductions elsewhere. But there is scope to go further on cleaner aircraft too.

Airlines are currently reaping profits thanks to the collapse of the oil market, which has lowered fuel prices across the board. Despite opposition from the aviation industry to strong emissions rules, now is a good time for it to invest in a much cleaner future. ■

Back to Earth

Success against cancer need not deliver the Moon.

When John F. Kennedy pledged in a 1961 presidential speech to land a man on the Moon and return him safely to Earth, he launched more than a space programme. He introduced the ultimate metaphor. Today, moonshots no longer need to shoot for the Moon. They can signify merely the launch of a grand effort fuelled by bold ambition that will elevate society to some new heights.

The latest is the US Cancer Moonshot, a US$1-billion plan, to be spearheaded by vice-president Joe Biden, that aims "to eliminate cancer as we know it".

The project and the promised investment are welcome indeed. The name and the rhetoric less so, and not just because they are so unoriginal — moonshots and Apollo programmes have been launched