## 'Mudtrails' caused by trawlers revealed

By Charles Clover, Environment Editor Last Updated: 6:01pm BST 10/05/2007



Combine harvesters moving across the plains of Nebraska? Low-flying jets in formation, con-trails behind them?

No, these are Chinese shrimp-trawlers, off the coast of Jiangsu province, near the mouth of the Yangtse River, pictured from space.

Scientists say the "mudtrails" are visible evidence of the disturbance to seabed habitat caused by trawling, which they say is one of the most damaging activities on Earth, according to this week's Nature.

Bottom trawling has been likened - by Daniel Pauly, a fisheries expert from the University of British Columbia, one of the scientists involved in this study - to clear-cutting a forest merely to hunt its game.

Trawls and dredges kill bottom-living creatures and reefs which are not their intended target. They also stir up sediment.

This set of high-resolution images, available through Google Earth, even show birds as white dots flocking to feast on the unwanted by-catch that is dumped overboard.

Kyle Van Houtan of Duke university in North Carolina, a conservation biologist, and Dr Pauly are now working with Quickbird, Landsat and other satellite data to quantify from the pictures how much sediment is churned up so they can quantify the toll on marine ecosystems caused by fishing.

These sediments, they say, smother any bottom-living creatures, cause over-enrichment of algae, and may even cause "dead zones."

Repeated trawling, say the scientists, can permanently modify the seabed and alter the ecosystem for creatures living in the upper few metres of the ocean.

Dr Van Houten said: "Imagining is one thing. Imaging is something else. When we see an image, it really crystallises

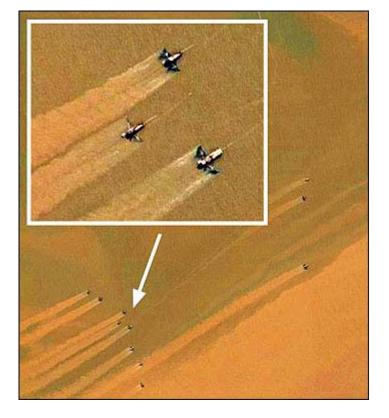


the impacts and an attitude towards the sea."

Prof Pauly added: "These images of trawler mudtrails confirm that this mode of fishing is terrible.

"Think of the story about China's Great Wall being the only human artefacts visible from space.

"Now we can add the mudtrails of trawlers. But not only trawlers from China - from all over the world".



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