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West blamed for rapid increase in China's CO2

- Consumer exports behind 15% of emissions - study
- Campaigners suggest new criteria for climate deal

Duncan ClarkThe Guardian, Monday 23 February 2009

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The full extent of the west's responsibility for Chinese emissions of greenhouse gases has been revealed by a new study. The report shows that half of the recent rise in [China's](#) carbon dioxide pollution is caused by the manufacturing of goods for other countries - particularly developed nations such as the UK.

Last year, China officially overtook the US as the world's biggest CO2 emitter. But the new research shows that about a third of all Chinese [carbon emissions](#) are the result of producing goods for export.

The research, due to be published in the scientific journal *Geophysical Research Letters*, underlines "offshored emissions" as a key unresolved issue in the run up to this year's crucial Copenhagen summit, at which world leaders will attempt to thrash out a deal to replace the Kyoto protocol.

Developing countries are under pressure to commit to binding emissions cuts in Copenhagen. But China is resistant, partly because it does not accept responsibility for the emissions involved in producing goods for foreign markets.

Under Kyoto, emissions are allocated to the country where they are produced. By these rules, the UK can claim to have reduced emissions by about 18% since 1990 - more than sufficient to meet its Kyoto target.

But research published last year by the Stockholm Environment Institute (SEI) suggests that, once imports, exports and international transport are accounted for, the real change for the UK has been a rise in emissions of more than 20%.

China, as the world's biggest export manufacturer, is key to explaining this kind of discrepancy. According to Glen Peters, one of the authors of the new report at Oslo's Centre for International Climate and Environmental Research, about 9% of total Chinese emissions are the result of manufacturing goods for the US, and 6% are from producing goods for Europe.

Academics and campaigners increasingly say responsibility for these emissions lies with the consumer countries.

Dieter Helm, professor of economics at Oxford University, said "focusing on consumption rather than production of emissions is the only intellectually and ethically sound solution". "We've simply outsourced our production," he added.

By contrast, the Department for Energy and [Climate Change](#) (Decc), argues that these "embedded emissions" in Chinese-produced goods are not the UK's. "The UK calculates and reports its emissions according to the internationally agreed criteria set out by the UN," it says.

However, the Decc admitted to the Guardian that "the footprint associated with the UK's consumption has risen".

Even if world leaders did agree a deal based on consumption rather than production of CO2, it is unclear how national figures would be calculated.

Jonathon Porritt, head of the Sustainable Development Commission, said: "Ultimately, the only place to register emissions is in the country of origin - in this case, China. Otherwise, the whole global accounting system for greenhouse gases will be undermined by the complexity of double-accounting."

The difficulty of measuring exported emissions is reflected in the fact that the new research focuses on the years 2002 to 2005. Relevant trade data is not yet available for subsequent years.

However, Dieter Helm believes these challenges can be overcome with political will. "It's complicated but there are ways of taking consumption into account, such as a border tax on carbon transfer," he said.

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