The carbon bubble – where finance meets physics

Green peer Natalie Bennet explains the economic risk that comes from 'stranded' oil and gas infrastructure, factory and industrial farming

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Imagine a new oil field is explored and eventually developed in the UK and a stretch of Indonesian rainforest is marked out for a new palm oil plantation. Money is invested in both of these projects. Then the world gets really serious about tackling the climate emergency, and both of those projects get closed down. The shareholders, the bondholders and the banks that leant the money to develop them will lose their money.

That's the carbon bubble, a risk to the stability of our financial system, which is, as we've all just been reminded with the Silicon Valley Bank collapse, far from a stable and secure structure.

The financial services and markets bill

In more technical terms the carbon bubble is the financial risk that comes from essential, unavoidable climate policies leaving infrastructure that's only partially returned its investment laden with unpayable debt. Fossil fuel infrastructure – oil, gas and coal production, distribution and use facilities – is the most common area of investment discussed with the term, and was that which was most highlighted in the House of Lords last week as peers from a range of parties proposed a package of amendments to the financial services and markets bill.

These proposed changes to the government's bill collectively could start to prepare the sector for a secure future living within the physical limits of this planet. You might think 'surely that is happening already?' But, no, not in most cases, on most issues. Figures from the Pensions Regulator's most recent survey of defined contribution schemes found that more than 80% did not allocate any time or resources to managing climate risk.

Forest commodities – the true cost

In thinking about the carbon bubble we need to look beyond fossil fuels. At least some financial companies are starting to take this seriously as the fossil fuel non-proliferation treaty rises up the agenda. I brought up another huge area of financial risk: agricultural commodities and food production systems, particularly factory farming and non-organic arable production.

Within this category, the most developed thinking is in 'forest commodities'. The start of action on this was included in the Environment Act of 2021, demanding due diligence measures in supply chains. Trees are being cut down, mostly in the global south, to meet global north demands, emitting carbon and destroying carbon sinks, obliterating often rich natural environments, and leaving communities at desperate risk from flooding and landslips.

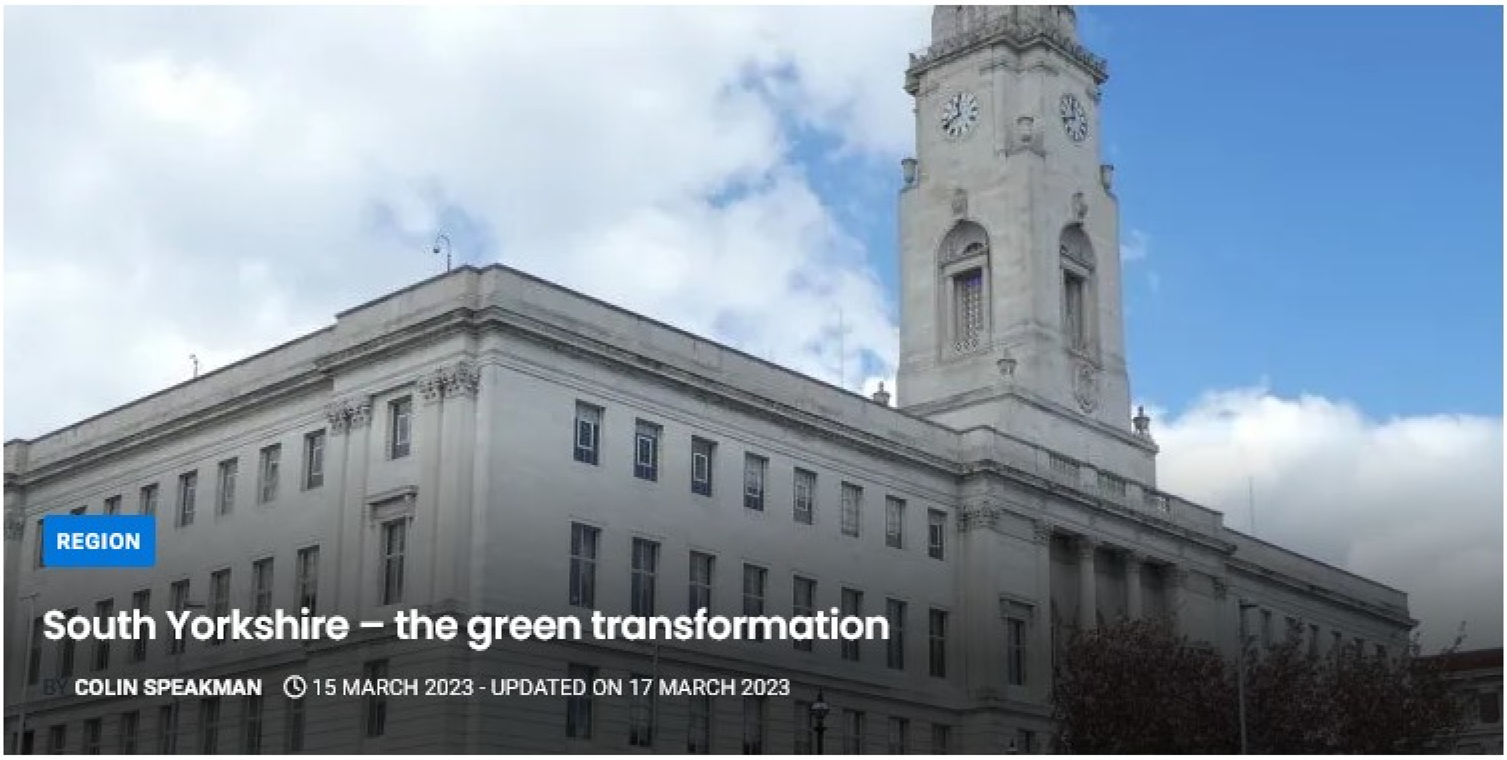
Naturally enough, on the products concerned, people often start by thinking about timber. But the reality is that palm, beef and soya production collectively amount to 26% of global deforestation, potentially as much as 36% (based on statistics recently provided to me by FAIRR).

The financial sector has hardly begun to consider what risks this poses to loans and investments. When Orbitas, an investment body, surveyed 24 capital providers in 2020, all of which had high levels of tropical commodity exposure, not one had screened their loan books and/or investments for agricultural transition risks.

But climate action is coming and it will have a major impact. If we look at Indonesia, 76% of unplanted forest concessions and 15% of existing palm oil assets could be at risk – that is, financial risk – should Indonesia adopt what is seen as its essential plans to meet its Paris climate commitments.

The investment initiative FAIRR has looked at the extremely high financial risks. The majority of the largest protein producer companies are at high risk for greenhouse gas emissions, deforestation, water and waste. Over 60% of them saw soya feed from areas at high risk of deforestation and have still not set deforestation targets. Fewer than one in five meat, egg and dairy firms is adequately managing the pollution of waterways from manure – just ask the people of Herefordshire about that if you want to know more.

FAIRR finds that the volume of waste produced by the 70 billion animals processed each year is equivalent to the volume of waste produced by twice the entire human population on this planet. Only 18% of global meat and dairy producers track even partial methane emissions, even though annual methane emissions from global capital and livestock make up 44% of anthropogenic methane emissions.



Ecological breakdown inevitably means economic breakdown

That part of the debate extended consideration to the carbon bubble. But ultimately, we need to look far more widely at all of the planetary boundaries being exceeded.

As another example, I cited water risk. Fresh water supplies rely heavily on fossil water aquifers – in the American high plains, in Mexico, in eastern Europe, in Egypt, in the Middle East, Iran and China. All agricultural production of food – the big sectors globally and financially – is utterly dependent on fresh water supplies which are not being replenished. At a fundamental level, that is a huge financial risk as well as a risk to when any of us can eat in the future.

We are talking about the future of our life on this planet. We are talking about a liveable planet. That is inescapable. However, what we were talking this week was ensuring that we do not see the next financial crash.

We need to remember the last financial crash, 15 years ago now, when the cash machines were within hours of stopping working. As the Conservative peer Ros Altmann said in the House:

“We have been taken by surprise too many times in the financial world by supposedly very small long-term risks which materialise in a cliff-edge event that people had not been prepared for.”

We must do something to stop the next financial crash from being at the point where the size of the carbon bubble, the level of stranded assets across a range of sectors; fossil fuels, animal agriculture and others, is such that it suddenly hits the markets.

The markets are not counting this now. They must count this in if we are to have a sustainable financial sector in an economic sense every bit as much as in an earth system sense. In the House, a coalition of peers from all parties (and our non-party crossbench colleagues) will be working on the report stage of the bill to force the government to acknowledge that.