

Raising the

Anyone coming to offsetting for the first time could be forgiven for thinking they'd fallen into an alphabet soup. So here's a (very simple) guide to the essentials.

The market for carbon as a traded commodity consists of two main sectors:

- Regulated, or 'compliance', carbon markets, which are governed by international rules defined in the Kyoto Protocol, and which include Clean Development Mechanism (CDM) projects. (Some uncertainty hangs over CDM's future post-2012, with negotiations for a successor to Kyoto still very much in the balance.) A number of national schemes also fall into this category.
- Voluntary carbon markets, which are unregulated and include a range of different trading relationships and voluntary project standards. Many emphasise social benefits as well as carbon ones.

These markets differ radically in the way they operate and who they cater for. The compliance market is aimed mainly at large energy-intensive industries that need to purchase huge numbers of credits (usually at the cheapest possible price). Although open to all, this market is dominated by companies who have compulsory targets under the Kyoto Protocol or other national or regional

'cap-and-trade' systems. As such, the credits they buy tend to be generated by major industrial-scale projects – such as cleaning up emissions from Chinese factories – which have relatively few benefits for local communities, and are hardly inspiring stories to tell.

The CDM projects share, in theory, the ambitions of the Millennium Development Goals for alleviating poverty. However, unless they are certified to the Gold Standard (see below), this remains more theory than practice.

In contrast, the voluntary market, which is what any company considering offsetting out of choice will be dealing with, has a much wider range of customers, from individuals to large companies, with very different needs and aspirations, resulting in a much broader range of projects. For these buyers, voluntarily purchasing relatively lower volumes of credits, price is often not the overriding concern. They are for the most part buying because they see the ethical, strategic or reputational benefit of doing so, and so the provenance of the credits, and the story behind them, become more important factors in their purchasing decisions.

The voluntary market can also act as a kind of proving ground for technologies, which later go on to be



standards

**Sunset sector:
the regulated market
focuses on heavy
industry**

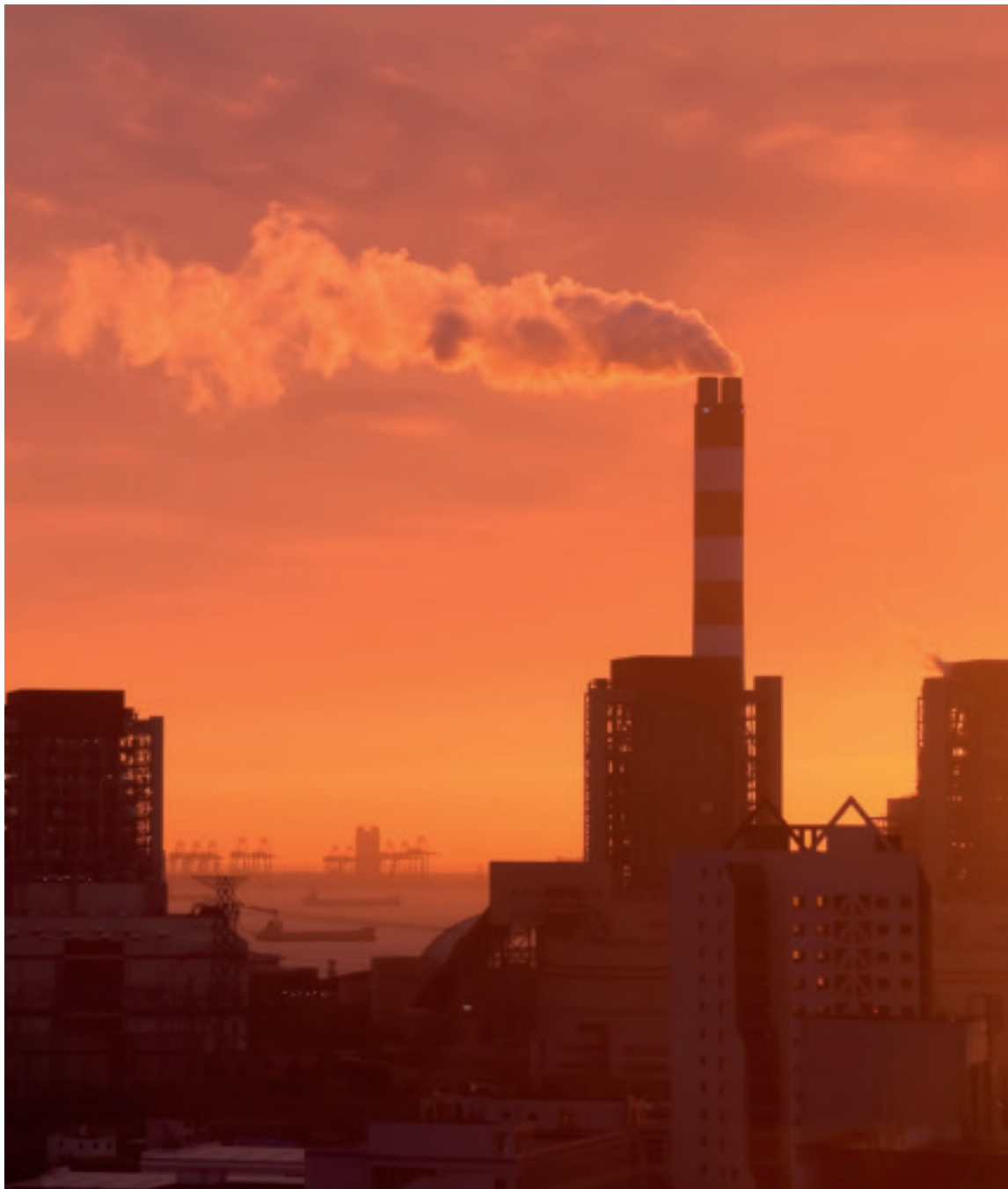


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recognised in the compliance market. This happened with efficient cookstoves, for example, and may well do so with water filters (which qualify for offset funding because they avoid the need to purify water by boiling it – usually using wood as fuel).

Because the compliance market is regulated internationally, you might assume it is more tightly governed. In fact, there have been a number of high-profile allegations of dubious behaviour or worse. Recently, it was alleged that some Chinese chemical companies were deliberately ramping up production of HFC-23, a highly potent greenhouse gas, purely to make money from its destruction via CDM finance.

That's not to say the voluntary market has always been a pillar of rectitude. In its early days at least, a lack of rigorous standards undoubtedly saw some poor projects slip through the net. But partly because of all the criticism, voluntary standards have recently become a great deal tighter, under the influence of the International Carbon Reduction and Offset Alliance (ICROA). This includes the vast majority of respectable offset providers, and was itself set up to promote the highest standards of

industry practice.

The standards are not entirely uniform, however, and that's no bad thing. It can help encourage innovation, and spur providers to design products for a range of buyers. And because the voluntary market is just that – voluntary – it is buyers who have the bargaining power: this in itself is helping drive standards up, as after all the criticism, no-one wants to be seen buying – or selling – a sub-standard offset.

Raising the standard

There are now around 20 standards covering the voluntary market, offering various degrees of rigour. Some are specialist – aimed at forestry offsets, for example. As Jonathon Porritt points out, though, while a wide range of standards may encourage innovation, it also ferments confusion among consumers. Now, however, two have emerged as widely respected, notably the Gold Standard and the Voluntary Carbon Standard (VCS).

Each standard is endorsed by ICROA, and includes tough verification elements to avoid the classic 'elephant

traps' of non-additionality, leakage and impermanence (see box). On top of this, it is now standard practise among ICROA members to guarantee offsets, so if they don't materialise from one project, another must be provided as a replacement.

Further assurance is provided by the rapid adoption of a registration system. First established in 2007, this allocates a unique serial number to each project and each tonne of CO₂ reduction achieved, and keeps a record of all the purchases. Offsets are tracked for life, traded securely and 'retired' permanently. So in theory this means they cannot be double counted, and project developers and offset providers alike cannot cheat the system. In a surprisingly short time, the registries have made the voluntary carbon market as transparent, if not more so, than the regulated market.

All this rigour makes it doubly frustrating that, for now, the UK Government has failed to include any of the voluntary market standards in its best practice scheme, which only recognises offsets validated by the CDM – a decision described by Forum's Iain Watt as "utterly pointless... The Government was meant to be setting acceptable standards for the voluntary market, now participants are just not bothering (with UK verification)." ICROA decries "the marginalisation of voluntary projects". Hanrahan agrees, arguing that if the Government is serious about encouraging offsetting as a key strategy, then it really should recognise the Gold Standard and the VCS.

Such has been the outcry from inside and outside the industry, that many expect the Government to change its mind on this before long.

Where does the money go?

The main types of projects funded through the voluntary market are as follows:

- Renewable energy (eg solar, wind, hydro and biomass)
- Energy efficiency (eg improved cookstoves, CFL or LED lights)
- 'Fuel switching' (eg crop waste substituting for wood in stoves; biogas schemes – animal and human waste used to produce cooking gas via anaerobic digestion; and coal to gas)
- Forestry (includes conservation, improved management, agroforestry and tree planting)
- Emerging technologies (such as water filters, which reduce emissions principally by avoiding the need to boil water on a wood-fired stove).

The average price per tonne of CO₂ equivalent saved in 2009 was £4.16. But prices vary widely, depending on the provider, the technology, and the extent of social and other benefits included. As a rule, solar and some forest projects come out as more expensive than simpler energy efficiency ones. Offset providers often package high cost offsets together with lower cost projects. This helps support projects with a high social impact that may cost a little more.

In 2009, the voluntary market accounted for 94 million tonnes of CO₂ equivalent, with a combined value of US\$387 million.



Nishant Bioenergy's cookstove – using crop waste instead of LPG

Green horizons: forest offsets are controversial, but could be crucial to conservation.

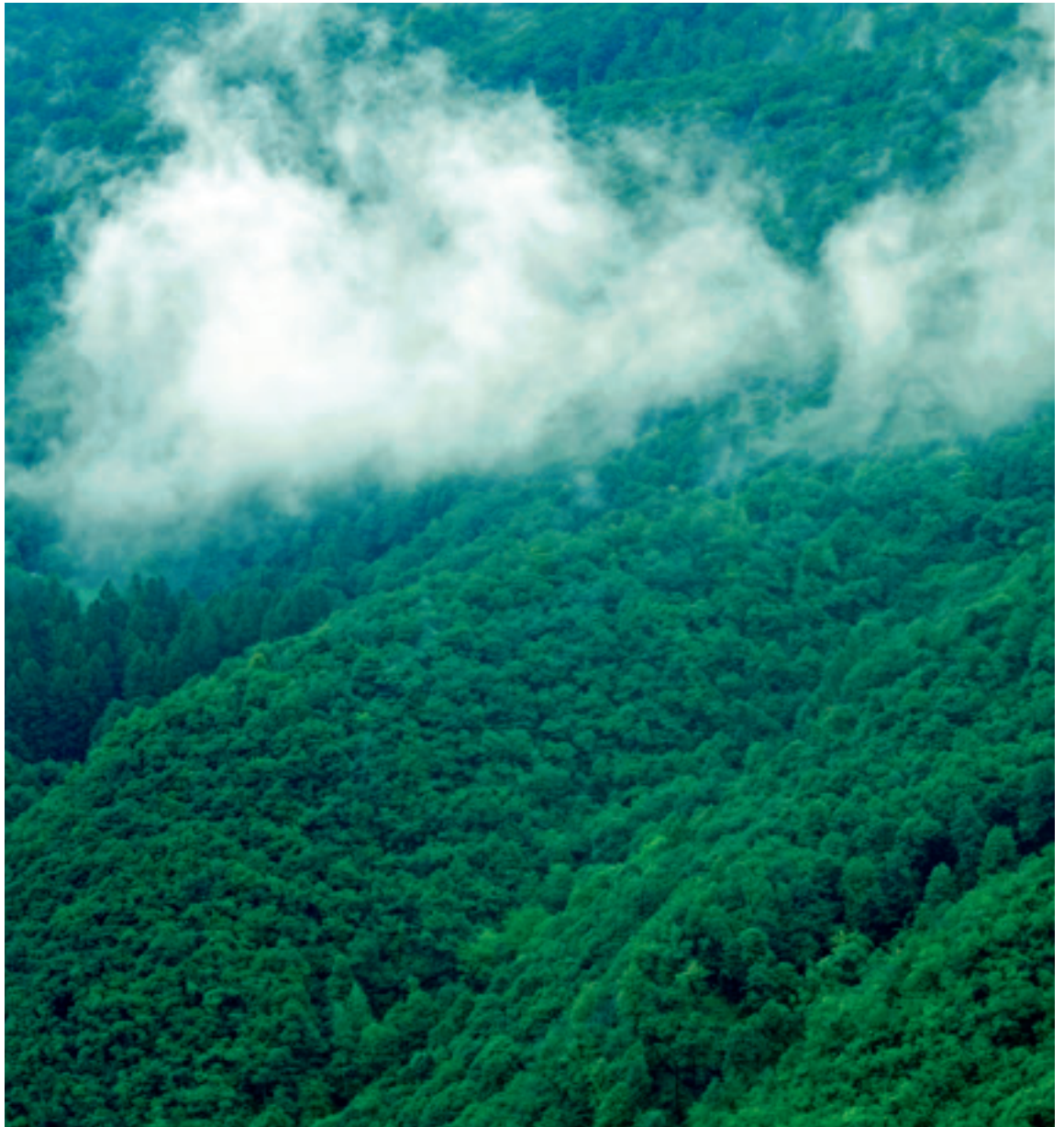


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Seeing the wood for the trees: offsets and forests

Forestry was the earliest target for offset funding, and no wonder. Everyone loves the idea of planting trees for the future. One of the first specialist offset companies (along with ClimateCare) was originally called Future Forests – now the Carbon Neutral Company.

Some early forest offsets drew sharp criticism, however, and were found wanting on the three key ‘tests’ of additionality, permanence and leakage. Wary of being associated with something so controversial, many organisations stopped buying forest offsets altogether. But recently they’ve returned to favour, not least because of renewed focus on the speed and scale with which the world’s tropical forests are being destroyed.

This has in part been encouraged by the conclusions of the Stern Review, which warned that rainforest loss alone would, in just four years, release more carbon into the atmosphere than every flight from the dawn of aviation until 2025. Forest conservation is also now part of the global climate negotiations, with attention focused on the potential to reduce emissions

caused by deforestation or degradation (REDD, as it’s known). While there is no guarantee that this will deliver, it could end up providing a massive shot in the arm for rainforest protection (see ‘Forest futures’, GF74, p26). Already, some forest governments are eyeing up the success of Belize in attracting funding from Norway (which is channelling its substantial oil earnings into forest protection). Peru, for example, wants to incorporate REDD into a broad conservation strategy that will cover 54 million of its estimated 64 million hectares of rainforest, with a final goal of eliminating all emissions from deforestation and degradation.

A number of forest projects have now won accreditation under both regulated and voluntary standards, such as Plan Vivo, specifically designed for forestry by the Edinburgh Carbon Management Centre. While any forest offset will require fierce scrutiny to make sure it meets acceptable standards, it’s fair to say that it’s no longer the neglected member of the family.

Elephant traps (and how to avoid them)

Three key tests for any credible offset scheme

Additionality

If a project funded by offset money would have happened anyway, without that finance, then it can't credibly claim to offset carbon. So, for example, if China were to insist that all new power generation projects in a particular district must be renewable, then any renewable energy offset projects yet to be undertaken there would fail the additionality test.

Safeguard Thorough checks carried out as part of a verification process, ensure that there were no funds already in place to enable such a project, or that it wasn't simply required by law. Additionality remains a complex issue. "It is part of the risk of our business," explains Edward Hanrahan. "It's one reason why we specialise in real development projects in the least developed countries, especially in Africa," as in such regions, it is far less likely that the projects would have gone ahead without carbon financing.

Leakage

If implementation of a project causes higher emissions elsewhere, these are referred to as leakage. It's a particular danger when conserving an area of forest

which may already be under pressure, since that could simply result in the forest destruction happening nearby – for example, by people gathering firewood. It can also be a risk where investment in renewables might lead to polluting power (for example, diesel generators) simply being shifted elsewhere.

Safeguard Ensure that there is adequate protection for any neighbouring forest; or if the project involves tree planting, make sure that this doesn't displace agricultural land. Establish careful baselines for all relevant activity in the region of the project concerned.

Permanence

Usually referring to forest projects. If you buy credits now which assume the trees are still going to be there, soaking up carbon, in 30 years time, you're risking all the accumulated CO₂ being released should the forest be inadvertently destroyed or felled.

Safeguard As well as trying to make sure there is long term land tenure, to minimise the threat of nasty surprises, responsible providers sometimes use a virtual 'buffer zone': holding back a proportion of credits in case of unforeseen circumstances such as these.



...But would they have been there anyway?