



## 2021-IP10: The Oxford Principles for Net Zero Aligned Carbon Offsetting

‘The Oxford Principles for Net Zero Aligned Carbon Offsetting’ was published in September 2020 by the University of Oxford and outlines how offsetting should be approached. Carbon offsets are credits that are available for purchase by a party when they are unable to eliminate enough of their own emissions to reach net zero; governments, organisations or individuals can invest to compensate for emissions made elsewhere.

The Oxford Principles are designed to help guide on how carbon offsetting can be made a credible means of reaching net zero, what types of offsets should be used and when, and how stakeholders can use offsets in a cost-effective manner. The Principles are intended for use by organisations designing and developing plans for achieving net zero, financial institutions to inform risk and impact analysis along with engagement and stewardship activities, society to gauge which actors are aligning with the Paris Agreement, initiatives that promote net zero target setting to help align requirements, regulatory and standard setting bodies to create rules, and researchers and academic institutions to address their own emissions and guide future research. A key takeaway from the Principles is the importance of switching to ‘long-lived storage’; those methods with a low reversal risk over long time periods, such as permanent storage as provided by carbon capture and storage (CCS).

The four components, the ‘Principles’, to credible net zero aligned offsetting as detailed in this report are:

### **Principle 1: Cut emissions, use high quality offsets, and regularly revise offsetting strategy as best practice evolves**

Adherence to best practice principles is key. Best practice should consider prioritising reducing actors own emissions and scaling up removals, minimising the need for offsets; the use of offsets that are verifiable and correctly accounted for and have a low risk of non-additionality, reversal and creating negative unintended consequences; and disclosure of current emissions, accounting practices and targets to meet net zero. This Principle highlights the need to reduce first, offset with high-quality offsets second and then continually revise individual offsetting strategies as best practices evolve.

### **Principle 2: Shift to carbon removal offsetting**

It will be important for actors to commit to gradually increasing their carbon removal offsets as an immediate transition is obviously not feasible (or necessary). Most offsets available today are emission reductions; completely necessary, but not enough to achieve net zero – carbon removals are also needed. Emission reductions include avoided emissions, and activities physically storing the averted CO<sub>2</sub> such as CCS. In these cases, it is critical that the storage is sufficiently permanent. Carbon removals take carbon directly from the atmosphere which can counteract emissions after net zero is achieved, e.g. biological CO<sub>2</sub> storage (such as planting trees or soil carbon enhancement), direct air capture with storage or BECCS (bioenergy with CCS). High-quality emission reductions have the same effect on the atmosphere as carbon removals in the near term, but carbon removals have the added advantage that they remove emissions directly from the atmosphere so can play a huge role and creating demand for carbon removal offsets now will send a signal to the market to increase supply.



### Principle 3: Shift to long-lived storage

This Principle highlights the importance of shifting from short-lived to long-term storage. The former means ways of storing carbon which have an uncertain / higher risk of being reversed within decades, including biological methods which are capable of long-term carbon storage but only providing that land use and environmental conditions do not change. Long-term storage refers to methods with a low reversal risk over centuries to millennia, such as CO<sub>2</sub> storage in geological reservoirs; a more secure approach than biological methods.

With short-lived storage, providing offsetting in high-risk situations is avoided or approached with caution and can be low-risk over time. It must be noted that storage duration does not directly match with carbon removals versus emission reductions. The report recognises that ‘it is critical that investment in scaling and improving the technologies that enable long-lived storage begins now. A net zero aligned portfolio of offsets must increase the portion of carbon removals over emission reductions, and the portion of long-lived storage over short-lived storage, over time’.

This Principle, along with Principle 2, sets up a new framework for evolving the mix of carbon offsets in a portfolio toward the eventual goal of achieving net zero.

Figure 1, below, is a simple diagram to illustrate the classification of offsets and guidance on how to assess the differences.

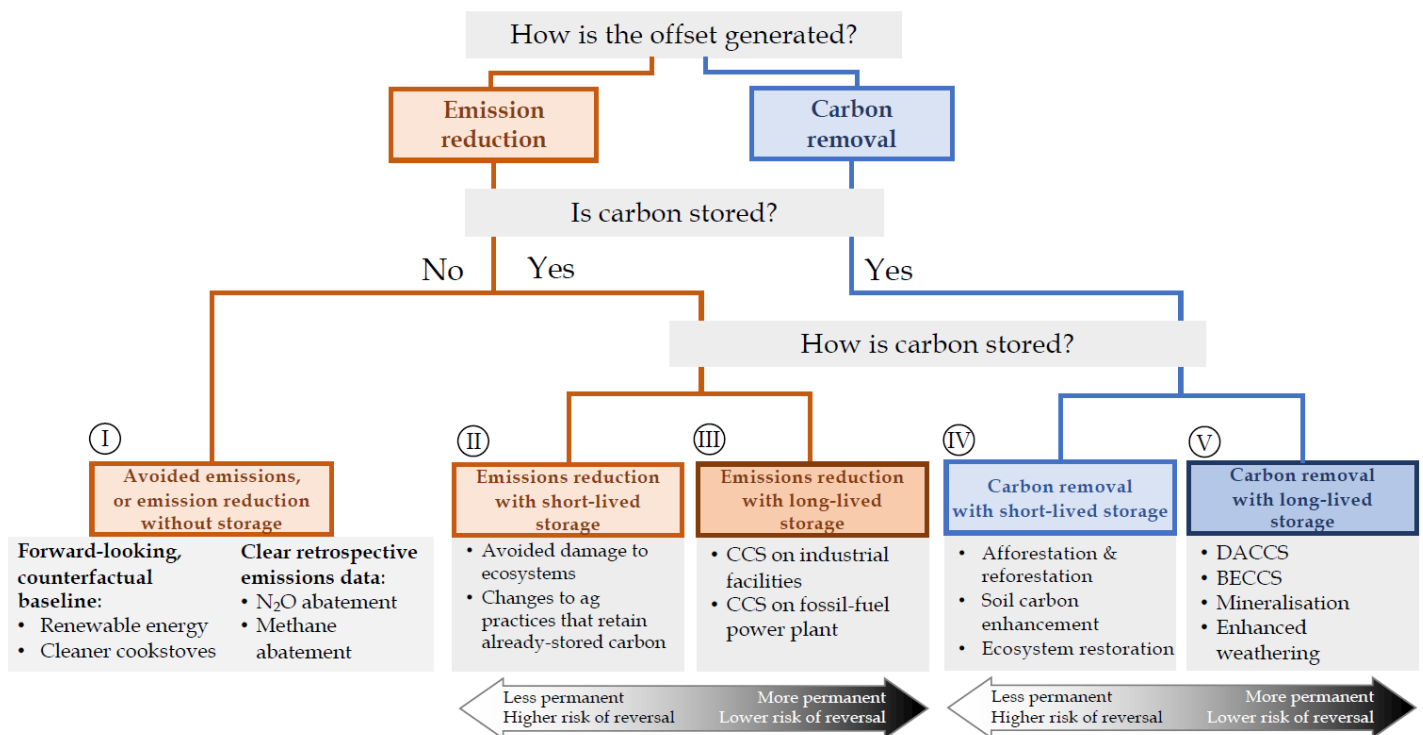


Figure 1, Taxonomy of Carbon Offsets, 'The Oxford Principles for Net Zero Aligned Carbon Offsetting', September 2020



#### **Principle 4: Support the development of net zero aligned offsetting**

This support will be crucial for the long-term transition to take place and can be driven by actors. Some of the immediate ways for organisations to work so that the offsetting market can develop to deliver net zero alignment include market signalling, aggregating demand and supply, forming sector-specific alliances, supporting the restoration and protection of a wide range of natural and semi-natural ecosystems in their own right, and incorporating these Principles into regulations and standards.

The authors of The Oxford Offsetting Principles urge offset buyers to adopt the Principles into their activities and encourage regulators to reflect them in the design of offsetting systems. Three key points should be remembered: offsetting is voluntary and so will not work for all actors; offsetting should not be considered a way of simply ‘passing the buck’ of responsibility for emissions; and a crucial part of the removal of carbon will be the development and progression of regulations and government investment. While The Oxford Principles are by no means the answer to all carbon offsetting issues, they are an important illustration of how carbon offsets can be effectively used as part of a broader climate strategy and will be useful to countries and companies over the coming years.

Further information can be found at <https://www.ox.ac.uk/news/2020-09-29-oxford-launches-new-principles-credible-carbon-offsetting>.

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