

Capitalizing on Carbon

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The Global Carbon Cycle

is complex and has **sources** (black arrows) and **sinks** (blue, green and brown arrows). Extraction and combustion of ancient carbon pools linked to industrialization have released CO₂ and other greenhouse gases into the atmosphere faster than carbon sinks can remove them. The result is a net increase in CO₂ concentration in the atmosphere leading to climate change. **Carbon markets** aim to reduce new atmospheric carbon and **sequester** existing atmospheric CO₂ using financial incentives and carbon trading. One carbon credit is equivalent to one metric ton (1,000 kg) of greenhouse gas removed from the atmosphere.

Carbon Sinks

Carbon sinks are “pools” of carbon where CO₂ accumulates in various forms. Plants and other organisms are short-term sinks, because they release most of their carbon as they decompose. Other sinks, such as soils and the ocean, store carbon for longer periods of time. Some of the oldest carbon sinks are coal and oil (fossil fuel) deposits. This carbon has been out of the carbon cycle for millions of years.

