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The untapped potential of blue carbon credit markets

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The US recently submitted its Nationally Determined Contribution (NDC) required under the Paris Agreement, setting a target of reducing net greenhouse gas emissions by 50 to 52% below 2005 levels by 2030. The NDC outlines a sector-by-sector approach to achieving this target, including support for “blue carbon” projects to sequester carbon in wetlands, oceans, and waterways.

“Blue carbon” projects capitalize upon the natural carbon storage potential in aquatic ecosystems through restoration and active management. These projects provide important opportunities to leverage both the natural environment’s capabilities for carbon sequestration and already-functional environmental credit trading markets in the US and abroad.

Carbon fixed by vegetated coastal ecosystems such as wetlands, marshes, and mangroves provides numerous benefits essential for climate change adaptation, but can also mitigate manmade CO₂ emissions. Recent [studies](#) confirm that blue carbon ecosystems are some of the world’s most efficient natural carbon sinks. Established markets for environmental credits could thus potentially be harnessed to enhance and increase existing blue carbon ecosystems, providing business opportunities to generate revenue from credit trading in a manner that aligns with corporate sustainability goals.

In fact, traditional energy companies, including domestic and foreign oil and gas companies, are well-suited to develop blue carbon offset projects, due to their familiarity with environmental credit trading and the use of emission reduction and offset credits to meet regulatory obligations. Unsurprisingly, these companies are already leading the way in the development of innovative technologies for carbon capture and sequestration.

There are two principal types of markets for carbon offset credits in the US: regulatory and voluntary markets. Regulatory markets are created under existing state-level cap-and-trade programs such as the California Air Resources Board (CARB) and Regional Greenhouse Gas Initiative (RGGI) programs, and the still-developing Transportation & Climate Initiative (TCI). These programs work by setting state- or region-wide declining emission caps for major GHG emission sources (large industrial facilities and power plants) or fuel suppliers, in the case of TCI. The cap is then split into emission allowances, which are budgeted annually to regulated entities. These entities can meet their compliance obligations either by trading allowances with other regulated entities or by purchasing offset credits.

Both CARB and RGGI have developed offset protocols for specific types of projects, which may be located anywhere in the United States. These protocols are used as the basis for quantifying the actual emission reductions achieved by a proposed offset project. There is currently no pathway for generating blue carbon offset credits under either the CARB or RGGI programs, despite the fact that blue carbon offset methodologies have been approved by the American Carbon Registry (ACR) for

wetland restoration projects in specific locations. However, a CARB Compliance Offsets Protocol Task Force recently recognized the ACR methodology for California wetlands projects as holding “considerable promise” for further development, signaling the possibility that CARB may consider adopting this protocol in the future.

Voluntary credit markets are a product of private sector initiatives that fall outside of the regulatory programs described above. The majority of credits are purchased by the private sector, who use credit purchases to reflect progress towards corporate sustainability goals. Despite recent increases in credit trading on voluntary markets, they face a number of challenges, such as transparency in credit pricing. Nonetheless, given the number of companies making public commitments to carbon neutrality who may be looking to purchase credits on the voluntary market, there is significant potential for growth in offset credit generation opportunities from blue carbon projects in the coming years.