



## UNLOCKING CARBON SECRETS: NAVIGATING TIDAL WETLANDS WITH THE COASTAL CARBON ATLAS

The [Coastal Carbon Atlas](#), conceived and maintained by the Smithsonian Environmental Research Center's [Coastal Carbon Network \(CCN\)](#), is a revolutionary web-based platform designed to democratize access to carbon stock and sequestration data for tidal wetlands such as marshes, mangroves, and seagrass beds across the globe. While many data repositories focus on one type of ecosystem or one geographic region, this interactive application is pivotal in decoding the complex relationship between coastal ecosystems and carbon storage, a relationship with far-reaching implications for global climate

### FEATURES OF THE GLOBAL CARBON ATLAS

**Comprehensive Data Collection:** The Atlas is an expansive digital library archiving carbon storage and greenhouse gas flux information from coastal habitats worldwide. It's a collective effort that centralizes research findings and makes them accessible for further analysis. This is instrumental for scientists and researchers delving into the specifics of carbon sequestration and seeking to understand the wider environmental impacts of these critical habitats.

**User-Centric Design:** The platform is engineered with the user in mind, boasting an intuitive interface that simplifies the exploration and analysis of complex datasets. This design ensures that users from various backgrounds, whether they are experienced researchers or public enthusiasts, can navigate and utilize the tool effectively.

**Analytical Capabilities:** It's not merely a data repository; the Atlas offers sophisticated tools for querying and analyzing information, enabling users to extract meaningful insights and make data-driven decisions that can influence policy and conservation strategies.

**Multi-Pronged Applications:** This platform is instrumental for scientists and researchers delving into the specifics of carbon sequestration and seeking to understand the wider environmental impacts of these critical habitats. The application is a key contributor to summary data for Nationally Determined Contributions (NDCs), Global Greenhouse Gas Information Systems (GHGIs), and more.

### MISSION AND VISION OF THE COASTAL CARBON NETWORK

The CCN, a global consortium of experts and enthusiasts, guides the Atlas project. The Network's mission is to advance understanding of coastal carbon dynamics and their significance in mitigating climate change. By promoting transparency and open access, the CCN empowers a diverse audience to partake in this crucial dialogue.

### IMPACT AND IMPORTANCE OF THE COASTAL CARBON ATLAS

**Facilitating Global Research and Collaboration:** The Atlas serves as a centralized point of reference for global research efforts, encouraging collaboration across borders and disciplines, which is crucial for tackling the multifaceted challenges of climate change.

**Guiding Conservation and Policy:** With its extensive data, the Atlas is an invaluable resource for conservationists and policymakers, who rely on accurate carbon stock assessments to design effective climate action plans and habitat restoration strategies.

**Educational Outreach:** The Atlas also functions as an educational platform, raising awareness about the importance of tidal wetlands in carbon sequestration and climate regulation, thus nurturing a new generation of environmentally conscious individuals.

### A CALL TO ACTION

The Coastal Carbon Atlas is more than a database; it's a call to action and a testament to the power of collaborative knowledge sharing. By enabling widespread access to pivotal data, it democratizes climate change mitigation efforts, allowing anyone, from researchers to policymakers, from educators to activists, to participate in safeguarding our planet's future. It is a cornerstone in the collective journey towards a sustainable and informed future, leveraging the power of open access to catalyze informed, science-driven climate resilience strategies.

### LEARN MORE

Belize Blue Carbon: Establishing a national carbon stock estimate for mangrove ecosystems <https://doi.org/10.1016/j.scitotenv.2023.161829>