United Arab Emirates Country Insights

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Congratulations! This country has available data.

This page includes country-specific insights and more detailed analysis, including carbon stocks, emissions factors, and ecosystem wetland area for mangrove, marsh, and seagrass ecosystems. This report details information for the selected country, **United Arab Emirates**.

Please explore the rest of the dashboard for more exciting visualizations, map features, and data.

Resources referenced to calculate estimates for **United Arab Emirates** are listed below under 'References' at the bottom of this document.

Total Carbon Stock Estimates

Total Carbon stock estimates were calculated for each country and habitat At this time total Carbon stock estimates do not include seagrass

We estimate that **United Arab Emirates** contains between 952609.54 to 666123.91 metric tonnes of soil C to a depth of 1 m, with a mean estimate of 809366.72 metric tonnes C.

country	territory	habitat	total_stocks	total_stocks_lower	total_stocks_upper	total_stocks_se
United Arab Emirates	United Arab Emirates	total	809366.7	952609.5	666123.9	73083.07

This total estimate includes total mangrove carbon stocks, from NA to NA metric tonnes of soil C to a depth of 1 m, with a mean estimate of 773394.18

country	territory	habitat	total_stocks	total_stocks_lower	total_stocks_upper	total_stocks_se
United Arab Emirates	United Arab Emirates	mangrove	773394.2	NA	NA	67570.84

This total estimate also includes total tidal marsh carbon stocks, ranging from NA to NAmetric tonnes of soil C to a depth of 1 m, with a mean estimate of 35972.55

country	territory	habitat	total_stocks	total_stocks_lower	total_stocks_upper	total_stocks_se
United Arab Emirates	United Arab Emirates	marsh	35972.55	NA	NA	7034.791

Seagrass carbon stocks were not included in the total value due to lack of a global, transparent, and independently assessed seagrass habitat map, however, best available areas and stocks for **United Arab Emirates** are explored in the following 'Wetland Areas and Activities' section.

Wetland Areas and Activities

We estimate mangrove area in **United Arab Emirates** to be 10452.4128992051 to 786.584690969768 hectares, with a mean estimate of 11903.937565825 hectares according to Global Mangrove Watch Bunting et al. (2018).

We estimate tidal marsh area in **United Arab Emirates** to be 421.450445830741 to 786.584690969768 hectares, with a mean estimate of hectares according to Worthington et al. (2024).

We estimate seagrass area to be **United Arab Emirates** to be a mean of 102637 hectares, according to McKenzie et al. (2020), aggregating data from multiple sources.

McKenzie et al. (2020) classifies seagrass area estimates as either high or medium to low confidence. seagrass_area_high_confidence % of the estimated seagrass area of **United Arab Emirates** is considered high to medium confidence, while seagrass_area_low_confidence % of the estimated seagrass area is categorized as low confidence.

Calculated Stocks and Emissions Factors

This section of the report details whether data is available to estimate Tier I, Tier II, or Tier III value estimates for tidal marsh, mangrove, and seagrass ecosystems in **United Arab Emirates**.

If data for the selected country is available in the Coastal Carbon Atlas, we have applied a Tier II emission factor based on a simple average of country specific data queried from the Atlas.

Data from **United Arab Emirates** includes 95 soil profiles from 17watersheds. This data comes from 2 different habitat types.

If there is not yet any country specific information in the Coastal Carbon Atlas, we instead applied IPCC Tier I estimate. IPCC Tier I estimates for mangrove, marsh, and seagrass ecosystems are listed below. **SOURCE**

The table in this section also details whether the calculated Tier II value is significantly different from the estimated Tier I values. This is observed in the "Overlap" column.

Table 4: IPCC Tier I Value Estimates

Habitat	Mean	Lower_CI	Upper_CI
mangrove	386	351	424
marsh	255	254	297
seagrass	108	84	139

Table 5: Availiability of Tier I and Tier II Data

Country	Territory	Habitat	Tier	Overlap
United Arab Emirates	United Arab Emirates	mangrove	Tier II	Country-specific average is significantly less than Tier I
United Arab Emirates	United Arab Emirates	marsh	Tier II	Country-specific average is significantly less than Tier I
United Arab Emirates	United Arab Emirates	seagrass	Tier II	Country-specific average is significantly less than Tier I

Tier I Carbon Stocks

This table includes Tier I Carbon Stocks included for **United Arab Emirates**.

country	territory	habitat	stock_MgHa_mean	stock_MgHa_lowerCI	stock_MgHa_upperCI	tier	carbon_pool

Tier II Carbon Stocks

This table includes Tier II Carbon Stock estimates for **United Arab Emirates**. Estimates in this table were derived from data queried from the Coastal Carbon Atlas. SOURCE

country	territory	habitat	tier	carbon_pool	stock_MgHa_mean	stock_MgHa_lowerCI	stock_MgHa_upperCI
United Arab Emirates	United Arab Emirates	mangrove	TierII	soil	64.96961	3.240143	71.32017	58.61905
United Arab Emirates	United Arab Emirates	marsh	TierII	soil	51.69996	7.370299	66.14548	37.25443
United Arab Emirates	United Arab Emirates	seagrass	TierII	soil	27.41888	2.823457	32.95275	21.88500

Tier III Carbon Stocks

Tier III carbon stocks were estimated, when available, from remote sensing data from Maxwell et al 2021 and Sanderman et al 2018. The table below details whether estimated values are available for **United Arab Emirates**, and any overlap with associated Tier I or Tier II values.

If there are no Tier III estimates associated with the selected country, please refer to Tier I and Tier II tables.

country	territory	habitat	stock_MgHa_mean	stock_MgHa_lowerCI	stock_MgHa_upperCI	tierIII_greaterlesser_tierI_overlaps_tierIII	tierIII_greaterlesser_tierI_overlaps_tierI	tier
United Arab Emirates	United Arab Emirates	mangrove	272.2682	224.9075	319.6289	greater than	Remote-sensing esimate is significantly greater than country-specific average	less than	Remote-sensing esimate is significantly less than Tier I	Tier III
United Arab Emirates	United Arab Emirates	marsh	187.1362	118.6235	255.6490	greater than	Remote-sensing esimate is significantly greater than country-specific average	less than	Remote-sensing esimate overlaps Tier I	Tier III

References

Bunting, Pete, Ake Rosenqvist, Richard M. Lucas, Lisa-Maria Rebelo, Lammert Hilarides, Nathan Thomas, Andy Hardy, Takuya Itoh, Masanobu Shimada, and C. Max Finlayson. 2018. "The Global Mangrove Watch—a New 2010 Global Baseline of Mangrove Extent." *Remote Sensing* 10 (10): 1669. https://doi.org/10.3390/rs10101669.

McKenzie, Len J, Lina M Nordlund, Benjamin L Jones, Leanne C Cullen-Unsworth, Chris Roelfsema, and Richard K F Unsworth. 2020. "The Global Distribution of Seagrass Meadows." *Environmental Research Letters* 15 (7): 074041. https://doi.org/10.1088/1748-9326/ab7d06.

Worthington, Thomas A., Mark Spalding, Emily Landis, Tania L. Maxwell, Alejandro Navarro, Lindsey S. Smart, and Nicholas J. Murray. 2024. "The Distribution of Global Tidal Marshes from Earth Observation Data." *Global Ecology and Biogeography* 33 (8). https://doi.org/10.1111/geb.13852.