

**ANTIGUA AND BARBUDA**

**Department of Environment**

**Terms of Reference**

**Carbon Sequestration Data Collection Consultation**

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| **Job Title** | Consultation for the collection of the Carbon Sequestration data within the Shekerley Mountain Management Area  |
| **Contracting Authority** | Department of Environment, Ministry of Health and the Environment, Antigua and Barbuda |
| **Date of Issue** | August 14th 2018 |
| **Deadline** | Extended to November 2nd 2018 |
| **Duration**  |  6 months |
| **To Apply** | **MSc. Students / Consultants** are invited to apply for this opportunity. Please email the Procurement Officer at DOE@ab.gov.ag and copied to antiguaenvironmentdivision@gmail.com the following:Carbon sequestration Services 1. Cover letter
2. Technical Proposal
3. Financial Proposal
4. Contact information for three (3) references

Please use email subject line: “…Consultation for the collection of the Carbon Sequestration data Antigua and Barbuda…” |
| **EQUAL EMPLOYMENT OPPORTUNITY (EEO)** | The Department of Environment (DoE) provides equal opportunity and fair and equitable treatment in employment to all people without regard to race, color, religion, sex, national origin, age, disability, political affiliation, marital status, or sexual orientation. The DoE also strives to achieve equal employment opportunity in all personnel operations through continuing diversity enhancement programs.  |
| **LATE BIDS** | Late proposals will not be opened and will be returned to sender. |

**Terms of Reference**

**Consultation for the collection of the Carbon Sequestration data within the Shekerley Mountain Managed Area (SMMA)**

1. **About the Department of Environment**

The Department of Environment is a Government agency within the Ministry of Health and the Environment in the Government of Antigua and Barbuda.

The overall mission of the Department of Environment (DOE) is to provide technical advice on the environment and to design and implement projects on behalf of the Government and the people of Antigua and Barbuda. These interventions are designed to protect and enhance the country's environment, as well as seek common solutions to national, regional and global environmental challenges.

The Department of Environment accomplishes its mission inter alia through:

* An integrated environmental planning and management system established on the basis of public participation and interagency collaboration,
* Efficient implementation of appropriate programmes, projects and technical services,
* Providing accurate council on environmental management as well as effective and consistent enforcement of environmental laws and regulations, and
* Provide the public with easily accessible information and technical assistance on environmental issues.

The Department of Environment manages projects within four main Programmes, which are aligned with national legislation and international environmental agreements. These are:

* 1. Climate Change Programme (Adaptation, Mitigation, and Capacity Building)
	2. Biodiversity Programme
	3. Pollution Programme
	4. Monitoring, Evaluation and Data Management Programme

The DOE has an active portfolio of 13 projects, with project sizes ranging from USD 50K to USD 15 million, with an additional 15 projects under development. Partners of the DOE include UN Environment, UNDP, IUCN, Caribbean Development Bank, Government of Italy, Global Environment Facility, Green Climate Fund, and the Adaptation Fund, among others. The DOE was accredited as a direct access entity to the Adaptation Fund in 2015 and to the Green Climate Fund in 2017. The DOE is focused on designing high-impact, transformational projects that maximize funding directly available to the public, private and civil society actors in order to meet an ambitious environmental agenda.

This consultancy in this Terms of Reference is in direct reference to the Sherley Mountain Managed Area (SMMA), which is to be converted into a Protected Area within the Pathway to 2020 project.

1. **Purpose and Objective of Consultancy**

The Department of Environment is seeking MSc Students / individuals **to collect Carbon Sequestration data within the Shekerley Mountain Management Area of Antigua and Barbuda.**

The vegetation of the Shekerley Mountain range is dominated by a mixture of evergreen and deciduous-evergreen forest, lower montane forest within the wetter valleys and sheltered slopes, and drier slopes consisting mostly of woodlands. In total, 15 different types of vegetation communities have been described in this area (inclusive of the aforementioned), in addition to other land uses/types (farming, ponds, gardens, commercial and urban areas). Roaming livestock have converted some areas to scrub woodland in this mountain range. Rural communities within the proposed Shekerley Mountain Management Area include John Hughes, Sawcotts, Cades Bay, Urlings, Johnson Point, Bendals, Sweets and Jennings. Economic activities within and adjacent to the area include hotels (Carlisle Bay, Curtain Bluff, Blue Herron, Coco Beach, Jolly Beach), ecotourism resorts (Antigua Rainforest Canopy Tours, South Coast Horizons), Agricultural Stations (Claremont Farms, Cades Bay Pineapple Station, Christian Valley Agricultural Station), and the Urlings Fisheries Complex. In addition, some local residents engage in small-scale farming of crops and fruits (the area is known to have the greatest diversity of mango trees on the island) and/or livestock raising (most of which roam freely), and there are some quarrying and groundwater extraction activities in the area.[[1]](#footnote-1)

The dispersed nature of the flora/fauna of the mountain range is representative of the once diverse and rich biodiversity of Antigua. Lower montane forests, which are comparable to rainforest, are not well formed in Antigua and Barbuda, and exist only in small patches (<0.5 hectares) throughout the Shekerley Mountains. However, these areas host the richest plant communities on the island, and mature areas (which mostly remain only within the Shekerley range) provide habitat for the growth of rare forest species including orchids and ferns. Bird numbers in the Shekerley range fluctuate depending on the season, food availability, amount of rainfall, and nesting habitat. North American and European avian fauna arrive in late October to feed on the population explosion of insects that happens due to increased rainfall at this time of the year. Other migrant species of birds may arrive earlier in the year. The native bird species of the Shekerley Mountain range include some of the country’s rarest, most colourful and regional endemic species, including *inter alia*: Scaly-naped pigeon (*Patagioenas squamosa*), Brown Trembler (*Cinclocerthia ruficauda*) and the Purple-throated Carib (*Eulampis jugalaris*). Around 15 species of reptiles and amphibian species are found within the Shekerley Mountain range, including the Antigua least gecko (*Sphaerodactylus elegantulus),* which is endemic to the island of Antigua and Barbuda, as well as several regional (and Lesser Antillies) endemic frog species (*Eleutherodactylus johnstonei* and *Eleutherodactylus martinicencis*) and the Blind Worm (*Typhlops monastus*).

The proposed SMMA encompasses two of Antigua and Barbuda’s twelve Key Biodiversity Areas, as identified by the Critical Ecosystem Partnership Fund (CEPF). The Walling’s Forest KBA/IBA[[2]](#footnote-2) (188 ha) is located on the northwest slopes of Signal Hill (Antigua’s second highest mountain), while the Christian Valley KBA/IBA[[3]](#footnote-3) (669 ha) is located to the north on the other side of Boggy Peak (Antigua’s highest mountain) (see Figure 3 below). Together, these two KBAs/IBAs support populations of nine (of the 11) Lesser Antilles EBA restricted-range birds. Within Antigua, some of these species (Bridled Quail-dove *Geotrygon mystacea*, Scaly-breasted Thrasher *Margarops fuscus*, Pearly-eyed Thrasher *M. fuscatus*and Antillean Euphonia *Euphonia musica)* are entirely confined to the Walling’s Forest and Christian Valley ecosystem. A significant population of the Near Threatened White-crowned Pigeon *Patagioenas leucocephala* also occurs. The Wallings Forest KBA/IBA also supports the largest and best remaining tract of moist evergreen forest on the island, and harbours seven species of bat, including the Near Threatened insular single leaf bat *Monophylus plethodon* and the Brazilian free-tailed bat *Tadarida brasilensis*. The Christian Valley KBA/IBA has not recorded any Globally Threatened or endemic species, but the area has a diverse flora and insect fauna. In addition, seven bat species (including Antillean fruit-eating bat *Brachyphylla cavernarum*and greater bulldog bat *Noctilio leporinus*) have been documented.

The proposed SMMA will also encompass the proposed Boggy Peak National Park (1,039 ha), which is being established with assistance from the GEF-funded SPPARE project. The Boggy Peak NP includes significant biodiversity from wet and dry forest, plant and bird species to watersheds, outstanding scenery and genetic material for about 28 species of mangoes, and the famous Antiguan black pineapple. One of the key objectives of establishing the SMMA is to create a conservation corridor linking the Wallings Reservoir (forest reserve) in the southeast part of the SMMA with the Boggy Peak National Park in the centre-west of the SMMA. In addition, the SMMA is situated just above the Cades Bay Marine Reserve, one of the premier coastal and marine conservation areas in the country, and establishment of the SMMA will benefit the marine reserve by reducing downstream flows of agricultural chemicals and runoff of soils due to agricultural and forestry activities (see Figure 3 below).

The objective of the Consultancy is to obtain data to understand the role of the the SMMA a carbon sink.

1. **Scope of Work**

The scope of work is understood to cover all the activities necessary to accomplish the stated objectives of the project including but not limited to the following:

1. Survey plant/tree species in the area with a view to identifying the species
2. Determine the carbon sequestration values for pasture, forest, mangroves and seagrass beds within the project area
3. Training of the DoE staff (at least 3 members) and the GHG experts team if possible stakeholders in carbon sequestration techniques and modelling
4. **Deliverables**

The consultant will provide the following outputs:

1. Work Plan
2. Periodic Reports
3. Final Report
4. Technical Report on Carbon Sequestration in the SMMA, Antigua
5. **Reporting Requirements**

Under the general supervision of the Technical Coordinator - Helena Jeffery Brown, the Consultant will be contracted to undertake and complete the specified activities, outlined in Section 3 – Scope of Work.

Seven (7) working days after the contract or agreement has been signed by the consultant and the Department of Environment (DoE), the consultant will submit a detailed Work Plan, inclusive of timelines for the submission of monthly and final reports.

Periodic reports on the progress, Milestones and challenges of this consultancy are a condition of payment.

Within fifteen (15) working days of completing the specified scope of work, the consultant will prepare and submit to the DoE, a Final Report and a Technical Report.

The Final Report should be submitted electronically Technical Coordinator - Helena Jeffery Brown in Microsoft Word. **The Final Report should also be accompanied by a signed invoice in the amount claimed by the Consultant in Eastern Caribbean Dollars.** The invoice should include full banking instructions in order to facilitate wire transfer of funds by DoE.

1. **Duration**

The assignment should not exceed a total of 6 months for the Consultant.

1. **Required Qualifications and Experience**
* A first level university degree with knowledge of carbon flow monitoring, forestry or other related areas. Presently, doing a MSc Degree in carbon flow monitoring or related areas.
* Strong knowledge of carbon inventory and monitoring issues including international methodologies is required
* Knowledge of soil carbon sequestration internationally recognized methodologies is required
* Excellent English Language skills.
* Skills in writing reports
* Ability to identify strategic issues, opportunities and risks and communicate broad and compelling organizational direction;
* Advanced MS Office skills
1. **Evaluation Criteria**

The evaluation criteria and weightings that will be applied to this TOR are as follows:

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| **Category** | **Description** | **Weighting** |
| 1 | Qualifications of consultant and availability of named individuals including national experts  | 25 |
| 2 | Adherence to TOR specifications and related requirements: Clear understanding of required deliverables  | 35 |
| 3 | Experience with similar work  | 25 |
| 4 | Demonstrated track record of success, supported by references | 15 |
|  | Total | 100 |

1. Source: Lindsay et al. 2011. *Terrestrial Field Characteristics and Assessments*. Island Resource Foundation [↑](#footnote-ref-1)
2. <http://datazone.birdlife.org/site/factsheet/20875> [↑](#footnote-ref-2)
3. http://datazone.birdlife.org/site/factsheet/20750 [↑](#footnote-ref-3)