

## Clarification #1 Request and Response for the Hydrologist Consultancy

### Query 1

- The scope of works refers to restoring the (historical) hydrological function of the study area. However, it is not clear how far back in time this restoration is meant to go. Is the restoration meant to achieve the site's hydrological status from the 19<sup>th</sup> Century (i.e. undisturbed), 1940's (i.e. pre-East Canal but with loss of North Negril River) or post-1950s (i.e. with the East Canal in place and functional)?

### Response

- The restoration is intended to achieve hydrological conditions that existed prior to the drainage of the area, i.e. its undisturbed state. However it is expected they the consultants conducting the hydrological assessments will utilize the information from the Ecological Assessment and the Land Use assessment to determine how best to restore hydrological conditions with limited impact to users of the morass.

### Query 2

- The development and calibration of a hydrological model requires a wide range of good-quality datasets (i.e., precipitation, temperature, evapotranspiration, streamflow, reservoirs operational data, intake operational data, soil/land use data, sedimentation/erosion data, amongst others). Can you please indicate which of these datasets does NEPA have available for the study area and in what format/quality are these datasets?

### Response

- Shapefiles exist in NEPA for soils within the target area. The most recent land use dataset is available through the Forestry Department at a cost. The methodology employed by Forestry however could be replicated under this consultancy by a capable GIS analyst using the Satellite imagery and a series of training datasets obtained in the field. The Water Resources Authority (WRA) has stream flow data from the stations at Orange River and Fish River. This data can be obtained from our Water Information Systems (WIS) on the WRA website. The remaining datasets have to be obtained from Meteorological service of Jamaica and the Soil Division of Ministry of Industry Commerce Agriculture and Fisheries.

### Query 3

- We are aware that high-resolution topographic surveying (i.e., LiDAR) for the entire country of Jamaica has been procured (by the Regional Track of the PPCR) and is currently being completed. Is it anticipated that LiDAR datasets will be available for the study area by the time this consultancy starts? If not, will this consultancy allow inclusion of a UAV drone survey?

### Response

- The Agency will need to confirm if that has been completed.

#### Query 4

- The scope of works refers to the development of hydrological models to determine “specific restoration needs”. In that regard, is there an agreed view (amongst the stakeholders or articulated within the Morass EPA classification and/or management plan) on the generic (non-specific) restoration goals/objectives to be achieved? (e.g., reduce sedimentation, increase/decrease saturation, decrease salinity, enable a certain land use, restore a particular habitat?). Furthermore, are the current threats and causes of wetland degradation currently understood? (for example, it is possible sedimentation does not relate to river inflows at all).

#### Response

- It would be expected that through this consultancy the best option would be provided. Along with this consultancy a land use survey and ecological assessment will be conducted. It is expected that all three consultants will provide the best option for rehydration, habitat/species restoration and the livelihood of the users of the morass.

#### Query 5

- The scope of works also refers to the “utilization of land use change plans developed through other project activities”. Will these land use change plans be developed (and ready to use) before/by the start of this consultancy?

#### Response

- A consultant is to undertake a land use survey and is expected to work along with the Hydrological consultant.

#### Query 6

- The scope of works refers to a hydrological zoning plan to be developed based on habitat and water requirements. We understand the habitat requirements/ecological assessments will be developed and provided by another consultant. Will these be completed (and ready to use) before/by the start of this consultancy?

#### Response

- An ecological consultant is expected to be hired and the Agency hopes that their input will be ready in time for the hydrological consultancy.

#### Query 7

- The scope of works refers to the determination of “existing soil conditions, hydrological conductivity and vegetation characteristics”. Is the consultant expected to use existing datasets or to also undertake data collection on the field?

#### Response

- If the data is not available to enable the determination of existing soil conditions, hydrological conductivity or vegetation characteristics, then the consultant will be expected to collect the data.

#### Query 8

- The scope of works refers to “identification and implementation of the hydrological engineering solutions”. Can you please clarify what it is meant by “implementation”,

especially given the duration of the entire consultancy (10 months), which clearly does not enough time for implementing the selected/agreed solution on the ground, and the wider national programme for IWECO implementation in following years.

**Response**

- It is expected that at the end of the consultancy, the solutions necessary to facilitate the hydrological restoration would be identified and would them be implemented.