



## Blockchain Technology Feasibility Study

### TERMS OF REFERENCE

#### Overview

The Commonwealth is a voluntary association of 54 independent and equal sovereign states and home to 2.4 billion people, representing some of the most at risk nations in the world to impacts of climate change including small states.

The Climate Change Section focuses on strengthening the resilience of Commonwealth countries to the negative impacts of climate change. It facilitates capacity development of member countries to access public and private climate funding to implement the Paris Agreement including their Nationally Determined Contributions (NDCs).

#### Background

The Climate Change Section focuses on strengthening the resilience of Commonwealth countries to the negative impacts of climate change. It facilitates capacity development of member countries to access public and private climate funding; supporting member states to adapt to the impacts of climate change, and assisting them in contributing to the global goal of mitigating climate change. This involves influencing international policies, mechanisms and rules to be more responsive to the development needs of climate change vulnerable countries, providing assistance to enable member countries to implement the Paris Agreement including their Nationally Determined Contributions (NDCs).

The Section is embarking on a work programme to support member states to strengthen evidenced based climate action, through enhanced utilisation of data, information and decision support tools. This initially entails a project known as the CommonSensing Project and the existing Commonwealth Climate Finance Access Hub Programme to support the use of innovative financial instruments.

Blockchain technology is an emerging technology that is based on a distributed ledger or list of all transactions across a peer-to-peer network, where data is stored in fixed structures known as “blocks” and added blocks are “chained”. Blockchain technology has potential to support climate action and is already being applied in blockchain-based parametric insurance payments. However, more work is required to ascertain the full potential of this emerging technology for enhanced climate action.

#### Objectives & Purpose of the Consultancy

The purpose of this consultancy is to conduct a feasibility study and assessment to determine the likely customer demand, technical feasibility and economic viability of blockchain-based climate catastrophe insurance, using Fiji as a case study. The assessment would be related to damage from cyclones, flooding (from rivers), storm surge flooding (from the ocean), landslides, excess rainfall and drought. The feasibility study would also provide

recommendations of other potentially suitable Commonwealth member states where a pilot of blockchain-based climate finance projects could be undertaken.

Specific elements of the consultancy will include but not limited to the followings:

- a) Customer Demand
  - Typical climate disasters and economic impact;
  - In-country potential partners and channels to market;
  - Available payment mechanisms;
  - Success criteria and selling points
- b) Technical Feasibility
  - Availability and suitability of historic and current data on weather metrics and climate damages to determine product structure, price and settlement (via a blockchain “oracle”);
  - Definition of service and system architecture;
  - Expected costs and timeline to implement a solution; and
  - Compliance against service requirements and technical risks and mitigation actions.
- c) Economic viability
  - Market analysis and likely provision of capital;
  - Potential subsidies from multilateral bodies;
  - Business proposition and service value chain;
  - Assessment of economic risks and financial sustainability; and
  - Roadmap for implementation and operation.

### **Expected Deliverables and Location**

#### **Phase 1**

- a) A draft work plan
- b) Basic structure and contents of the first set of the feasibility study report
- c) First drafts of the feasibility study report
- d) Final draft after seeking inputs from different stakeholders and Commonwealth climate change Team

The work may be conducted from any location with stakeholder consultation undertaken. The assignment will be carried out using two main methods of research: A desktop review; and fieldwork which might be impacted due to COVID-19 and will be held in a virtual manner. The desk-research will mainly focus on obtaining information relating to the technology and market analysis, which, however, will be supplemented by fieldwork to obtain the country-specificities. In turn, fieldwork will require building a quantitative data set as well as qualitative semi-structured interviews with a number of stakeholders from Fiji. In order for the work to be undertaken within the given timeframe, the consultancy will need to be delivered by a firm or team.

The appointed consultancy firm should provide their own computer equipment, computer applications and internet connection. The proposal should show how the consultancy would be

carried out to meet the specific objectives set out in the TOR. The proposal should also provide details of the candidate(s), including their professional qualifications and specific experience working in the consultancy firm. It should include a short statement of the candidate's relevant expertise and experience.

#### **Duration and Timeframe**

The consultancy is expected to take no more than 100 person days (working days) between August 2020 and October 2020.

#### **Key Deliverables & Timelines**

A proposed overall work plan will be agreed with the Climate Change Section in the first 5 days of the contract. The following 95 days will be spent undertaking the various components of the study, stakeholder consultations, preparation and submission of the report.

The activity schedule for the assignment is foreseen as follows:

#### **Phase 1**

<b>Deliverable</b>	<b>Final Due Date</b>
Submit basic structure and outline of content of the feasibility study report	11 <sup>th</sup> September 2020
Submit first draft of feasibility study report	23 <sup>rd</sup> October 2020
Submit final feasibility study report	21 <sup>st</sup> November 2020

*\* The extended timeline for the final delivery is taking into consideration possible delay due to the existing Covid-19 situation and country response.*

#### **Project Management and Reporting**

The project will be managed by the Climate Change Section, Economic, Youth and Sustainable Development Directorate of the Secretariat. Reporting to the Head of Section, the successful consultant will be expected to work in close consultation with the Climate Change Section which includes the Commonwealth Climate Finance Access Hub and relevant in-country experts deployed under the programme.

#### **Estimated Budget**

The total amount payable under this contract will be £20,000 and scheduled as follows:

- First tranche of £4,000 will be paid on the submission of basic structure and contents of the first/ second set of country reports;
- Second tranche of £8,000 will be paid on the submission of first draft of reports; and
- Third and final tranche of £8,000 will be paid upon delivery of the final reports.

#### **Qualifications & Competencies**

The preferred consultant should hold the profile below:

- The firm and its consultants must be based in and nationals of Commonwealth countries;

- The firm must possess consultant profiles with postgraduate qualifications in digital technology solutions and environmental law, economics, engineering, climate finance or any other related disciplines;
- At least (5) years of experience in climate finance, climate policy and preferably with at least (2-3) years' experience in preparation of projects around use of block chain technology for climate/ development sector.
- The firm should be qualified by international institution(s) to provide technical assistance to developing countries with demonstrated expertise in broader climate finance area along with experience in successful preparation of mitigation and adaptation proposals for different climate finance institutions (e.g. GCF, AF, GEF);
- Extensive knowledge of and work experience in Small Island Developing States (SIDS);
- Experience of working on capacity building projects, climate change and finance; and
- A demonstrable track record of undertaking analytical studies, authoring and publishing reports, papers/books on relevant topical issues with reputable publishers.

Please respond to this consultancy opportunity by submitting a proposal and a short cover letter explaining relevant experience, expert profiles and your approach for completing this work.

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