



Internship Assignment

Sustainable Development Mechanisms (SDM)
Regulatory Development Unit (RDU)
Blockchain

Announcement number	Application deadline	Duration of assignment	Duty Station
17/Intern29/SDM-RDU Blockchain	15 June 2017	Two to six months	Bonn, Germany

Background

The **United Nations Framework Convention on Climate Change (UNFCCC)** is the focus of the political process to address Climate Change. The secretariat supports the Convention, the Kyoto Protocol and the Paris Agreement through a range of activities, including substantive and organizational support to meetings of the Parties.

The Sustainable Development Mechanisms (SDM) programme is leading in the development and effective implementation of innovative approaches to broaden the engagement in and effectiveness of action to mitigate climate change and drive sustainable development. SDM supports the operationalization of the cooperative approaches established by Article 6 of the Paris Agreement and broader efforts to engage non-Party stakeholders in climate action. SDM manages the NAZCA platform, supports the COP Presidencies' Climate Action Champions, and supports the implementation of the three Kyoto mechanisms - the Clean Development Mechanism (CDM), Joint Implementation (JI), and International Emissions Trading (IET).

Objectives of the internship assignment

The internship assignment is with the Regulatory Development Unit (RDU) of the Sustainable Development Mechanisms (SDM) Programme. RDU is primarily responsible for developing, improving and managing greenhouse gas (GHG) measurement, reporting and verification (MRV) standards, procedures and guidelines in support of the Kyoto Protocol mechanisms and the Paris Agreement.

Under the direct supervision of the Associate Programme Officer (P-2) and the overall guidance of the Team Leader (P-4) and the Manager (P-5), RDU, the intern will contribute to the analysis, evaluation and development of **blockchain**¹ based solutions to enhance transparency, reduce costs and barriers to measuring, quantifying and certifying GHG emission reductions from sustainable development projects and various types of climate action.

¹ A blockchain is essentially a distributed database of records (or public ledger) of all transactions or digital events that have been executed and shared among participating parties. Each transaction in the public ledger is verified by consensus of a majority of the participants in the system. Once entered, information can never be erased. The blockchain contains a certain and verifiable record of every single transaction ever made. Blockchain Technology – Beyond Bitcoin. UC Berkeley, October 2015



The particular functions are:

- Conducting information gathering, analysis and evaluation of blockchain-based systems, including its application to smart contracts, and tracking the outcomes/impacts of sustainable development projects and various types of climate actions;
- Contributing to the development of a conceptual framework, and potentially prototyping a pilot blockchain database for monitoring, verification, reporting, and exchange (e.g. trade) of emission reduction units; and
- Providing a brief evaluation of risks, barriers, challenges and recommendations in reference to the various applications identified and analyzed, as well as recommendations for overcoming them, to support the effective application and uptake of the technology.

Learning areas

During the period of the internship, a successful candidate will develop a deep understanding of:

- The UNFCCC processes which support actions to mitigate climate change and drive sustainable development;
- Technology solutions to reduce the barriers to measuring, quantifying and certifying impacts of greenhouse gas (GHG) emission reduction and sustainable development projects, including IT based platforms and blockchain-based solutions.

Timeframe

The internship is for a period of minimum two months to maximum six months, the exact period will be determined based on the availability of the intern, the needs of the programme, and the intern's on-going university enrolment and performance.

Minimum requirements

- Candidates must have completed an undergraduate degree and be enrolled in a Master's or PhD programme at a recognized university at the time of application and for the duration of the internship.
- Studies in the fields of computer sciences, information technology, or other related to blockchain fields, with experience in creating and running distributed ledger systems, are preferred. Candidates should have excellent computer programming skills, with very good coding ability, e.g. in Java and C++, and a good understanding of the principles of bitcoin, ethereum, and other cryptocurrencies. Experience in programming, blockchain, cryptography, hashing algorithms and database management are desirable.
- Candidates must have the ability to collect and organize large amounts of information from various sources, and translate them into process documentation.
- Candidates must be fluent in English (both oral and written).

Internship conditions

UNFCCC secretariat internships are not remunerated and the selected intern will be responsible for all costs before, during and after the internship assignment. Interns of the UNFCCC secretariat are not considered to be staff members. The selected intern will work on a full-time basis (40 hours per week) at the UNFCCC premises in Bonn, Germany. For more detailed information about UNFCCC Internship programme please visit the internships section



on our recruitment webpage:

https://unfccc.int/secretariat/internship_programme/items/2653.php.

Application procedure

Candidates who are interested in this assignment and meet the minimum requirements are encouraged to send their application including a cover letter through the on-line recruitment system available at <http://unfccc.int/secretariat/employment/recruitment>. Due to the high number of applications, only candidates under serious consideration will be contacted for a telephone interview.



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Approved by:

Date:

Human Resources Officer
Human Resources Unit
