



UWR (RoU) Program Manual (Ver 2.0)

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UWR RoU Program Manual

By:

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(Incorporated under the Companies Act, 2013, India. CIN: U82990DL2023PTC414528)

www.uwaterregistry.io

1. Universal Water Registry Rainwater offset Unit (RoU) Program- (UWR RoU Program Manual) Overview

1.1 Introduction

Universal Water Offset Unit Private Limited (UWR), Office #37, 3rd Floor, Darshanam Trade Centre #1, Sayajigunj, Vadodara 390020, Gujarat, India, (incorporated under the Companies Act, 2013, India. CIN: U82990DL2023PTC414528) is a private limited company located in Gujarat, India and aims to launch a low cost, simple and robust voluntary/verified water credit offset standard and accompanying voluntary/verified water offset/credit registry/platform.

The aim of the Universal Water Registry Rainwater Offset Unit Standard (UWR RoU Standard or Program) is to drive unutilized water harvesting, recharge and conservation efforts, defined as the actions taken for capturing/recycling/reusing unutilized sources of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through on site or catchment project activities. Building capacity and removing barriers to accessing finance is fundamental to accelerate climate change adaptation.

The UWR RoU Standard receives water conservation, recharging and recycling with gainful end use projects from the entire world, although it places special emphasis on water conservation efforts in India and especially early action small scale projects that have been under-represented in water or environmental markets. *RoUs are generated for unutilized water sources that can be harvested/recycled/conserved repeatedly with negligible environmental impacts.* The UWR Rainwater Offset Standard and its flagship RoU registry platform is a one-stop shop for registration of positive unutilized water conservation, recharge and rainwater harvesting projects and issuance of water credits (Rainwater Offset Units or RoUs) based on the simple principle that project activities within the RoU system do not cause any net-harm to the environment and society but instead establishes water security via restoring groundwater or water harvesting efforts while contributing to the water sustainability goals as set out by India and the UN.

Water credits or Rainwater offset Units (RoUs) issued under the UWR framework, represent a quantifiable amount of unutilized water conserved, harvested, saved or recharged-typically in terms of one cubic meter or 1000 liters of avoided groundwater or water resource depletion prevention equivalent. The market for RoUs purchased voluntarily (rather than for entitlement or compliance purposes) is important to direct private financing to climate-action projects that would not otherwise scale and to lower the cost of emerging water and wastewater treatment technologies. Most importantly, scaled-up voluntary water markets facilitate the mobilization of capital to the Global South for building water resilience due to the climate crisis.

The UWR Rainwater Offset Program (UWR RoU Program) is comprised of the entire governance structure, registry platform system and the documentation framework to achieve this objective. The objective of this manual is to drive water harvesting, recharge and conservation efforts, defined as the actions taken for capturing/recycling/reusing unutilized sources of water, and **thus avoiding extracting groundwater or depleting existing water resources**, that are socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through on site or catchment project activities.

The UWR RoU Program has been designed based on international and traditional best practices, including:

- assuring transparency through a pre-approved positive list of eligible project activities;
- providing a de-centralized structure for accepting standards (e.g., baseline and monitoring methodologies) that are new to the water conservation and recharging market;
- establishing a low cost and fast project registration cycle, including transparent and simplified project registration and water-credit issuance procedures;
- establishing an international water registry to track, trace and retire water credits;
- ensuring effective approval of project and emission-reduction verifiers;
- adopting provisions to ensure and evaluate the sustainable-development performance of projects; and
- creating a platform for allowing results-based finance of projects via decentralized blockchain token technology for decentralized access to environmental finance.

This document provides the general provisions governing the UWR RoU Program and the development of UWR RoUs (water Credits or Offsets) Project Protocols, Verification, Registration of RoU Projects, and issuance and transfers of RoUs from projects registered in the UWR RoU Program or associated Registry. Project specific protocol guidance can be found in the individual UWR Standard. The procedures used to assess these proposals as candidates for new RoU project types are also described in this document.

UWR issued water credits or RoUs **are not:**

- **water rights or shares of physical water quantities within a system/basin/catchment etc.**
- **water delivery market mechanisms that trade and deliver physical quantities of water to users.**
- **related to water savings achieved from water allocations to entitlement holders.**

UWR water credits or RoUs do not confer holders to a specified water quantity or allocation or entitlement or shares. Common water resources are the property of the Government and the private water sources and groundwater extracted from a private land are that of the property owner. Moreover, under the federal system, the State Governments are responsible to manage their water resources.

1.2 General Qualifications

The UWR RoU Program Manual (this document) is the overarching program document and provides links to various UWR documents containing the rules and requirements governing the UWR RoU Program. The manual describes key elements of the program, such as the UWR RoU Standard, UWR RoU Platform/Registry and approval requirements for UWR Water Verifiers.

All project activities are awarded verified or voluntary water credits (RoUs) for unutilized water conservation and recharge efforts (with or without treatment) worldwide designated as 1 (one) RoU which equals 1000 litres (1m³) of *extracted groundwater or existing water resource equivalent avoided* due to the efforts undertaken by the project developer. The UWR RoU framework helps project developers showcase quantities of rainwater harvested, unutilized water captured or wastewater treated/recycled and gainfully reused from systems and measures undertaken each year. **All project activities must be currently operational.**

The RoU or UWR RoU Projects can be registered on UWR via www.uwaterregistry.io, directly by the Project Owner (Seller), or through a registered Aggregators (entities who open a UWR membership account as a Seller on behalf of the project owner or multiple project owners). Aggregators may serve as administrative agents for multiple small Project Owners in order to minimize verification costs and time. Aggregators manage project documentation, arrange for independent verification by Approved Verifiers, effect RoU transfers, conversion or retirement on behalf of Project Owners, and distribute sales proceeds back to the Project Owners in a de-centralized or centralized trading system. Entities wishing to register eligible RoUs with the UWR RoU Program must first qualify as an approved Participant (Seller) or must work through an Aggregator.

The generic considerations of UWR RoU Program are mostly based on the following combination of available guides and manuals:

- Rainwater Harvesting and Conservation Manual, 2019 ([link](#))*,
- Guide on Artificial Recharge to Ground Water ([link](#))*
- Rainwater Harvesting Techniques To Augment Ground Water ([link](#))*
- Manual on Artificial Recharge of Groundwater ([link](#))*
- IS 15797: 2008 ([link](#)) and*
- UWR Water Data Guide ([link](#))*

The UWR RoU Program provides a global platform for positive water conservation and/or recharge and/or recycling and/or harvesting projects and issuance of water offset/credits for eligible project activities, through an integrated and de-centralized UWR Registration, Verification and Issuance process. RoU revenue makes the harvesting or water conservation activity financially attractive for project developers.

The UWR RoU Program deals with the following sectoral scopes:

Scope 1	Measures which enhance the sustainable yield in areas where over-development has depleted the aquifer.
Scope 2	Measures for conservation and storage of unutilized water for future requirements.
Scope 3	Measures that improve the quality of existing ground water through dilution with rainwater runoff.
Scope 4	Measures that remove bacteriological and other impurities from <i>seawater*</i> , sewage and waste water or unutilized water so that water is suitable for re-use and/or recycling. <i>*Desalination plants</i>

	<i>using seawater are eligible only if the project activity is powered by renewable energy systems and clear documentation and practices on brine management and scientific data is provided during registration indicating no net harm to the local marine ecosystem.</i>
Scope 5	Conservation measures taken to recycle and/or reuse water, spent-wash, industrial effluents, wastewater etc across or within specific industrial processes and systems, including wastewater recycled and reused in a different process, but within the same site or location of the project activity. Recycled wastewater used in off-site landscaping, gardening or tree plantations/forests activity are also eligible under this Scope.

The *Scopes* mentioned above are part of the UWR requirements and shall be met either by the Project Owner or Aggregator (Sellers) or the Verifier who undertakes the verification and audit services on behalf of the Project Owner or Aggregator. Where there is any conflict between UWR Rainwater Offset (RoU) Standard, documentation and the above-mentioned *Scopes*, the UWR RoU Program (this document) shall take precedence.

1.3 Use of RoUs

Rain Water Offset Unit or Credit (RoU) is a volumetric measure of water harvested, recycled or conserved through project activities and expressed as m³ or 1000 litres of avoided groundwater extracted or existing water resources depleted per year. *It is not a measure of the severity of the local environmental impact of water harvested or consumed and is not necessarily based on specific water quality or pollution standards.* RoUs are also not water rights nor represent ownership of deliverable water.

Water Increasing, the supply of unutilized rainwater to groundwater and/or for reuse or recycling of process wastewater streams or treatment of unutilized water for potable purposes (subject to conditions) is the challenge this standard aims to address through the creation of RoUs.

The UWR RoU Program may issue RoUs on an annual basis or more frequently for some project activities on the submission of the required project verification documentation to the UWR. However, since the RoU Program quantifies conservation and recharging activities, it becomes the first water program and standard to award water offset units in terms of RoUs that can be used for water footprint (WF) offsetting purposes since it introduces an unutilized source of water, hence potentially compensating the WF of virtual water in supply chains, products and services worldwide.

1.4. Eligible Project Types

The generic requirements of the UWR RoU Program explained above, are based on list of documents outlined in Section 1.2 above, whereas the specific requirements of the UWR RoU Program are stipulated in the UWR Standard. UWR RoU Program, in cooperation with experts from the academic, industrial, government and non-governmental sectors, has developed and continues to establish eligibility and technical criteria for a variety of RoU Project categories. The eligibility criteria for projects to be registered as UWR Project Activities are contained in the UWR RoU Standard. The process for developing, submitting and seeking registration of a project is described in the UWR RoU Program Processes. Specific eligibility criteria for each project type are contained in UWR RoU Standard and as below.

Currently, the following project activities have prescriptive eligibility, evaluation and verification requirements:

Table 1: Eligible Project Types within the UWR RoU Program	
Different types of artificial recharge structures such as sub-surface dykes, nalla bunds, tank excavation and minor irrigation tanks that store the excess monsoon run off on the surface which other than supplying water for irrigation and/or are also used to recharge the shallow unconfined aquifer to create additional subsurface storage for further utilisation.	Percolation tanks with associated recharge shafts.
Desalination systems using seawater are eligible only if they meet all of the following: <ul style="list-style-type: none"> the project activity is powered by 100% renewable energy, and the brine generated by the desalination process or other types of waste, is not released into the surrounding environment causing damage to the marine ecosystem in the 	Artificial recharge through lateral shafts with associated injection wells

<i>vicinity of the project activity.</i>	
Sub surface barriers with associated gravity head inverted wells.	Roof top / paved area rainwater runoff diversion into injection tubewell or well or tank.
Replenishment of ground water reservoirs through artificial recharge by rainwater harvesting which involves inducing, collecting, storing and conserving local surface runoff.	Gabion and check dam structures across streams. Construction of artificial recharge of stagnant water in depressions with recharge shafts piercing through impermeable clay horizons.
Taanka traditional rainwater harvesting technique.	Panam keni type wells.
Johad (small earthen check dam) system to conserve and recharge ground water.	Kund system with associated underground well.
Baoli harvesting system with associated drainage systems	Nadi pond system for rainwater harvesting
Zabo rainwater harvesting system, Jackwell bamboo interconnected rainwater harvesting systems, Traditional ramtek model of rainwater harvesting system	Eri (tank) system of rainwater harvesting
All types of water purification systems creating potable drinking water from previously untapped water resources.	Conservation measures that recycle and/or reuse water and/or spent wash and/or wastewater across or within specific industrial processes and systems, including wastewater recycled and/or reused in different process activities, but within the same site or location of the project activity. Recycled wastewater from ETPs being used in off-site landscaping, gardening or tree plantations/forests/ reforestation activities.

In addition to recharge, conservation, recycling and harvesting measures, the UWR RoU Program also provides an opportunity for Sellers to voluntarily demonstrate that their Project Activity does not cause any net harm to the environment and society, based on acceptable environmental and social standards within the environmental and water sustainability domain using ESG and NetZero principles.

1.5 Principles of the UWR RoU Program

The objective of this RoU Program is to drive water harvesting, recharge and conservation efforts, defined as the actions taken for capturing/recycling/reusing unutilized sources of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through on site or catchment project activities.

The UWR RoU Program employs rules designed to provide easily understood performance criteria for potential Project Owners and aims to include small- and large-scale projects at par to access climate finance. The COVID-19 pandemic has revealed the inter-relationships between the environment and our livelihoods. Climate change is our biggest challenge, and it's time to switch to a sustainable future in 2022. Water now finds itself at the heart of a decarbonised ecosystem that delivers multiple additional benefits for society and the environment.

In India, and most other developing nations, there are very low levels of law enforcement in relation to protecting existing freshwater resources and groundwater aquifers, and hence the concept of regulatory “additionality” and enforcement are inherently in conflict. It is clear that water conservation projects will not occur in the absence of financial incentives (including from water markets) even if rainwater harvesting and wastewater re-use is mandated by law. Indeed, non-compliance with the law is the baseline scenario in most cases, and the UWR program with its RoU as a financial incentive model could result in a change in behaviour that would be additional to business-as-usual practices.

The sad reality is that India recycles only 30% of its wastewater. Furthermore, most of the installed STPs are not in an active condition, thanks to many issues. It results in a bulk of India's urban sewage systems flowing into the rivers & lakes. It creates environmental issues like pollution of drinking and agricultural & industrial usage. Another factor hampering wastewater recycling in India is negligible awareness associated with water & its consumption, treatment, reuse and recycling. The myth of India being a water-abundant country is being shattered. In 2021, India's per capita water availability was down to 1,800 cubic metres per year. It will be 1,100 by 2050. It is a serious issue indeed. Another concern is the lack of recycling of sanitation-related water in urban India. The truth is that India's urban areas have no properly financed or designed wastewater recycling infrastructure. It severely limits the options for wastewater

recycling. The overcrowded & constantly growing urban population in India will add to the chaos.

India has no water trading market framework to provide universal and equitable access to safe, adequate and climate-resilient drinking water and sanitation services, however, India exported virtual water amounting to 496.98 trillion litres and imported 237.21 trillion litres during the 2006-2016 period. Virtual water export is the volume of water used domestically for making export products which are consumed elsewhere. Blockchain and commodity companies are already creating digital product tokens with a sort of “nutrition label” for every commodity that’s been bought and sold to enable provenance. The supply chain industry for commodities is moving towards ESG tags for water pollution, among other ESG parameters. The UWR RoU program envisions the creation of blockchain RoU tokens, created by users of this program, that can be wrapped or attached around product and supply chains seeking positive ESG or NetZero credentials seamlessly to help showcase water recycled, recharged and conserved.

The UWR RoU program also believes that **retail participation** will be key to bridging the climate finance gap of \$100 billion a year for each developing country. The climate crisis is **too big, too serious and too urgent** to rely on the resources of public institutions alone. Developing countries need \$2–4 trillion annually to avert catastrophic climate change. Mobilizing private capital at scale is critical to meeting this financing need. [Trade finance is expected to play a substantial role in USD 30.1 trillion tokenized real-world assets \(RWAs\) market by 2034](#). At UWR, we aim to become the leading supplier of water RWAs for “tailored” NAV DLT token plays globally. Water credits have the potential to become one of the top tokenized assets globally in the next few years.

The UWR criteria allow Participants, the Program Administrator and Approved Verifiers to distinguish best-in class water harvesting/recycling/recharging activities that may benefit from the de-centralized water finance market that could incentivize and make water positive actions profitable.

Users of this methodology understand their own water use, catchment context and shared concerns in terms of water governance; water balance; water quality; important water-related areas (IWRAs); water sanitation and hygiene (WASH), and engage in meaningful individual and collective actions that benefit people, the economy and nature. In all project activities, under the UWR program/methodology, the end use of the harvested rainwater or recycled wastewater or treated seawater, must either be consumption, utilization or groundwater recharge.

This manual, and the UWR RoU Standard, employs a broad monitoring and accounting framework that is expected to capture the impacts of various water recharging, harvesting, recycling and conservation practices aimed at unutilized water savings and/or enhancing groundwater supply stocks. Projects may apply a combination of practices as set out in Section 1.2 of this document.

It is not mandatory for UWR RoU Verifiers/Auditors to conduct an on-site visit or site inspections during project verification for proposed UWR Project RoU Activities. Virtual verification is to be conducted and site visits are left to the sole discretion of the UWR verifier.

The following summarizes the brief expectations of the UWR RoU Program from participants:

- (a) Water offset or recharge or conservation or savings achieved by the Project Activity are conservative, real and verifiable;
- (b) Contributions towards achieving voluntary water related Environment, Social and Governance (ESG) and/or Sustainable Development Goals (SDGs) are demonstrable; and
- (c) Claims that the Project Activity does not cause any net harm to the environment or/and society are transparent
- (d) RoUs are generated for water that can be harvested repeatedly with negligible environmental impacts – a condition that is analogous to sustainable water use.

1.5.1 Relevance

Project Protocols are designed to balance requirements for adequate documentation and verification of environmental effectiveness with the goal of minimizing transaction costs and time, while maintaining environmental integrity.

1.5.2 Completeness

Project Protocols are developed to ensure all unutilized water sources are appropriately included and quantified, project boundaries are defined where necessary, negative environmental and social impacts are avoided, and reporting requirements are well-defined.

1.5.3 Consistency

Project types obtain consistency through the development and use of standardized protocols and to ensure

compatibility with the end goal of this Program.

1.5.4 Accuracy

Project Protocols are designed to generate unbiased estimates of water savings/recharge or conserved. RoUs, serve as an important tool in rebalancing the water dynamics of the region by incentivizing and monetizing all efforts to harvest and conserve rainwater and to methods that recycle and reuse wastewater or to projects that convert an unutilized water source into usable water. The establishment of RoUs leads to a water-rich environment. RoU estimates represent the best available scientific and technical information, as evidenced by peer-review published studies and high-quality research findings and archived rainfall data.

1.5.5 Transparency

Project Protocols and verification procedures are designed in a transparent fashion to evaluate and incorporate input from multiple stakeholders. Protocols are laid down based on acceptable international standards and buyer requirements in the voluntary virtual water market.

1.5.6 Conservativeness

Conservative quantification methodologies are adopted to ensure that accurate estimates will, if any potential deviations occur, undercount the quantity of actual RoUs through the application of discounts to parameters used to calculate RoUs.

1.6 General Terms and Conditions under the RoU Program

By registering a Project with UWR, each Project Owner acknowledges and agrees to the UWR Terms and Conditions required by a particular project type, as well as the general terms and conditions provided below:

1. The enrolled RoU Project Activity meets all applicable eligibility rules of the UWR RoU Manual and Standard.
2. UWR will issue to the appropriate Account of the Project Owner a quantity of RoUs based on the entire recognized verified credits approved by the UWR auditor/verifier. **The RoU issuance process and serialization will begin immediately at the time of verification report/statement submission by the Owner or aggregator for all the vintage years applicable.**
3. Each sale or transfer of RoUs executed through the Registry shall represent a complete transfer of all legal rights associated with the RoUs. The transferred legal rights are those corresponding to the quantity and Vintage of the RoUs issued in accordance with the terms and conditions provided in this section and other applicable provisions.
4. Sellers and Buyers within the UWR Platform may trade, transfer, retain, burn and tokenize or retire the RoUs earned under these provisions and as specified under the UWR Terms and Conditions document.
5. The Project Owner may elect to deregister the RoUs once registered with UWR. The Project Owner, Seller or Aggregator must cancel or deregister RoUs prior to entering into an agreement to sell the associated RoUs outside of UWR RoU Platform and RoU Registry.
6. UWR makes no warranty as to the marketability or market value of RoUs.
7. The Project Owner(s), and, when applicable, the Aggregator, is required to submit a signed Project Verification Report through a UWR-Approved Verifier that confirms conformance with the terms herein. Representatives of UWR may conduct onsite or virtual inspection of registered Projects and related documents. Each Project Owner or Aggregator agrees to provide access in such cases in a prompt and cooperative manner. All UWR RoU Projects, reports and verification reports are subject to inspection and review by any provider of regulatory services designated by UWR, and by other independent experts as may be engaged by UWR and also available on its public database available worldwide for download and viewing.
8. Failure to conform to the rules provided herein may result in termination of enrolment in UWR and prohibition from all further participation in UWR.

1.7 Role of Aggregators

1. For-profit entities, cooperatives, governmental bodies and non-profit organizations may act as RoU Aggregators or Aggregator. Eligible entities must apply to become a UWR Aggregator by completing and submitting the applicable UWR forms. UWR Aggregators may charge for services they provide to Project

- Owners. UWR Aggregators shall have the discretion to refuse to represent individual Projects.
2. Aggregators are assigned an account in the UWR Registry. Aggregator shall undertake the following actions on behalf of Projects it represents:
 - a. Accept initial registration forms from owners of RoU Projects.
 - b. Assemble Project Reports from Project Owners and retain copies of Project verification records.
 - c. Have sole authority to access the Registry Account(s) holding the RoUs issued to Projects it represents and to authorize transfers and retirement or burn and tokenize RoUs.
 - d. Execute sales, conversion or transfers on behalf of Project Owners and distribute sales proceeds to Project Owners in accordance with the terms agreed between the Aggregator and Project Owners. The terms of the business and legal relationships between Aggregators and Project Owners are left to the discretion of those parties.

1.8 Prevention of Double-Counting

UWR provides a public listing of all registered RoUs. UWR allows and issues RoUs for vintages beginning 2014 onwards and also the same to be transferred, held or retired or burnt and tokenized on the UWR. UWR requires that all registered Projects attest that they have not been registered in other water registries or sustainable development programs for the same vintage or crediting period in which they seek to register at UWR. Verifiers or Project Owners or Aggregators must confirm this attestation has been made and search the other known worldwide registries (i.e. Green Credits Water Program by MoEF, etc). UWR encourages other registries and sustainable development programs to review the UWR public listing of RoU projects. Additional requirements to address double-counting are contained in guidance documents and within this Manual.

The following safeguards are in place under the UWR RoU Program to prevent over issuance:

(a) Double Issuance by the UWR RoU Program: The UWR workflow systems do not allow double issuance. Prior to issuance, checks are made that no issuance has been made for the Project Activity for the same monitoring period. Issued RoUs will be deposited into the Sellers account in the Registry only once, by the UWR platform.

(b) Double Issuance by other similar programs: There is a risk that a UWR Project Activity will be registered with another SDG water program for the same crediting or monitoring period. Prior history of all RoU projects must be included in the Project Concept Note and disclosed to the auditor/verifier. The UWR Team checks the same on public listings of projects on other such registry systems. If such a case is identified, the UWR Team will require the Seller to inform the other GHG programs on suitable cancellation actions to be taken on their system prior to registration.

(c) Double Use and Double Sell: RoUs will either be retired or burnt for tokenization from a Seller's account or transferred to a Buyer's in a de-centralized manner without any intervention from the UWR system. There are no transfer costs associated with any transfers between Buyers and Sellers. Options are in place for end actions of the RoU that include transfer, retire or burn and tokenize and reasons for the same (e.g., water neutrality of an event) can be highlighted by the Buyer or Seller prior to the event. Consequently, double use and double selling of RoUs is avoided. It is up to the Buyer and Seller to maintain clear and transparent records of funds and transactions against the sale or cancellation or retirement or burn and tokenize events of RoUs.

2. Governance Structure

2.1 Overview

The UWR RoU Program is owned and operated by Universal Water Offset Unit Private Limited (UWR), Office #37, 3rd Floor, Darshanam Trade Centre #1, Sayajigunj, Vadodara 390020, Gujarat, India, (incorporated under the Companies Act, 2013, India. CIN: U82990DL2023PTC414528). The UWR procedures are devised and refined based on expert input provided and overseen by standing board of Directors. This Board provides input to the Program Administrator on issues pertaining to all RoUs or Projects. The UWR board of directors offer insight on standard development, procedure interpretation and refinement, case-by-case review of non-standardized projects, and oversight of technical issues. Recommendations from the Board will be acted upon at the discretion of the UWR RoU Program Administrator and staff.

2.2 Advisory Committee Member Composition

Members of the Board are comprised of representatives of company directors and/or academic experts, verification experts, and individuals representing both domestic and international perspectives. Membership of the UWR Board is based on a self-nomination process, with all members subject to the approval by the UWR directors.

2.3 UWR RoU Standard Development

The UWR RoU Standard may elect to develop a formal, standardized protocol for water credit/offset projects that adhere to best management practices at any time or date. The design of a draft framework is typically assisted by a technical subcommittee comprised of representatives from governments, non-governmental organizations, academia, or industry experts.

2.4 Public Feedback and Protocol Revisions or Inclusions

UWR Standard or Program Protocols are available on the Program website for public review. The UWR Standard may be revised in reflection of input provided by the UWR Committees incorporating input based on the insights gained through practical project-related experience, public feedback, and the emergence of new technologies, scientific information and market regulations.

Individuals wishing to provide feedback on UWR Standard or Program Protocols may do so via email to info@ucarbonregistry.io.

2.5 Project Verification and Registration Procedures

To assure quality and legitimacy of RoUs registered in the UWR, independent verification of project eligibility and effectiveness must be obtained from an Approved Verifier before the RoUs will be issued to the Participant's Registry account. Every RoU project enrolled in the program must conform to eligibility standards and undergo independent verification before it can be issued RoUs in the UWR.

Project Owners or sellers that intend to submit projects for registration and issuance of RoUs under the UWR RoU Program are required to prepare and submit the project documentation. Project details required for submitting projects for registration are provided in the UWR Rainwater (RoU) Standard and Documents Section on the website. The details of project implementation and data required are provided in Project Concept and Monitoring Report (PCMR). These documents are submitted to UWR Verifiers during third party verifications. The Verifier then prepares the Verification Report and Statement for the Seller. Project documentation submitted to the UWR is available publicly on its platform and RoU Registry.

Certain UWR documents from Sellers or Buyers, that are deemed confidential, are not made available to the public. However, PCNMR, Additional Monitoring Reports, Double Counting Attestations, Verification Reports and Verification Statements are not treated as confidential.

2.5.1 Requirements for conducting RoU Verifications

Verification of project documentation by approved UWR Verifiers is a pre-requisite for project issuance of RoUs under the UWR RoU Program. The fees for such verification services are paid directly by the Project Owner or Aggregator (Seller) to the verifier. The approach to and requirements for Project and RoU Verifications are provided in the RoU Verification Standard. Verifications of projects are carried out following the requirements in the RoU Verification Standard and relevant baseline and monitoring methodologies. UWR Verifiers provide their conclusions in reports referred to as Verification Reports and Verification Statement Reports, applying UWR RoU templates.

UWR RoU Program relies on evidence verified by UWR-approved Verifiers for RoU issuances. Since Verification Reports and Verification Statements are key inputs to UWR decisions, the UWR RoU Program requires that all Verifiers are professionally liable for any false or erroneous evidence that they provide regarding the RoUs resulting from UWR Project Activities. A clause addressing this liability is included in the UWR Verifier Agreement and UWR Verifiers shall make appropriate provisions to cover or understand this liability. UWR-approved Project Verifiers will be required to assess and transparently declare any conflict of interest they may have in the Project Activities that they evaluate.

2.5.2 RoU Over issuance Safeguard

Actual or potential over issuance of RoUs means that the RoUs issued for a Project Activity are greater than that in the registered Project Concept Note (PCN) or Project Design Document (PDD) or the Project Monitoring Report (MR) or the PCNMR.

Over issuance of RoUs is a threat to environmental integrity and the reputation of the UWR RoU Program and its stakeholders. In normal situations, there is very low risk of actual over issuance of RoUs, for the following reasons:

- (a) The determination of baseline and project water harvested/conserved, avoided groundwater extracted quantities, and the design of monitoring protocols, in UWR methodologies are conservatively and robustly designed.
- (b) Project documentation and monitoring reports undergo several checks, including assessments carried out by an approved UWR verifier and the UWR Operations Team before approvals for the issuance of RoUs are granted.
- (c) If an issuance request and monitoring report submitted to the UWR reports greater RoUs than those delineated in the registered PCN, PDD or MR, this will be duly verified and evaluated by the UWR Verifier.
- (d) The UWR Platform has all of the due diligence in place to administer issuance of the correct amount of RoUs.
- (e) Provisions are in place in the UWR Verifier Agreement and the UWR Conflict of Interest Report template that address the risk of over issuance.

However, the following special situations have been identified for which there is a risk of over issuance of RoUs:

- (a) Situation 1: (Actual over issuance): Erroneous project verification or emission reduction verification by a UWR Verifier, which could be due to:
 - (i) incompetence of Verifier; or
 - (ii) negligence, fraud or wilful misconduct by the Verifier.
- (b) Situation 2: (Potential over issuance): Changes in the operating conditions of project that were not foreseen during the project registration process and are not in the control of the Project Owner.
- (c) Situation 3: (Potential over issuance): Changes in the project design compared to that described in registered PCNMR, VS or VR.

If a case of actual or potential over issuance is called to the attention of the UWR by any UWR stakeholder, the UWR will duly investigate it in detail to assess the case. If a complaint of over issuance or the potential for over issuance is found to be legitimate in accordance with one or more of the three situations indicated above, the UWR shall take the following actions:

- (a) Situation 1: If over issuance has occurred due to incompetence of the Verifier, the UWR will immediately suspend the Verifier, requiring a verifiable corrective action to be reinstated. If over issuance has occurred due to negligence, fraud or wilful misconduct by the Verifier, the Verifier will be immediately terminated. All approved UWR Verifiers sign a UWR Verifier Agreement, which requires the UWR Verifier to conduct services as per its terms and conditions, act with integrity, have adequate insurance and provide the conditions of dealing with improper RoU issuance, including such instances of over issuance. Further, the UWR Terms and Conditions Document requires Project Owners to take responsibility for any improper RoU issuance that occurs as a result of their actions, including negligence, fraud or wilful misconduct.
- (b) Situation 2: If changes in operating conditions are duly justified and do not lead to issuance requests of more than 10% of the amount indicated in the registered PCNMR, PDD or MR, issuance is approved if all other issuance requirements are met. If the issuance request is for more than 10%

than that in the registered project documents, the issuance of water credits is capped at a maximum of 10% over and above the amount of RoUs indicated in the registered VS, VR, PCNMR or MR.

(c) Situation 3: Issuance requests indicating a greater amount of RoUs than the amount mentioned in registered PCNMR or MR or VR or VS due to changes in project design will be rejected by the UWR and the Project Owner will be requested to initiate the process of formally changing their project reports to update the quantity of RoUs.

In event of actual over issuance (situation 1), the UWR Verifier is required to use its professional liability insurance to cover the loss, as indicated in the UWR Verifier Agreement. To address the environmental integrity concerns due to actual over issuance, the UWR RoU Program will make corresponding adjustments in the issuance of RoUs in the next monitoring period of the same Project Activity. This will be indicated in the UWR Monitoring Report available on the UWR RoU Program website.

The following information provides a summary of the RoUs or water offsets registration process in the UWR RoU Program.

Step 1: Determining Eligibility:

All projects must submit a Project Concept Note & Monitoring Report (PCNMR) and video describing the activity (and the UWR communications agreement, if documents are being submitted by an aggregator working on behalf of the project owner as required). Upon receipt and review of the same, the Program Administrator may seek input from the Advisory Committee regarding the feasibility and appropriateness of the requested PCNMR if it is not on the Approved Positive Project list or deviates from the same, and, as needed, seek guidance from appropriate technical experts. Project Owners and Aggregators will be notified of the decision of the Program Administrator and shall proceed accordingly.

Regardless of whether a project satisfies the standardized Approved Positive List protocol or if, the Project Owners have requested a specific deviation approval from an existing standardized protocol, or have requested approval for a new category, all Project Owners seeking to register a project must receive their **Project Approval Authorization which will be displayed on the UWR website** prior to initiating verification. Verifiers should view the [UWR website](#) prior to verification to ensure that the project has been approved for verification.

Direct Registration

Projects are eligible for “direct registration” provided that they strictly satisfy the standardized requirements of a pre-specified project category with no deviations. Projects that adhere strictly to protocol requirements do not require review but are required to obtain a Project Approval Authorization on the UWR prior to Verification.

Projects already holding other water program verification reports for the 2014-2023 vintage years can apply for direct registration provided they cancel the project listing completely with the water registry concerned and obtain a verification attestation statement from the UWR approved verifier or auditor stating the same.

In such cases, the Project Design Document (PCNMR), verification report, video evidence of current operation of the activity and verification statement would need to be uploaded by the Aggregator or Project Owner prior to issuance of RoUs.

Approval of Non-Standard Projects

Alternatively, projects may be approved as eligible by the UWR Board or Program Administrator, with input from the relevant Advisory Committee, after the review of the PCNMR. If the project is approved, the Program Administrator will issue the Project Approval Authorization on the UWR prior to Verification with an explicit description of the conditions under which the project was approved.

Review is required for all projects that do not adhere strictly to the Approved Positive List of established project types and scopes.

Projects under other water offset programs

Unless specific circumstances warrant otherwise, other water credit mechanism-approved projects may be considered to be eligible to earn RoUs in the UWR RoU Program for 2014 vintage years

onwards, provided that such water credits or offsets are not retired or traded or owned by another entity not part of the UWR RoU Program, subject to the terms and conditions provided herein:

1. Projects that are registered on any other water offset program but have generated water offsets for the time period prior to their acceptance at that water program, but which adhere to an approved UWR RoU Standard, may be eligible to register in the UWR RoU Program provided they also satisfy the Approved Project Positive List and are seeking to earn **RoUs beginning vintages 2014 onwards**. A crosscheck of the applicable Registry by UWR admin/verifier/auditor/DoE shall ensure that the said water credits have not been retired for the said vintage years, that the project Owner has clear title and right to the said vintages and no double counting is permitted. A verification statement to this effect must be submitted by the UWR verifier.

2. Other water project program approvals notwithstanding, **project types under section 1.4 as described earlier, are eligible** to be registered in the UWR RoU Program:

Step 2: Project Verification

Third-party independent verification is required of all projects to ensure that the requirements of the applicable protocol, this Program Standard or Manual, and Verification Standard are correctly applied. Project Owners seeking to register RoU Projects must have the project verified by an Approved Verifier in accordance with the protocol-specific requirements and the provisions contained herein before RoUs may be issued. A list of Approved Verifiers is found on the UWR RoU Program [website](#).

Approved Verifiers must review the UWR and review the approval conditions prior to conducting verification through the following process:

◦ **1. UWR Search**

Complete a search of the UWR and view the Project Approval Authorization on the registry. Ensure that the PCNMR is uploaded and an accompanying video is displayed on the RoU Project Page. For projects that use the Positive List, the Program Administrator will ensure that the Project Approval Authorization is displayed on the UWR. For projects that involve review, post approval, the Project Approval Authorization status will be displayed on the UWR.

◦ **2. Receiving approval that no conflicts of interest exist**

Approved Verifiers must submit the project-specific conflicts-of-interest form, signed by the Verifier and the Project Owner. This submission also serves as confirmation that the Project Owner has given the UWR RoU Program Administrator permission to disclose project-specific information (e.g. PCNMR, Communication Agreement etc.) to the prospective Verifier.

The UWR RoU Program retains the right to reject any submitted verification report and statement that does not adhere to this process. Project specific conflicts-of-interest forms will remain valid through the approval period, provided that no substantive change has occurred in the nature of the relationship between the organizations. If such a change has occurred, a new project specific conflicts of interest form must be submitted.

The cost of the verification shall be borne by the Project Owner/Aggregator. All Project registration documents, verification reports, related documents and documentation of quantification methods shall be subject to inspection and review. Additional provisions governing verification of RoU Projects are provided in the Program Verification Standard.

Step 3: Project Registration in order to earn RoUs, the Project Owner must:

1. Be a Project Participant/Owner or Aggregator (Seller).
2. Register the project with the UWR RoU Program.
3. Obtain ongoing independent verification of the project by an Approved Verifier.

The performance of each project must be quantified and verified in accordance with the provisions of this document and related protocol documents. Each Project Owner must submit their project for verification or has been suitable verified by an approved verifier under a different water offset program/protocol and has not been double counted. RoUs will be issued only if a satisfactory verification report is received by the UWR RoU Program Administrator.

The vintage year assigned to RoUs shall correspond to the time period of mitigation realized by the Project activity in question and **must be on or after January 01, 2014 only**.

2.6 UWR RoU Registry

The UWR RoU Program Registry operates a water offset (RoU) registry that is designed, operated and maintained by UWR. The registry follows thorough operational procedures related to the management of projects and RoUs throughout the entire lifecycle of water credits. The UWR aims to maintain environmental integrity by using this Registry to prevent double counting and double issuance while ensuring complete transparency. The registry is an electronic database that serves as the official holder of the flow record and transfer or retirement or burn mechanisms of RoUs by Program Participants. The Registry is a serialized RoU tracking system that provides Registry Account Holders a full suite of administration and reporting tools to assist in managing and transferring their RoUs. The Registry provides a full audit trail of each registered RoU from its creation, transfer, burning event, tokenized event and/or retirement action.

The Registry takes into account that UWR Project Activities are not restricted to a fixed crediting period and no restrictions on the renewal of crediting periods. The Registry also takes into account that it is decentralized and has no role in approving or rejecting any transfer or retirement or burn events of RoUs carried out by sellers or buyers.

The Registry facilitates RoU status changes that include transfers from one account to another, and through the RoU lifecycle including from issuance through retirement or burning for token creation. The Registry also assigns unique serial numbers to issued RoUs, which can be tracked from issuance through to transfer or end use (burning or retirement). The Registry maintains a clear chain of custody in operating the UWR RoU Platform. The Registry operations are according to an established internal governance and code of conduct structure. Certain details related to UWR Project Activities and RoUs are publicly visible on the UWR website, including the host country, project type/sector, and RoU vintage years. The UWR RoU Program webpage for the Registry displays all project labels awarded to and RoUs issued to UWR Project Activities. Information regarding project registrations and issuance of RoUs is disclosed to the public on a project-by-project basis on the UWR website.

The Registry also displays different stages at which Project Activities are registered and RoUs have been issued. For example, Project Activities with PCNMR submission and approved for verification are declared to be RoU Projects under verification on the public webpage of the UWR Platform.

The Registry performs several functions, including accounting and recording of verified or audited RoUs issued by the UWR to Project Activities. The Registry uses a de-centralized process for assigning and transferring RoUs between buyers and sellers.

The Registry tracks and reports the deposit/withdrawal of RoUs to/from the centrally managed accounts; and maintains custody and records of the legal ownership of RoUs. The Registry allows listing, issuance, transfer, retirement and burning to tokenize of RoUs.

RoU Projects are registered when RoUs are issued to the Project Owner's/Aggregator's UWR Account **immediately after submission of a valid verification document/statement**. Issuance fees to the UWR are 5% of the total RoUs issued to the Project Owner/Aggregator (seller) and deducted from the latest vintage year prior to initial issuance into the Project Owner/Aggregator (Seller) UWR account. RoUs are recorded and transacted in unit size equal to one cubic metre (1m³) or 1000 litres of water equivalent. RoUs in the amount of one m³ of water offset/recharged/conserved/harvested shall constitute one water Rainwater Offset Unit ("RoU"). Unless otherwise authorized by UWR in advance, the minimum quantity that can be registered in the Registry is 20 RoUs.

Members may use their UWR Account to:

- Manage RoU holdings and associated project activities.
- Search and effect transfers and/or retirements and burn and tokenize events.
- Review account status.
- Access Participants-only information
- Connect to other marketplaces/applications/decentralized applications/decentralized finance platforms to convert RoUs as and when this facility is setup.

Each UWR Account Holder is assigned a UWR Account to facilitate management, transfer, retirement and trade of RoUs.

Each UWR Account can be viewed only by parties authorized by the Registry Account Holder. Information contained in each Registry Account will be accessible only by parties authorized by the Registry Account Holder. The Program Administrator may publicly report certain aggregate information on Transfers across Registry Accounts, but may not publicly report Registry activity of any single Registry Account Holder.

Each Registry Account Holder shall be responsible for controlling and monitoring log-in and password protocols. Further terms and conditions governing access and usage of the UWR RoU Program are provided in the UWR Terms and Conditions Document.

2.7 RoU Transfer De-centralized Procedures

RoU transfers are executed by the **Registry Account holder directly (peer-to-peer)** in a decentralized manner using the UWR dashboard between representatives of both sides to a RoU transfer via an over the counter (OTC) trade or directly via any trading/transfer/conversion mechanism chosen by the counterparties. Business terms of transfer agreements among Participants are established through private negotiations and business terms are not needed to be disclosed to UWR to effect an RoU transfer.

There are no transfer/trade/retirement/token fees for any RoU Transfer/Trade/Retirement/Blockchain Token creation events payable to UWR. Listing fees, if any, for accessing marketplaces linked or established by UWR in the future, would be informed to members prior to the launch of such services.

2.8 RoU Issuance Fee and De-centralized Transfers

Voluntary or verified RoUs are water credits that quantify activities that reduce or avoid *depletion of existing water and groundwater resources*. The unit of measurement and issuance of RoUs to Sellers in the UWR RoU Program represents a quantifiable and verifiable amount of unutilized water conserved, harvested, saved or recharged, *expressed as equivalent in one cubic meter or 1000 liters of groundwater extraction avoided or depletion of existing water resources prevented*. It confers to the recipient, legal ownership rights associated with such *avoidance of extracted groundwater or further depletion of existing water resources* due to measures undertaken by the project developer to implement rainwater harvesting/ water conservation/effluent treatment, recycling and reuse activities realized through implementation and verification against the UWR RoU framework.

UWR issued water credits or RoUs **are not:**

- **water rights or shares of physical water quantities within a system/basin/catchment etc.**
- **water delivery market mechanisms that trade and deliver physical quantities of water to users.**
- **related to water savings achieved from water allocations to entitlement holders.**

UWR water credits or RoUs do not confer holders to a specified water quantity or allocation or entitlement or shares. Common water resources are the property of the Government and the private water sources and groundwater extracted from a private land are that of the property owner. Moreover, under the federal system, the State Governments are responsible to manage their water resources.

UWR water credits or RoUs do not allot or fix quantities of water available for delivery to users or groups of users. Trade and purchase of UWR water credits does not involve transfer of water entitlements, nor can be redeemed for any real water quantities by the regulatory authorities.

RoU issuance and serialization begins at the time of submission of the verification report/statement via the UWR member/owner/participant dashboard. UWR RoU Issuance fees are 5% of the total RoUs issued to the Project Owner/Aggregator and deducted from the latest vintage year prior to initial issuance into the Project Owner/Aggregator UWR account. There is no cash or invoice requirements for the same.

Every transfer of RoUs among Registry Account Holders (Buyer and Seller) is the conveyance from seller to buyer of full legal title to all legal rights associated with water conservation/recharge/offset/recycled/harvested rights represented by RoUs transferred from transferor to transferee.

Full legal title transfers from seller to buyer when the UWR member holding the RoUs (seller), effects a Registry transfer directly to the counterparty (buyer) to the trade using the UWR dashboard. The UWR neither approves nor rejects any trade between buyer and seller. If the buyer rejects the transfer, the RoUs are returned into the account of the seller.

The UWR RoU Program makes no representation as to the marketability or market value of RoUs. Issuance fees are 5% of the total RoUs generated by Project Owner/Aggregator and is deducted automatically prior to the first issuance of RoUs into the Project Owner's/Aggregator's account. Hence the issuance fee is a fixed charge only applicable during the issuance stage of RoUs for the verified period applied by the seller. The issuance fee is payable in RoUs without money or cash being exchanged and is auto-deducted.

If UWR designs and launches a water credits marketplace in the near future, listing fees (if any) for the same will be announced prior to the commencement of such a marketplace.