



Forest Carbon Partnership Facility

Update on Registry

Participants Assembly Twelfth Meeting (PA12)

Participants Committee Twenty-Eight (PC28)

Punta Cana (DR)

November 11-14, 2019

Objective of this session

- FMT to present the **results from the ongoing contract with Cognizant for the implementation of the Central Transaction Registry (CATS - Carbon Assets Tracking System)** as a platform solution to register and transfer the ER units generated under the FCPF CF and ISFL ER Programs (Phase 1)
- FMT to present the advances in the preparation of the **Registry Operational Guidelines** (Registry Policies), **Users Manual** and the **Terms and Conditions** of the Central ER Transaction Registry.

Contents

1. Quick Review

2. CATS - Carbon Assets Tracking System

3. Legal Support and Communication Plan



Quick review

	Consultancy	Modality	Timeline
1	Study on the architecture of an WB Centralized Registry System: key functions, operational processes and rules. Analysis of alternatives (operational, technical and cost)	STC	May-Nov. 2018
2	Supporting analysis on risks and legal issues related to the operations of the WB Centralized Registry System	STC	May-Nov. 2018
3	Develop a System Blue Print for Country Registries (DRC and ROC)	STC	Dec. 2018
4	Business Requirements Document preparation and Program Plan (April 8, 2019 – v.0.8 ; Aug. 1, 2019 v.2.2)	STC	April 2019
5	CATS program : Phase I (first release Nov. 8 th 2019; second release Dec. 12 th , 2019) and Phase II (Jan. 2020 - Sept. 2020)	Vendor	Go live Nov. 2019

Contents

1. Quick Review

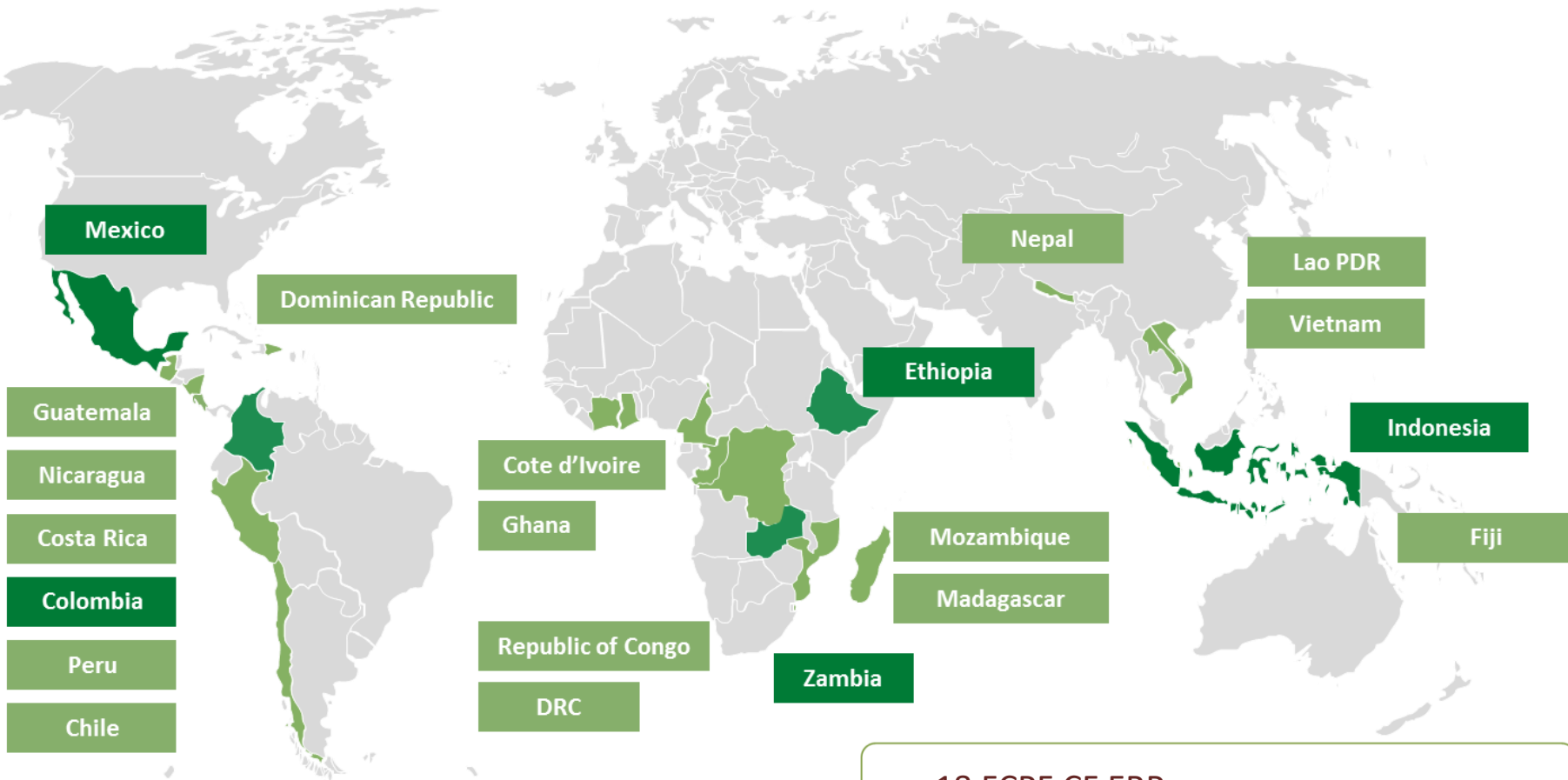
2. CATS - Carbon Assets Tracking System

3. Legal Support and Communication Plan



CATS Program

Scale Phase 1



- 18 FCPF CF ERP
- 5 BioCF ISFL ERP
- **23 ER Programs** (21 Countries; Mexico & Indonesia host both programs)

CATS Program

Scope & Business Objectives

Central Transaction Registry as a platform solution to support the issuance and transactions of ER units generated under WB Programs (Phase 1 FCPF CF and ISFL ER Programs)

WB Team (SCCFM, ITSBG, LEGEN, LEGIA, SCCMI)

01

Deliver a **user-friendly software solution** to register, track, and as appropriate retire or cancel ER units generated under the WB Programs

02

Design and implement a **strong and reliable architecture** to create, govern, store and maintain data

03

Mitigate **double counting, double claiming & double selling risks** of the ER units generated under **the WB Programs**.

04

Provide **transparency and security** to the operation of the system,



CATS
Carbon Assets
Tracking System



TRACKING SYSTEM
CARBON ASSETS
CATS

CATS Program

web portal: landing page



[WHO WE ARE](#)

[WHAT WE DO](#)

[WHERE WE WORK](#)

[UNDERSTANDING POVERTY](#)

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Carbon Assets Tracking System

The Carbon Assets Tracking System (CATS) is an Emission Reduction (ER) Transaction Registry, designed and implemented to support the issuance and transactions of ER units generated under the World Bank Programs.

Who We Are?

We are a multi-disciplinary team of experts from the climate change fund management, information technology, environmental and international law, who have contributed towards this initiative.

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CATS Program

web portal: about us



WHO WE ARE

WHAT WE DO

WHERE WE WORK

UNDERSTANDING POVERTY

WORK WITH US



About Us

The Carbon Assets Tracking System (CATS) is an Emission Reduction (ER) Transaction Registry, designed and implemented to support the issuance and transactions of ER units generated under the World Bank Programs.

What is CATS?

The Carbon Assets Tracking System (CATS) is an Emission Reduction (ER) Transaction Registry, designed and implemented to support the issuance and transactions of ER units generated under the World Bank Programs. The first release of CATS provides the foundational and central architecture for accounting and transactions of ER units under the Forest Carbon Partnership Facility Carbon Fund (FCPF CF) and BioCarbon Fund Initiative for Sustainable Forest Landscapes (BioCF ISFL) ER Programs.

What are our goals?

- To provide a user-friendly software solution to register, track, and as appropriate retire or cancel ER units generated under the WB Programs
- To implement a strong and reliable architecture to create, govern, store and maintain ER data
- To guarantee transparency and security to the operation of the system
- To mitigate double counting, double claiming & double selling risks of the ER units generated under the WB Programs

Who are We?

We are a multi-disciplinary team of experts from the climate change fund management, information technology, environmental and international law, who have contributed towards this initiative.



Atul Gupte
Team Member



Alejandra Bustamante
Team Member



Bong Thi Le
Team Member



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Russell Nunes
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Siet Meijer
Team Member



Simon Whitehouse
Team Member



Xiaoxin Shi
Team Member

CATS Program

Phase I Functionality



Account Management

(Fund, Participants, Countries, Program)

- Registration management process (Participant, Countries and Third party buyers)
- Fund, Tranche, Program, ERPA and Donor's agreements
- Ledger and chart of accounts

ERU Issuance & Serialization

- ERU registration and issuance
- Serialization of Global Carbon Ticker Code (GCTC)
- Traceability of ERU
- Logs and audit of ERU

Buffer Management

- ERU allocation to buffer accounts: Fund and Program buffers
- Release and cancellation of buffered ER

ERU Transactions

- Multi-level allocations
- Transfer/Forward/Re-Transfer
- Cancellation
- Retirement

Reporting and Messaging

- Documents management
- Reports
- Alerts and Notifications

Security and Authorization

- Access and authorizations
- Roles and Profiles
- Audit and Logs

CATS Program

Phase 1 Timeline Milestones



Phase 1 Implementation	2018		2019										
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1 Business Requirements Document (BRD)													
2 Go/No-Go Decision													
3 Mini bid and Implementation Team on-board													
5 Design and Solution Architecture													
6 Development													
7 QA/Regression - SIT/Simulation													
9 UAT - User Acceptance Testing													
10 Phase 1 Production Deployment - Go Live													



- Master Data & User Management
- Transactions
- Dashboards
- Reports
- Performance Test
- Code Merge
- Deployment in Pre-Production
- Regression passed
- Functional Tests
- Performance Test
- OIS Instance
- Code Merge
- Deployment in Pre-Production
- Stability and Performance Test
- Final UAT config
- Master Data & User Management
- Transactions
- Dashboard
- Reports
- UAT Bug Fix
- UAT Signed off
- Regression Complete
- Retest of Bugs
- Performance stabilized
- Data Validation
- UAT Sign-off
- OIS Clearance & Accreditation (C&A) clearance
- Risk Memo clearance and signature
- Production Deployment
- **Go-live**

CATS Program

User Acceptance Test



UAT

- Understand business requirement and user stories
- Executing business process specific steps for master data and related functions
- Identifying errors/defects that do not follow business requirements and/or business rules
- PMO/Business analyst logs all defects on daily/regular basis
- UAT defect fixing team (offshore) analyzes and fix bugs/defects, and test internally
- UAT environment will be refreshed with fixed defects on a periodic basis
- Retest of resolved defects

Oct 21-29
UAT

Oct 25
PMO Sign-off

- Master Data & User Management
- Transactions
- Dashboard
- Reports
- UAT Bug Fix

- UAT Signed off
- Regression Complete
- Retest of Bugs
- Performance stabilized
- Data Validation

CATS Program

User Acceptance Test



- Profiles and Accounts
- Master data Attributes
- Users and Group Management
- Fund Creation
- Fund Edit
- Tranche Creation
- Tranche Edit
- Participant account creation
- Third Party account creation
- Program account creation
- Tranche/Participant Link
- Tranche/Program Link
- Assets Tracking and Mapping
- Accounts Chart
- Recording Account Transactions
- Issuance Account Transactions
- Uncertainty Buffer Account Transactions
- Reversal Buffer Account Transactions
- Cancellation Account
- Close Tranche
- Tranche Tradable and Non-Tradable Accounts
- Participants Interim Account
- Participants Holding Account
- Third Party Holding Account
- Program Holding Account
- Fund Pooled Reversal Buffer Account
- Share of Proceeds Account
- Cancellation Accounts

Process Title	Description	Menu option and fields to be completed on page	Acceptance Criteria
<i>Creation of Groups</i>	<p>Given: System Administrator / authorized User to create and manage the groups is available in CATS system and wants to create a new group</p> <p>When: System displays the list of Groups and its description for system administrator to view the groups and create new one if needed. System administrator navigates to 'Create Group' and system administrator selects the desired role / roles from the list of options provided and submits the details.</p> <p>Then: The group is created in the system and is available in the list of groups displayed by the system.</p>	<p>Admin settings -> Groups Management: Create Group:</p> <p>Group Name* - Text box</p> <p>Description* - Text box</p> <p>Select Roles to add in the Group* - Checkbox to be provided and Roles to be listed</p>	<p>Group is created successfully and is available in the list of Groups created</p>

CATS Program

User Acceptance Test



Backlogs Queries

Bug 2694:ERPA Creation - Remove the word "Country" form the fields within the box.

ERPA Creation - Remove the word "Country" form the fields within the box. 2694

STATUS Assigned To: Kaustubh Vishwas Deshpande
 State: Resolved
 Reason: Fixed
 Resolved Reason: Fixed

CLASSIFICATION Area: CATS
 Iteration: CATS/UAT Cycle 1\Final End-User UAT Sprint 1-8

PLANNING Story Points:
 Priority: 2
 Severity: 3 - Medium
 Activity: <None>

EFFORT (HOURS) Original Estimate:
 Remaining:
 Completed:

REPRO STEPS SYSTEM INFO TEST CASES HISTORY ALL LINKS ATTACHMENTS

ID	Work Item Type	Title	State	Tags
2694	Bug	ERPA Creation - Remove the word "Country" form the fields within the box.	New	Change Request; Nice to Have - Quick; UI
2693	Bug	Invite Users - Remove the first and last name fields form the invite users screen	New	Change Request; Functionality; Nice to Have - Time Consuming
2720	Bug	GCTC - In the GTCTC pop-up box - Change the order of the itemized list of the code elements to match the order of the items as displayed in the block header.	New	Nice to Have - Quick; UI
2719	Bug	Transfer-Back Transaction - My Requests List - Change the name of the transaction in the Transaction Type Column to be "Transfer-Back"	New	UI; Urgent - Must Have
2718	Bug	Transfer-Back Transaction - Change the transaction name tag to Transfer-Back	New	UI; Urgent - Must Have
2717	Bug	Transfer Back Transaction - Missing Certification Period Range	New	Functionality; Urgent - Must Have
2716	Bug	Transfer Transaction (From Program to Participant) - Missing the Transferring and Acquiring Account box	New	UI; Urgent - Must Have
2715	Bug	Across all transactions - Correct the Transferring and Acquiring Accounts tag	New	UI; Urgent - Must Have
2714	Bug	View Activity both block and account level - Transaction code hyperlink should be linked to the transaction screen.	New	Functionality; Nice to Have - Time Consuming

CATS Program

Status



01

- **RFP/Mini-bid completed**
- **Contract Award April 2019**

Cognizant: Green House (+Blockchain)
DC, Chennai, Pune based team (25+ members)

02

- **Business Requirements finalized and validated**

20+ requirements validation workshops
BRD 2.2 signed off, + 190 User Stories

03

- **High level design and solution architecture approved:**

Set-up of Azure Cloud for CATS Dev and QA environment
Set-up and test Quorum (Kaleido) for CATS Blockchain database

04

- **8 Sprints completed September 2019**
user stories in scope; Master Data & User Management, Transactions, Dashboards, Reports

05

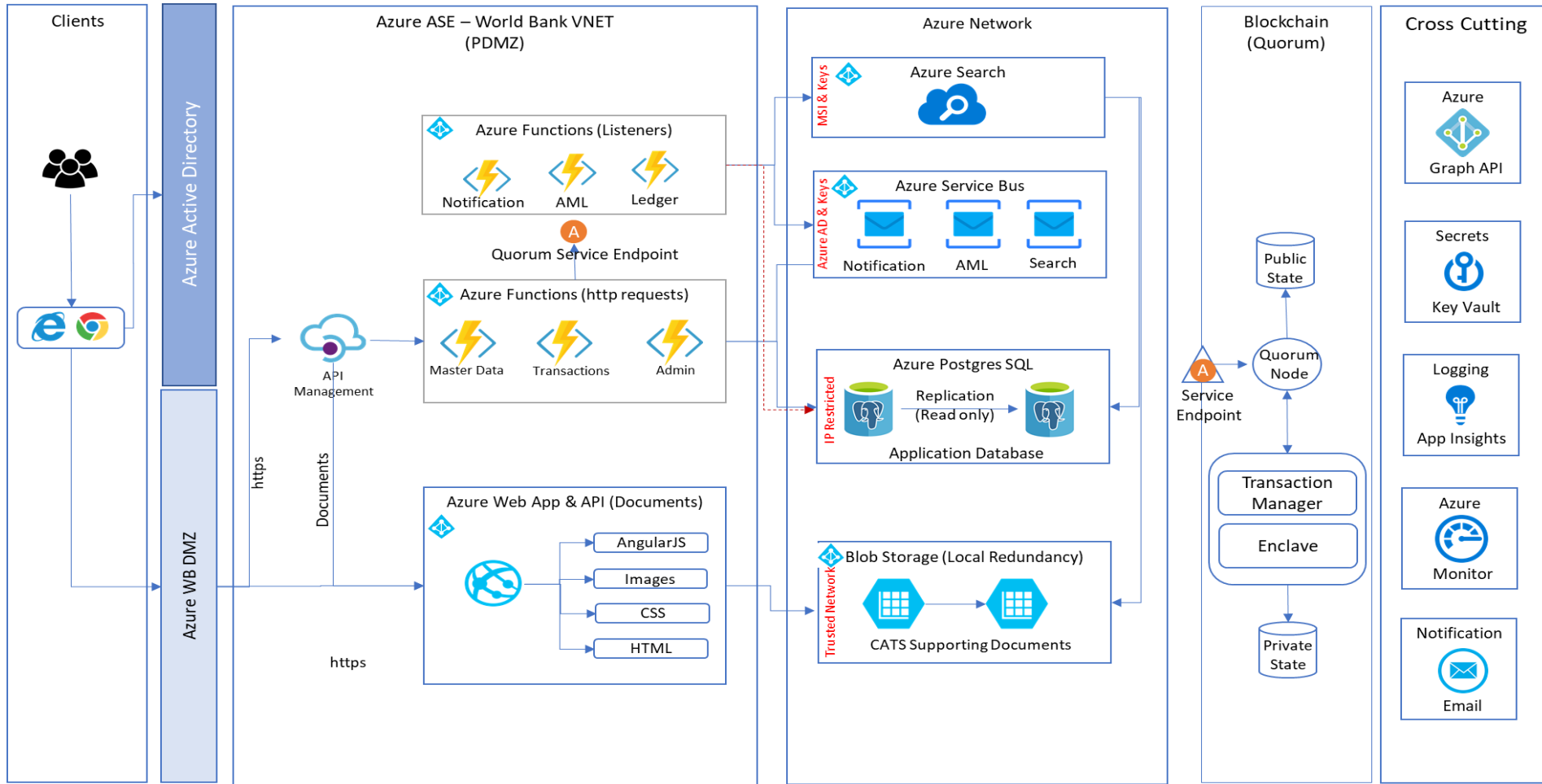
- **110+ wireframes and mockups of CATS key screens, navigation, functions**
- **Style Guide, Themes and Visual design**
- **Database and document management design**

06

- **Cross-cutting and common services (e.g. notification, user management, etc.)**
- **Overall CATS Testing and UAT Strategy reviewed, approved, conducted and cleared**

CATS Program

CATS Phase 1 Solution Stack in Azure and Quorum



CATS Program

CATS Phase 1 Application



testingCA from OIS
Testing harsha from OIS Read more...

MY PORTFOLIO

78 FUNDS

73 PROGRAMS

83 PARTICIPANTS

673.9K Units

nonTradableUnits tradableUnits

MY PENDING TASKS

1 SENT BACK REQUESTS

0 PENDING REQUESTS

0 APPROVALS

NOTIFICATIONS(109)

Oct 25, 2019 TRA698 to InterimNonTradable - Forward "Forward" is Pending for approval

Oct 25, 2019 TRA698 to InterimNonTradable - Forward "Forward" is Pending for approval

Oct 25, 2019 TRA695 to InterimTradable - Forward "Forward" is Pending for approval

Oct 25, 2019 TRA695 to InterimTradable - Forward "Forward" is Pending for approval

Recently Accessed Funds MLFUND22OCTEST1 TF097 MLFUND22OCTEST1 TF097

PRETEST123

Issuance Accounts Holding Accounts

Tradable Account

Tradable Units 89

ACTIONS

- Retire Units
- Cancel Units
- Transfer Units

Cancellation Account

Tradable Units 6 Non Tradable Units 4

PRETEST123 Recording Account Verify Units

Select Units Issue Units

Selected Units

- Sent Back for Revision
- Pending for Approval
- Issued
- Canceled

Verification ID	Verification Period Range	Original Verified Units	Balance Units	Verifying Body
VER00207	01 Sep 2019 - 04 Sep 2019	2,000	2000	WorldBank Certification Group

Issue Units

Certification Period Start Date* 09/01/2019

Certification Period End Date* 09/07/2019

Number of Units* 250

Available Verified Units 2000

Certification Body* WorldBank Certification Group

Comments*

CANCEL PREVIOUS RETURN

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1. Quick Review

2. CATS - Carbon Assets Trading System

3. Legal Support and Communication Plan



CATS Program

Legal support



Operational Guidelines (Registry Policy Documents)

- As part of the **Registry Policy Documents** compliant in this Phase 1 with the FCPF CF MF and BioCF ISFL ERs Program Requirements and Buffer Guidelines.

Users Manual

- To prepare **the platform / software users manual** and **training material** for the ER Transaction Registry

Terms & Conditions

- To draft proposed **Terms & Conditions for the Transaction Registry** based on the legal analyses, best practices and taking into account requirements needed as in the Registry Operational Guidelines. Legal Consultancy.

Legal Analyses to operationalize the ER Transaction Registry

- To deepen knowledge and consolidate best practices regarding the legal processes needed to support the operationalization of the ER Transaction Registry: (i) **confidentiality and privacy requirements** for the users, and (ii) **limitation of liability, warranty and indemnification (disclaimers)**. Legal Consultancy.

CATS Program

Legal support



Operational Guidelines (Registry Policy Documents)

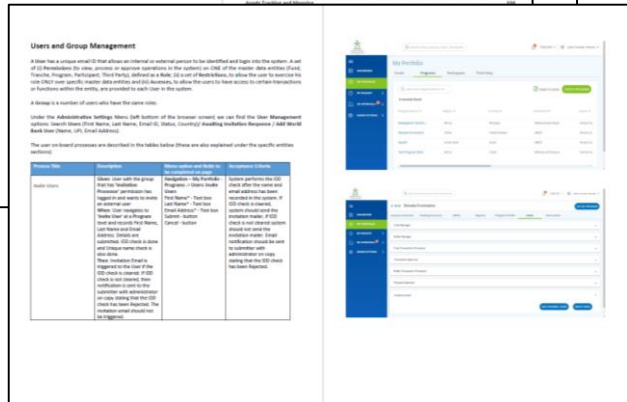
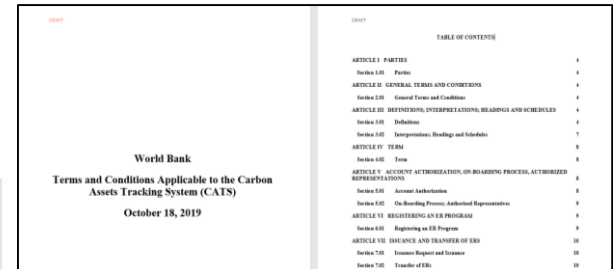
- First Draft (Oct 4th, 2019).
- Advanced Draft (Oct 31st, 2019).
- Final Document (Dec 12th, 2019).

Users Manual

- First Draft (Aug 27th, 2019).
- Advanced Draft (Nov 8th, 2019).
- Final Document (Dec 12th, 2019).

Terms & Conditions

- First Draft (Oct 18th, 2019).
- Workshop (Oct. 24th, 2019).
- Advanced Draft (Oct 31st, 2019).
- Final Document (Dec 12th, 2019).



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Scope & Objectives

01

To **disseminate** the WB initiative of an in-house **Transaction Registry (CATS)** to support the ERPs from the FCPF CF and the BIOCF ISFL and target boosting the external users' buy-in for phase 1

02

To **survey and assess the national** (host countries and participants) **and third-party initiatives on transaction registries**, their technical characteristics and potential communication protocols

03

To collect and analyze relevant stakeholders' **requirements** for the preparation of the **phase-2 (trade)**

04

To prepare the **communication and training materials** (English, Spanish and French) and **train the teams** (host countries, participants, third-party buyers, WB) in the use of CATS.

CATS Program

Communication Plan



Contact list

- To identify **potential points of contact** with external parties (host countries; participants; third party buyers): (LAC, Africa, Asia)

Introductory Webinars

- **Prospective webinars** (3 languages: English, Spanish and French): presentation, leaflet, video and survey forms.

Explore business goals

- **On-going national/international initiatives on transaction registries**; calls and analysis: VERRA, CDM, **ICAO-CORSIA**, California Climate Action Reserve, APX.

Phase II Road Map

- To define **Phase II timeline and budget** and prepare a project plan: **BRD** and implementation.

Training Materials

- To prepare the training materials based on the **Operational Guidelines, Users Manual, and Terms & Conditions**

Training Webinars

- **Training webinars** (3 languages: English, Spanish and French): presentation, training materials, video. Potential organization of **regional workshops**.

CATS Program

In Summary



CATS Phase 1 on track for going live with a first release in November with Phase 1

- Central Registry for FCPF CF & BioCF ISFL ERP
- ERs Issuance and serialization
- ERs Buffer Management
- ERs transactions: Fund, Tranche, Participants, Program, Country, Program, Third Party Buyers
- Auditing and Reporting
- Operational Guidelines
- Users Manual
- Terms and condition
- Communication Plan

Progressing in Phase 2 plan to complete asap after Phase 1

- Connect existing National Registries / Provide an open source application to the countries being part (as a node) of a BlockChain.
- API of listing movability and traceability to the units issued on CATS with other registries (e.g. ICAO CORSIA, UNFCCC, VERRA, etc.)
- Accommodate new Funds and Programs

CATS will meet all CORSIA requirements on registries

Application Form for Emissions Units Programs):

- 3.3. Offset credit issuance and retirement procedures
- 3.4 Identification and Tracking
- 4.7 Are only counted once towards a mitigation obligation (double-issuance, double-use, double-selling)
- 21 Oct, 2019 Montreal TAB – ICAO-CORSIA FCPF Program Assessment (Registry videos and Live demo)



THANK YOU!

www.forestcarbonpartnership.org