

Climate Warehouse – A global public data layer for the carbon markets

January 31, 2022

The Climate Warehouse conceptualizes & prototypes products for the next generation of climate markets



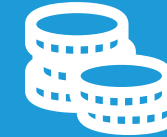
Creating MOs

Generate supply of MOs from WB IDA & IBRD lending operations with mitigation co-benefits



Warehousing MOs

Design connected infrastructure for tracking and recording of MOs
(Climate Warehouse)



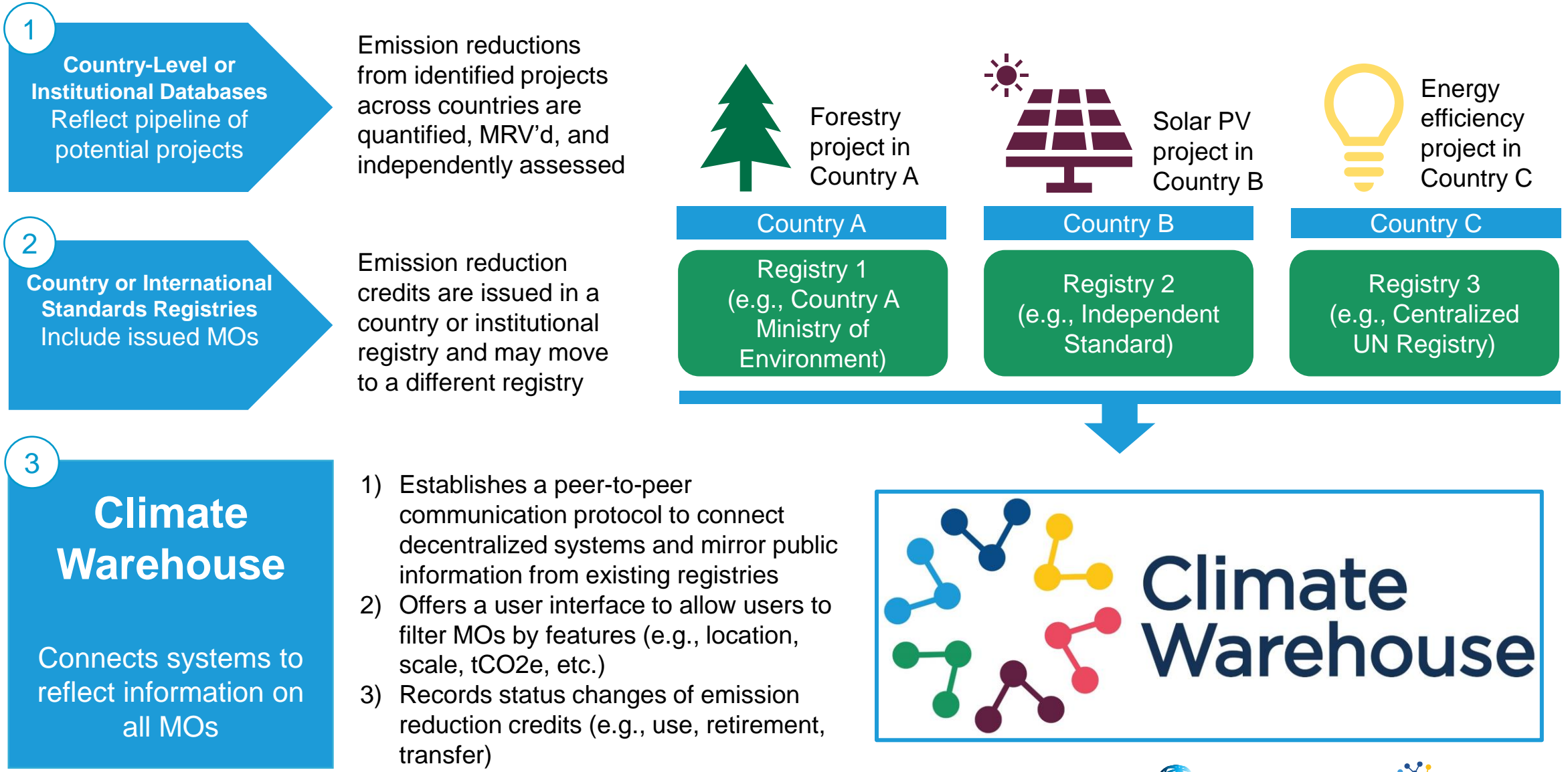
Trading MOs

Facilitate demand for and transactions of MOs through design of financial instruments and products

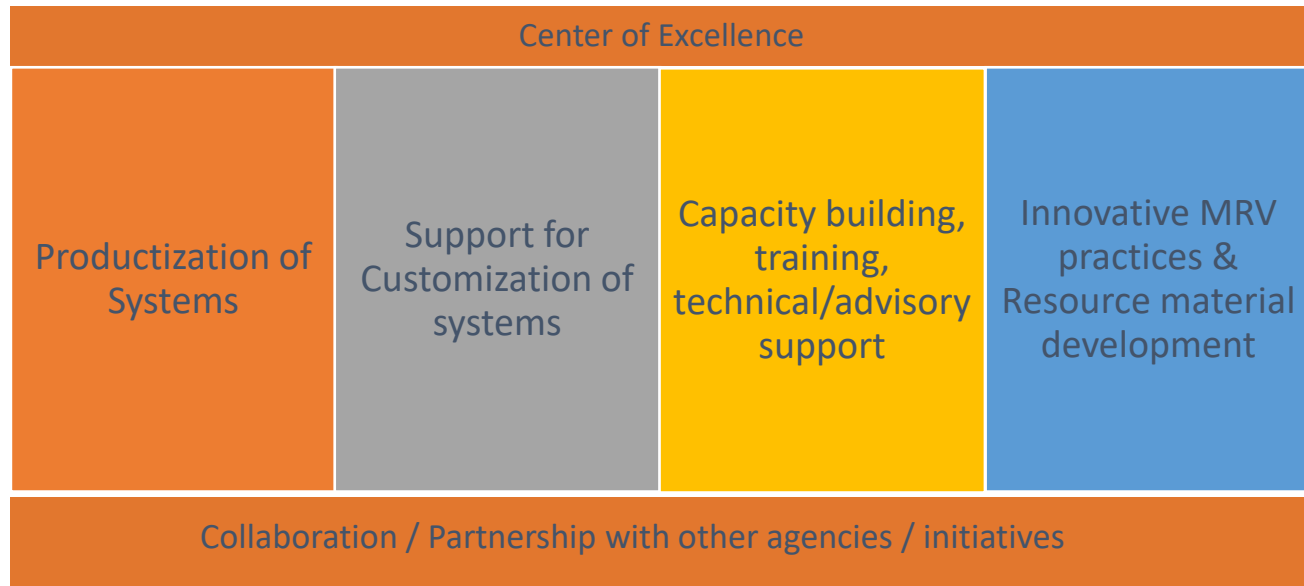
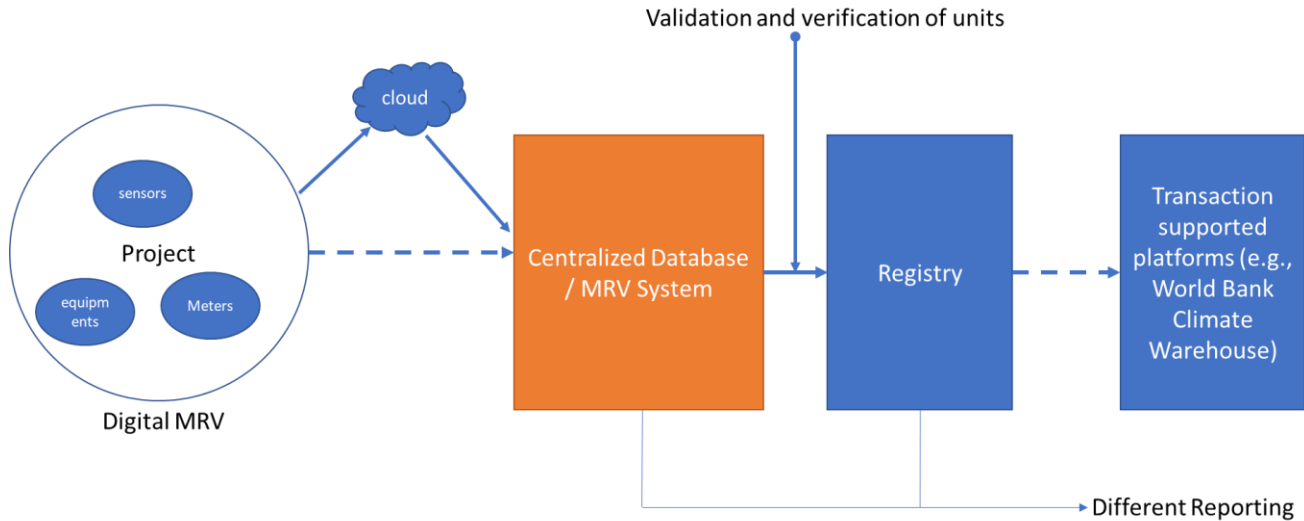
Create **enabling environment**, inform development of **regulatory framework**, **institutional arrangements** and efficient **market infrastructure** and associated **governance arrangements**, including:

- **Climate Market Club**
- **Approach Papers** on key technical issues related to Article 6
- **Assessment Frameworks** for enhancing comparability

Climate Warehouse – carbon market infrastructure for trackability and transparency



End-to-end digital infrastructure for a transparent carbon market



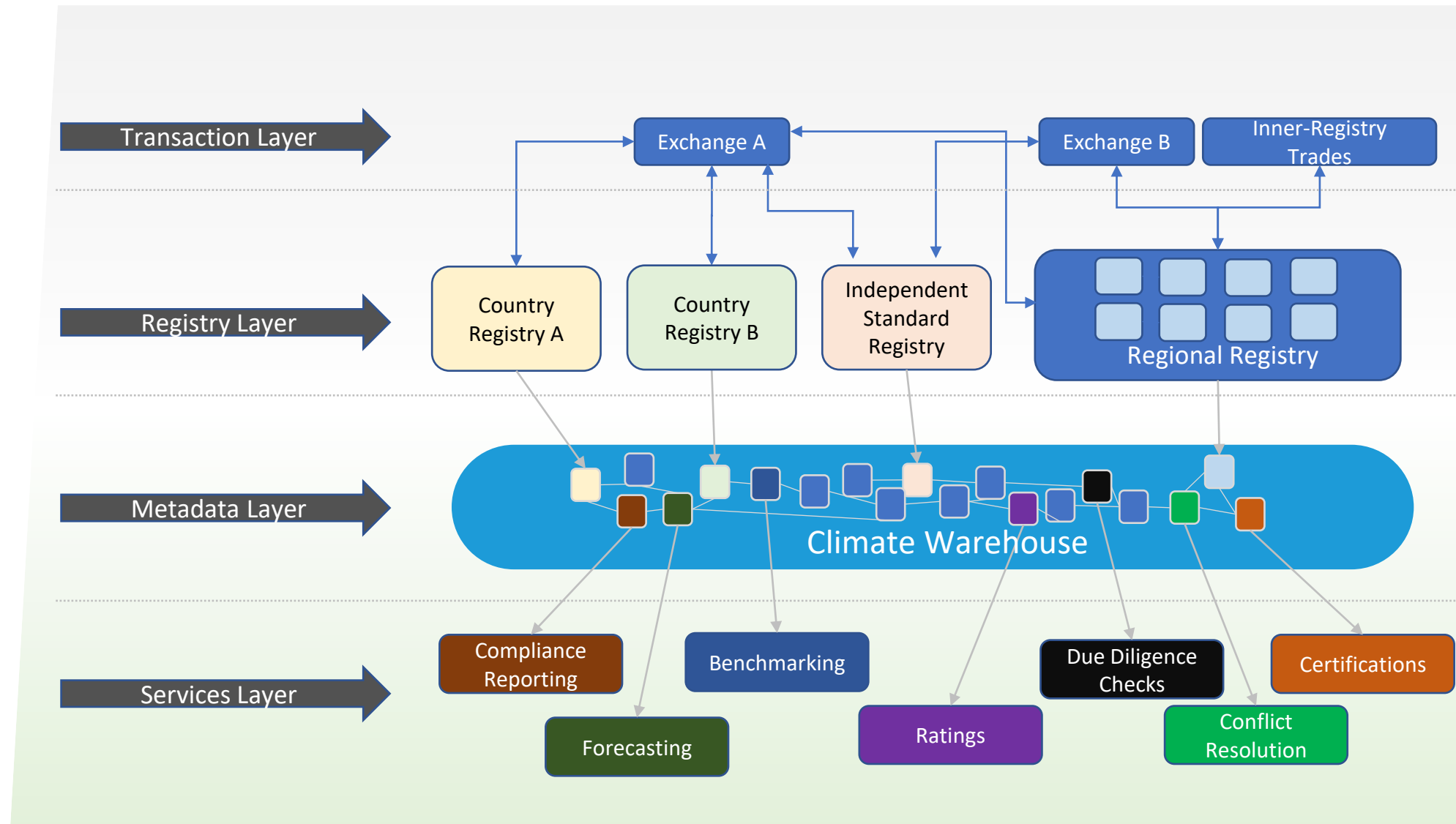
➤ Goal is to have end-to-end automated and digitalized system, from mitigation project monitoring, reporting and verification system (MRV) to Registry to the market infrastructure through the Climate Warehouse with automated processes on a digital platform.

➤ Digitalization of the MRV system will build on the work for the electricity system in India, Jordan and in collaboration with other partners such as the EBRD.

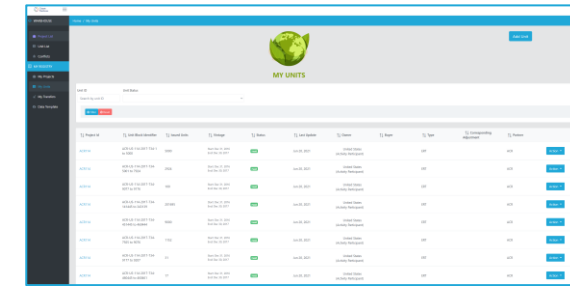
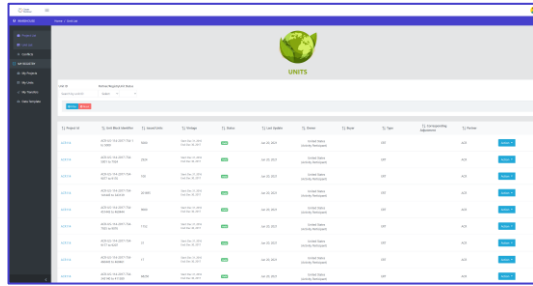
➤ The partnership will coordinate through the Partnership for Market Implementation (<https://pmiclimate.org/>)

The Climate Warehouse: Building a Public-Good Data Layer

- Designed as an open shared infrastructure layer
- Common taxonomy of data facilitates communication between entities
- Registry service providers and countries share data to the Warehouse
- Public and private sector market players can host a node and build out the service layer



Climate Warehouse Prototype Functions



Project Level:

- View Project detail information
- Sort and filter projects

Unit Level:

- View Unit detail information
- Sort and filter unit serial number blocks
- View status change history of unit blocks
- View transfer history of unit blocks moving between connected registries

Conflicts:

- View and sort conflicts log, providing a demonstration of how double counting risks among connected registries can be identified.

Project Level:

- Add and update project details, their lifecycle status
- Add high level rating information
- Link related projects together
- Add labeling information including support for letters of authorization

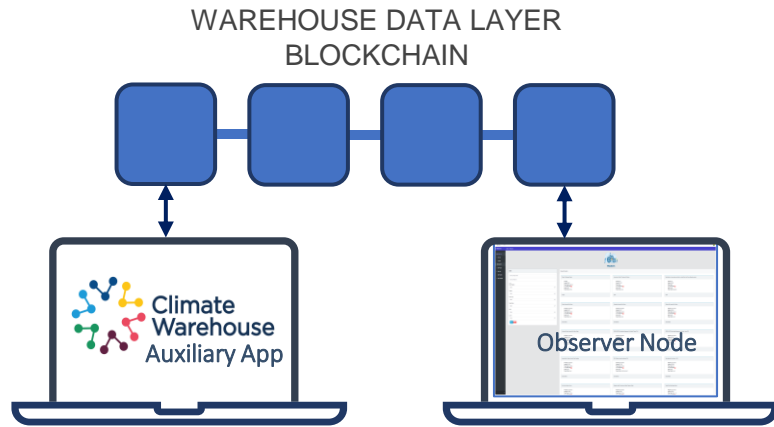
Unit Level:

- Add issuances and status the lifecycle of unit blocks
- Assign labeling information to unit blocks
- Break unit blocks into smaller blocks for transfer and use
- Sell and transfer unit blocks to other registry systems
- Change unit ownership
- Copy unit information into from transferred units into local registry

Prototype testing – Phase II: objectives of the simulation

- Test the utility of the Climate Warehouse's functions to track information and **identify double counting risks**.
- Understand the **feasibility of peer-to-peer integration** across decentralized registry systems.
- Assess the potential **benefits and barriers of using emerging technologies**, particularly blockchain, to support processes associated with climate markets.
- Identify potential **minimum data and technical requirements** for registry systems to accommodate the needs of post-2020 climate markets.
- Inform the **governance framework** for an operational Climate Warehouse, which would be launched outside of the World Bank.

Climate Warehouse: Testing, Governance Consultations and Next Steps



16 “registry” Nodes:

Chile
Costa Rica
Japan
Mexico
Singapore
Switzerland

American Carbon Registry
Carbon Action Reserve
Global Carbon Council
Gold Standard Foundation
Verra

Kengen
Energy Efficiency Services
Limited (EESL)
EcoRegistry
Global Green Growth Institute

Observer Node Access:

Over 20 organizations:

UNFCCC
MDBs
Academics
Country Ministries
Industry Partners

CLIMATE WAREHOUSE GOVERNANCE CONSULTATIONS



IETA, WB, Singapore NCCS

Governance Consultation with private, public and non-profit ecosystem partners:

Goals:

Determine the appropriate
governance and operating
model for the Climate
Warehouse as a public
good.

Explore different funding
models for the operations
and maintenance of the
infrastructure



High Level Outcomes of Phase II Testing of Prototype

- Feedback to further refine the data model and functions enough granularity to build a new Climate Warehouse for testing
- Demonstrated minimum functions needed for a simple registry through the Auxiliary Application
- Provided capacity building on registry functions and data elements that will be needed for ITMOs, tested out how these processes can be tracked through the warehouse
- Demonstrated the ability to trace and audit units that are traded between organizations using blockchain



Next Steps:

- Developing a new Open-Source Climate Warehouse on the Chia Blockchain to test out public blockchain with an updated data model and functions based off lessons learned from Simulation II. Minimum Viable Product (Feb 2022)
- Observer Node published on theclimatewarehouse.org (Mar 2022)
- Plan testing activities for the new Climate Warehouse with partners
- Completion of Governance Consultations with IETA and the Government of Singapore (Mar 2022)

For further information:

<http://www.theclimatewarehouse.org>

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