## Japan CCS Forum 2022



Dec. 01, 2022

# Trends and activities to develop common standards for Carbon Markets

Takashi Morishima Senior Advisor, Japan IETA morishima@ieta.org

https://www.ieta.org/

## INTERNATIONAL EMISSIONS TRADING ASSOCIATION - IETA



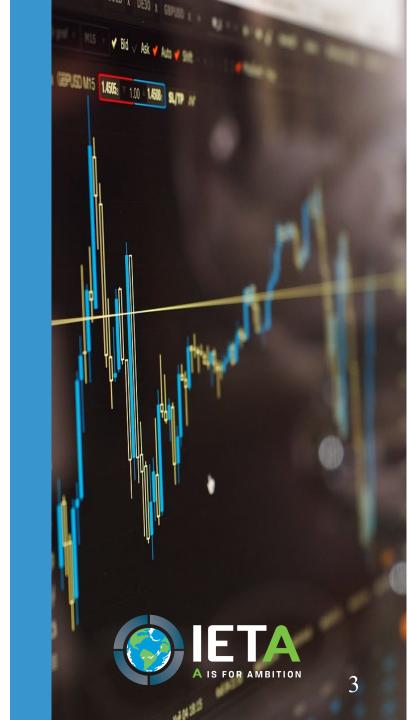
## WHO WE ARE

IETA is a non-profit business organisation created in June 1999 to establish a functional international framework for trading in greenhouse gas emission reductions.

IETA's diverse membership benefits from a full range of views — industrials, verifiers, lawyers, project developers, investors, standards, traders & consultants — from every market in the world.

We pride ourselves to be involved in and influence policy design, thought leadership, global capacity building, best practice and knowledge transfer.

We value our global Partnerships & Strategic initiatives with UNFCCC, World Bank, OECD, IEA, ICAO, IATA & other multilateral organisations.



## **Our History**

For over 20 years we have been at the cutting edge of climate action.

Promoting market solutions for climate change since

JUNE

IETA founded

UNCTAD and WBCSD,

supported by members

IETA

including Shell, ABB,

BP and Powergen, establish IETA



CDM Reforms

IETA recommendations lead to reforms of the CDM at COP11 in Montreal.



2005

MAY

DEC

1st Carbon Expo

Organised in conjunction with Koelnmesse and the World Bank, Carbon Expo quickly became the must-attend event for carbon market participants



#### MAY

VCS Version 1 published IETA, WEF and the Climate Group launch the Voluntary Carbon Standard now known as Verra.



ICRO# JUNE

IETA + ICROA merger

As opportunties grow in the voluntary market, especially around land-based projects, IETA teams up with ICROA



OCT



INSIGHTS & INFORMATION



SHAPING POLICY



REPUTATION & ACCESS



#### **OUR WORK**



The Business Partnership for Market Readiness aims to prepare businesses in regions where emissions trading is emerging

B-PMR Launch



NETWORKING



moving towards a global carbon market

### 2016

#### MAY

From Kyoto to Paris launched

IETA's oral history of the carbon market shines a light on its pioneers





#### Market Stability Reserve

IETA proposes a volume-based flexible mechanism for the EU ETS which the EU adopted in 2015, known as the Market Stability Reserve



#### IETA releases straw

proposal for market mechanisms in Paris Agreement. This proposal ultimately became Article 6 of the 2015 Paris Agreement.



ARTICLE 6

DEC

#### 2013 OCT

#### California ETMA

Building off of IETA's International Emissions Trading Master Agreement, the organisation released a standardised trading contract for the nascent California market to help the market to grow

## MISSION & OBJECTIVES



#### **OUR MISSION**

- Empower business to engage in climate action, advancing the objectives of the United Nations Framework Convention on Climate Change and the Paris Agreement as informed by IPCC science, and
- Establish effective market-based trading systems for greenhouse gas (GHG) emissions and removals that are environmentally robust, fair, open, efficient, accountable and consistent across national boundaries.

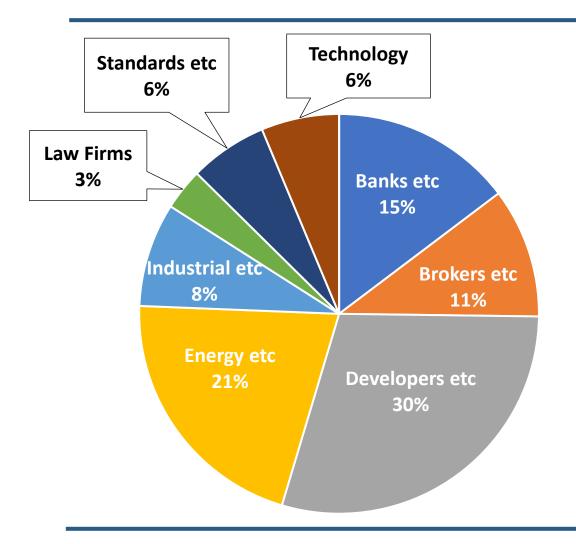
#### **OUR OBJECTIVES**

### We aim to achieve our mission by using our expertise to:

- promote carbon market and pricing solutions to climate change;
- help design effective rules for market operation and integrity; and
- provide the most up-to-date and credible information on greenhouse gas emissions trading and market activity.

## Our Members by industry sector





Total ca 230 members at the end of August, 2022

- BANKS, EXCHANGES & INVESTMENT COMPANIES ca 35 members (ca 15%)
- BROKERS & TRADERS ca 25 (ca 10%)
- DEVELOPERS, CONSULTANTS & ANALYSTS ca 70 (ca 30%)
- ENERGY & POWER PROVIDERS ca 50 (ca 20%)
- INDUSTRIAL & MATERIALS SECTOR ca 20 (ca 7%)
- LAW FIRMS 8 (ca 3%)
- STANDARDS, REGISTRIES & FOUNDATIONS ca 15(ca 7%)
- TECHNOLOGY ca 15 (ca 7%)
- ✓ Now growing rapidly

# Global economic modeling of Article 6 First round of NDCs

### **Independent vs. Cooperative Article 6 Implementation**

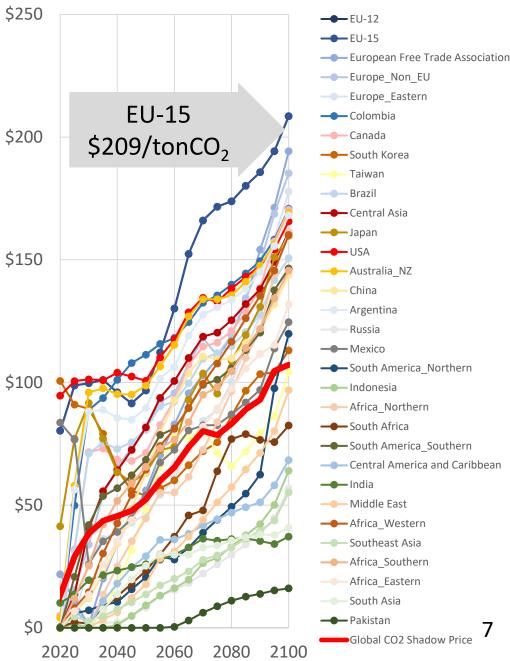
- Independent NDCs show wide range in modeled prices
- Cooperative NDC implementation cuts costs in half
- Potential to double the ambition at no extra cost

	2030	2050	2100
I-NDC Range	\$0 to \$101/tonCO <sub>2</sub>	\$0 to \$111/tonCO <sub>2</sub>	\$16 to \$209/tonCO <sub>2</sub>
C-NDC	\$38/tonCO <sub>2</sub>	\$52/tonCO <sub>2</sub>	\$107/tonCO <sub>2</sub>

Source: IETA, University of Maryland, World Bank Carbon Pricing Leadership Coalition (Sept 2019) <a href="https://ieta.org/resources/International\_WG/Article6">https://ieta.org/resources/International\_WG/Article6</a> /CLPC A6%20report no%20crops.pdf

\$0/tonCO<sub>2</sub>

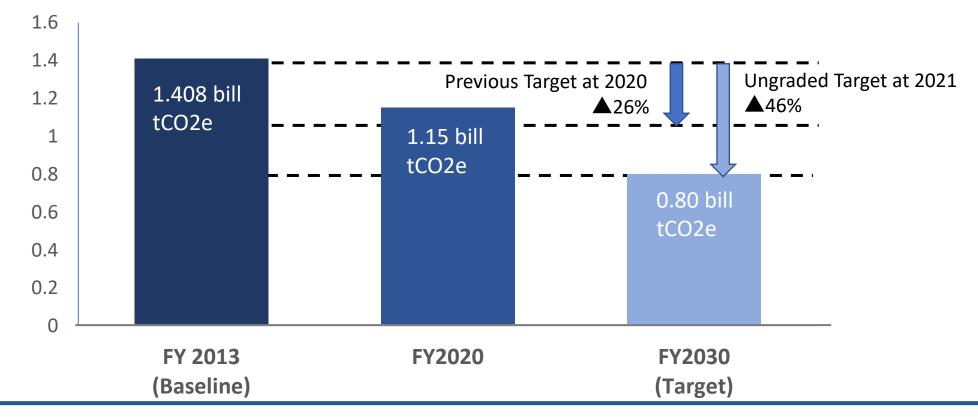
## **Shadow Price of CO<sub>2</sub>**



## Japan's NDC & Offset



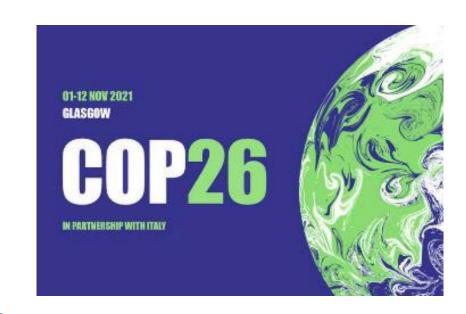
- In 2021 Japanese Government upgraded the NDC (-26%  $\Rightarrow$  -46%)
- It might need huge amount of carbon offsets sourced abroad to achieve the NDC in 2030.



## **COP 26 Main Outcomes**



- Glasgow Climate Pact
- Enhanced Transparency Framework
- Common Timeframes for NDCs
- Adaptation Fund
- Warsaw Mechanism for Loss and Damage
- Retirement of the CDM
- Article 6 accounting guidelines / integrity measures
- Several bilateral and multilateral declarations (focus on forests and land use, carbon finance, methane)

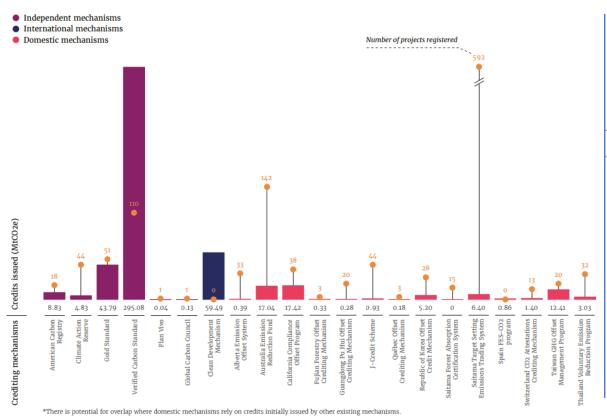


## Growth in carbon credit issuance

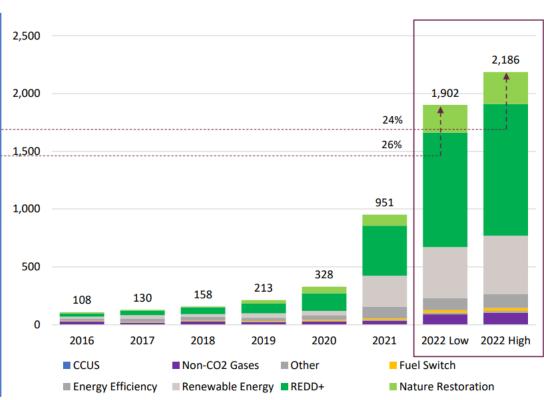


#### Credit issuance and nr. of projects by crediting mechanism (2021)

#### VCM market size (2016-2022)





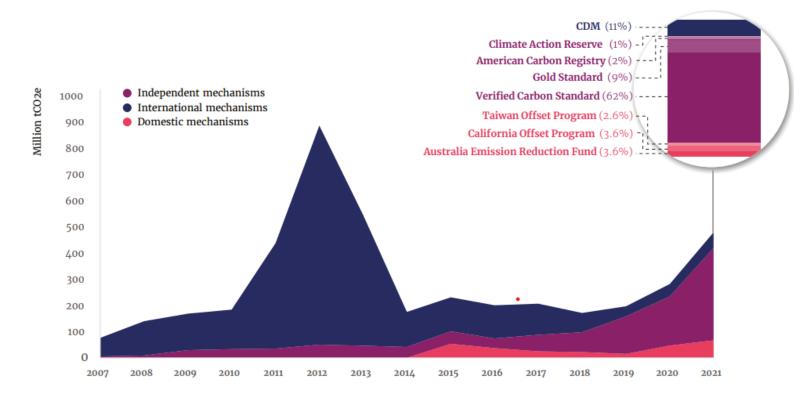


Source: Trove Intelligence

## ...but not an all-time high!



#### **Credit issuance volume time series (2007-2021)**



- Independent standards (voluntary carbon market) are dominant
- UN-run Clean Development Mechanism (CDM) retired in 2020 – no credit issuance for mitigation activities taking place in 2021
- A6.4 crediting mechanism to be established, but progress is slow

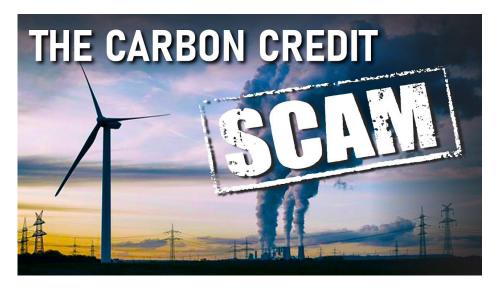
Source: The World Bank

# Challenges ahead to earn more trust







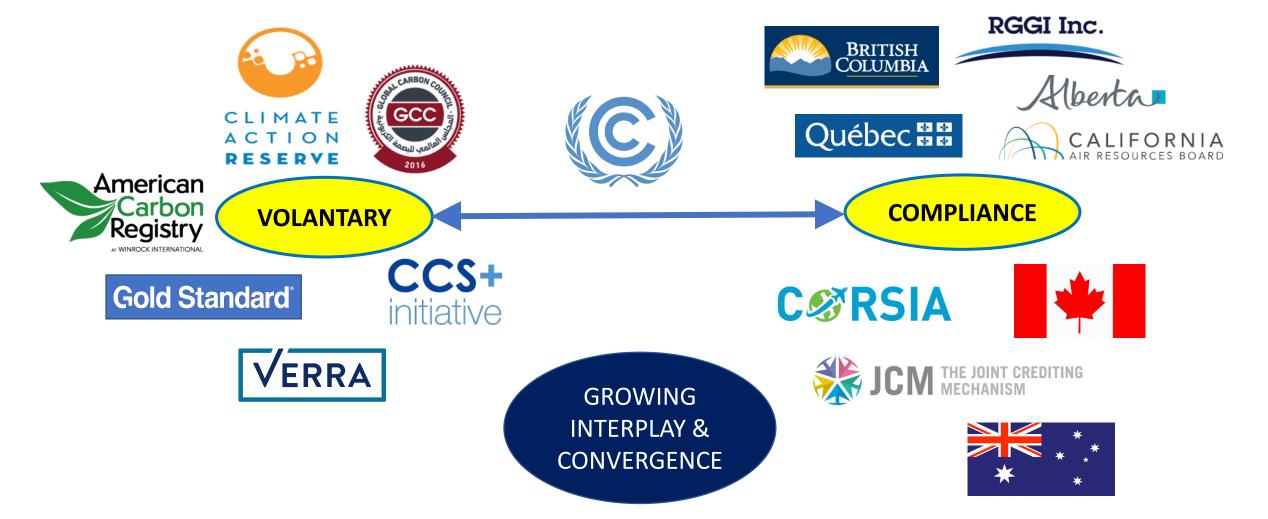




## **Voluntary and Compliance Offset Standards/Protocols**

Period of Growth, Transition and Convergence





# **VCM** governance initiatives







IC-VCM	VCMI	
• Integrity Council for the Voluntary Carbon Market	Voluntary Carbon Market Integrity Initiative	
• an independent governance body for the voluntary carbon market.	a multi-stakeholder platform to drive credible, net- zero aligned participation in voluntary carbon markets	
• Goal: create a threshold standard for the quality of carbon credits (SUPPLY)	• Goal: ensure the integrity of the use of carbon credits (DEMAND)	
• Documents: Core Carbon Principles, Assessment Framework, Assessment Procedures	• Document: claims code of practice	
• Public consultation open until 27 September 2022	Public consultation open until 12 August 2022	

✓ IETA is a member of IC-VCM's Secretariat



# WHAT ARE THE CORE CARBON PRINCIPLES?

The CCPs are designed to establish interlinked, fundamental principles for high-quality carbon credits that create real, additional and verifiable climate impact with high environmental and social integrity.

- **01.** ADDITIONALITY
- **02. MITIGATION ACTIVITY** INFORMATION
- 03. NO DOUBLE COUNTING
- **04. PERMANENCE**

- 05. PROGRAM GOVERNANCE
- **06. REGISTRY**
- 07. ROBUST INDEPENDENT THIRD-PARTY VALIDATION AND VERIFICATION
- 08. ROBUST QUANTIFICATION OF EMISSION REDUCTIONS AND REMOVALS
- 09. SUSTAINABLE DEVELOPMENT IMPACTS AND SAFEGUARDS
- 10. TRANSITION TOWARDS NET-ZERO EMISSIONS



# a GEOBALLY-RECOENSED threshold STANDARD for high-integrity carbon credits



## Core carbon principles

The Core Carbon Principles represent the commonly-accepted fundamental elements for high-integrity carbon credits that create real, additional and verifiable climate impact with high atmospheric, environmental and social integrity.

## Assessment framework

The CCPs are operationalised through the Assessment Framework, which sets out criteria for the Integrity Council to consistently evaluate whether carbon credits and carbon-crediting programs meet the provisions outlined in the CCPs.

## Assessment procedure

The Assessment Procedure sets out the process for CCP-approval, how eligible carbon credits will be tagged, and how the Integrity Council will facilitate the continual development of the voluntary carbon market.

## **VCMI launched Claims Code of Practice**





## VCMI Provisional Claims Code of Practice



Comprises four components or steps, all of which companies must adhere to in order to make credible claims about their voluntary use of carbon credits:

- 1. Meet the Prerequisites
- 2. Identify Claim(s) to Make
- 3. Purchase High-Quality Credits
- 4. Report Transparently on the Use of Carbon Credits

#### Prerequisites:

- Science-aligned commitment to net-zero by no later than 2050 covering Scopes 1, 2 and 3
- Public interim reduction targets
- Provide detailed information on plans and strategies to achieve the targets
- Maintain publicly available GHG emissions inventory following GHG Protocol or equivalent, covering Scopes 1, 2 and 3
- Make public statement on consistency of advocacy activities with goals of the Paris Agreement

# **VCMI Claim Guidance (draft under consultation)**



## **Enterprise-wide claims**

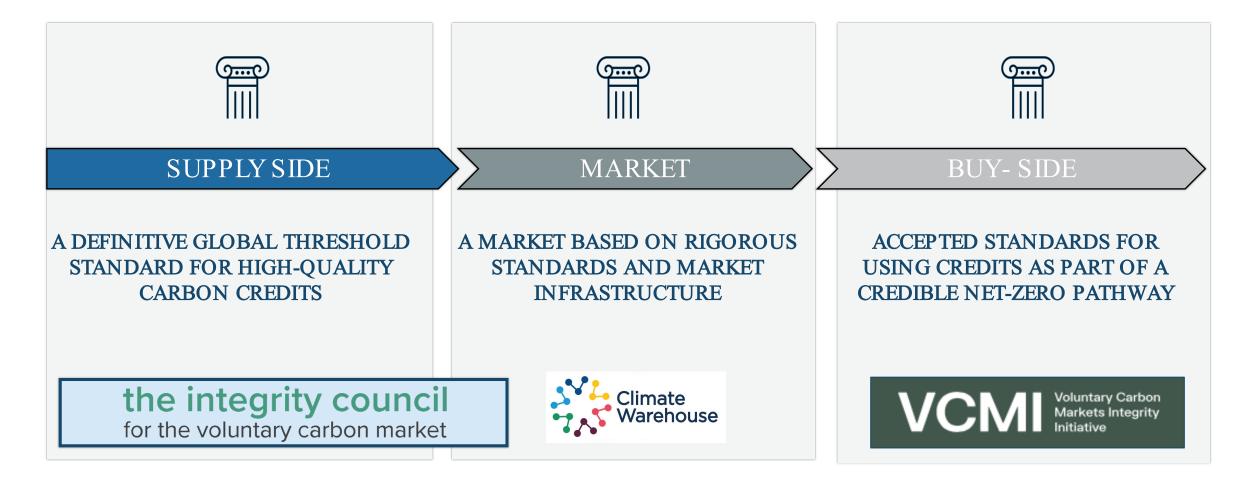
VCMI GOLD	VCMI SILVER	VCMI BRONZE
<ul> <li>On track to achieve next interim target for Scopes 1, 2, and 3</li> <li>Cover 100% of all remaining unabated emissions through retirement of carbon credits</li> </ul>	<ul> <li>On track to achieve next interim target for Scopes 1, 2, and 3</li> <li>Cover at least 20% of all remaining unabated emissions through retirement of carbon credits</li> </ul>	<ul> <li>On track to achieve next interim target for Scopes 1 and 2</li> <li>Reduce Scope 3 emissions through combination of internal reductions and carbon credits (up to 50% of Scope 3 footprint and declining over time) to achieve interim target</li> <li>Cover at least 20% of all remaining unabated emissions through retirement of carbon credits</li> <li>Available until 2030 only. Then needs to be on track to achieve Scope 3 interim target through internal reductions (graduate to VCMI Silver)</li> </ul>

<sup>✓</sup> Brand-, product- and service-level claims (carbon neutrality) are available



# Introduction to the Climate Warehouse A market infrastructure to connect climate markets

https://www.theclimatewarehouse.org/







## What is the value proposition?

A decentralized IT approach to connect climate markets





Facilitating a peer-to-peer connection and communication among decentralized registries in order to track mitigation outcomes



Provide visibility into corresponding adjustment procedures and the lifecycle of carbon offsets from issuances to retirement, which will safeguard against double counting and ease reporting requirements.



Surface publicly-available information on MOs and record status changes to provide information on how MOs are used.

An open shared repository

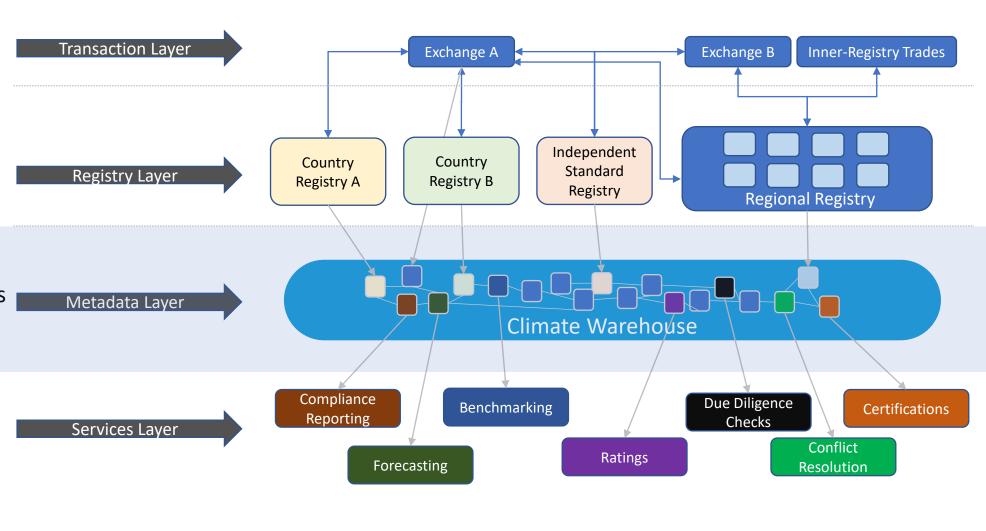


Enhance transparency and trust among market participants and enable tracking of MOs and reduce double counting risk. The Climate Warehouse would not hold assets or directly facilitate.



## 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



# Data Model – Key Updates

#### Project Location Warehouse Project ID\* (FRO Project Location ID\* (PK) Country\* **In-Country Region** Geographic Identifier\* City

Street Address

Zip Code

#### Key:

- No change
- New field
- Changed name
- Removed

Fields with an \* are required form fields

### **Projects** Program **Project Rating** Warehouse Project ID\* (FK) Project Rating ID\* (PK) Sector\* Rating Type\* 00 Rating Range Lowest\* Rating Range Highest\* Rating\* Rating Link\* Co-Benefits Warehouse Project ID\* (FK) Co-Benefit ID (PK) 00 Co-Benefit **Estimations** Warehouse Project ID\* (FK)

 $\infty$ 

Estimations ID\* (PK)

**Crediting Period Start\*** 

Crediting Period End\*

**Unit Count\*** 

#### Warehouse Project ID\* (PK) Current Registry\* $\infty$ Project ID\* Registry of Origin\* Project Name\* Project Link\* Project Developer\* 00 Project Type\* **Project Tags** Covered by NDC\* **NDC Information** Project Status\* Project Status Date\* Unit Metric\* Methodology\* **Methodology Version** $\infty$ Validation Approach Validation Body ValidationDate EstAvgAnnEmmissions Reductions **Project Description**

#### **Related Projects** Warehouse Project ID\* (FK) Related Project ID (PK) Relationship Type Registry Related Project Note Unit Owner\* Owner\* In-Country Jurisdiction of Warehouse Project ID\* (FK) Owner Issuance ID\* (PK) Unit Block Start\* Issuance Start Date\* Unit Block End\* Unit Count\* Issuance End Date\* Vintage Year\* Verification Approach\* Unit Type\* $\infty$ Verification Report Date\* Marketplace Verification Body\* Labels Unit Tags Warehouse Project ID\* (FK) Unit Status\* Label ID (PK) **Unit Status Reason** Label Type\* Unit Registry Link\* Label\* Declaration\* Crediting Period Start Date\* Crediting Period End Date Status\* Validity Start Date\* Transaction Type Validity End Date\* Unit Quantity\* Label Link\*

Issuance ID\* (FK) Warehouse Unit ID\* (PK) Unit Issuance Location\* (FK to project loc ID) Label ID\* (FK)

Country Jurisdiction of

Marketplace Link

Marketplace Identifier

Corresponding Adjustment

Corresponding Adjustment

00

Transaction Hash





Governance (ref)

Registry values

**Project Sector values** 

**Project Status values** 

Unit Metric values

Validation Body values

Country values

Rating Type values

Unit Type values

**Unit Status values** 

Unit Transaction Type

values

Corresponding

**Adjustment Declaration** 

values

Corresponding

Adjustment Status

values

Related Project

Relationship type

values

Label Type values

Verification Body

values

# Testing Activities

Phase I

Phase II

Phase III

#### Phase IV

#### **Group 1 (Internal Testing)**

- WB CMI
- WB CATS

#### Observers:

- IETA
- Open Earth Foundation

March - April 2022

#### **Group 2**

- Sweden
- Gold Standard
- Switzerland
- VERRA
- Chile
- CARACR
- JapanSingapore
- GCC

#### Observers:

- Spain
- EBRD
- UNFCCC

April – May 2022

#### **Group 3**

- Rwanda
- Uganda
- Bhutan
- Eco-registry
- Senegal
- Colombia
- Ghana
- BV Rio
- Mexico
- Bangladesh
- Peru
- Colombia

#### **Observers:**

- Asian Dev. Bank Temasek
- Climate LedgerAirCarbonInitiativeCBL
- Climate Impact X

May – July 2022

## Feedback Consolidation and Documentation

- Capture feedback in 5 tools:
  - Feedback notes
  - Test scripts
  - Action items tracker
  - Feedback survey
  - Participant profiles
- Produce documentation:
  - Simulation III Final Report
  - Transition Plan
  - Onboarding Operational Climate Warehouse Package

July - August 2022



<sup>\*\*</sup>These groupings may be subject to change due to availability and preferences of participants

## CAD Trust Media release on 26 October, 2022





# Climate Action Data Trust

Climate Warehouse Digital Ecosystem

Connecting carbon markets through open data

https://climateactiondata.org/

✓ Official launch on 7 December



The World Bank, IETA and the Singapore Government Connect Carbon Markets Through Open Data

SINGAPORE (26 October 2022) –

The International Emissions Trading Association (IETA) today revealed information on the forthcoming launch of Climate Action Data Trust (CAD Trust), a decentralized metadata system that can link, aggregate and harmonize all major carbon market registry data. Climate Action Data Trust (CAD Trust) is a joint initiative of the International Emissions Trading Association, The World Bank and the Singapore government, along with a variety of governments and public and private organizations.









## **IOSCO** Media Release on Nov. 9, 2022



#### **MEDIA RELEASE**



International Organization of Securities Commissions Organisation internationale des commissions de valeurs Organização Internacional das Comissões de Valores Organización Internacional de Comisiones de Valores المنظمة الدولية لهيئات الأوراق المالية

IOSCO/MR/32/2022

Sharm el-Sheikh, Egypt, 9 November 2022

IOSCO consults on the development of sound and well-functioning carbon markets

Organization of Securities Commissions)

IOSCO (International

IOSCO is the international body that brings together the world's securities regulators and is recognized as the global standard setter for the securities sector. IOSCO develops, implements and promotes adherence to internationally recognized standards for securities regulation.

Comments on the report should be submitted by 10 February 2023

## **IOSCO** Recommendations for the Compliance Carbon Market



- 1. Relevant authorities should increase predictability and transparency in primary market decisions.
- 2. To foster fair, stable and competitive markets, relevant authorities in charge of primary market issuance should place greater reliance on auctions over free allocation.
- Relevant authorities should consider setting frequent auctions.
- 4. When relevant authorities establish market stability mechanisms, any market intervention should be rule-based to allow for better predictability.
- 5. Relevant authorities should consider allowing the participation of non-compliance firms in primary markets.
- 6. Relevant authorities should define the legal nature of allowances in their jurisdiction.
- 7. Relevant authorities should encourage the scrutiny of auction performances.
- 8. Relevant authorities should consider establishing clear and robust frameworks for conducting market surveillance, overseeing of entities' behavior in spot and derivatives carbon markets and ensuring appropriate enforcement.
- 9. Relevant authorities should ensure that the relevant market infrastructures (e.g., trading venues, auction platforms, central counterparties, registries) are robust and properly regulated.
- 10. Relevant authorities should encourage the development of standardized derivatives contracts.
- 11. Relevant authorities should consider public disclosures about aggregate positions, as well as periodic public reporting derived from regulatory data.
- 12. Relevant authorities should set clear lines of responsibilities and cooperation between authorities in charge of compliance markets at primary and secondary market level, including both environmental and financial agencies as appropriate and promoting regulatory coordination between these entities.

## Summary



- Since COP26, interest on carbon markets has grown even more.
- However, there are many challenges for development of carbon markets.
- ➤ In the Voluntary Carbon Market, IC-VCM presents Core Carbon Principles and VCMI presents Claims of Code of Practice, aiming to standardize the supply side and the demand side respectively.
- ➤ IETA, The World Bank and the Singapore government are going to launch Climate Action Data Trust as an effort to create a common platform for carbon credit registry data.
- Also in the compliance carbon market, IOSCO consults on the development of sound and well-functioning carbon markets.



# Thank you for your kind attention

https://www.ieta.org/