

# MUFG TRANSIT

## APAC Carbon Offsets

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ESG Finance Department

**MUFG Bank, Ltd.**

A member of MUFG, a global financial group

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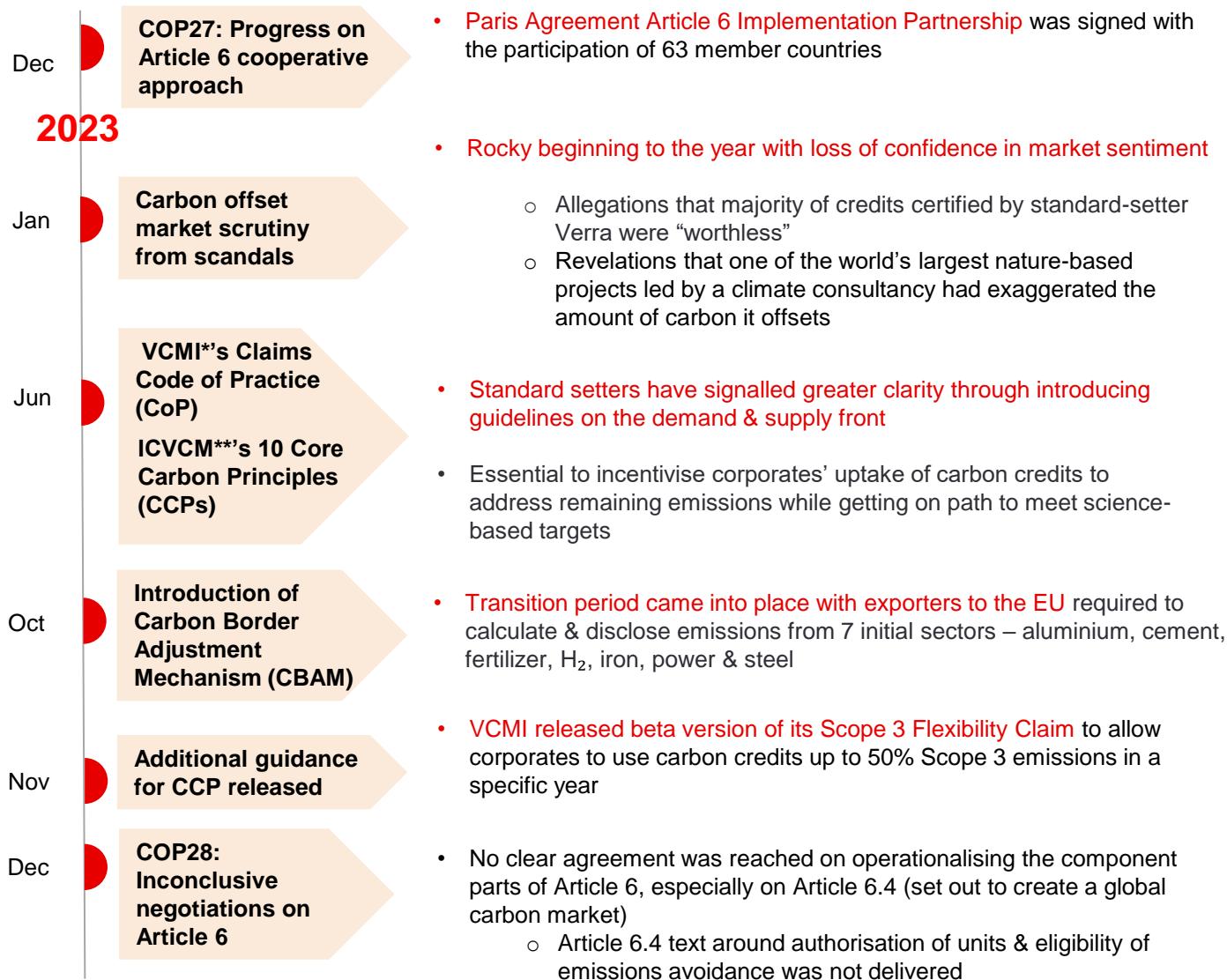


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# Section I: 2024 Carbon Market Outlook

# Lookback at 2023 | Key global carbon market developments

2023, a year of uncertainty with a focus on building up the foundation of voluntary carbon markets



\*VCMI – Voluntary Carbon Markets Initiative

\*\*ICVCM – Integrity Council for the Voluntary Carbon Market

Source: MUFG compiled from Environmental Finance, VCMI and various public sources

2024, volatility remains for international carbon markets while bilateral negotiations begin to bear fruits



## Steering the demand towards high quality carbon credits

### High-Level Roundtable on Unlocking High-Integrity Carbon Markets



Dec 2023: Science Based Targets Initiative (SBTi), VCMI, ICVCM, GHG Protocol & We Mean Business Coalition (WMB) joined forces to establish a **robust integrity framework** that provides **scientifically based methodologies** for decarbonisation of production processes & use of voluntary credits to offset residual carbon emissions

### COP28 Independent Crediting Programme (ICP) Joint Statement

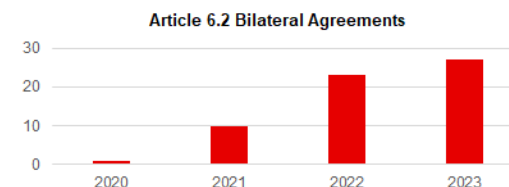


6 ICPs – American Carbon Registry, Architecture for REDD+ Transactions, Climate Action Reserve, Global Carbon Council, Gold Standard & Verra formed a **ground-breaking coalition** to seek **alignment of principles** to amplify the impact of carbon markets in achieving real mitigation

## Bilateral talks continue amidst a stalled Article 6 negotiation



Bilateral negotiations are expected to pick up in 2024 following a rising trend in number of agreements signed



Source: UN Environment Programme (Jan 2024)



**Singapore** has inked its **first carbon credit implementation agreement** with **Papua New Guinea** that will allow companies in the Republic to buy carbon credits from projects there to offset part of their carbon tax liability

## Section II: Bilateral Carbon Market

# Bilateral Carbon Market I Article 6 in action

## Article 6.2:

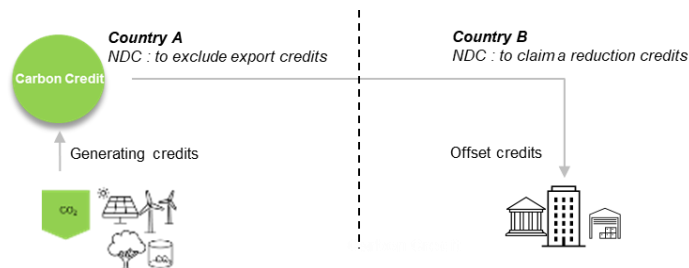
Outlines possibility of cooperative approaches & transfer of ITMOs through bilateral agreements to create a basis for trading in GHG emission reductions, also known as “mitigation outcomes” between countries

United Nations Development Programme

## Bilateral Carbon Market

A recognition of benefits from supporting offshore climate mitigation effort. Countries are allowed to claim credits counting towards their respective **Nationally Determined Contributions (NDCs)** via an Implementation Agreement that sets out a bilateral framework for the international transfer of correspondingly adjusted mitigation outcomes.

A Corresponding Adjustment under Article 6.2 of the Paris Agreement aims to prevent double-counting in a cross-border transfer of carbon credits known as **Internationally Transferable Mitigation Outcomes (ITMO)**.



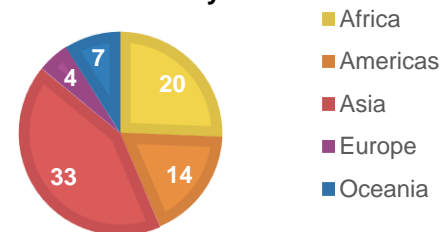
**71.1%**

of potential Article 6.2 Reduction Volume to come from APAC according to UNEP

**40**

out of 78 bilateral agreements signed under Article 6.2 come from APAC

## Bilateral Agreements By Host Country






Source: UN Environment Programme (Jan 2024)

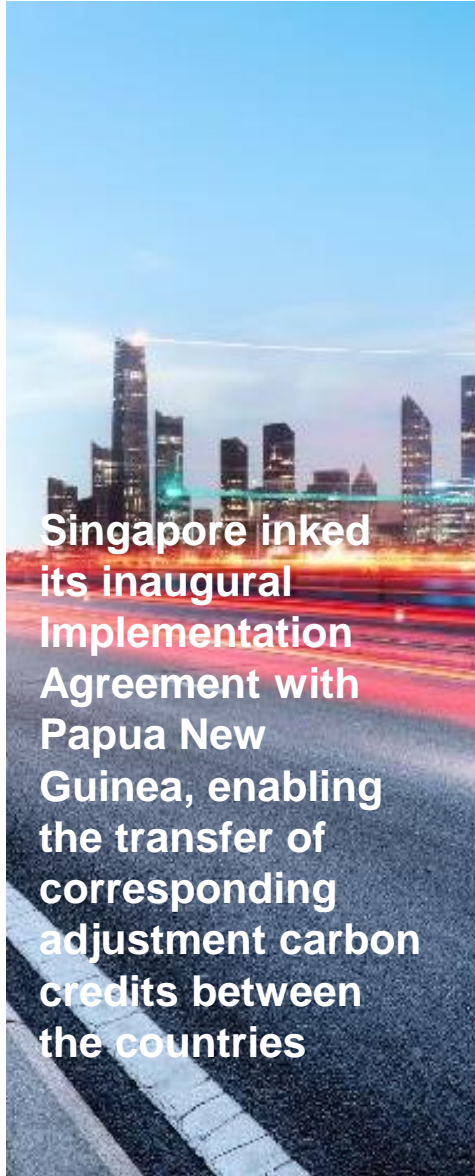


# Bilateral Carbon Market in Review I Comparison of schemes

Three schemes target financing for carbon reductions & removal beyond domestic borders, with Japan's scheme putting further emphasis on technology contributions

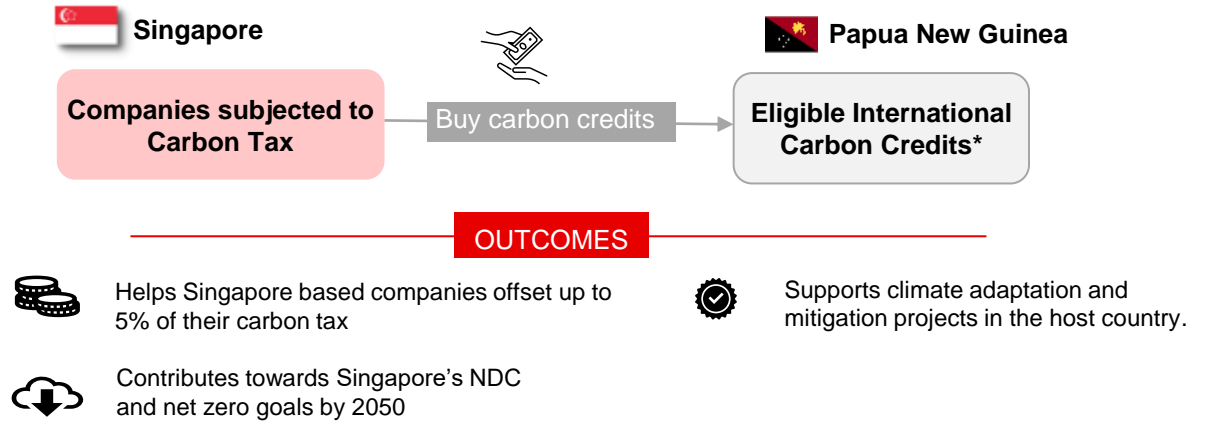
	Japan JCM 	Singapore 	Switzerland 
<b>Type of ITMOs</b>	JCM Credits	High-integrity internationally certified carbon credits	Carbon credits
<b>Certification</b>	<ul style="list-style-type: none"> <li>Approved by joint committee established by Japan &amp; individual partner countries</li> </ul>	International: <ul style="list-style-type: none"> <li>American Carbon Registry (ACR)</li> <li>Global Carbon Council (GCC)</li> <li>Gold Standard for the Global Goals (GS4GG)</li> <li>Verified Carbon Standard (VCS)</li> </ul>	<ul style="list-style-type: none"> <li>Jointly reviewed by Switzerland &amp; its partner countries</li> </ul>
<b>Bilateral Agreements with other countries (as of Jan 2024)</b>	28 partner countries <ul style="list-style-type: none"> <li>Africa – 4</li> <li>Americas – 3</li> <li>APAC – 20 (Southeast Asia countries include Cambodia, Indonesia, Laos, Myanmar, Philippines, Thailand, Vietnam)</li> <li>Europe – 1</li> </ul>	20 partner countries <ul style="list-style-type: none"> <li>Implementation Agreement: 1 (<b>Papua New Guinea</b>)</li> <li>Negotiated stage: 4 (Bhutan, Ghana, Paraguay, Vietnam)</li> <li>MOU stage: 14</li> <li>Other: 1</li> </ul>	15 partner countries <ul style="list-style-type: none"> <li>Implementation Agreement: 11                             <ul style="list-style-type: none"> <li>Africa – 4</li> <li>Americas – 3</li> <li>APAC – 3 (including <b>Thailand</b>)</li> <li>Europe – 1</li> </ul> </li> <li>Other: 3</li> </ul>
<b>Projects within Article 6.2 framework (as of Jan 2024)</b>	117	0	23
<b>Key Project Types</b>	Energy efficiency, renewables, transport, waste	NA	Biomass, energy efficiency, solar, transport
<b>Stage of development</b>	<b>Broadest</b> in terms of country & project coverage	<b>Initial</b> as actual projects have not been realised yet	<b>Advanced</b> as it pioneered first-ever transfer of carbon credits under Article 6.2

# Case Study of Singapore | Launching of the government-led framework

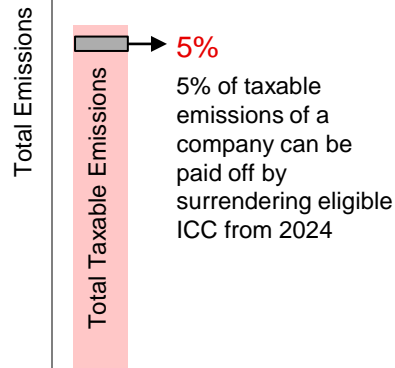


In November 2023, Singapore published the criteria for International Carbon Credits (ICCs) which can be used by companies and facilities to offset up to 5% of their taxable emissions from 2024

Subsequently, Singapore signed the Implementation Agreement under Art 6 of the Paris Agreement in December with Papua New Guinea, the **first** country qualified under the ICC's eligibility list.



## Singapore Carbon Pricing Mechanism



- \*Eligibility Criteria for ICCs
- ✓ No double counting
  - ✓ No Net Harm
  - ✓ Additionality
  - ✓ No Leakage of emissions elsewhere
  - ✓ Emission reduction or removal should be real
  - ✓ Emission reduction or removal should be permanent
  - ✓ Emission reduction or removal must have been quantified and verified

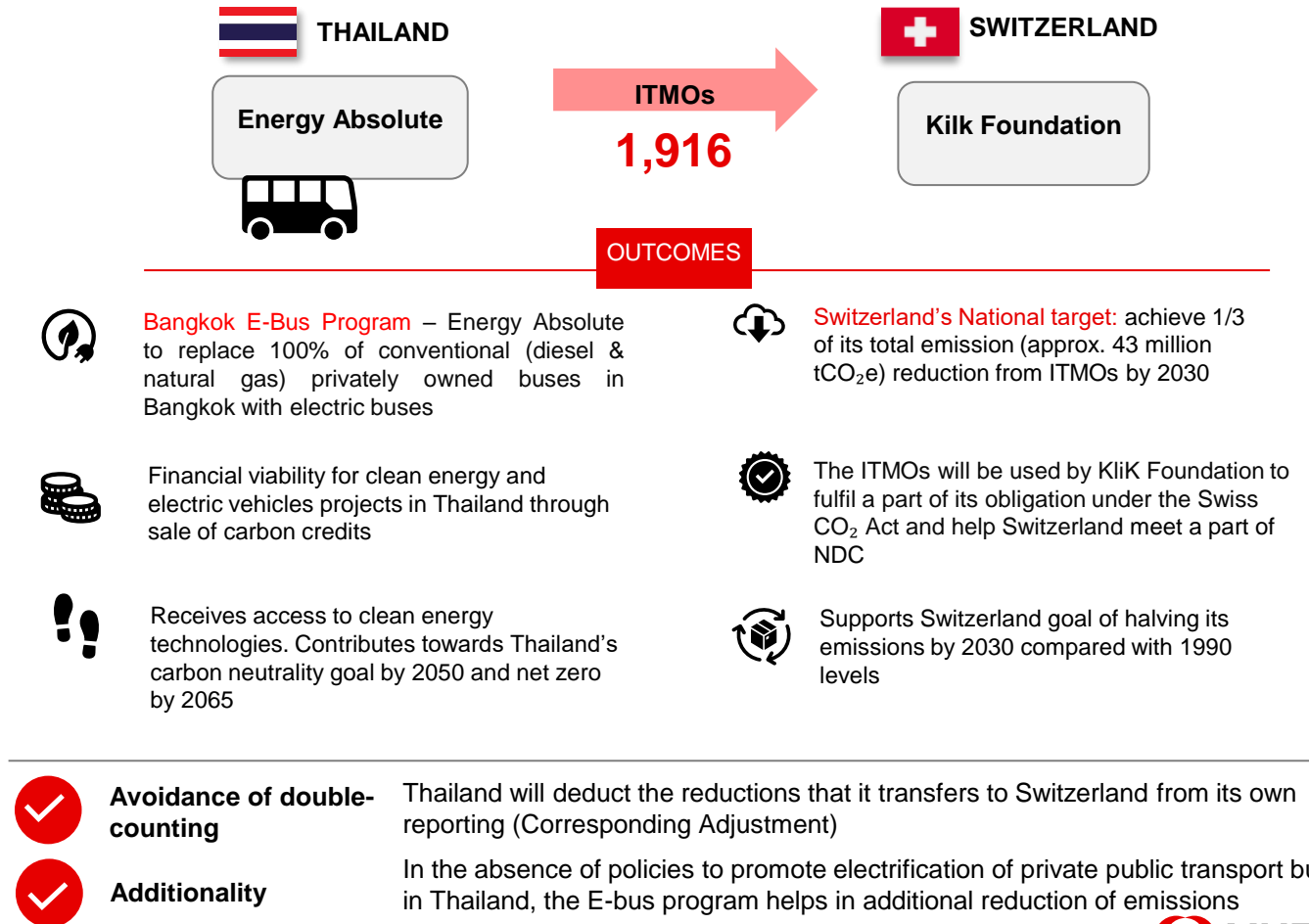
# Case Study of Switzerland - Thailand | Private sector-led Bangkok E-Bus Program



**Switzerland and Thailand completed first-ever transfer of carbon credits under Article 6.2 of the Paris Agreement**

In 2022, Thailand and Switzerland signed world's first country-to-country agreement on offsetting carbon emissions. The agreement allows both Thailand and Switzerland to voluntarily cooperate in achieving their emission reduction as per their NDCs

As per the agreement, Switzerland-based KliK Foundation bought 1,916 ITMOs (Internationally Transferred Mitigation Outcomes) from the Thai company Energy Absolute for the **Bangkok E-Bus Program in Dec 2023**

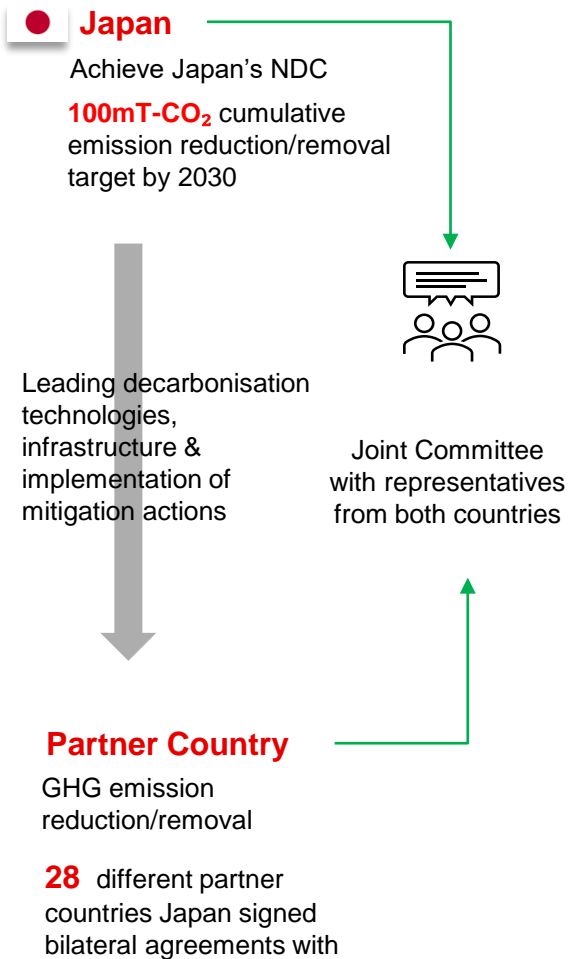


# Case Study of Japan | Joint Crediting Mechanism (JCM)



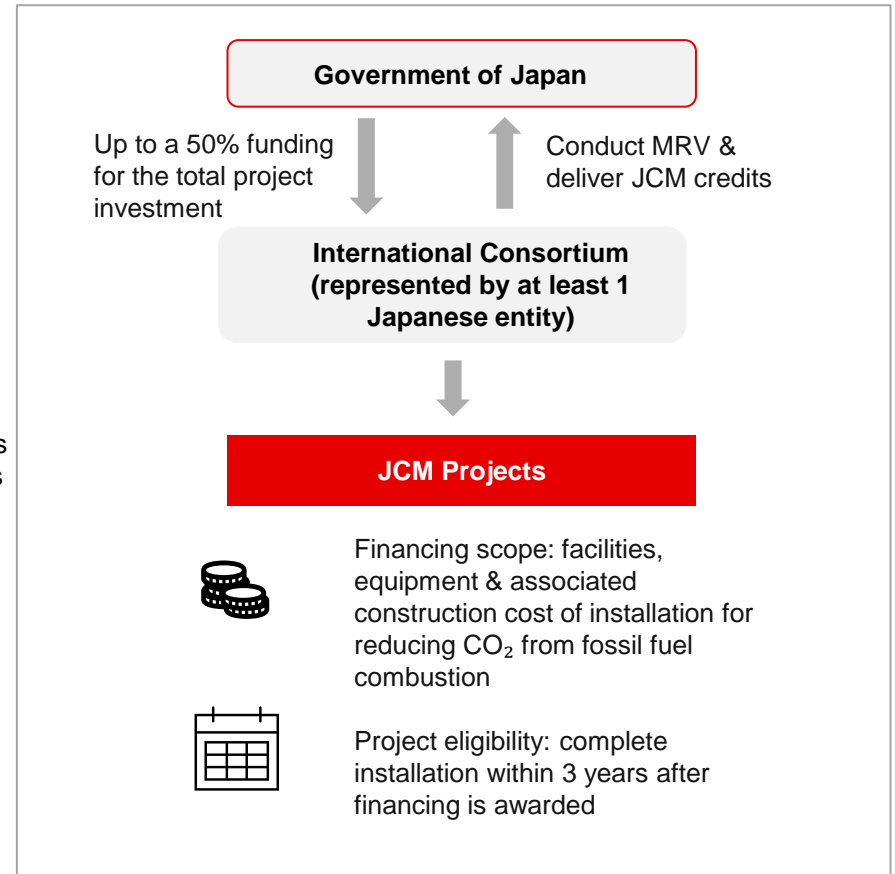
JCM draws upon guidance from international cooperative approach laid out in Paris Agreement

## Corresponding Adjustment(CA) mechanism under Article 6 of Paris Agreement



### Sample model of funding for JCM:

Financing Programme for JCM Model Projects by Ministry of Environment



# Joint Crediting Mechanism I Introduction to current public-led model

## JCM Project Landscape of Key ASEAN Partner Countries



Source: MOEJ (Oct 2023)



### Key Project Types supported by JCM financing scheme



Renewable energy –  
Solar, Hydro, Biogas,  
Geothermal



Energy efficiency –  
consumer, industrial,  
urban sectors



Waste



Transport –  
fuel-switching



### Various financial support programmes available for project implementation stage

**Ministry of Economy,  
Trade & Industry**

JCM Feasibility Study  
JCM Demonstration Project

**Ministry of Environment  
(MOEJ)**

JCM Model Project  
Japan Fund for the JCM – managed by ADB  
JCM F-gas Recovery & Destruction Model Project

Conventional JCM projects under government funding provides additional revenue stream and more certainty to the project developer

# Joint Crediting Mechanism I Speed up & scale up call

## Scope for expansion of current JCM structure has been socialised by the market

Nov 2023: Keidanren\* issued statement for Japanese government to address limitations of JCM



- **Slow progress of JCM to date** – 126,628 credits issued as of Nov 2023 but targeted 50-100m credits issued by 2030
- **Limited selection of partner countries** – hence Japanese companies are engaging markets/regions apart from current partner countries to develop decarbonisation projects
- **Limited guidance & methodologies approved for certain project types** – agriculture, CCUS/CCS, forest conservation
- **Lack of institutional measures & support systems** with governments of partner countries

## New JCM reforms bring about advantages to private-sector companies

- Mar 2023: **New guidelines** introduced for formation of JCM projects invested & implemented by private companies without governmental financial support



- **Acquire greater share of JCM credits**

- Since JCM Credits are allocated based on amount of financial contribution, companies correspondingly receive more credits than conventional JCM model funded by Japanese government



- **Enjoy greater flexibility in project participation abroad**

- Companies no longer have to follow scheduled regulations/rules for receiving financial assistance e.g. waiting to receive pay-outs according to fiscal year period



- **Ability to receive other forms of support from Japanese government**

- Feasibility studies, JCM methodologies for GHG emission calculation & monitoring reporting & verification still open to consultation

\*representing >1500 companies, 107 national industry organisations & 47 regional economic organizations  
Source: MUFG compiled from Carbon Pulse and various public sources

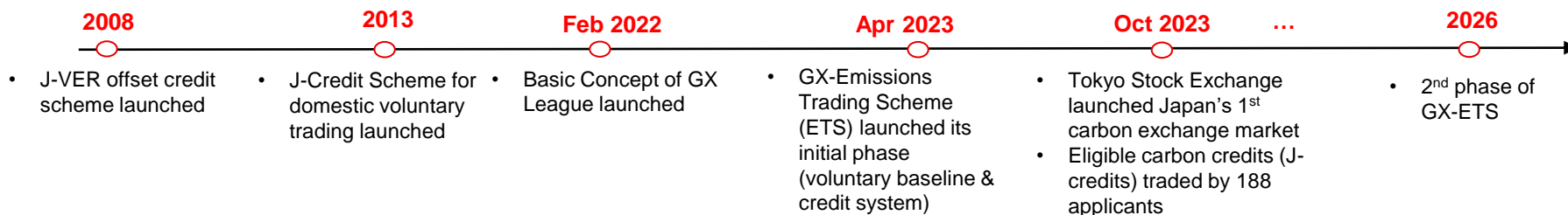
A call for expansion of existing scheme to incentivise private sector – led JCM for scaling up of the JCM credits



# GX League | JCM & J-credits, only two eligible carbon credits under GX League

## History of Japan's GX Policy

Objective: Facilitate GHG emission reduction to achieve Japan's 2050 carbon neutrality goal, while fostering greater industrial competitiveness



### GX League mechanism:

- Participation is voluntary but each GX League Member has to achieve an ambitious emissions reduction target set
- Compliance obligations is expected to kick in from 2026
- Where actual emission reduction is insufficient to meet target, corporates have to purchase "eligible carbon credits" for offsetting
- 2 eligible credits: J-credits and JCM credits

### Pricing

#### 1. J-credits

Relatively high price (\$16.68-\$66.57/mtCO<sub>2</sub>e) due to high project development costs from only **onshore** emission reduction projects

#### 2. JCM credits

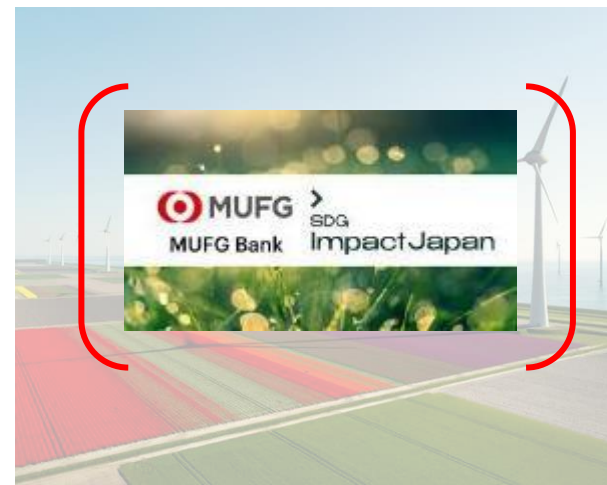
Price currently unknown and will largely depend on trading outcome

The growing role of private-sector JCM is key to speeding up Japan's action to achieve **100mT-CO<sub>2</sub>** overseas emission reduction and removal target by 2030

# Supporting the Carbon Credit Ecosystem | MUFG's highlighted initiatives

## MUFG's investment in SDG Impact Japan

- Oct 2023: MUFG invested in SDG Impact Japan, the first sustainable investment platform based in Japan
- MUFG's continued support to **our clients' GHG emission reductions has expanded into efforts to contribute to creation and utilisation of high-quality carbon credits**
- Work to expand pipeline for the creation of **Joint Crediting Mechanism (JCM) credits** & stimulate demand
- Open innovation through linking MUFG Bank's **network of large Japanese corporations** to SDG Impact Japan's network of innovative sustainability & circular economy focused startup companies
- Partner countries in APAC include Philippines, Thailand, Myanmar, Indonesia, Laos, Vietnam, Mongolia, Cambodia, Bangladesh



## Forest Fund Investment Initiatives

- MUFG's investment in forest funds with objective of receiving carbon credits for GHG absorption by forests in addition to earning a financial return on said investments
- Jun 2023: Signed investment agreement with Imprint Nature-Based Opportunities (NBO) & Manulife Forest Climate Fund (MFCF), 2 global forest investment funds, to contribute to creation & development of carbon credit market in Japan & invigoration of global CC market



## Referral Service for Carbon Credits Provided by ENGIE SA

- MUFG has launched a fee-based business matching service to introduce Japanese customers to carbon credits offered by ENGIE SA
- Enable us to provide carbon credits in line with our customers' strategies toward carbon neutrality
- ENGIE SA has extensive experience in renewable energy projects & long history of carbon credit creation & trading to provide quality carbon credits



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