

Japan's Experiences About GHG Accounting on ETS

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Corporate Profile of Deloitte-TECO

- **Company Name** : Deloitte-TECO (Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd.)
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- **Service Line-ups**

1. Certification based on international standards for:

- Environmental management systems (ISO14001) accredited by JAB
- Quality management systems (ISO9001) accredited by JAB
- Information Security Management Systems (ISO27001) accredited by JIPDEC

2. CDM/JI Validation and Verification

- Clean Development Mechanisms : DOE (E-0006) since May, 2006
- Joint Implementation: AIE (JI-E-0003) since November, 2008

3. GHG Emissions Verification

- Japan Voluntary Emission Trading Scheme (JVETS)
- Experimental Emission Trading Scheme (Domestic Integrated Market)
- Tokyo Metropolitan Government Emission Trading Scheme

4. Assurance for Environmental / Sustainability Reports

5. Environmental Due Diligence

- A designated investigation organization by Ministry of the Environment of Japan

6. Environmental Rating

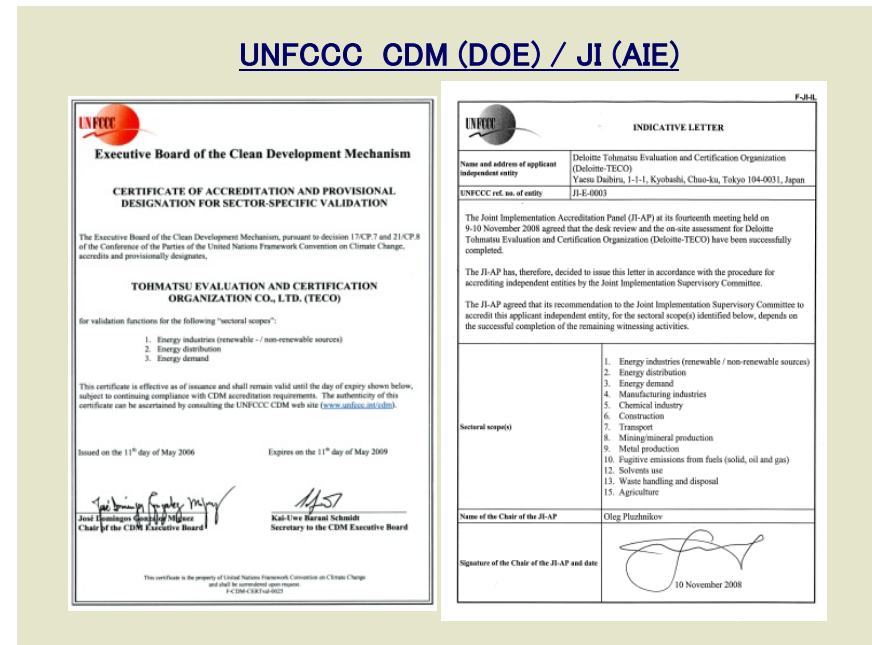


Table of Contents

■ **Chapter 1**

- Japan Voluntary Emission Trading Scheme (JVETS)

■ **Chapter 2**

- Experimental Emission Trading Scheme

□ **Information /**

- Existing Mandatory GHG Reporting Systems in Japan

□ **Information //**

- Tokyo Metropolitan Government – ETS

■ **Chapter 3**

- Toward International Linking in Future

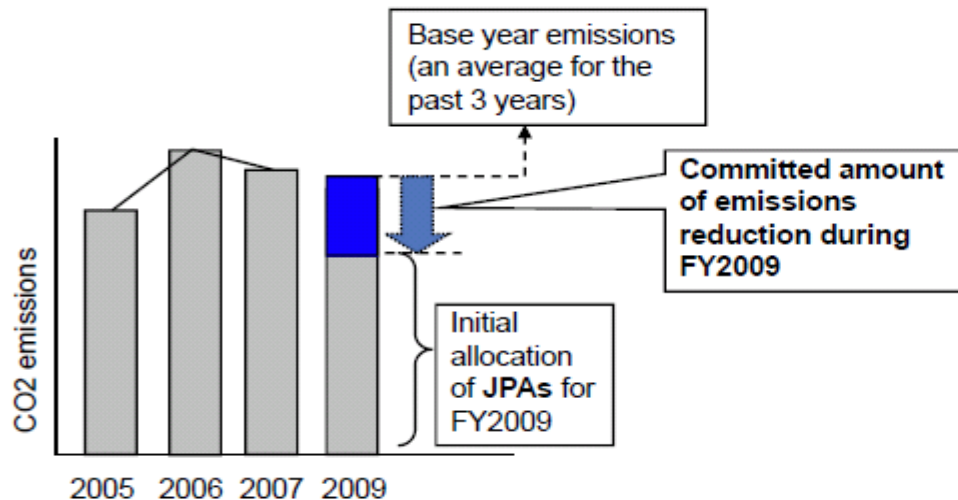
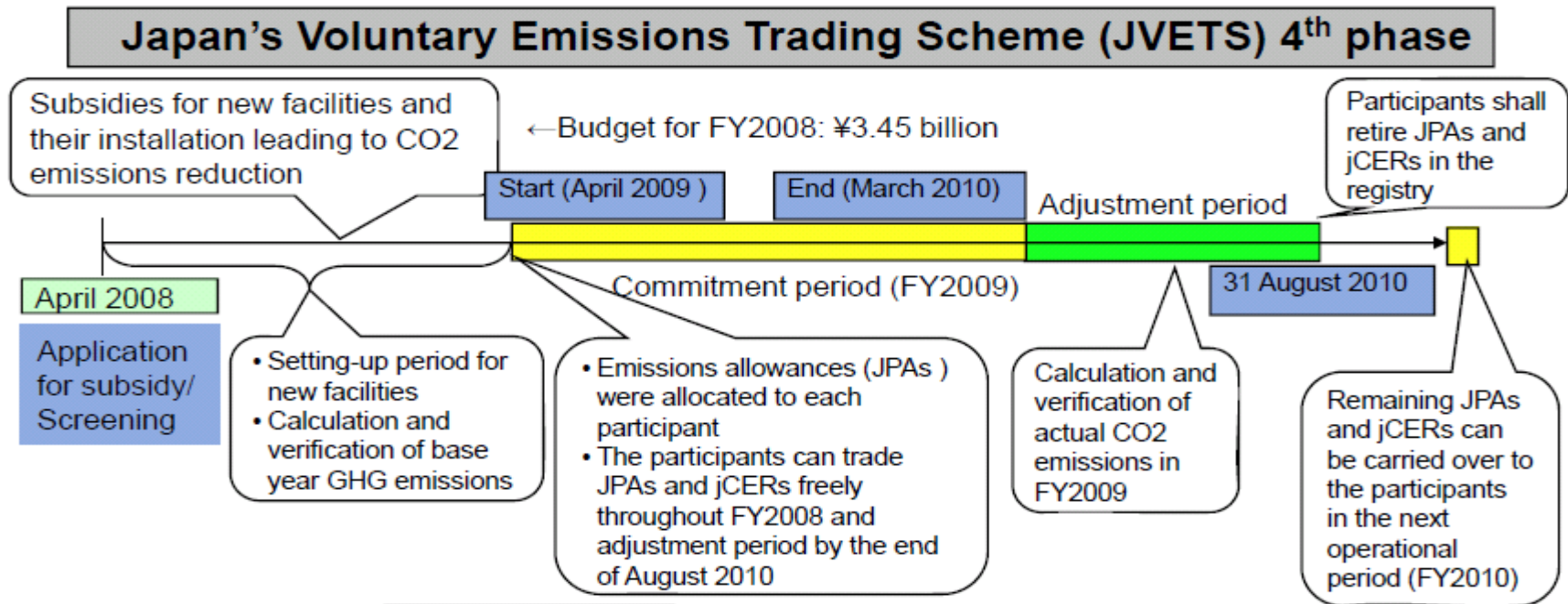
Chapter 1

Japan Voluntary Emission Trading Scheme (JVETS)

1-1 Outline of Japan Voluntary Emission Trading Scheme (JVETS)

- JVETS started in 2005 as first ETS in Japan
 - Voluntary CO2 reduction with ETS for accumulation of know-how and experience
 - Gas: Energy-oriented CO2 and process-emitted CO2
 - Factors: Provided as default value
 - CER / ERU available as “**jCER**”
- Emission Target Setting:
 1. Grandfathering in averaging past 3 years for base-year emission
 2. Reduction commitment by participant to be approved by the Government
 3. Initial allocation of Japan Allowances (JPA)
- Participants : 300 in total (2005 – 2009) as of October, 2009
 - A single facility, or
 - Multiple sites as one group (ex. Factories of an enterprise, Franchise stores)
- Since 2009, to be incorporated into “Experimental ETS” as an option
 - For companies without industrial sector-specific “Voluntary Action Plan”

1-2 Outline of Japan Voluntary Emission Trading Scheme (JVETS)



<Notes>

- After the final trading period, if participants cannot retire JPAs corresponding to the actual amount of their emissions, the subsidies paid should be returned.
- CERs from CDM projects also can be used for the retirement in the registry.

1-3 Infrastructure of JVETS refined referring to EU-ETS

- Unified Methodologies for Operation and Verification
 - Monitoring Reporting Guidelines
 - Verification Guidelines
 - **3rd Party Verification required**
- Definition of each role of key players concerned
 - Competent Authority (CA)
 - Operator
 - Verification Body
- IT-based systems introduced for effective operation
 - Registry System referring to National Registry under UNFCCC / Kyoto Protocol
 - Emissions Management System
 - Trade Matching System

1-4 MRV of JVETS

- **Monitoring and Reporting Guidelines**

- Developed referring to EU-ETS
- Based on ISO14064 P-1
- High accuracy in quantifying GHG emissions and reduction
- Methodologies with Monitoring Patterns, Monitoring Points, Tier Approach, etc.

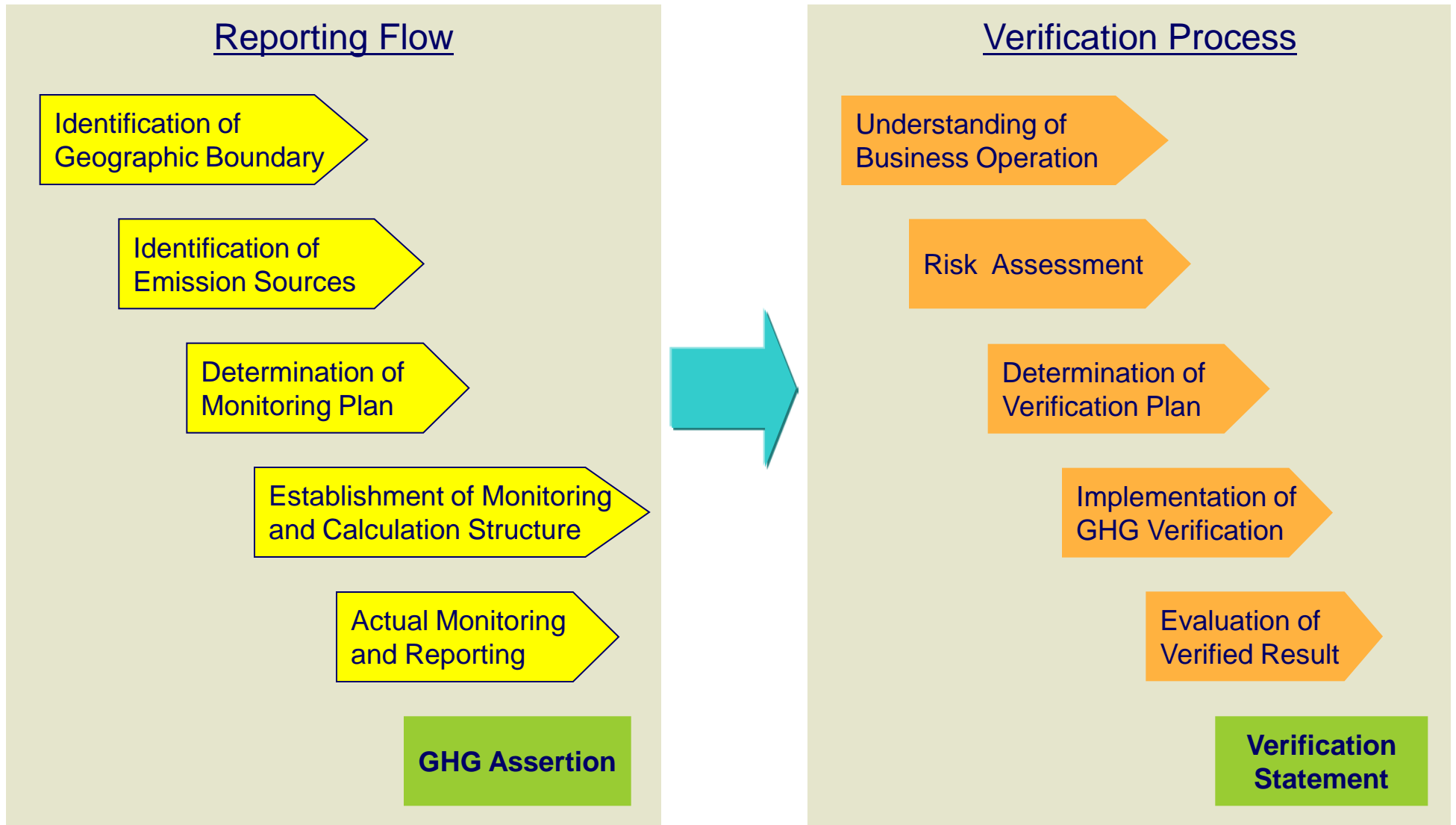
- **Verification Guidelines**

- Based on ISO14064 P-3
- Methodologies with Risk Approach, Materiality, Uncertainty, Sampling Methods, etc.
- ***3rd Party Verification required***
 - ***Reasonable Level of Assurance***

- **Accreditation Standard for Verification Body**

- Based on ISO14065
- Pilot Accreditation Program under ISO14065 by Japan Accreditation Board (JAB) in 2008

1-5 Reporting Flow and Verification Process of JVETS



1-6 Remaining Issues of JVETS from Verifier's Point of View

- Consolidation of Facilities for GHG Accounting
 - ✓ Proper boundary of parent company and subsidiaries?
 - ✓ Fair and valid 'Sampling Method' for various industries?
- Accuracy in Quantification
 - ✓ Monitoring Plans
 - ✓ GHG Emissions through Process in Manufacturing
 - ✓ Trade-off with Cost
- Accreditation Program for Verification Body by JAB
 - ✓ ISO14065-based program to be introduced officially ASAP

Chapter 2

Experimental Emission Trading Scheme

2-1 Outline of Integrated Domestic Market

- **Integrated Domestic Market** commenced in October, 2008

1. **Experimental Emission Trading Scheme**

- Based on the target under Industrial Sector-specific “Voluntary Action Plan”

2. **JVETS** incorporated as an option of Experimental ETS

- For companies without “Voluntary Action Plan”

3. **Domestic Credit Scheme** like “small scaled CDM”

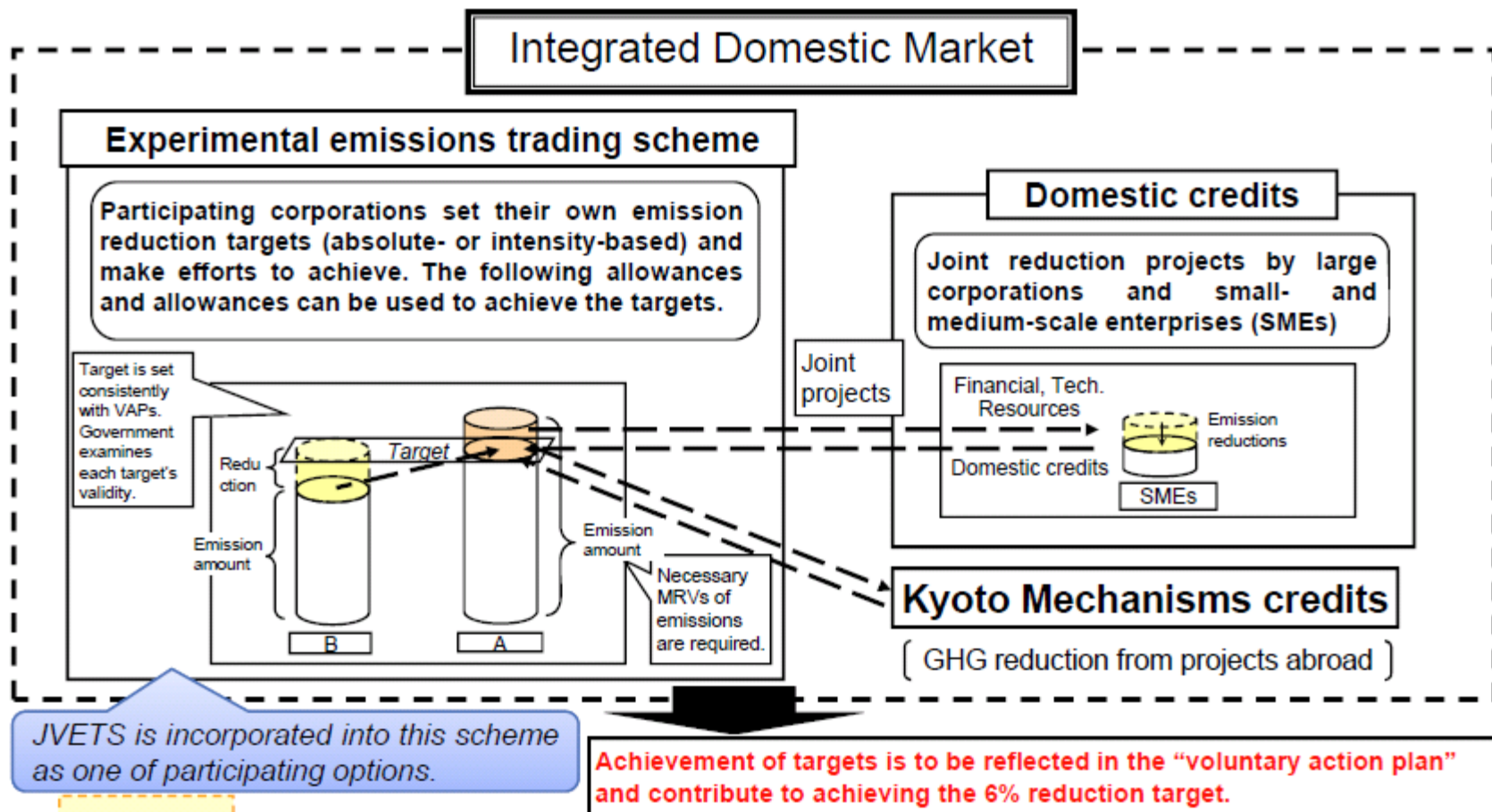
- For small and medium sized companies without “Voluntary Action Plan”

4. **Kyoto Credits** available for target achievement

- Participants 715 in total as of July, 2009

- ETS with Target 521 ※ covers over 70% of Japanese industries’ emissions
- Broker 68
- Domestic Credits 126

2-2 Image of Integrated Domestic Market



Key points

- This scheme prepares various options for **substantial emissions reduction** by various entities including large corporations and SMEs in every sector.
- In the **integrated domestic market**, various allowances and credits are available for target achievement.
- Follow-up is scheduled at the beginning of 2009 and in the fall 2009.

2-3 MRV of Experimental Emissions Trading Scheme

Guidelines of Experimental ETS

Case 1: No Requirement for 3rd Party Verification

- Follow the existing Guidelines based on “Voluntary Action Plan” : **No 3rd Party Verification**
- Industrial Sector-specific Guidelines for Energy / GHG Control: **Not Disclosed !**
- According to the Guidelines above, set on basis of;
 - ✓ **Intensity target**, or
 - ✓ **Absolute target**

Case 2: To Be Verified by 3rd Party

- To sell excess Allowances to other emitters
- Not for Sale, but voluntarily verified by 3rd Party
 - ✓ In order to establish GHG Management System

To follow

JVETS-based MRV Guidelines

- **Monitoring and Reporting Guidelines**
 - Based on ISO14064 P-1
- **Verification Guidelines**
 - Based on ISO14064 P-3
 - Reasonable Level of Assurance
- **Accreditation Standard for Verifier**
 - Based on ISO14065 (expected)

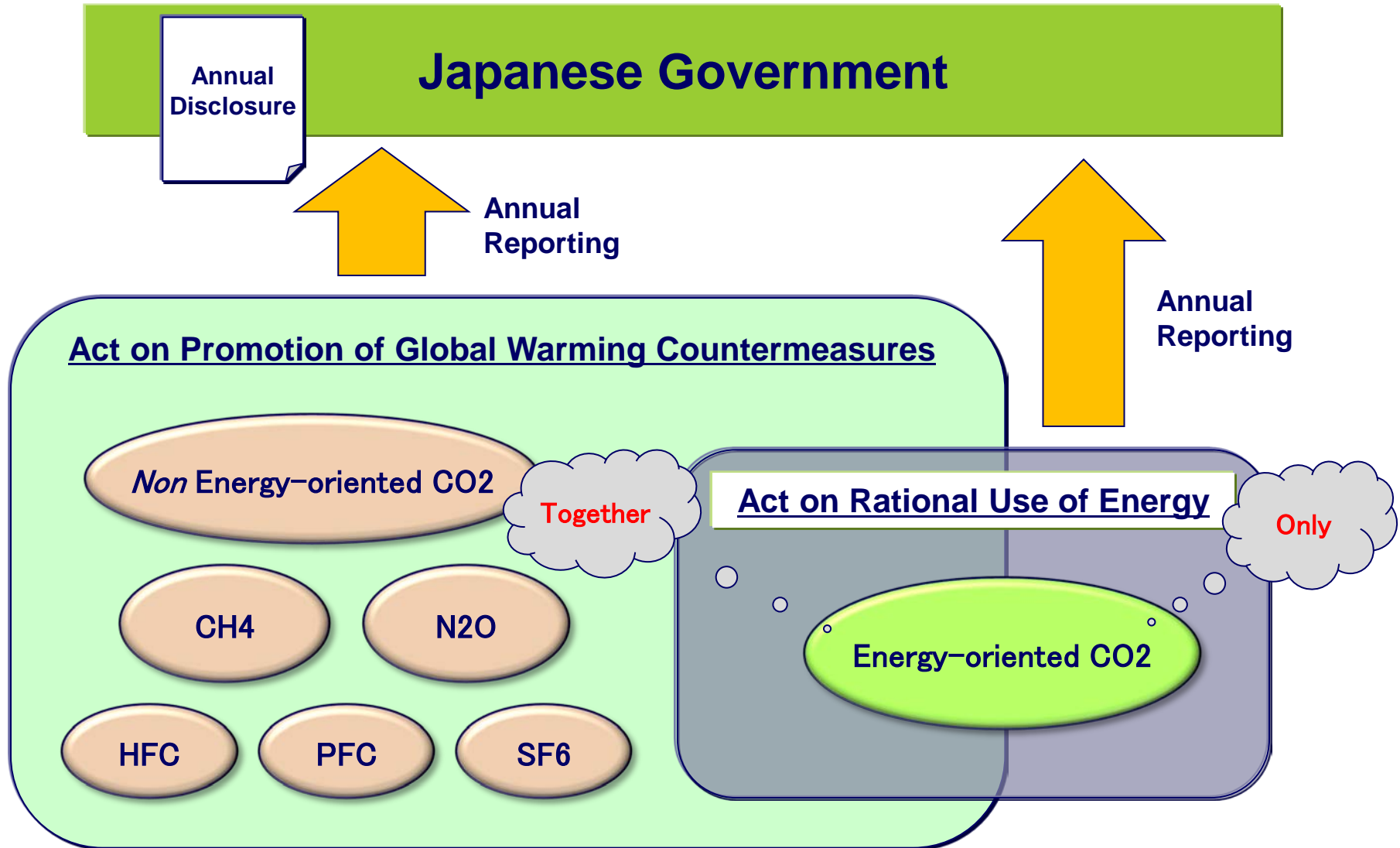
2-4 Recognized Issues through Experimental ETS

- Confusion in Intensity-based Management
 - ✓ Boundary
 - ✓ Emission sources
 - ✓ Emission factors
- No Baseline Verified This Time
 - ✓ Who is Competent Authority(CA)?
 - ✓ Guidelines to be Unified
 - ✓ GHG Infrastructure to be established
- GHG Reporting System to be Unified

Information /

Existing Mandatory GHG Reporting Systems In Japan

I -1 Existing Laws for Mandatory Reporting



I -2 Calculation and Reporting Methods

- No Monitoring and Reporting Guidelines
 - Just according to “Calculation and Reporting Manual” provided
- No 3rd Party Verification required

Methods

1. Analyze and determine activities of the entity
2. Calculate emissions from each of the activities : Activity x Emission Factor
3. Sum up emissions of each gas according to result of 2. above
4. Convert the emissions of each gas to CO₂ equivalent with GWP
5. Fill up “Reporting Forms” with the quantified result and submit to Government

Information //

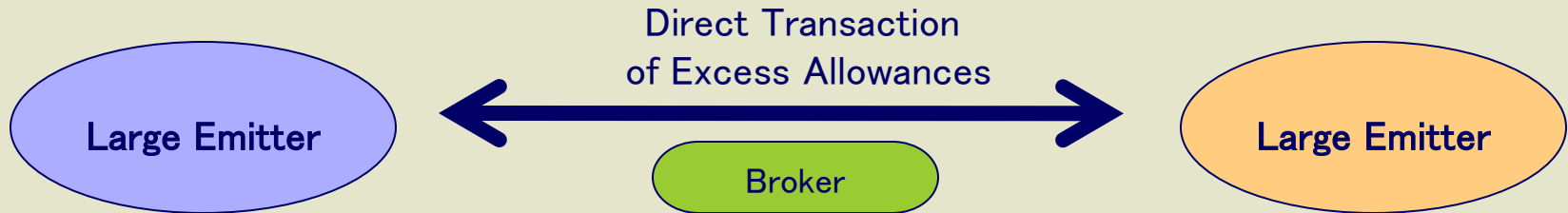
Tokyo Metropolitan Government - ETS

II -1 Outline of Tokyo-ETS

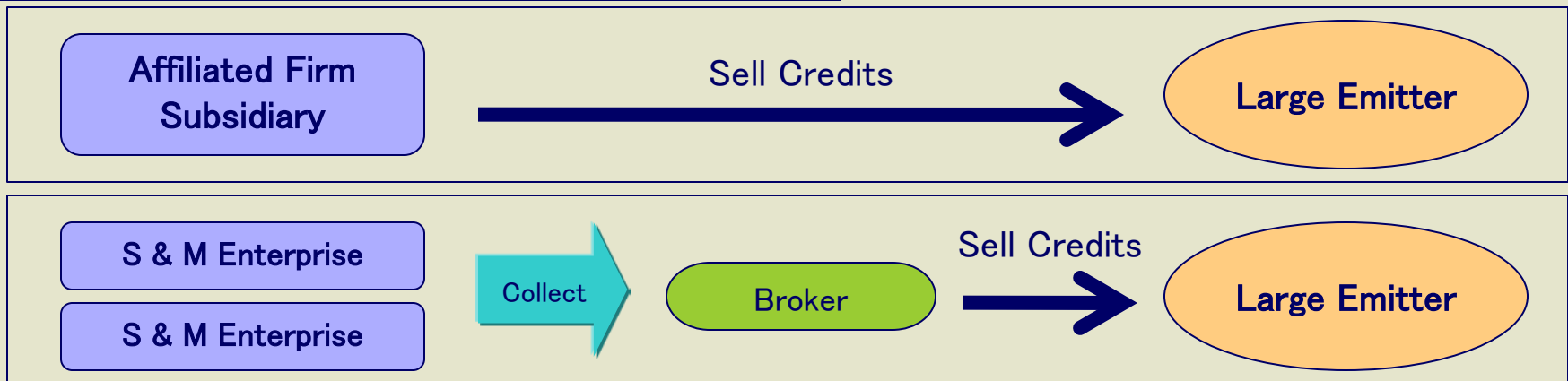
- Independent of Japan's National ETS
- Tokyo's Mid-term Emission Reduction Target : - **25%** below 2000 by 2020
- First **Mandatory** Cap & Trade ETS in Japan
 - ✓ 1st phase 2010 – 2014, 2nd phase 2015 – 2019
 - ✓ Covers about 1,300 sites : emissions as converted over 1,500KL of crude oil / year
 - ✓ Coverage about 44% of Total Tokyo's GHG emission of Business & Industry Sector
 - ✓ Gas for **Mandatory** emissions reduction : Energy-oriented CO2
- Target Setting for Base-year Emission :
 1. Grandfathering in averaging any of past consecutive 3 years between 2002 – 2007
 2. Reduction Ratio to be applied for 1st Phase: - **8%** for buildings / - **6%** for factory & plant
- MRV Guidelines :
 - ✓ **3rd Party Verification required**
 - ✓ **Not ISO-based Guidelines**

11-2 Images of Tokyo-ETS

1. Large Emitters' Reduction



2. Credits from Small and Medium Size Emitters



3. Credits from Renewable Energy



Chapter 3

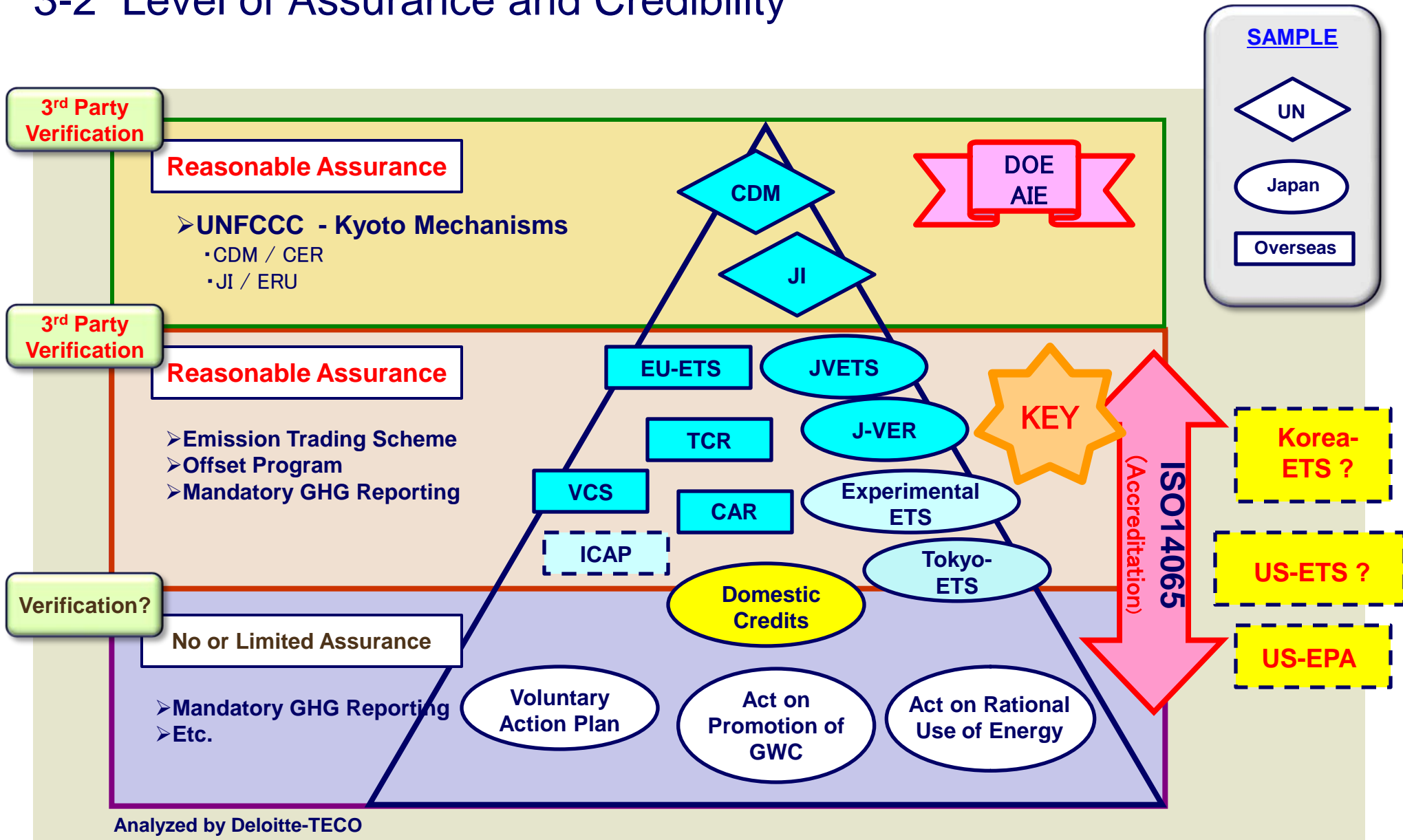
Toward International Linking in Future

3-1 Comparison of GHG Programs

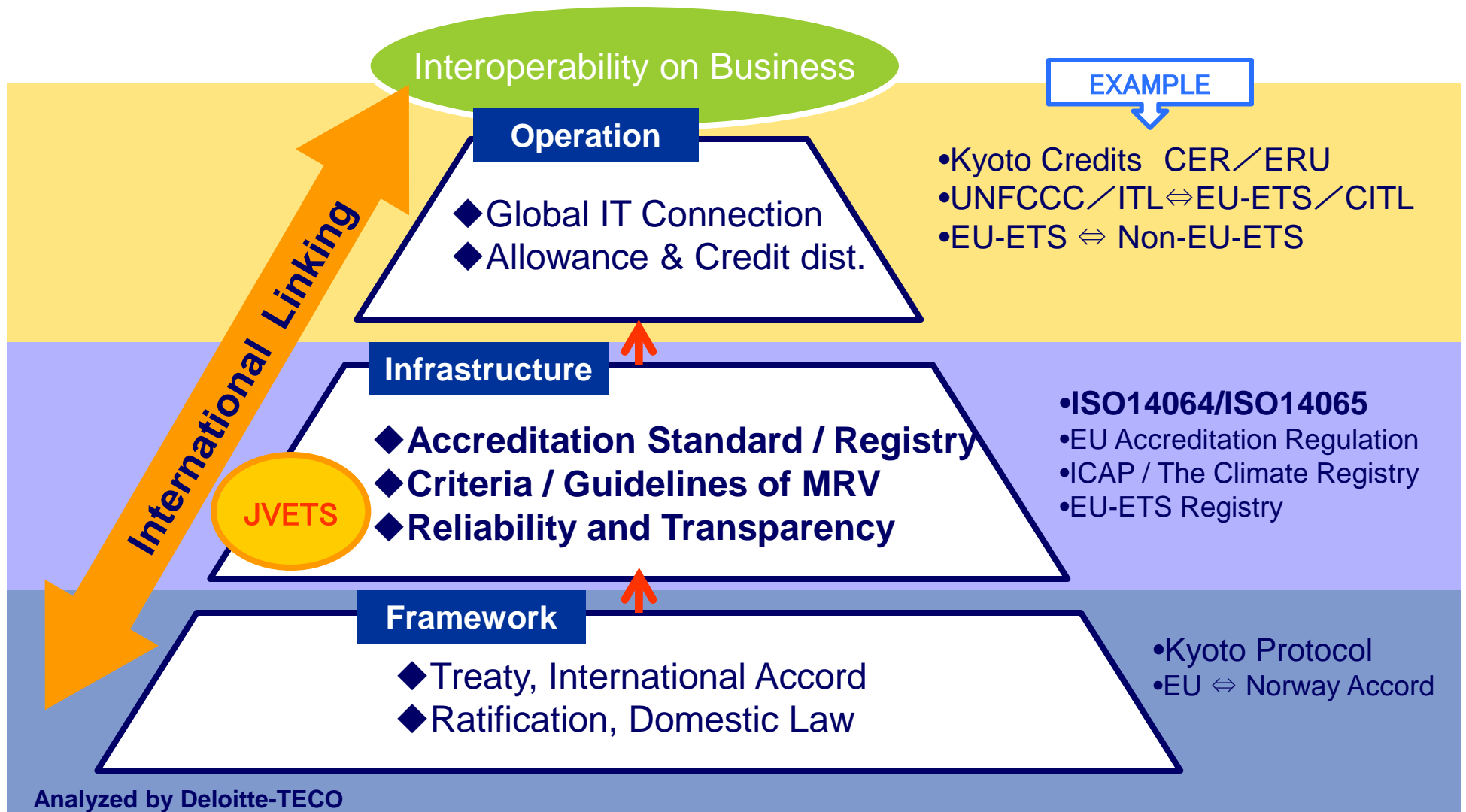
No.	Legislation/Scheme	Program/System	Mandatory GHG Reporting	3rd Party Verification		GHG Management
				YES/NO	Assurance Level	
(Japan)						
1	Act on Rational Use of Energy	Annual Reporting	YES	NO	–	Entity GHG Platform to be unified
2	Act on Promotion of GWC	Annual Reporting & Disclosure	YES	NO	–	
3	Local Government	Annual Reporting	YES	NO	–	
	Tokyo Metropolitan Government	Annual Report/ETS	YES	YES	(Reasonable)	
4	Voluntary Action Plan	Industrial Sector-specific Guideline	NO	NO	–	
5	Integrated Domestic Market	Experimental ETS	NO	YES/NO	(Reasonable)	
	do	JVETS	NO	YES	Reasonable	
	do	Domestic Credit Scheme	-	(Check Only)	-	
6	Carbon Offset	J-VER	-	YES	Reasonable	Project
7	Product Carbon Footprinting	Carbon Label	-	unknown	??	Entity
(Overseas)						
8	UNFCCC	CDM	-	YES	Reasonable	Project
9	EU	EU-ETS / Cap & Trade	YES	YES	Reasonable	Entity
10	The Climate Registry	North America Wide	YES/NO	YES	Reasonable	Entity
11	ICAP	Int'l Link of Cap & Trade ETS	-	YES	Reasonable?	Entity
12	Climate Action Reserve	Offset Program	-	YES	Reasonable	Project
13	VCS	Offset Program	-	YES	Reasonable	Project
14	US EPA	US-ETS by 2012 ?	YES	(EPA)	??	Entity / Project



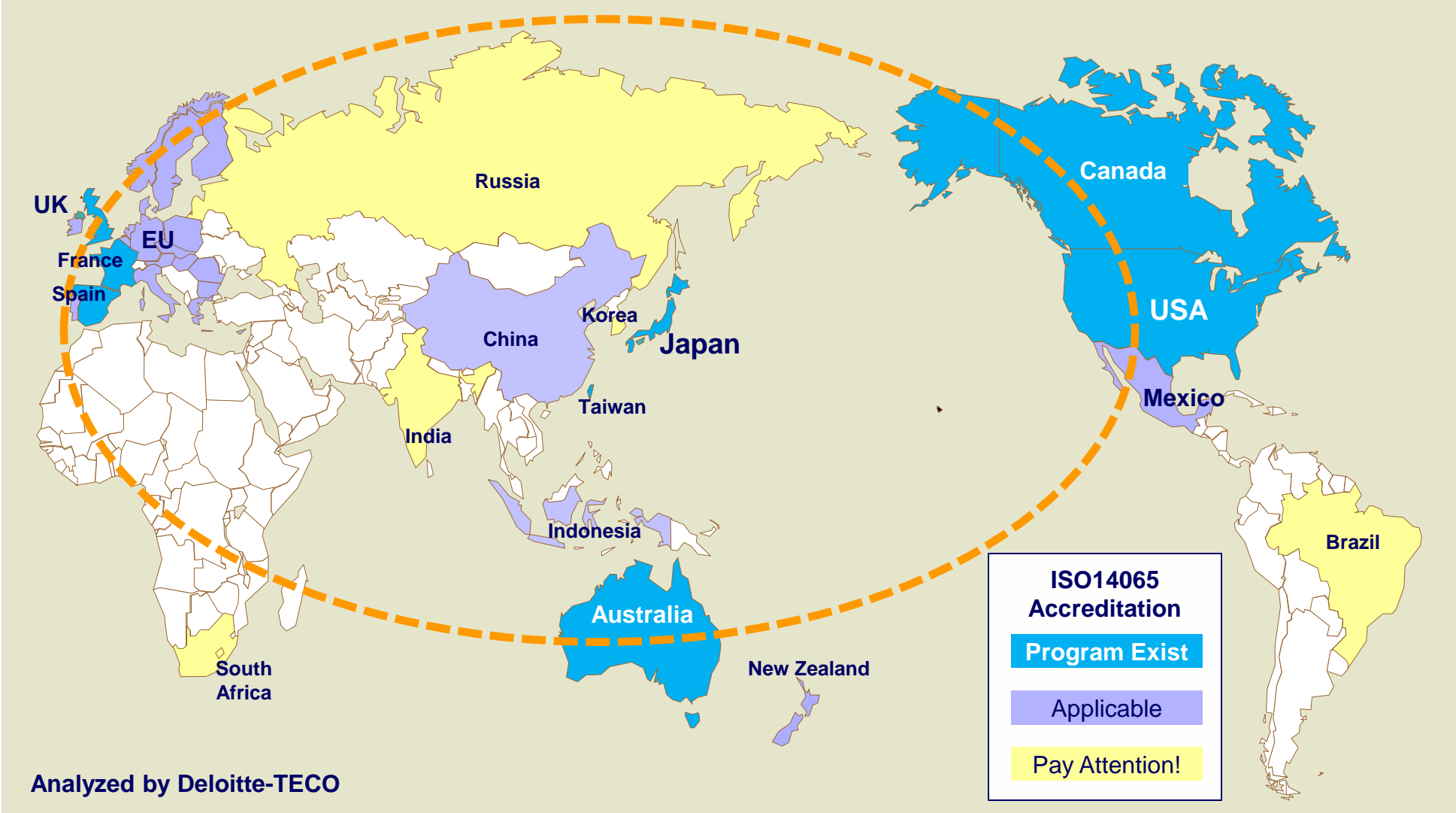
3-2 Level of Assurance and Credibility



3-3 Toward International Linking in Future



3-4 Expansion of ISO14065-based Accreditation for VB



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