

# Voluntary Carbon Market

## Introduction and Opportunities for the Pacific Islands



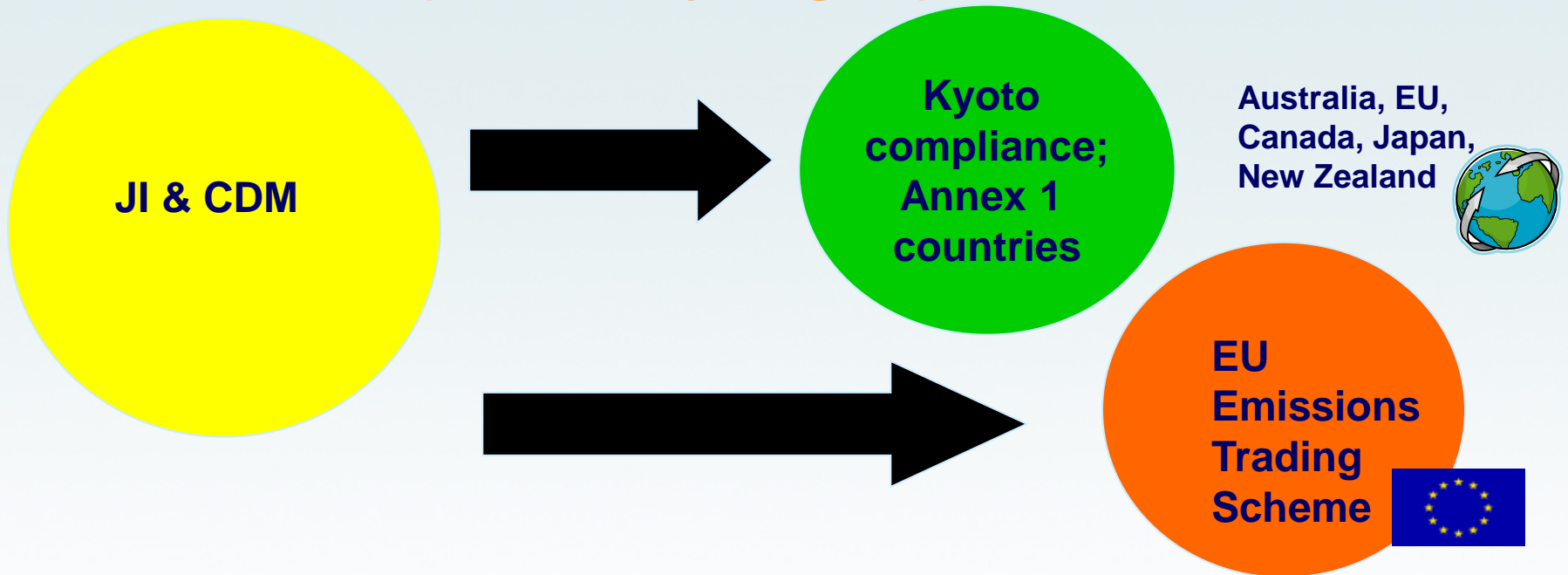
# Presentation Overview

- **Introduction to Voluntary Carbon Markets**
  - Types
  - Advantages / Issues
  - Buyers / Sellers
  - Project and prices
  - Standards and registries
- **Opportunities in the Pacific**
  - Advantages of Pacific VER projects
  - Project Types
  - Essentials for project development

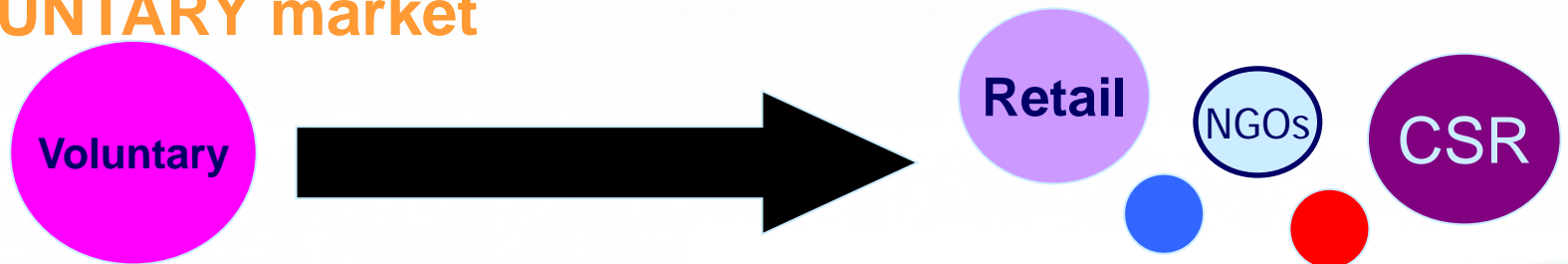


# Carbon market structure

## COMPLIANCE (Mandatory targets) Market



## VOLUNTARY market



# Voluntary Carbon Markets

## Two Types of Markets

- n Cap-and-Trade (limits emissions of countries, regions, sectors)
- n Offset Market (companies or individuals not subject to mandatory GHG ER but wanting to offset their own emissions)



# Voluntary Cap-and-Trade

- n Successful mandatory cap-and-trade examples: SO<sub>2</sub> (US), European Trading Scheme
- n Only Voluntary Cap-and Trade system: Chicago Climate Exchange
- n Oversupply of allowances caused the price of allowances to crash (US\$0.05)
- n Closed in December 31, 2010



# Voluntary Offset Market

- n Organisations, companies & individuals: purchase CO<sub>2</sub> emission credits and remove them from the market in order to offset their own emissions.
- n Governments: national voluntary offset programs.



# Voluntary Offset Market

## n Uses Carbon Credits

- Generated through a project based system
- Uses a Baseline – Project Emissions
- Similar to CDM procedures (many projects use same methodologies)
- Additionality verified by independent third party



# Voluntary vs. CDM

	<b>Voluntary</b>	<b>CDM</b>
Commodity	VER	CER
Price	Variable accordingly with standard and project (typically ~ €2-6)	Higher (~ €11)
Coverage	Voluntary / worldwide	Annex 1 countries
Market size	Smaller	Larger
Volume	2009: 94 MtCO <sub>2</sub> CCX 2010: 1.3 MtCO <sub>2</sub> GS expect: 18 MtCO <sub>2</sub>	2009: 1,265 MtCO <sub>2</sub> (EU ETS 2009: ~ 6,000 MtCO <sub>2</sub> )
Regulation	No formal regulation	UNFCCC EB
Methodologies	CDM and others	Approved by EB
Independent Third Party	CDM DOEs and others	DOEs and EB





# Advantages: Voluntary vs. CDM

- n Less bureaucratic
- n Less costly (~ US\$30,000)
- n Niche/new sectors not covered by CDM
- n Can contribute more to sustainable development
- n Easier to register forestry projects
- n Cheaper to generate credits



# Issues: Voluntary

- n Generally lower price
- n Quality: certainty of additionality
- n Transparency
- n Number of standards: too confusing
- n Market is still small – just 1% of the global carbon market



# Voluntary Market: Buyers

n Who buys carbon credits?

Companies, NGOs and individuals

n For?

n Offsetting activities and products (travels, books, music festivals)

n Why?

- Competitive advantage: Public relations, Branding, Corporate Social Responsibility
- Investment/Resale



# Voluntary Market Suppliers

- n Project Developers: Develop GHG emissions-reduction projects and sell the VERs
- n Wholesalers: Only sell offsets in bulk and often have ownership of a portfolio of credits.
- n Retailers: Sell small amounts of credits to individuals or organizations, usually online, and have ownership of a portfolio of credits.
- n Brokers: Do not own credits, but facilitate transactions between sellers and buyers.



# Voluntary Market: Projects

- n Which type? The big three (2009):
  - Landfill methane
  - Forestry
  - Wind
- n Others
  - Other Renewable energy (hydro, biomass and solar)
  - Energy efficiency
  - Sequestration / Agriculture / waste water



# Existing Standards

- n Voluntary Carbon Standard (VCS): CDM & own meth
- n Gold Standard: uses CDM meth
- n CAR: own meth
- n VER+: CDM & new meth
- n CCBS: CDM meth
- n Plan Vivo: project specific meth
- n GHG Protocol: generic guidelines
- n ISO14064: generic guidelines



# Examples

## **Thai Biomass Project**

9.9MW Cogeneration Plant

Fuel: rice husks

Standard: VCS

Third-party verification: TUV Nord

Price: US\$16/tCO<sub>2</sub>

Offsetting a return flight Port Vila -  
Sydney: US\$21



# Examples

## **Erbaqu Hydro Power Project**

9.6MW from 6 run-of-river hydro stations

Country: China

Standard: VCS

Third-party verification: Green-e Climate

Price: US\$16/tCO<sub>2</sub>

Offsetting annual emissions of a 4x4:  
US\$121





# Why VERS from the Pacific?

- n Niche market with desirable project characteristics:
  - Location – Small and vulnerable Pacific Islands
  - Type – Solar and other renewables
  - Strong environmental and social project contributions – community projects
  - High profile – good for buyers' image
  - The story behind the credit



# Opportunities in the Pacific

- n Renewables + good project characteristics = higher price for VERs
- n Solar, mini-hydro, biomass
- n REDD forestry + forest management + exploring mangrove conservation
- n Landfill and waste water
- n Energy efficiency (good price but VER volumes are small)



# How to Develop a Project?

1. The project must require carbon credit revenue to be financial attractive and/or to secure finance.
  2. It should contribute to the sustainable development of the local community
  3. Present project to credit buyers
- Main constraint in PICs = proving additionality

