

State of the Global Carbon Markets

Clean Energy Conference

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Presentation structure

- Types of carbon markets
- Internal carbon pricing
- Policy landscape
- Future developments

Types of carbon markets

- Compliance: emissions trading system/carbon tax
- Voluntary

Compliance market: overview

- 40 national jurisdictions & > 20 cities and states
- 7 gigatonnes of CO₂e or 13% of global GHG emissions
- Coverage increase to 25% if China's National Emissions Trading System (NETS) comes on stream in 2017 as scheduled
- Compliance market incl. carbon taxes valued at US\$50bn in 2016 (peak: \$176bn in 2011)
- Price range: \$1/tCO₂e to \$131/tCO₂e
- ¾ of covered emissions average \$10/tCO₂e

Source: World Bank 2016

Voluntary market (1): overview

- Significantly smaller than compliance market:
 - Volume traded: 63.4 MtCO₂e
 - Volume retired: 43.5 MtCO₂e
 - Value: \$193m
- Price variability:
 - <\$0.50/tCO₂e to \$50/tCO₂e
 - Avg. price \$3/tCO₂e
- Product differentiation: location; standard; project type; associated co-benefits e.g. employment

Sources: Ecosystem Marketplace 2017; ICROA 2017

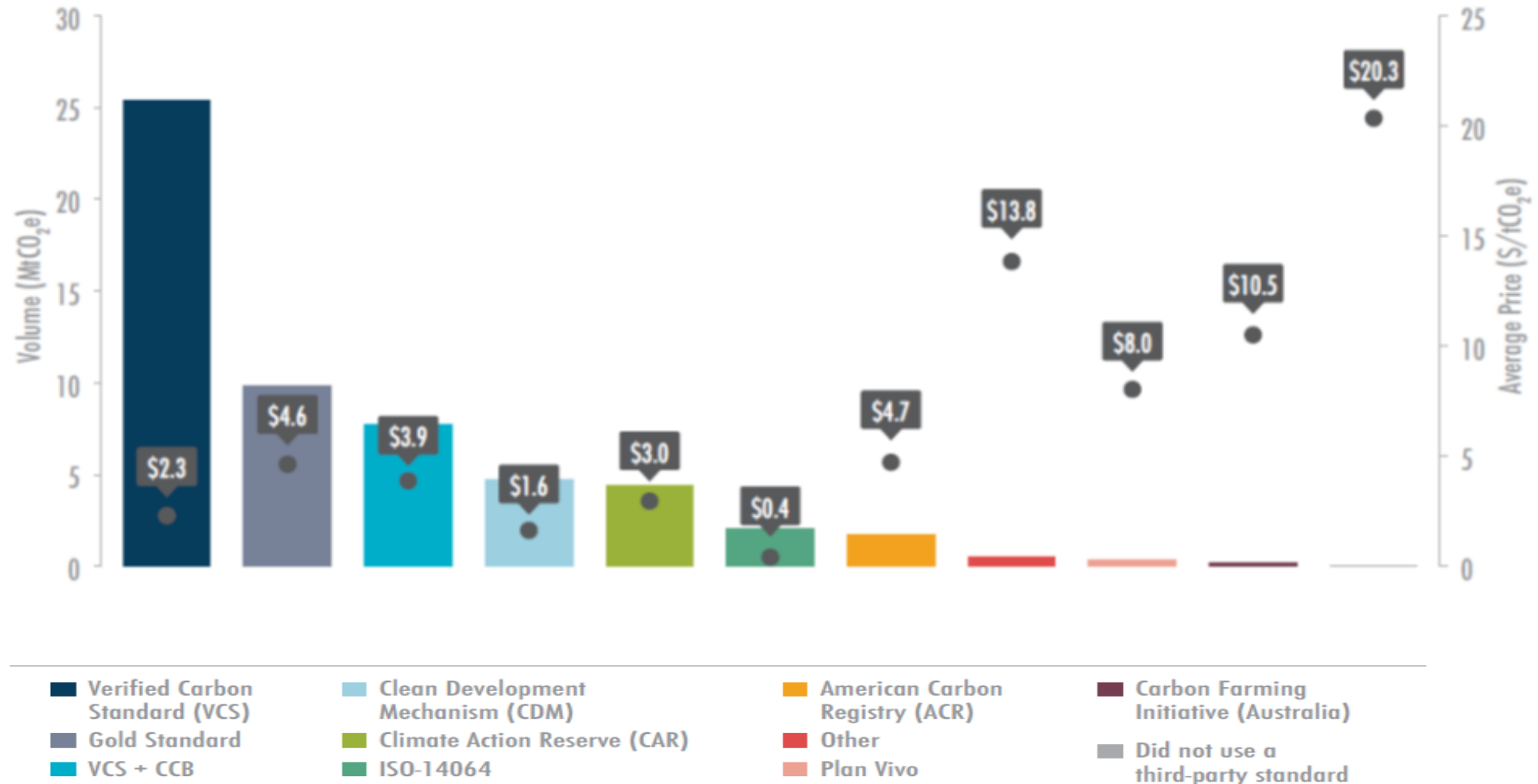
Voluntary Market (2): Transacted volume, value & average price by project category (2016)

	VOLUME	AVERAGE PRICE	VALUE
RENEWABLES	18.3 MtCO ₂ e	\$ 1.4	\$ 25M
FORESTRY AND LAND USE	13.1 MtCO ₂ e	\$ 5.1	\$ 67M
METHANE	5.6 MtCO ₂ e	\$ 1.8	\$ 10M
EFFICIENCY AND FUEL SWITCHING	4.5 MtCO ₂ e	\$ 2.9	\$ 13M
HOUSEHOLD DEVICE	3.4 MtCO ₂ e	\$ 5.2	\$ 18M
TRANSPORTATION	1.9 MtCO ₂ e	\$ 0.3	\$ 1M
GASES	1.4 MtCO ₂ e	\$ 5.7	\$ 8M
OTHER	0.5 MtCO ₂ e	\$ 4.0	\$ 2M

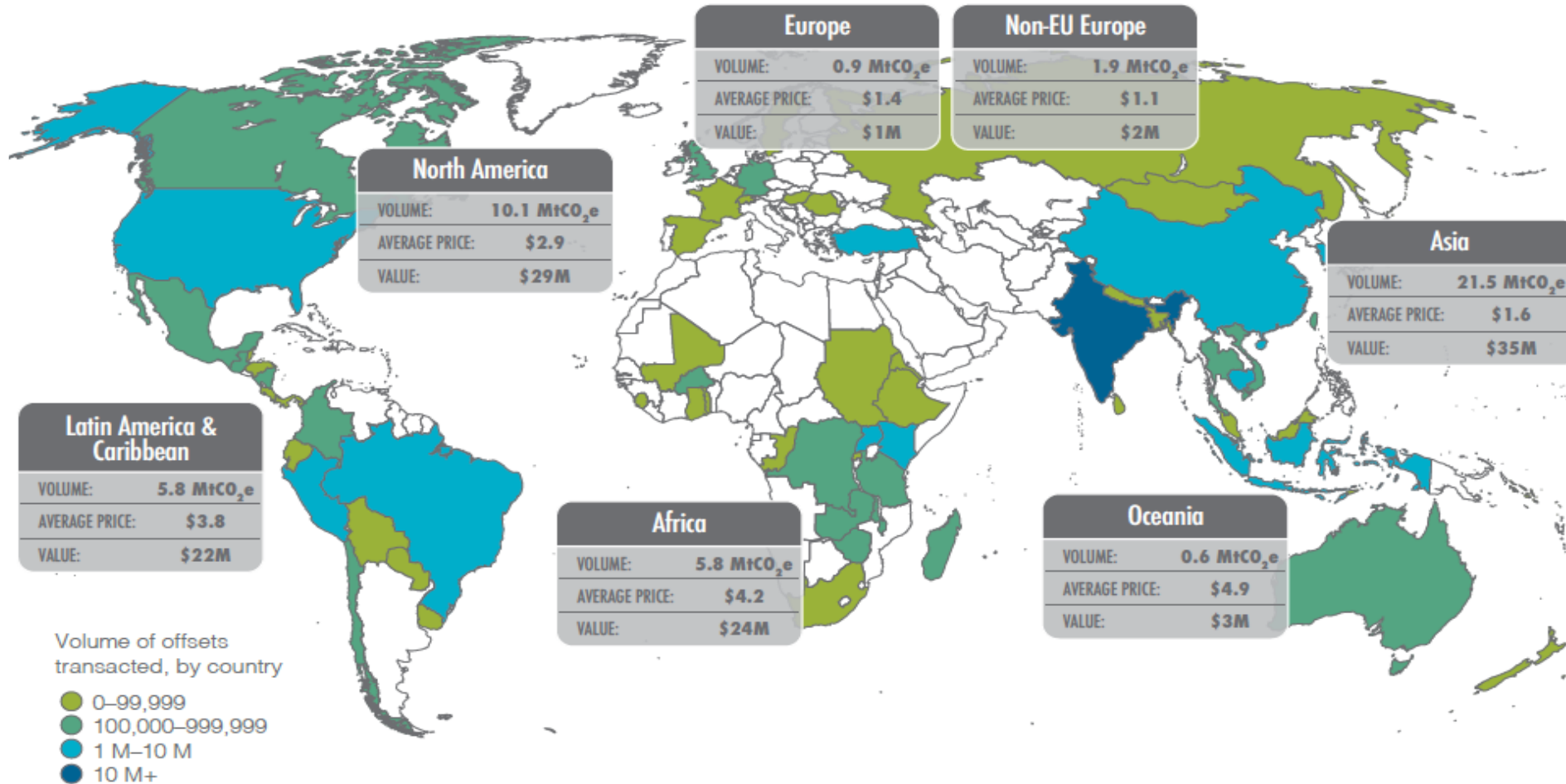
* Based on 717 transactions representing 48.8 MtCO₂e in 2016

Source: Ecosystem Marketplace 2017

Voluntary market (3): Price variability by standard



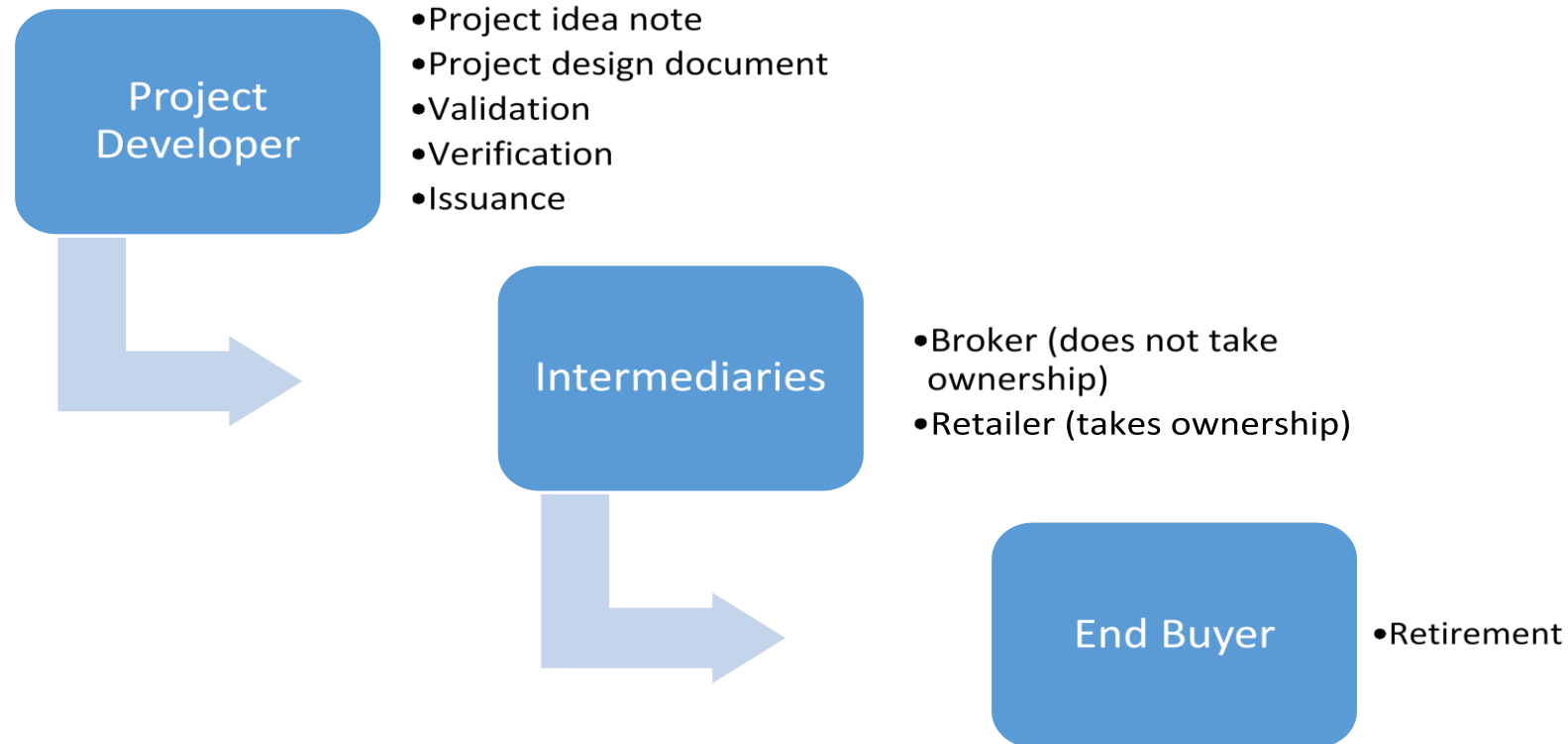
Voluntary Market (4): Price variability by region



Source: Ecosystem Marketplace 2017

Voluntary market (5): Offset cycle – project development to retirement

Offset Cycle: Project Development to Retirement



Internal carbon pricing

- Financial tool for reducing risks, costs and greenhouse gas (GHG) emissions
- De-risk against any future carbon pricing legislation – transition risk to low-carbon economy
- Managing risk for future investments
- Generate finance for cleaner alternatives and reducing emissions
- Corporate responsibility: answering to investors and consumers
- Over 1,200 companies report an internal carbon price
- Price range: \$0.30/tCO₂e to \$893/tCO₂e

Policy landscape

- NDCs: 101 Parties included either domestic and/or international carbon pricing covering 58% of global GHG emissions
- Paris Agreement Article 6 – internationally transferable mitigation outcomes (ITMO)
- Accountability and transparency
- Aligning carbon pricing with climate policy

Future developments

- CORSIA: carbon offsetting and reduction for international aviation
- Linking carbon markets
- Ambition gap (10 gigatonnes)
 - Scenario limiting global warming to less than 2C
 - \$140/tCO₂e (2030)
 - \$400/tCO₂e (2050)
 - (UK DoE & CC; Carbon Trust)
 - \$16 – 152/tCO₂e (2020)
 - \$26 – 212/tCO₂e (2050)
 - (US EPA)

References

CDP – Carbon Disclosure Project (2017): Embedding a carbon Price into business strategy

Ecosystem Marketplace (2017): Unlocking potential - state of the voluntary carbon markets 2017

ICROA – International Carbon Reduction and Offset Alliance (2017) – Unlocking the hidden value of carbon offsetting

World Bank (2016): State and trends of carbon pricing

Questions?

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