



Carbon from plantations: opportunities and constraints,

10.09.2015; Pietermaritzburg
DAAD World Forestry Congress Workshop

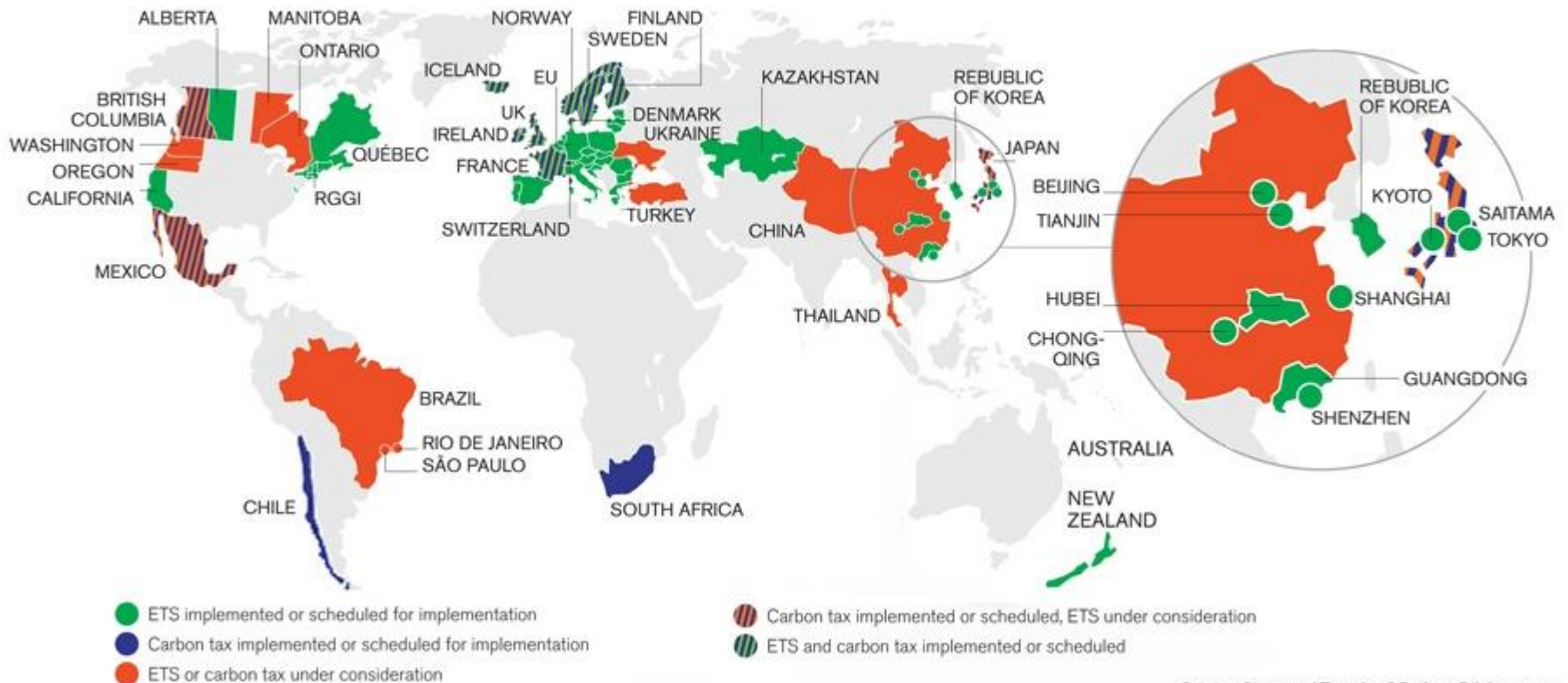
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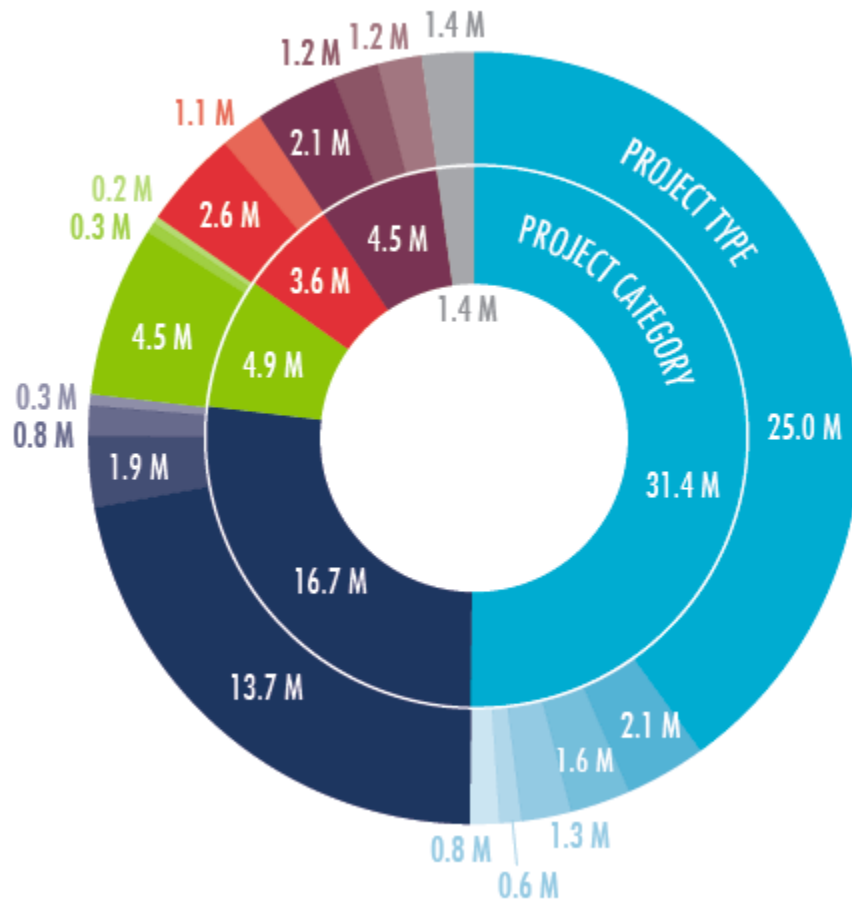
Carbon pricing strategies

Locations of Existing, Emerging & Considered Carbon Pricing Instruments



ETS = Emission trading system

Transacted Volume by Project Category and Type, 2014



INNER CIRCLE:

● Forestry and land use

● Renewables

● Gases/Methane

● Household device

● Efficiency and fuel switching

● Other

OUTER CIRCLE:

● Avoided deforestation

● Agro-forestry

● Tree planting

● Grassland/Rangeland

● Forest management

● Other forestry

● Wind

● Hydro

● Biogas

● Other renewables

● Landfill methane

● Gases

● Other methane

● Cookstoves

● Water filtration

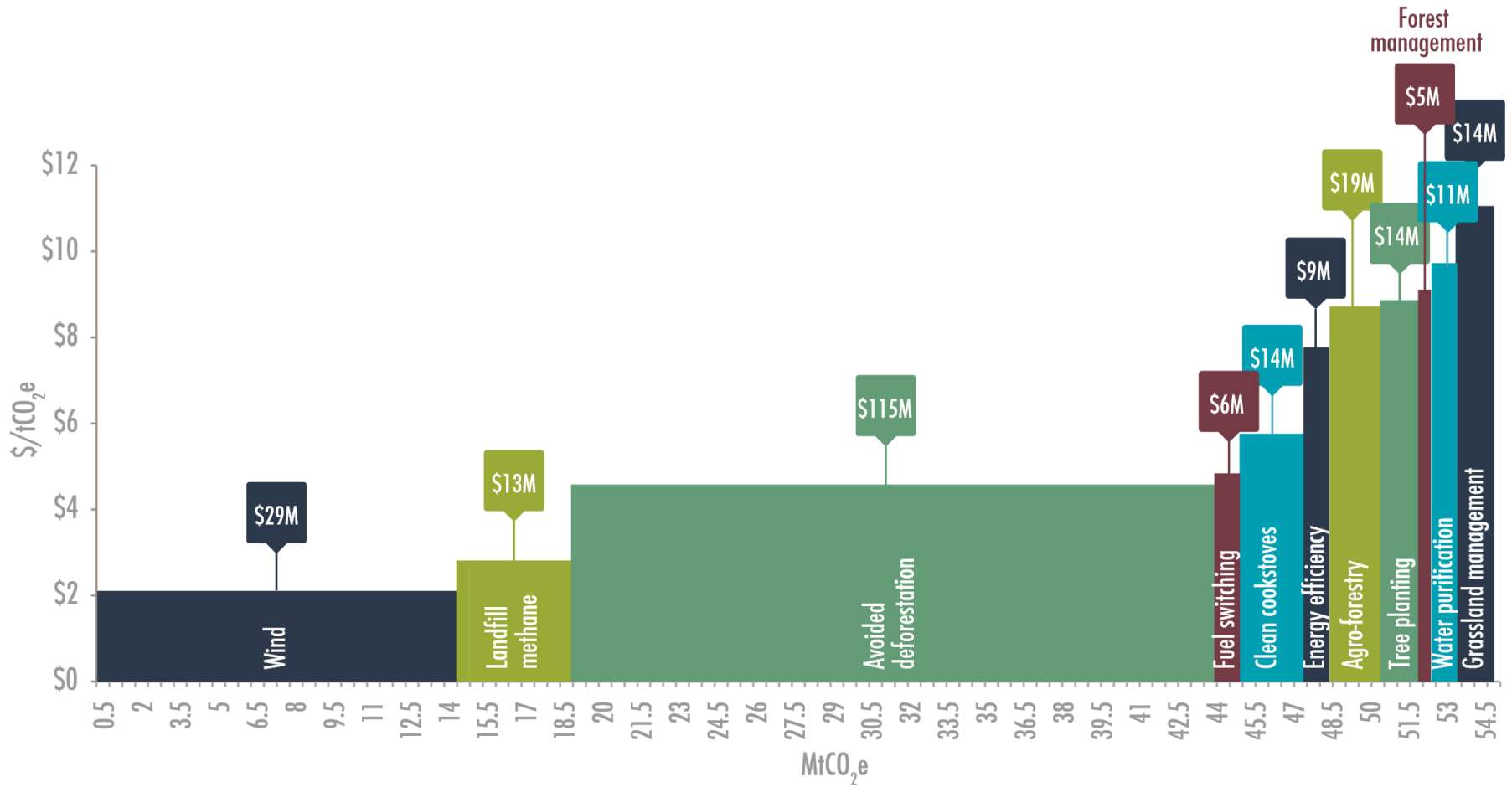
● Waste heat recovery

● Fuel switching

● Energy efficiency

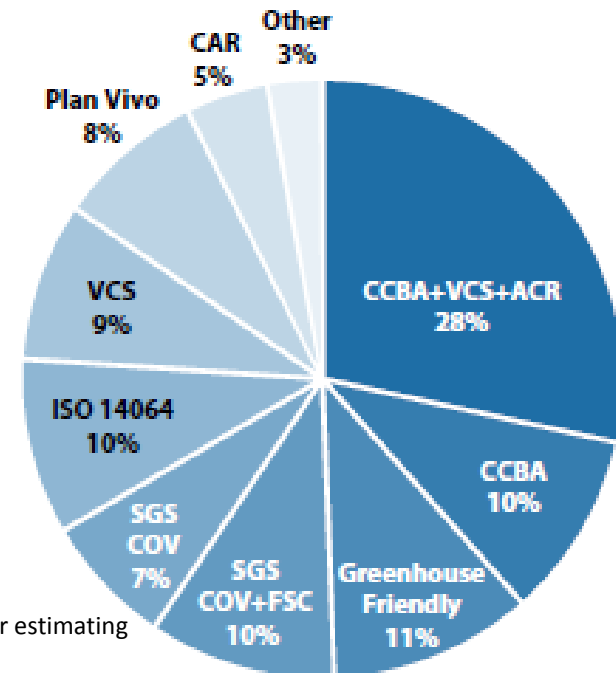
● Other

Value Transacted by Project Type, 2014



Voluntary Carbon Trade

- ~12 standards (+other standards with different criteria; foci; procedure
- Standards focus on different land use systems
- additional requirements
- Central registration: e.g. Markit Environmental Registry
- Follow same criteria



Criteria

Afforestation/Reforestation (AF/RF)

Reducing Emissions from Deforestation and Degradation
(REDD)

Additionality

Location

Methodology

Permanence

Leakage

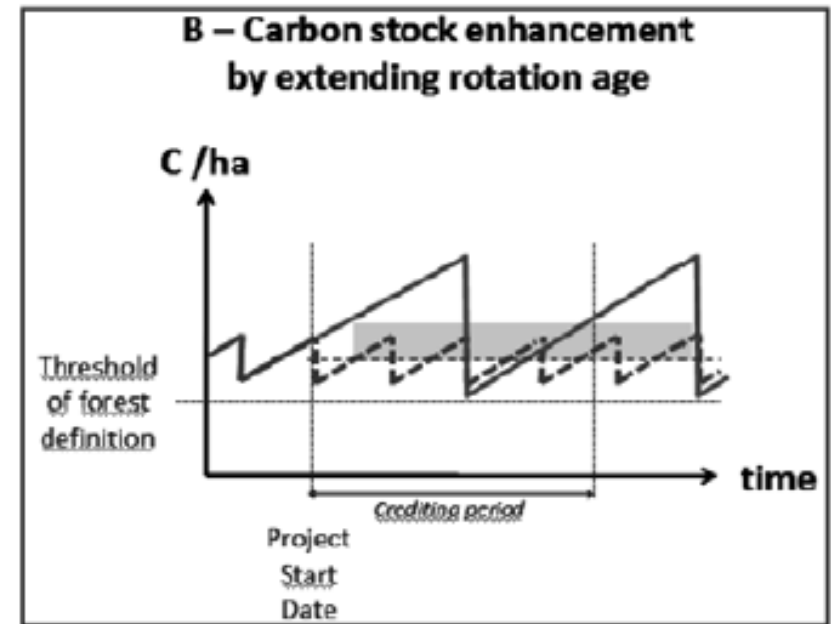
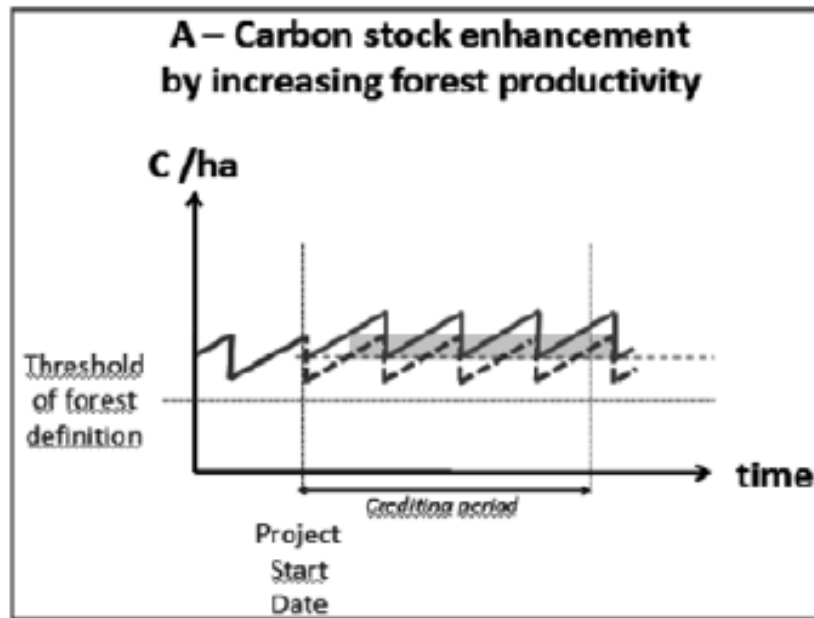
Co-benefits

Registry

Transparency

Sustainable Forest Management by Extension of Rotation age

- Example from the Verified Carbon Standard (VCS):
Methodology for Improved forest Management through
Extension of Rotation Age



———— Historical carbon stocks
----- Projected carbon stocks (Baseline)

———— Project scenario carbon stocks
■ Carbon stock increases

Carbon in South Africa

- Fossil fuel dependent industry
- Largest CO₂ emitter in Africa
- 12th largest CO₂ emitter globally
- Non-annexure I party to Kyoto Protocol
- Voluntary commitment to reduce emissions
 - 34% by 2020
 - 42% by 2025

Carbon Tax in South Africa

- Introduced in 2010
- Implemented in 2016
- Internalise GHG emissions
- Behavioural change
- Oligopolistic nature of energy sector
- Developing economy
- Flexibility
- Phased-in
- Provides certainty
- Access to low-carbon market

Carbon Tax in South Africa (2)

- Levy directly on emissions
- Tax on fuel inputs/outputs
- Percentage-based threshold, below exempted
- Offsets used to reduce
- Tax-rebate
- Tax rate proposed: 8€ per t CO₂

Tax-free thresholds by sector

Sector	Basic Tax Free Threshold	Trade Exposure (Max.)	Process Emissions	Total	Offset Allowance
Electricity	60	-	-	60	10
Petroleum (coal/gas to liquid)	60	10	-	70	10
Petroleum (Refinery)	60	10	-	70	10
Iron and Steel	60	10	10	80	5
Cement	60	10	10	80	5
Glass and Ceramics	60	10	10	80	5
Chemicals	60	10	10	80	5
Pulp and Paper	60	10	-	70	10
Sugar	60	10	-	70	10
Agriculture/Land-Use/Forestry	60	-	40	100	0
Waste	60	-	40	100	0
Fugitive Emissions	60	10	10	80	5
Other	60	10	-	70	10

(Department: National Treasury, 2013)

Case study of **Guangdong Changlong Carbon Sink Afforestation Project**

- Introduced in 2011 till 2030
- Four county: Wuhua, Xinning, Zijin and Dongyuan
 - 2014.3.30 certified by China Environmental United Certification Center Co., Ltd
- Guangdong Verde Landscaping Company is doing it
- 866.7 ha mix-species plantation
- New plantation estimated to reduce 17,365 tCO₂ emission per year
- China Green Carbon Foundation (money, technique) under the standard AR-CM-001-V01 “Carbon Sink Afforestation Project Methodology”

Opportunities

- Mixed rotations
- Mixed species
- Diverse silvicultural methods
- Different land-use (grassland, natural forest)

Constraints

- Current policies for the forestry sector
- Little experience in Close to Nature Forestry
- Strong existing systems

Thank you for your attention!

Main Literatur

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