



# Wetlands and the Verified Carbon Standard

Igino Emmer

Blue carbon Policy WG

Washington, 12-14 July 2011

# Carbon markets

- Compliance market: UNFCCC
  - Kyoto Protocol: Domestic reductions, CDM, JI, ET
- Voluntary markets
  - VCS
  - ACR and others
  - Only project-based activities

# Sectors

## National GHG reporting

- Energy Industries Solvents Waste
- Agriculture
- Land use, land use change and forestry (LULUCF):
  - Forest land
  - Cropland
  - Grassland
  - Wetlands
  - Settlements

## CDM

- 1-13 Energy Industries Waste etc.
- 14 Land-use, land-use change and forestry
- 15 Agriculture

# CDM LULUCF

- Only A/R
- Normal-scale methodologies
  - Mangrove restoration methodology 2011
- Small-scale methodologies (16k CERs/yr)
  - 1 wetlands methodology

# Why develop a wetlands standard?

- A market for wetland restoration and conservation is developing
- No international standard specific for wetlands exists
- International standards for LULUCF until 2011 included no wetlands specific requirements
  - March 2011 peatland requirements launched by the VCS

# Standards for project activities

- General requirements and guidance for project design and GHG accounting
- Procedures for validation and verification
- Registry and clearing house for 'carbon credits'

# Credible project-based activities and carbon markets

- Standards for project activities
  - General requirements and guidance for project design and GHG accounting
  - Procedures for validation and verification
  - Registry and clearing house for 'carbon credits'
- Methodologies are step-by-step procedures for estimation of emission reductions and removals in line with the requirements following accepted scientific good practice
- Project description or design documents provide information on how a specific project complies with the requirements and applies the methodology

# Content of methodologies

- Applicability conditions
  - Relate procedures provides to specific project circumstances
- Project boundaries
  - Geographical – temporal – carbon pools – GHGs
- Baseline scenarios and additionality
- Baseline GHG accounting
- Project GHG accounting including leakage
- Permanence
- Monitoring protocol



# Verified Carbon Standard



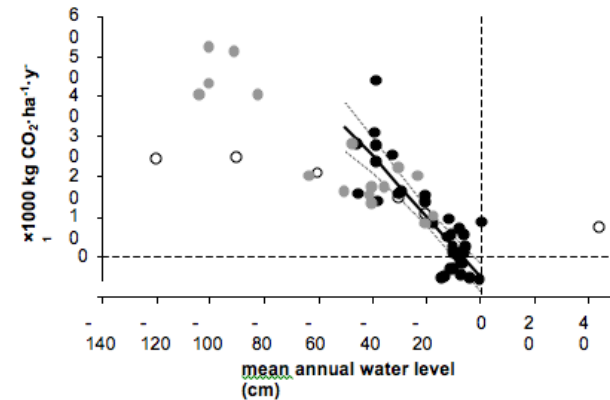
- Afforestation, Reforestation, Revegetation (ARR)
- Agricultural Land Management (ALM)
- Improved Forest Management (IFM)
- Reduction Emissions from Deforestation and Degradation (REDD)
- Peatland Rewetting and Conservation (PRC)

# PRC categories

Baseline Scenario		Project Activity	Applicable Guidance
Condition	Land Use		
Drained peatland	Non-forest	Rewetting	RDP
		Rewetting and conversion to forest/ revegetation	RDP+ARR
		Rewetting and paludiculture/ erosion avoidance	RDP+ALM
	Forest	Rewetting	RDP
	Forest with deforestation/ degradation	Rewetting and avoided deforestation	RDP+REDD
	Forest managed for wood products	Rewetting and improved forest management	RDP+IFM
Undrained peatland	Non-forest	Avoided drainage	CUPP
	Forest	Avoided drainage	CUPP
	Forest with deforestation/ degradation	Avoided drainage and deforestation	CUPP+REDD
	Forest managed for wood products	Avoided drainage improved forest management	CUPP+IFM

# GHG accounting

- Spatial and temporal dimensions
- Direct measurements (fluxes) or
- Proxies
  - Carbon stock changes
  - Water level
  - Salinity and others...
- Leakage
- Uncertainty versus conservativeness
  - Avoid complex/expensive measurements by conservatively neglecting pools and fluxes



# From peatlands to wetlands - some issues

- Wetlands definition
- Eligible wetland categories to include sea grasses?
- Hydrology, sedimentation and erosion - hydrogeomorphology
  - Scale (water and sediment supply beyond buffer zones)
- Sea level rise

# Wetlands project categories

- PRC becomes WRC: Wetland Restoration and Conservation
- RWH: Restoration of Wetland Hydrology and hydrogeomorphology
- CIW: Conservation of Intact Wetlands

# PWRC categories

Baseline Scenario		Project Activity	Applicable Guidance
Condition	Land Use		
Drained peatland	Non-forest	Rewetting	RDP
		Rewetting and conversion to forest/	RDP+ARR

- Replace
  - PRC with WRC
  - RDP with RWH
  - CUPP with CIW
  - Drained peatland with degraded wetland
  - Undrained peatland with intact wetland
  - Rewetting with restoring hydrogeomorphology
  - Avoided drainage with avoided conversion
- Add open and impounded water
- Add creation of wetlands

	Forest managed for wood products	Avoided drainage improved forest management	CUPP+IFM
--	----------------------------------	---------------------------------------------	----------

# Outlook

- Peer and public review in 2011
- Launch in 2012



# Thank you

Igino Emmer [igino.emmer@silvestrum.com](mailto:igino.emmer@silvestrum.com)