

Wetlands Requirements and Methodologies under the Verified Carbon Standard

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Blue Carbon Policy WG

Guayaquil, 10-12 July 2012



- Why wetlands requirements?
- What are the VCS AFOLU requirements?
- Wetlands methodologies

Why develop requirements for Wetlands?

- Wetland ecosystems store significant amounts of carbon
 - Land use conversion releases stocks
 - Restoration reinitiates carbon sequestration
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- Methodologies and projects that reduce emissions or remove emissions in wetland ecosystems are emerging
 - There are a lack of requirements for this area
 - This is a natural expansion of the PRC requirements issued last year

Wetlands Technical Working Group

A Wetlands Technical Working Group, made up of wetland and carbon market experts, drafted the requirements

- Steve Emmett-Mattox, Restore America's Estuaries
- Dr. Igino Emmer, Silvestrum
- Dr. Steve Crooks, ESA PWA
- Dr. Patrick Megonigal, Smithsonian Environmental Research
- Dr. Boone Kauffman, Oregon State University

From standard to project

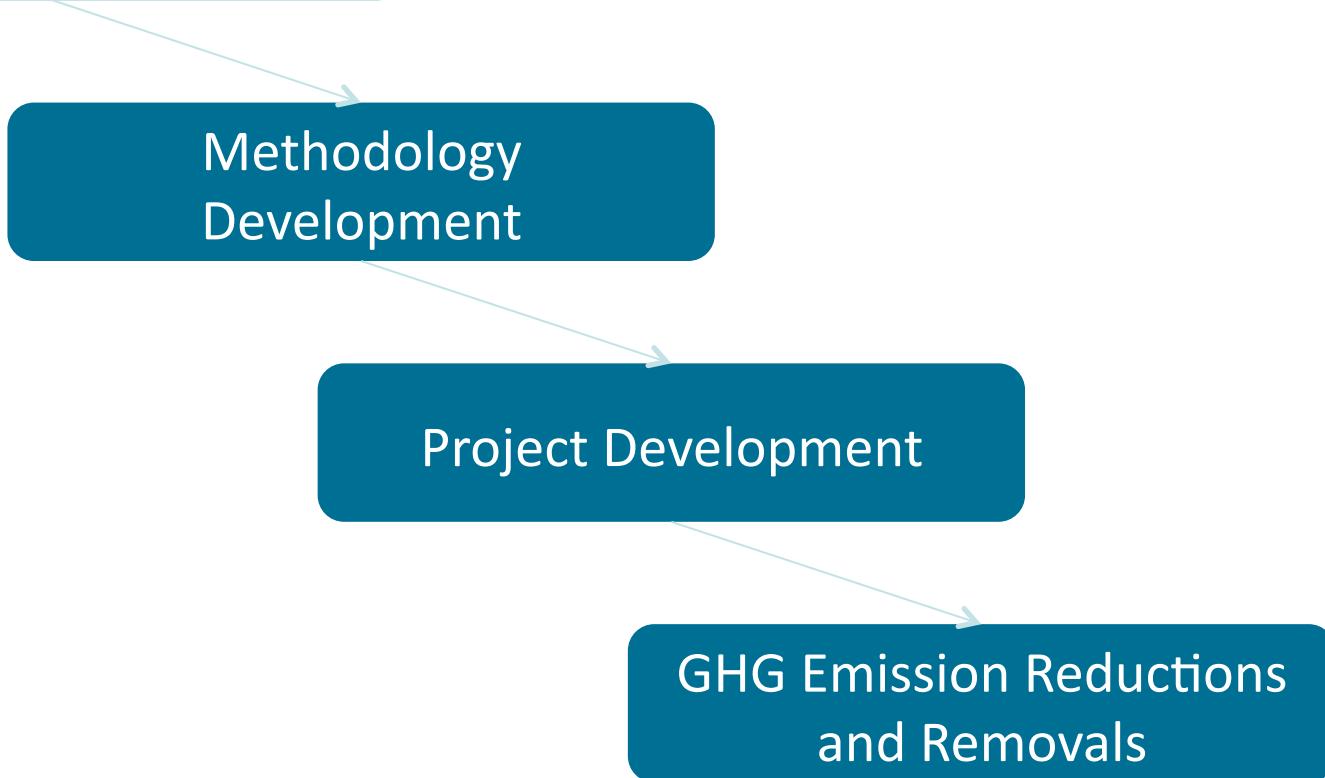
- Standards for project activities
 - General requirements and guidance for GHG accounting
 - Procedures for validation and verification
 - Registry and clearing house for ‘carbon credits’
- Methodologies are step-by-step explanations of how emission reductions or removals are to be estimated in line 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

WRC Requirements

Methodology
Development

Project Development

GHG Emission Reductions
and Removals



AFOLU Requirements

- AFOLU Program Specific Issues
- Project Requirements
- Methodology Requirements
- Validation Verification Requirements



Carbon accounting in projects

- Project boundaries
 - Geographical – temporal – carbon pools – GHGs
- Baseline scenarios and additionality
- Baseline GHG accounting
- Project GHG accounting including leakage
- Permanence
- Monitoring protocol



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





- PRC becomes WRC: Wetland Restoration and Conservation
- Wetlands Restoration / Creation / Conservation
 - RWE: Restoration of Wetland Ecosystems
 - CIW: Conservation of Intact Wetlands



WRC categories

Baseline Scenario		Project Activity	Applicable Guidance
Condition	Land Use		
Degraded wetland (including, drained, impounded, and with interrupted sediment supply)	Non-forest (including aquacultures, shrublands and grasslands)	Restoring, enhancing, creating and/or managing hydrological conditions, sediment supply, salinity characteristics, water quality and/or native plant communities	RWE
		Ditto and conversion to forest / revegetation	ARR+RWE
		Ditto and conversion to wetland agriculture (including paludiculture)	ALM+RWE
		Ditto and avoided conversion of grassland or shrubland	ACoGS+RWE
	Forest	Restoring hydrology or hydrogeomorphology	RWE
	Forest with deforestation / degradation	Restoring hydrology or hydrogeomorphology and avoided deforestation	REDD+RWE
	Forest managed for wood products	Restoring hydrology or hydrogeomorphology and improved forest management	IFM+RWE

Baseline Scenario		Project Activity	Applicable Guidance
Condition	Land Use		
Non-wetland or open water	Non-forest	Creation of wetland conditions and conversion to forest/ revegetation	ARR+RWE
	Open water or impounded wetland	Creation or restoration of conditions for vegetation development/ revegetation	ARR+RWE

Baseline Scenario		Project Activity	Applicable Guidance
Condition	Land Use		
Intact wetland	Non-forest (including shrubland and grassland)	Avoided drainage and/or interrupted sediment supply	CIW Methodology
		Avoided conversion to open/impounded water (including excavation to create fish ponds)	CIW
		Avoided drainage and/or interrupted sediment supply and avoided conversion to agriculture or devegetation	ACoGS+CIW
	Forest	Avoided drainage and/or interrupted sediment supply	CIW
		Avoided conversion to open / impounded water	CIW
	Forest with deforestation / degradation	Avoided drainage and/or interrupted sediment supply and avoided deforestation	REDD+CIW
		Avoided conversion to open / impounded water and avoided deforestation	REDD+CIW
	Forest managed for wood products	Avoided drainage and/or interrupted sediment supply and improved forest management	IFM+CIW

Typical project activities

- Conservation of mangroves – REDD
- Improved management of mangroves – IFM
- Restoration of mangroves – A/R and restoring hydrology
- Restoration of sediment supply on tidal marshes
- Restoration or conservation of natural vegetation of wetlands

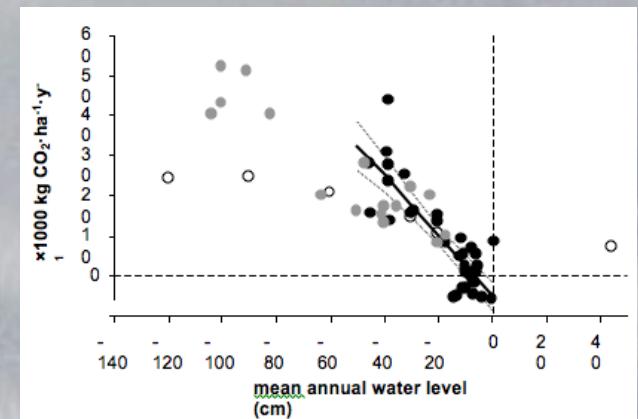


From peatlands to wetlands - some issues

- Wetlands definition
- Eligible wetland categories to include sea grasses?
- Hydrology, sedimentation and erosion
- Buffer zones and upstream threats
- Sea level rise

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



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

CDM ssc wetlands A/R methodology



CDM – Executive Board

UNFCCC/CCNUCC



AR-AMS0003 / Version 01
Sectoral Scope: 14

Simplified baseline and monitoring methodology for small scale CDM afforestation and reforestation project activities implemented on wetlands

I. Applicability conditions, carbon pools and project emissions

1. The simplified baseline and monitoring methodologies are applicable if all the conditions (a)-(g) mentioned below are met.

(a) Project activities are implemented on wetlands¹. The DNA of the host country shall provide a

CDM Mangrove restoration methodology



CDM – Executive Board

UNFCCC/CCNUCC



AR-AM0014 / Version 01.0.0
Sectoral Scope: 14
EB 61

Approved afforestation and reforestation baseline and monitoring methodology

AR-AM0014

“Afforestation and reforestation of degraded mangrove habitats”

(Version 01.0.0)

I. SOURCE, DEFINITIONS AND APPLICABILITY

1. Source

This methodology is based on elements from the following methodologies:

- AR-NM0038 “Afforestation and reforestation of degraded tidal forest habitats” The

Outlook for Wetland Methodologies

- Pipeline
 - Wetland restoration modular methodology - ACR
 - Restoration of coastal wetlands (RAE) – VCS
 - Wetlands restoration/creation (CH2M) – VCS
- Expected
 - Coastal wetlands conservation – baseline issues
 - Sea grasses

Outlook for WRC

- Peer and public review in 2011 and 2012 – closed 23 June 2012
- Now responding to comments and making adjustments
- Launch in October 2012



Thank you

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