

## Protocol for Sustainably Managed Forests

### Purpose

This section establishes the conditions that an Offset Provider or Offset Aggregator in the Forest Offset sector must meet in order to earn Carbon Financial Instruments (CFI's) from sustainably managed forestry projects.

### General Conditions

1. Project owners and aggregators must provide evidence of sustainable forest management of all their managed forest land through certification from agencies or schemes that have been endorsed by the PEFC<sup>1</sup> (e.g. SFI), the Forest Stewardship Council, or other certification programs approved by the CCX Committee on Forestry. A complete list of CCX approved certification schemes is available in Annex I. Carbon Financial Instruments may be issued retroactively prior to obtaining certification for sustainable management provided that sustainable certification exists when the project enrolls in CCX.
2. Project owners and aggregators may earn Exchange Forestry Offsets issued for managed forest projects on the basis of verified documentation for the net changes in carbon stocks (expressed in metric tons of carbon dioxide) on eligible sites included in the project during each of the years 2003 through 2010.

The net change in carbon stocks is defined by the equation:

Net change in Carbon Stocks = (increases in Carbon Stocks due to growth) minus (the quantity by which Carbon Stocks decreased due to harvest, pest, fire and adverse weather events).

If an offset provider or aggregator reports for the calendar year a net decrease in Carbon Stocks from the previous calendar year, the project owner or aggregator must Surrender Carbon Financial Instruments in an amount reflecting net decreases in Carbon Stocks from the previous year. Offset providers or aggregators may use banked allowances for compliance in this situation.

3. Quantification of net changes in forest carbon stock must involve a Modelbased Accounting Approach. Guidelines for Model Based Accounting approach are presented in Chapter 8 section 8.4 of the CCX Rulebook. (Contact NCOC for information). Managed forest projects will be issued or debited CCX CFI's on the basis of net annual change in forest carbon stocks through the CCX Market Period (2003-2010). Growth and yield Model estimates of net annual changes in carbon from forestry project will be discounted to account for variance in model estimates by the minimum

---

<sup>1</sup> The PEFC Council (Programme for the Endorsement of Forest Certification schemes) is an independent, non-profit, non-governmental organization, founded in 1999 which promotes sustainably managed forests through independent third party certification. The PEFC provides an assurance mechanism to purchasers of wood and paper products that they are promoting the sustainable management of forests.

of 20% or two times the reported statistical error<sup>2</sup> of the baseline inventory data. Forest inventories, that will be input into the growth-and-yield model to estimate annual carbon sequestration, must have a 90% confidence interval at a minimum for the estimated mean wood volume. All managed forest projects are subject to approval of the CCX Committee on Forestry.

No discount will be applied for instances when in-field inventories are conducted on an annual basis. Inventories conducted on an annual basis must also have a 90% confidence interval at a minimum.

4. All issuance of Exchange Forestry Offsets to CCX-eligible forestry projects, including managed forestry projects, shall require the placement of 20% of earned Exchange Forestry Offsets in a Forest Carbon Reserve Pool. A Forest Carbon Reserve Pool will be established for the entire pool of Projects represented by each offset provider and aggregator. Exchange Forestry Offsets held in a Forest Carbon Reserve Pool shall remain the property of the Project Owner, and all Exchange Forestry Offsets not terminated by CCX (in the event of a catastrophic loss) shall be released to the Project Owner during 2010. Should CCX extend beyond 2010, the Forest Carbon Reserve Pool will be maintained for projects that elect to remain enrolled in CCX.
5. Upon registration, Forest Offset Providers or Offset Aggregators must present to CCX an attestation that the carbon stocks in the managed forest project will be subject to long-term maintenance in a manner deemed acceptable by the CCX Forestry Committee. This includes a contractual agreement between the aggregator and each participating landowner to maintain the enrolled land in an approved sustainable certification program for at least 15 years from enrolled date and a signed letter of intent from each registered landowner. This contract and letter will be included in the project filing.
6. The quantification of changes in carbon stocks will be adjusted to reflect acquisition or disposition of forest land on an annual basis as outlined below:
  - a. When forested land is acquired, the enrolled landowner may include eligible forest carbon accumulation provided that it meets all of the criteria set forth in this document. When forest parcels are purchased, the carbon stocks on the purchased forest are not counted as growth for the year they are purchased, but are added into the baseline so that the net growth may be calculated in the subsequent year.
  - b. If forested land is disposed by a land owner, then the offset provider or aggregator will be penalized by the total amount of offsets issued by CCX for sequestered carbon from those acres for entire length of time that the land has been enrolled in the program.

---

<sup>2</sup>The statistical error (E) is defined as the difference between the mean carbon sequestration (X) and the lower confidence limit value (LCL) divided by the mean carbon sequestration (X). Thus,  $E = [(X - LCL) / X]$ .

- i. However, disposed land from one pooled participant to another pooled participant that is also enrolled within CCX will not be penalized in this fashion. Under such conditions, a transfer of credits from one aggregator to another may be required.
7. Forest offset aggregators are responsible to maintain a database of pooled participant records, maintain accurate records of enrolled project forest inventories, and keep track of management activities in enrolled forest lands.

The database records, model inputs and all enrolled land are subject to third party verification requirements by CCX-approved verifiers.

8. If an enrolled participant's project land does not conform to the managed forest offset performance requirements, such event shall be promptly reported to CCX (such reporting shall occur through a project's aggregator if the project is registered through an aggregator). CCX will then cancel all CCX CFI's in an amount equal to the quantity of forest offsets previously issued to the project.

The owner of the non conforming forest project shall be prohibited from further participation in CCX.

## **Baseline**

Project participants must establish a baseline of forest carbon stocks for purposes of calculating net changes in forest carbon stocks and subsequent issuance of CFIs. Once established, this baseline will serve as the reference year for all purposes in the managed forest project pool during the CCX market period. The baseline is established as the biomass level in the enrolled parcels on December 31 of the year preceding their enrollment.

Participants are eligible to earn CFI's based on verified documentation of net changes in forest carbon stocks from the baseline year. Project proposal filing must present sufficient data on forest inventories and management activities on enrolled forest land while establishing the baseline. Baselines are subject to audit by a CCX approved verification agency.

## **Included Carbon Pools**

Net changes in carbon stocks shall be quantified only on the basis of increases in aboveground and below ground living biomass occurring on lands included in the CCX project. The above-ground living biomass carbon pool includes stem wood, stem bark, and branches. The below ground living biomass carbon pool includes coarse roots<sup>3</sup>. In addition to the terms and conditions established in this document,

---

<sup>3</sup> Acceptable methods for the inclusion of below-ground biomass in the United States are defined in Jenkins JC, Chojnacky DC, Heath LS, Birdsey RA (2003) National-Scale Biomass Estimators for United States Tree Species. *Forest Science* 49(1):12-35. Acceptable methods for the inclusion of below-ground biomass for regions outside of the United States are defined in Cairns M, Brown S, Helmer E, Baumgardner G (1997) Root Biomass Allocation in the World's Upland Forests. *Oecologia* 111: 1-11.

in all cases project owners (or, as applicable, the ultimate owner of carbons sequestration rights associated with forest land included in a CCX project) shall retain ownership rights for all sequestration occurring in any excluded carbon pools.

### **Treatment of Catastrophic Losses and Forest Carbon Reserve Pool**

Each CCX managed forest project (which could be an aggregated pool of forest projects) shall be required to place 20% of the offsets it earns into a CCX Forest Carbon Reserve Pool. Such offsets shall remain the property of the forest owner(s) (pool participants in the case of aggregated projects) and all forest offsets that remain in the Forest Carbon Reserve Pool shall be released to forest owners near the end of the market period.

CCX CFI contracts in the Forest Carbon Reserve Pool will be used to compensate for any catastrophic losses. In cases of adverse weather events or outbreaks of fire and pest damage that do not reduce the quantity of Carbon Stocks on a parcel of forested land to levels below those documented for the baseline, the Member shall document the quantity of timber destroyed by the fire, pest or adverse weather event and Surrender an equivalent amount of Carbon Financial Instruments. The Member shall continue to quantify and report subsequent increases and decreases in carbon stocks on that land and shall be issued or must surrender Carbon Financial Instruments accordingly.

In cases of catastrophic weather events or outbreaks of fire and pest damage that reduce the quantity of carbon stocks on a parcel of forested land to levels below those documented for baseline, the Member shall document the quantity of timber destroyed by the fire, pest or adverse weather event. An amount of CFIs in the Forest Carbon Reserve Pool equal to the amount of the destroyed by the catastrophic event will be cancelled. The CFIs in the Forest Carbon Reserve Pool represent the maximum amount of CFIs that will be cancelled in the event of a catastrophic loss.

Those stands shall be excluded from future projections of annual changes in Carbon Stocks until the quantity of carbon stocks in those stands reaches the reported quantities for baseline. All reports of significant damage caused by pest, fire and adverse weather events shall be subject to audit by a CCX approved verification agency.

### **Managed Forest Project Proposals**

All managed forestry project proposals must be submitted to the CCX Committee on Forestry for review and recommendation. Project proposal filing must contain the following information:

#### **1. Organizational Description**

- Short description on the organization, its function and work related to forestation
- Description of program goals, management etc
- Program relationship between agency and landowners
- Social impacts of forest land on indigenous community
- Historical description of forest stands
- Description of how initial baseline determined

2. Description of Forested areas
  - Species information
  - Planting dates
  - Acreage
  - Legal ownership
  - Maps and other pertinent information
3. Description of Forest Management Activity
  - Harvesting cycle
  - Description of thinning, clearing and other management activities
  - End use of the wood
4. Quantification Model
  - Brief description of the proposed quantification method
  - Baseline measurement
    - Inventory frequency
    - Sampling techniques
    - Tree measurement techniques
    - Statistical precision
    - Backup equations
    - References and documentation
5. Description of Project and Proposed Aggregation Model
  - Objectives of project
  - Eligibility and landowner requirements
    - i. Sustainable Forest Management certification information
    - ii. Contractual requirements with aggregator
    - iii. Monitoring arrangement between aggregator and landowner
  - Database description

### **CCX Forest Offset Aggregators**

An aggregator is a CCX-registered entity that serves as an administrative representative, on behalf of Project Owners, of multiple CCX-qualifying Forest Projects. Projects that are represented in CCX by an aggregator are referred to as “pooled projects”. The “pool” simply refers to the multiple projects represented by the aggregator.

Each aggregator is assigned a CCX Registry Account which will hold all Offsets issued to Projects it represents. Aggregators shall also be Authorized Traders in the CCX Trading Platform for such offsets. Aggregators shall be responsible for receiving from individual projects the CCX-required project reports, and for submitting to CCX summary reports of projects they represent. A copy of this summary report is included as Annex II. The terms of the business and legal relationships between aggregators and Forest Owners are left to the discretion of those parties.

In addition to the terms and conditions presented in the CCX Rulebook Chapter on Offsets, the following terms and conditions shall apply to CCX Exchange Forestry Offset Projects that are aggregated.

1. The aggregator acknowledges that it must annually submit a signed attestation that it is in conformance with the terms and conditions presented herein to CCX.
2. The aggregator acknowledges that actual increases and decreases in forest carbon stocks must be reported to CCX in accordance with CCX rules.
3. The aggregator acknowledges that a CCX-approved verifier must be selected to provide verification of the project, and be allowed access to forest lands and project documents for the purpose of undertaking project audits.
4. The aggregator acknowledges that a decrease in carbon stocks due to catastrophic losses will result in cancellation of CCX CFI's held in the Forest Carbon Reserve Pool. The aggregator is responsible for replenishing cancelled CCX CFI's in the Forest Carbon Reserve Pool to maintain a 20% escrow within one year of cancellation. The aggregator may be required to surrender additional Carbon Financial Instruments to compensate for loss of carbon stocks if the quantity of forest offsets in the Reserve Pool is inadequate.
5. Aggregators are responsible for maintaining and available for audit, a sound database and monitoring management system capable of tracking each individual owner's forest land holding enrolled in the program at the stand level. A summary sheet outlining data requirements for each landowner is contained as Annex III.
6. Aggregators must establish a baseline with each distinct pool of landowners that is enrolled. Quantification of baseline and net change in carbon stocks will be accounted separately for each project owner at the stand level within a registered pool of managed forest projects. On an annual basis, the baseline will be adjusted to reflect land acquisitions and dispositions within the enrolled pool.

## **Guidelines for Verification on Managed Forest Offset projects**

### **Objective and Scope of Work**

Desk and field verification of CCX Managed Forest Offset projects on registered projects in the CCX Offset program must be conducted by a CCX approved verifier. Verification is intended to confirm the reported species mix and characteristics, verify acreage enrolled in program, confirm that forest management practices on enrolled land are in conformance with the program criteria, and to identify any acres not in compliance with eligibility criteria. Verification costs are borne by the project provider/aggregator.

### **Desk Review**

All land enrolled by the selected applicant or forest offset provider are subject to an annual desk audit. Landowners that are unable to provide sufficient documentation will be ineligible. The desk audit must verify that the baseline and annual reports are in conformance with the managed forest offset protocol.

### **Field Verification**

Field verification consists of inspecting at least 10% of both the participants and acreage enrolled in the program. This field inspection will occur when the project is approved, at the end of the CCX commitment period, and, subject to the recommendation of the CCX Committee on Forestry, for additional periods. The projects selected for field verification are chosen at the discretion of the verifier and will occur on land where harvesting has occurred whenever possible. Land will be inspected to confirm the appropriate use of the approved quantification method, species mix and age class, ownership, and the number of eligible acres. The field verification shall provide an opinion that the practices and requirements provided in the CCX project proposal have been implemented as intended.

### **Statement of Intent**

Each project owner must sign a statement of intent declaring that the applicant intends to respect and abide by the protocol developed by CCX on all land enrolled in the program and that the applicant intends to preserve the Forest Stocks beyond December 31, 2010.

A copy of the letter is included in Annex IV.

#### Annex I. CCX Approved Certification Schemes for Sustainable Forest Management<sup>4</sup>

Country	Name	Schemes
Australia	Australian Forestry Standard Limited	Australian Forest Certification Scheme
Austria	PEFC Austria	Austrian Forest Certification Scheme (2006)
Belarus	Belarusian Association of Forest Certification	
Belgium	WoodNet - Commission PEFC Belgique	Belgian Forest Certification Scheme
Brazil	National Institute of Metrology, Standardization and Industrial Quality	Cerflor - Brazilian Program of Forest Certification
Canada	CSA International;	CSA Sustainable Forest Management Program
	SFI, Inc.	SFI – Sustainable Forestry Initiative
Chile	CertforChile Forest Certification Corporation	CertforChile
Czech Republic	PEFC Czech Republic	Czech Forest Certification Scheme (2006)
Denmark	PEFC Denmark	Danish Forest Certification Scheme
Estonia	Estonian Forest Certification Council	Estonian Forest Certification Scheme
Finland	Finnish Forest Certification Council	Finnish Forest Certification Scheme
France	PEFC France	French Forest Certification Scheme (2006)
Gabon	PAFC Gabon	PAFC Gabon Forest Certification Scheme
Germany	PEFC Germany e.V	Revised German Forest Certification Scheme (2005)
Ireland	PEFC Council of Ireland	
Italy	PEFC Italy	Italian Forest Certification Scheme
Latvia	PEFC Latvia Council	Latvian Forest Certification Scheme
Lithuania	PEFC Lietuva (PEFC Lithuania)	Lithuanian Forest Certification Scheme
Luxembourg	PEFC Luxembourg	Luxembourg Certification Scheme for Sustainable Forest Management
Malaysia	Malaysian Timber Certification Council	
Norway	PEFC-Norway	Norwegian Living Forest Standard and

<sup>4</sup> [http://www.pefc.org/internet/html/members\\_schemes/4\\_1120\\_59.htm](http://www.pefc.org/internet/html/members_schemes/4_1120_59.htm)

		Certification Scheme
Poland	PEFC Polska	Polish Forest Certification Scheme
Portugal	Portuguese Forestry Sector Council	Portuguese Forest Certification Scheme
Russia	Partnership on the Development of PEFC Forest Certification	
Slovakia	Slovak Forest Certification Association	Slovak Forest Certification Scheme
Slovenia	Institute of Forest Certification Slovenia	Slovenian Forest Certification Scheme
Spain	PEFC España	Spanish Forest Certification Scheme
Sweden	Swedish PEFC Co-operative	Swedish Forest Certification Scheme
Switzerland	PEFC Switzerland and HWK-Zertifizierungsstelle	Swiss Q-label certification scheme
United Kingdom	PEFC UK Ltd.	UK Scheme for Sustainable Forest Management
		PEFC UK certification scheme for sustainable forest management (revised 2006)
United States	Sustainable Forestry Inc. American Forest Foundation (AFF)	SFI - Sustainable Forestry Initiative American Tree Farm System Group Certification
International	Forest Stewardship Council (FSC)	Forest Stewardship Council (FSC)

Annex II. CCX Forest Project Summary Form

<b>CCX Forest Project Summary Form</b>	
CCX Aggregator	
Project Name	
Geographic Region	
CCX Forest Offset Project Type	
Estimated Annual Metric Tons	
CCX Program Years	
Were Subaggregators Used on Project?	
Project Verifier	
Description of Consulting Services Utilized in Project Proposal Development	

Annex III. CCX Forest Project Landowner Form

<b>CCX Forest Aggregator Reporting Form</b>	
Landowner Name	
Landowner Acreage	
Forest Age and Species	
Landowner Certification for Sustainable Management	
Legal Description of Land	
Landowner Management Activity	
Most Recent Inventory	
Documentation of Land Acquisition / Disposition	
Evidence of Ownership	
Most Recent Aggregator On-Site Visit	

**Annex IV: Sample letter of Intent to Maintain Forest Stocks beyond the CCX Market Period for Managed Forest Offsets**

**CHICAGO CLIMATE EXCHANGE  
FORESTRY OFFSETS SECTOR  
STATEMENT OF INTENT  
TO  
MAINTAIN FOREST CARBON STOCK  
BEYOND 2010**

[COMPANY]  
[ADDRESS]

TO: CHICAGO CLIMATE EXCHANGE

This Statement of Intent issued by \_\_\_\_\_ (“Enrolled Participant”), to Chicago Climate Exchange (“CCX”) confirms Participant’s intent to respect the Principle of Permanence regarding its forest carbon stock to maintain beyond December 31, 2010, excluding catastrophic events and land sales, the quantity of Carbon Stocks held by the Participant in its CCX-registered Managed Forest Offset Project as defined in Chapter 9 of the CCX Rulebook including any amendments and/or interpretations thereto.

It is recognized by Participant and CCX that this is a non-binding Statement that reflects the Participant’s intent in regards to the issues described herein. The Participant acknowledges that the effectiveness of forest stocks in sequestering carbon dioxide depend on the forests stocks being maintained for a considerable time period. The Participant acknowledges that an objective of the Chicago Climate Exchange is the development of protocols to advance climate change mitigation objectives and that the Chicago Climate Exchange issues offsets for forest carbon stocks with the objective that the forest stocks sequester carbon for a considerable time period. The Participant acknowledges that they support the objectives of the Chicago Climate Exchange and the use of forest offset projects as a means of carbon sequestration.

DATED this \_\_\_\_ day of \_\_\_\_\_, [Year]

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_