

ICS 65.020.40
CCS B 60

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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

LY/T 3196-2020

Technical regulations for carbon accounting of bamboo forest

竹林碳计量规程

(English Translation)

Issued on: March 30, 2020

Implemented on: October 1, 2020

Issued by: State Forestry and Grassland Administration

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard was proposed and managed by the National Bamboo and Rattan Standardization Technical Committee (SAC/TC263).

Drafting organizations of this standard. International Center for Bamboo and Rattan, Department of Ecological Protection and Restoration, National Forestry and Grassland Administration, Forest Health State Environment and Protection Research Institute, Chinese Academy of Forestry Research Institute.

1 Scope

This standard specifies the terms, definitions and measurement methods for bamboo forest carbon measurement.

This standard is applicable to the measurement of carbon storage of natural distribution and artificially cultivated bamboo forests.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version is suitable Used in this document. For undated references, the latest version (including all amendments) applies to this document.

GB/T 26423-2010 Terminology of Forest Resources LY/T 2258-2014 Standing wood biomass modeling method technical specifications LY/T 2259-2014 Standing wood biomass

modeling sample collection technical specifications LY/T 2988-2018 Guidelines for Measuring Carbon Storage of Forest Ecosystems QX/T 188-2013 Technical Guidelines for Vegetation Monitoring by Satellite Remote Sensing

3 Terms and definitions

The following terms and definitions apply to this document.

Bamboo forest

A forest with bamboo with an average diameter at breast height not less than 2 cm and an average height not less than 2 m as the main component.

Single ramet

Ramets

Scattered, clumped, or mixed bamboo is a single standing bamboo that grows in solid or cloned.

Stand

Forest plots that have the same or similar internal forestry characteristics and are significantly different from the surrounding adjacent plots.

[GB/T 26423-2010, definition 2.4] 3.4 Large sized monopodial bamboo Under normal growth conditions, standing bamboos are uniaxial scattered bamboo species with an average DBH of 8 cm or more and an average height of 10 m or more.

Medium sized monopodial bamboo Under normal growth conditions, standing bamboos have an average DBH of 3 cm to 8 cm and an average height of more than 6 m.

Small sized monopodial bamboo Under normal growth conditions, the average DBH of standing bamboo is less than 3 cm and the average height is more than 2 m uniaxial scattered bamboo species.

Large sized sympodial bamboo Under normal growth conditions, standing bamboos have an average DBH of more than 10 cm and an average height of more than 10 m.

Medium sized sympodial bamboo Under normal growth conditions, standing bamboos have an average DBH of 5 cm to 10 cm and an average height of 6 m or more.

Small sized sympodial bamboo Under normal growth conditions, the average DBH of standing bamboo is less than 5 cm and the average height is more than 2 m.

3.10

Canopy layer of bamboo forest Located at the top level of the forest, is a layer made up of bamboo canopy.

3.11

Carbon pool

During the carbon cycle, forest ecosystems store various components of carbon. Including living biomass above ground and living below ground There are five parts. quality, litter, dead wood and soil organic carbon.

[LY/T 2988-2018, definition 3.2] 3.12 Bamboo forest carbon stock the storage of organic carbon in each carbon pool of the bamboo forest ecosystem.

3.13

Vegetation index

Linear or non-linear combination of satellites in different bands to reflect the quantitative information of plant growth.

[QX/T 188-2013, definition 2.3]

4.1 Preparation

In accordance with the provisions of Chapter 4 of LY/T 2259-2014.

4.2.1 Standard bamboo biomass modeling sample collection

According to LY/T 2259-2014, 5.7.

4.2.2.1 Modeling method of standard bamboo on-ground biomass

In accordance with the provisions of Chapter 6 of LY/T 2258-2014.

4.2.2.2 Modeling method of standard bamboo underground biomass

In accordance with the provisions of Chapter 8 of LY/T 2258-2014.

4.2.3 Biomass measurement of standing bamboo

Substitute the diameter at breast height (and bamboo height, age) of standing bamboo into the model established in 4.2.2 to measure the biomass of standing bamboo.

4.2.4 Lizhu's carbon storage measurement

The carbon storage of Lizhu is calculated according to formula (1).

$C = B \times CC$ (1) where.

C Individual plant-the carbon storage of standing bamboo (tC);

B Individual plant-the biomass of standing bamboo (t);

CC--The carbon content in standing bamboo biomass, dimensionless.

4.3.1 Principles of carbon storage measurement

To ensure the accuracy requirements of carbon storage measurement, the method of stratified sampling (classified sampling) should be used to investigate the carbon storage of forests.

Bank, which is based on the principle that the main attributes of the forest stand (tree species composition, plant number density, diameter at breast height, bamboo height, etc.) are the same or relatively consistent.

Line layered measurement. During the investigation, the data of each wooden ruler is recorded in Appendix A.

4.3.2.1 Arbor layer

Set up quadrats in layers, 3~5 quadrats in each layer, and the distance between the quadrats is not less than 1 km. According to the dominant bamboo species Characteristics, the size requirements of the plots for different bamboo forest types are as follows.

The area of the large-diameter scattered bamboo and bamboo plots shall not be less than 400 m²; the medium-diameter scattered bamboo and bamboo plots shall not be less than 100 m², and the number of plants in the plot is not less than 30; the plot area of the small-diameter scattered bamboo forest is not less than 25 m², and the number of plants in the plot is not less than 30 Strain.

The area of the large-diameter clustered bamboo forest plot is not less than 900 m² or contains more than 30 clusters and the number of standing bamboos is not less than 150.

The plot area of the middle-diameter clustered bamboo forest is not less than 400 m² or contains more than 30 clusters and the number of standing bamboos is not less than 200.

The plot area of the small diameter clustered bamboo forest is not less than 100 m² or contains more than 30 clusters and the number of standing bamboos is not less than 300.

product.

The square size of mixed bamboo and bamboo forests, refer to scattered bamboo and bamboo forests.

The shape of the sample should be set as a square or rectangle.

4.3.2.2 Shrub layer

In each arbor layer sample plot, at least 3 plots are randomly set up, and the area of each plot is not less than 25 m².