Climate project methodology No. 0011

Improved forest management, including forest fire protection

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Table of contents

1. Terms and definitions

Crediting period is the period in which verified greenhouse gases (GHG) emission reductions or increases in net anthropogenic GHG removals by sinks attributable to a climate project activity, as applicable, can result in the issuance of carbon units. The time period that applies to a crediting period for a climate project activity, and whether the crediting period is renewable or fixed, is determined in accordance with Section 4 *Project Crediting Period* of this methodology.

Forest is an integral dynamic ecological system of mainly woody plants, soil, animals, fungi, microorganisms and other natural components, having interconnections within and links with the external environment, being a part of the environment, a source of environmental and social benefits, as well as the natural resource for meeting the needs of the economy and population[1].

Improved Forest Management (IFM) means forest management activities, which result in increased carbon stocks within forests and/or reduced GHG emissions from forestry activities when compared to conventional forestry practices.

Forest Fire Protection is implementation of fire safety measures in forests and extinguishing of fires in forests.

Stratification is grouping of individual territorial units with a set of identical or similar characteristics (for example, soil type, vegetation cover, hydrological regime, etc.).

Wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or saline, including areas of marine water the depth of which at low tide does not exceed six meters.

2. Scope and applicability

2.1 Forest Fire Protection is one of the eligible activities under the "Improved Forest Management" (IFM) category of forestry climate projects.

2.2 Protection of forests from fires is a set of measures aimed at preventing the occurrence of forest fires, limiting their spread, reducing fire danger, increasing the fire resistance of forests, timely detection and extinguishing of forest fires. Forest Fire Protection is carried out by state authorities, local governments within their powers, determined in accordance with articles 81 - 84 of the Forest Code of the Russian Federation in the latest edition, unless otherwise provided for by the Forest Code of the Russian Federation, and other

[1] GOST R 57938-2017 Forestry. Terms and Definitions

federal laws. Extinguishing of forest fires and other landscape (wildland) fires on the lands of the forest fund, defense and security lands and lands of specially protected natural areas, is carried out in accordance with the Forest Code of the Russian Federation, Federal Law No. 68-FZ dated 21.12.1994 “On the Protection of the Population and Territories from Natural and Technogenic Emergencies” and Federal Law No. 69-FZ dated 21.12.1994 “On Fire Safety”. Fire-fighting arrangement of forests is carried out in accordance with the Rules for Fire Safety in Forests (Decree of the Government of the Russian Federation No. 1614 dated 07.10.2020) and the Standards for Fire-Fighting Arrangement of Forests (Order No. 174 of the Federal Forestry Service dated 04.27.2012).

2.3 Forest Fire Protection includes the implementation of fire safety measures in forests and extinguishing fires in forests.

2.4 Fire safety measures in forests include (in accordance with Article 53, Chapter 3 of the Forest Code of the Russian Federation):

I. prevention of forest fires;

II. monitoring of fire danger in forests and forest fires;

III. development and approval of forest fire suppression plans;

IV. forest fires suppression;

V. restrictions on the stay of people in forests in order to ensure fire safety in forests;

VI. measures to manage emergency situations in forests caused by forest fires;

VII. measures to mitigate the consequences of emergency situations in forests caused by forest fires;

VIII. other fire safety measures in forests.

2.5 Fire safety measures in forests are carried out in accordance with the forest plan of the constituent entity of the Russian Federation, the forestry regulations of the forestry and the forest development project.

2.6 Types and scope of fire prevention measures are determined taking into account the degree of fire hazard of forests and the fire prevention arrangements characteristic of the region.

2.7 The project boundary is defined as the area where the project developer has permission to carry out fire protection activities during the entire project crediting period. Project activities are carried out on lands belonging to the category of forest lands. The boundaries of the project area should be clearly delineated and documented with coordinates, maps or plans. The location of the project and its area must be specified in the project description and cannot be changed during the project implementation period. If the project area is stratified, it is necessary to provide information for each individual polygon.

2.8 The area where the project activities are carried out does not belong to the category of wetlands, incl. drained peatlands.

2.9 The implementation of the climate project is possible only in relation to those land plots that are used by the project developer:

• on the right of ownership;

• under the terms of a land plot lease agreement;

• under the terms of a land plot sublease agreement. In this case, all documents defining the relationship between the subtenant, the tenant and the owner of the land must be provided;

• on the lands of the forest fund outside the lease on the basis of other documents securing the right of the project developer to use the territory of the climate project on the lands of the forest fund, for example, on the basis of an agreement with the Federal Forestry Agency.

2.10 Climate projects in the field of forest relations are implemented by project developers in accordance with Federal Law No. 296-FZ dated 2 July 2021 "On Limiting Greenhouse Gas Emissions".

2.11 In case of a change in the regulatory framework for greenhouse gas emissions in the Russian Federation, this methodology is subject to revision in order to take into account the relevant changes.

2.12 Carbon pools and GHG sources accounted for within the project boundary are presented in Tables 2.1 and 2.2, respectively.

Table 2.1. Carbon pools included in or excluded from the project boundary.

Carbon pool	Inclusion in project boundaries
Above-ground tree biomass	Yes
Above-ground non-tree biomass (undergrowth, shrubs, dwarf subshrubs)	Optional (subject to reliable data availability)
Below-ground biomass	Optional (subject to reliable data availability)
Harvested wood products	Yes
Dead wood	Optional (subject to reliable data availability)
Litter	Optional (subject to reliable data availability)
Soil	Optional (subject to reliable data availability)

Table 2.2. GHG sources included in or excluded from the project boundary.

Source		Gas	Inclusion in project boundaries
Baseline	**Biomass burning**	CO_2	Yes
		CH_4	Yes
		N_2O	Yes
	Harvested wood products	CO_2	Yes
		CH_4	No
		N_2O	No
	Fossil fuel emissions	CO_2	Yes
		CH_4	Yes
		N_2O	Yes
Project scenario	**Biomass burning**	CO_2	Yes
		CH_4	Yes
		N_2O	Yes
	Harvested wood products	CO_2	Yes
		CH_4	No
		N_2O	No
	Fossil fuel emissions	CO_2	Yes
		CH_4	Yes
		N_2O	Yes

3. Baseline methodology

3.1 The baseline[2] is set conservatively[3] for a business-as-usual activity, taking into account all existing policies and measures, but not considering additional project activities (Business-as-usual model).

3.2 The project developer may use the following approach[4] to determine the baseline: an approach based on existing actual or historical emissions, adjusted downwards by at least 5%, unless otherwise specified in the project methodology.

3.3 The project developer (PD) should consider all possible baseline scenarios.

3.4 When developing the baseline, the project developer must select and justify the assumptions, values and procedures to ensure that greenhouse gas emission reductions or

[2] Greenhouse gas baseline, GHG baseline - quantitative reference(s) of GHG emissions and/or GHG removals that would have occurred in the absence of a GHG project and provides the baseline scenario for comparison with project GHG emissions and/or GHG removals (ISO 14064-2:2019 Greenhouse gases - Part 2)

[3] Calculation of the baseline is considered conservative if the final estimate of emission reductions resulting from project activities will not be overestimated. If there is any doubt, the project developer should better understate the baseline projection.

[4] Approaches to determining baselines are given in Action taken by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its third session (FCCC/PA/CMA/2021/10/Add.1, Article 6, paragraph 4, p. 34, para. 36). URL: https://unfccc.int/sites/default/files/resource/cma2021_10a01E.pdf.

removal enhancements cannot be overestimated, select or develop, justify and apply criteria and procedures to demonstrate that the results of the project's emission reduction or enhanced greenhouse gas removals are additional to existing ones compared to the established baseline.

3.5 The baseline reflects the level of greenhouse gas emissions that would occur in the absence of project activities. The baseline must be clearly defined so that a comparison can be made between the greenhouse gas emissions that would occur under the baseline and the GHG emission reductions that would be achieved as a result of the project activity. The baseline should include net GHG removals by forests in the project area, which are calculated taking into account the average level of emissions from fires and other disturbances over the past 10 years (taking into account tree species classes).

3.6 The established baseline should be realistic and based on verifiable sources of information according to the best available knowledge (relevant literature and/or consultation with local experts), as well as national or regional official statistics, government reports, published peer-reviewed studies in the project area, the results of interviews conducted by or on behalf of the project developer prior to the commencement of project activities.

3.7 It must be taken into account that, depending on the types of forest (protective, production or reserve forests) and the mandatory regulations that regulate the aspects of the use, contol, protection and reproduction of forests (established by articles 110 - 119 of the Forest Code of the Russian Federation), the list of mandatory activities within the project boundaries may vary, which must be taken into account when developing the baseline.

3.8 To quantify the baseline GHG balance, project developers should use generally accepted methodologies, which include:

• 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

• 2003 IPCC Good Practice Guidelines for Land Use, Land-use Change and Forestry.

• Decree No. 15-r of the Ministry of Natural Resources and Environment of Russia dated 16 April 2015 "On approval of guidelines for conducting a voluntary inventory of greenhouse gas emissions in the constituent entities of the Russian Federation".

• Decree No. 20-r of the Ministry of Natural Resources and Environment of Russia dated 30 June 2017 "On approval of guidelines for quantifying the volume of greenhouse gas absorption"[5].

[5] In the case of zero stocks of certain age groups, average regional values should be used in the calculations.

• Order No. 371 of the Ministry of Natural Resources and Environment of the Russian Federation dated 27 May 2022 "On approval of methods for quantifying greenhouse gas emissions and greenhouse gas removals".

3.9 When calculating the baseline, it is allowed to use models for accounting for the carbon balance in forests (for example, CBM-CFS3, CO2FIX, Romul_hum model, etc.).

3.10 The project baseline quantification is given for the following gases - CO_2, N_2O and CH_4 in accordance with Table 2.2.

3.11 The main reservoirs (pools), changes in which are accompanied by emissions or removals of greenhouse gases, are indicated in Table 2.1.

3.1 Emissions and/or removals of GHGs should be estimated for each source, sink or pool relevant to the baseline. An assessment of the biomass pool and other mandatory pools indicated in Table 2.1 is mandatory within the framework of forest climate projects; for the remaining pools it is necessary to provide evidence that these pools are not additional sources of greenhouse gas emissions. These additional pools can be estimated if reliable data is available.

3.2 The unit of measurement should be metric tons, and the volumes of each greenhouse gas should be converted to tons of CO_2 equivalent (CO_2eq).

3.3 Additionally, all greenhouse gas emissions associated with the combustion of fossil fuels from equipment, machines and mechanisms that are used in the project area are assessed.

3.4 The project developer should provide a detailed description of how the baseline was calculated and provide these calculations with a description of all the steps that were taken to perform the calculations (i.e. data collection, selection or development of methodology, coefficients, etc.), and provide all the results obtained as a result of the calculations.

3.5 If the applied methodologies, applied standardized baselines or other applied methodological normative documents include different baseline conditions or provide a choice of different options and/or default values, the project developer should justify his choice.

3.6 The total annual carbon balance in year *t* ($\Delta C_{BSL,t}$) for the baseline scenario is calculated as:

$$\Delta C_{BSL,t} = \Delta C_{BSL,LB,t} + \Delta C_{BSL,DOM,t} + \Delta C_{BSL,HWP,t} \qquad (1)$$

where:

$\Delta C_{BSL,LB,t}$ – annual change in carbon stocks in living tree biomass (above- and below-ground), t C yr^{-1}

$\Delta C_{BSL, DOM, t}$ – annual change in carbon stocks in dead organic matter (dead wood and litter), t C yr^{-1}

$\Delta C_{BSL, S, t}$ – annual change in carbon stocks in soil, t C yr^{-1}

$\Delta C_{BSL,HWP, t}$ – annual change in carbon stocks in harvested wood products, t C yr^{-1}.

3.7 If the project area has been stratified, carbon pools are calculated for each polygon *i*, and then summed for a given year *t*.

3.8 Methodology for quantitative determination of greenhouse gas emissions, approved by Order No. 371 of the Ministry of Natural Resources and Environment of Russia dated 27 May 2021, should be used to quantify the GHG emissions from vehicles and machinery (see Equation 2). Emissions from the total mass of fossil fuel consumption by vehicles involved in mechanized activities during a full calendar year within the project boundaries should be estimated. The baseline takes into account the annual fuel consumption for all activities according to the historical data for the previous 10 years of activity.

$$C_{FUEL} = \sum_{k=0}^{n} Vk * EFk \qquad (2)$$

where,

C_{FUEL} – CO_2 emissions from fuel combustion, tons;
Vk – volume of fuel *k* combusted;
EFk – coefficient of CO_2 emission from fuel *k* combustion.

3.9 The calculation should include various types of fuels produced using fossil energy resources, including gasoline, kerosene, diesel fuel, etc.

3.10 Estimation of direct emissions of greenhouse gases (CO_2, CH_4, N_2O) from fires is carried out according to formula 3 (IPCC, 2006):

$$L_{fire} = A * MB * Cf * Gef * 10^{-3} \qquad (3)$$

Where,

L_{fire} – the amount of greenhouse gas emissions from the fire; tons of each greenhouse gas, e.g., CO_2, CH_4, N_2O;

A – area burned, ha;

MB – mass of fuel available for combustion, tons/ha^{-1}. This includes biomass, ground litter and dead wood;

Cf – combustion factor, dimensionless. Values of 0.43 for top fire and 0.15 for bottom fire are used;

Gef – emission factor, g kg^{-1} of dry matter burned (see table 3.1, IPCC, 2006).

Table 3.1 – Emission factors for the main greenhouse gases from fires, g kg^{-1} of substance burned (use for Gef).

Category	**CO_2**	**CH_4**	**N_2O**
Forest	1569±131	4.7±1.9	0.26±0.07

3.11 Loss of biomass and carbon as a result of wood removal (logging) in the project area is calculated using formula 4 (IPCC, 2006):

$$L_{wood\text{-}removals} = H * BCEF_R * (1 + R) * CF \qquad (4)$$

Where:

$L_{wood\text{-}removals}$ – annual carbon loss due to biomass removals, t C/yr;

H = annual wood removals, roundwood, m^3/yr;

R = ratio of below-ground biomass to above-ground biomass (t d.m. of below-ground biomass) / (t d.m. of above-ground biomass). R must be set to zero if assuming no changes of below-ground biomass allocation patterns;

CF = carbon fraction of dry matter, t C/(t d.m.);

$BCEF_R$ = biomass conversion and expansion factor for conversion of removals in merchantable volume to total biomass removals (including bark), tons of biomass removal / (m^3 of removals), (see Table 4.5 IPCC, 2006: vol. 4, chapter 2). If $BCEF_R$ values are not available and if the biomass expansion factor for wood removals (BEF_R) and basic wood density (D) values are estimated separately, then the following conversion can be used:

$$BCEF_R = BEF_R * D \qquad (5)$$

3.12 Where applicable, procedures to account for uncertainty of GHG emissions/removals, data and parameters related to baseline calculation shall be applied in accordance with the requirements set out in the methodology.

3.13 Methods used for estimating uncertainty shall be based on recognized statistical approaches such as those described in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.

3.14 Confidence deductions shall be applied using conservative factors such as those specified in the CDM Meth Panel guidance on addressing uncertainty in its Thirty Second Meeting Report, Annex 14[6].

4. Project crediting period

4.1 The starting date of project activities is not regulated.

4.2 The crediting period for emission reduction projects is a maximum of 15 years; it can be renewed twice (45 years in total). For this type of projects, implying timber harvesting, the duration of the crediting period must include at least one complete harvesting/cutting cycle.

4.3 The crediting period begins no earlier than 5 years prior to applying for validation for projects validated until 31 December 2025, and no earlier than 2 years prior to applying for validation for projects validated after 1 January 2026.

4.4 The additionality and baseline shall be evaluated at the beginning of the crediting period and confirmed or re-evaluated at the beginning of the next 15-year phase if the project is conducted in three 15-year phases.

5. Additionality

5.1 Additionality shall be demonstrated using Guidelines No. 001 Demonstration of the additionality of the project activity.

5.2 When checking and/or selecting additional measures, the project developer should be guided by the mandatory requirements set forth in the following documents in accordance with the Forest Code of the Russian Federation: the project of the territory (forestry), the forest development project (FDP) of the tenant, the forestry regulations, the forest inventory project, the forest plan of the constituent entity of the Russian Federation.

6. Monitoring plan requirements

6.1 The purpose of monitoring is to conduct field measurements that can be used to evaluate the reduction (prevention) of greenhouse gas emissions or increase in carbon stock as a result of project activities.

6.2 During the entire crediting period of the project, monitoring should be carried out at least once every five years.

6.3 The PD should establish criteria for identifying sites for regular monitoring, and develop and implement a monitoring plan that reflects measurement procedures that include

[6] Chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cdm.unfccc.int/Panels/meth/meeting/08/032/mp_032_an14.pdf

obtaining, recording, summarizing and analyzing data and information necessary for quantification and reporting changes in the carbon stocks in the carbon pools associated with the project and the baseline scenarios.

6.4 When implementing projects to protect forests from fires, the achieved changes in carbon stocks in the pools presented in Table 6.1 should be regularly assessed.

Table 6.1 Data assessed during monitoring.

#	Data	Data unit
1	Carbon stock in above-ground tree biomass	t C/ha
2	Carbon stock in below-ground biomass (non-tree)	t C/ha
3	Carbon stock in below-ground biomass	t C/ha
4	Carbon stock in dead wood	
5	Carbon stock in soil	t C/ha
6	Carbon stock in litter	t C/ha

6.5 During monitoring, it is necessary to periodically estimate the carbon stocks changes in the pools using the calculation method. Estimation of the actual amount of GHG emission reductions can be made using the stock-difference method for certain periods of time or on the basis of the gains-loss approach (the difference between carbon accumulation and its losses due to disturbances). As part of monitoring, it is also necessary to assess the non-permanence risk and evaluate leakage.

6.6 To assess biomass stocks, the forest stand, seedlings and undergrowth of tree species within the project boundaries are taken into account. The stand includes trees with stem diameter of more than 8 cm at the height of 1.3 meters. Young trees with stem diameter of less than 8 cm at the height of 1.3 meters are considered undergrowth. The inventory is conducted by methods that ensure the identification of the number of trees, seedlings and undergrowth with an error of no more than 10 percent. Thirty plots are established in areas up to 5 hectares, 50 plots from 5 to 10 hectares, and 100 plots over 10 hectares. The size of survey plots is 400 m^2 for growing stock surveys and 100 m^2 for undergrowth surveys. The species, height, and stem diameter at the height of 1.3 meters are taken into account. Self-seeding of 1-2 years old is not considered.

6.7 Project monitoring allows the use of remote forest canopy survey methods (satellite images, data from unmanned aerial vehicles) in addition to ground-based monitoring sites. In this case, the number of ground-based monitoring sites can be reduced by 50%.

6.8 A necessary condition for the use of remote sensing methods is the ability to estimate the number of trees indicating the taxon (species, subgenus, genus of trees) and determine the height and diameter of the crown of trees in the project area, for dead wood – determine the diameter and length of parts of trunks and large branches.

6.9 Depending on the initial data obtained, the calculation of the amount of different phytomass fractions is carried out using allometric models[7], including crown diameter and tree height as parameters:

$$\ln P_i = a_0 + a_1 \ln H + a_2 \ln D_{cr}, \qquad (6)$$

or tree height and trunk diameter:

$$\ln P_i = a_0 + a_1 \ln H + a_2 \ln DBH, \qquad (7)$$

Where,

P_i - biomass in absolutely dry state of stems with bark, branches skeleton, needles (foliage), above-ground parts and roots (*Pst*, *Pbr*, *Pf*, *Pa* and *Pr*, respectively – according to Usoltsev et al.,2016), kg;

H – tree height, m;

D_{cr} – crown diameter, m;

DBH – stem diameter at breast height, cm;

$a0, a1, a2$ – constants of equations 6 and 7.

6.10 The constants of equations 6 and 7 can be taken from V. A. Usoltsev et al., 2016, and also, in the absence of data for individual species, from the available scientific literature.

6.11 A factor of 0.5 is used to convert biomass to carbon.

6.12 In the absence of equation coefficients for Pr, information on below-ground biomass stocks can be taken from scientific publications (Schepaschenko et al, 2018; Usoltsev, 2010), etc. If it is not possible to use them in the project area, the ratio of above-ground biomass to

[7] V.A. Usoltsev., Yu.V. Noritsina, D.V. Noritsin, V.P. Chasovskikh, A.K. Gabdelkhakov, A.S. Kasatkin, A.S. Zhanabaeva Allometric models of phytomass of deciduous trees of Eurasia and prospects for their use in remote sensing of forests // Eco-potential. - 2016. - No. 1 (13). – P. 7–19.

below-ground biomass is applied, which is assumed to be 0.39 (if the above-ground biomass stock is less than 75 t/ha) or 0.24 (if the above-ground biomass stock is more than 75 t/ha) according to the IPCC (2006).

6.13 Other equations can be used to estimate the phytomass of trees, for example, in Utkin et al., 1996, the amount of carbon in the stand biomass pool is calculated using allometric equation 8 for each tree species:

$$C_{biomass} = 0.5 \sum (a\ (d_i^2 h_i)^b) \qquad (8)$$

Where,

$C_{biomass}$ – carbon in forest stand biomass, kg of absolutely dry weight;

0.5 – biomass-to-carbon conversion factor;

d_i – stem diameter *i* at a height of 1.3 m, cm;

h_i – tree height *i*, m;

a и *b* – coefficients of the allometric equation for different fractions and tree species (according to Utkin et al., 1996).

6.14 Calculation of the amount of carbon in above-ground biomass for each type of undergrowth and underbrush is carried out according to equation 9:

$$C_{aboveground\_biomass} = 0.5 \sum (a\ h_i^b) \qquad (9)$$

Where,

$C_{aboveground\_biomass}$ – the amount of carbon in the above-ground biomass of undergrowth/ underbrush, kg;

0.5 – biomass-to-carbon conversion factor;

h_i – height of undergrowth stems of trees/shrubs, m;

a и *b* – coefficients of the allometric equation for above-ground biomass (according to Utkin et al., 1996).

6.15 Additional allometric equations and equation parameters for determining tree biomass and stem wood volume, as well as wood density data and coefficients to estimate tree biomass from wood volume data, are available at: http://www.globallometree.org/ (registration required).

6.16 Performing representative measurements of carbon stock dynamics in small dead wood (branches less than 5 cm in diameter) in the litter and soil pools involves the establishment of permanent sample areas, within which random sampling will be performed throughout the duration of the project. Depending on the total area of the territory allocated for the project, each sample area should be from 0.5 to 1 hectare.

6.17 When selecting a sampling scheme, the scale of the project area and key environmental parameters (e.g., topography) should be taken into account. The latter can serve as a stratification parameter, and it is necessary to ensure that spatial heterogeneity of the territory is taken into account to the fullest possible extent.

6.18 Large dead wood is measured on linear transects. The dimensions of all fragments of dead wood, the largest diameter of which is at least 5 cm, are taken into account. Measurements are made of the largest and smallest diameters, the diameter at the intersection with the transect line and the total length of the fragment.

6.19 The degree of dead wood decomposition is assessed by grades:

- Grade 1 – full bark coverage, both small and large twigs are present, leaves or needles may be present, wood is hard;
- Grade 2 – bark is starting to peel off, small branches are partially or completely missing, no signs of visible wood decay;
- Grade 3 – bark is partially absent, only large branches are present, wood decomposition is noticeable;
- Grade 4 – bark is absent or covers an insignificant part of the fragment, branches are absent, wood decomposition is high - the heel can be pressed through a significant part of the trunk, the trunk retains a rounded shape;
- Grade 5 – bark is completely absent, no branches, destroyed by heel to the full depth of the diameter, the shape of the cross-section of the trunk is highly deformed.

6.20 Calculation of the volumes of dead wood differentiated by decomposition grades and species is made using Equation 10:

$$V_{deadwood} = \frac{1}{3}\pi h(r_1^2 + r_1 * r_2 + r_2^2) \qquad (10)$$

Where:

π – constant (=3.14);

r_1 - upper base radius, cm;

r_2 - bottom base radius, cm;

h – trunk length, cm.

6.21 Conversion from volume to mass of dead wood was made using density values from Table 6.2.

Table 6.2 Density of dead wood by decomposition class[8].

[8] Krankina O.N., Harmon M.E. Dynamics of the Dead Wood Carbon Pool in Northwestern Russian Boreal Forests // Water, Air and Soil Pollution. 1995. V. 82. P. 227–238.

Decomposition grade	Density, **g cm^{-3}**	
	coniferous	**deciduous**
1	0.378	0.502
2	0.319	0.472
3	0.226	0.284
4	0.109	0.126
5	0.065	0.126

6.22 Small pieces of dead wood with a diameter of less than 5 cm are selected on plots of 50 cm x 50 cm in 10 replicates randomly within each permanent sample area ranging in size from 0.5 to 1 ha.

6.23 Samples of small dead wood are dried to a completely dry state and weighed. Then the fractions of large and small dead wood are summed up.

6.24 The conversion of dead wood mass to carbon is carried out using a factor of 0.5.

6.25 Litter sampling is carried out on plots of 50 cm x 50 cm in 10 replicates within each sample area. Litter samples are dried to a completely dry state and weighed. Calculation of the carbon stock in the litter pool is carried out by multiplying the absolute dry weight of the sample by the average carbon content, which is assumed to be 0.4.

6.26 Soil sampling is carried out in accordance with GOST 17.4.3.01-2017 ("Soils. General Requirements for Sampling") and GOST 17.4.4.02-2017 ("Soils. Methods of Sampling and Sample Preparation for Chemical, Bacteriological, Helminthological Analysis").

6.27 Soil sampling is carried out taking into account the vertical structure, heterogeneity of the soil cover, relief and climate of the area, as well as taking into account the characteristics of pollutants or organisms. Sampling is carried out on sample areas laid out in such a way as to exclude the distortion of the results of analyzes under the influence of the environment. It is advisable to mark the test site on the coordinate grid, indicating their numbers and coordinates.

6.28 Samples are taken along the profile from soil horizons or layers in such a way that in each case the sample is a part of the soil typical of the genetic horizons or layers of this soil type. When studying changes in soil carbon stocks, samples are taken from the horizon from a depth of 0 to 5 cm and from 5 to 20 (maximum up to 30) cm.

6.29 At least one combined (mixed) sample weighing at least 1 kg should be taken from a sample area of 0.5 to 1 ha, consisting of 5-10 point samples.

6.30 Soil samples for chemical analysis are dried to an air-dry state in accordance with GOST 17.4.3.01–2017. Air-dry samples are stored in cloth bags, in cardboard boxes or in glass containers. To determine chemical substances, in the laboratory, a soil sample is scattered on paper or tracing paper and large lumps are kneaded with a pestle. Then inclusions are taken out, such as plant roots, insects, stones, glass, coal, animal bones, as well as new formations - gypsum druses, lime nodules, etc. The soil is ground in a mortar with a pestle and sifted through a sieve with a hole diameter of 1 mm. The new formations are analyzed separately and should be prepared for analysis in the same way as the soil sample.

6.31 Chemical analysis for the total content of soil organic matter is carried out in accordance with GOST 26213-91 ("Soils. Methods for Determination of Organic Matter") according to the Tyurin method in the modification of TsINAO. The carbon content in soil organic matter is assumed to be 58%. Conversion into the soil carbon stock is made taking into account the volumetric mass of the soil (g cm^{-3}) according to equation 11.

$$C = \sum_{i=1}^{n} \left(\frac{H_i}{100} \frac{K_C}{100} \frac{(100 - K_{Si})}{100} D_i \, L_i \, K_{met} \times 10 \right) \qquad (11)$$

Where:

C – soil carbon stocks for the soil layer or litter, kg/m^2; n is the number of horizons in the soil profile;

H_i – content of organic matter in a particular soil horizon, %;

K_C – organic matter carbon content (0.58), %;

K_{Si} – stone content of the horizon, %;

D_i – horizon density, g/cm^3;

L_i – horizon thickness, cm;

K_{met} – correction factor relative to the method for determining the content of organic matter according to Tyurin;

10 – g/cm^2 to kg/m^2 conversion factor.

6.32 The monitoring plan should include the following:

- the purpose of the monitoring;
- the list of parameters to be measured and monitored;
- types of data and information to be reported, including the units of measurement;
- sources of data;

- monitoring methodologies, including the sampling procedure according to available national methodologies and their representativeness, evaluation, modeling, measurement, calculation approaches and uncertainty;
- the frequency of monitoring, taking into account the needs of the intended users;
- roles and responsibilities of participants related to monitoring, including procedures for authorizing, approving, and documenting changes in recorded data;
- control procedures, including internal validation of input data, conversions, and output data, and procedures for corrective actions;
- GHG information management systems, including data hosting and security, and data management, including procedures for transferring data between different types of systems or documentation.

6.33 Where monitoring tools and equipment are used, the PD shall ensure that they are properly applied, maintained, meet the requirements of this methodology, and are comparable with generally accepted methodologies and approaches to GHG inventory (see para 3).

6.34 The PD shall apply monitoring criteria and procedures in accordance with the monitoring plan. All data and information related to project monitoring shall be recorded and documented.

6.35 Where applicable, procedures to account for uncertainty in GHG emissions/reductions, data and parameters associated with the monitoring procedure shall be applied in accordance with the requirements set out in the methodology.

6.36 Methods used for estimating uncertainty shall be based on recognized statistical approaches such as those described in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.

6.37 Confidence deductions shall be applied using conservative factors such as those specified in the CDM Meth Panel guidance on addressing uncertainty in its Thirty Second Meeting Report, Annex 14.[9]

7. Project scenario

7.1 The project developer shall provide a detailed description of how GHG emissions and GHG emission reductions to be achieved as a result of the proposed project activity (project scenario) have been calculated and provide these calculations for each year of the crediting period. The project developer should also describe all the steps that were taken to carry out

[9] Chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cdm.unfccc.int/Panels/meth/meeting/08/032/mp_032_an14.pdf

these calculations (i.e. data collection, selection or development of methodology, coefficients, etc.) and provide all the results obtained from the calculations.

7.2 The project scenario used for the project area should be estimated in accordance with generally accepted methods, such as:

- 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
- 2003 IPCC Good Practice Guidelines for Land Use, Land-use Change and Forestry.
- Decree No. 15-r of the Ministry of Natural Resources and Environment of Russia dated 16 April 2015 "On approval of guidelines for conducting a voluntary inventory of greenhouse gas emissions in the constituent entities of the Russian Federation"
- Decree No. 20-r of the Ministry of Natural Resources and Environment of Russia dated 30 June 2017 "On approval of guidelines for quantifying the volume of greenhouse gas absorption"[10]
- Order No. 371 of the Ministry of Natural Resources and Environment of the Russian Federation dated 27 May 2022 "On approval of methods for quantifying greenhouse gas emissions and greenhouse gas removals".

7.3 Quantification is provided for the following gases: CO_2, N_2O and CH_4.

7.4 Carbon stocks and carbon budget are estimated for the pools shown in Table 2.1. The set of pools in the baseline and in the project scenario must match.

7.5 For the predictive assessment of carbon stocks in biomass, it is also possible to use systems of models such as EFIMOD, FORRUS, ROMUL, CO2-fix, etc. A combination of the EFIMOD 2 stand dynamics model, the Romul_Hum soil organic matter dynamics model and the SCLISS soil climate model can be used. In this case, the project developers must indicate which model is used, and describe in detail the input data and their sources.

7.6 If underground biomass pool is selected for assessment, then the carbon stock projection should be modeled in both the baseline and project scenarios.

7.7 If the applied methodologies, applied standardized project conditions or other applied methodological normative documents include different scenarios or cases, or provide different options and/or default values to choose from, project participants should justify their choice.

7.8 Net GHG emission reductions or removal enhancements resulting from the project activity should be quantified. Metric tons should be used as the unit of measurement, and volumes

[10] In the case of zero stocks of certain age groups, average regional values should be used in the calculations.

of each greenhouse gas should be converted to tons of CO_2 equivalent (CO_2-eq). All GHG emission reductions must be converted into CO_2-eq.

7.9 The total annual carbon balance in year *t* ($\Delta C_{PRJ,\ t}$, t C yr^{-1}) for the project scenario is calculated as:

$$\Delta C_{PRJ,\ t} = \Delta C_{PRJ,\ LB,\ t} + \Delta C_{PRJ,\ DOM,\ t} + \Delta C_{PRJ,\ S,\ t} + \Delta\ C_{PRJ,HWP,\ t} \qquad (12)$$

where:

$\Delta C_{PRJ,\ LB,\ t}$ – annual change in carbon stocks in living tree biomass (above- and below-ground) as a result of project activity, t C yr^{-1};

$\Delta C_{PRJ,\ DOM,\ t}$ – annual change in carbon stocks in dead organic matter (dead wood and litter) as a result of project activity, t C yr^{-1};

$\Delta C_{PRJ,\ S,\ t}$ – annual change in carbon stocks in soil, as a result of project activity, t C yr^{-1}.

$\Delta\ C_{PRJ,HWP,\ t}$ – annual change in carbon stocks in harvested wood products, t C yr^{-1}.

7.10 If the project area has been stratified, carbon pools are calculated for each polygon *i*, and then summed for a given year *t*.

7.11 The operation of any equipment in the project area is accompanied by greenhouse gas emissions and requires a quantitative assessment. Estimation of greenhouse gas emissions from equipment used in firefighting activities is carried out applying methodology for quantitative determination of greenhouse gas emissions, approved by Order No. 371 of the Ministry of Natural Resources and Environment of Russia dated 27 May 2021 (see Equation 8) for calculations based on data on consumed fuel. Greenhouse gas emissions from operating machinery are differentiated depending on its type and the type of fossil fuel used.

7.12 Calculation of CO_2 emissions from fossil fuel combustion in the project area is carried out according to:

$$C_{FUEL} = \sum_{k=0}^{n} Vk * EFk \qquad (13)$$

where:

C_{FUEL} – CO_2 emissions from fuel combustion, tons;
Vk – volume of burned fuel *k*;
EFk – coefficient of CO2 emission from fuel *k* combustion.

7.13 The calculation should include various types of fuels produced using fossil energy resources, including gasoline, kerosene, diesel fuel, etc.

7.14 The method for estimating the annual biomass carbon loss due to wood-removals in the project area is provided in equation 14 (IPCC, 2006):

$$L_{wood\text{-}removals} = H * BCEF_R * (1 + R) * CF \qquad (14)$$

Where:

$L_{wood\text{-}removals}$ – annual carbon loss due to biomass removals, t C/yr^{-1};

H – annual wood removals, roundwood, m^3/yr^{-1};

R – ratio of below-ground biomass to above-ground biomass (t d.m. of below-ground biomass / (t d.m. of above-ground biomass). R must be set to zero if assuming no changes of below-ground biomass allocation patterns;

CF – carbon fraction of dry matter, t C / (t d.m.);

$BCEF_R$ – biomass conversion and expansion factor for conversion of removals in merchantable volume to total biomass removals (including bark), tons of biomass removal / (m^3 of removals), (see Table 4.5 IPCC, 2006: vol. 4, chapter 2). If $BCEF_R$ values are not available and if the biomass expansion factor for wood removals (BEF_R) and basic wood density (D) values are estimated separately, then the following conversion can be used:

$$BCEF_R = BEF_R * D \qquad (15)$$

7.15 The GHG emission reductions or enhanced removals that are expected to be achieved as a result of the project activity is calculated as the difference in carbon stocks in the selected carbon pools between the project scenario and the baseline scenario, taking into account any project N_2O, CH_4 and CO_2 emissions from fossil fuels, and emissions from leakage.

7.16 Where applicable, procedures to account for uncertainty in GHG emissions/reductions, data and parameters associated with the project scenario shall be applied in accordance with the requirements set out in the methodology.

7.17 Methods used for estimating uncertainty shall be based on recognized statistical approaches such as those described in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.

7.18 Confidence deductions shall be applied using conservative factors such as those specified in the CDM Meth Panel guidance on addressing uncertainty in its Thirty Second Meeting Report, Annex 14.[11]

[11] Chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cdm.unfccc.int/Panels/meth/meeting/08/032/mp_032_an14.pdf

8. Leakage assessment, including market leakage, activity shifting leakage and ecological leakage. Leakage prevention methods

8.1 Leakage is the phenomenon through which efforts to reduce emissions in one place simply shift emissions to another location or sector where they remain uncontrolled or uncounted. Leakage is an inherent risk in carbon projects and programs. The level of leakage risk depends on what causes the baseline emissions and on the design of the carbon projects or programs, i.e. on how well they mitigate risks. The leakage management approach should include identifying, elimination, monitoring and quantifying carbon leakage throughout the whole cycle of the project, and subtracting that leakage from the estimated number of GHG emission reductions or removals that can be issued as carbon credits.

8.2 According to Order No. 248 of the Ministry of Economic Development of Russia dated 11 May 2022, project activities should not lead to an aggregate increase in greenhouse gas emissions or reduce their absorption levels outside the scope of such activities.

8.3 At the same time, it is necessary to consider and take full account of the existing leakages initiated by the project activities.

8.4 Greenhouse gas emissions from leakage can be determined either directly from monitoring as recommended in section 6 above, by calculation methods in accordance with the IPCC (2006) methodologies, or indirectly when the leakage is difficult to control directly but scientific knowledge provides reliable estimates of the likely impact, in accordance with this methodology.

8.5 There are three types of leakage:

1) Market leakage occurs when projects significantly reduce the production of a commodity causing a change in the supply and demand equilibrium that results in a shift of production elsewhere to make up for the lost supply (e.g. if fewer trees are cut down by the project activity, while the demand for wood products remains at the same level, which is likely to lead to an increase in felling in other areas). To assess a possible market leakage, it is necessary to analyze data on the current logging volumes in the administrative region of the project in comparison with historical data for the 5 years preceding the project, as well as with the planned logging volumes for the current year in the relevant documents (forest development project (FDP) of the tenant, forest plan of the constituent entity of the Russian Federation, forest inventory project, forest development project, forestry regulation of the forestry). In the event that current harvesting volumes are reduced by more than 15% from planned and historical data, these volumes are converted from m3 of harvested wood to carbon using equation 14 and subtracted from the project results achieved. Alternatively, the project developer may provide reasonable information to the

validation and verification body proving that the decline in logging in the administrative region was beyond the control of the project activity.

2) Activity Shifting leakage is related to activities that directly cause carbon-emitting activities to be shifted to another location outside of the project boundaries, cancelling out some or all of the project's carbon benefits (for example, when the level of protection of forests from fires decreases outside the project boundary, forest degradation moves to an area outside the project boundary and continues elsewhere). In order to assess possible leakages due to activity shifting, it is recommended to analyze data on current annual fire areas and forest mortality caused by fires outside the project area in the relevant administrative region in comparison with the historical data for the 5 years preceding the project. If this level is exceeded by 50%, 15% of the achieved reductions in emissions / increase in removals in tons of CO_2-eq. should be deducted from the project results for the respective year. Alternatively, the project developer may provide the validation and verification body with reasonable information proving that in the adjacent territory within the given administrative region, the number and scale of measures to protect forests from fires have not decreased compared to the average level for the 5 years preceding the project. Alternatively, the project developer may provide reasonable information to the validation and verification body proving that the increase in the area of fires and forest mortality outside the project area in the relevant administrative region does not depend on the project activity.

3) Ecological leakage occurs when the project activity causes changes in GHG emissions or fluxes of GHG emissions from ecosystems that are hydrologically connected to the project area (for example, when machinery used in any type of work in the project area disturbs the soil cover beyond its boundaries). In this case, it is necessary to assess the degree of disturbance of adjacent ecosystems as a result of the implementation of the project activity and to estimate the loss of carbon pools in them: above- and below-ground biomass, dead wood, litter and soil in accordance with paragraph 8.4 above.

8.6 Leakage occurring outside the host country (international leakage) does not need to be quantified.

8.7 Projects should not consider positive leakage (i.e., where GHG emissions decrease or removals increase outside the project area due to project activities).

9. Non-permanence risk analysis

9.1 Overall risk management should be carried out in accordance with GOST R ISO 31000-2019. National Standard of the Russian Federation. Risk Management. Principles and

Guidance (approved and put into effect by Rosstandart Order No. 1379-st dated 10 December 2019).

9.2 The risk of non-permanence for projects falling under the Forest Fire Protection category is the loss of all or part of the carbon benefits generated by the project as a result of the termination of additional fire safety activities.

9.3 When developing project documentation for the climate project, the project developer envisages possible risks of force-majeure catastrophic events, the occurrence and development of which may fully or partially eliminate the positive result accumulated by the time of such occurrence. Generally, such phenomena include force-majeure events, primarily various natural phenomena (e.g., hurricanes, earthquakes, floods, destruction of forest stands by forest pests and diseases, etc.). Such circumstances may also include accidents and catastrophes of man-made nature if hazardous production facilities are located in close proximity to the climate project area.

9.4 To minimize the negative consequences of force-majeure catastrophic events, the project developer has the right to develop additional measures to prevent or reduce the probability of such events. Development and implementation of such measures will significantly reduce the risks of elimination of the accumulated positive effect of the climate project. A plan for these additional activities should be submitted at the stage of project validation and a report on its implementation should be submitted at each verification of project activities.

9.5 If catastrophic events occur during the implementation of the climate project, the developers shall take all actions possible on their part to reduce the negative impact.

9.6 The fact of occurrence of catastrophic events, as well as measures taken by the project developer to mitigate negative impacts, shall be recorded, documented and submitted to the validation/verification body to prove that these catastrophic events could not have been prevented.

9.7 If the project developer implemented additional measures to reduce the risk of hazardous events in accordance with paragraph 9.4 above, the project developer shall not be responsible for the state of the project areas and the increase in the amount of greenhouse gas emissions emitted from them, if it proves that the resulting force-major catastrophic events were beyond his control, they could not reasonably be expected or avoided, or overcome.

9.8 In this case, the amount of greenhouse gas emissions of both the baseline and the project scenario is recalculated, starting from the date of completion of the catastrophic event.

9.9 For the implementation of the climate project, it is recommended to develop a system for assessing risks that may arise at all stages of the climate project. To do this, the project developer should draw up a detailed matrix indicating the following information:

1. The main stages of the implementation of the climate project.

2. Description of the risks that may arise at each stage of the climate project.

3. Description of the probability of occurrence of risks. For this, the rating options “low, medium, high” or any other understandable numerical scales can be used.

4. Description of the impact of each risk on the results of the entire climate project. This can also be done using “low, medium, high” or any other understandable numerical scale.

5. Description of the period of influence of each risk for the entire period of preservation of the results of the climate project.

6. For each risk, measures are developed to minimize or prevent it (if such actions are possible in relation to each described risk situation).

7. The time for the implementation of each measure that reduces or prevents the occurrence of risks (if such actions are possible in relation to each described risk situation) is indicated (Table 9.1).

9.10 The project developer has the right to include in the project documentation other additional information related to the possible risks of loss or significant reduction of the useful result of the climate project.

9.11 The project developer is obliged to take into account the risks of non-permanence for the purpose of the overall assessment of the feasibility of implementing a climate project in the selected area.

9.12 Mechanism to minimize the risk of non-permanence:

• It is necessary to provide guarantees that the results of the project will be preserved for 100 years. For every 10 years that are not covered by guarantees, 3% of the issued carbon credits must be discounted.

• To minimize the non-permanence risk and force majeure after the end of the crediting period, 15% of the carbon credits issued must be discounted for each issue of carbon credits.

Table 9.1. An example of a risk matrix.

Stage of climate project implementation	**Description of risks**	**Probability of occurrence**	**Impact on the project**	**Impact period**	**Risk minimization methods**	**Implementation period**

		1. low 2. medium 3. high	1. low 2. medium 3. high	1. Preparation period 2. 1-2 years after the implementation 3. The entire period of the climate project	Detailed description of mitigation measures for each risk	Description of the time frame for the implementation of these activities
		Scale from 1 to 5 or others	Scale from 1 to 5 or others			

10. Methods to prevent double counting, negative impacts on the environment and society

10.1 The activities of any forest climate project must not have a negative impact on the environment or local communities. The project developer must identify and mitigate any negative environmental and socio-economic impacts of the project activities, as well as interact with local stakeholders during the development and implementation of the project. Actions that deplete natural ecosystems and lead to the deterioration of ecosystem functions of forests do not fit the definition of a forest climate project and are not eligible for carbon crediting. The description of the project must contain evidence that the project area has not been drained and natural ecosystems have not been transformed. Project activities should not include impact on the hydrology or otherwise affect the hydrological regime of adjacent areas.

10.2 As part of the implementation of the climate project, it is recommended to promote the Sustainable Development Goals in accordance with GOST R ISO 14080-2021.

10.3 The climate project must demonstrate compliance with all legal requirements in the jurisdiction where it is located. The project developer must provide information on whether there is a risk that his project could lead to negative impacts on local communities, biodiversity and the environment. Such projects must not result in increased pollution of the atmosphere, soil, surface and ground waters, as well as conflicts between communities, land tenure issues, forced evictions, violations of human rights, or deterioration in health and well-being due to limited access to forests and other natural areas. Appropriate information shall be provided to the validation and verification body.

10.4 Additionally, the project developer must justify that the project is not associated with, and is not complicit in, significant conversion or degradation of critical natural habitats, including those that are:

(a) protected by law;

(b) formally proposed for protection;

(c) recognized by authoritative sources due to their high conservation value;

(d) recognized as protected by traditional local communities.

10.5 The project developer should also demonstrate that the project respects internationally proclaimed human rights, including the dignity, cultural values and uniqueness of indigenous peoples. The project is not involved in human rights violations.

10.6 As part of the implementation of the climate project, the project developer may additionally conduct an environmental impact assessment in accordance with Principle 6 of the Russian Forest Etalon standard[12].

10.7 In order to avoid double counting, project results registered in the national register cannot be re-registered in other registers.

10.8 In the event that the facilities within the project boundary specified in this methodology are owned by different legal entities (or are under the operational management of different legal entities), the project documentation should include a description of the procedures to exclude the possibility of double counting of greenhouse gas emission reductions, potentially achieved as a result of the project activities, fixed in contractual agreements. It is also recommended that the validation/verification body exclude double counting of the same project (climate project area), as a result of applications submitted by different legal entities, during the climate project validation procedure at the stage preceding its registration in the National Register.

10.9 The validation/verification body also needs to keep track of the number of carbon credits issued to avoid double crediting of carbon credits for the same GHG emission reduction (prevention) or increase in GHG removal.

11. Recommendations for updating or keeping the baseline unchanged at the renewal of the crediting period and project activity

11.1 Baseline should be updated in the following cases:

• when extending the crediting period;

[12] https://forest-etalon.org/

• in case of occurrence of force-majeure circumstances beyond the control of the project developer.

11.2 When extending the crediting period, the project is subject to validation and technical review by the validation and verification body to determine the necessary updates to the baseline, additionality and quantification of emission reductions (removal increases).

11.3 To update the baseline, the definition of the baseline, the main parameters and assumptions used in the analysis are revised. The baseline must reflect the conditions for the start of a new crediting period and be valid during that period.

11.4 When the crediting period is renewed, additionality is checked against the criteria under Guidelines No. 001 at the start date of the new crediting period.

12. Normative references

1. 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4. Agriculture, Forestry and Other Land Use (https://www.ipcc-nggip.iges.or.jp/public/2019rf/vol4.html).
2. Decree No. 1614 of the Government of the Russian Federation dated 07.10.2020 “On the approval of the Forest Fire Safety Rules”).
3. Forest Code of the Russian Federation dated 04.12.2006, No. 200-FZ (latest edition).
4. GOST R ISO 14064-1-2021. National Standard of the Russian Federation. Greenhouse Gases. Part 1. Requirements and Guidance for Quantification and Reporting of Greenhouse Gas Emissions and Absorption at the Organization Level (approved and enacted by Rosstandart Order No. 1029-st dated 30.09.2021).
5. GOST R ISO 14064-2-2021. National Standard of the Russian Federation. Greenhouse Gases. Part 2. Requirements and Guidelines for Quantification, Monitoring and Reporting Documents for Projects to Reduce Greenhouse Gas Emissions or Increase Their Absorption at the Project Level (approved and enacted by Rosstandart Order No. 1030-st dated 30.09.2021).
6. GOST R ISO 14064-3-2021. National Standard of the Russian Federation. Greenhouse Gases. Part 3. Requirements and Guidance for Validation and Verification of Greenhouse Gas Statements (approved and enacted by Rosstandart Order No. 1031-st dated 30.09.2021).
7. GOST R ISO 14065-2014. National Standard of the Russian Federation. Greenhouse Gases. Requirements for Greenhouse Gas Validation and Verification Bodies for Their

Application in Accreditation or Other Forms of Recognition (approved and enacted by Rosstandart Order No. 1869-st dated 26.11.2014).

8. GOST R ISO 14066-2013. National Standard of the Russian Federation. Greenhouse Gases. Requirements for Competence of Greenhouse Gas Validation and Verification Groups (approved and enacted by Rosstandart Order No. 2274-st dated 17.12.2013).
9. GOST R ISO 14080-2021. National Standard of the Russian Federation. Greenhouse Gas Management and Related Activities. System of Approaches and Methodological Support for the Implementation of Climate Projects (approved and enacted by Rosstandart Order No. 1033-st dated 30.09.2021).
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14. Order No. 371 of the Ministry of Natural Resources and Environment of Russia dated 27.05.2022 “On approval of methods for quantitative determination of greenhouse gas emissions and greenhouse gas removals” (from March 1, 2023, except for certain provisions, coming into force on March 1, 2024).
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