Forest climate projects: overview and opportunities for Russia



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Existing projects

391 forest carbon projects with total area 52.6 Mha

- Voluntary projects
- Compliance projects:
 - California
 - South Africa
 - China
 - CORSIA
- Within internationally improved schemes:
 - CDM/JI
 - REDD+



Source: Forest Trends 2021

Forest projects

Project Types	Description
Afforestation / Reforestation	 Projects involve restoring tree cover to previously non-forested land. Afforestation projects have high costs because they generally require significant planting and maintaining trees.
Avoided Conversion	 Preventing the conversion of forested land to non-forested land. AC project developers must demonstrate that the forested land is under significant threat of conversion for an AC project to be viable.
Improved Forest Management	•Projects involve land management activities that increase or at a minimum maintain the current level of carbon stocking.

Requirements to forests projects

Key Attributes of Forest Descriptions Carbon Projects

Additionality	 Forest project sequester more carbon than in a 'business as usual' scenario Project must demonstrate that the carbon sequestration would not have happened without the development of the specific offset project
Permanence	 GHG removal enhancements be maintained for up to 100 years Each project must undergo a third-party verification of inventory reports and a site visit every six years during the life of the project (~25 years)
Non-leakage	 Leakage from carbon projects happens when GHG reductions in one area results in an unintended increase in GHG emissions in another location Project operators must demonstrate their project does not cause excessive leakage, essentially wiping out the increases in GHG removal from their project Leakage is of biggest concern on afforestation projects where cropland is being converted back to forests

Source: Parajuli et al., 2019

Voluntary offsets market in 2019



Voluntary Chicago Climate Exchange-traded Chicago Climate Exchange Offsets Traded "Off-exchange"

🔳 Pre-Compliance Volume 🛛 🔶 Cumulative Volume

	MtCO ₂ e	AVERAGE PRICE	VALUE
RENEWABLE ENERGY	42.4	\$1.4	\$60.1 M
FORESTRY AND LAND USE	36.7	\$4.3	\$159.1 M
WASTE DISPOSAL	7.3	\$2.5	\$ 18.0 M
HOUSEHOLD DEVICES	6.4	\$3.8	\$24.8 M
CHEMICAL PROCESSES/ INDUSTRIAL MANUFACTURING	4.1	\$1.9	\$7.7 M
ENERGY EFFICIENCY/ FUEL SWITCHING	3.1	\$3.9	\$11.9M
TRANSPORTATION	0.4	\$1.7	\$0.7 M

Source: Donofrio et al., 2020

Potential afforestation / reforestation

- Ecosystems could support an additional 0.9 bn ha of forests (25% of forested area) (Bastin et al., 2019)
- Russia may provide 151 Mha of additional forest cover (the largest potential among all the countries), mitigation potential 351 Mt CO₂/year (Leskinen et al. 2021)



EU Carbon Border Adjustment Mechanism

- Is planned by the EU starting from 2022-2023 in order to prevent carbon leakage and to promote green development in other countries
- Details are not clear yet (geographical and sectoral scope, part of carbon footprint etc.)
- KPMG:
 - 3 scenarios:
 - pessimistic: 50.6 bn euro in 2022-2030
 - baseline: 33.3 bn euro in 2025-2030
 - optimistic: 6 bn euro in 2028-2030
- BCG:
 - 3-4.8 bn dollars/year, incl.:
 - oil and gas: 1.4-2.5 bn dollars/year
 - metals: 0.4-0.6 bn dollars/year
- Institute of Economic Forecasting of RAS:
 - 3.6 bn euro/year



Opportunities for Russia



Methodology of carbon sinks accounting (including the launch of carbon polygons) don't play any role in commercialization of forest projects

Thanks for your attention! <u>imakarov@hse.ru</u>