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Argus Insight: Nature-based Removal



ARGUS LAUNCHES A NEW SUITE OF NATURE-BASED REMOVAL PRICE ASSESSMENTS

Argus this month launched a new suite of price assessments covering the Nature-based Removals segment of the global voluntary carbon market (VCM). The assessments cover ARR (Afforestation, Reforestation & Revegetation); IFM (Improved Forestry Management) and Blue Carbon (Coastal ecosystem – mangrove protection and restoration). They offer detailed, robust and independent references for a segment of the VCM where both buy and sell-side demand is growing. In this paper, Argus explains what it will be publishing, and why.

Summary

Argus has reported on the VCM since February 2023, producing weekly price assessments based on spot OTC trade for carbon credits such as REDD+ (Reducing Emission from Deforestation and Forest Degradation), Clean Cookstoves and Renewable Energy. These project types are exclusively avoidance or reduction activities and reflect the majority of the VCM's current traded volume to-date. But recent market developments have created a need for insight on increasingly liquid nature-based removal projects. As such, we will be commencing assessments for ARR (Afforestation, Reforestation & Revegetation) for China, Colombia and Uruguay, IFM (Improved Forestry Management) for the US and China, and Blue Carbon for the Delta Blue Carbon project. Our assessments will cover vintages relating to each of the six years before the date of assessment.

Background

Argus' reporting on the VCM is focused on addressing the demand for a high-resolution reflection of the OTC market, underpinned by detailed and specific price assessments. We aim to avoid the market standardisation produced by broad baskets of non-fungible and diverse project types, conflating key value parameters such as geography or vintage, and over-reliance on automation and exchange-traded data. Instead, our editorial approach enables us to sense-check and corroborate prices, while providing granularity, reliability and transparency.

As such, we stratify our voluntary carbon prices by project type, vintage and geography to shape dynamic assessments more closely aligned with market liquidity. And by honing in on the core, most frequently-traded credits, we maintain the

Detail of existing & new prices							
	REDD+ CCB	Renewable Energy	Clean Cookstoves	Project Specific	IFM	ARR	Blue Carbon
Geography	Latin America	Brazil	Africa	Envira (Brazil)	US	China	Delta Blue Carbon (Pakistan)
	Southeast Asia	China	Asia	Kariba (Zimbabwe)	China	Colombia	
	Sub-Saharan Africa	India	Latin America	Katingan (Indonesia)		Uruguay	
		Turkey		Rimba Raya (Indonesia)			
				South. Cardamom (Cambodia)			
Technology		Wind					
		Solar					
		Hydro					
Vintage	v2022	v2022	v2019+	v2022	v2023	v2023	v2023
	v2021	v2021		v2021	v2022	v2022	v2022
	v2020	v2020		v2020	v2021	v2021	v2021
	v2019			v2019	v2020	v2020	v2020
	v2018			v2018	v2019	v2019	v2019
					v2018	v2018	v2018
#Assessments	15	36	3	25	12	18	6
Commenced	Feb 23	Feb 23	Feb 23	Feb 23	Jan 24	Jan 24	Jan 24

flexibility to adapt when new pockets of liquidity materialise.

Our initial assessments therefore comprised three specific project types: REDD+, Clean Cookstoves and Renewable Energy. We structure our REDD+ prices around the key producing regions of Southeast Asia, Latin America and Sub-Saharan Africa, with a separate price for each of the last five years' vintages. For Renewable Energy, we categorise by technology (wind, solar and hydro), country of origin (key host countries China, Brazil, India and Turkey) and vintage (the last three years). Lastly, we split Clean Cookstoves by region (Asia, Africa and Latin America), with prices covering vintages from 2019 onwards.

These project types are all examples of CO₂e emission avoidance (i.e. reduction) activities and, as such, are typically low-cost and scalable. Avoiding deforestation is handled in high volumes. Wind, solar and hydro are established, mature technologies. And the distribution of clean cookstoves is based on relatively straightforward practices. These are the low-hanging fruit of negative emissions, which explains why they represent the first project types to supply the market at scale and will likely continue to dominate supply in the short and medium-term.

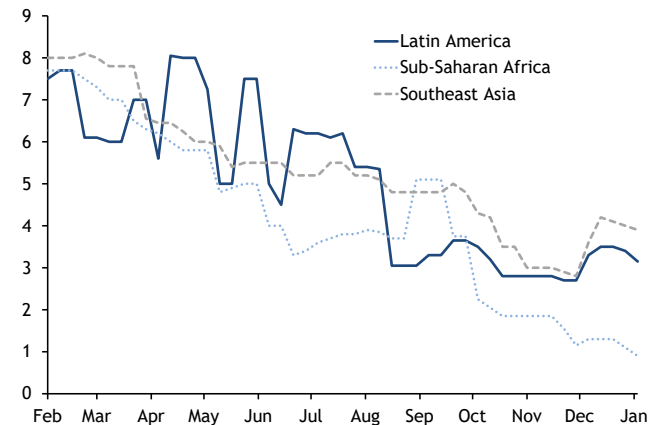
However, much of the controversy that has recently surrounded the VCM has focused on these avoidance strategies and the baseline calculations they rely on. This has coincided with a push towards a greater supply and use of carbon dioxide removal (CDR) strategies. The CDR space has attracted a lot of attention and investment over the past few years, as it is viewed as a more easily quantifiable long term solution. The field offers a variety of different technologies and, while many of the engineered solutions such as direct air capture (DAC) are in the early stages of commercialisation, there is burgeoning interest and liquidity in nature-based solutions. Our new prices we will cover the most liquid removal credit types, and will be complemented with new coverage in response to future market developments.

Climate change and the stock and flow of greenhouse gases

Climate change is a two-sided problem that relates to the concentration of greenhouse gases in our atmosphere. On the one hand, there is the existing concentration of carbon dioxide and other gases already in the atmosphere. On the other, there is the ongoing volume of emissions that is continually adding to that. In economic terms this is the stock and flow, respectively. The current concentration of CO₂ is considered to be too high and must be reduced in absolute terms. It is not enough to merely reduce, or even eliminate, the ongoing generation of additional emissions. It will also be necessary to actually remove CO₂ from the atmosphere and capture and store it somewhere. Carbon markets have therefore evolved two distinct approaches: “avoidance” and

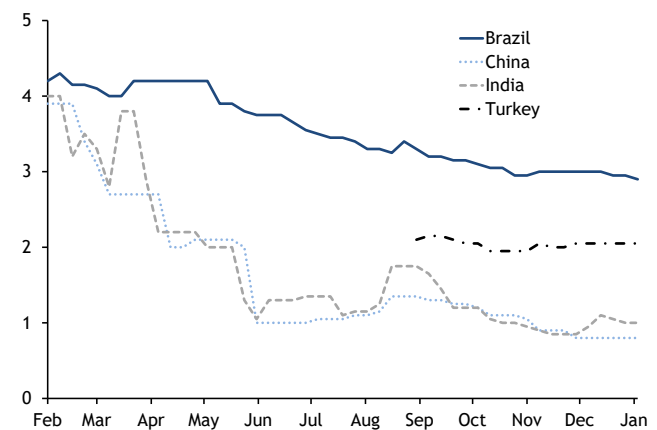
REDD+ v2018

\$/t CO₂e



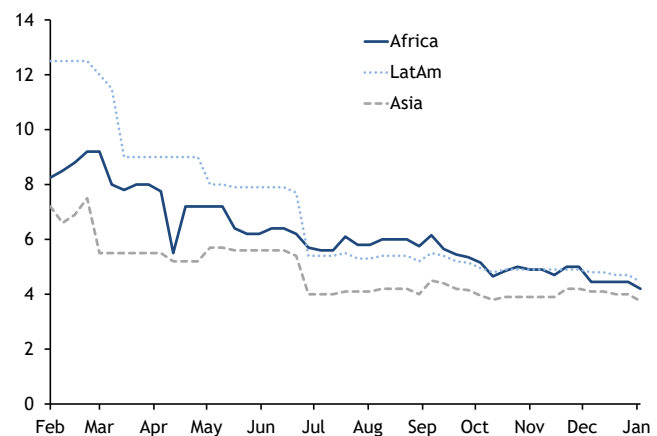
RE - Solar v2020

\$/t CO₂e



Clean Cookstoves v2019+

\$/t CO₂e



“removal” activities. Avoidance (also known as reduction) projects engage in activities that seek to mitigate sources of ongoing emissions, such as deforestation or the use of fossil fuels to generate energy. They address the “flow”. Removals activities attempt to address the “stock” of CO₂ by removing it outright. These concepts can be best understood by the following concrete examples:

Avoidance Projects

REDD+

The destruction of tropical rainforests releases large amounts of CO₂ in the atmosphere, as these natural carbon sinks are destroyed. Avoiding deforestation (also known as REDD+) aims to preserve forests, while providing an economic alternative and incentive to leave these ecosystems in place.

Renewable Energy

Renewable energy projects in jurisdictions where renewable energy generation is not economically viable, or supported by subsidies, offer another example of an avoidance activity, in that they avoid the consumption of fossil fuels to generate energy.

Clean Cookstoves

The distribution of clean cookstoves to isolated or disadvantaged communities in developing countries provides safer alternatives to traditional open fires and/or reduces the amount of biomass needed for cooking, avoiding the release of harmful black carbon emissions.

Removals Projects

Improved Forestry Management (IFM)

IFM is a hybrid approach where land owner or local communities can increase carbon stocks (avoidance) and enhance the sequestration of carbon dioxide (removals) from the atmosphere through improvements in forest management practices, allowing for a transition towards a more sustainable and resilient forest.

Afforestation, Reforestation & Revegetation (ARR)

Afforestation is the creation of a new forest on a previously unforested land, reforestation is replanting trees in once-forested areas, and revegetation is the restoration of vegetation in areas where it has been lost. In all cases the aim is not to mitigate an ongoing source of emissions but to establish new natural ecosystems that will extract CO₂ from the atmosphere and store it.

Blue Carbon

Blue carbon projects in many ways resemble the approach of ARR projects but do so in ocean-based ecosystems, namely mangroves, sea grass and sea kelp.

Register for a complimentary trial of Argus Voluntary Carbon Markets.



For more information:

 contact@argusmedia.com

 +44 20 7780 4200

 www.argusmedia.com

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