Forest Carbon Markets: Overview and Potential

Forest Trends’ Ecosystem Marketplace
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Who is Ecosystem Marketplace?

Forest Trends’ Ecosystem Marketplace Initiative is the leading global source of information on environmental finance, markets, and payments for ecosystem services.

https://www.forest-trends.org/ecosystem-marketplace
Nature is key to fighting climate change

NATURAL CLIMATE SOLUTIONS

In the next 10-15 years, natural climate solutions can provide more than a third of the emissions reductions needed to hold the Earth’s temperature rise to well below 2°C.

- 25% of the problem
- More than 30% of the solution
- 1% of the conversation

https://nature4climate.org
### Forest carbon offsets are a cost-effective solution

<table>
<thead>
<tr>
<th>Type of Finance</th>
<th>Name of Finance</th>
<th>2016</th>
<th>All Years*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>Voluntary forest carbon offset transactions</td>
<td>$74.2M</td>
<td>$996.6M</td>
</tr>
<tr>
<td></td>
<td>Compliance forest carbon offset transactions**</td>
<td>$551.4M</td>
<td>$1,573.9M</td>
</tr>
<tr>
<td>Non-Market</td>
<td>Payments for REDD+ programs</td>
<td>$36.5M</td>
<td>$218.0M</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$662.1M</td>
<td>$2,788.5M</td>
</tr>
</tbody>
</table>

* Ecosystem Marketplace has been tracking forest carbon finance annually since 2009 but our data goes back as far as the early 2000s, when payments for forest-based emissions reductions were just beginning. “All years” refers to the total finance that we know of to date.

** This compliance market value includes Australia’s Emissions Reduction Fund’s payments for land-use offsets, worth an estimated $1.2B across all years, and $509.5M in 2016. We counted this finance as market-based because contracts are awarded through a competitive auction; however, there is currently only one buyer: the government. Without the Australia value, compliance market payments in 2016 were $41.9M.
Forest Carbon Markets
(Voluntary + Compliance)
Where are forest carbon markets?

How is a voluntary carbon offset produced?
# A brief overview of common project types

<table>
<thead>
<tr>
<th>Project Type</th>
<th># of Active Projects</th>
<th>Offsets Issued (2005- present)</th>
<th>Offsets Retired (2005- present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afforestation/reforestation</td>
<td>22</td>
<td>2.4 Mt</td>
<td>1.7 Mt</td>
</tr>
<tr>
<td>Avoided conversion</td>
<td>38</td>
<td>65.8 Mt</td>
<td>33.0 Mt</td>
</tr>
<tr>
<td>Improved forest management</td>
<td>30</td>
<td>8.3 Mt</td>
<td>3.0 Mt</td>
</tr>
<tr>
<td>REDD – Avoided planned deforestation</td>
<td>1</td>
<td>0.6 Mt</td>
<td>0.4 Mt</td>
</tr>
<tr>
<td>REDD – Avoided unplanned deforestation</td>
<td>16</td>
<td>6.3 Mt</td>
<td>3.7 Mt</td>
</tr>
<tr>
<td>Wetland restoration/management</td>
<td>2</td>
<td>0.3 Mt</td>
<td>0.2 Mt</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>3.2 Mt</td>
<td>3.0 Mt</td>
</tr>
</tbody>
</table>
Generally, forestry projects sell between $4-$10/tCO2e.

Non-Markets
Main REDD+ program funds

Figure 1. Result-based REDD+ commitments and disbursements by program since 2010

NICFI: 2646\(\frac{1}{1303}\) USD million
FCPF CF: 911 USD million
GCF: 500 USD million
REM: 336 USD million (310 USD million disbursed)
BioCF ISFL: 310 USD million

Source: Climate Focus analysis based on data since 2010 shared by NICFI and REM, and BioCarbon Fund. ISFL and FCPF Carbon Fund commitments retrieved from funds' official websites.

Note: NICFI = Norwegian International Climate and Forest Initiative; FCPF CF = the World Bank's Forest Carbon Partnership Facility Carbon Fund; GCF = the Green Climate Fund; REM = the German REDD Early Movers program; BioCF ISFL = the BioCarbon Fund Initiative for Sustainable Forest Landscapes. Data reflects commitments and disbursements through August 2018. For bilateral donors, commitments and disbursement are based on personal communications with donors. Commitments to the FCPF Carbon Fund and BioCarbon Fund's ISFL were retrieved from publicly available documentation.
Locations of REDD+ programs

Figure 8: Progress in results-based finance agreements for multilateral and bilateral initiatives

Multilateral initiatives
- Proposals selected into the FCPF Carbon Fund pipeline
- Programs provisionally selected into the FCPF Carbon Fund portfolio
- Programs selected into the BioCarbon Fund Initiative for Sustainable Forest Landscapes

Bilateral initiatives
- German, Norwegian and/or UK agreements in the REDD Early Mover Program
- Amazon Fund agreement with Norway/Germany
- Other Norwegian bilateral agreements

Notes: Updated from source publication based on communications with donors.

Note: This figure is taken from the Climate Focus report Finance for Forests: Progress on the New York Declaration on Forests report.
Upcoming Trends
### Upcoming trends

<table>
<thead>
<tr>
<th></th>
<th>Voluntary Markets</th>
<th>Compliance Markets</th>
<th>REDD+ Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>REDD+ program progress</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Paris Agreement decisions</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>CORSIA</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Compliance markets – expansions &amp; new</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Insetting / supply chain investments</td>
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<td></td>
<td></td>
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<tr>
<td>Non-carbon quantification</td>
<td>X</td>
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</table>
New progress in REDD+ programs

https://www.forestcarbonpartnership.org/sites/fcp/files/2019/Mar/FCPF%20Dashboard%20as%20of%20Feb%2028%202019.pdf

https://www.greenclimate.fund/how-we-work/redd
Paris Agreement

The Problem:

Who counts what?

http://gec.jp/jcm/about/
https://www.icroa.org/Voluntary-Market-Portal
CORSIA

- CORSIA could become the world’s largest carbon market: it could potentially create demand for 1.6-3.7 billion tonnes of emissions reductions during its initial three phases of implementation.

- Which offsets are eligible will depend on decisions that have yet to be announced – including:
  - Standards
  - Project types
  - Vintage

https://www.icao.int/Newsroom/Pages/CORSIA-implementation-on-course.aspx
Compliance markets – upcoming and expanding markets

https://carbonpricingdashboard.worldbank.org/map_data
Insetting / Supply Chain Investments

https://www.icroa.org/Insetting

https://www.sustain-cert.com/user-centric-impact-assessment/#environmental

https://climateforward.apx.com/myModule/rpt/myrpt.asp?r=1
Non-Carbon Benefits

https://verra.org/sdvistapilotprojects/

https://globalgoals.goldstandard.org/
THANK YOU!

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