



Progress on the New York Declaration on Forests

Technical Annexes

Goal 8: Provide support for the development and implementation of strategies to reduce forest emissions

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Description of the Goal and the Indicators

NYDF Goal 8 focuses on levels of investment in strategies to reduce forest emissions. The text of this goal is framed relatively broadly. 'Strategies' can be interpreted to include any concerted efforts to reduce emissions from forests, whether through high-level policies or laws, government programs, and private sector initiatives or local projects. Such an interpretation is in line with the text, and with the nature of the NYDF, whose signatories include public, private and civil society actors. It also reflects the diversity in financial flows for reducing greenhouse gas emissions from forests, where a wide variety of public and private actors interact in providing and generating funding. We therefore adopt this broad definition, and include under this goal finance for the full range of actions by public and private actors that have among their main objectives the reduction of emissions associated with forests. We have, however, excluded payments that are made in return for the reduction or sequestration of emissions (results-based payments), since these are specifically addressed under Goal 9.

The challenge of drawing a broad definition is that, in the case of most channels of finance, very little data is available. While international public finance flows are fairly well documented, there is only sparse and indicative information available on national public finance, private finance flows and those from civil society and indigenous peoples' organizations. In light of these limitations, in the case of financial flows other than those from international public donors, we have sought to identify some indicative lessons through the use of case studies that may show success stories or highlight emerging practices. This approach is limited in that it cannot accurately track progress toward meeting Goal 8, but it does hope to provide some indication of current activities and highlight useful lessons.

The five indicators we have selected are set out below. The first indicator tracks international public climate finance to mitigate forest emissions in developing countries, comprised of a quantitative assessment of Official Development Assistance (ODA) for forest activities committed by OECD countries (excluding results-based payments for REDD+), and a non-quantitative analysis of ODA-like finance provided by non-OECD countries ('South-South' financial flows). The second indicator looks at domestic public finance to reduce forest emissions, which typically represents larger sums than those flowing internationally, but is harder to track. The third indicator identifies some of the main areas of private sector investment in strategies to reduce forest emissions, a relatively nascent source but with substantial potential. The fourth and fifth indicators look at financial support by indigenous peoples' and by civil society organizations respectively, to reduce forest emissions.

INDICATOR 1

International public climate finance flowing to the forestry sector in developing countries

INDICATOR 2

Domestic public spending in NYDF signatory countries that includes intent to reduce forest emissions

INDICATOR 3

Private support for strategies to reduce forest emissions

INDICATOR 4

Indigenous peoples' investments in strategies to reduce forest emissions

INDICATOR 5

Civil society investments in strategies to reduce forest emissions

Main Concepts and Definitions

Support	<p>We define 'support' narrowly to mean financial support. Though support for reducing forest emissions commonly extends beyond financial assistance to include capacity building and technology transfer, the focus on finance enables greater quantification. We make an exception to this when describing 'in kind' support by indigenous peoples to reduce forest emissions.</p>
Strategies	<p>We define 'strategies' broadly to encompass public international, national and sub-national strategies and policies, but also strategies to reduce emissions by the private sector, civil society and indigenous groups. Hence we focus on financing provided by all of these groups.</p>
Development and implementation	<p>We define 'development and implementation' to mean all types of finance across public and private spheres that reduce forest emissions. We exclude from this definition results-based REDD+ payments, and carbon market investments that are tracked under Goal 9.</p>
Official Development Assistance (ODA)	<p>As a marker of international public finance provided by developed countries, we track flows of ODA. The Organisation for Economic Cooperation and Development (OECD) defines ODA as flows of development finance that is provided by official agencies, including state and local governments, or by their executive agencies and is: (1) administered with the promotion of the economic development and welfare of developing countries as its main objective; and (2) is concessional in character and conveys a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent).</p>
Forestry ODA	<p>The OECD defines ODA for forestry to include both ODA specifically directed at the forest sector (i.e. economic activities related to forests) and non-economic activities relating to forests, including the provision of environmental services. It excludes multisector activities such as environmental protection and rural development that may have an effect on forests.</p>

Key Messages

INDICATOR 1: INTERNATIONAL PUBLIC CLIMATE FINANCE FLOWING TO THE FORESTRY SECTOR IN DEVELOPING COUNTRIES

- Bilateral commitments of ODA to reduce forest emissions have been increasing from approximately US\$200 million in the early 2000s, to just under US\$1 billion in the early 2010s.
- In 2013 (the first year for which consolidated figures are available) bilateral and multilateral climate mitigation forestry ODA was US\$763.5 million (excluding results-based payments for REDD+). The majority (62%) came from bilateral sources, and the majority (also 62%) was reported as a grant.
- South-South cooperation on reducing forest emissions is still in the early stages and barely tracked. There are however indications that international financial flows from the larger middle and upper-middle income countries may increase in the future, particularly in light of China's commitment to provide US\$3.1 billion in climate finance in September 2015.

INDICATOR 2: DOMESTIC PUBLIC FINANCE TO REDUCE FOREST EMISSIONS

- No global data set reports relevant domestic public spending, and data is patchy for developed and developing countries. Nonetheless, there is evidence of increased spending on forest management – for example, in the United States and Europe. In some developing countries, domestic public spending on forest conservation in developing countries is equal to or greater than that received from international sources.

INDICATOR 3: PRIVATE SECTOR INVESTMENT IN STRATEGIES TO REDUCE FOREST EMISSIONS

- Impact investments are growing, driving investments in forest conservation and the production of sustainable forest commodities. Large investors, including major international banks and sovereign wealth funds are developing sustainable investment policies with implications for forest emissions, though these policies are aspirational, and their impact at present is difficult to assess.
- Some major purchasers and consumers of agricultural and forest commodities are investing in sustainable sourcing and production to reduce and eventually eliminate deforestation associated with their supply chains (see Goal 2).
- Companies continue to invest in corporate social responsibility initiatives, though the impact of such initiatives, which are often unrelated to the patterns of production that drive forest emissions, are still small.

INDICATOR 4: INDIGENOUS PEOPLES' INVESTMENTS IN STRATEGIES TO REDUCE FOREST EMISSIONS

- Indigenous peoples' organizations are pushing for greater acknowledgement of indigenous peoples' contribution to forest conservation. Recently, leaders from an alliance of indigenous peoples' have pledged to sustainably manage 400 million hectares of forest under their control.

INDICATOR 5: CIVIL SOCIETY INVESTMENTS IN STRATEGIES TO REDUCE FOREST EMISSIONS

- Non-governmental organizations make significant own contributions toward strategies to reduce deforestation, though these can be difficult to quantify. One study estimates that between 2007 and 2013, four international NGOs contributed an estimated US\$100 million for reducing deforestation in the Amazon Basin.

Data Gaps and Limitations

- Data on climate mitigation forestry ODA commitments provided through bilateral and multilateral channels is available, but only as of 2013. Prior to 2013, only bilateral data is available. Further, data on disbursements is still not available. It would increase transparency if OECD members completed disbursement data in DAC statistics.
- Though international financial assistance by non-OECD members is currently limited, transparent reporting is to be encouraged as this is scaled up in the years ahead.
- Data is collected on domestic public spending for a number of key World Development Indicators, for example, spending on health (compiled by the World Health Organization Global Expenditure Database) and education (compiled by the UNESCO Institute for Statistics). However, there is no coordinated data reporting of domestic public spending on forests in developing or developed countries, beyond a few OECD countries. If countries reported domestic spending on sustainable forest management and other strategies to reduce forest emissions, in a harmonized manner, it would be possible to assess own-country contributions on strategies to reduce forest emissions.
- There is not adequate data on private sector investments to reduce forest emissions, and given problems in defining 'sustainable' investments, the sheer number of actors, and issues of commercial confidentiality, aggregate global figures are unlikely to become available. However, more work could be done to shed light on the underlying financials of key commodity markets driving forest emissions: the additional costs of producing or sourcing sustainably; the premiums associated with sustainable production; and the proportion of sustainable to unsustainable production on investors' balance sheets
- There is no uniform data on investments by non-governmental organizations (NGOs) to reduce forest emissions. Though some NGOs provide a breakdown of spending by sector, it is often not possible to determine what percentage of this is 'own contribution' (that is, money received from individual or other donations that is not reported elsewhere) and what proportion is 'pass through' (that is, money received from governments or multilateral institutions where the NGO acts as an implementing entity).
- NYDF signatories may consider developing guidelines that enable transparent and harmonized reporting of sustainable investments by for-profit and not-for-profit actors.

Findings

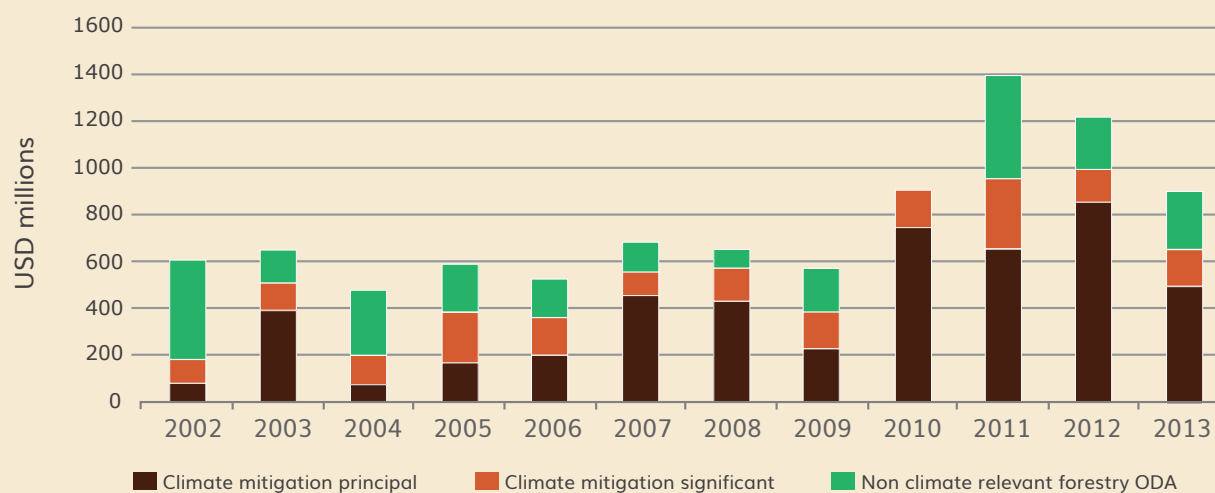
Indicator 1: International public climate finance flowing to the forestry sector in developing countries

Subindicator 1.1: Climate relevant ODA for forests committed by OECD donor countries and disbursed either bilaterally or through multilateral institutions

Between 2002 and 2013, OECD donor countries committed a total of US\$6.65 billion of bilateral climate mitigation ODA to the forestry sector in developing countries. This was 72% of all bilateral forestry ODA (totalling US\$9.19 billion), indicating that a large percentage of forestry ODA pursued climate mitigation objectives. Notably, between 2002 and 2013 there was an upward trend in the percentage of all bilateral forestry ODA that also targeted mitigation objectives (Figure 2).

Although there is great year-to-year variation in bilateral ODA (see Figure 1), there was an upward trend of commitments throughout this period; annual average commitments for 2002 to 2007 were US\$365 million, whereas annual average commitments for 2008 to 2013 were over twice as high, at US\$744 million. There was an upturn in commitments from 2009, likely reflecting the fast-start finance that developed countries agreed to deliver in climate finance between 2010 and 2012. Data has not yet been recorded on OECD DAC for commitments in 2014, though it has been estimated that bilateral pledges for REDD+ alone approached US\$1 billion in 2014 (Norman & Nakhouda 2014).

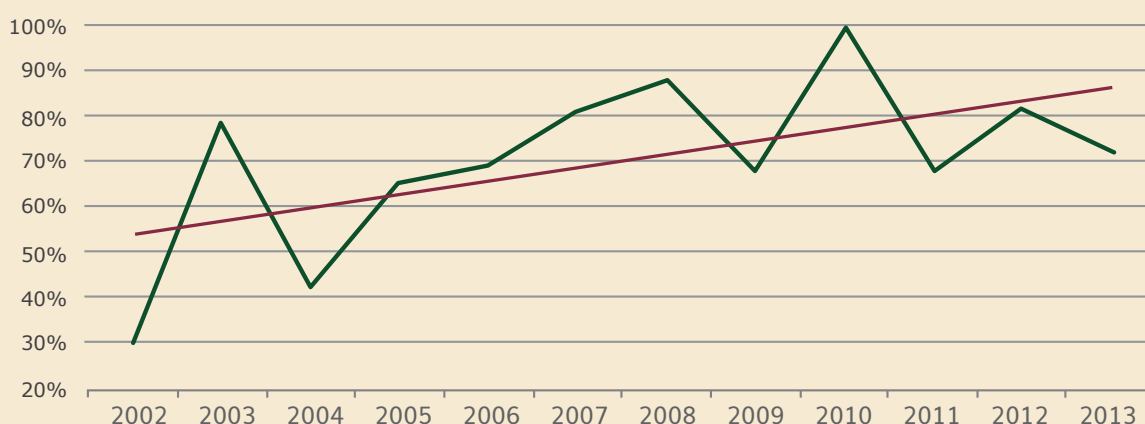
Figure 1: Total bilateral forestry ODA committed to all developing countries from 2002-13



Total ODA broken into ODA for which climate mitigation was a principal objective, a significant objective, or not stated as an objective, in constant US\$ millions (2013 value).

Source: Climate Focus calculations based on OECD DAC dataset: Aid Activities targeting Global Environmental Objectives.

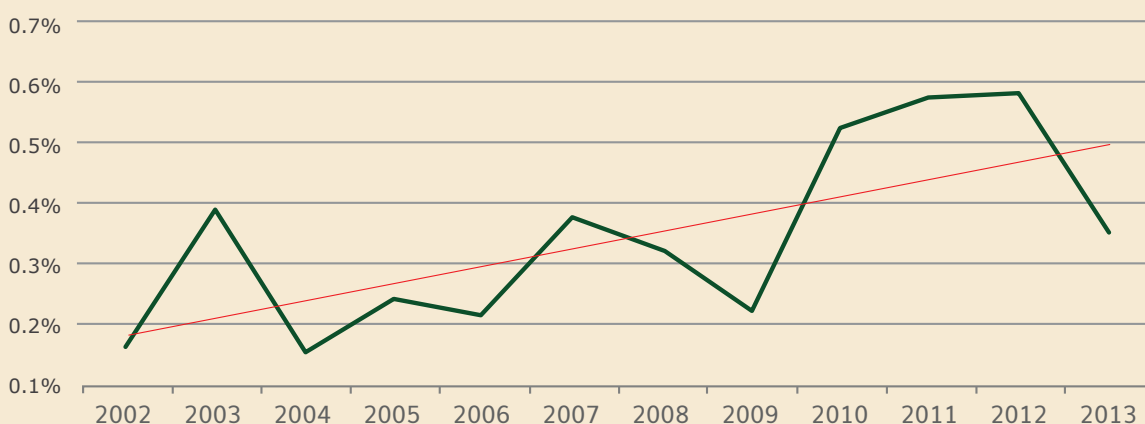
Figure 2: Percentage of total forestry ODA with a climate mitigation objective, with trend line



Source: Climate Focus calculations based on OECD data from above.

As part of the UN negotiations on climate change, developed countries have committed to providing “new and additional” funding to developing countries to tackle climate change (see Cancun Agreements, 1/CP.16). Given the lack of a common definition on what “new and additional” means (Nakhoo-da et al., 2013), it is not possible to determine whether forest mitigation ODA is new and additional, or whether it is a redirection of business-as-usual development flows. However, it is possible to observe that from 2002 to 2013: (1) total ODA commitments across all sectors increased from US\$111 billion (2002) to US\$184 (2013) and (2) the share of ODA for mitigating forest emissions as a proportion of total ODA rose from around 0.2% to 0.5% over that period (Figure 3).

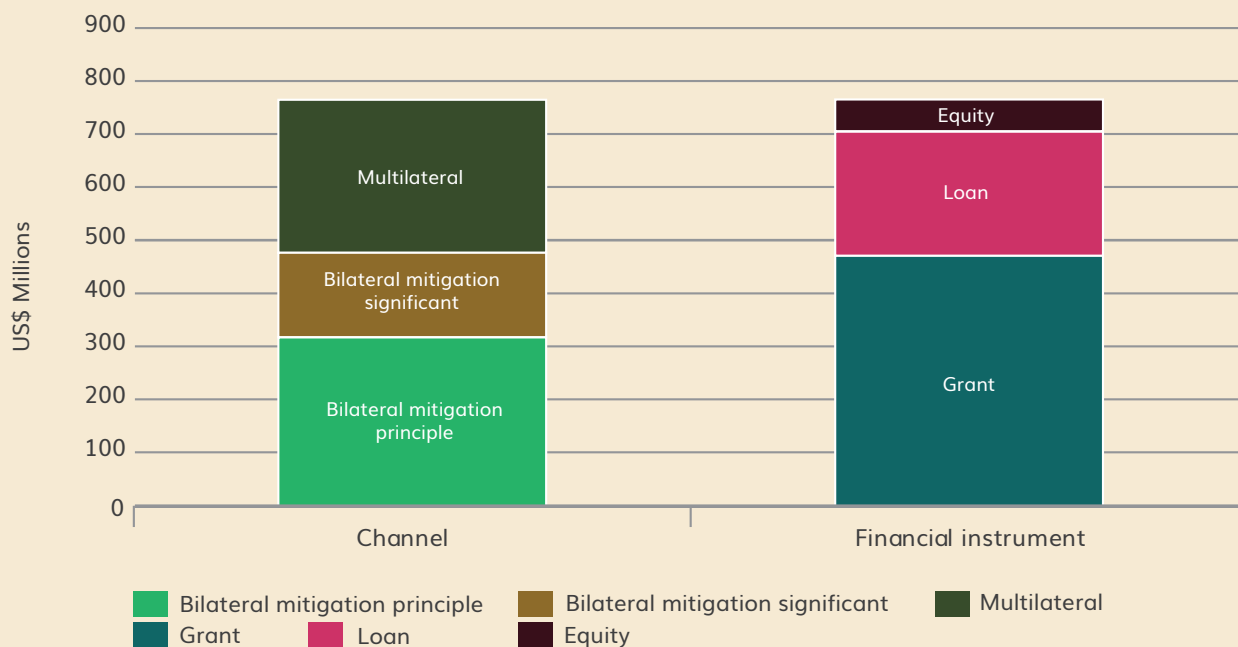
Figure 3: Bilateral ODA where mitigating forest emissions is a principal objective, as a percentage of total bilateral ODA, 2002 – 2013, with trend line



Source: Climate Focus calculations based on OECD data from above, and OECD DAC dataset: Aid (ODA) by Sector and Donor.

In 2013, OECD-DAC presented for the first time an integrated picture of bilateral and multilateral climate finance. Prior to 2013, it is not possible to assess bilateral and multilateral flows without double counting. This data shows that in 2013, US\$763.5 million in climate mitigation ODA for forestry was committed by OECD countries (see Figure 4). We exclude from this figure ODA payments for verified emissions reductions under REDD+ results based payments programs including the Amazon Fund and the German REDD Early Movers (REM) program, as these are tracked under Goal 9. Of the funds committed in 2013, the majority (US\$472 million) was committed as OECD-labeled grants. Loan commitments, at US\$233 million, were provided through multilateral development bank financing of forest plantation and restoration projects, and through the Climate Investment Funds' Forest Investment Program. A small sum (US\$58 million) was provided in equity finance. An example of this was the European Investment Bank's investment in the Althelia Ecosphere Fund, a private impact investor.

Figure 4: Total bilateral and multilateral ODA to all developing countries committed to the forestry sector in 2013 with climate mitigation as a principal or significant objective, excluding REDD+ results based payments, in US\$ millions, broken down into channel and financial instrument



Source: Climate Focus calculations based on OECD DAC dataset: Climate Related Development Finance, Project Level Data.

Subindicator 1.2: South-South cooperation on reducing forest emissions

There are increasing flows of development assistance from middle and upper-middle income countries to other developing countries, with OECD-DAC estimating that ODA-like flows from China, India and South Africa increased one third between 2010 and 2013, from US\$3.4 billion to US\$4.4 billion (OECD 2015). There are however no official estimates of such flows, and it is not currently possible to disaggregate how much, if any, is flowing towards reducing forest emissions. However, there are indications

that South-South flows of public climate finance are increasing.

In September 2015, as part of a US-China Joint Statement on Climate Change, the Chinese President announced that China would make US\$3.1 billion available to support other developing countries to combat climate change, including to enhance their capacity to access funds of the Green Climate Fund (The White House 2015). This will be delivered through the China South-South Cooperation Fund, which was launched at the climate conference held in Lima in 2014 (UNEP 2014). It is not clear how much of this will be directed towards reducing forest emissions, but this is nonetheless a highly significant and unprecedented step, given China's status as a developing country, and the fact that this contribution exceeds any individual developed country pledge to the Green Climate Fund.

Other developing country signatories to the NYDF have, meanwhile, collectively pledged US\$23.6 million to the Green Climate Fund. These contributions can be expected to finance, among others, projects and programs to reduce forest emissions (Green Climate Fund 2015). While to-date there remain few instances of direct South-South cooperation on forestry, some examples are beginning to emerge, such as the cooperation between Brazil and the Democratic Republic of the Congo described in the case study below.

Case study: Memorandum of Understand between Brazil and Democratic Republic of Congo (DRC) on the sustainable use of forest resources

In 2013 Brazil and DRC entered into a Memorandum of Understand that seeks to support the development of DRC's REDD+ processes, improve its forest cover monitoring systems, and improve sustainable management and use of forests. Together with a number of other international partners, Brazil has provided specific assistance with the design of the Mai Ndombe regional emissions reduction program, which has been shortlisted to receive payments from the Forest Carbon Partnership Facility (FCPF) Carbon Fund

Source: EU REDD Facility, Fostering South-South Cooperation on REDD+

Indicator 2: Domestic public finance to reduce forest emissions

Subindicator 2.1: Public spending in developed NYDF signatory countries on reducing forest emissions

It is well documented that domestic public financing for forest management in developed countries is significant and far exceeds international flows.¹ Nonetheless, the absence of centralized data sources or harmonized accounting or reporting means it has not been possible to undertake a global assessment of the level of such flows.

Through assessing a number of case studies of key developed countries or blocs, two tentative observations can, however, be drawn. First, environmental protection expenditure on biodiversity and landscape protection has generally been increasing across developed countries in the last decade, in those countries for which data is available.² Second, developed countries are having to devote greater amounts to forest management to mitigate human and climate induced drivers of forest loss, such as forest fires and increased demand for biomass.

Table 1. Case studies for subindicator 2.1.

Program/Policy	Agencies	Activities	Funding Source and Scale	Contribution to Reduction in Forest Emissions
<p>US spending on forests and sustainable landscape management through Conservation Reserve Program (CRP), Forest Restoration Program (FRP), Conservation Easements and the Forestry Service</p>	<p>The US Department of Agriculture (USDA) oversees CRP and FRP.</p> <p>The US Forestry Service is an agency of the USDA, and part of the Federal Government.</p> <p>Conservation Easements are created privately and funded through tax deductions, which are overseen by State and Federal Tax authorities</p>	<p>CRP functions like a Payment for Ecosystem Services system, providing a yearly “rental” payment in exchange for farmers removing environmentally sensitive land from agricultural production and planting species that will improve environmental quality</p> <p>FRP provides funding to restore privately owned forests damaged by natural disasters.</p> <p>Conservation easements limit the right of landowners typically to develop land in a way that interferes with a conservation purpose, in exchange for a tax deduction.</p> <p>USFS conducts sustainable forest management activities, which include landscape scale restoration of forests, land management planning, sustainable management of productive forests, law enforcement and watershed management.</p>	<p>Spending on USDA conservation programs increased approximately 50% between 2002 and 2012, and in 2013 was approximately US\$6 billion.</p> <p>Tax spending on conservation easements is difficult to estimate, but it has been approximated that between 2003 and 2009, more than US\$11 billion in tax deductions were claimed for this purpose.</p> <p>The budget of the USFS has increased in recent years, due in part to increased spending on fire-management. Average annual budget of the USFS from 2005-2008 was approximately US\$5 billion, increasing to approximately US\$ 6 billion for 2009-2012 and 2013-2016. In 2016, fire management will represent one third of the total budget.</p>	<p>The U.S. Forest Service (USFS) estimates that in the absence of major interventions, carbon stored in U.S. forests will peak between 2020 and 2040 and then decline.</p> <p>This is related to a number of factors including forestland conversion, aging forests, and adverse impacts related to climate change and other disturbances (e.g. increasing wildfire, insects, disease, and other natural disturbances).</p> <p>US spending on forests and sustainable landscape management will be increasingly vital to mitigate these impacts</p>

Program/Policy	Agencies	Activities	Funding Source and Scale	Contribution to Reduction in Forest Emissions
The European Union strategy on sustainable forestry	<p>Though forest policy is the competence of EU Member States, EU institutions contribute to sustainable forest management (SFM) through the development of common policy and co-financing.</p> <p>Forest 2020 objectives have been developed by the European Commission and endorsed by The Council</p> <p>SFM policy is also developed within Forest Europe, a ministerial level pan-European platform for developing legally binding agreements on SFM.</p>	<p>The EU Forestry Strategy is a framework for forest-related actions that support SFM.</p> <p>The key objective is “to ensure and demonstrate that all forests in the EU are managed according to sustainable forest management principles and that the EU’s contribution to promoting sustainable forest management and reducing deforestation at global level is strengthened.”</p> <p>Priority areas include protecting forests and enhancing ecosystem services, and maintaining and enhancing forest resilience and adaptive capacity, including through fire prevention and other adaptive solutions.</p>	<p>The European Agricultural Fund for Rural Development is a key source of EU financing for SFM. Between 2007 and 2013, EUR5.4 billion from the EAFRD was earmarked for forestry measures. Of this, approximately EUR2 billion was set aside for afforestation of agricultural land.</p> <p>Further EU financing for reducing forest emissions will be available through the LIFE Programme for the Environment and Climate Change 2014-2020, with a total of EUR864 million currently set aside for all sectors.</p>	<p>The EU Forestry Strategy requests Member States to demonstrate how they intend to increase their forests’ mitigation potential through increased removals and reduced emissions.</p> <p>In addition to promoting the role of forests as carbon sinks, EU strategy is designed to enhance the sustainability of the bioenergy sector.</p>

Subindicator 2.2: Public spending in developing NYDF signatory countries on reducing forest emissions

There is no centralized collection of data on national spending on reducing forest emissions or similar activities in developing countries, and so it has not been possible to undertake quantitative assessments of global trends in this area.

Through a selection of case studies in NYDF countries it is, however, possible to obtain some indications of the national efforts to raise finance for activities that reduce forest emissions. These case studies, set out in Table 2, indicate that several developing countries are raising substantial amounts of finance for forest protection and management domestically, in many cases rivalling or surpassing the level of finance received from international donors. It is worth noting that these case studies highlight some

of the more advanced countries in terms of raising domestic finance for forests, in particular middle and upper-middle income countries with strong and developed private (or quasi-private) sectors. Many developing countries – in particular least developed countries – often do not have sufficiently strong administrative capacities or sufficiently developed private sectors to enable them to raise large amounts of finance domestically.

Significant flows in many countries is through payment for environmental service (PES) schemes. Such schemes have been active for many years in Latin America, with the two biggest schemes in Costa Rica and Mexico raising hundreds of millions of US\$ over their lifetimes, with large amounts coming from environmental taxes or levies on users of environmental services. While not initially designed with reduction of greenhouse gas emissions in mind per se, finance raised through these schemes has for the most part been channeled to forest protection and management, thus reducing forest emissions. In addition, these schemes have begun to or are considering the integration of carbon-specific components. More recently, Vietnam has become the first Asian country to establish a national PES scheme. Currently focusing on watershed protection and collecting payments from hydropower plants, the scheme has raised US\$148 million in less than four years, and decision-makers are considering the possibility to include a carbon component.

Elsewhere, some developing countries have begun to allocate large amounts from their general budgets to specific programs aimed at reducing forest emissions, such as Mexico’s US\$333 million contribution to its Forests and Climate Change Program.

Table 2. Case studies for subindicator 2.2

Country	Funding sources and levels	Funding recipients
Costa Rica	<p>Since 1997 Costa Rica has had in place a fuel levy that is earmarked for the activities of the national forestry administration, FONAFIFO. From 1997-2010 an average of US\$11.3 million per year was collected from this tax (PORRAS et al. 2012), and in 2013 that number rose to US\$ 24 million (FONAFIFO 2013). Costa Rica also levies a water tax that is directed to FONAFIFO, as well as 40% of its timber tax. The water tax collected US\$3.6 million a year from 2007-2010, though only US\$1.8 million was collected in 2013. The timber tax collected US\$320,000 in 2013. More recently, Costa Rica has sought to integrate finance from the sale of carbon credits into the program.</p> <p>These figures compare to international ODA with environmental objectives for forestry in Costa Rica of an average US\$0.8 million annually between 2002 and 2013.</p>	<p>The majority of the domestic funding taken in by FONAFIFO has been directed to the country's payment for ecosystem services program (PSA, in its Spanish acronym). For example, in 2013 US\$15.7 million was directed to providers of environmental services (FONAFIFO 2013). FONAFIFO also operates a number of smaller programs, including a credit program for small scale forest owners.</p>

Country	Funding sources and levels	Funding recipients
Mexico	<p>Between 2009 and 2012 Mexico provided US\$333 million of financing from the national budget for its Forests and Climate Change Program, equating to 43% of overall finance for REDD+ over that period (Piña & Flores 2014).</p> <p>In addition, Mexico has collected US\$ 489 million from 2003-2011 through its payment for environmental services program. The majority of this has been collected from commercial water users, though it is expected that carbon payments will be integrated in the future.</p>	<p>The majority of finance under the Forests and Climate Change Program has been directed toward local communities to support community projects in line with national climate change priorities (Piña & Flores 2014).</p> <p>Financing under the PES program has created financial compensation for forest owners and incentives for conservation and land management practices. The system offers forest owners a range of management subsidies in the form of reforestation activities, commercial plantations and community planning processes. (Leon et al. 2012)</p>
Vietnam	<p>The PFES policy requires users of forest environmental services to make payments to suppliers of these services. Thus far the scheme has primarily focused on collecting payments from operators of hydropower plants, which are then distributed among forest owners (Cuang & Hong, 2012). From 2012-2015 approximately US\$ 148 million was collected from users of environmental services under the PFES scheme, the vast majority of which was collected from hydropower plants (MARD, 2015). Vietnam is also considering adding other environmental services to the scheme, including carbon.</p> <p>These figures compare to international forestry ODA for climate mitigation in Vietnam of an average US\$ 18.8 million annually between 2002 and 2013</p>	<p>Funding collected under the PFES scheme is directly paid to forest owners in watershed areas, minus minor administration costs. As of early 2015 approximately 70% of funding collected had been disbursed to forest owners, with a number of bottlenecks in identifying and verifying the correct recipients cited as reasons for the remaining 30% not yet being distributed.</p>

Indicator 3: Private sector investment in strategies to reduce forest emissions

Deforestation is largely driven by private investment in the production of commodities on converted forest land, and the global market value of the most significant of these commodities is enormous, with a demand for soy bean derivatives at US\$177 billion by 2015 (Markets and Markets 2015), palm oil derivatives at US\$61 billion by 2014 (GVR 2015a) and over US\$2 trillion by 2020 (expected) for beef (GVR 2014b). Where these investments are directed towards more sustainable production strategies – for example, shifting production to degraded lands, developing agroforestry techniques, or in some instances

increasing cattle stocking densities – there is great potential to reduce the forest emissions associated with production.

However, there is no reliable data across any of these markets on the levels of private investment in sustainably produced forest commodities. This is due in part to a lack of definitional clarity on what is understood by 'sustainable production'. Yet even where benchmarks exist, such as those established by commodity roundtables such as the Roundtable on Sustainable Palm Oil (RSPO), there is no industry wide data on levels of investment in sustainable production. The Climate Policy Institute, in mapping their Global Landscape of Climate Finance, was unable to track investments in the forestry and agricultural sector due to a lack of data (Buchner et al. 2014). Though one World Bank PROFOR study has attempted to analyze private financing for sustainable forest management and forest products in developing countries (Castrén et al. 2014) this study does not separate total investments into wood and wood products from the component of that investment flowing to sustainable production. As the report notes, "even if the data on forestry investments were available, there would be major challenges in separating investments in sustainable natural forest management from exploitative, unsustainable investments, which tend to dominate in many parts of the developing world." (Castrén et al. 2014, p.18).

Due to this absence of data, we present case studies on private investment in strategies to reduce forest emissions which we classify according to three subindicators: equity and debt investments in the production of sustainable forest commodities, capital investment in the production or sourcing of sustainable forest commodities, and corporate social responsibility initiatives to reduce forest emissions.

Subindicator 3.1: Shifting equity and debt investments toward sustainably produced commodities

This subindicator assesses moves to shift investment in agricultural commodities towards those that are sustainably produced. This can take two forms: (1) removing investment in unsustainable commodities; and (2) investing in companies or funds engaged in the production of sustainable forest commodities, where the equity or debt investment is conditioned on sustainability criteria. These two strategies can also be employed in concert, through redirecting investments from unsustainable to sustainable commodities, or requiring producers to improve sustainability as a condition for continued investment.

The first strategy is new but gaining increasing importance through the emerging divestment movement, which has been growing in recent years, though actual divestment moves remain relatively limited. Impact investment – defined as investments made with the intention to generate positive social and environmental impacts alongside a financial return – is a major component of the second strategy. Impact investment as a whole is a major growth area, with the impact investment market in 2013 estimated at US\$36 billion, up from US\$4.3 billion in 2011,³ though forest and agricultural investments still represent a small portion of impact investors' portfolios.

The case studies summarized in Table 3 below provide examples of each of these two strategies.

Table 3. Case studies for subindicator 3.1

Fund	Description	Sustainability Standard	Scale of Investment	Contribution to Reduction in Forest Emissions
<p>Norway's Government Pension Fund Global (GPFG)</p>	<p>The largest sovereign wealth fund globally, GPFG has, from 2013, been divesting shares in companies with holdings in unsustainably produced palm oil</p>	<p>In 2015, GPFG introduced a new criterion to exclude investment in companies "whose conduct to an unacceptable degree entail greenhouse gas emissions." This is not product specific, but would in theory extend to commodities driving deforestation.</p> <p>The GPFG has also established proactive mandates for environment related investments, though these do not currently cover agricultural/forest products</p>	<p>GPFG controls approximately US\$870 billion, though the scale of investment in companies in the forest and agricultural sector is not clear.</p>	<p>Divestment by GPFG in unsustainable palm oil producers will not have a direct impact, as shares will be reallocated to other investors.</p> <p>A proactive policy to invest in sustainable producers would promote lower forest emission production practices, but GPFG have no such policy at present</p>
<p>The Banking Environment Initiative (BEI)</p>	<p>BEI comprises 11 of the world's largest banks, including Barclays, Deutsche Bank and Santander. Its mission is to help direct capital towards environmentally and socially sustainable economic development.</p>	<p>In 2013 the BEI agreed a 'Soft Commodities Compact' with the Consumer Goods Forum (CGF).</p> <p>Banks commit to "use all reasonable endeavors to work with CGF supply chains to explore how they can finance the growth of the markets producing palm oil, timber products, soy and beef to the CGF's required zero net deforestation standards in ways appropriate to their individual business models."</p>	<p>Figures are not currently available on BEI members' financing of commodities produced with zero net deforestation standards.</p>	<p>Commitments to finance sustainable production, and due diligence by lenders to avoid financing unsustainable production will be vital to reduce forest emissions.</p> <p>However, at this stage, it is not possible to assess the impact of BEI members' lending, due to the absence of data.</p>

Subindicator 3.2: Capital investment in production of sustainable forest commodities

This subindicator covers investments by companies in the sustainable production of forest commodities, or in sustainably sourced produce. The case studies set out in Table 4 below, which focus on palm oil, estimate the additional costs faced by companies that seek to source or produce according to sustainability standards.

Table 4. Case studies for subindicator 3.2

Company	General Commitment	Investment Type	Scale of Investment	Contribution to Reduction in Forest Emissions
Unilever	Unilever is the world's largest purchaser of palm oil, and has committed to purchasing 100% certified sustainable palm oil (CSPO), as defined by the Roundtable on Sustainable Palm Oil (RSPO)	<p>Unilever follows two approaches to CSPO purchasing.</p> <p>The first is to purchase GreenPalm certificates. This functions as an offset, whereby Unilever purchases a certificate for each tonne of palm oil purchased, with proceeds of the certificate invested in the production of CSPO.</p> <p>The second is to purchase segregated CSPO from suppliers, which contains 100% CSPO.</p>	<p>The price of GreenPalm certificates in 2014 was between US\$1 and 3. In 2014, Unilever purchased certificates covering 90% (or 1.35 million tonnes) of palm oil purchased, representing an approximate investment of US\$2.7 million.</p> <p>There is no reliable data on the price premium of segregated CSPO, though a WWF study estimates this to be between US\$ 15 and 50 per ton. In 2014, 9% (or 135 thousand tons) of palm oil purchased by Unilever was segregated CSPO, which, taking an average premium cost, would represent an investment of approximately US\$4.4 million.</p> <p>The price of a ton of palm oil has varied between US\$1000 and 500 over the last 5 years. Accordingly, GreenPalm certificates represent an additional cost of approximately 0.2%, and purchasing segregated CSPO, 4%.</p>	<p>CSPO must meet RSPO criteria that directly or indirectly, reduce forest emissions from palm oil production (e.g., that new plantations have not replaced primary forest or any area required to maintain or enhance one or more High Conservation Values).</p> <p>Purchasing GreenPalm certificates is seen as less effective than purchasing segregated CSPO directly, as certificates are only a small premium, do not address the emissions caused by the actual palm oil purchased, and may not fully fund an equivalent number of tons of CSPO.</p> <p>For this reason, Unilever, along with other large purchases, have committed to expanding the percentage of segregated CSPO purchased. However, due to lack of demand outside of Europe, supply of segregated CSPO is currently limited.</p>

Company	General Commitment	Investment Type	Scale of Investment	Contribution to Reduction in Forest Emissions
Cargill	Cargill is one of the world's largest palm oil producers and suppliers, and has committed to achieve RSPO certified production with 100% traceability to the mill level by end 2015 and 100% traceable back to sustainable plantations by 2020	In 2015, Cargill acquired a new 50,000-hectare plantation (the Poliplant Group) for which it aims to achieve RSPO certification. To do this, Cargill will identify high carbon stock (HCS) and high conservation value (HCV) lands, carry out social assessments and develop corrective action plans.	Costs differ between companies on achieving RSPO certification. A World Wide Fund for Nature (WWF) report estimates the main cost of certification per hectare, excluding ongoing maintenance costs, to comprise HCV assessment (US\$0.8 – 5), staff training (US\$0.1 - 23) corrective action (US\$3.7 -11) and certification (US\$2.1 -3.5). Taking average figures, for a 50,000-hectare plantation, this would translate into an approximate investment of US\$ 1.2 million.	The setting aside of HCS and HCV lands has clear benefits in terms of reducing forest emissions as compared with businesses as usual production practices. However, while the large companies can regulate production practices of palm oil produced on their land, the complex web of small holders and third party suppliers that constitute a significant proportion of the palm oil they supply, makes traceability challenging.

Subindicator 3.3: Corporate Social Responsibility initiatives to reduce forest emissions

This subindicator covers investments by companies in strategies to reduce forest emissions that do not relate directly to their production practices (Table 5). While such investments do contribute to reducing forest emissions, they are typically one-off and grant based, and lack the scalability of the case studies described in subindicators 3.1 and 3.2, in that they do not lead to long term changes in a company's business model.

Table 5. Case studies for subindicator 3.3

Company	Initiative Description	Scale Of Initiative	Contribution to Reduction in Forest Emissions
Danone	<p>The Danone Fund for Nature invests in the restoration of natural ecosystems, agroforestry and sustainable agriculture projects, and rural energy/clean cookstove projects.</p> <p>In 2011, DFN established the Livelihoods Fund, a carbon fund where partner investors receive carbon credits flowing from projects.</p>	The Fund has a current capital of EUR40 million.	The 7 projects supported by the Fund are expected to generate carbon credits equivalent to 8 million tons of CO ₂ over the next 20 years, having led to the planting of more than 130 million trees over 30 thousand hectares.
Nestle	Nestlé Malaysia has embarked on a project to reforest land along the lower Kinabatangan River in Sabah. Project RiLeaf will provide a natural buffer to filter pollutants, mainly soil sediments and chemical fertilizer run-off, giving the river a chance to repair itself over time.	In 2013, the project received two years of funding worth approximately US\$0.5 million from the Sime Darby Foundation.	Between 2011 and 2013, almost 180,000 trees have been planted across 2400 hectares.

Indicator 4: Indigenous peoples' investments in strategies to reduce forest emissions

The central role of indigenous peoples' in forest protection is well established. Indigenous peoples and local communities have legal or official rights to about one eighth of the world's total forest, and where there is strong legal recognition and government protection, deforestation rates are typically far lower than outside those areas (Stevens, C. et al. 2014). In the Brazilian Amazon Basin for example, between 2002 and 2012, tree cover loss was over ten times lower in Indigenous Lands than in the surrounding areas.

Indigenous peoples are often characterised as beneficiaries of strategies to reduce deforestation, or victims of the exploitation of forest lands. However, it is important to acknowledge indigenous peoples' specific contribution to and support for strategies to reduce forest emissions, of which the case study below provides a good example.

Table 6. Case studies for Indicator 4

Group	Initiative Description	Scale Of Initiative	Contribution to Reduction in Forest Emissions
<p>An alliance of Aliansi Masyarakat Adat Nusantara (AMAN), Indigenous Organizations of the Amazon River Basin (COICA), Interethnic Association for the Development of the Peruvian Rainforest (AIDSEP), Mesoamerican Alliance of People and Forests (AMPB) and Réseau des Peuples Autochtones et Locales Pour la Gestion des Écosystèmes Forestiers (REPALEF)</p>	<p>At the 2014 Climate Summit in New York, indigenous territorial leaders from four big tropical forest regions (Amazon, MesoAmerica, Congo Basin and South-Eastern Asia) issued a formal statement committing to protect tropical forest in exchange for: (1) respect and restitution of ancestral territory; (2) territorial climate finance and; (3) self-determination and binding free, prior and informed consent.</p>	<p>Indigenous leaders pledged to protect and sustainably management 400 million hectares of rainforest.</p> <p>This group represents 85% of tropical forest in community hands.</p> <p>Though it is difficult to attach a financial sum to the proposal, direct costs covered by indigenous peoples will include the costs of mapping, managing, monitoring forests, protecting forests from fire, illegal logging and other drivers of deforestation.</p>	<p>It is difficult to calculate an avoided deforestation figure, as deforestation rates are currently low in the relevant areas. However, carbon stored in the forests over which these groups exercise control has been estimated at 85 billion tonnes of CO₂ – or nearly three times global annual CO₂ emissions.</p>

Indicator 5: Civil society investments in strategies to reduce forest emissions

Non-governmental organisations and other civil society groups in both developed and developing countries play a significant role in financing strategies to reduce forest emissions. However, NGOs do not report on their forest spending in a harmonized manner, and this data is not collected centrally. The situation is also complicated by the fact that large international NGOs commonly pass through funds received from governments, multilaterals or private sector bodies, in addition to funds received from individual contributions and other sources, which can be classified as ‘own funds’. Where total NGO spending on forest conservation is available, if that cannot be disaggregated into ‘own funds’ and “pass-through” funds, there is a risk of double counting, once by the source and again by the NGO.

To date, only one review has attempted to calculate NGO own fund spending on forest conservation, with a focus on interventions in the Amazon Basin (De La Mata & Riega-Campos 2014). This study found that four large international NGOs (WWF, Conservation International, The Nature Conservancy and Critical Ecosystems Partnership Fund) contributed US\$100 million to forest conservation in the Amazon Basin between 2007 and 2013 (7% of all international finance recorded by the study). The study found that the interventions with the greatest NGO funding were protected area creation and management, payment for ecosystem services and REDD schemes, and indigenous lands management.

Technical Annex

Selection of Indicators

Indicator 1: International public climate finance flowing to the forestry sector in developing countries

Subindicator 1.1

This subindicator tracks commitments of ODA targeted at the forestry sector generally with climate mitigation as a principal or significant objective. This will capture finance committed to readiness and capacity building to reduce forestry emissions, as well as implementation of emission reduction programs. A principal objective means that the ODA funded activities pursue objectives of the UNFCCC and that the activity would not have been funded but for that objective. A significant objective means that ODA funded activities will have other prime objectives, but will have been formulated or adjusted to help meet climate concerns.

For comparison, we also present figures for total forestry ODA, and total ODA.

We do not track REDD+ finance as a category in its own right for two reasons: (1) REDD+ finance is a subset of all investments to reduce forest emissions, and our aim is to capture as broad a set of investments as possible. For example, some ODA forestry investments where climate mitigation is only a significant objective may fall outside of REDD+ reporting, as will most private sector investments that reduce forest emissions; (2) the boundaries between REDD+ finance and non-REDD+ finance are not clear, and hence there is a risk of double counting where REDD+ specific databases (e.g., the Voluntary REDD+ database) are used alongside OECD DAC data.

Subindicator 1.2

This subindicator highlights instances of South-South ODA-like finance flows to reduce forestry emissions. As there are very few instances of this to date, we focus more broadly on South-South climate finance in general.

Indicator 2: Domestic public finance to reduce forest emissions

Subindicator 2.1

This subindicator highlights domestic public investments in developed countries in strategies that reduce forest based emissions. Given the absence of collected data or consistent reporting on this across developed countries, we present two case studies: spending by the US Federal Government on sustainable forest management, and spending at EU level on sustainable forest management.

Subindicator 2.2

This subindicator highlights domestic public investments in developing countries in strategies that reduce forest based emissions. Given the absence of collected data or consistent reporting on this across developed countries, we present three case studies: payment for ecosystem services and domestic co-financing of climate programs within Costa Rica, Mexico and Vietnam.

Indicator 3: Private sector support for strategies to reduce forest emissions

Subindicator 3.1

This subindicator highlights equity and debt investments by private actors in sustainable production of commodities driving deforestation. We present two case studies: the Banking Environment Initiative and the Norway's Government Pension Fund Global.

Subindicator 3.2

This subindicator highlights capital investment in production of sustainable forest commodities by private actors. We present two case studies: investments by Unilever and Cargill in the sourcing of certified sustainable palm oil, and production of certified sustainable palm oil, respectively.

Subindicator 3.3

This subindicator highlights corporate social responsibility investments by private actors. We present two case studies: initiatives by Danone and Nestle.

Indicator 4: Indigenous peoples' investments in strategies to reduce forest emissions

This subindicator highlights investments by indigenous peoples in forest conservation. Given the diversity of indigenous peoples, there is no common definition of this term, though it encompasses those groups that self-identify as indigenous peoples, have historical continuity with pre-colonial and/or pre-settler societies and strong link to territories and surrounding natural resources. We present a case study of a formal commitment by an alliance of indigenous peoples groups represents to protect tropical forest under their control.

Indicator 5: Civil society investments in strategies to reduce forest emissions

This subindicator highlights investments by NGOs and other civil society bodies.

Methodology

Indicator 1: International public climate finance flowing to the forestry sector in developing countries

Subindicator 1.1

We present bilateral data of climate mitigation ODA for forestry from 2002 to 2013 as reported through OECD Stat, Aid objectives targeting environmental objectives. For 2013 we also present OECD DAC data on bilateral and multilateral climate-related development finance commitments, selecting mitigation finance targeted at the forestry sector.

Although a focus on disbursement data would be preferable to commitments, climate-related disbursement data are not yet complete in DAC statistics (though this may change in the future, as 16 OECD members have already confirmed the completeness of their disbursement data). As soon as disbursement data is complete in DAC statistics, it should be tracked under this subindicator.

Although it would be preferable to use bilateral and multilateral flows of public climate finance from 2002 – 2013 as a reference level, and not just bilateral flows, there is no integrated data capturing both multilateral and bilateral flows before 2013.

OECD DAC captures flows from a donor perspective and recipient perspective. The donor perspective captures bilateral contributions, donor country contributions to climate specific funds (e.g., the Adaptation Fund) and imputed multilateral contributions (that is, contributions by donors to multilateral bodies, a percentage of whose outflows contribute to climate goals). The recipient perspective reports committed outflows from bilateral and multilateral sources (though still commitments), as reported by the donor or multilateral institution. Progress against Goal 8 should be tracked from a recipient perspective, as understanding the scale and recipients of finance is more relevant than identifying the original source.

Given the large year on year variance between commitment figures, this subindicator provides averaged figures across years to give a better picture of trends.

Figures are provided in US\$ constant value (2013), which is an adjusted value of currency used to compare dollar values from one period to another.

We compare bilateral climate mitigation forestry ODA from 2002 to 2013 with total forestry ODA over that period to illustrate the percentage of forestry ODA that pursues a mitigation objective. We also compare bilateral climate mitigation forestry ODA from 2002 to 2013 with total bilateral ODA flows across all sectors over that period, to give some indication of whether new forestry mitigation ODA is a redirection of existing ODA flows.

Subindicator 1.2

Given the absence of collated data on this indicator, we present case studies.

Indicator 2: Domestic public finance to reduce forest emissions

Subindicator 2.1

Given the absence of collated data on this indicator, we present case studies.

Subindicator 2.2

Given the absence of collated data on this indicator, we present case studies.

Indicator 3: Private sector investment in strategies to reduce forest emissions

Subindicator 3.1

Given the absence of collated data on this indicator, we present case studies.

Subindicator 3.2

Given the absence of collated data on this indicator, we present case studies.

Subindicator 3.3

Given the absence of collated data on this indicator, we present case studies.

Indicator 4: Indigenous peoples' investments in strategies to reduce forest emissions

Given the absence of collated data on this indicator, we present case studies.

Indicator 5: Civil society investments in strategies to reduce forest emissions

Given the absence of collated data on this indicator, we present case studies.

Data sources

Indicator 1: International public climate finance flowing to the forestry sector in developing countries

Subindicator 1.1

The data for subindicator 1.1 is retrieved from 1) the OECD DAC Climate Related Development Finance, Project Level Data, Sector (DAC Classification) Forestry (retrieved in September 2015) and 2) the OECD DAC Creditor Reporting System, Aid Activities Targeting Global Environmental Objectives, Sector Forestry, Marker Mitigation (retrieved in September 2015).

Since 2013 the OECD DAC has captured an integrated picture of both bilateral and multilateral climate-related external development finance flows. As a subset of this dataset, recorded flows into the forestry sector (forestry policy and administrative management, forestry development, fuelwood/charcoal, forestry education/training, forestry research and forestry services) provide the most complete dataset of international support for strategies to reduce forest emissions. Bilateral commitments are 'Rio marked' to identify if they target climate change as a principal or significant objective. Data on multilateral commitments are based on the multilaterals' joint approach, which identifies the climate-component within a project, consistent with their 2013 Joint Report.

Subindicator 1.2

Data for developing country commitments to the Green Climate Fund is taken from the Green Climate Fund website. Information about China's climate finance commitment is taken from U.S.-China Joint Presidential Statement on Climate Change, September 25 2015.

Indicator 2: Domestic public spending in NYDF signatory countries that includes intent to reduce forest emissions

Subindicator 2.1

Data for US spending is taken from US Department of Agriculture budgets and US Forestry Service budgets. Tax spending on conservation easements is an estimate taken from a paper by Deal, K., (2013). Figures on EU spending are taken from a European Commission Communication: A new EU Forest Strategy For Forests And The Forest-Based Sector.

Subindicator 2.2

Data for Costa Rica's payment for ecosystem services scheme are taken from Fondo Nacional de Financiamiento Forestal (FONAFIFO) reports. Figures for Mexico's domestic investments are taken from MÉXICO: Seguimiento del Financiamiento para REDD+ 2009-2012 (Pina and Flores, 2014). Figures for Vietnam's PFES scheme are taken from Payments for forest environmental services in Vietnam (Thuy et al. 2013) and MARD (2015), Forest Sector Development Report Year 2014. Figures for international ODA are retrieved from OECD DAC data.

Indicator 3: Private sector investment in strategies to reduce forest emissions

Subindicator 3.1

Information on the Banking Environment Initiative is taken from The Banking Environment Initiative (BEI) & the Consumer Goods Forum (CGF)'s "Soft Commodities" Compact, and BEI website. Information on the Norwegian Government Pension Fund Global (GPF) is taken from investment criteria, available to download on their website.

Subindicator 3.2

Information on Unilever is taken from their Sustainable Palm Oil Progress Report 2014. Information on Cargill is taken from their Palm Oil Progress Update, and Policy on Sustainable Palm Oil. Information on the cost of GreenPalm certificate pricing for 2014 is provided by Book & Claim on GreenPalm website. Information on CSPO price premiums is taken from WWF, Profitability and Sustainability in Palm Oil Production, 2012.

Subindicator 3.3

Information on Danone is taken from the Danone Fund for Nature webpage. Information on Nestle is taken from the Nestle Project RiLead website.

Indicator 4: Indigenous peoples' investments in strategies to reduce forest emissions

Information on indigenous peoples' commitment is taken from the publication "From Territorial Peoples towards a Global Agreement" (2014).

Indicator 5: Civil society investments in strategies to reduce forest emissions

Data on NGO contributions is taken from analysis commissioned by the Gordon and Betty Moore Foundation, prepared by De La Mata & Riega-Campos (2014).

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Endnotes

¹ US spending on wildfire management in 2013 was more than double all climate related ODA for forests in that year (based on figures from US Forest Service budget)

² Figures for some EU countries are reported to Eurostat and available to download at http://ec.europa.eu/eurostat/statistics-explained/index.php/Environmental_protection_expenditure it is not possible to disaggregate forest spending from these figures, and as such this data is not a suitable proxy for strategies to reduce forest emissions

³ Global Impact Investing Network, <http://www.thegiin.org/cgi-bin/iowa/home/index.html>

www.forestdeclaration.org

