BRANCHING UP AND OUT

Options for Integrating Forests into the Post-2015 Development Framework

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Summary for Policymakers

The United Nations is currently articulating a new set of post-2015 development goals that aim to mainstream environmental sustainability (along with social and economic sustainability) into poverty alleviation efforts. Forests—both natural and managed—have an important role to play in poverty alleviation. This paper proposes ways that forests could be integrated best or "bundled" into the post-2015 development agenda, using current proposals as the starting point and building off existing internationally agreed natural resource objectives. We explore several options in this analysis—from mainstreaming forests to standalone goals. Based on our assessment of the political benefits and costs to each approach, we recommend both mainstreaming forest targets across relevant goal areas and housing forest-specific targets under a standalone natural resource management goal.

Why the twofold approach? Substantively, forests relate to a broad set of issues and sectors that are central to the post-2015 framework, which argues for a mainstreamed approach. From health and energy—where increased access to sustainable, modern energy services for the poor can protect forests and improve air quality—to gender equality and governance—where universal land tenure can enhance forest protection and decrease conflict and insecurity—forests both promote and benefit from sustainable development. Yet without a home within a standalone goal, forests may marshal insufficient attention and resources, which argues for a standalone goal.

In particular, we recommend that countries adopt the following ambitious yet achievable mainstreamed forest targets to measure progress during the post-2015 period.

Potential goal: Ensure healthy lives

Recommended target: Reduce by X% the incidence of morbidity and mortality from indoor and outdoor air pollution relative to 2013.

Mainstreaming rationale: Reducing dependence on wood burning for fuel and heat will improve health and air quality while protecting the forest.

Potential goal: Secure sustainable energy

Recommended target: Ensure universal access to modern energy.

Mainstreaming rationale: Switching to modern, sustainable energy sources is essential to combat poverty and foster stronger, more inclusive growth, yet also promotes forest protection.

Potential goal: Attain gender equality and women's empowerment

Recommended target: Ensure universal access to secure tenure for men and women, including customary rights to land and forests.

Mainstreaming rationale: Guaranteeing secure land tenure improves levels of investment and access to credit, while enhancing land management and forest protection.

Potential goal: Ensure sustainable agriculture, food security and nutrition

Recommended target: Reduce by 50% post-harvest agricultural lost, marine bycatch, and food waste.

Mainstreaming rationale: Reducing food waste will help close the gap between food available today and that needed to feed the world's growing population, while also minimizing the need to clear forests for agricultural expansion.

Potential goal: Promote sustainable and resilient employment

Recommended target: Increase by X% sustainable agricultural production on smallholder farms.

Mainstreaming rationale: Increasing agricultural productivity will boost both smallholder farmer revenues and the food supply, and can mean less need to clear forested land.

Potential goal: Support rule of law and capable institutions

Recommended target: Reduce by X% illegal deforestation and logging relative to 2013.

Mainstreaming rationale: Curbing illegal deforestation and logging will increase tax revenue and boost global timber prices, while protecting standing forests for legal use.

We also recommend the following forest targets under a standalone goal to promote sustainable natural resource management, given the clarity, communicability, and political resonance of the "management" frame.

Potential goal: Ensure sustainable natural resource management

Recommended targets:
- **Increase sustainable government procurement, including commodities related to deforestation, by X% relative to 2013.**
- **Ensure sustainable management of all forests.**
- **Achieve near zero natural forest loss.**
- **Agree to and mainstream a global standard for national accounting of environmental goods and services with all countries reporting on improvement.**

Introduction

Nations from around the world have been meeting over the past year in New York to discuss the future of global development. Their aim is to craft a set of voluntary global goals to succeed the Millennium Development Goals, or MDGs, that were designed to reduce global poverty and will expire at the close of 2015. These successors to the MDGs, which are likely to be finalized in September 2015 and are known as the "post-2015 goals," will address today's global development challenges— including international environmental concerns that directly affect poverty alleviation. The post-2015 development goal process will likely create a framework to eradicate extreme poverty by 2030 (defined as having less than $1.25 a day), and will carry forward the unfinished business of the MDGs.

As countries work to define ambitious goals aimed to tackle the most urgent environmental, social and economic challenges of our day, they would do well to integrate sustainable forest and land-use policies into the agenda. From international organizations and regional development banks to academics and think tanks, much has been written on the links between forests and poverty alleviation. Forest resources directly contribute to the livelihoods of some 90 percent of the world's 1.2 billion people living in extreme poverty;[1] between 500 million and 1 billion smallholder farmers across the developing world grow farm trees or manage remnant forests for subsistence and income, and 60 million indigenous peoples are wholly dependent on forests.[2] However, many of the world's poorest countries are also those losing their forests. Of the 48 least developed countries, 35 reported forest cover loss between 2005 and 2010;[3] three of the top five deforesting countries (Myanmar, Democratic Republic of Congo, and Zambia) fall into this category. Even in middle-income countries, like Brazil and Indonesia that are losing their forests, it is often the landless poor who suffer the most

and benefit the least when forests are cleared.[4] In Brazil, for instance, 40 percent of rural households are smallholder farmers and 46 percent are landless, while around 25 percent of the rural population is extremely poor.[5]

Of course, trade-offs abound between poverty alleviation and forests as well. In most cases, forest clearing provides a much greater cash return than keeping forests standing to the individuals controlling the land. This creates large and contradictory incentives in the near-term. When the return on agricultural products is high, there is a large incentive to clear forests and convert the land to agricultural production. However, when the return on timber is high, incentives can align either to provoke clearing (to liquidate high value timber) or to stimulate sustainable management of plantations and secondary forests. Governance and land tenure conditions strongly affect these dynamics, for where governance is weak and tenure poorly defined, powerful interests can seize forest lands away from the rural poor for conversion to agriculture, clear cutting, or sustainable timber production—whichever provides the greatest cash return. Where governance is strong and tenure clearly defined, smallholders and forest-dependent communities may choose any of these options as well and often do seek to generate income from clearing, but are also more likely to keep forests standing for many reasons.[6] Rather than provide a full summary of studies on both sides, we would direct readers to the appendix for a bibliography of relevant resources.

As a result of these near-term tradeoffs, a number of international forums have sought to mediate the dynamics between development and forest protection through the United Nations (UN)—including the UN Forum on Forests (UNFF) and the Convention on Biological Diversity (CBD). UNFF, an intergovernmental policy forum composed of all member states, aims to promote the

management, conservation and sustainable development of forests through voluntary coordination and knowledge sharing. Its Non-legally Binding Instrument on All Types of Forests (NLBI) articulates global "objectives" for 2015 that aspire to reverse the loss of forest cover worldwide, enhance forest-based economic, social and environmental benefits, increase the area of protected forests across the world, and reverse and augment the decline in official development assistance for sustainable forest management.[7] In contrast, the CBD is a multilateral, legally binding treaty that covers all ecosystems, species and genetic resources. Through its Aichi Biodiversity Targets for 2020, parties to the CBD are obliged: 1) to halve the rate of loss of all natural habitats, including forests, and where feasible, to bring that rate close to zero, and 2) to

sustainably manage areas under agriculture, aquaculture and forestry, ensuring the conservation of biodiversity.[8] Any post-2015 treatment of forests should build on rather than duplicate these efforts.

Ideally, forest-focused post-2015 targets would also take as their baseline progress made to date on these processes. Of course, there are limitations. Progress on the implementation of NLBI is monitored through country reporting; however given that baselines are ambiguous and specific reduction targets are absent, it would be challenging to formally build off of the instrument's objectives in any case. And given that the Aichi Biodiversity Targets were adopted in 2011, it may be too soon to determine where progress stands.

Forests and Universality

One of the major innovations of the post-2015 development agenda is its focus on universality. In this context, universality means that the goals and targets will be as relevant to high-income countries as low-income countries, yet will take into account different national realities, capacities and levels of development. In short, the goals will need to have global relevance, while recognizing the need for differentiation. In terms of forests and poverty alleviation—where forest cover is vastly different across countries and even within countries—universality can be embraced as follows.

First, forests have global relevance, as they are found across the developed and developing worlds. The world's top 10 countries by forest area include major industrialized powers, emerging economies, and a least development country: Australia, Brazil, Canada, China, Democratic Republic of the Congo, India, Indonesia, Peru, Russia, and the United States. And in terms of forests with the greatest biological value, or primary forests, the top ten again span everything from industrialized countries to major emerging economies.[9]

Second, forests play a critical role in global climate change, which affects people and economies the world over. When standing, forests sequester carbon pollution; and when felled, they release it. Today, deforestation, largely driven by agriculture predominantly in the tropics, is responsible for 11 percent of global greenhouse emissions, which fuel climate change. However, northern forests are increasingly becoming a source of emissions as pest outbreaks are driving significant die-off. While climate change affects us all, the world's poor are projected to suffer the most. According to the UN Intergovernmental Panel on Climate Change's fifth assessment report, climate change is very likely to have a negative effect on yields of major cereal crops across Africa. By 2050, wheat yields are expected to decline by 35 percent across sub-Saharan Africa. Fisheries, which are an important food source, will be adversely affected and could result in a 50 percent decline in fisheries-related employment and a total annual loss of $311 million to West African economies by 2050.[10] Around the world, sea-level rise will

disproportionately affect the world's poor, for approximately 14 percent of the developing world's population resides in coastal areas. Infectious diseases such as malaria will spread.[11] In short, the poorest developing countries and the large proportion of the world's poor living there, are most vulnerable to the threat of climate change, and yet, did the least to fuel it.

Third, promoting development and forest protection requires action and collaboration beyond national policies. The global nature of the world's food systems, which is the most important driver of deforestation, requires a global approach. From international supply chains to trade rules and agricultural subsidies, national policymakers are poorly placed to manage these challenges in a vacuum. Therefore, some portion of this agenda needs to be taken up through coherent policies across economies, which lends itself to a universal approach.

Forests and Land-use in Current Proposals

Since June 2012, the international community has received over 800 proposals on the post-2015 development agenda from governments, think tanks, thought leaders, advocacy organizations, and multilateral and regional bodies.[12] These proposals range in their offerings from scope to substance to methodology. Some are comprehensive and present a complete set of post-2015 goals and accompanying targets to achieve those goals. Others focus on a single issue. Still others present a broad narrative within which the post-2015 goals should be crafted. Within the proposals themselves on a given sector or issue area are a diverse set of priorities. And many are the result of extensive consultation with stakeholder groups, while others rely on deep analysis or thought experiments.

For their part, forests have been directly integrated into many proposals for goals and targets in the post-2015 development agenda. Table 1 (see appendix B) provides an overview of proposals and characterizes them in terms of whether the environment was mainstreamed broadly across the proposal and/or contained a standalone goal (column two); whether and how they include forests and biodiversity in the proposed goals and targets (column three); and whether they explicitly mention the Aichi targets and to what Aichi targets the proposal implicitly or explicitly refers (column four).

Of the proposals analyzed, which were taken from the Sustainable Development Goals e-Inventory,[13] 49 contained a forest component. Only the 14 proposals that offer concrete goals or targets and that address the broad post-2015 development agenda, including goals and targets on both poverty eradication and environmental sustainability, are included in our analysis. Among these, most come from intergovernmental processes (6), followed by non-governmental organizations (5), think tanks and research institutions (2), and governments (1). Proposals across the board include contributions from both developed and developing countries.

Box 1. Goals and Targets: What's the Difference?

For the uninitiated to the post-2015 global development agenda, the differences between goals, targets and indicators may seem small. While closely related, each serves a distinct purpose, described in more detail in the table below.

	Tier	Definition	Form	Scope
Goal	1	A goal offers an ambitious and aspirational commitment to address a single challenge (for example, improve maternal health).	Generally qualitative	Global
Target	2	A target offers a specific, measurable and time-bound outcome that directly contributes to the achievement of a goal (for example, reduce by three quarters the maternal mortality ratio).	Quantitative and measurable	Global or national; may be aggregated to assess global progress
Indicator	3	An indicator provides a metric used to enhance specificity and measure progress towards a target; it is generally based on available or established data (for example, proportion of births attended by skilled health personnel).	Quantitative and measurable	Global or national; may be aggregated to assess national or global progress

Source: Modified from Molly Elgin-Cossart, Cathleen Kelly, and Abigail Jones, "Reducing Poverty Through Climate Action: A Strategy for Global Development Leaders," Center for American Progress and Climate Advisers (May 2014).

Most proposals sought to mainstream environmental sustainability either in the targets themselves (as indicated in column two of Table 1, Appendix B) and/or in the framing language used in their introductory remarks. Mainstreaming in this context means that goals and targets that are not directly concerned with environmental sustainability also work to attain these objectives. For instance, a mainstreamed approach to the environment within a health goal would acknowledge and promote through clear targets and indicators the important role clean air and water play in the promotion of human health the world over. Such an approach represents a tectonic shift from the original MDGs, which did not integrate environmental issues outside of the loan goal on the environment (MDG 7).

Roughly 80 percent of proposals generated via intergovernmental processes, NGOs, think tanks, and governments that were analyzed included some form of a standalone

environment goal—of which the most popular framings were natural resource management, ecosystem services, or environmental sustainability. Both an environmental goal around natural resource management and ecosystem services are explored in options below. A general goal on environmental sustainability is not considered in this paper as this construction both lacks clarity and the people-centered focus of the post-2015 development agenda. Other options forwarded in terms of a standalone environment goal included one on forests and biodiversity, pollution, and climate change. Of the two proposals included in the analysis that offered goals but did not feature a standalone one on the environment, each presented a forest target bundled under goals on nutrition or green growth, respectively.

Of course despite each of these different constructions, most environment goals would house the same targets. In the end, the framing of a standalone environment goal does more to communicate the aspirations of the community and less to inform the quantitative and measurable targets; for within these goals, forests are directly addressed for the most part through reduced forest loss and deforestation targets. Other proposals suggest targets related to forest protection and biodiversity, forest restoration, or unsustainable use. Among the targets offered on forest loss and deforestation, half do not provide a target number while the others suggest halving the rate of forest loss over the period. To some extent, the forest loss and forest protection targets could just be seen as inverses of the other—one appealing to the problem, the other to the solution. Curiously, however, the forest protection targets lack quantitative measures and seem more aspirational in nature.

Finally, roughly a third of the proposals mention the Aichi Biodiversity Targets in their approach, while a small subset of these directly reference them in the target language specifically on forests. This could reflect a number of tensions—among them the relative obscurity of the Aichi targets and the need to focus on substance rather than process.

So while no broad consensus emerges across the proposals analyzed, a few points of agreement are clear:

1. **Mainstreaming forests across relevant goals would be optimal and widely supported.**

2. **A standalone goal, if included, on a) natural resource management, b) ecosystem services, or c) environmental sustainability would be best suited to house forest-specific targets.**

3. **Reducing forest loss and deforestation are the favored framing for numeric forest-specific targets— perhaps given their direct connection to the Aichi Biodiversity Targets.**

With these reference points in mind, we sketch out below a number of different options for including forests in the post-2015 development agenda. Options outlined include 1) mainstreaming forests throughout the goals, 2) a standalone goal on natural resource management that includes forests, and 3) a standalone goal on ecosystem services that also features forests. None of these approaches are mutually exclusive, and all have benefits and trade-offs both from a substantive and political perspective.

Three Major Options

Option 1: Mainstreaming forest targets across the goals

Forests could be integrated into the post-2015 framework as a crosscutting issue. Forests affect and are effected by all economies and could deliver tangible benefits that cut across several key sectors and areas relevant to the post-2015 development agenda, including health, gender, energy, and food security.

A number of illustrative mainstreamed targets are listed below that show how forests might be approached in a number of different goal areas.

Figure 1. Forests mainstreamed across potential goal areas
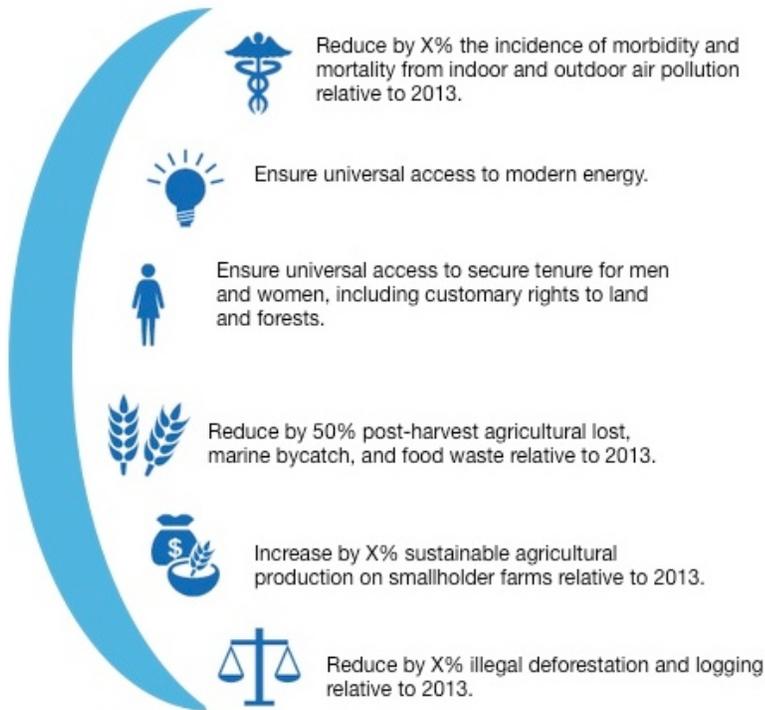
*Target relevant to **health**: Reduce by X% the incidence of morbidity and mortality from indoor and outdoor air pollution relative to 2013.*

Biomass burning, including wood, to cook and light homes drives indoor air pollution that is responsible for roughly 4 million premature deaths annually across the world or 4,000 people a day—a greater loss than from malaria.[14] Improving both efficiency and safety of biomass-fired cookstoves can both reduce wood demand and improve air quality and health.

*Target relevant to **energy**: Ensure universal access to modern energy access.*

Increasing access to modern, sustainable energy sources allows communities to fuel stronger, more inclusive growth, while substituting away from unsustainable biomass use that can drive deforestation.

*Target relevant to **gender**: Ensure universal access to secure tenure for men and women, including customary rights to land and forests.*

Insecure land rights are a major driver of illegal deforestation. Land, and often the forests that grow there, is a fundamental livelihood asset—yet only between 10-20 percent of women in developing countries have land rights.[15] Often land is an individual's single largest capital asset and provides a vehicle to contribute to and benefit from economic growth. Furthermore, it provides a safety net that reduces vulnerability.

*Target relevant to **food security**: Reduce by 50% post-harvest agricultural lost, marine bycatch, and food waste.*

Agricultural expansion is the primary driver of global deforestation. Reducing the nearly one-third of wasted agricultural production lost either before reaching consumers or after purchase both would increase the revenue for rural farmers and fisherman and diminish excess strain on forests, water, and the climate.

*Target relevant to **livelihoods**: Increase by X% sustainable agricultural production on smallholder farms. [16]*

With global population expected to swell 33 percent to 9.3 billion by 2050 and little more than 12 percent more arable land available worldwide, the world will need to dramatically increase staple food production in environmentally sustainably ways— primarily through increased productivity on fertile soils already in crop production rather than through expansion into forests. And with over 70 percent of the extreme poor in low income countries still living in rural areas where most are involved in farming, a focus on smallholder farmers will ensure that extension services target vulnerable populations.

*Target relevant to **governance**: Reduce by X% illegal deforestation and logging relative to 2013.*

Illegal deforestation and logging undermines economies and societies. In economic terms, illegal logging results in lost revenues both from forgone taxes and depressed global prices. In fact, estimates suggest that the practice depresses global prices for timber and timber products by roughly 7-16% on average.[17] In social terms, illegal logging has fueled conflicts over land and resources, disenfranchised local and indigenous communities, and driven corruption and armed conflict.

Mainstreaming forests across relevant goals is compelling from a substantive standpoint. Forests speak to the poverty alleviation agenda that is central to the post-2015 framework. Forest resources directly contribute to the livelihoods of about 1 billion people living in extreme poverty all over the world—from food, like honey and fruit, to raw goods and building materials that can be used to support livelihoods and shelter. Forests also speak to the universality dimension of the agenda, as discussed above, for they have global relevance, play a critical role in climate change, and require cross-boundary cooperation. Given the potential near-term tradeoffs, however, between poverty alleviation, economic growth, and forest conservation, goals could easily be at cross-purposes without fundamental mainstreaming. For instance, one could envision a target on increasing agricultural

production that stimulates land grabs and encroachment on natural forests, without complementary targets on land tenure and forest cover.

Yet mainstreaming without some standalone environment goal could create little attention for forests. And without some degree of attention and focus, forest and resource management budgets may suffer with attendant consequences for staffing levels across ministries the world over. In the first instance, totally mainstreaming an agenda can limit media coverage of that issue and, perhaps as a result, the number of people for whom a cause resonates.[18] In the second instance, budget appropriators, or politicians who determine spending priorities, seem to gravitate to those
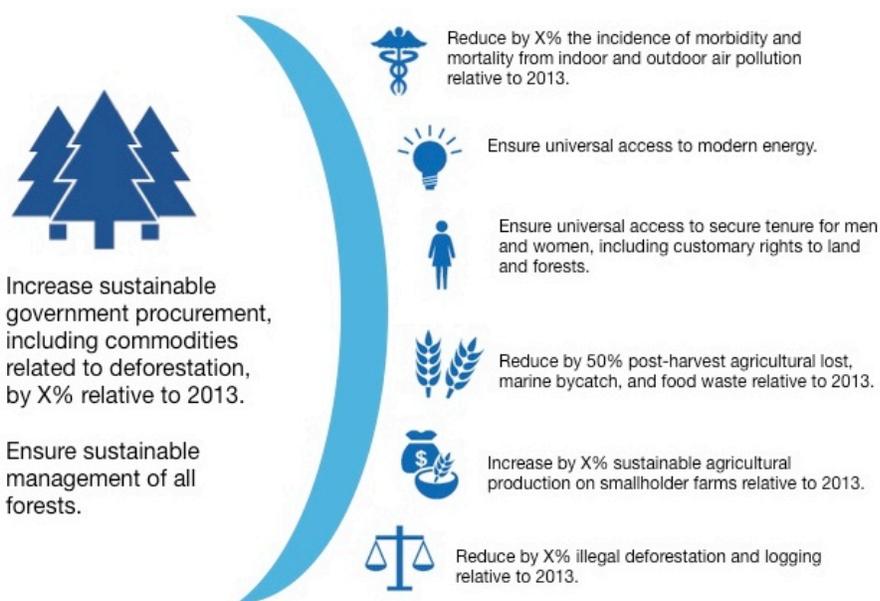
issues with headline goals. Independent research suggests a high correlation between these dynamics.[19] And with budgets come staff to implement priority projects.

Given these limitations, the two options presented in the remainder of the discussion draft point to potential standalone environment goal that would include forest related targets and indicators, in addition to mainstreaming forests across other goals, when appropriate, to ensure policy coherence and consistence across the agenda.

Option 2: Mainstreaming with a sustainable natural resource management goal

Forests could be included under a sustainable natural resource management goal. Natural resource management focuses on the use of major natural resources, including minerals, forests, and fisheries. The approach weighs the costs and benefits of a resource left untouched or harvested both for current and future generations. It tends to focus on sustainable resource extraction or exploitation that follows a "maximum sustainable yield" or "do-no-harm code"[20]—meaning that managers seek to find an optimal level of sustainable use. In practice this means, for

Figure 2. Natural resource management goal (left) with forests mainstreamed across additional goal areas

Increase sustainable government procurement, including commodities related to deforestation, by X% relative to 2013.

Ensure sustainable management of all forests.

Reduce by X% the incidence of morbidity and mortality from indoor and outdoor air pollution relative to 2013.

Ensure universal access to modern energy.

Ensure universal access to secure tenure for men and women, including customary rights to land and forests.

Reduce by 50% post-harvest agricultural lost, marine bycatch, and food waste relative to 2013.

Increase by X% sustainable agricultural production on smallholder farms relative to 2013.

Reduce by X% illegal deforestation and logging relative to 2013.

example, that when harvesting timber, one seeks to maintain forest cover at the point of

maximum forest growth so that harvesting timber does not diminish the base forest cover—unfortunately despite our best efforts, not an exact science.

A goal on natural resources could be something like the following: "Manage Natural Resource Assets Sustainably."[21] Both the High Level Panel (HLP) on the Post-2015 Development Agenda and the reports generated by the Economic Commission for Africa through consultations with various African experts favor this approach.

Two illustrative forest-related targets are elaborated in greater depth below, as are the pros and cons of selecting a natural resource management frame. Like those forest targets proposed under option 3, these forest-specific targets are not exclusive to natural resource management and could be bundled elsewhere, including under an ecosystem services goal.

Target: Increase sustainable government procurement, including commodities related to deforestation, by X% relative to 2013.

Sustainable procurement targets would leverage the market power of government purchases worldwide to facilitate much broader change toward sustainable commodities. As the largest consumer of goods and services, governments have the power to define the production standards of global markets through procurement policy and significantly amplify the market for sustainable products and practices, both through direct purchases and through signaling to the private sector the minimum level of acceptable practice. For example, four globally traded commodities—paper, palm oil, beef, and soy—are currently the most significant drivers of forest loss. Some governments have established procurement standards for zero deforestation that are rippling through markets and driving private sector action.[22]

Target: Ensure sustainable management of all forests.

Building on the NLBI effort to promote better forest stewardship, a target to enshrine broad-based, sustainable forest management for all forests by 2030 could help catalyze greater adoption of the 1992 effort. Such a target could help ensure a healthy supply of renewable timber for present and future generations, as well as the benefits derived from standing forests, including erosion protection and water filtration.

From a political standpoint, a natural resource management approach is appealing for a number of reasons. First, as a concept, it is easy to understand. It is about managing those natural resources at our disposal for use by current and future generations at optimal levels. As a result, it would easily be understood by all constituents—from the public and private sectors to civil society and individuals across the globe—making it an appealing goal. Second, sustainable natural resource use and management is widely supported politically among both developed and developing nations. The HLP report, made up of eminent persons from Liberia and Kenya to Mexico, Turkey and Japan, which embraced this approach, is a testament to this broad-based support. Furthermore, the approach underlies a number of important public-private partnerships, including, for instance, the Extractive Industries Transparency Initiative—a global coalition working to improve openness around the management of and revenues from natural resource extraction—and regional organizations' work on the environment, as for instance, the United Nations Economic Commission for Africa.[23]

Yet the concept of natural resource management as currently understood, fails to capture the full benefits to people of

unmanaged ecosystems. Forests absorb carbon; the soil they maintain filters water and protects against floods. Coral reefs support fisheries and protect coastlines. The wind carries pollen to help promote food security and genetic diversity. These are all services to development and poverty alleviation that aren't captured through "use." Consequently, while a natural resource management goal would be easily communicated, in practice it may suggest an overly narrow scope for the benefits ecosystems provide to people, including forests.

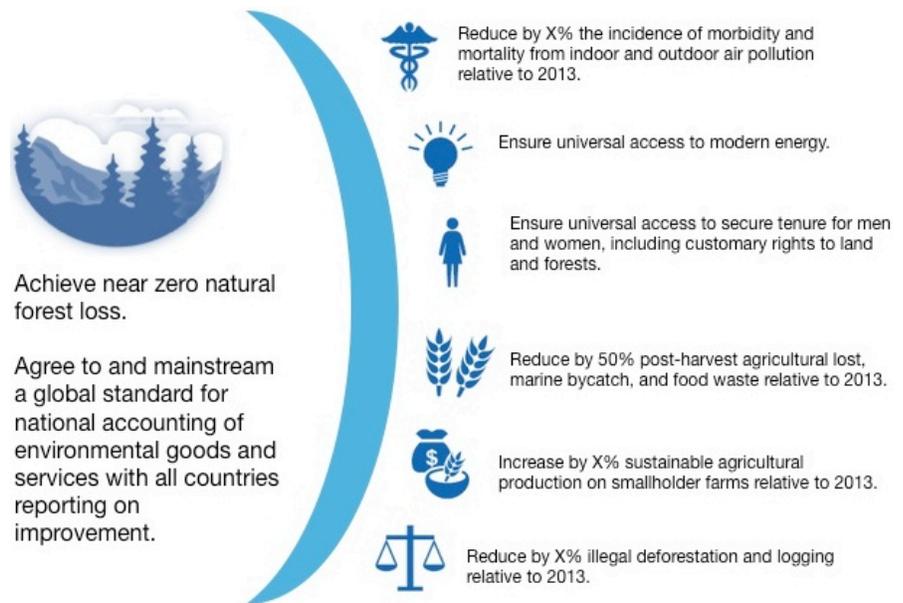It is important to note, however, that while the concept currently fails to capture the full benefits of the environment to people, there does not appear to be any intrinsic reason why this approach would preclude the environment's standing value, as well as the services it provides. It is perhaps by common convention and historical circumstance that the term came to be associated with extraction and exploitation. More and more, regional bodies and organizations are coming to embrace the broader suite of goods and services nature provides under the banner of sustainable or integrated natural resource management. Practitioners and experts alike are in fact thinking about holistically managing large swaths of land and the natural resources found within these geographies with a whole range of objectives in mind.

Option 3: Mainstreaming with an ecosystem services goal

Forests could likewise be included under an ecosystem services goal. Ecosystem services are the benefits people and communities derive from nature. The approach recognizes that people in their daily lives depend of a range of goods—from food and fiber—to services that ecosystems deliver, such as filtering air pollutants and protecting shorelines from destructive waves. Ecosystems are typically valued economically for their extracted, immediately marketable goods, like fish, minerals, and timber, rather than their standing value; while the costs of production to the services, like air and water pollution, are rarely captured in economic accounting.[24]

A goal on ecosystem services could be something like the following: "Ensure Ecosystem Services for All." Both the Sustainable Development Solutions Network, a partnership between leaders from academia,

Figure 3. Ecosystem services goal (left) with forests mainstreamed across additional goal areas

Achieve near zero natural forest loss.

Agree to and mainstream a global standard for national accounting of environmental goods and services with all countries reporting on improvement.

Reduce by X% the incidence of morbidity and mortality from indoor and outdoor air pollution relative to 2013.

Ensure universal access to modern energy.

Ensure universal access to secure tenure for men and women, including customary rights to land and forests.

Reduce by 50% post-harvest agricultural lost, marine bycatch, and food waste relative to 2013.

Increase by X% sustainable agricultural production on smallholder farms relative to 2013.

Reduce by X% illegal deforestation and logging relative to 2013.

civil society, and the private sector, as well as environmental think tanks and civil society prefer this framing to options 1 and 2 above.

Two forest targets are explored below, in addition to the benefits and challenges of selecting an ecosystem services lens for the standalone environment goal. These forest-

specific targets, like those presented in option 2 above, could be embedded within either lens and are presented for illustrative purposes within an ecosystem services goal.

Target: Achieve near zero natural forest loss.[25]

Building on the Aichi Biodiversity Targets that seek to cut deforestation rates in half by 2020, an ambitious but achievable forest loss and reforestation target for 2030 would help catalyze additional progress with attendant benefit for those two billion people worldwide that depend on forests for their livelihoods.

Target: Agree to and mainstream a global standard for national accounting of environmental goods and services with all countries reporting on improvement.

The standard measure of progress for any country is typically Gross Domestic Product (GDP), which is also considered an indicator of a country's standard of living. Yet GDP does not include the changing value of natural assets, though they do affect growth and human wellbeing. Incorporating the value of natural resources into standard GDP calculations would create a fuller picture of a nation's wealth and allow greater assessment of the costs and benefits of resource exploitation to current and future generations.

From both a substantive and political standpoint, an ecosystem services approach may be appealing for a number of reasons. First, ecosystems and the services they provide reflect the full value of nature to people and poverty alleviation across and within generations. Second, an ecosystem services approach can help support rational decision-making when different targets and goals conflict, by estimating the value of such services in a common currency as other economic benefits. Third, there seems to be growing political support among UN member states for an ecosystem services goal. In fact, the latest document to emerge from the UN Open Working Group (OWG) on the Sustainable Development Goals includes a biodiversity and ecosystem services goal among the 16 goals still under consideration for inclusion in the final outcome document to be presented to the Secretary-General in September 2014.[26]

Yet few understand what an ecosystem is, let alone an ecosystem service. As a result, an ecosystem service target could lack clarity and communicability to the broad set of constituencies and stakeholders that the post-2015 framework is meant to inspire and serve. Relatedly, measuring the economic value of ecosystem services remains fairly limited, despite good work being done through the UN System of Environmental-Economic Accounting and the Wealth Accounting and Valuation of Ecosystem Services partnership. And finally, some communities and advocates have been cautious in approaches that attempt to place an economic value on nature. Consequently, while the goal may be factually and conceptually accurate, and politically has some wind at its sails in the United Nations, in practice it could be challenging to reach global agreement and implement this approach.

Recommended Approach

Real opportunities exist to integrate forests into the post 2015 development agenda with tangible benefits for poverty alleviation and human development. Despite potential near-term tradeoffs, forests can be fully integrated into the new development framework in ways that promote health, advance gender equity and empowerment, support sustainable energy access for all, enhance food security, and increase returns to smallholder farmers between 2015 and beyond.

Based on the assessment above of the strengths and weaknesses of the various approaches proposed to date for integrating forests into the post-2015 development agenda, we recommend the following approach.

First, forests should be fully mainstreamed into relevant goals through measurable, ambitious, yet achievable targets. We proposed targets above that could be bundled into standalone goals on health, energy, gender, food security, jobs/livelihoods and rule of law. This list is not comprehensive and targets folded into one goal could just as easily be bundled elsewhere. For instance, "ensure universal access to secure tenure for men and women, including customary rights to land and forests," which we have bundled under a gender equity goal, could equally be folded into a standalone goal on food security, natural resource management or poverty alleviation instead.

Second, countries should support the natural resource management approach for a number of reasons. Firstly, and perhaps most importantly, as a concept, natural resource management is widely understood. As such, it could easily be communicated across the world to civil society, policymakers, and the private sector. Secondly, it may be more diplomatically feasible. Despite the latest indications from the OWG, there has been broad support for a natural resource management approach from both developed and developing countries, as well as key regional groups, including the African community, both throughout the process and, more significantly, beyond the process where international, national, and local action will determine whether the post-2015 goals are met or lost. Thirdly, a natural resource management lens could include the concept of conserving and sustainably managing ecosystem services. In contrast, a goal on maintaining ecosystem services lacks clarity both in terms of messaging and data availability/capacity.

Ultimately, the framing of any standalone environment goal is important in as much as it gains political traction in national ministries and local agencies, resonates among all segments of society, and galvanizes action in support of environmental sustainability for this and future generations. For all of these reasons, a natural resource management approach offers a compelling frame for environment-specific targets, including forests.

Building a better world free of the most urgent environmental, social and economic challenges of our day is within reach. It is possible for a new development framework to jumpstart action that addresses environmental and poverty challenges simultaneously. Forests, with all their life-sustaining resources—from creating the oxygen we breathe to the timber that houses us—have a critical role to play in forging this better future that sees an end to poverty and a healthy environment for all.

Appendix A.

Background reading on forests and poverty alleviation

Angelsen, A., P. Jagger, R. Babigumira, B. Belcher, N.J. Hogarth, S. Bauch, J. Borner, C. Smith-Hall, and S. Wunder. In press. "Environmental Income and Rural Livelihoods: A Global-Comparative Analysis." *World Development.* Elsevier, Amsterdam.

Chomitz, K.M., P. Buys, and T. de Luca. 2007. *At Loggerheads? Agricultural Expansion, Poverty Reduction, and Environment in the Tropical Forests*. Policy Research Report. The World Bank, Washington, DC.

FAO (Food and Agriculture Organization of the United Nations). 2005. "Realizing the Economic Benefits of Agroforestry: Experiences, Lessons and Challenges." In *State of the World's Forests 2005*. Rome, Italy: FAO. http://www.fao.org/docrep/007/y5574e/y5574e00.htm (accessed 20 July 2012).

FAO (Food and Agriculture Organization). 2010. *Global Forest Resources Assessment 2010*. FAO Forestry Paper 163. Rome, Italy: FAO. http://www.fao.org/docrep/013/i1757e/i1757e.pdf (accessed 31 May 2012).

Fisher, R.J., S. Maginnis, W.J. Jackson, E. Barrow, and S. Jeanrenaud. 2005. *Poverty and Conservation: Landscapes, People, and Power.* International Union for Conservation of Nature, Gland, Switzerland, and Cambridge, UK.

IFAD (International Fund for Agricultural Development). 2008. *Gender and Non-timber Forest Products: Promoting Food Security and Economic Empowerment*. Rome, Italy: IFAD. http://www.ifad.org/gender/pub/timber.pdf (accessed 12 June 2012).

Knoke, T., B. Calvas, N. Aguirre, R.M. Román-Cuesta, S. Günter, B. Stimm, M. Weber, and R. Mosandl. 2009. "Can Tropical Farmers Reconcile Subsistence Needs with Forest Conservation?" *Frontiers in Ecology and the Environment* 7:548–554.

Nelson, A., and K.M. Chomitz. 2009. Protected Area Effectiveness in Reducing Tropical Deforestation: A Global Analysis of the Impact of Protection Status. Evaluation Brief 7. The World Bank, Washington, DC.

Rudel, T.K., R. DeFries, G.P. Asner, and W.F. Laurance. 2009. "Changing Drivers of Deforestation and New Opportunities for Conservation." *Conservation Biology* 23(6): 1396–1405.

Scherr, S., A. White, and D. Kaimowitz. 2003. A New Agenda for Forest Conservation and Poverty Reduction: Making Forest Markets Work for Low-Income Producers. Forest Trends, Washington, DC.

UNEP (United Nations Environment Programme). 2014. *Building Natural Capital: How REDD+ can Support a Green Economy, Report of the International Resource Panel*. UNEP, Nairobi, Kenya.

Wittmer, H., C. Schröter-Schlaack, C. Nesshöver, J. Bishop, P. ten Brink, H. Gundimeda, P. Kumar, and B. Simmons. 2010. *The economics of ecosystems and biodiversity: mainstreaming the economics of nature: a synthesis of the approach, conclusions and recommendations of TEEB*. TEEB.

Wolosin, M., P. Elias, A. Riddle, and D. Nguyen. 2012. "Forest Interventions with Economic Returns." Climate Advisers, Washington, DC.

World Bank. 2002. *Sustaining Forests: A Development Strategy.* The World Bank Group, Washington, DC. http://siteresources.worldbank.org/intforests/Resources/SustainingForests.pdf (accessed 20 July 2012).

WRI (World Resources Institute), UNDP (UN Development Programme), UNEP (UN Environment Programme), and World Bank. 2005. *World Resources 2005: The Wealth of the Poor—Managing Ecosystems to Fight Poverty*. WRI, Washington, DC.

Appendix B.

Table 1. Forests and biodiversity in current SDG proposals

Proposal	Integration of environmental sustainability (2)		Inclusion of forests (3)			Reference to Aichi Targets (4)	
	Mainstreamed (a)	Stand-alone goal (b)	# Goals that explicitly address forests and deforestation, including as targets (a)	Forests (b)	Biodiversity (c)	Mentioned in approach (a)	Link to strategic goal B (targets 5 and 7) (b)
"Proposal on the SDGs," UNCSD Major Group for Children and Youth	X	X ("Forests and biodiversity")	1/14	G	G	X	X
"Written evidence submitted by Dr. Tom Mitchell to the Commons Select Committee on International Development," Overseas Development Institute	X	-	1/5	T ("X% reduction in rate of biodiversity and forest loss by x" under "Healthy nutrition for all")	T ("X% reduction in rate of biodiversity and forest loss by x" under "Healthy nutrition for all")	-	-
"Our World, Our Future, Our Goals," Campaign for Peoples Goals for Sustainable Development	-	X ("Climate Justice and Environmental Sustainability")	1/10	T ("Arrest deforestation, overfishing, biodiversity loss, environmental degradation, pollution and protect livelihoods of forest-dwellers and fishers")	T ("Arrest deforestation, overfishing, biodiversity loss, environmental degradation, pollution and protect livelihoods of forest-dwellers and fishers")	-	-
"Sustainable development goals for people and planet," Monash	X	X ("Healthy and productive ecosystems. Sustain	1/6	-	G	X	-

Sustainability Institute		biodiversity and ecosystem services through better management, valuation, measurement, conservation and restoration")					
"Putting People and the Planet First," CONCORD's Beyond 2015 European Taskforce	X	X ("Biodiversity and ecosystem services maintained and restored" and "Equitable access to natural resources")	?/21	T (presumably; no targets articulated)	G	-	-
"A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development," High Level Panel of Eminent Persons on the Post-2015 Development Agenda	X	X ("Manage Natural Resource Assets Sustainably")	1/12	T ("Reduce deforestation by X% and increase reforestation by Y%")	T ("Safeguard ecosystems, species and genetic diversity" and "Improve soil quality, reduce soil erosion by X tonnes and combat desertification ")	-	-
"An Action Agenda for Sustainable Development," Sustainable Development Solutions Network	X	X ("Curb Human-Induced Climate Change and Ensure Clean Energy for All" and "Secure Ecosystem Services and Biodiversity, Ensure Good Management of Water and Other Natural Resources"	2/10	G	G	X	X
"Growing Together Sustainably A Zero-	X	-	-	T ("Protection	T ("Biodiversity	-	-

Poverty Post-2015 Development Framework," Unnayan Onneshan				of natural resources")	conservation")		
"Post-2015 agenda on development: French position paper prepared with civil society," French Ministry of Foreign Affairs	X	X ("A sustainable environment for all")	1/10	T ("Protecting natural environments and remarkable ecosystems" and "Preserving ordinary biodiversity, the basis of life")	T ("Protecting natural environments and remarkable ecosystems" and "Preserving ordinary biodiversity, the basis of life")	X	X
"Report on the SDGs: Central Africa Subregion," African Union/African Development Bank/ECOSOC	-	X ("Ensure environmental protection and promotion of resilience to climate change")	1/9	T ("Protect biodiversity from anthropogenic activities and by 2035, eliminate losses due to human activity" and "Ensure implementation of the Aichi Biodiversity Targets on protection of biodiversity and extend them beyond 2020"	T ("Protect biodiversity from anthropogenic activities and by 2035, eliminate losses due to human activity" and "Ensure implementation of the Aichi Biodiversity Targets on protection of biodiversity and extend them beyond 2020"	X	X
"Report on the SDGs: North Africa Subregion," African Union/African Development Bank/ECOSOC	-	-	1/4	T ("Half by 2035 the rate of degradation of natural resources and biodiversity" under "Promote the transition to	T ("Half by 2035 the rate of degradation of natural resources and biodiversity" under "Promote the transition to a green and	-	-

				a green and inclusive economy")	inclusive economy")		
"Report on the SDGs: West Africa Subregion," African Union/African Development Bank/ECOSOC	-	X ("Reduce environmental pollution")	1/9	T ("Reduce deforestation and forest degradation by half between 2015 and 2030 and eliminate it by 2040")	T ("Reduce biodiversity loss, achieving by 2010 a significant reduction in the rate of loss")	-	-
"Report on the SDGs: Southern Africa Subregion," African Union/African Development Bank/ECOSOC	-	X ("Sustainable environmental management")	1/6	T ("Reverse unsustainable use of environmental and natural resources")	T ("Reverse unsustainable use of environmental and natural resources")	-	-
"Report on the SDGs: Eastern Africa Subregion," African Union/African Development Bank/ECOSOC	-	X ("Promote efficient use of natural resources and reverse environmental degradation")	1/7	T ("Reduce deforestation and forest degradation by half between 2015 and 2030")	T ("Increase protection of natural resources by 2% in 2030")	-	-

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Endnotes

[1] World Bank, "Sustaining Forests: A Development Strategy," (World Bank: Washington, DC 2004), available at http://siteresources.worldbank.org/INTFORESTS/Resources/SustainingForests.pdf.

[2] UNDP, UNEP, World Bank, WRI, "The Wealth of the Poor: Managing Ecosystems to Fight Poverty," World Resources 2005 (World Resources Institute: Washington, DC, 2005), available at http://www.wri.org/sites/default/files/pdf/wrr05_lores.pdf.

[3] UN-OHRLLS (UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States), "Least Developed Countries: About LDCs," (no date); Food and Agriculture Organization of the United Nations, "Global Forest Resources Assessment 2010," FAO Forestry Paper 163 (Rome, Italy: FAO, 2010).

[4] WRI, et al. 2005.

[5] International Fund for Agricultural Development, "Enabling poor rural people to overcome poverty in Brazil," (November 2011), available at http://www.ifad.org/operations/projects/regions/PL/factsheet/brazil_e.pdf.

[6] Kenneth M. Chomitz, with Piet Buys, Giacomo De Luca, Timothy S. Thomas, and Sheila Wertz-Kanounnikoff, *At Loggerheads? Agricultural Expansion, Poverty Reduction, and Environment in the Tropical Forests* (World Bank: Washington, DC, 2007).

[7] General Assembly resolution 62/98, *Non-legally binding instrument on all types of forests*, A/RES/62/98 (31 January 2008), available at http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N07/469/65/PDF/N0746965.pdf?OpenElement.

[8] For more information, see http://www.cbd.int/sp/targets/.

[9] UNEP, "Forest definition and extent," in Vital Forest Graphics (no date), available at http://www.unep.org/vitalforest/report/vfg-01-forest-definition-and-extent.pdf.

[10] Intergovernmental Panel on Climate Change, *Fifth Assessment Report* (World Meteorological Organization: Geneva, 2014).

[11] Intergovernmental Panel on Climate Change, *Fourth Assessment Report* (World Meteorological Organization: Geneva, 2007).

[12] See the Sustainable Development Goals e-Inventory at www.sdgseinventory.org.

[13] Proposals were analyzed if they were tagged under thematic area "forests" for the period from June 2012 to January 2014.

[14] International Energy Agency, *World Energy Outlook 2010* (IEA: Paris, 2010).

[15] Food and Agriculture Organization, *The State of Food and Agriculture 2010-2011: Women in Agriculture—Closing the gender gap for development*, (FAO: Rome, 2011).

[16] Because sustainable agricultural production lacks some definitional clarity, indicators—including potentially crop nitrogen efficiency and crop water productivity—will be essential to give measurable specificity to the target. See the Sustainable Development Solutions Network for additional ideas at www.sdsn.org.

[17] Environmental Investigation Agency, "The U.S. Lacey Act: Tackling the Illegal Trade in Timber, Plants and Wood Products," Funding for Implementation in 2012 (2012).

[18] See the following studies for case studies on mass-media coverage affecting public awareness of climate change. Yuki Sampei and Midori Aoyagi-Usui, "Mass-media coverage, its influence on public awareness of climate change issues, and implications for Japan's national campaign to reduce greenhouse gas emissions," *Global Environmental Change* 19 (2009): 203-212; http://sciencepolicy.colorado.edu/students/envs_4800/sampei_2009.pdf; Mathew Nisbet and Teresa Myers, "Twenty years of public opinion about global warming," *Public Opinion Quarterly* 71 (2007): 444-470.

[19] Charles Kenny and Andy Sumner, "More Money or More Development: What Have the MDGs Achieved?" Center for Global Development Working Paper 278 (December 2011), available at http://www.cgdev.org/sites/default/files/1425806_file_Kenny_Sumner_MDGs_FINAL.pdf .

[20] World Economic Forum, "Natural Riches? Perspectives on Responsible Natural Resource Management in Conflict-affected Countries," (no date), available at http://www3.weforum.org/docs/WEF_GAC_NaturalRiches_ResponsibleNaturalResource ManagementConflictCountries_Report_2013.pdf.

[21] High Level Panel on the Post-2015 Development Agenda.

[22] Nigel Purvis, Michael Wolosin, and Cecilia Springer, "Breaking the Link between Commodities and Climate Change," Climate Advisers (June 2013), available at http://www.climateadvisers.com/wp-content/uploads/2014/01/2013-06-Breaking-the-Link.pdf.

[23] See EITI and UNECA for more information at http://eiti.org/eiti and http://www.uneca.org/our-work/natural-resource-management, respectively.

[24] World Bank, *Where is the Wealth of Nations: Measuring Capital for the 21st Century* (2006); World Bank, *The Changing Wealth of Nations: Measuring Sustainable Development for the New Millennium* (2010); UN et al, "Handbook of National Accounting – Integrating Environmental and Economic Accounting," (2003).

[25] A near zero forest loss target provides space for infrastructure development and agricultural conversion across the developing world, while offering simplicity and clarity around which to mobilize various constituencies.

[26] Open Working Group on the Sustainable Development Goals Co-chairs, "Working Document for 5-9 May Session of the Open Working Group," available at http://sustainabledevelopment.un.org/content/documents/3686WorkingDoc_0205_addit ionalsupporters.pdf (accessed May 19, 2014).