

**FROM:**

**The Earth Partners LP  
Roundtable on Sustainable Biomaterials  
National Wildlife Federation**

**TO: SER Werkgroep Duurzaamheidscriteria (SER Working Group on Biomass Sustainability Criteria)**

**DATE: 28 August 2014**

**RE: Policy opportunity to support Conservation Biomass and other Low Indirect Impact Biomass**

*Summary:* The Netherlands is in a unique position to become a global leader in bringing the next generation of sustainable biomass to market. The SER working group recommendations should include strong support for low indirect impact biomass, especially those sources of biomass that can have large-scale tangible land restoration benefits (“Conservation Biomass”). In order to bring these resources to market, incremental policy support is needed above and beyond traditional, existing sources of biomass. Below, this letter proposes two policy recommendations, explains why they are critical for a sustainable bioeconomy, and suggests next steps for the undersigned organizations to support further policy development. Building on the UK’s recognition of the biomass category of “wood removed for ecological reasons,” we propose that the Netherlands take steps to:<sup>1</sup>

1. Set a small but growing quota of Conservation Biomass feedstocks required as part of total biomass use, coming into force in 2017 (e.g. start with 10 percent in 2017 and grow towards 20 percent by 2022, with higher levels as the market matures). Such a quota could be incorporated into other quotas set as part of the SER recommendations.
2. Provide incremental support for Conservation Biomass through the SDE+ system by double counting for Conservation Biomass compared to conventional feedstocks, similar to the system used for certain wastes and residues feedstocks under the European Union Renewable Energy Directive. Other innovative feedstocks could also qualify for double-counting. To ensure long term competition and price reduction in the bioenergy sector, all double counting could be phased out by 2022.

*What is “Conservation Biomass”?*

Conservation Biomass refers to biomass recovered from marginal and degraded land, AND whereby the biomass production or removal has tangible land restoration benefits. Such land restoration benefits can include:

- Improved biodiversity
- Improved wildlife habitat
- Enhanced water resources
- Enhanced potential for soil carbon sequestration

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<sup>1</sup> UK Department of Energy and Climate Change 2014

- Reduced soil erosion
- Reduced wildfire risks

These feedstocks also have the added benefit of not creating competition with food production or other ecosystem services and creating new value for farmers and rural landowners. Examples of Conservation Biomass include 1) removal of invasive species to restore native wildlife habitat and natural plant diversity, and 2) cultivation of native grasses on marginal or degraded agricultural land to improve soil quality, hydrology, and soil carbon sequestration. Many other examples of Conservation Biomass can be developed across degraded landscapes, such as post-mined land, salinated land, and diseased and degraded forests.

Biomass with land restoration benefits is part of a family of “**low indirect impact biomass**” (**LIIB**) resources, a concept developed by a consortium of Ecofys, the Ecole Polytechnique Fédérale de Lausanne/Roundtable for Sustainable Biomaterials, and WWF International. The LIIB concept includes:

- Integration of agricultural and biomass production systems, to avoid competition with food production and indirect land use change,
- Use of “unused land” for biomass production,
- Use of “end of life” materials, or categories of wastes and residues, and
- Increasing yields on existing agricultural land to provide for biomass demand.

The LIIB methodologies developed to date can help point the way toward creating a rigorous standard for Conservation Biomass, which would be a pre-requisite for implementing any incremental policy support for these feedstocks.

### *The case for restoring marginal and degraded land*

Land degradation is defined under the UN Convention to Combat Desertification as: “Reduction or loss of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or range, pasture, forest, and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns, such as:

- (i) soil erosion caused by wind and/or water;
- (ii) deterioration of the physical, chemical and biological or economic properties of soil;
- (iii) long-term loss of natural vegetation.”<sup>2</sup>

Land degradation is a growing global crisis - there are an estimated 2.9 billion hectares, or 20 percent of land world-wide, experiencing some form of degradation.<sup>3</sup> Rural communities and consumers of agricultural goods incur costs over \$40 billion annually due to land degradation, without accounting for the losses of wildlife habitat and biodiversity, and the costs of increasing fertilizer needs.<sup>4</sup> At the same time, utilization and restoration of less than 10 percent of global degraded lands would provide all the incremental land needed for increased food, fuel, and fiber

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<sup>2</sup> UNCCD, Article 1

<sup>3</sup> Bai et al. 2008

<sup>4</sup> FAO 2014

demand leading up to 2030 (170-220 million hectares) as the global population grows and economies develop.<sup>5</sup>

Thus, use of marginal and degraded land creates a win-win situation by addressing a growing global crisis and ensuring that growing demand for biomass does not threaten protected, pristine, or high conservation value wildlife habitat and landscapes.

Furthermore, the soil carbon sequestration potential for growing bioenergy crops or perennial grasses on marginal and degraded land is immense: it is estimated that promoting bioenergy crops on 100 million hectares of degraded, unused pasture land globally could sequester at least 10 percent of the projected CO<sub>2</sub> “gigaton gap” by 2020 for the UNFCCC 2 degree C target.<sup>6</sup>

### *Why is incremental support needed for Conservation Biomass?*

Developed strategically, many Conservation Biomass projects can be cost competitive with traditional biomass sources. All biomass feedstocks should be encouraged to compete on the market and bring down costs over time, and Conservation Biomass is no different.

However, there are multiple reasons why strong, near term policy signals are needed to support investment and supply chain development for innovative feedstock pathways like Conservation Biomass and why this is one of the few opportunities to incentivize land restoration on a global scale:

1. **Need to engage private market:** To date, public dollars and government support programs to restore degraded land or promote conservation of agricultural land have been important but too small to have an impact on a landscape or global scale. For example, in the United States, the US Department of Agriculture has been able to bring over 8 million hectares of farm land under various conservation programs over the last decade, with over \$15 billion of government support. However, this has only been able to reach 5 percent of US farm land.<sup>7</sup> Policies are needed to create incentives for private markets to invest in land restoration – fostering a market for Conservation Biomass is an excellent opportunity to leverage private finance on a global scale.
2. **Conservation Biomass and other low impact biomass feedstocks do not have the installed capacity like traditional biomass sources:** The traditional forest-based biomass sector in Europe, Russia, the U.S., and Canada have invested in commercial-scale wood densification (pellet) plants to supply growing global bioenergy demand. The sector is leveraging existing human resources, and established logistics and supply chains based on robust forest products industries. Conversely, Conservation Biomass and other “next generation” biomass feedstocks do not benefit from such an established base. In the near term, investors and project developers will require strong, investment-grade policy signals to be able to justify large scale investment in Conservation Biomass projects and supporting infrastructure. Otherwise traditional biomass projects will remain preferred, due to their market precedence and lower up-front costs. With the right policies, over time Conservation Biomass will become competitive with conventional feedstocks.

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<sup>5</sup> McKinsey 2011

<sup>6</sup> UNEP 2013, TEP Soil Carbon Methodology 2012, Lovejoy and Ashton 2011

<sup>7</sup> USDA ERS 2010, USDA NRCS 2012, US Census Bureau 2012, US EPA 2012

3. **The power sector and other industries are less familiar with these kinds of feedstocks:** Conservation Biomass can be generated from a diverse range of woody and herbaceous feedstocks. While they can have many advantageous characteristics in terms of energy density and sustainability, their chemical profile and appropriate specifications may be less familiar to industrial users. To counteract the perceived and real risk of utilizing a wider variety of biomass feedstocks, strong policy signals can help encourage utilities and other biomass users to diversify their sourcing strategies and overcome potential engineering or handling challenges from using new feedstocks.

For these reasons, additional and predictable government support for Conservation Biomass as distinct from traditional biomass feedstocks can incentivize bringing such projects to market and maximize opportunities for sustainable biomaterials, land restoration, and soil carbon sequestration – helping achieve a sustainable future for bioenergy, food production, and the climate. These policies need not be complicated or extreme – there are several simple, cost-effective opportunities to achieve these objectives that the Netherlands can take up immediately.

### *Policy proposal*

The undersigned group proposes that the SER working group endorse a plan to support Conservation Biomass through two policy approaches:

1. Set a small but growing quota of Conservation Biomass feedstocks required as part of total biomass use, coming into force in 2017 (e.g. start with 10 percent in 2017 and grow towards 20 percent by 2022, with higher levels as the market matures). Such a quota could be incorporated into other quotas set as part of the SER recommendations.
2. Provide incremental support for Conservation Biomass through the SDE+ system by double counting for Conservation Biomass compared to conventional feedstocks, similar to the system used for certain wastes and residues feedstocks under the European Union Renewable Energy Directive. Other innovative feedstocks could also qualify for double-counting. To ensure long term competitiveness of the bioenergy sector, all double counting could be phased out by 2022. Any double counting scheme should be accompanied by a strict, lifecycle chain of custody requirement, including an independent audit requirement, to minimize the risk of fraud.

These two measures would be consistent with other policies to bring next generation biomass resources to market. For example, in the United States the Renewable Fuel Standard sets separate quotas for biofuels that exhibit higher emissions saving potential and environmental criteria. In the UK, their Renewables Obligation scheme provides double the support for dedicated bioenergy crops compared to traditional biomass feedstocks.

The UK has also recently acknowledged a biomass category termed “wood removed for ecological reasons,” which is considered automatically sustainable under the UK’s Timber Standard when removed from non-forest land.<sup>8</sup> This is the first example of government recognition of Conservation Biomass as a distinct biomass category and points the way for the Netherlands to develop further policy guidance for incentivizing this type of feedstock.

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<sup>8</sup> UK Department of Energy and Climate Change 2014

With these two policy levers, the Netherlands can both begin to **bring Conservation Biomass to market on a commercial scale** and also create awareness of this category for **promotion with other governments** as they begin to assess and update existing biomass sustainability requirements.

*Next steps*

We propose that the SER working group first come to agreement in the next round of deliberations in September that incremental support for Conservation Biomass will be included in the final recommendations from the group, including proposing the level and design of additional support. Then, in the remaining months of 2014, a subgroup of stakeholders should finalize a definition and standard for Conservation Biomass that would be used for policy implementation. By the end of 2014, a fully formulated policy could be issued, in accordance with the SER working group recommendations, and the market would have complete clarity on the kinds of feedstocks that qualify for the Conservation Biomass incentive. The incentive could then come into force in 2017 to allow sufficient time for the market to respond to the incentive. We highly recommend allowing several months to define Conservation Biomass in a way that can be endorsed by all Dutch stakeholders, to ensure it is a robust process that produces a model other governments could adopt.

	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Policy Development - set subsidy/quota and definition for Conservation Biomass</b>									
<b>Legislative action to solidify biomass incentive scheme</b>									
<b>Industry qualifies for SDE+ biomass subsidy, including co-firing</b>									
<b>Conservation Biomass project development, based on incremental support clarity</b>									
<b>Conservation Biomass quota and incremental support comes into force</b>									
<b>Clarity provided on post-2022 renewables support, providing continuity for the sector</b>									

Note that we would not propose that the whole SDE+ system for bioenergy be delayed until 2017, only that incentives for Conservation Biomass come into force in 2017 to allow time for the market to develop and industry to create relationships with potential Conservation Biomass suppliers.

The undersigned group would be willing to offer our services in supporting deliberations around this incentive scheme, to help ensure it meets all environmental and land restoration objectives. Thank you for considering this proposal.

Sincerely,

David Tepper, CEO, The Earth Partners LP

Rolf Hogan, Executive Secretary, Roundtable for Sustainable Biomaterials

Barbara Bramble, Senior Program Advisor, National Wildlife Federation



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