



Land available for bioenergy production: sustainable potential and why it is not yet being used?

A call for tender by BirdLife Europe, EEB and Transport & Environment

Background and context

Discussions around biofuels have been heated in Europe, especially when several scientific studies demonstrating the concerns around indirect impacts of biofuels prompted an official proposal by the European Commission on Indirect Land Use Change (ILUC). At the core of the debate there were discussions about the trade-off between fuel and food, and the best use of land: be it for energy, food, feed, fuel, fibre.... This debate was broadened further when several industry and farmers' groups brought up the issue of energy crops and the substantial amounts of land – be it abandoned, waste land or old industrial sites (contaminated land) - that were presumably still available throughout Europe ready to be used for energy purposes. These claims pose several questions, such as: “if there was so much land available, then why is biofuels production still taking place on the best agricultural land, causing ILUC outside of Europe?” “Was this land, that was claimed abandoned, really worthless also when the social, carbon and environmental functions of this land were taken into account?”, “What would be the best use of any “available land”?”

Moreover, energy crops that could be grown on this land do not always have the best environmental reputation. The crop could be an alien or invasive species, hence difficult to get rid of, it is not necessarily more sustainable in terms of water or pesticide use, the varieties used might be of GMO origin, etc.

These discussions become even more relevant now that the council is considering amendments with regards to low-ILUC biofuels, coming from higher yields or abandoned land, in its discussions on the ILUC proposal¹.

This study is meant to get to the bottom of this debate: what do we know about land still available in Europe and how much of energy (crops and other types of biomass for energy purposes) can be sustainably grown on it? Why is this land not yet being used? Should it be used at all for energy purposes? What type of criteria do we need to get the land that is truly available for energy in use in the most sustainable way?

¹ The wording of the proposal says now: ““Although food and feed crop-based biofuels are generally associated with ILUC risks, there are also exceptions. Member States and the Commission should encourage the development and use of schemes which can reliably prove that a determined amount of biofuel feedstocks produced in a given project did not displace production for other purposes. This may, for example, be the case where the biofuel production equals the amount of additional production achieved through investments into improved productivity above levels which would have otherwise been achieved, or where biofuel production takes place on land where direct land-use change occurred without significant negative impacts on pre-existing ecosystem services delivered by that land, including protection of carbon stocks and biodiversity”.

Objectives of the study

BirdLife Europe, EEB and T&E would like to commission a study to analyse the sustainable potential of energy biomass (specifically energy crops, short rotation coppice and forests) as a source of bioenergy in Europe. This includes:

Estimate how much and what kind of land is sustainably available for energy purposes in Europe and where this is located geographically.

Analyse the bottlenecks and derive recommendations on the policies needed and (sustainability) criteria to put in place in order for this land potential to materialize for energy use.

Identify types of energy crops, short rotation coppice and forestry options for this land and identify the amount of sustainable energy potential that one could derive from this land in a future renewables scenario. Compare these options to a “zero option” in terms of carbon (and potentially also biodiversity) of allowing the land to evolve naturally in the absence of management.

The study will be used by NGOs to inform external discussions in the EU and Member States.

Structure of the study and deliverables

The main research questions to be answered by the study are “What is the sustainable potential of land for energy crops in Europe? What is the sustainable amount of bioenergy we can get out of it? Why is this not yet happening? What (sustainability) criteria do we need to make this a reality?”

The deliverables are the following:

Availability of land for bioenergy production in Europe. This should be estimated on the basis of abandoned agricultural land (separated at least into ex-arable and ex-grassland), waste or old industrial sites and degraded and/or polluted land, and other if identified;

Suitability of these lands for bioenergy production,

The geographical distribution of this area, this should be mapped at least to Nuts 2 level (though ideally to finer grained scale, e.g. to distinguish uplands from lowlands)

What are the sustainability concerns around this land, including in comparison to “zero option” of leaving it to natural evolution. Is this land suitable for bioenergy production?

What is the GHG balance of bringing this land into production under different types of relevant crops/forest types? This should include all potential inputs, such as fertilizers and irrigation.

What are the bottlenecks why this land is not currently in use (e.g. technical/topographic, infrastructure, land ownership structures, legal protection) with a focus on those barriers that can realistically be lifted through EU policy measures.

Match this land with different types of energy crops and forestry options (fast growing plantations, restoration of natural forest, etc.) and look into the sustainability of these energy crops. Compare environmental and carbon performance with “zero option” of leaving land to natural evolution.

Make an estimation of the sustainable availability of biomass for energy (including estimation of competing uses) in a future renewables scenario for 2020 and 2030.

Derive conclusions and recommendations for the EU policy (and potentially also Member States) looking into the land that is sustainably available and the energy that could come out of this land. Link this with recommendations regarding existing policy and policy changes and (sustainability) criteria that would need to be set up in order for this sustainable potential to materialize for energy purposes in Europe.

Timeframe and budget

The deadline for the proposals is 10 December 2013. The proposals should be sent by email only to: faustine.defossez@eeb.org, nusa.urbancic@transportenvironment.org, sini.erajaa@birdlife.org and Trees.Robijns@birdlife.org.

The proposal should include a narrative on how the consultant plans to implement the terms of reference, justification on why your organization is qualified to implement the research, and a financial breakdown of the project. It should also include the timeline for the implementation of the research and ideas on the meetings needed (with the NGO steering group or any other experts) to conduct research smoothly. The selection of the consultant and the managing of the report will be done by the NGO steering group, consisting of EEB, BirdLife and T&E. The consultant will sign the contract with BirdLife Europe on behalf of the group.

The study should be completed two months after the signing of the contract, unless agreed otherwise. Consultants should present a draft of the study at a meeting or phone call with the NGOs from the steering group.

The budget for the project: EUR 30 000 (including VAT).

About BirdLife Europe

BirdLife Europe is a Partnership of nature conservation organisations in 49 countries, including all EU Member States, and a leader in bird conservation. Through its unique local to global approach BirdLife Europe delivers high impact and long term conservation for the benefit of nature and people.

About EEB

The European Environmental Bureau (EEB) is the environmental voice of European citizens, standing for environmental justice, sustainable development and participatory democracy. We want the EU to ensure all people a healthy environment and rich biodiversity.

About Transport & Environment

Transport & Environment's mission is to promote, at EU and global level, a transport policy based on the principles of sustainable development. Transport policy should minimise harmful impacts on the environment and health, maximise efficiency of resources, including energy and land, and guarantee safety and sufficient access for all.