

BioTrade2020plus

Supporting a Sustainable European Bioenergy Trade Strategy

**Intelligent Energy Europe
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Deliverable 5.1

Database of relevant policies (EU, MS, outside EU) impacting biomass imports to the EU

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The BioTrade2020plus Project

Objectives

The main aim of BioTrade2020plus is to provide guidelines for the development of a **European Bioenergy Trade Strategy for 2020 and beyond** ensuring that imported biomass feedstock is sustainably sourced and used in an efficient way, while avoiding distortion of other (non-energy) markets. This will be accomplished by analyzing the potentials (technical, economical and sustainable) and assessing key sustainability risks of current and future lignocellulosic biomass and bioenergy carriers. Focus will be placed on wood chips, pellets, torrefied biomass and pyrolysis oil from current and potential future major sourcing regions of the world (Canada, US, Russia, Ukraine, Latin America, Asia and Sub-Saharan Africa).

BioTrade2020plus will thus provide support to the use of stable, sustainable, competitively priced and resource-efficient flows of imported biomass feedstock to the EU – a necessary pre-requisite for the development of the bio-based economy in Europe.

In order to achieve this objective close cooperation will be ensured with current international initiatives such as IEA Bioenergy Task 40 on “Sustainable International Bioenergy Trade - Securing Supply and Demand” and European projects such as Biomass Policies, S2BIOM, Biomass Trade Centers, DIA-CORE, and PELLCERT.

Activities

The following main activities are implemented in the framework of the BioTrade2020plus project:

- Assessment of **sustainable potentials of lignocellulosic biomass** in the main sourcing regions outside the EU
- Definition and application of sustainability criteria and indicators
- Analysis of the **main economic and market issues of biomass/bioenergy imports** to the EU from the target regions
- Development of a dedicated and **user friendly web-based GIS-tool** on lignocellulosic biomass resources from target regions
- **Information to European industries** to identify, quantify and mobilize sustainable lignocellulosic biomass resources from export regions
- **Policy advice on long-term strategies** to include sustainable biomass imports in European bioenergy markets
- **Involvement of stakeholders** through consultations and dedicated workshops

More information is available at the BioTrade2020plus website: www.biotrade2020plus.eu

About this document

This report corresponds to Deliverable D5.1 of BioTrade2020+– Database of relevant policies (EU, MS, outside EU) impacting biomass imports to the EU. It has been prepared by VITO.

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RE	Restricted to a group specified by the consortium (including the Commission Services):	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1	29 May 2015		Draft (some regions to be analysed)
2	16 July 2015		Draft, including all analysed regions
3	29 February 2015	Policy factsheets are now uploaded on the S2Biom policy database (https://s2biom.vito.be/)	Draft – for comments of the Advisory Board Committee

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1. Introduction

It is clear that the role of imported biomass and bioenergy carriers in the EU will increase in the future. In some EU Member States the amounts of traded lignocellulosic biomass for energy are already substantial. There is a clear link with policies, both at EU level and MS level.

This report maps what policies at EU and MS level are already impacting biomass imports. Typical examples are promotion measures for bioenergy, sometimes favouring domestically produced biomass, some including sustainability requirements. Also custom regimes and technical standards can be relevant. The mapping started from the policies collected in the sister projects Biomass Policies and S2Biom.

On the other hand, also policies from outside the EU are having an impact on biomass imports to Europe. The availability of biomass for exports depends on local policies for using biomass, environmental policies putting restrictions on harvesting practices, or even export tariffs or subsidies. The most relevant policies in the selected sourcing regions have also been entered into the policy database.

As mentioned, the focus in this policy database is on existing policies and regulations in the EU and in relevant export regions. The project focuses on **lignocellulosic biomass** (woody resources, agricultural residues and cellulosic crops), with case studies in the following sourcing regions:

- North America (Southeast United States¹),
- South America (Brazil, Colombia),
- East Europe (Ukraine),
- Southeast Asia (Indonesia) and
- East Africa (Kenya).

The current policies are integrated in the on-line policy database of the S2Biom project (<https://s2biom.vito.be/>). The policies will also be integrated in the BioTrade2020+ toolbox.

¹ There was no case study analysed in Canada, but as it is an important sourcing region for the EU, this report includes an overview of relevant policies in Canada.

2. Types of policies

Policies in the **EU and EU Member States** were considered which directly impact imports of biomass (positively or negatively):

- Policies stimulating demand of biomass for energy in regions which either have limited domestic potential, either are very internationally oriented,
- Requirements/limits imposed on biomass (domestic and imported), including sustainability and legality requirements,
- Product norms of lignocellulosic biomass (commodities),
- Logistic requirements, e.g. phytosanitary requirements,
- Customs and import tariffs,
- International cooperation.

Policies focusing on domestic biomass (e.g. agriculture, forestry, environment) were not considered, although they may have an indirect impact on imports (e.g. through increasing or decreasing the availability of domestic biomass for energy, thereby reducing/increasing the need for imports).

In terms of the **sourcing regions** we generally considered three types of policies: (1) policies stimulating domestic use of biomass, therefore impacting the availability for export, (2) policies which directly steer imports/exports (restrictions, tariffs), (3) policies ensuring sustainable production of biomass which could encounter European sustainability requirements.

- Policies stimulating domestic use of lignocellulosic biomass, e.g. promoting or mandating bioenergy/biofuels/bio-materials (e.g. renewable energy policies, biofuel policies, producer subsidies)
- Policies with direct impact on imports/exports: Import or export tariffs/restrictions
- Policies ensuring sustainable production of biomass
 - o Environmental regulations (e.g. nature protection)
 - o Policies to stimulate biomass production
 - o Relevant voluntary sustainable forestry schemes (e.g. FSC, PEFC endorsed schemes) or sustainable agriculture
 - o Guidelines for sustainable agriculture or forestry

3. Information collection

A template was developed to collect the information on the policies. This is very much in line with the methodology in the projects S2Biom and Biomass Policies. The following information was collected for all policies in the database:

A. Key information

1. Country/region
2. Short name & reference code
3. Full name (English & original language)
4. General description & goal / aim of the regulation
5. Relevance for biomass trade with the EU
6. Status (entry into force & last amended)
7. Connection to other legislation (e.g. EU Directive)
8. Responsible authority
9. Type of rule (financial, regulatory, soft) & concrete implementation (e.g. subsidies, ...)
10. Sector/topic targeted (e.g. energy, agriculture, forestry, ...)
11. Links

B. Advanced information

1. Feedstock relevance (selection list)
2. Application relevance (electricity, heat, biofuels, bio-products, ...)
3. Value chain phase affected (biomass production, waste/residues, logistics, conversion, distribution, end use)
4. Requirements (environmental, efficiency, material hierarchy)

C. References

1. Links
2. Acknowledgements
3. Project, completed by & date

The following chapters contain a listing of the selected policies. For detailed information, we refer to the on-line database.

4. Relevant regulations and instruments in the EU

As mentioned, distinction is made between EU level initiatives, and MS initiatives. The listing below contains some essential information, i.e. the country/region, sector in which it plays and our assessment on the relevance for biomass trade. More detailed information is available in the policy database.

4.1. EU level

Country/ region	Short name	Sector/field	Relevance for Biomass Trade*
EU	Renewable Energy Directive (RED) Dir. 2009/28/EC	Energy, Biofuels	Renewable energy targets by MS => THE driver for renewable energy promotion in the MS. Sustainability criteria for biofuels & bioliquids (GHG, land use). Essential in traded volumes to fulfil these sustainability criteria. Can be demonstrated through <ul style="list-style-type: none"> - Voluntary schemes - Bilateral or multilateral agreements with 3rd countries Joint projects between Member States and 3 rd countries Double counting of advanced biofuels (incl. lignocellulose based) provides an extra incentive for wood-based biofuels. Biannual reporting requirement on the impact of biofuel demand.
EU	iLUC Directive (EU)2015/1513	Biofuels	Cap on land-based biofuels (including energy crops) Indicative MS target for advanced biofuels for transport (including wood based) iLUC accounting
EU	Fuel Quality Directive	Biofuels	GHG reduction for transport fuels (important role for biofuels)

	(FQD) Dir. 2009/30/EC		Sustainability criteria for biofuels (see RED)
EU	Emission Trading System (ETS) Dir. 2009/29/EC	Energy, Transport (aviation), Climate	EU ETS covers more than 11,000 power stations and industrial plants in 31 countries, as well as airlines. The aim is to reduce GHG emissions through Emission Allowances.
EU	Energy Taxation Directive Dir. 2003/96/EC	Energy; Biofuels	Energy taxation can differ in relation to the environmental performance of energy carriers.
EU	Sustainability criteria for solid and gaseous biomass COM(2010)11	Energy	Recommendations for MS that wish to implement sustainability criteria for solid and gaseous biomass. Criteria focus on greenhouse gas (GHG) requirements and land use. For the moment no binding requirements on EU level.
EU	Sustainable Biomass Partnership	Energy	Initiative of large biomass importers to fulfil sustainability requirements of several Member States (e.g. BE, NL, UK) and to anticipate EU level requirements: verification framework to provide assurance that woody biomass for energy is sourced from legal and sustainable sources.
EU	EU Timber Regulation (EU-TR) Reg. 995/2010	Forestry ; trade	Obligations (on traceability and legality) of operators who place timber and timber products on the market to counter trade in illegally harvested timber and timber products.
EU	FLEGT (Forest Law Enforcement, Governance and Trade) Reg. 2173/2005	Forestry; Trade	Voluntary Partnership Agreement between EU and wood producing countries (bilateral). Licensing scheme for imports of certified legal wood into the European Community.
EU	LULUCF (land use, land-use change and forestry) Dec. 529/2013/EU	Forestry; Climate	Accounting rules applicable to emissions and removals of greenhouse gases resulting from land use, land- use change and forestry
EU	REDD+ (reducing emissions from	Forestry;	Financial support to developing countries which demonstrate reduced emissions from

	deforestation and forest degradation, ...)	Climate	forests at a national level.
EU	Plant Health Directive Dir. 2000/29/EC	Agriculture; Forestry; Trade	Protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community. Also specific requirements on wood products. Depending on the origin and type, heat treatment, bark stripping and/or drying is required.
EU	Green Public Procurement COM(2008)400	Economy	Public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle. May include reference to sustainable forest management for wood.
EU	EN ISO 17225 / CEN/TC335 (Solid biofuels)	Energy; Product	Specifications for solid biofuels (pellets, logs, chips, ...)
EU	ENplus certification	Energy; Product	Certification of pellet producers (pellet quality – value chain)
EU	Common customs tariff (CCT)	Taxation; Trade	Common Customs Tariff' (CCT) applies to the import of goods across the external borders of the EU.
EU	Trade Defence Measures Reg. 597/2009 & Reg. 1225/2009	Taxation; Trade	Anti-dumping measures, anti-subsidy measures or safeguards when EU industry is harmed by dumped or subsidized imports. Applied for biodiesel (US, Argentina, Indonesia), bio-ethanol (US) and plywood (China)
Global	FSC	Forestry	Certification system for sustainable forest management
Global	PEFC	Forestry	Certification system for sustainable forest management – endorsement of national schemes.

* limited to lignocellulosic energy carriers

4.2. EU Member States

The following overview shows a selection of Member States regulation with direct impact on import of biomass. The regulations indicated in bold are most relevant for international markets.

MS regulations which are a direct implementation of European Directives (e.g. sustainability criteria for biofuels, ETS) are not included here.

Country/ region	Short name	Sector/field	Relevance for Biomass Trade
Austria	Green electricity act (ÖSG) / Green electricity feed-in tariff regulation (ÖSET)	Energy	Biomass plants need to reach an efficiency of at least 60% (CHP focus). This means there is less focus on large scale plants. Feed-in tariff depends on plant type, biomass used and overall efficiency.
Belgium - Flanders	Green Power Certificates	Energy	Energy for pretreatment, transport (up to BE border) and on-site energy use has to be subtracted from produced MWh for the calculation for green power certificates. Green power certificates are only provided if the wood resources cannot be used by the wood or paper industry. Reporting needed on biomass sourcing. System of biomass certificates (not for small installations using own or local biomass) Support for large scale biomass installations (>20 MW) limited to three existing initiatives.
Belgium - Brussels	Brussels Green Certificates	Energy	Amount of certificates depends on the amount of CO2 saved compared to the best available technologies. Sustainability criteria of liquid and solid biomass (RED land use criteria).
Belgium - Walloon	Green Certificates	Energy	Amount of certificates depends on the amount of CO2 saved compared to the best available technologies (STAG (55% eff) for electricity; NG boiler (90% eff) for heat).

Belgium	Minimum requirements for wood pellets non-industrial heating installations	Energy, Product	Pellets should come from sustainable forest management (FSC, PEFC or equivalent).
Bulgaria	ERSA - Feed-in tariff	Energy	Feed-in tariff differentiated on the basis of type of technology and type of fuel. Forestry biomass not included.
Croatia	Feed-in tariff	Energy	Feed-in tariff differentiated by size of the installation and efficiency (>2MW and <45% has lowest support). Less interest in large scale (internationally focused) plants.
Czech Republic	Act on Promoted Energy Sources	Energy	Feed-in tariff for plants up to 100kW, CHP requirement. Less interest in large scale (internationally focused) plants.
Denmark	Law on the Promotion of Renewable Energy	Energy	The biomass agreement of 1993 forced central power stations to use biomass. Eligible for a feed-in tariff of 50€/MWh for a 10-year period.
Denmark	Danish Industry Agreement for Sustainable Biomass	Energy	voluntary industry approach to ensure the sustainable use of solid biomass in CHP plants (wood pellets and wood chips) in Denmark
Estonia	Electricity Market Act	Energy	Feed-in tariff. The electricity must be generated by high-efficiency CHP plants. Electricity generated by conventional thermal power stations is not eligible.
Finland	Act on Production subsidies for renewable electricity	Energy	Premium tariff. Increased 'heat bonus' (20€/MWh) if both electricity and usable heat is produced, installation between 100kW and 8MW, minimum efficiency of 50% (even 75% if capacity >1MW).
Finland	Biofuel for Transport Obligation	Transport	High target of 20% renewable energy in transport by 2020. High reliance on advanced biofuels, mostly focused at residues from the wood and paper/pulp sector.
France	Feed-in tariff	Energy	Biomass only plants are eligible if < 12 MW installed capacity; CHP plants supported if <2MW. Less interest in large scale (internationally focused) plants.
Germany	Biofuel Quota Act	Transport	The quota requirement is recently changed from an energy requirement to a GHG requirement. This may give an extra incentive for advanced biofuels.
Germany	Renewable energy sources act (EEG)	Energy	Feed-in tariff. Maximum capacity of 500 kW; obligation to keep a record of biomass substances.

Greece	Feed-in tariff	Energy	Feed-in tariff depends on capacity; max capacity 15MW.
Ireland	Renewable Energy Feed-in Tariff - REFIT	Energy	Feed-in tariff depends on CHP (below and above 1.5 MW), energy crops or other biomass. No capacity constraints.
Italy	Auction system for large RES-E plants (>5MW)	Energy	Annual cap on the total new build dedicated biomass capacity. Incentives range between € 122 and € 145 per MWh. Biomass plants can also benefit of additional amounts depending on the material used and environmental impact.
Italy	Feed-in tariff order	Energy	Feed-in tariff for small-scale RES-E plants (less than 5 MW). The tariff is differentiated according to plant size, typology of input fuel (agricultural and forestry by-products, dedicated crops, organic fraction of wastes), option of high quality cogeneration, use of district heating, air emission levels, sustainability of the biomass supply chain.
Luxembourg	Renewable electricity regulation	Energy	Feed-in tariff limited to 10 MW.
Netherlands	SDE+ premium feed-in scheme	Energy	Distinction <10 MW and 10 – 100 MW. If co-firing, biomass fraction should be at least 6% of capacity. Recent Energy Agreement: cap on cofiring of 25PJ; Sustainability criteria for solid biomass (co-firing & >10MW dedicated): sustainable forest management, avoid carbon debt, iLUC (LIIB), GHG reduction (60%)
Poland	Energy Law	Energy	Quota obligation with certificate trading. Cofiring (>5MW) & dedicated biomass installations (>20MW): minimum % of agricultural and waste biomass to reduce dependency on woody biomass.
Portugal	Feed-in tariff	Energy	The FiT regime continues to apply only to existing installations.
Romania	Quota & tradable green certificates	Energy	Operators of biomass plants eligible for green certificates need to present certificates of origin for the biomass used.
Slovakia	Feed-in tariff	Energy	Feed-in tariff for plants <125 MW; surcharge (bonus) only for installations <5MW.
Slovenia	Decree on Renewable Electricity support	Energy	Feed-in tariffs and premium tariffs, differentiated in terms of both technology and size. Bonus in case of certified sustainable forest management and in case of CHP.
Spain	Decrees on Renewable electricity	Energy	<i>Currently suspended</i>

Sweden	Electricity Certificates Act	Energy	One certificate is issued for every MWh of electricity produced, regardless of the generation technology employed.
Sweden	Energy and CO2-tax	Energy, taxation	Energy and CO2 taxes are levied on the supply, import and generation of fossil fuels for heating purposes. Renewable energy sources are exempt from these taxes. Biomass is eligible if certified with sustainability certification.
UK	Contracts for Difference (CfD) scheme / Renewables Obligation	Energy	<p>CFD strike prices (GBP/MWh), for biomass conversion and dedicated biomass installations (with CHP). Until 2017 choice between RO scheme and the new Contracts for Difference (CfD) scheme.</p> <p>For plants above 5 MW. Plants between 50 kW - 5 MW are entitled to choose between the ROC scheme and the FIT.</p> <p>Monthly reporting on sustainability criteria if >50 kW</p> <p>For plants above 1 MW: GHG criteria, land criteria (non-wood), timber criteria (wood)</p>
UK	Non-Domestic Renewable Heat Incentive	Energy	<p>Fixed amount per kWth, capacity related.</p> <p>GHG emission target (60% savings), land criteria (non-wood), timber criteria (wood).</p> <p>'Self suppliers' (<1MWth and sourcing fuel within 50 miles) don't need to show compliance with the sustainability criteria.</p> <p>Traders of woodfuel need to register on the BSL list.</p>

In general we see that many countries limit their support to smaller scale installations, or reduce their support for larger installations. Smaller installations are less internationally oriented and more focused at local/regional biomass.

Only countries which have a tradition in trade, and/or which have limited domestic resources tend to include larger scale installations and therefore also the international dimension. In those cases there is often high attention for sustainability of the feedstocks, as we can see in the policy measures in the UK, Netherlands and Belgium.

We also see that in some cases support is capped to a limited amount (e.g. NL), often as a result of the debate on the sustainability of imported feedstocks.

4.3. WTO compliance

The World Trade Organization (WTO) is an intergovernmental organization which regulates international trade. As international trade volumes increase, issues such as protectionism, trade barriers, subsidies, violation of intellectual property arise due to the differences in the trading rules of every nation. The idea of international trade agreements (WTO and GATT) was to create an **equal field** for all countries in trade. The World Trade Organization serves as the mediator between the nations when such problems arise.

The WTO establishes a framework for trade policies, with the following five principles of particular importance²:

- **Non-discrimination.** It has two major components: the most favoured nation (MFN) rule, and the national treatment policy. Both are embedded in the main WTO rules on goods, services, and intellectual property, but their precise scope and nature differ across these areas. The *MFN* rule requires that a WTO member must apply the same conditions on all trade with other WTO members, i.e. a WTO member has to grant the most favorable conditions under which it allows trade in a certain product type to all other WTO members. "Grant someone a special favour and you have to do the same for all other WTO members." *National treatment* means that imported goods should be treated no less favourably than domestically produced goods (at least after the foreign goods have entered the market) and was introduced to tackle non-tariff barriers to trade (e.g. technical standards, security standards et al. discriminating against imported goods).
- **Reciprocity.** It reflects both a desire to limit the scope of free-riding that may arise because of the MFN rule, and a desire to obtain better access to foreign markets. A related point is that for a nation to negotiate, it is necessary that the gain from doing so be greater than the gain available from unilateral liberalization; reciprocal concessions intend to ensure that such gains will materialise.
- **Binding and enforceable commitments.** The tariff commitments made by WTO members in a multilateral trade negotiation and on accession are enumerated in a schedule (list) of concessions. These schedules establish "ceiling bindings": a country can change its bindings, but only after negotiating with its trading partners, which could mean compensating them for loss of trade. If satisfaction is not obtained, the complaining country may invoke the WTO dispute settlement procedures.
- **Transparency.** The WTO members are required to publish their trade regulations, to maintain institutions allowing for the review of administrative decisions affecting trade, to respond to requests for information by other members, and to notify changes in trade policies to the WTO. These internal transparency requirements are supplemented and facilitated by periodic country-specific reports (trade policy reviews) through the Trade Policy Review Mechanism (TPRM). The WTO system tries also to improve predictability and stability, discouraging the use of quotas and other measures used to set limits on quantities of imports.
- **Safety valves.** In specific circumstances, governments are able to restrict trade. The WTO's agreements permit members to take measures to protect not only the environment but also public health, animal health and plant health.

There are three types of provision in this direction:

² https://en.wikipedia.org/wiki/World_Trade_Organization based on WTO website

- articles allowing for the use of trade measures to attain non-economic objectives;
- articles aimed at ensuring "fair competition"; members must not use environmental protection measures as a means of disguising protectionist policies.
- provisions permitting intervention in trade for economic reasons.

Exceptions to the MFN principle also allow for preferential treatment of developing countries, regional free trade areas and customs unions.

International trade rules can play an important role in ensuring that trade barriers are not erected that deprive countries of opportunities to participate in new markets.

There are two WTO Agreements that deal with subsidies: the Agreement on Subsidies and Countervailing Measures (ASCM) and the Agreement on Agriculture (AoA).

Harmer (2009)³ provided an analysis of biofuel subsidies and WTO:

As governments put in place new measures, or fine-tune existing ones, care is needed in crafting these measures. This is important both to ensure that biofuel/bioenergy policy objectives are achieved in an efficient and effective way and to avoid distorting trade. Some specific issues for policy makers to consider include the following:

- WTO subsidy disciplines do not prohibit subsidies or support to biofuels or bioenergy. Rather, the WTO rules concern themselves with subsidies that have a trade-distorting effect.
- Although often cited in discussions about the WTO and biofuel subsidies, the 'green box' provisions of the WTO Agreement on Agriculture (AoA) do not provide a broad category sheltering measures on the basis that they offer some environmental benefits. To qualify as **green box support**, specific requirements must be met. For example, payments under environmental programmes must be limited to the costs of compliance with the programme.
- The issue of whether subsidies have been passed on to the benefit of other participants in the bioenergy production chain may be particularly relevant in a biofuels/bioenergy context, where subsidies are provided at various stages of the production and use chain.
- Attempts to provide assistance by way of decoupled payments are likely to be scrutinized closely, and the requirement that a payment not be "related to" production will be applied strictly. Importantly, if there is some condition attached to the payment that would have an impact on production – positive or negative – then it is not likely to qualify as a decoupled payment.
- Many countries have sought to foster domestic production and use of biofuels, raising the prospect of policies that favour domestically sourced biofuels. For this reason, biofuel policies that express a preference for domestic over foreign-sourced biofuels may present problems as prohibited on local content subsidies.

³ Toni Harmer (2009). Biofuels Subsidies and the law of the WTO, International Centre for Trade and Sustainable Development (ICTSD). June 2009

Analysis of the International Food & Agricultural Trade Policy Council (IPC) in 2010⁴ on biofuel and biomass subsidies and WTO rules:

The Agreement on Subsidies and Countervailing Measures (ASCM) sets rules on subsidies. The Agreement divides specific subsidies into those that are *prohibited* (i.e. export incentive subsidies contingent on export performance and local content subsidies granted for the use of domestic inputs over imported goods) and those that are “*actionable*,” potentially subject to challenge. Serious prejudice may arise when one or more of the following apply:

- imports into the market of the subsidizing country are displaced;
- exports to third country markets as a result of the subsidy are displaced;
- there is significant price suppression as a result of the subsidy, and
- there is an increase in world market share by the subsidizing country.

In addition to a challenge based on serious prejudice, a subsidy can also be countervailed if it causes injury to domestic producers.

The Agreement on Agriculture (AoA) includes disciplines for “all domestic support measures in favour of agricultural producers,” but exempts “green box” support from reduction. In addition to subsidies to feedstock producers, it might be argued that blending requirements, often combined with protection from imported biofuels, serves to increase the domestic demand for feedstocks and thus their price, providing support in favour of basic agricultural products.

ICTSD (2011)⁵ analysed whether sustainability criteria in the RED are consistent with WTO rules.

Promotion measures (tax reductions or mandates) would give an advantage to all biofuel producers (foreign and EU based) because they create demand for biofuel that would otherwise be almost non-existent. The crucial question is from where this biofuel will come, and whether foreign producers will have equal chances to gain from the increased demand. If refiners are completely free to choose the sources of the biofuel (assuming the 10% target is implemented through mandatory blending), the most efficient producers will capture the market. Thus, in case foreign producers are able to produce biofuel more efficiently, there will be large amounts of imports. This, however, could be impeded if foreign producers found it difficult to fulfil the sustainability criteria.

Moreover, tariffs could block foreign producers from entering the EU market. Currently, tariffs are set at very different levels for major biofuels. This is because biofuels fall under different product categories in the tariff schedule. The high tariffs on certain biofuels (in particular ethanol) can be considered a significant trade barrier.

As the Renewable Energy Directive affects global trade flows, the EU has to ensure that the sustainability criteria contained in Article 17 are compatible with applicable WTO law. According to the principles of non-discrimination, Member States cannot discriminate between ‘like products’ from different trading partners, nor between its own and like foreign products. A related question is whether products that are produced using different process or production methods (PPMs), can be found to be ‘unlike’ even if these different methods do

⁴ <http://www.agritrade.org/documents/BiofuelsPolicyFocus.pdf>

⁵ <http://www.ictsd.org/downloads/2011/12/sustainability-criteria-in-the-eu-renewable-energy-directive-consistent-with-wto-rules.pdf>

not leave a physical trace in the final product. In other words, is discrimination between products on the basis of the production process – as required by the Directive’s sustainability criteria - allowed?

Product-related PPMs are ‘used to assure the functionality of the product, or to safeguard the consumer who uses the product’, whereas the non-product-related PPMs are ‘designed to achieve a social purpose’. Non-product-related PPMs can be further divided into three types: the how-produced standard specifying the processing method used for making the product; the government policy standard concerning the laws or regulations of a foreign government regarding the production process; and the producer characteristics standard specifying attributes of a producer or its contractual relations.

The GHG emission saving as well as the land-use criteria can be considered non-product-related how-produced PPMs as they relate to the biofuel production process of an individual producer. The required GHG savings are calculated by adding emissions from the whole production process, most of which are completely unrelated to the product itself. For example, it matters whether methane is extracted from the emissions of a biofuel processing plant, but this has no bearing on the final product. The land-use criteria define whether the land used for the production of the raw material allows ‘sustainable’ production, which is also unrelated to the final product.

Access to the EU market provides a major advantage to biofuel producers that meet the sustainability criteria compared to those that fail to comply with the required standards. Indeed, the Directive establishes a link between the sustainability criteria and the financial support provided as part of the domestic schemes, only allowing sustainable biofuels to benefit.

However, the question in relation to the non-discrimination principle is whether a distinction regarding the advantage conferred (Article I) or the favourable treatment (Article III) is made on the basis of origin. The legal analysis on this might differ for the GHG saving requirements and the land-use requirements.

The GHG emissions saving criteria were set to apply to both domestic and imported biofuels irrespective of their origin, without explicitly discriminating against any of these. However, there is a possibility that the GHG emissions saving requirements outlined in the Directive de facto discriminate against all or certain foreign producers due to 1) the inclusion of transport emissions in the calculation of GHG emissions savings; 2) the setting of default values for GHG emissions savings; and 3) the methodology used for the establishment of the GHG savings thresholds.

Land-use criteria: Article 17 (3) to (5) of the Directive contains three land-use criteria, applying to highly biodiverse land, land with high carbon stock, and peatland. As the highly biodiverse ecosystems that the land-use criteria aim to protect are unevenly distributed across the biofuel producer countries, the criteria could be considered to be directed at specific foreign countries, as the types of ecosystems provided for in Article 17 (3) to (5) are more susceptible to be used for the production process of biofuels in those regions of the world.

The Directive 2009/28/EC does not contain an explicit restriction on the importation of biofuels. However, if a biofuel cannot fulfil the sustainability criteria, this has a significant

restrictive impact on its marketability within the EU. Indeed, there is no incentive to use those biofuels unless their price falls below the price of fossil fuel, which is not yet the case.

Overall, the Directive is mostly in line with obligations under the GATT Agreement, though certain elements could likely be considered a violation of the WTO's non-discrimination principle under both Articles I and III. In the alternative, non-sustainable biofuels are subject to a restriction on importation within the European Union, which is a violation of GATT Article XI.

However, most of these measures can be justified under the exception clause provided for by Article XX. ICTSD found that the emissions saving criteria and land-use criteria are consistent with both Article XX (b) (*measures designed to protect life or health of humans, animals and plants*) and (g) (*conservation of exhaustible natural resources*) and are also in line with the chapeau of Article XX.

Conclusions:

- WTO rules are about subsidy schemes, or schemes which provide support for certain products (including mandates).
- In principle domestic and imported biomass or products need to be treated equally - there should be no discrimination against imported goods. So limiting support to bioenergy from domestic biomass, or biomass from within a certain distance is clearly against WTO rules.
- Support to biomass/biofuel producers is susceptible to strict rules, on the condition that it does not distort international markets for alike products.
- Sustainability requirements can induce market barriers. They may have higher impact on imported biomass/biofuels in terms of greenhouse gas emissions related to transport, or protecting ecosystems which are related to specific foreign countries. Nevertheless these measures can be justified in terms of environmental protection goals of the policies.
- Payments under environmental programmes are possible, but they must be limited to the costs of compliance with the programme.

5. Shortlist of policies in sourcing regions

As mentioned in the introduction, for the **sourcing regions** we consider three types of policies: (1) policies stimulating domestic use of biomass, therefore impacting the availability for export, (2) policies which directly steer imports/exports (restrictions, tariffs) and (3) policies ensuring sustainable production of biomass which could encounter European sustainability requirements.

This overview presents a shortlist of policies, which are also available in the policy database, separated into the mentioned category types. Deliverable D5.2⁶ will go deeper into strategies of the sourcing regions, leading to a regulatory SWOT analysis of all these regions in terms of biomass export opportunities.

5.1. United States

Some of the policy competences in the United States are at State level. The listing contains some examples, with focus on the Southeast part of the US (with access to the Atlantic Ocean) as this part is most relevant for trade with the EU.

1. Policies increasing production of biomass, or ensuring sustainable production of biomass

Relevant regulations/documents for biomass production:

Country / State	Name	Sector/field	Description
US (Federal)	Biomass Crop Assistance Program (BCAP)	Agriculture; forestry	BCAP provides financial assistance to producers who establish, collect, harvest, store, and transport biomass crops or forest residues

⁶ Report discussing strategies for bioenergy in potential supply regions to the EU, and analyzing potential risks and potential impacts of policy changes. Deliverable 5.2 of the BioTrade2020+ project. Scheduled in April 2016.

US (Federal)	Clean Water Act / Best Management Practices	Environment	Water pollution control. Best Management Practices (BMPs) are techniques employed before, during, and after a timber harvesting operation to minimize negative effects on water quality.
US (Federal)	Cooperative Forestry Assistance Act	Forestry	Establishing and funds forest management with respect to non-Federal forest lands of the United States
US (Federal)	Forestry Programs	Forestry	Forest service economic action program authorities. Forest products conservation and recycling program authorities. Watershed restoration and enhancement (wyden amendment authorities for nfs related work on other lands). Biomass commercial utilization grant program. Tribal watershed forestry assistance.
US (Federal)	Principal Laws Relating to USDA Forest Service State and Private Forestry Programs	Forestry	The Cooperative Forestry Assistance Act of 1978, amended through 2008
US (Federal)	SFI Sustainable Forestry Initiative	Forestry	Voluntary scheme for sustainable forest management - endorsed by PEFC

Less relevant regulations/documents for biomass trade, but somehow related to the conditions of domestic biomass production:

Country / State	Name	Sector/field	Description
US (Federal)	New Energy for America	Energy; forestry	BLM -Bureau of Land Management- and the Forest Service have jointly funded several biomass supply studies

2. Policies stimulating domestic use of biomass, which could restrict availability for export

Relevant regulations/documents stimulating domestic use of biomass:

Country / State	Name	Sector/field	Description
US (Federal)	Agricultural Act of 2014: Repowering assistance program	Biofuels	Provides funding for biorefineries to install renewable biomass systems for heating and power at their facilities; or, to produce new energy from renewable biomass.
US (Federal)	Energy Independence and Security Act (EISA 2007)	Biofuels	Grants for production of advanced biofuels. Grants for R & D and commercial application of biofuel production technologies. Biofuels and biorefinery information center. Cellulosic ethanol and biofuels research. Biofuels distribution and advanced biofuels infrastructure.
US (Federal)	Renewable Fuel Standard (RFS2)	Biofuels	The RFS program is a national policy that requires a certain volume of renewable fuel to replace or reduce the quantity of petroleum-based transportation fuel, heating oil or jet fuel. Renewable fuel percentage standards for cellulosic biofuel, biomass-based diesel, advanced biofuel and total renewable fuel
US (Federal)	The President's Climate Action Plan (2013)	Climate	The plan has three pillars: (1) cut carbon pollution in the United States; (2) prepare the United States for the impacts of climate change; (3) lead international efforts to combat global climate change and prepare for its impacts.
US (Federal)	Agricultural Act of 2014: Community wood energy program	Energy	Grants for biomass heating facilities
US (Federal)	Energy policy Act of 2005 (EPAAct)	Energy	includes grants for forest biomass for electric energy, useful heat, transportation fuels, and other commercial purposes

US (Federal)	Farm Bill (Food, Conservation, and Energy Act 2008)	Biofuels; energy	Increased support for the production of cellulosic ethanol & funding for biofuel plants and cellulosic ethanol; reduction of existing ethanol tax credit, & extension of the ethanol import tariff. Support R&D. Loans for renewable electricity.
US (Federal)	Federal renewable electricity production tax credit PTC	Energy	Incentive payments for qualified renewable energy facilities
US (Federal)	Lacey Act (part of Food, Conservation, and Energy Act)	Forestry, Trade	a ban on trading plants or plant products harvested in violation of the law; requirement to declare information for some products
US (States)	State-level Renewable Portfolio Standards (RPS)	Energy	State Renewable Portfolio Standards (RPSs) are flexible-market based policies which ensure that public benefits of renewable energy are recognised.
US Alabama	Alabama Reinvestment and Abatements Act	Energy	Incentives for renewable energy facilities
US Georgia	House Bill 445 More Take Home Pay Act of 2015	Energy, product	Regulation on tax for alternative fuel facilities (for ethanol, biodiesel, butanol) and sale or use of biomass material to be utilised for energy
US Georgia	Biomass Sales and Use Tax Exemption	Taxation; energy	Exemption for biomass materials from the state's sales and use taxes, if used for energy
US South Carolina	HB 3649 Biomass Energy Production Incentive	Energy	Production incentives for certain biomass-energy facilities
US South Carolina	The South Carolina Renewable Energy and Energy Efficiency Portfolio Standard	Energy	Target of 20% renewable electricity sales in South Carolina by 2022

Less relevant regulations/documents for biomass trade, but mostly related to domestic bioenergy markets.

Country / State	Name	Sector/field	Description
US (Federal)	Rural Energy for America Program (REAP): The Renewable Energy Systems and Energy Efficiency Improvement Assistance	Agriculture, energy	Grants and guaranteed loans to agricultural producers and rural small businesses to invest in renewable energy systems
US (Federal)	Biomass Research and Development Act	Agriculture; Energy; Forestry	financial advantages granted for R&D, production of biofuels and biomass crop production
US (Federal)	Advanced Biofuels Payment Program	Biofuels	Subsidies for eligible producers of advanced biofuel
US (Federal)	Agricultural Act of 2014: Biodiesel fuel education program	Biofuels	Funding for biodiesel fuel education
US (Federal)	Agricultural Act of 2014: Bioenergy program for advanced biofuels	Biofuels	Funding for advanced biofuels
US (Federal)	American Reinvestment and Recovery Act (ARRA)	Biofuels	Grants to accelerate commercialization of advanced biofuels
US (Federal)	Biofuels and biorefinery information center	Biofuels	Financing renewable fuel information center
US (Federal)	Biofuels distribution and advanced biofuels infrastructure	Biofuels	R&D on advanced biofuels infrastructure
US (Federal)	Cellulosic ethanol and biofuels research	Biofuels	R&D on cellulosic ethanol and biofuels
US (Federal)	Production incentives for cellulosic biofuels	Biofuels	Production incentive payments for cellulosic biofuels
US (Federal)	Tax increase prevention Act of 2014	Biofuels	Credits to second generation biofuel producers

US (Federal)	Biomass Research and Development Initiative	Biofuels; products	Funds to feedstocks development; biofuels and biobased products development; and biofuels development analysis.
US (Federal)	Biorefinery Assistance Federal Loan Program	Biofuels; products	Grants for demonstration-scale biorefineries and guarantees for loans of commercial-scale biorefineries
US (Federal)	Climate Showcase Communities Grant Program	Climate	sustainable community action that generate cost-effective and persistent greenhouse gas reductions
US (Federal)	Mandatory Reporting of Greenhouse Gases Rule	Climate	requires large sources and suppliers in the U.S. to report greenhouse gas (GHG) emissions annually
US (Federal)	Federal Leadership in Environmental, Energy, and Economic Performance	Climate; energy	Executive Order making greenhouse gas management a priority for the Federal Government
US (Federal)	Agricultural Act of 2014: Feedstock Flexibility Program for Bioenergy Producers	Energy	Funding authorization for Bioenergy Producers
US (Federal)	Biomass Thermal Utilization Act	Energy	Regulation for biomass heating appliances
US (Federal)	Cellulosic Biofuels Incentives	Energy	financial advantages granted for cellulosic biofuels
US (Federal)	Onshore Renewable Energy Development Programs	Energy	providing sites for environmentally sound development of renewable energy on public lands
US (Federal)	Conservation Reserve Program (CRP)	Environment; agriculture	Subsidies for production of plant species that will improve environmental health and quality
US (Federal)	Partnership for Sustainable Communities	Environment; economy	Partnership agencies incorporate six principles of livability into federal funding programs, policies, and future legislative proposals
US (Federal)	Agricultural Act of 2014: Biobased markets program	Products	Reporting and promotion of biobased products, including forest products,
US (Federal)	Agricultural Act of 2014: Biorefinery assistance	Products	Regulate renewable chemicals, and biobased product facilities

US (Federal)	Agricultural Act of 2014: Biomass research and development	RD&D	Grants for biomass research and development
US Alabama	Act that creates the Center for Alternative Fuels	Biofuels	Regulations concerning Alternative Fuels
US Arkansas	Arkansas Distributed Generation Act	Energy	Increasing the use of renewable energy resources
US Florida	Renewable energy House Bill No. 77 (2006)	Energy	Requirements and incentives for renewable electricity
US Georgia	House Bill 34 Income tax credit; clean energy property	Energy	income tax credits for clean energy property, incl biomass equipment to convert wood residuals into electricity through gasification and pyrolysis.
US Georgia	House Bill 503: Public utilities; establishment of voluntary portfolio standard goals for renewable energy	Energy	amendment of existing legislation to provide for the establishment of voluntary portfolio standard goals for renewable energy
US Georgia	House Study Committee on the Economic Impact of Expanding the Renewable Energy Market in Georgia	Energy	This committee undertakes a study on the needs/problems for renewable energy and recommended actions.
US Georgia	The Georgia Cogeneration and Distributed Generation Act	Energy	Programme to support distributed generation of cogenerators, also to encourage investment in renewable energy resources
US Kentucky	Alternate Energy Development Fund	Energy	Fund to encourage and promote the development, implementation and construction of alternate energy projects.
US Kentucky	Utilization of Woody Biomass	Trade	Regulates timber/vegetative sales contracts between the government and contractors
US Mississippi	Mississippi Energy Sustainability and Development Act	Trade	Includes promotion of renewable technologies
US Missouri	New sections relating to the renewable energy standard	Energy	Requirements for electric utilities to generate or purchase electricity generated from renewable energy resources

US Missouri	Agricultural tax credit	Taxation; energy	Income tax credit for a taxpayer who uses processed biomass engineered fiber fuel, or for wood energy producers (5 dollar per ton) as a production incentive for forest products in Missouri.
US South Carolina	Biomass Energy Tax Credit	Energy	Legislation concerning a landfill methane tax credit
US Virginia	Agriculture and Forestry Industries Development Fund (AFID)	Energy	Grants to promote and develop the agriculture and forestry industry and create or expand value-add facilities, including qualified biofuel production facilities
US Virginia	Renewable energy property tax credit	Energy	Tax credits for placing into service renewable energy property
US West Virginia	Renewable portfolio standards sustainable energy Act	Energy	Portfolio standard for renewable energy that shall require each provider to generate or acquire electricity from renewable energy systems

5.2. Canada

Many of the policy competences in Canada are at provincial level. The listing contains some examples, with focus on Atlantic and Central Canada (with access to the Atlantic Ocean) and Western Canada (British Columbia).

1. Policies increasing production of biomass, or ensuring sustainable production of biomass

Relevant regulations/documents for biomass production:

Country / Province	Name	Sector/field	Description
Canada (Federal)	Forestry Act	Forestry	Forestry research and forest protection and management
Canada (Federal)	Timber Regulations	Forestry	Regulations respecting the cutting and removal of timber
Canada (Federal)	The Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA)	Forestry; trade	Preventing imports of illegally harvested forest products
Canada (Federal)	Canadian Standards Association Sustainable Forest Management (CSA)	Forestry	Voluntary scheme for sustainable forest management - endorsed by PEFC
Canada (Federal)	SFI Sustainable Forestry Initiative	Forestry	Voluntary scheme for sustainable forest management - endorsed by PEFC
Canada: British Columbia	Protected Areas of British Columbia Act	Environment	British Columbia provincial parks and protected areas
Canada: British Columbia	BC Forest Act	Forestry	tenure agreements (licenses) for Crown timber
Canada: British Columbia	Forest and Range Practices Act	Forestry	Forest stewardship, forest health, and reforestation

Canada: British Columbia	Private Managed Forest Land Act	Forestry	Forest practices standards and timber regulation
Canada: New Brunswick	Crown Lands and Forests Act	Forestry	Regulations for the development, utilization, protection and integrated management of the resources of Crown Lands
Canada: New Brunswick	Timber Regulation - Crown Lands and Forests Act	Forestry	Timber regulation
Canada: Newfoundland & Labrador	NF & L Forestry Act	Forestry	Management, harvesting and protection of the forests
Canada: Newfoundland & Labrador	Three Timber Regulations under the Forestry Act	Forestry	Timber Scaling Regulations, Timber Royalty Regulations and Mill Regulations
Canada: Nova Scotia	Forest Sustainability Regulations made under Section 40 of the Forests Act and the Finance Act	Forestry	Forest Sustainability Regulations for private lands
Canada: Nova Scotia	NS Forests Act	Forestry	Forest management and forest products
Canada: Nova Scotia	Primary Forest Products Marketing Act	Forestry	Regulation for Primary Forest Products
Canada: Nova Scotia	Registration and Statistical Returns Regulations made under Section 40 of the Forests Act	Forestry	Timber harvest regulations
Canada: Nova Scotia	Wildlife Habitat and Watercourses Protection Regulations made under Section 40 of the Forests Act	Forestry	Forest harvesting and specify performance and post-harvest requirements
Canada: Ontario	Crown Forest Sustainability Act CFSA	Forestry	Ontario forest management

Canada: Ontario	Three Forest Manuals	Forestry	Forest Management Planning Manual (FMPM), Forest operations and silviculture manual (FOSM), Scaling Manual
Canada: Québec	Wood-burning appliances Environment Quality Act	Energy	Conformity of wood-burning appliances
Canada: Québec	Marketing of agricultural, food and fish products Act	Forestry	Regulation on the cutting of trees
Canada: Québec	Sustainable Forest Development Act	Forestry	Management of forest communities and timber regulation

Less relevant regulations/documents for biomass trade, but somehow related to the conditions of domestic biomass production:

Country / Province	Name	Sector/field	Description
Canada: Alberta	Alberta Forests Act	Forestry	Forest and timber regulation
Canada: Prince Edward Island	Forest renewal program regulations	Forestry	Management and harvest of public land forests on PE
Canada: Prince Edward Island	PEI Forest management Act	Forestry	Forest management for Public lands and for Private lands
Canada: Province of Saskatchewan	The Forest Resources Management Act	Forestry	Sustainable forest management

2. Policies stimulating domestic use of biomass, which could restrict availability for export

Relevant regulations/documents stimulating domestic use of biomass:

Country / Province	Name	Sector/field	Description
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Canada (Federal)	Federal Renewable Fuels Regulations	Biofuels	Regulations require an average 5% renewable fuel content for gasoline, and 2% renewable fuel content in most diesel fuel
Canada: British Columbia	Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act	Climate, energy	Reduction the greenhouse gas emissions from fuel
Canada: British Columbia	British Columbia Clean Energy Act: Clean or Renewable Electricity Requirement	Energy	Clean Energy Act commits that British Columbia will generate at least 93% of their electricity from clean or renewable sources
Canada: Nova Scotia	Greenhouse Gas Emissions Regulations made under the Environment Act	Climate	Reduction of the greenhouse gas emission
Canada: Nova Scotia	Renewable Electricity Regulations made under the Electricity Act	Energy	Nova Scotia's Renewable Electricity Plan
Canada: Ontario	Green Energy Act	Energy	Fostering the growth of renewable energy projects, which use cleaner sources of energy
Canada: Ontario	Ontario Feed-in Tariff Programme	Energy	Feed-in tariff programme, open to various renewable energy technologies

Less relevant regulations/documents for biomass trade, but mostly related to domestic bioenergy markets.

Country / Province	Name	Sector/field	Description
Canada	Income Tax Regulations	Taxation, energy	Income Tax Application Rules for Canadian renewable and conservation expenses for a Energy Conservation Property

Canada: Alberta	Renewable Fuels Standard Regulation Climate Change and Emissions Management Act	Energy	Renewable Fuels Standard and Requirements
Canada: Ontario	Renewable energy projects	Energy	Admission and authorisation of renewable energy projects
Canada: Prince Edward Island	Renewable Energy Act	Energy	Use of renewable energy sources for the generation of electric energy

3. Policies with direct impact on imports/export markets

Country / Province	Name	Sector/field	Description
Canada: New Brunswick	Transportation of Primary Forest Products Act	Forestry	Transportation Certificate regulation

5.3. Brazil

1. Policies increasing production of biomass, or ensuring sustainable production of biomass

Relevant regulations/documents for biomass production:

Country	Name	Sector/field	Description
Brazil	Bonsucro Production Standard	Agriculture	voluntary scheme, promoting measureable standards in key environmental and social impacts of sugarcane production and the need for economic viability
Brazil	RTRS Responsible Soy Production Standard	Agriculture	voluntary standard for responsible soy production that assures soy production that is environmentally correct, socially appropriate and economically feasible
Brazil	ZAE Cana - Agro Ecological Zoning of sugarcane	Agriculture	in the frame of the expansion and sustainable production of sugar cane in Brazil; includes a set of strict environmental, economic, social, climate and soil restrictions that serve as mandatory guidelines, limiting future expansion of sugarcane to 7.5% of the Brazilian territory (or 64.7 million hectares)
Brazil	Green Protocol / Protocolo Agroambiental	Agriculture; energy	agreement on the reduction of sugarcane straw burning and cogeneration in mills in the state of São Paulo, on top of the recovery of riparian forest
Brazil	Brazil's Soy Moratorium: SoyM	Agriculture; forestry; environment	SoyM is a pledge agreed to by major soybean companies not to trade soybean produced in deforested areas after 24th July 2006 in the Brazilian Amazon biome
Brazil	Brazil National Climate Change Plan PNMC	Climate; forestry	plan for reducing greenhouse gas emissions from deforestation, and contains targets fore cutting deforestation

Brazil	National Environmental Policy	Environment	preservation and restoration of environmental resources; environmental licensing requirement for potentially polluting activities, such as forestry and industrial.
Brazil	National Water Resources Policy (NWRP) and the National Water Resources Management System (NWRMS)	Environment	Water Law establishes an integrated approach to water resources management
Brazil	National System of Protected Areas SNUC	Environment; forestry; agriculture	Sustainability rules for forestry and agriculture (e.g. nature protection, best management practices)
Brazil	Forest Investment Program (FIP)	Forestry	FIP focused on building synergies in order to maximize the impact of a larger set of policies aimed at reducing reforestation in the Cerrado biome
Brazil	FSC® (Forest Stewardship Council) and CERFLOR (Brazilian National Forest Certification Program)	Forestry	voluntary sustainable forestry schemes
Brazil	Management of Public Forests, Brazilian Forest Service and National Fund for Forest Development	Forestry	mandates forest management principles based on REDD+ policies, establishes the Brazilian Forest Service, and sets up the National Fund for Forest Development
Brazil	New Forestry Code	Forestry	Forest Code creates standards for Permanent Protected Areas, regulates economic activities in forests, and restricts deforestation
Brazil	PMFS Sustainable Forest Management Plan (Plano de Manejo Florestal Sustentável) and POA Annual Operational Plan (Plano Operacional Anual)	Forestry	forest managers and harvesting companies harvesting native species from planted forests must have an PMFS
Brazil	PPCDAm, Plano de Ação para a Prevenção e o Controle do Desmatamento na Amazonia Legal	Forestry	financial and regulatory Plan for Prevention and Control of the Legal Amazon Deforestation

Brazil	PROPFLORA: Programme of Commercial Planting and Recovery Forest	Forestry	Funding to plant forests, mainly for industrial use. Also includes the restoration and maintenance of preservation areas and legal reserves.
Brazil	National Plan on Climate Change and the Action Plan to Prevent and Control Deforestation	Forestry; energy	National Energy Efficiency Action Plan that lowers electricity consumption and reduces deforestation of the Amazon

Less relevant regulations/documents for biomass trade, but somehow related to the conditions of domestic biomass production:

Country	Name	Sector/field	Description
Brazil	ABC Programme - Low Carbon Agriculture	Agriculture	ensure the continued improvement of sustainable management and use of natural resources by the agriculture sector, with a view to reducing greenhouse gas emissions
Brazil	Agricultural and Livestock Guarantee Program Proagro	Agriculture	financial liabilities in rural working credit operations when producers have income loss as a consequence of climatic adversities or diseases and plagues without a widespread method of combat, control, or prophylaxis.
Brazil	Climatic Risk Agricultural Zoning	Agriculture	technical-scientific tool of support to the management of risks in agriculture which seeks to guide the granting of agricultural working credit and the acquisition of rural insurance and Proagro
Brazil	Rural Insurance Premium Subvention Program	Agriculture	The most important agricultural policy instruments, indispensable for the good performance of agribusiness
Brazil	National Fund on Climate Change	Climate	directs funds for the mitigation of greenhouse gas emissions
Brazil	Sao Paulo Climate Change Act	Climate	establishes principles and strategies for Sao Paulo's mitigation of climate change

Brazil	Ecological-Economic Macro-zoning of the Legal Amazon's MacroZEE	Environment	MacroZEE proposes production strategies and environmental management and creates public monitoring evaluations
Brazil	Internal Regulation of the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA)	Environment	implements national policies related to federal environmental legislation
Brazil	National Policy for the Environment	Environment	provide information on environmental legislation
Brazil	BNDES Forestry	Forestry	Credit line aimed at the reforestation, conservation and forest recovery of degraded or converted areas, and sustainable use of native areas through forestry development
Brazil	Amazon Fund	Forestry; environment	Raise donations for non-refundable investments in preventing, monitoring and combating deforestation, in addition to the conservation and sustainable use of the Amazon biome forests
Brazil	National Policy on Solid Residues	Waste	encourages the reduction of solid waste, sewage, and effluents and the recycling of and reuse of trash to improve sanitary conditions and reduce GHG emissions

2. Policies stimulating domestic use of biomass, which could impact availability for export

Relevant regulations/documents stimulating domestic use of biomass:

Country	Name	Sector/field	Description
Brazil	Ethanol blending mandate	Biofuels	mandatory ethanol blend in the gasoline
Brazil	National Fuel Alcohol Program (Proalcool)	Biofuels	Brazilian government supports private industry in the development of alcohol-based fuels by subsidizing research and development

Brazil	Sugar cane production for biofuel	Biofuels	rules on the sugar cane production for biofuel
Brazil	2010-2019 Plan for Energy Expansion	Energy	plan for phasing out of fossil fuel power plants construction by 2014 and major expansions of plants with renewable energies
Brazil	Carbon Credits from Bioelectricity	Energy	Credits to spread mechanized harvesting techniques that preserve additional plant matter to use as fuel in more-efficient generators to obtain greenhouse gases reduction
Brazil	Electric power auctions - Biomass	Energy	specific auctions for existing energy sources, and those for new energy sources, including renewable energy
Brazil	Programa de Incentivo a Fontes Alternativas de Energia Elétrica - PROINFA	Energy	Programme of Incentives for Alternative Electricity Sources through subsidies and incentives to target increasing the share of electricity produced by renewable sources

Less relevant regulations/documents for biomass trade, but mostly related to domestic biofuel markets. The production of biofuels may increase the availability of residues (e.g. from sugarcane or palm oil plantations):

Country	Name	Sector/field	Description
Brazil	AGORA project	Agriculture	The AGORA Project is a successful integrated marketing and communications initiative focused on a specific chain (sugarcane-ethanol) and launched in Brazilian agribusiness, that has concluded a number of successful initiatives, including a series of four educational programs
Brazil	BNDES PRORENOVA (Paiss Agricola)	Agriculture	financing for the renovation of old sugarcane farms and the expansion of the cultivated area

Brazil	PRONAF Forestry and Eco PRONAF	Agriculture	Financial support to the agriculture and livestock and non-agriculture and livestock activities involving direct employment of family workforces on rural landholdings
Brazil	Biodiesel Stocks	Biofuels	the introduction of the “option to buy” contract in which the biodiesel buyers (basically, Petrobras) contract the right to pick up the product at any time at the biodiesel plant.
Brazil	Ethanol Supply Contracts	Biofuels	fuel distributors are required to adopt a yearly supply contract to meet purchasing targets
Brazil	Institute of Sugar and Alcohol	Biofuels	composition, duties and responsibilities of the Institute of Sugar and Alcohol
Brazil	Mandatory Biodiesel Requirement	Biofuels	requirement for B2 biodiesel - a mix of vegetable oil and sugar-cane ethanol with 98% standard diesel
Brazil	National Biodiesel Program (PNPB)	Biofuels	measures with the goal of accommodating Brazil’s fuel-related legal and regulatory environment to the addition of biodiesel
Brazil	State Programme for Biofuel	Biofuels	This Programme aims at promoting the participation and use of renewable fuel in the framework of direct administration, local authorities and foundations of the State of São Paulo.
Brazil	Tax incentives for ethanol-flex fuel vehicles	Biofuels; taxation	Three taxes for different categories of vehicles
Brazil	Interministerial Commission on Climate Change (CIMGC)	Climate	coordination of the government’s actions in the climate change area
Brazil	India-Brazil-South Africa Declaration on Clean Energy	Energy	agreement to work together in the promotion of renewable energies and in the endorsement of climate change mitigation

Brazil	National Energy Conservation Program - PROCEL	Energy	program to promote the rationalization of production and consumption of electricity, in order to eliminate waste and reduce costs
Brazil	National Energy Plan for 2030	Energy	plan sets forth long-term government strategies to meet the country's energy needs in a sustainable way
Brazil	Utility energy efficiency obligation	Energy	electric power distribution companies are obliged to make investments that reduce electric waste, including through undertaking energy efficiency measures
Brazil	Light for All (Luz para Todos) electrification programme	Energy	Program to improve generating electricity with renewable energies
Brazil	Support of Environmental Conservation and Program for the Promotion of Rural Productive Activity	Environment	"Green Allowance", a payment system for people engaged in conservation activities, and a cash-transfer policy for rural families living in extreme poverty
Brazil	Agroenergy Development Program	Forestry	Purpose is to organize and develop the technological research, innovation and transfer in support to the sustainability and competitiveness of agroenergy chains.
Brazil	PIS/Cofins - payroll and social security taxes	Taxation; Energy	reduction of the so-called PIS/Cofins, payroll and social security taxes, and interest rates on loans is expected to help ethanol groups
Brazil	Vehicle emission limits	Transport	Laws and resolutions concerning new model vehicle (including ethanol fuelled) emission limits

3. Policies with direct impact on imports/export markets

Country	Name	Sector/field	Description
Brazil	Timber export regulation	Forestry; trade	Regulations for timber companies seeking to export timber from Brazil
Brazil	Ethanol export tax credit - REINTEGRA	Biofuels; trade	special Regime of Reinstatement of Tax Amounts for Exporting Companies
Brazil	Ethanol and Biodiesel Import Tariff	Biofuels; trade	extension of the zero import tariff applied to ethanol with less than one percent water

5.4. Colombia

1. Policies increasing production of biomass, or ensuring sustainable production of biomass

Relevant regulations/documents for biomass production:

Country	Name	reference	Sector/field	Description
Colombia	Special projects of Agricultural and Forestry development (PEDAF)	Decree 4944/2011	Agriculture; forestry	Special projects of Agricultural and Forestry development (PEDAF) and creation of 'Single Window Forestry' (Ventanilla Única Forestal VUF) tools
Colombia	Approval of UNFCCC related to climate change	Law 164 – 1994	Climate	This law allowed the development of new policies, action plans and elaboration of official documents related to climate change (United Nations Framework Convention on Climate Change UNFCCC).
Colombia	National Development Plan 2010-2014: PNACC, ECDBC, ENRREDD+, REDD+ (R-PP)		Climate	National Plan for Adaptation to climate Change (PNACC), Colombian Strategy for low-carbon Development (ECDBC), National Strategy for reducing Emissions from Deforestation and Forest Degradation (ENRREDD+).
Colombia	Regulation of the Natural Areas Protection System	Decree 2372/2010	Environment	Regulation of the Natural Areas Protection System
Colombia	Tax incentives for new plantations and tax reforestation discounts	Tax Statute art 157 & 253	Taxation; forestry	Tax incentives for new plantations and tax reforestation discounts

Less relevant regulations/documents for biomass trade, but somehow related to the conditions of domestic biomass production:

Country	Name	reference	Sector/field	Description
Colombia	Decree on all aspects related to water discharges and obligation of waste water producers and sewage service providers	Decree 3930-2010	Environment	water quality and water discharges
Colombia	Green and Sustainable business 2013		Environment	Concerns economic activity that products, goods or services are offered, based on innovation, contributing to the conservation of the environment
Colombia	Standards for allowable emissions of pollutants into the atmosphere from stationary sources	Resolution 909-2008	Environment	standards for allowable emissions of pollutants into the atmosphere from stationary sources
Colombia	Regional economic sustainable development and sustained growth	Law 1450-2011	Environment; Energy	Law to achieve dynamics allowing regional economic sustainable development and sustained growth
Colombia	Tax on the toll of road of natural protection municipal areas & international wetland	Law 981/2005 amended by Law 1718-2014	Environment; taxation	Set a tax on the toll of road near or inside of natural protection municipal areas and international wetland

2. Policies stimulating domestic use of biomass, which could restrict availability for export

Relevant regulations/documents stimulating domestic use of biomass:

Country	Name	reference	Sector/field	Description
Colombia	Incentive for Rural Capitalization / Secure Agricultural Income Programme		Agriculture; biofuels	Credit incentives for sowing crops intended for ethanol and biodiesel production Promote the establishment and replanting of different plantations through the development of infrastructure for the processing of biomass
Colombia	Excise duties - taxes biomass - gasoline surcharges	Law 788/2002	Energy; Taxation	Exemption and reduction of sales taxes of sugarcane, sugar cane molasses and the electricity from biomass, subject to environment and social requirements

Less relevant regulations/documents for biomass trade, but mostly related to domestic biofuel markets. The production of biofuels may increase the availability of residues (e.g. from sugarcane or palm oil plantations):

Country	Name	reference	Sector/field	Description
Colombia	Colombia biofuels policy		Biofuels	This document lays down the objectives for Colombia's biofuels production, in order to secure energy supply and reduce the dependence on fossil fuels
Colombia	"MC" contribution margin of biofuels	Resolution 90155-2014	Biofuels	
Colombia	Biofuel blend %, price aspects of finished products and bonuses	Resolution 181966-2011	Biofuels	
Colombia	Biofuels (price) calculation	Resolution 90145-2014	Biofuels	

Colombia	Biofuels price calculation formulas	Resolution 180134-2009	Biofuels	
Colombia	Biofuels Program 2007		Biofuels	Program to provides forecasts based on UPME data on fuels demand, aims at energy matrix diversification, provides information on land for biofuels production, provides the targets for fuel blends
Colombia	Committee for the pricing of (bio)fuel	Resolution 90042-2014	Biofuels	Committee with recommendations on the pricing of (bio)fuel
Colombia	CONPES 3510		Biofuels	Sustainable Biofuel Production in Colombia
Colombia	Ethanol blend percentage	Decree 90932-2013	Biofuels	Based on Resolution No. 90932/2013, in December 2013 the mandate was increased to 10 percent in the Central, Southern and South-western zones of the country (FedeBiocombustibles, 2013).
Colombia	Fuel quality requirements	Resolution 1565-2004	Biofuels	Quality requirements for ethanol blending with gasoline; defines quality characteristics for Diesel; establishes the use of additive in Colombian fuels
Colombia	gasoline oxygenation program and blending obligation for specific regions in the country	Resolution 181069-2005	Biofuels	gasoline oxygenation program and blending obligation for specific regions in the country
Colombia	Inter-Sectorial Commission for Biofuel Management (ISCBM)	Decree 2328/2008	Biofuels	Establish the Inter-Sectorial Commission for Biofuel Management in order to coordinate the formulation and implementation of biofuels policies
Colombia	Mandatory blend for biofuels	Decree 4892-2011	Biofuels	
Colombia	Motor flex fuel	Decreet 1135-2009	Biofuels	Motores flex fuel concerning use of alcohol fuels in Colombia and measures applicable to motor vehicles that use gasoline for its operation
Colombia	Project increase of mandatory blend for alcohol fuel		Biofuels	Mandatory blend 10% since 2005 to 20% in 2012

Colombia	Quality for ethanol blending with gasoline, for diesel, use of additive in Colombian fuels	Resolutions 1565 of 2004 and 2200 of 2005	Biofuels	Quality for ethanol blending with gasoline - for diesel - use of additive in Colombian fuels
Colombia	Quality requirements for biofuels	Resolution 1180-2006	Biofuels	Quality requirements for biofuels
Colombia	Requirements for users and producers of bioethanol as biofuel	Law 693/2001	Biofuels	Promote the increased use of non-conventional energy sources and regulate the production, marketing and use of alcohol based fuels
Colombia	Resolutions on prices for biofuel producers 2012 - today	Resolution 90146-2012 and following	Biofuels	
Colombia	Technical and safety requirements for biofuels	Resolution 90454-2014	Biofuels	Defines the technical and safety requirements regarding the production, storage, distribution and blending locations for biofuels
Colombia	The biofuel mandatory blend % for specific regions	Resolution 180916-2009 and Resolution 181318-2009	Biofuels	
Colombia	Use of biofuels	Decree 2629/2007	Biofuels	Dictates rules to promote the use of biofuels in the country and measures applicable to vehicles and other devices that use motor fuel for operation
Colombia	Criteria of quality of biofuels	Resolution 447-2003	Biofuels, energy	Chemical analysis criteria of liquid and solid fuels for industrial and commercial combustion engines
Colombia	Exemption from sales tax and global tax on diesel fuel - stimulation of biofuels of vegetable or animal origin	Law 939/2004	Biofuels; Taxation	Exemption for biodiesel sales tax & global tax and stimulate production and commercialization of biofuels of vegetables or animal origin for use in diesel engine
Colombia	Prices of biofuel for transport	Resolution 180294-2009	Biofuels	

Colombia	Kyoto protocol approval	Law 629/2000	Climate	Approval of the Kyoto Protocol to the UN Framework Convention on Climate Change
Colombia	Efficient and Rational use of energy	Law 697/2001	Energy	Promote the rational and efficient use of energy and the use of alternative energy
Colombia	Integration of energy from renewable sources into the national electricity grid	Law 1715/2014	Energy	Regulation of the non-conventional renewable energy integration in the National Energetic System
Colombia	PROURE: Rational and Efficient Use of Energy Program		Energy	program to diminish energy intensity, improve efficiency and promote non-conventional energy
Colombia	Tax exemption for electricity autocomsumption	Law 1215/2008	Energy; Taxation	Set a tax exemption for electricity autocomsumption
Colombia	Cleaner Production Policy		Environment	Strategies for the innovation, commercialization and dissemination of clean technologies
Colombia	Maximum allowable emission limits for vehicles on biofuels	Resolution 910-2008	Environment	maximum allowable emission limits for vehicles on biofuels
Colombia	Colombia strategy for low carbon development ECDBC		Environment; climate	Estrategia Colombiana de Desarrollo Bajo en Carbono (ECDBC)
Colombia	Tax incentives for energy efficiency projects & investments in clean technologies	Tax Statute art 428	Taxation	

3. Policies with direct impact on imports/export markets

Country	Name	reference	Sector/field	Description
Colombia	Tax Free Trade Zones FTZ	Decree 383/2007	Trade; taxation; industry	Tax Free Trade Zones (FTZ) under special regulations on taxation, customs and foreign trade. Tax Free Zones aimed at stimulating major agro-industrial projects.

5.5. Indonesia

1. Policies increasing production of biomass, or ensuring sustainable production of biomass

Relevant regulations/documents related to biomass production:

Country	Name	Sector/field	Description
Indonesia	Guidelines of Plantation Business Licensing No. 98/Permentan/OT.140/9/2013	Agriculture	requirements and procedures for applying for plantation business licences. Plantation Business shall be any business engaged in the cultivation of certain plants in a suitable ecosystem, processing and marketing goods
Indonesia	Revitalisation Programme No. 33/Permentan/OT.140/7/2006	Agriculture	promoting the development of estate crop plantations through expansion, regeneration and rehabilitation activities
Indonesia	Financing for food and energy crops No. 79/PMK.05/2007	Agriculture; Energy	enables small and medium-size enterprises to obtain subsidised financing for food and energy crops
Indonesia	Credit for Development of Bio Energy and Revitalization of Plantation (KPEN-RP) No. 117/PMK.06/2006	Biofuels	provides for credit to support the program to increase production and productivity of plants generating raw materials for biofuel
Indonesia	Spatial Planning Law No. 26/2007	Biofuels	provides Guidance of Estate Business Permits and determines that the individual ownership of land for palm oil is at least 20% of the total area of the community which is developed for palm oil
Indonesia	Reduced Impact Logging for Carbon Sequestration	Climate	techniques to reduce GHG emissions associated with logging practices
Indonesia	Environmental Management Law Number 23/1997	Environment	requires any business enterprise to take full account of the environmental implications of its business operations, in order to obtain a plantation permit

Indonesia	Forest arrangement and formulation of forest management plan as well as forest exploitation No. 3/2008 on the amendment to No. 6/2007	Forestry	to design and plan activities related to forest arrangement and making of forest management plan including forest exploitation throughout forest areas
Indonesia	Guidelines for implementation of auction of forest products found, seized and confiscated No. P.02/Menhut-II/2005	Forestry	guidelines for the auction of forest products which have been confiscated, seized or forest products found inside or outside the forest whose owner is unknown.
Indonesia	Implementation of demonstration activities on reduction of emission from deforestation and degradation No. P. 68/Menhut - II/2008	Forestry	to reduce carbon emission from deforestation and degradation.
Indonesia	Industrial Tree Estate (HTI) program	Forestry	to decrease the rate of deforestation, the government is developing fast growing plantations
Indonesia	Law on Forestry No. 41/1999	Forestry	Indonesian forest lands are divided into three major functional categories: production forest, protection forest and conservation forest.
Indonesia	Procedure of altering the appropriation and function of forest areas No. 10/2010	Forestry	stipulates procedures for changes in the designation and function of forest areas
Indonesia	Procedures for licencing of commercial utilization of carbon sequestration and/or storage in production and protected forests No. P. 36/Menhut - II/2009	Forestry	License for utilizing environmental services of timber in natural forest, of timber from Plantation Forests, of IUPHHK-RE (UPHHK Restoration Ecosystem), of timber from Community Plantation Forest

Less relevant regulations/documents for biomass trade, but related to production of biomass:

Country	Name	Sector/field	Description
Indonesia	Basic Agrarian Law No. 5 of 1960	Agriculture	law applicable to all citizens of Indonesia, thereby abolishing the dual system of agrarian rights and secondly, to promote land reform by imposing a ceiling on private landholdings.

Indonesia	Managing Agency for the reduction of Emission from Deforestation and Degradation of Forest and Peatlands No. 62/2013	Climate	aims at coordinating, synchronising, planning, facilitating, managing, monitoring, overseeing and controlling REDD+ in Indonesia
Indonesia	National Council of Climate Change No. 46/2008	Climate	the establishment of the National Council of Climate Change and defines its internal organization and its tasks.
Indonesia	Procedure for changing function of forest zone RI No. P.34/Menhut-II/2010	Forestry	sets out procedures and requirements for proposals to change the function of forest areas.
Indonesia	Plantation Estate Law 18/2004	Forestry; Agriculture	regulation on the requirements and procedures for transferring protection of plant varieties and the use of varieties protected by the Government

2. Policies stimulating domestic use of biomass, which could restrict availability for export

Relevant regulations/documents stimulating domestic use of biomass:

Country	Name	Sector/field	Description
Indonesia	Biofuel Blending No. 25/2013	Biofuels	Targets for biofuel use
Indonesia	Development credits for biofuels and plantation revitalisation No. 117/2006 & No. 79/2007	Biofuels	enables small and medium-size enterprises to obtain low-cost finance from national banks for food and energy crops
Indonesia	Medium-Scale Power Generation using Renewable Energy No. 2/2006 and 26/2006	Energy	obliges electric utility PLN (The National Electric Company) to purchase electricity generated from renewable energy from facilities with a capacity between 1 MW and 10 MW.

Indonesia	Tariffs for Small and Medium Scale Power Generation using Renewable Energy No. 31/2009	Energy	creates framework for feed-in tariff system in Indonesia.
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Less relevant regulations/documents for biomass trade, but related to domestic use or trade of biomass:

Country	Name	Sector/field	Description
Indonesia	National Team for Biofuel Development and Biofuel Roadmap No. 10/2006	Biofuels	to accelerate the use of biofuel as a replacement fossil-based fuel.
Indonesia	Procurement and distribution of biofuels No.45/2009	Biofuels	determine the market price of petroleum and biofuels
Indonesia	Provision and Utilization of Biofuel No. 1/2006	Biofuels	to promote the supply and use of biofuel
Indonesia	Blueprint of National Energy Management (2005-2025)	Energy	identifies short- and long-term development objectives in the electricity sector to targets on increasing electrification levels, infrastructure expansion, reduction of subsidies and improvement in efficiency
Indonesia	Clean Technology Fund (CTF)	Energy	co-financing from the multilateral CTF to expand large-scale geothermal power plants but also to finance energy from a range of other sources.
Indonesia	Electricity Purchase from Small and Medium Scale Renewable Energy and Excess Power No. 4/2012	Energy	new differentiated feed-in tariff levels in Indonesia.
Indonesia	Electricity Supply and Utilization No. 26/2006	Energy	Regulating the supply and utilization of electricity: electricity demand forecasting, electricity supply on sector basis, electricity facilities (transmission & distribution), primary energy utilization, prioritizing renewable energy for power generation.

Indonesia	Energy Law EL7 No. 30/2007	Energy	aims at significantly reducing the economy's dependence on imported refined oil while boosting the use of other energy sources, including natural gas, biofuels and geothermal resources
Indonesia	Feed-in-Tariffs for Biomass No. 19/2013	Energy	Tariffs concerning biomass from municipal solid waste
Indonesia	Green Energy Policy No. 2/2004	Energy	strategy to maximise the utilisation of its renewable energy potential and to build public awareness of energy efficiency measures
Indonesia	Indonesia Power Price Purchase Guidance: Guidelines for the purchase of electricity by PT PLN (limited) from cooperatives or other business entities n° 05/2009	Energy	Guidelines to the purchase of electricity from power plants producing energy from new, renewable, and non-renewable energy sources
Indonesia	Presidential Regulation on National Energy Policy No. 5/2006	Energy	to reduce significantly the use of oil, to increase the use of 'among others' biofuels, and to improve energy infrastructure
Indonesia	Small Distributed Power Generation Using Renewable Energy No. 1122 K/30/MEM/2002	Energy	objective of promoting small-scale renewable energy power plants
Indonesia	Income tax reduction for energy development projects No. 21/2010	Energy; Taxation	Adjustments to income tax on energy development projects, including net income reduction, accelerated depreciation, dividends reduced for foreign investors and compensation for losses.

3. Policies with direct impact on imports/export markets

Relevant regulations/documents on biomass import/export:

Country	Name	Sector/field	Description
Indonesia	Import and use of equipment for activities of business: license to utilize forest or license to utilize timber No. P.53/Menhut-II/2009	Forestry	sets out requirements and application procedures to obtain a licence to import and use equipment in forest areas

Indonesia	Income tax facilities for investment in certain business fields and/or certain regions No. 1/2007	Biofuels; Taxation	The biofuels industry is one of the sectors eligible for incentives detailed in this regulation
Indonesia	Rules on import of sugar No. 18/M-DAG/PER/4/2007 on the fourth amendment to Decree No. 527/MPP/Kep/9/2004	Trade	makes provision with respect to the importation of sugar. The main objective of this Decree is to control the supply of sugar as raw material and consumption originating from the import

5.6. Kenya

1. Policies increasing production of biomass, or ensuring sustainable production of biomass

Relevant regulations/documents:

Country	Name	Sector/ field	Description
Kenya	Crops Act 2013	Agriculture	to provide for the growth and development of agricultural crops and for connected purposes.
Kenya	The Forest Conservation and Management Bill, 2014	Forestry	higher yields can be achieved, thus more timber and subsequently more residues available for export to the EU.
Kenya	Kenya Vision 2030	Environment; Forestry	Aim for increasing agricultural land area, and domestic supply of forestry and agricultural products

Less relevant regulations/documents in terms of biomass trade, but somehow related to domestic production of biomass:

Country	Name	Sector/ field	Description
Kenya	Agriculture, fisheries and food authority Act 2013	Agriculture	to provide for the consolidation of the laws on the regulation and promotion of agriculture
Kenya	Kenya Agricultural and Livestock Research Act 2013	Agriculture	provides the establishment and functions of the Kenya Agricultural and Livestock Research Organization; to provide for the co-ordination of agricultural research activities in Kenya
Kenya	Kenya National Environment Action Plan 2009-2013	Environment	Environmental planning and environmental security; sustainable development in Kenya
Kenya	Wildlife Conservation and Management Act of 2013	Environment; Forestry	provides the protection, conservation, sustainable use and management of wildlife in Kenya

2. Policies stimulating domestic use of biomass, which could restrict availability for export

Relevant regulations/documents:

Country	Name	Sector/ field	Description
Kenya	Clean Energy Services Programme - since 2011	Energy	Scaling-Up Renewable Energy Program in Low Income Countries (SREP); programme includes includes various activities: performance of cookstoves / Biomass multiplication / Bioethanol as a clean energy for households
Kenya	Electric Power Generation Licences	Energy	Licensee are among others : Mumias Sugar Cogeneration with Bagasse technology / Cummins Power Generation with Biomass technology
Kenya	FiT policy: feed-in-tariffs policy on among others biogas resource generated electricity	Energy	Biogas in Kenya is widely produced with over 8000 biogas plants utilizing various raw materials e.g. agricultural wastes, slaughterhouse waste, municipal wastes etc.
Kenya	FiT policy: feed-in-tariffs policy on among others biomass resource generated electricity	Energy	Bio-energy derived from various sources of solids, liquids and gaseous biomass, including fuel wood, charcoal, ethanol, bio-diesel, and agricultural waste.
Kenya	Renewable Energy Regulations: Energy (Improved Biomass Cookstoves) Regulations 2013	Energy	cookstove device where biomass fuel produces heat for cooking and heating applications through combustion

Less relevant regulations/documents, but somehow related to domestic use or trade of biomass:

Country	Name	Sector/ field	Description
Kenya	Energy (blending Of Power Alcohol With Motor Gasoline Gasohol) Regulations, 2010	Biofuels	Mandatory 10% blending (E10) is in place in Kenya in the city of Kisumu / Eldoret / Nakuru, which has an ethanol plant.

Kenya	Energy Regulation 2009 on Biodiesel Licensing	Biofuels	regulates the production and commercialisation of biodiesel.
Kenya	Kenya Climate Venture Facility (KCVF) Project	Climate	concerns renewable energy and climate technology
Kenya	Energy Act of 2006	Energy	licensing procedures, issue permits, make recommendations for further energy regulations, set and adjust tariffs, approve power purchase agreements (PPAs) and prepare national energy plans.
Kenya	Least Cost Power Development Plan 2011-2031	Energy	resources: Multiple RE Sources including biomass & biogas, Geothermal, Wind, Hydropower
Kenya	Power Purchase Agreement (PPA) - Simplified Agreement Developed for Kenya	Energy	Renewable Energy Portal for use in power generation facilities.
Kenya	Sessional Paper No. 4, 2004 on Energy	Energy	policy framework for cost-effective, affordable, adequate and quality energy services on a sustainable basis over the period 2004 - 2023.
Kenya	Sustainable Energy for All - SE4ALL	Energy	Universal access to modern energy services. Aim to double the global rate of improvement in energy efficiency and double the share of renewable energy in the global energy mix by 2030.

3. Policies with direct impact on imports/export markets

Very relevant regulations/documents:

Country	Name	Sector/field	Description
Kenya	Value added tax (amendment) act 2014	Taxation	Amendment of the Value Added Tax Act, 2013 and for connected purposes including sugarcane, materials, waste, residues and byproducts, whether or not in the form of pellets, and preparations of a kind used in animal feeding

5.7. Ukraine

1. Policies increasing production of biomass, or ensuring sustainable production of biomass

Relevant regulations/documents related to biomass production:

Country	Name	Sector/ field	Description
Ukraine	Greenhouse gas emissions cut by 2027	Climate	agreement to reduce greenhouse gas emissions in power plants and oil refineries
Ukraine	Additional activity for development of forestry	Forestry	Improvement in forest management en timber regulation
Ukraine	Forest Code of Ukraine	Forestry	regulates forestry management
Ukraine	Land Code of Ukraine (2001)	Forestry	forest plots with area less than 5 ha can become private and private forests can be planted on the private non-fertile lands.
Ukraine	Regulation of afforestation and reforestation	Forestry	application of forestry and agro-technical arrangements in accordance with environmental protection arrangements for the purpose of increasing the efficiency of afforestation and reforestation activity
Ukraine	State Programme “Forests of Ukraine 2002-2015”	Forestry	elaborate plan for forestry management

Less relevant regulations/documents for biomass trade, but related to production of biomass:

Country	Name	Sector/ field	Description
Ukraine	Law on plant life	Agriculture; Forestry	assigned the task of governing social relationships in the sphere of protection, use and reproduction of wild plants and other species
Ukraine	Law on Safety for Forestry workers	Forestry	Plan of safety control

2. Policies stimulating domestic use of biomass, which could restrict availability for export

Relevant regulations/documents stimulating domestic use of biomass:

Country	Name	Sector/ field	Description
Ukraine	National Renewable Energy Action Plan (NREAP) 2014	Energy	targets of use of renewable energy sources until 2020
Ukraine	Green Tariff (Feed-in Tariff)	Energy	Feed-in tariff (FIT) scheme for electricity generated from renewable energy sources
Ukraine	Law on Alternative Energy Sources	Biofuels	stimulate the production of fuel ethanol, biodiesel and biogas.
Ukraine	Law on Promotion of Biological Fuels Production and Use (No. 1391-VI)	Biofuels	to save fossil fuels, decrease Ukraine's dependency from energy imports, increase its energy security and decrease the negative impact on the environment caused by burning fossil fuels
Ukraine	Programme to develop biodiesel production	Biofuels	investment in equipping biofuels production plants and developing energy crop fields

Less relevant regulations/documents for biomass trade, but somehow related to domestic use or trade of biomass:

Country	Name	Sector/ field	Description
Ukraine	Law on Alternative Liquid and Gaseous Fuels	Biofuels	framework for financial mechanisms to stimulate biofuels

Ukraine	Fuel excise tax.	Biofuels Taxation	Excise taxes on biodiesel increase by 4% in 2015
Ukraine	Law on Combined Heat and Power (cogeneration) and Waste Energy Potential	Energy	regulates the relations connected to the energy generation, transmission and supply of electricity and heat from cogeneration plants.
Ukraine	Corporate income tax exemptions in Ukraine for renewable energy sector	Energy; Taxation	tax exemptions were available in the renewable energy sector, since Jan 2015 certain tax incentives were cancelled.

3. Policies with direct impact on imports/export markets

Relevant regulations/documents on biomass import/export:

Country	Name	Sector/ field	Description
Ukraine	Interim Regulation on the modalities of issuing of timber and saw-timber certificate for export operations	Forestry	mandatory document for export of timber and saw-timber
Ukraine	State Forest Committee validating the form of Certificate of origin of timber and sawn timber for export operations	Forestry	validating Instruction for filling in the form of Certificate of origin of timber and sawn timber produced for export operations
Ukraine	VAT and Customs Duties Exemptions	Energy; Taxation; Trade	Exemption from excise duties and VAT until the end of 2019 for the import of equipment for generating electricity from renewable energy

6. BioTrade2020plus Consortium

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