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Strategies and policies in two projects: BioTrade2020+ and Biomass Policies

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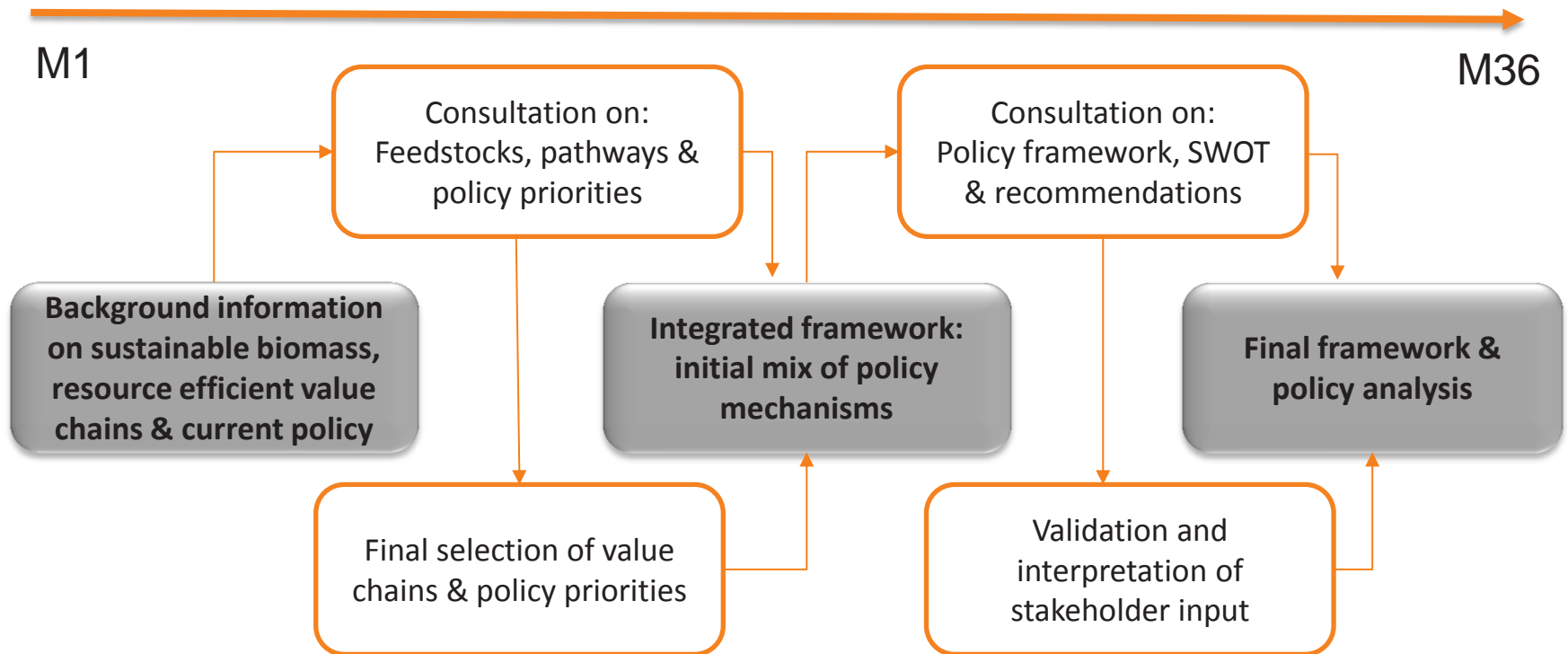
BioTrade2020+ Final Workshop

Brussels, 14 June 2016

Biomass Policies in brief

- » *“Strategic Initiative for Resource Efficient Biomass Policies”*
 - » Development of integrated policies for the mobilisation of **‘resource efficient’** biomass value chains, focused on **indigenous** biomass potentials.
 - » Support of policy development for relevant value chains in the 11 participating countries (AT, BE, DE, ES, FIN, GR, HR, NL, PL, SK, UK).
 - » In the view of 2020-2030 renewable energy targets
- » Supported by the Intelligent Energy for Europe (IEE) programme of the EC
- » Project duration: April 2013 - March 2016
- » <http://www.biomasspolicies.eu/>

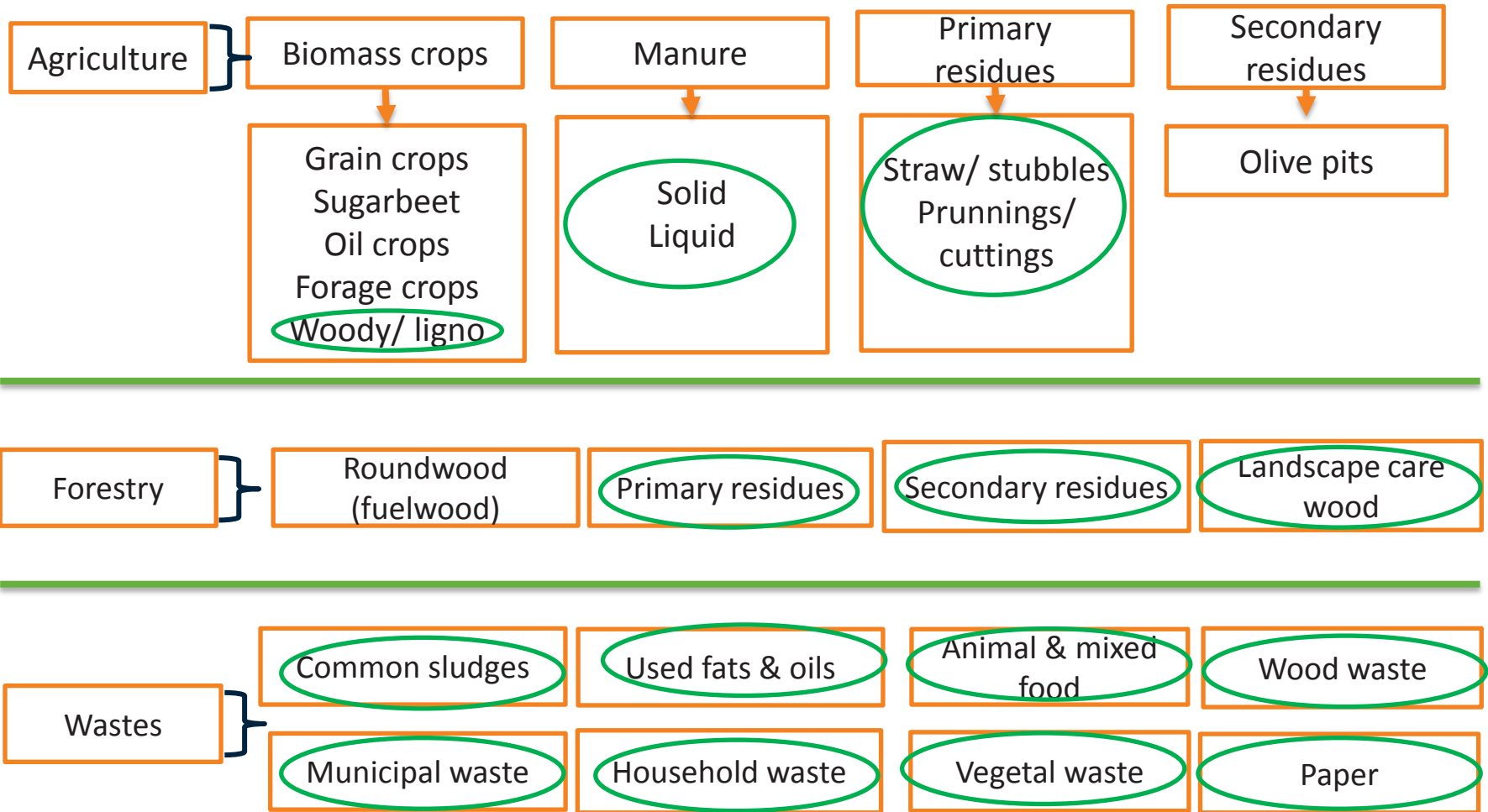
Participatory process for understanding the context and developing the framework



Participatory analysis with stakeholders

Land use & energy modeling, policy analysis

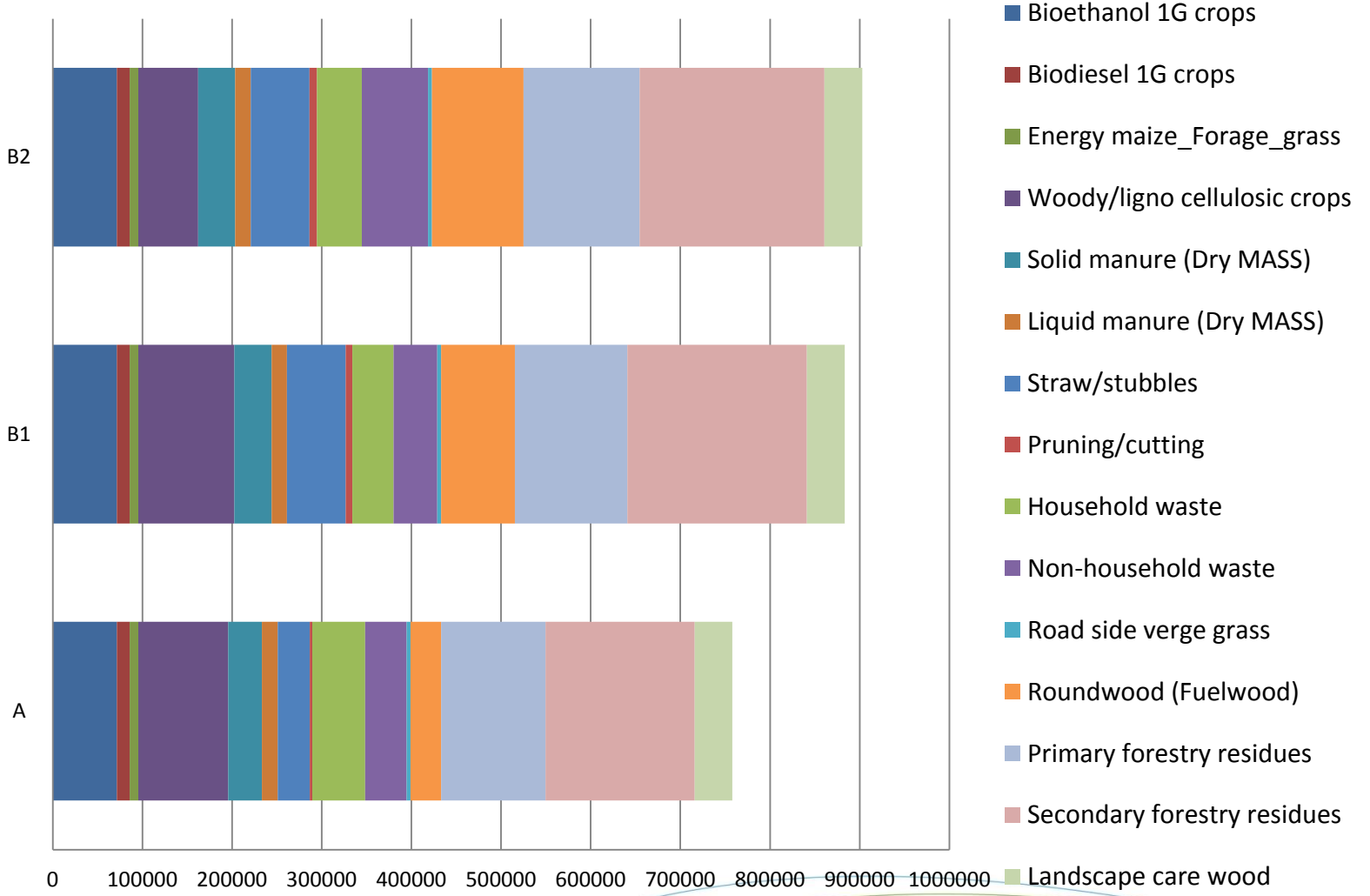
Feedstock focus: diversity in the resource base



Work within Biomass Policies has estimated sustainable biomass potentials and selected the ones in circle as promising indigenous feedstocks to focus the analysis and recommendations

EU-28 Biomass potentials 2030

2030 indigenous biomass potential (Kton d.m.)



Resource efficiency criteria for (indigenous) biomass value chains

Inspiration from GBEP sustainability indicators and Biomass Futures (D4.1), aligned with sister projects S2Biom & BioTrade2020+

Criteria:

Efficient use of resources	Ecosystem aspects	Business case & markets	Socio-economic aspects
Energy efficiency Functionality / output service* Land use productivity	Climate change mitigation Biodiversity Soil Water Air quality	Production costs Markets System versatility	Job creation Local economy (Participation / transparency) (Labour conditions & livelihood) (Secure tenure of land) (Food security) (Access to energy/services)

Most selected indigenous value chains

- » **Combustion** (medium scale + CHP or small scale):
 - » **Primary forest residues**, prunings, landscape care wood
 - » Perennial crops, straw
 - » Mixed waste
- » Gasification (+ CHP or + synthesis to chemical building blocks)
 - » Primary forest residues
 - » Organic waste
- » **Biochemical conversion** (to biofuel or chemical building blocks)
 - » **Straw**
 - » Sugar beet
- » **Anaerobic digestion** (+ CHP or + upgrading & grid injection)
 - » **Organic waste**
 - » Liquid manure

Overview recommendations for future policy: biomass mobilisation: supply and logistics

Biomass supply

- Support multi-functionality in forests & sustainable forest management
- Measures for private forest owners (involve smallholders, e.g. through grouping)
- Further support agricultural productivity, with attention for soil carbon & ecosystem services
- Mobilise unutilised potentials, incl. marginal/abandoned lands
- Anaerobic digestion as a way to reduce methane emissions in agriculture & waste
- Improve waste management and account for all potential uses and waste transportation issues
- Cascading as guiding principle

Overview recommendations for future policy: biomass mobilisation: supply and logistics

Logistics

- Support for biomass trade centers
- Develop more efficient infrastructures to support the new markets
- Decentral pretreatment to open up markets
- Facilitate green gas use in the natural gas distribution network

Overview recommendations for future policy: biomass for heat, electricity, biofuels

Heat

Not enough focus on renewable heat in the renewable energy debate!

- Financing: Repayment bonus, soft loans with low interest rates
- Promote biomass heat in buildings
- Consider the option of district heating
- Promote biomass heat in (agro-)industries
- Valorisation of residual heat (e.g. CHP)
- Raise awareness on biomass fuel quality & efficient stoves/boilers (eco-design)

H&C strategy and upcoming revisions of EED, EPBD and RED !

Overview recommendations for future policy: biomass for heat, electricity, biofuels

Electricity

- Stimulate the use of residual heat of bio-electricity, e.g. through CHP bonus payment/ premiums above certain conversion efficiencies
- Capacity building on CHP in industry and waste management sectors – there is lack of awareness
- Consider the (future) role of bioenergy in grid balancing, creating synergies with intermittent renewable electricity sources

Advanced biofuels

- Dedicated support for advanced biofuels (target/obligation, financing)
- Capacity building and recognition of practices for low-iLUC biofuels
- Market based mechanisms to stimulate aviation biofuels
- Mechanisms to stimulate green gas as transport fuel

Issues to take into account in an integrated & resource efficient biomass policy

SUSTAINABILITY

Apply across sectors to ensure improved utilisation and facilitate the mobilisation of residues

CASCADING

A guiding principle but avoid prescriptive regulations – let markets work.
Place emphasis on increasing mobilisation
Support biorefining, new biobased products (combined production of materials & energy)

FINANCING

Financing instruments are essential across value chains: create pull measures (e.g. feedstock premiums) as close as possible to the biomass market.
Finance for innovation, demonstration & flagship projects.
Learn from Good Practices from regions, clusters and MSs

PRINCIPLES for future framework

Low carbon
Energy security
Resource efficiency
Job creation

Biomass policy toolkit- tailoring evidence to support policy recommendations and decision-making

<http://www.biomasspolicies.eu/tool>



Information and guidance on policies affecting the use of biomass in Europe

A simple toolkit for extracting concise, user-relevant information from comprehensive studies on European biomass policies carried out for the [Biomass Policies](#) project. Use the tabbed sections to step through tailored summaries on the current situation and potential options for biomass supply and policy in the member states of the European Union.

Policy types and their application to biomass value chains Favourable biomass value chains Country-specific information and guidance	Policy instruments used in EU-28 countries Select the types of policy instruments you wish to explore:		
	Regulations (Seek to achieve policy goals through legal requirements or prohibitions on specific activities or behaviour)	Expenditure (Seek to achieve policy goals through control of monetary incentives or disincentives)	Information provision (Seek to achieve policy goals through deployment and control of information)
	<input type="checkbox"/> Mandated quotas <input type="checkbox"/> Obligatory standards <input type="checkbox"/> Licences and permits <input type="checkbox"/> Qualifying criteria for incentives <input type="checkbox"/> Preferential market access <input type="checkbox"/> Intellectual property rules	<input type="checkbox"/> Grants <input type="checkbox"/> Loans and loan guarantees <input type="checkbox"/> Feed-in tariffs <input type="checkbox"/> Green energy generation payments <input type="checkbox"/> Tax incentives <input type="checkbox"/> Market premiums <input type="checkbox"/> Tradable allowances <input type="checkbox"/> Public procurement <input type="checkbox"/> Research and development funding <input type="checkbox"/> User charges	<input type="checkbox"/> Best practice information <input type="checkbox"/> Voluntary standards <input type="checkbox"/> Recommended targets or plans <input type="checkbox"/> Promotion <input type="checkbox"/> Awareness raising <input type="checkbox"/> Data collection and monitoring

Policy framework in BioTrade2020+



Objectives of WP5 in BioTrade2020+



- Define **solid long term strategies** on how to include sustainable biomass imports in European bioenergy markets
- Existing situation:
 - which policies impact biomass trade (in EU and sourcing regions)?
 - SWOT of different export regions
- Starting from
 - **Risks and opportunities** of biomass trade
 - For import regions (focus EU)
 - For sourcing regions (N-Am, S-Am, Africa, S-E Asia, East Europe)
 - Practical **barriers** for trade
- Define **key principles** of sustainable biomass trade
- Explore **policy options** to steer / facilitate sustainable biomass trade

Stakeholder consultation !!

- » Workshops
- » Telcons
- » Advisory Board Meetings

- » On-line **survey** (April - June 2015):
 - » 127 participants
 - » from 35 countries



Biotrade2020+ survey on international biomass trade for energy

Opportunities for importing regions

6. Opportunities of biomass trade for importing regions in the EU

- **Complementary with other renewable energy:** Imported biomass can be complementary to domestic intermittent energy sources like solar or wind.
- **Limited domestic potential:** Imported biomass is of interest in regions where domestic biomass resources are limited.
- **Broader feedstock portfolio:** International trade opens up the feedstock portfolio of bioenergy installations in the EU. This creates flexibility in feedstock sourcing and stabilizes prices.
- **Cost-efficiency:** Imported biomass from regions with abundant and easily accessible biomass can be a cost-efficient way to reach renewable energy targets.
- **Infrastructure build up:** Biomass imports can be an intermediate tool to facilitate the development of local bioenergy infrastructure in the EU.
- **Investments in new technologies:** EU countries can invest in technological solutions (e.g. advanced biofuels, biorefineries) which need substantial biomass volumes to reach economy of scale. Imports can fill the gap if these volumes are not available domestically.
- **Reduce domestic competition for biomass:** Opening markets for imported biomass can reduce competition for domestic biomass resources, e.g. related to the demand of existing biomass processing industries (for materials).
- **Trading links:** EU countries can build trading links with strategic trade partners.

	How important do you rate these opportunities for importing regions in the EU?						Arguments
	Very important	Important	Moderate importance	Low importance	Not important	I don't know	
Complementary with other RE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Limited domestic potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Broader feedstock portfolio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Cost-efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Infrastructure build up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Investments in new technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Reduce domestic competition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Trading links	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Other (please specify in the column 'arguments')	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

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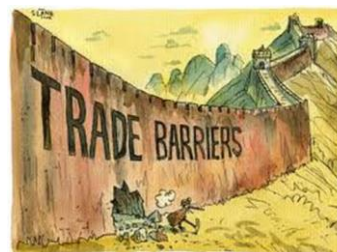
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Key principles for sustainable trade



Statement	% agree or totally agree
Trade should be based on sustainable and legally acquired biomass sourcing (traceable and verifiable).	97%
Markets should be transparent , with clear reporting and monitoring systems.	90%
Full value chain (from feedstock production up to end conversion) as a basis for performance assessments (e.g. energy, GHG).	88%
Trade should follow the principles of fair trade, i.e. all actors in the value chain receive a fair share of the benefits.	86%
Markets should be open (WTO compliant), and there should be no discrimination in market access.	80%
Local use of biomass should have priority over trade. Displacement as a result of trade demand should be avoided.	76%
Displacement/indirect effects in the sourcing regions should be taken into account in support mechanisms for biomass/bioenergy.	75%

Barriers for trade



Statement	% important and very important
Insufficient knowledge of public/media/policy makers	81%
Bad public image due to claims of unsustainable practices for biofuels	80%
Different sustainability requirements in EU Member States for solid biomass (not EU-wide)	78%
Differences in sustainability governance of agriculture and forestry policies (legislation and enforcement) by country/region	74%
Lack of sustainability criteria for fossil fuels creates an unequal playing field	69%
Changing sustainability requirements creates uncertainty for stakeholders	67%
Sustainability criteria only required for energy and not for other applications of biomass	66%
Lack of roads and port infrastructure in sourcing regions	65%
Proliferation of certification systems	64%

% indicate 'totally agree' & 'agree'

» Sustainability criteria for bioenergy

1. Proof of **sustainable forestry management** for forest biomass → **90%**
2. More efforts in **cooperation/good practice exchange** with sourcing regions towards sustainable practices and capacity building → **86%**
3. **Common binding sustainability criteria** at EU level, also for solid and gaseous biomass for energy → **85%**
4. Requirements should go **further than the current RED** criteria for biofuels (GHG, biodiverse land, high carbon stock land) → **69%**

» Standards & labelling

5. Technical **standards** for traded biomass should be **harmonized** at international level (ISO) → **85%**
6. All wood-derived products (i.e. materials and energy carriers) should be **labelled** to indicate if they come from legal and sustainable forests or not → **84%**

% indicate 'totally agree' & 'agree'

» Displacement / indirect effects

7. Certain types of feedstocks that have higher risks of indirect effects/displacement should be **excluded from support** → 80%
8. There should be incentives for **practices that avoid/reduce negative indirect effects**. The EC should clearly define such practices. → 80%
9. **Indirect effects should be quantified** and included in value chain calculations (e.g. in terms of GHG balance) → 72%

» Monitoring

10. Better monitoring systems with **distinct classifications** are needed for international trade flows of wood and other lignocellulosic products → 83%

Long term strategies

- » Biomass production & harvest in the frame of **long-term sustainability**
 - Sustainability requirements, workable in practice (don't create tougher barriers than needed => cost of doing nothing)
 - Build further from existing systems, e.g. EU Timber Regulation/FLEGT, voluntary schemes in the market
 - Transparency and controllability, labelling
 - Risk-based approach, bilateral agreements with sourcing regions
 - Consistency along different markets & Members States!

- » **Fossil fuels** are still favoured, serious reduction is needed in the frame of climate change mitigation
 - » Fossil fuels should also *demonstrate sustainability performance* (level playing field), e.g. in terms of GHG, land use
 - » *Carbon tax* as a tool for energy carriers and materials (level playing field between energy and materials)

Long term strategies

- » Support sustainable **mobilisation**
 - » Opportunities for concurrent benefits (social, environmental, ...)
 - » **Cooperation/good practice exchange** with other regions in the world to facilitate progress in agricultural productivity, forest management and waste management, low iLUC approaches

- » Efficient use of resources
 - » Energetic efficiency and energy use in the **value chain**
 - » Biorefinery approach: look for synergies between energy and (new) material markets

- » **Monitor** direct and indirect impacts on markets (EU and outside).

Long term strategies

- » Independent **knowledge** to inform the public debate
 - » Carbon accounting principles (diverging opinions/slogans & methodologies)
 - » Provide clarity for policy makers & the public
- » Provide **financing / investment models** (access to finance)
- » Variability of biomass **quality** is an issue, particularly for residues, herbaceous material
 - » Turn lignocellulosic material into **commodities**
 - » Compatibility with conversion technologies
 - » Technical standards (international level)
 - » Facilitates contracting, opens markets, access to finance
 - » Governments can stimulate this process

New survey on SWOT of sourcing regions

- » Aim:
 - » rate attractiveness (strengths and weaknesses) of sourcing regions as trade partner for biomass with the EU:
 - » United States, Canada, Brazil, Colombia, Indonesia, Kenya & Ukraine
 - » In terms of
 - » General conditions: regulatory stability, investment climate, accessibility, prospects of domestic biomass use
 - » Forestry biomass: governance of forests, sustainable forest management, carbon stocks (LULUCF)
 - » Agricultural biomass (residues, energy crops): prospects for domestic use, conditions for agriculture, food inadequacy / domestic supply of food/feed
- » <http://www.surveygizmo.com/s3/2807987/67e19fea8229>
- » Open until 30 June 2016

Thanks for your attention !

Questions, suggestions?

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