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IMPACT OF EU BIOENERGY POLICY ON DEVELOPING COUNTRIES

Focus: woody biomass

Presentation of the Briefing Paper
DEVE/7/08607

Stephanie Wunder, Ecologic Institute

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Source: Fotolia



Overview

1. EU Policy background and anticipated woody biomass demand
2. Trade flows
3. Main impacts on communities in developing countries
 - ▶ Access to land and water
 - ▶ Food security
 - ▶ Local energy security
 - ▶ Environmental impacts and land degradation
4. Conclusions

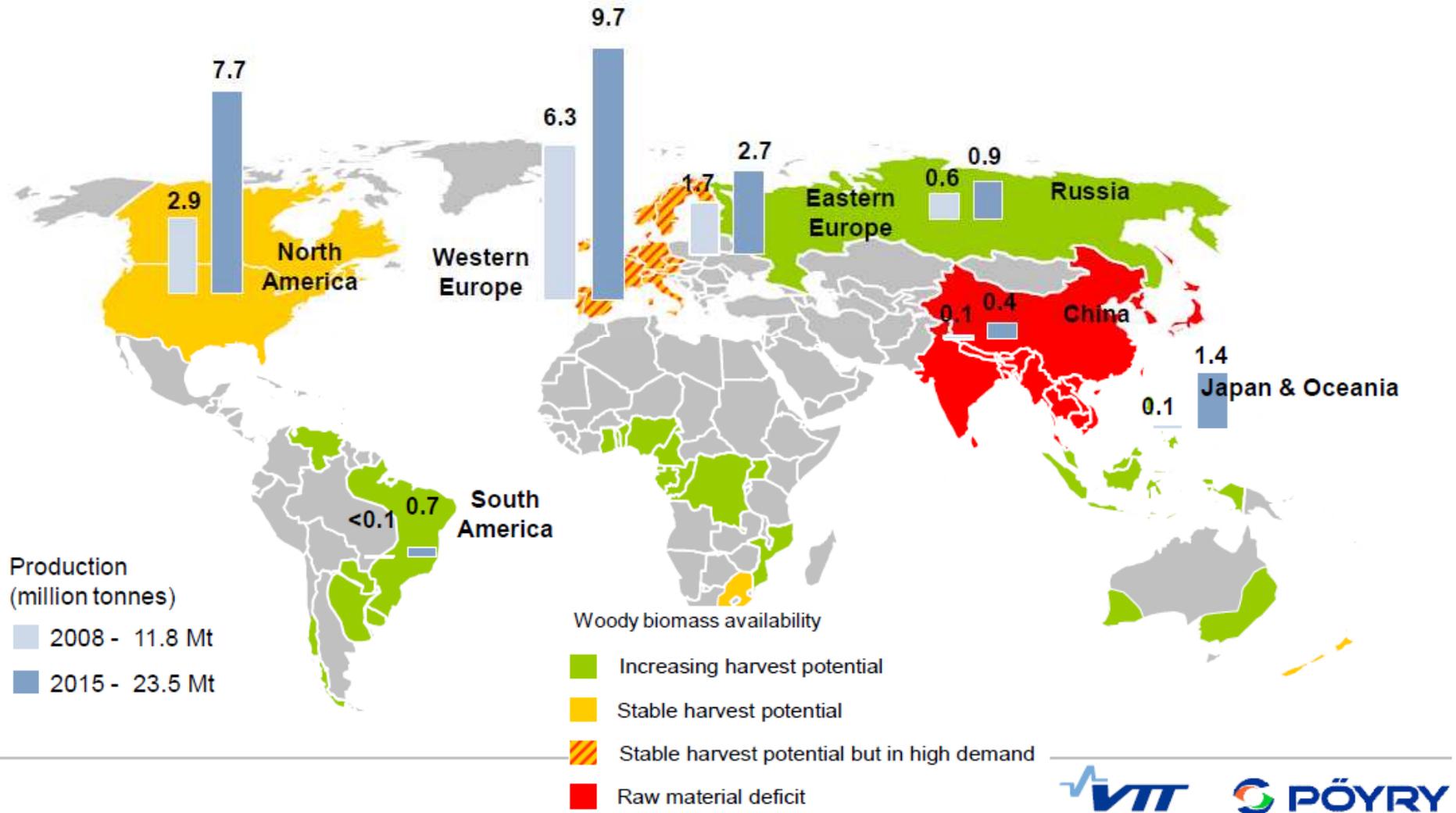


Background and Scope

1. Renewable Energy Directive (2009/28/EC) objective:
20% renewables by 2020, 10% renewable transport fuels
2. Interest for woody biomass has grown
 - ▶ particularly for electricity and heating
 - ▶ Future application in second generation biofuels
3. Increased demand cannot be met domestic production (see NREAPs):
 - ▶ imports also from developing countries
 - ▶ Supply by (but not only) plantations



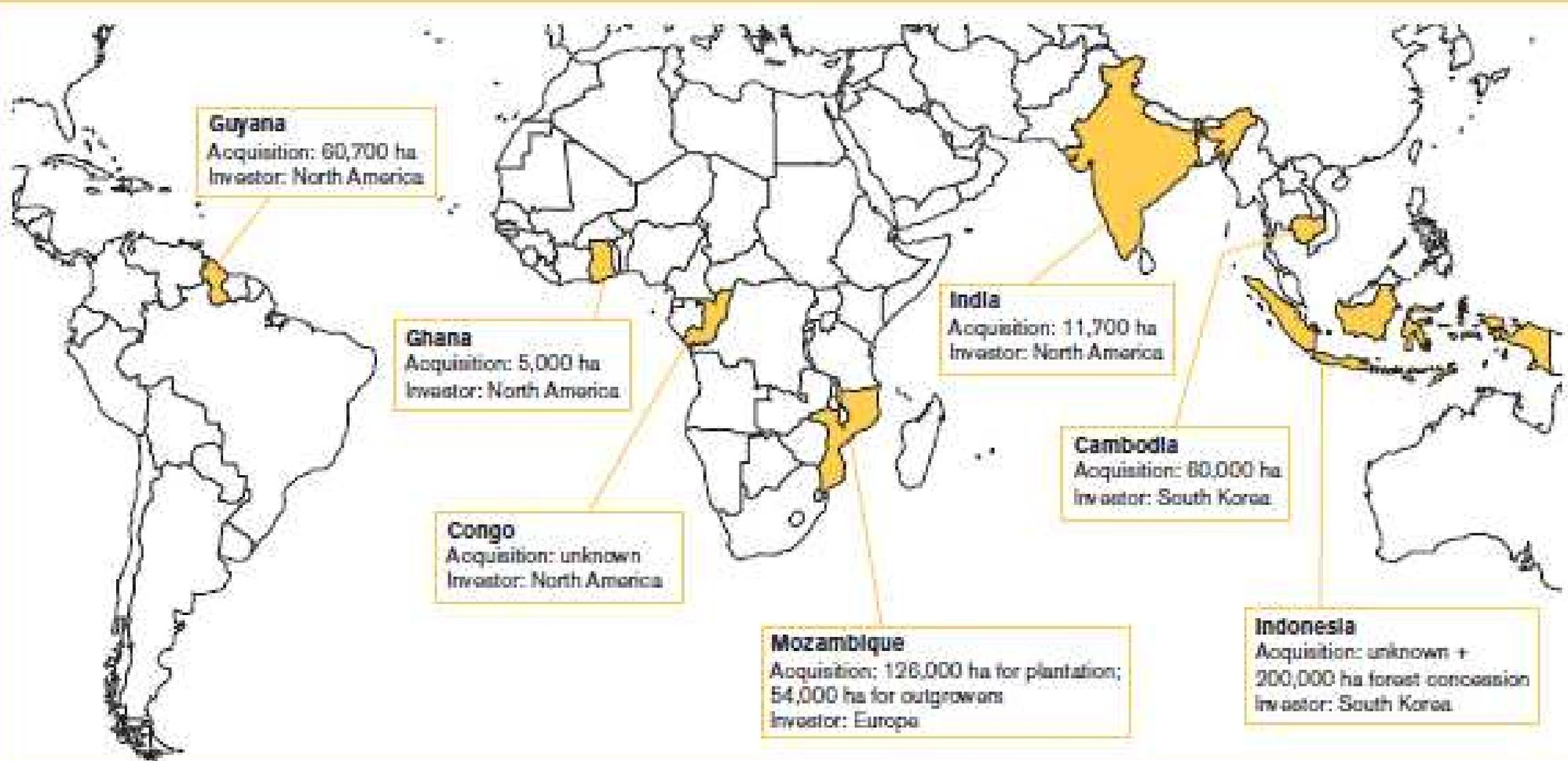
Trade Flows: Raw Material Availability and Pellets Production



Source: European Biomass Association (AEBIOM) 2011



Examples of Bioenergy Tree Plantations in the Global South



Source: Cotula et al. 2011



Impacts

- ▶ Benefits may be gained (job creation, improved energy access)
- ▶ But reasons for concern/ community-level impacts
- ▶ Scope of the briefing:
 - ▶ difficult to identify specific impacts of EU bioenergy policy in developing countries
 - ▶ briefing allows general insights and gives specific examples (particularly Africa)

Access to Land

- ▶ Fears of Land and Water ‘Grabbing’ by investors
- ▶ Large scale land deals often include community land
- ▶ Most communities do not have a formal legal claim
 - ▶ Only 2-10% of all land in Africa is formally tenured
 - ▶ Community consultation often insufficient, unrepresentative (example Cameroon)
 - ▶ Even with formal claim: communities often excluded from the benefits/ promises remain unfulfilled (example Mozambique)





Access to Water

- ▶ Plantations can have a high demand for water (e.g. Eucalyptus)
- ▶ Pesticides and herbicides can pollute local water resources
- ▶ As with land rights, water rights are ill-defined
- ▶ In Mali and Sudan, companies have had unrestricted access to water resources
- ▶ Potential conflicts between plantations and communities in times of drought



Source: Fotolia

Food Security

- ▶ Underlying food-insecurity in potential exporting countries
 - ▶ E.g: Ethiopia, Mozambique, Sierra Leone, Cambodia.
- ▶ Direct competition between biomass plantations and fertile lands
 - ▶ Degraded land is not the core interest: Species meant for marginal lands are grown on fertile lands to increase yields
- ▶ Increase in food prices because of biofuel crops
- ▶ Loss of income opportunities
 - ▶ firewood collection, forest product gathering
- ▶ Undermines alternative land use models for decades
- ▶ Opportunity: agroforestry



Source: Pixelio

Local Energy Security

High dependence on wood-based energy for local energy security

Household biomass use as percent of total wood consumption	
Africa	89%
Asia	81%
Latin America	66%
Source: World Bank/AFREA 2011	



Local Energy Security

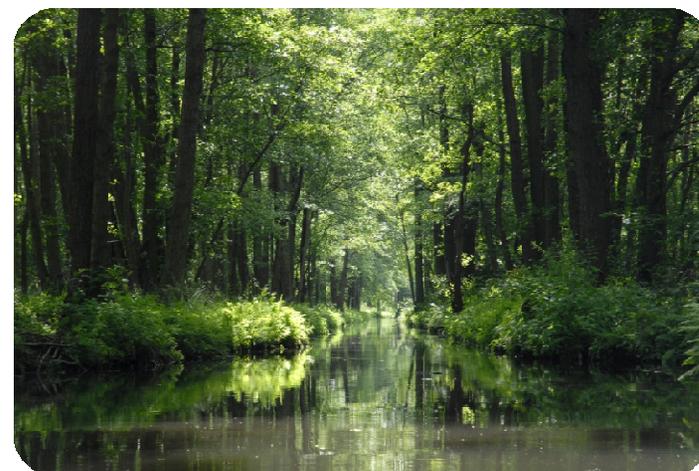
- ▶ Conflicts with local energy security are likely to occur if
 - ▶ designated production sites displace land uses with significant role in feeding local energy needs/ ensuring local income.
 - ▶ Biomass is redirected to export and no longer available for local population





Environmental Impacts

- ▶ Impacts depend on production intensity, scale, tree species, harvesting systems etc.
- ▶ Potential Benefits of Woody Biomass Production include:
 - ▶ Afforestation
 - ▶ Reduction of wildfire risks
 - ▶ Reduction of water run-off and sediment loss (land stabilization)



Source: Fotolia

Environmental Risks

- ▶ Deforestation and forest degradation
- ▶ Direct and indirect conversion of land
- ▶ Monoculture plantations (incl. GMO tree species)



Source: Pixelio

Difficult policy framework

- ▶ FAO definition of forests partly includes plantations
- ▶ Weak governance structures for forest management
- ▶ No binding sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling

Conclusions

- ▶ Difficulties to assess particular impacts of EU bioenergy policy
- ▶ Macro effects mostly indirect but severe:
 - ▶ Higher wood demands/wood prices add pressure on ecosystems and habitats, land use conflicts
 - ▶ Food price volatility particularly impacts DC
- ▶ Projects are long term and potentially harm access to land & water and energy and food security for decades
- ▶ The lack of land rights/weak governance among key causes of negative impacts.



Source: Pixelio



Recommendations

1. Needs reduction of EUs ecological footprint – towards greater energy and resource efficiency

2. Support DC to build up good governance mechanisms

3. Broaden sustainability standards debate

- **environmental impacts but also food security, energy security, land access etc.**
- **Include biomass not only biofuels for transport**
- **indirect land use change**



Source: Pixelio



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Thank you for listening.

Stephanie Wunder

Ecologic Institute, Pfalzburger Str. 43-44, D-10717 Berlin

Tel. +49 (30) 86880-0, Fax +49 (30) 86880-100

stephanie.wunder@ecologic.eu

www.ecologic.eu



Quelle: Fotolia