



Final conference of the Global Bio-Pact project – 29th January 2013






**Global Assessment of Biomass and Bioproduct Impacts
on Socio-economics and Sustainability**

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Public perception of biofuels in different societies

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Centro Agronómico Tropical de Investigación y Enseñanza

- Research, postgraduate studies and technical cooperation
- Tropical agroforestry, forests and biodiversity, watershed management, climate change...



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In Global Bio-Pact
- case study sugarcane ethanol in Costa Rica
- work package coordin. on public perception



WP 7 – Public perception of biofuels in different societies

What is public perception?

- Is defined in contrast with knowledge, absolute truth based on facts
=> important concept to deal with uncertain matters where both scientific knowledge and local knowledge are incomplete
- Refers to beliefs, opinions, attitudes (acceptance, resistance) of lay people
=> central in the dialogue between science and society, and possibly in policy-making
- Results from current experiences and information, and adapts over time
=> ephemeral, influenced by the context and by the values that are the basis of people's interests and judgements
- Reveals hierarchy setting amongst criteria
explain the reaction of people beyond what they directly experience

PP is what people feels about a topic, their expectations and the risks they identify

How did we analyse public perception?

- Review of a growing literature on PP of innovation with social relevance emphasizing the importance of non expert point of view in policy-decisions on environmental innovations with social relevance,
=> **the role of media framing**
- Initial test of the opinion poll type
illustrating the difficulty to give a precise picture of PP at the national level => **focus on the dynamics of PP**
- Elaboration of an original methodological framework, accounting for the diversity of situations, around two fundamental interrogations
 - What are the business prospects with biofuels? <-> **bottom-up** factors
 - How biofuel coincide with public objectives? <-> **top-down** factors
- Design of a step-by-step common methodology adapted and applied in each case study

Case-study realized in each of 8 countries

Mapping biofuel stakeholders	on who is influencing biofuel PP at which level
External influences and crisis	on external factors or sudden events influencing biofuel PP
Media analysis	on the frequency and depth with which biofuel issues are treated in the media and their framing
Cultural parameters	on the possible intervention of religious, ethical, moral, socio-historical standpoints

Desk and internet research methods

+

questionnaire to 30 lay persons

+

interviews to 10 experts

=> **synthesis**

Results of the case studies on PP (1/3)

- lack of specific knowledge on biofuel and quite positive appraisals revealing different national priorities linked with biofuel development

	Knowledge	Hierarchy-setting	Appraisal
Argentina	on soy oil and biodiesel	rural growth	(+)
Brazil	on biodiesel and sugarcane ethanol	biofuel price from a consumer perspective	neutral
Costa Rica	on biofuels in general, the Brazilian model	environmental innovation	(+)
Germany	on E10 and biofuels in general	fossil fuel substitution	(-) by media, not so much by consulted people
Indonesia	on palm oil production	energy security, economic development	(+)
Mali	on Jatropha plantation	access to energy, agricultural production	(+)
Tanzania	on Jatropha in different production scheme	rural development and poverty alleviation	(+) when small scale for local use (-) when large scale export oriented

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Results of the case studies on PP (2/3)

- positive PP out of expectations/promises, negative PP out of risks (experienced or foreseen)

	Expectations	Risks
Argentina	Agro-industrial development Increased end value of products	Social, environmental in the longer run
Brazil	Environmental positive impacts. Contribution to economic growth. Fossil fuel substitution at lower cost	Supply unreliability. Environmental negative impacts.
Costa Rica	Environmental positive impacts. Added value to existing resources (molasses, degraded land...)	Costs, discontinuities in policy
Germany	Lower dependence on fossil fuel	At world level: food security, deforestation, monoculture At national level: damage to motors
Indonesia	Energy self-sufficiency. Job creation, economic development. Positive environmental impacts	Biofuel project failure for lack of commitment by the government and the industry, social injustice, deforestation
Mali	Energy independence. Income generating plantation (Jatropha)	Food insecurity. Failure of Jatropha plantation (high costs, low yields and low selling prices)
Tanzania	Rural development through smallholders' inclusion	Exclusion effects (land, incomes, energy)

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Results of the case studies on PP (3/3)

- PP may evolve rapidly on the basis either of failures to comply or of new risks

	Main factor of possible change	Corresponding intervention required
Argentina	Environmental and social impacts	Research on longer term impacts
Brazil	Price and availabilities fluctuations	(Existing) incentives to regulate prices and supply levels
Costa Rica	Direct experiences with biofuel	Information on biofuel main objective, research on how to meet it, incentives for better policy consistency
Germany	Consumer trust	Information on biofuel performance
Indonesia	Economics of biodiesel production	Research on how incentive changes will affect biofuel project economic sustainability
Mali	Market opportunities for Jatropha seeds	Incentives that allow the building of the biofuel from Jatropha value-chain
Tanzania	Production model that will finally emerge	Research on contribution of biofuels to development Incentives to better avoid options that contribute to exclusion

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Remaining questions on the dynamics of biofuel PP

- How the PP on one specific biomass or biofuel does affect PP of other biofuels and biomass products?
- Transnational effects
- How strong and how long do critical events modify PP ?
- To what extent punctual cases are subject to generalization or extrapolation (negative results more than positive)?
- The importance of country-specific values and cultural parameters (globalization of the diversity of standpoints: techno-economic, nature conservation, livelihoods...)
- ...

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How to account for public perception?

- Acknowledge the impossibility to isolate PP of biofuel from PP on wider issues of land use, climate change, energy security, ...
 identify the interests at stakes in responding these challenges and the alternatives considered
- Remember promises made locally or nationally, and check what biofuel development is associated with (some specific cases? some national priorities?...)
- Understand what are the expectations behind PP and check whether they can realistically be fulfilled
- Communicate on concrete activities and outcomes when PP seems to be based on erroneous assessments
 However, more communication is not always the best response, without policy consistency or given the uncertainties on socio-economic impacts and the diversity of standpoints
- ... **=> learn from PP**

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