



## Indirect Landuse Change

Perspectives on science and regulatory policy particularly relevant to developing countries

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## Key messages

- iLUC is about more than Greenhouse Gas Emissions
- We already have ways to mitigate iLUC and reduce the risk of it arising
- Regulation and policy around iLUC should differentiate between production methods which mitigate iLUC risks and those which do not



## Not just Greenhouse Gas Emissions

- Landuse change is a driver of biodiversity loss through habitat fragmentation and degradation
- Landuse change has social implications and is driven by societal decisions



## How does iLUC arise?

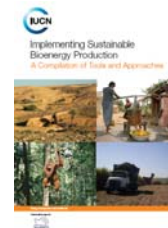
- Local – Displacement of people who were previously using the land in some way.
- Market-based – Increasing demand for agricultural commodities which must then be met by increased supply in global, regional or national markets.



## What we know to manage iLUC

– in the case of displaced activities of local people

- Involve local stakeholders in planning for feedstock production
- Ensure local stakeholders derive benefits from biofuels markets that are at least as valuable as those foregone
- Identify locations for feedstock production with robust land tenure and governance regimes



## What we know to manage iLUC

– in the case of global commodity markets

- **The basic principle:** Increased demand will have to be met by increased supply.
- **The challenge:** Are there ways of increasing supply of agricultural commodities other than putting more land under till?
- **Some ideas:**
  - Choose the right crops for the right places
  - Increase productivity of agricultural land – sustainably
  - Decrease waste in the supply chain of the commodity



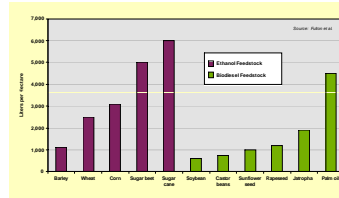
## Choose the right crop in the right place

- Look for high yield, low input opportunities
- Can native/endemic species work?
- Look to operate in countries and regions with robust land tenure and access regimes
- Looking to next generation feedstocks (potentially at the expense of market flexibility)...

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## Choose the right crop in the right place



- The other indirect effect – fuels vs. food (and feed & fibre)
- Increase yields for all uses?

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## Increasing productivity

- Improve yields...with some caveats...
  - in ways which conserve biodiversity/reduce biodiversity loss and enhance livelihoods
  - More effective use of fossil-fuel based inputs in agricultural landscapes
  - The other RSB principles must be met



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## Decreasing waste

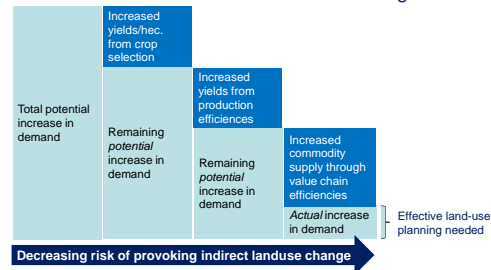
- Up to 50% of the food grown is lost or wasted



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## Opportunities for Producers to offset increases in demand...and mitigate iLUC



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## Role of Landuse Planning

built on locally relevant governance frameworks



REDD readiness, Community Based Resource Management, Landscape Management

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## What we already can do

### Producers

- Measure initial increase in demand, measure yields, measure the impact of your mitigation measures
- Report to regulators
- The RSB principles and criteria are a good place to start for defining good mitigation practices

### Governments

- Design policies which differentiate between practices
- Penalties can be an incentive to mitigate only if good mitigation practices can opt out of the penalty

### RSB

- Certified biofuels should mitigate against iLUC risks to meet principle 3 *biofuels shall contribute to climate change mitigation by significantly reducing lifecycle GHG emissions as compared to fossil fuels*

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## Last thoughts – models

- We may never be able to attribute iLUC to individual developments
- We will be able to calculate GHG emissions associated with landuse change...eventually
- Ultimately, iLUC should not happen...IF land tenure and planning systems at the national and regional level are robust
- LUC will happen...the challenge is to make sure it happens in ways that give society value in terms of GHG balances, biodiversity...

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## Last thoughts – regulation

- There is much we can do to mitigate iLUC and reduce the risk of it arising from expanding biofuels markets
- Delaying action will only exacerbate an unsustainable and untenable situation
- We can and must design smart regulations for iLUC

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