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Bio-Fuels or Fools:

Are Bio-fuels the Right Choice for the Transport Sector?

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EMBARQ
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EMBARQ

- A catalyst for socially, financially, and environmentally sound solutions to the problems of urban mobility





EMBARQ

- Established as a unique center within World Resources Institute in 2002, *EMBARQ* is now the hub of a network of centers for sustainable transport in developing countries.
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 - **US Environmental Protection Agency**
 - **Japan International Transport Institute (JITI)**





What Problems do Bio-Fuels Address? Can They “Solve” Them

- **Depends on Definition of “Solve”**
 - Biofuels can do many things if prices are right
 - Can do little if heavy subsidies required
 - *Might help local development and farm situation*
- **Can Contribute to These Goals:**
 - Lower oil imports and improve fuel security
 - Reduce GHG emissions from a baseline
 - Improve urban air quality
 - *Give employment, other development opportunities*
 - *Boost farm or rural employment?*





These Approaches Also Help or Hinder Solving the Problem

- **Lower oil imports and improve fuel security**
 - First value “1 less barrel of oil imported” and tax oil
 - Lower vehicle use, higher efficiency also improves security
 - Mandated or subsidized bio-fuels cut off other options
- **Reduce GHG emissions**
 - US corn ethanol has little savings, high cost
 - Other “solutions” have varying degrees of closet carbon
 - No CO2 relief is reliable without a carbon tax
- **Improve urban air quality**
 - Alcohol blends can help, but why subsidize?
 - Biodiesel has mixed impacts
 - Lower vehicle use also improves air quality

*Mandates, Renewable Standards, Subsidies Imply Value
Why Not Tax Bads Instead of Earmarking Goods?*





What is the Outlook Elsewhere Mostly Limited in Scope and Expensive

- **India and China**
 - Experiments abound, but small scale
 - Land, water key scarce resources
 - Fuel markets badly distorted by subsidies
- **Hot Asia and Latin America**
 - Brazil hitting roof on ethanol, struggling with biodiesel
 - Environmental threats from rapid expansion of palm and other oils or soy beans?
- **Europe**
 - Niche impacts everywhere
 - Sweden distils bad wine into good ethanol (hmmm)
 - Like the US, oil still the mainstay

*Alternative Fuels Succeeded Only Where
Cheaper or Almost “Economic”*





Discussion Points for Today

How Much, How Soon, How Messy?

- **Externality Pricing Framework Necessary**
 - Tax bads, don't earmark favorites like the US does
 - Pricing in most developing economies twisted
- **Transparency on Environment**
 - Full fuel cycle analysis?
 - Correct pricing of energy, land, water inputs?
- **Business and Development Issues**
 - If you scale up, do unit costs rise or fall?
 - If you include environment, what happens to unit costs?
 - Small enterprises or large fuel companies?



Thank You Lee Schipper

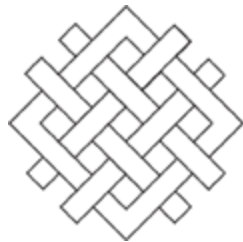
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