Biofuels in Asia & the Pacific

An FAO Perspective

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Outline

1. Biofuels in Asia & the Pacific
2. A Unique Policy Problem
3. FAO & Biofuels
4. FAO Bioenergy Initiatives

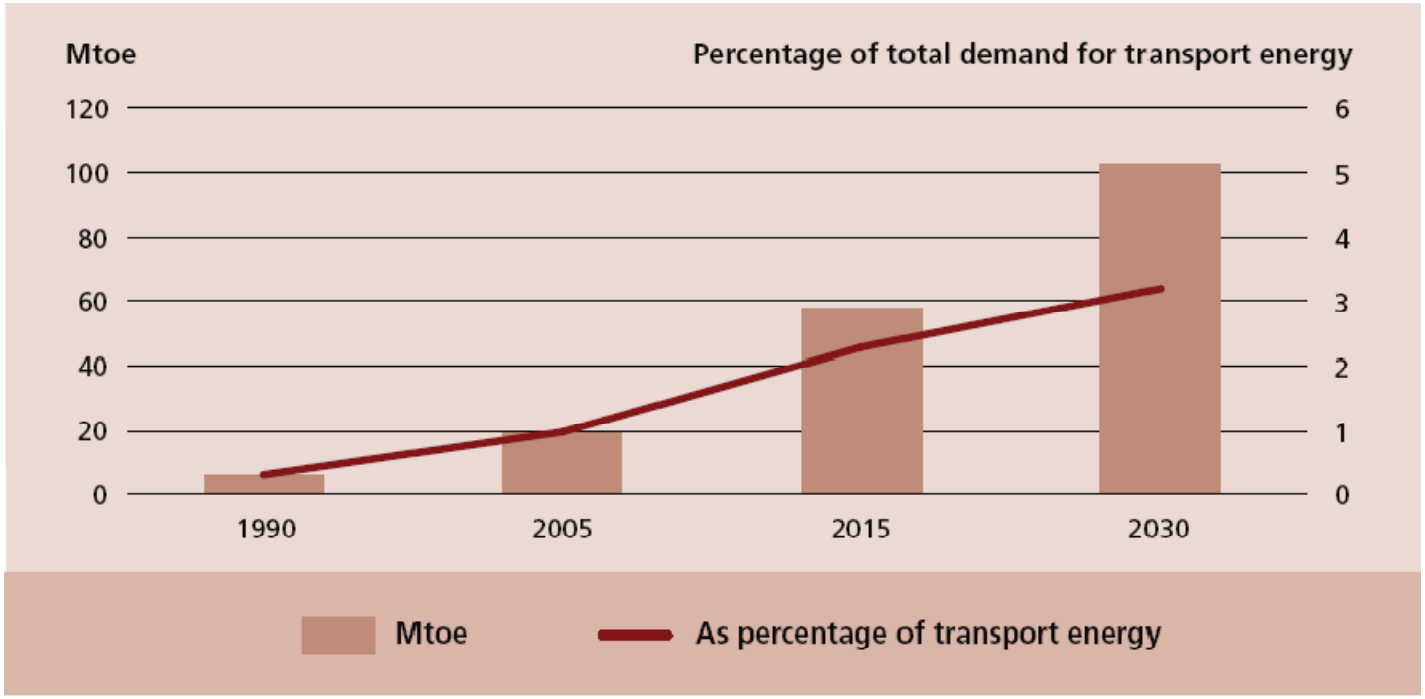
Biofuel - Demand

Demand Outlook Asia – Gasoline & Diesel

- Vehicle numbers have increased rapidly to match economic growth
- Demand for transport fuel is projected to grow at 3 to 4% per year - but could be much higher
- Liquid biofuels production will increase significantly to supplement fossil fuel supplies

Future Biofuel Consumption

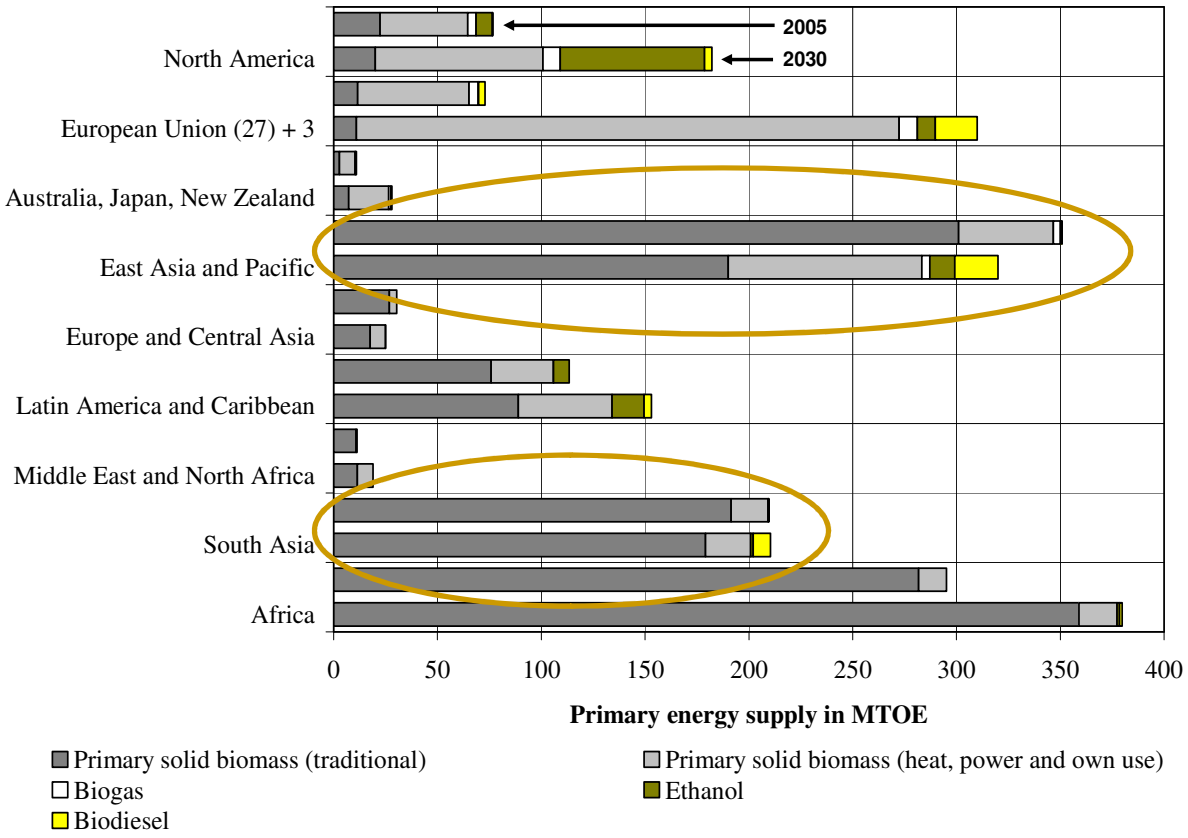
Trends in consumption of transport biofuels



Source: IEA 2007

Bioenergy in Asia-Pacific

Contribution of solid, gas and liquid biofuels to bioenergy in 2005 and 2030



Source: IEA, 2006

Regional Biofuel Policies

- Biofuel development in the region will be driven by government policies

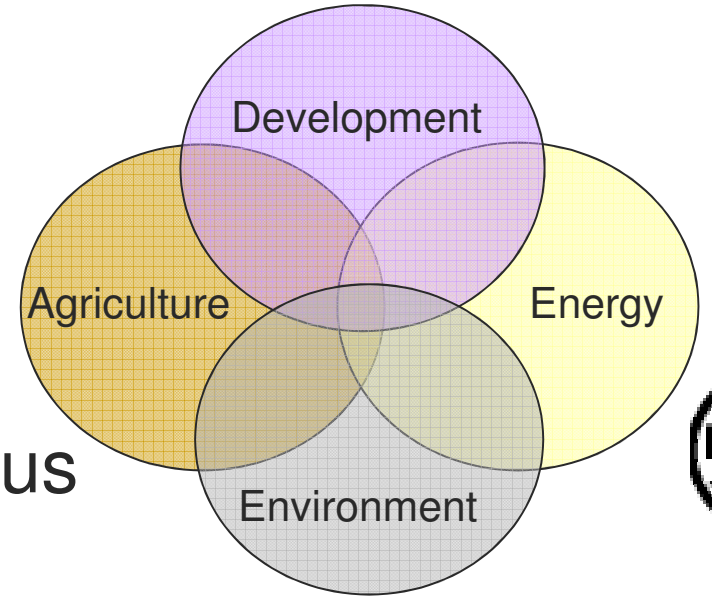
  - China – 15% biofuels target by 2015
  - Indonesia – 2% biofuels target by 2010
  - Thailand – 20% biofuels and natural gas target by 2012
  - India – 10% ethanol target and 20% biofuels by 2017
  - Philippines – 10% ethanol mandate and 2% biodiesel mandate by 2010
  - Malaysia – 5% palm oil mandate in diesel

Limits on Biofuels

- Biofuels have potential to deliver energy, climate and development benefits
- However, concerns persist about their sustainability
- Rapid, unchecked pursuit of biofuels could lead to:
  - Deforestation and biodiversity loss
  - Marginalization of small land holders & land tenure conflicts
  - Greenhouse gas emissions in excess of fossil fuels
  - Competition for scarce natural resources and increased food prices

A unique policy problem

- Bioenergy is at the intersection of multiple policy areas
- Any single policy to address all policy objectives simultaneously is likely to be ineffective
- A successful policy framework will require a multifaceted response that accounts for policy trade-offs



The bioenergy policy nexus

FAO & Biofuels

State of Food & Agriculture 2008

1) Promise of biofuels for rural development realized only in the long term

2) At present opportunities cannot overcome existing social and institutional barriers

3) Additional investments in productivity, research, institutions & policy necessary

4) Focus on needs of poorest and least resource endowed crucial for broad-based rural development

Small-Scale Bioenergy (SSB)

FAO/PISCES STUDY:

SMALL-SCALE BIOENERGY (SSB) INITIATIVES

- Improve understanding regarding SSB initiatives and livelihood impacts
- 15 case studies from across the world
- Lays out potential for SSB and key success factors

Example case

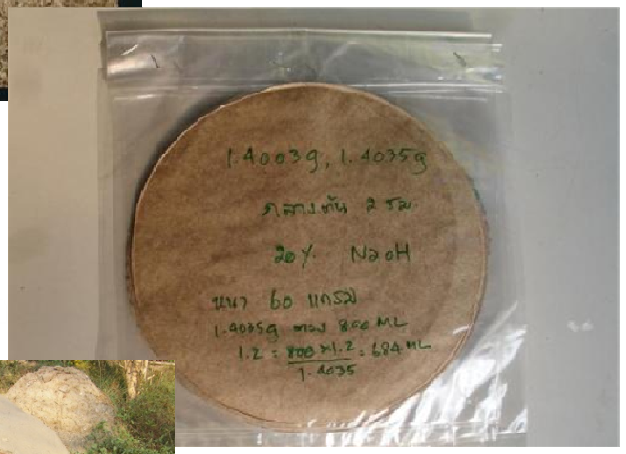
Zero-Waste Biomass Utilization

- Project located in Northern Thailand
- Started as a jatropha-based initiative – but system is being trialed with small-scale oil palm and rice growers
- Project managed through local cooperatives who guarantee prices for a range of farmer outputs
- Knowledge partner in local University provides technical support and system design

Towards full biomass use

PARTICLE BOARD

FUEL & ENEGRY



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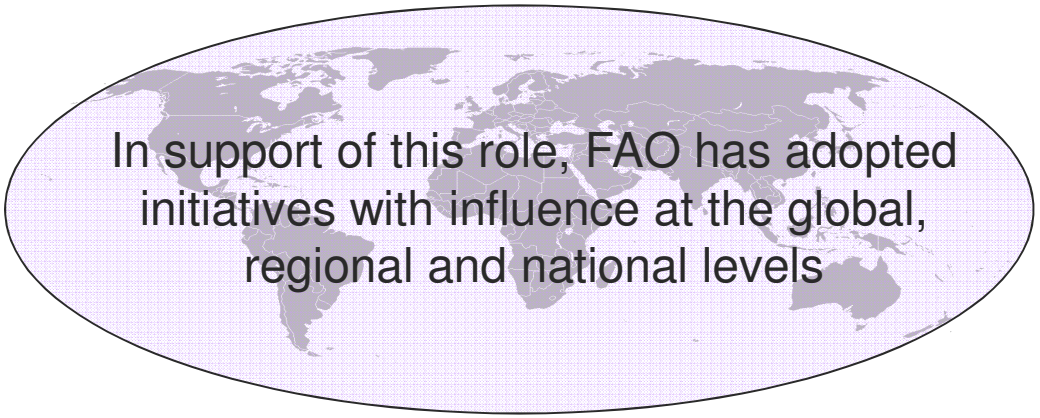
FAO & Bioenergy

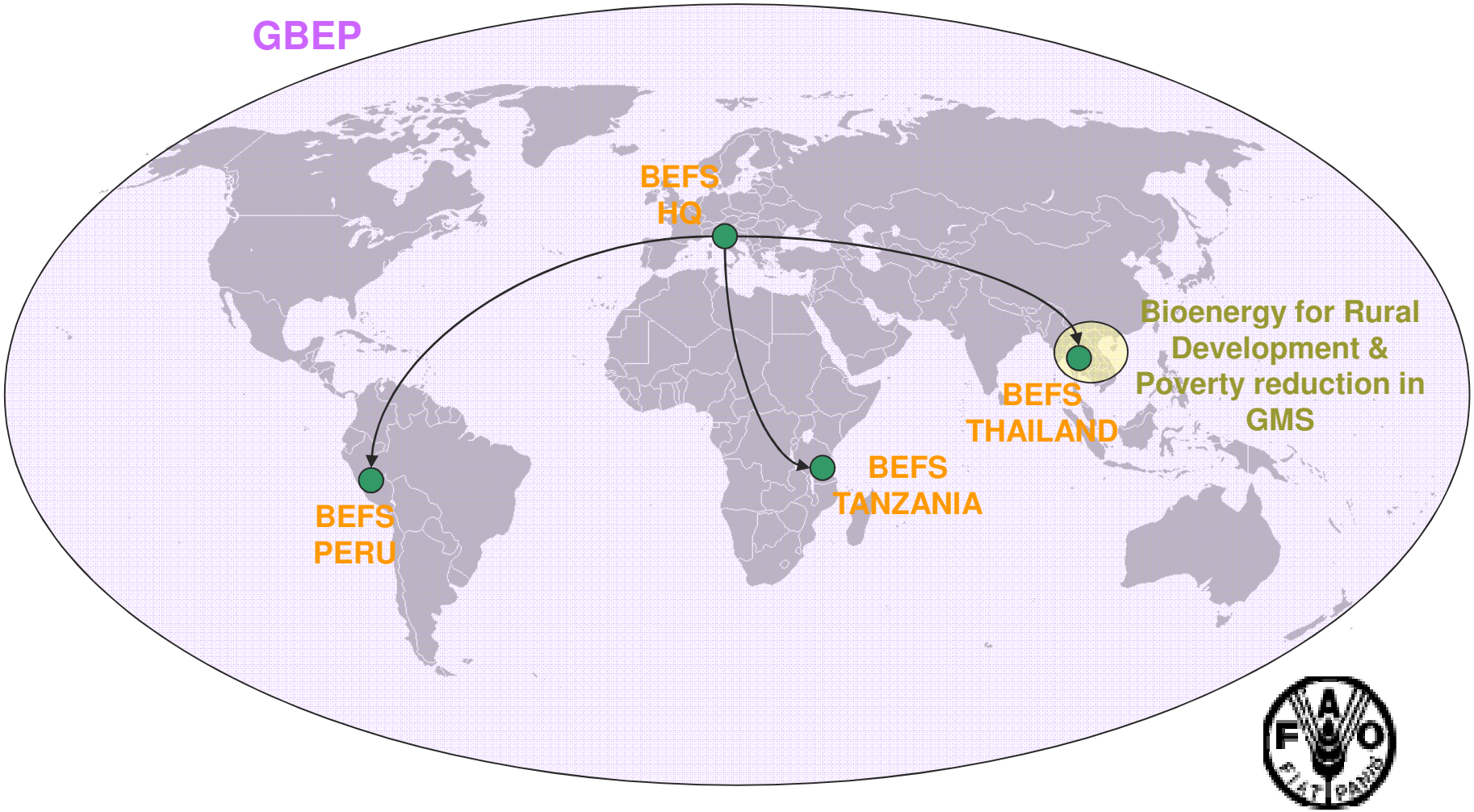
FAO role in relation to Bioenergy

- Support member countries in strengthen institutional and human capacities to implement bioenergy programs; particularly for the benefit of rural communities

- Promote SSB while also promoting opportunities for and mitigating potential negative impacts of liquid biofuels



FAO Bioenergy Initiatives



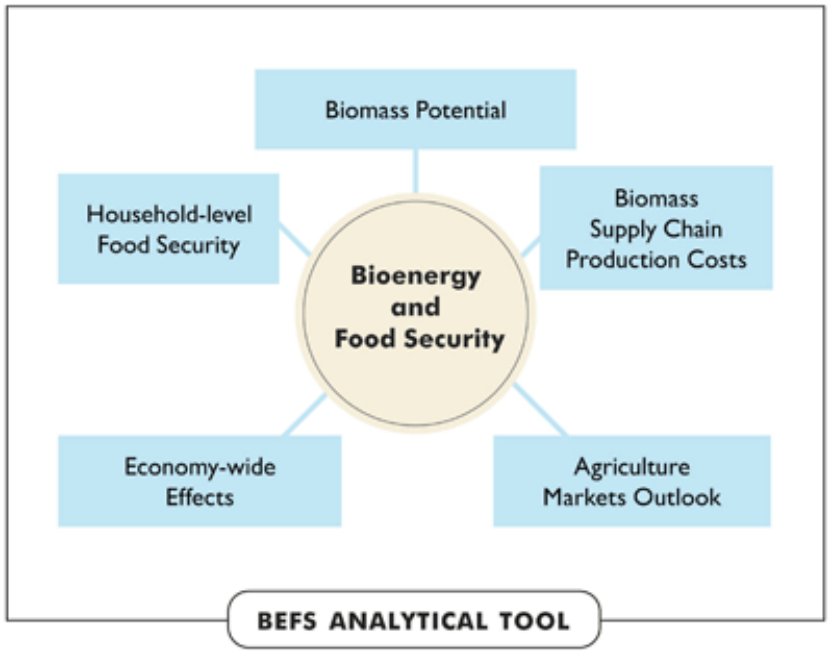
FAO Bioenergy Initiatives

BEFS Bioenergy and Food Security Project

– Provides guidance to assess potential effects of bioenergy on food security in developing countries

BEFSCI Bioenergy and Food Security Criteria and Indicators

– Aims to develop detailed criteria and indicators on bioenergy that safeguards food security



FAO Bioenergy Initiatives

Bioenergy for Rural Development & Poverty Reduction

- Aims to promote mechanisms that will integrate Small Scale Bioenergy GMS rural energy & poverty reduction strategies
- Thematic studies will include:
  - Water utilization and biofuels
  - Potential for biochar

Conclusion

- Demand for biofuel in the region will grow to match government policies
- Biofuels present a unique policy problem - action to achieve one policy goal likely to have unintended consquences
- Continued monitoring and assessment is required to mitigate risk that biofuels will unnecessarily harm biodiversity
- FAO is developing the tools to assist Member Governments assess the risks and looking for opportunities at small-scale

FAO RAP - Bioenergy

Contacts

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Publications

SOFA 2008
http://www.fao.org/docrep/011/i0100e/i0100e00.htm

FAO Bioenergy Portal (corporate)
http://www.fao.org/bioenergy/home/en