



## Environment

### Ways Forward and Recommendations

First FAO Technical Consultation on Bioenergy  
and Food Security  
16-18 April 2007



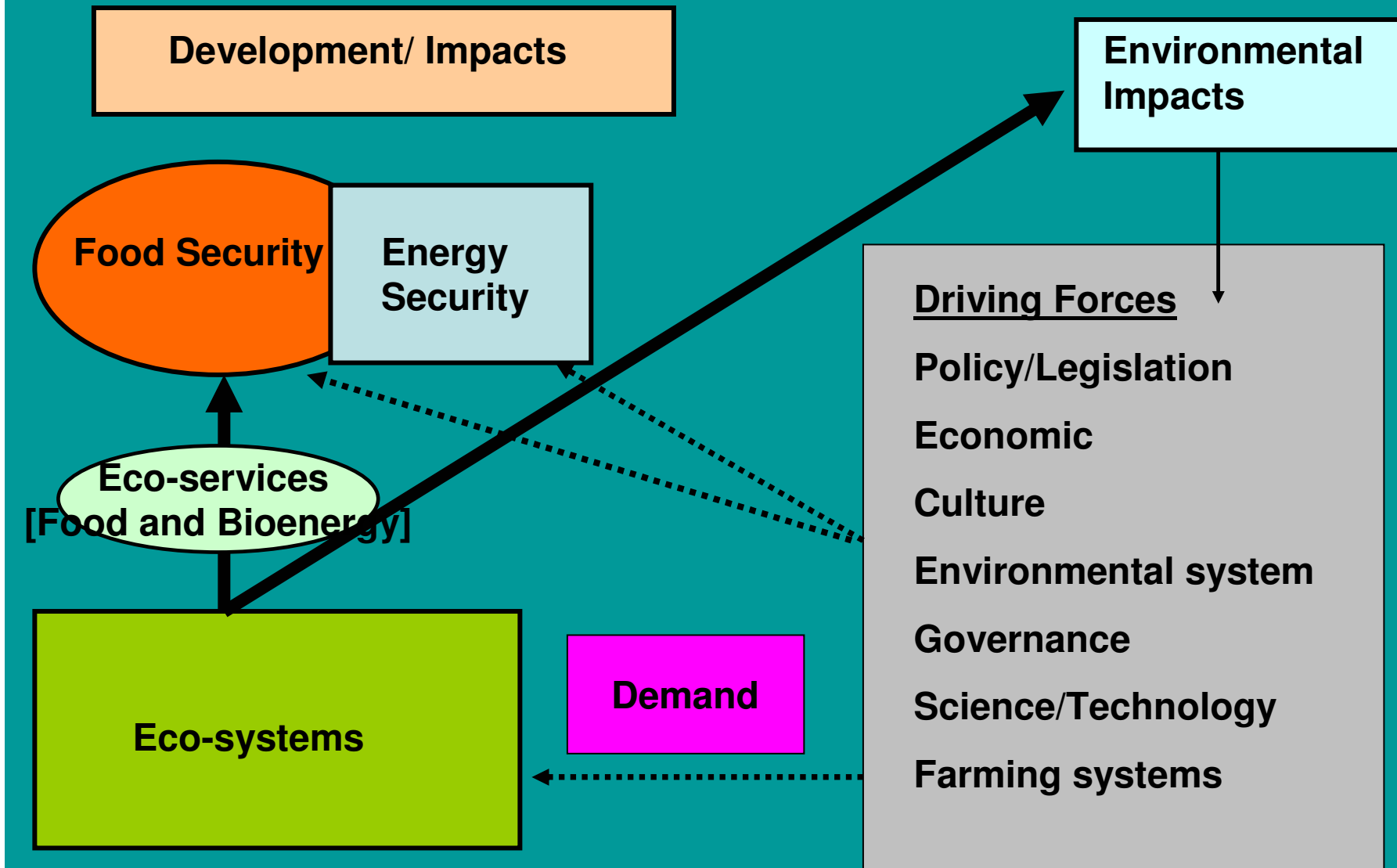
## Environment, bioenergy and climate change

- Trade-offs need analysis, particularly those related to impacts on food security
- Local issues related to access and control of natural resources
- Global impact of climate change and environmental degradation most direct links
- Increased frequency and severity of weather shocks reduce food production and livelihoods

# Conceptual Framework: (starting point?)

## Reference Systems

(1) Smallholder-subsistence (2) smallholder-national market (3) Large commercial producers





## Multipurpose cropping

- **Ways forward:** Research, synthesis and brainstorming with key stakeholders
- **Recommendation:**
  - Convene a global workshop on this topic
  - CGIAR/FAO and national experts, particularly Brazil, China and India



# BIOENERGY AND FOOD SECURITY

## Land

- **Ways forward:**
  - All issues synthesized and integrated into biomass potentials debate
  - Identify implications of scaling up on land use for traditional systems
- **Recommendation:**
  - Convene a global workshop on this topic
  - CGIAR/FAO + national experts, particularly Brazil, China, India
  - Identify land use hotspots in terms of poverty mapping and land use systems
  - Workshop on filtering, mapping land, water use issues
  - Advice in context of bioenergy expansion for subsistence farmers – environmentally sustainable & socially equitable



# BIOENERGY AND FOOD SECURITY

## Water

- **Ways forward:**
  - Take stock of known parameters, e.g. combinations of land and water use for bioenergy development in specific eco-agro zones
- **Recommendation:**
  - Identify data sources: Oko-institut, UNEP, FAO
  - Best sources in terms of linkages between land use and environment: mapping, scale resolution
  - Simulation exercise: practical integration test for land use and environment
  - Scales, resolution



## Climate and Biodiversity

- **Ways forward:**
  - Characterise impacts of biodiversity
- **Recommendation:**
  - Use Paris meeting of CBD, July 2007 – side event on linkages between biod, FS, and BE
  - Need to study impact on livelihoods and vulnerable people: WWF, IUCN, IFAB, FAO



## People- Reference Systems

- **Ways forward: questions will be complemented by research elsewhere and mapping evidence**
  
- **Recommendations**
  - **Define and research factors of exclusion**
  - **Define business concepts and develop guidance for small enterprise bioenergy development**
  - **Complete a livelihoods analysis of transition from subsistence farming to larger scale or more commercial orientation (mixed farming systems)**



## Research and Case Studies

Ways forward: Identify knowledge and data sources for environmental and socioeconomic risk analysis – need for field information

Recommendations:

Explore and test concrete ways to integrate HPC FS methods with environmental indices

Review EWS and Emergency Preparedness systems (cannot be based on food stock assumptions)



## Immediate Action Items (3-6 months):

- Drafting paper for conceptual framework – filters matrix
- Key meetings interact – CBD side event
- Reconvene group to create analytical tool
- Hold Practical Integration Exercise
- Mapping and scenarios
- Review FAO legal framework document and start on a briefing kit for policy-makers