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Bioenergy Production in Namibia

Opportunities and Challenges for Pro-Poor Rural Development and Food Security

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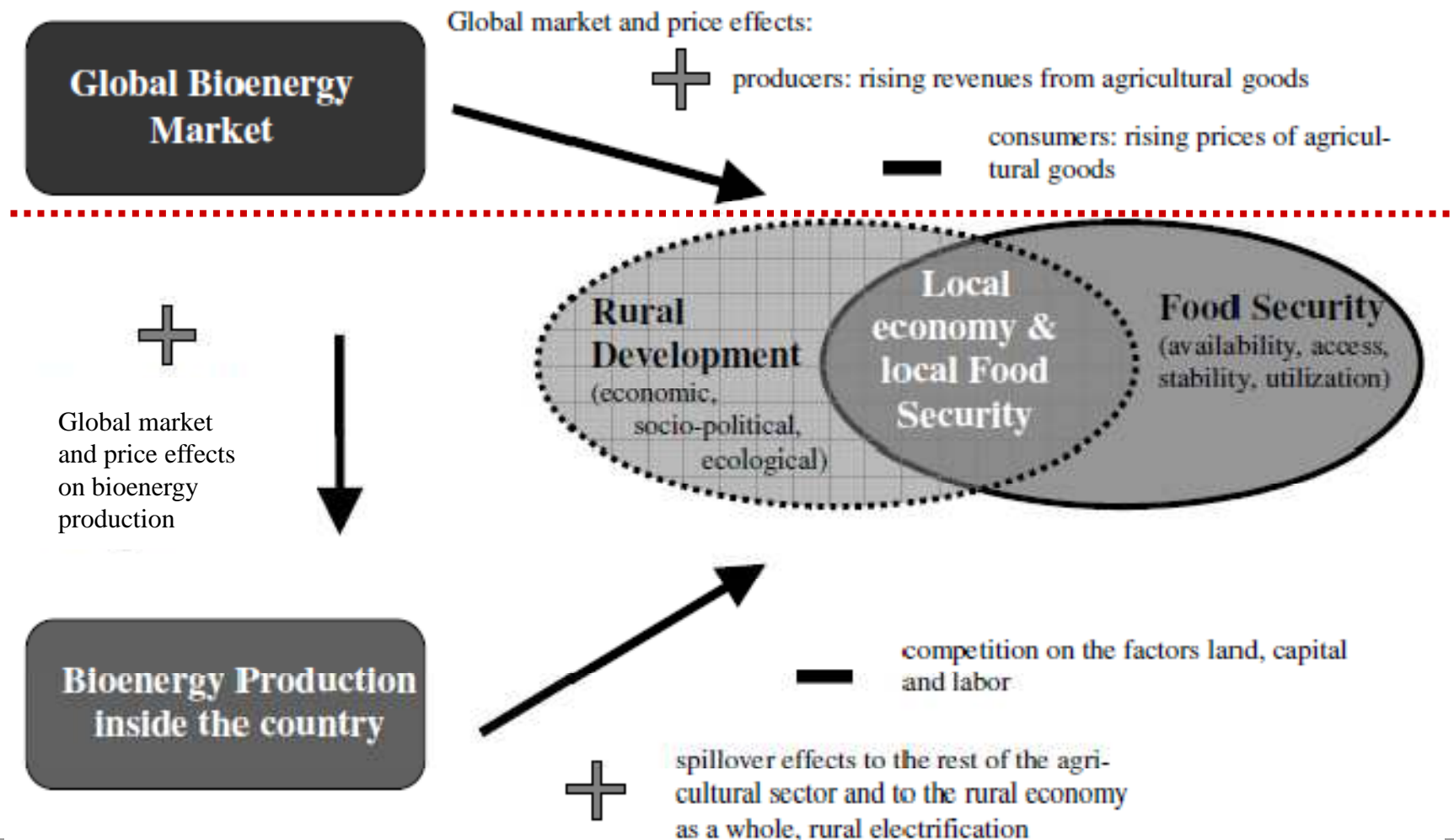


1. Introduction
2. Approach
3. Bioenergy Production in Namibia:
 - Potential Impacts
 - Obstacles
 - Key Institutional Challenges
4. Conclusions & Recommendations

Introduction



Figure: Impact of Global and local bioenergy production on Rural Development and Food Security





Namibia:

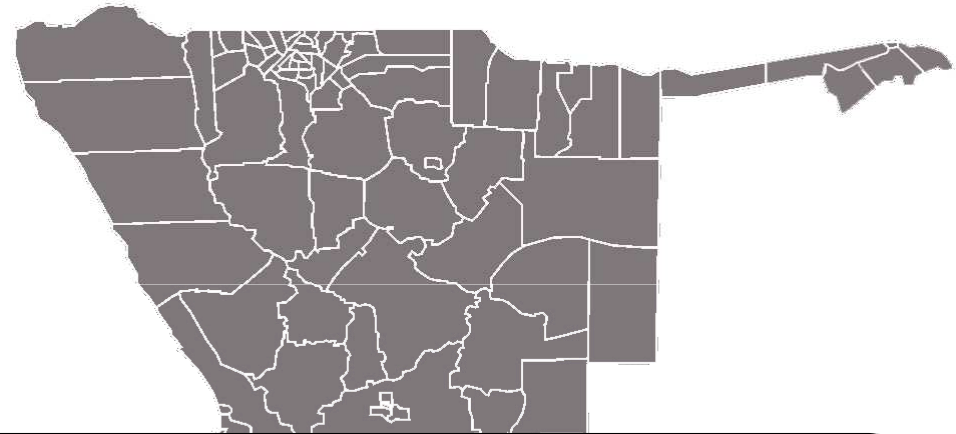
(1) Bush-to-Energy VC

- Bush Encroachment (26 mio ha of rangeland)

(2) Jatropha-to-biofuel VC

- National Bio-Oil Roadmap

- MIC, but Gini 0.7
- Rural-Urban Divide
- South-North Divide



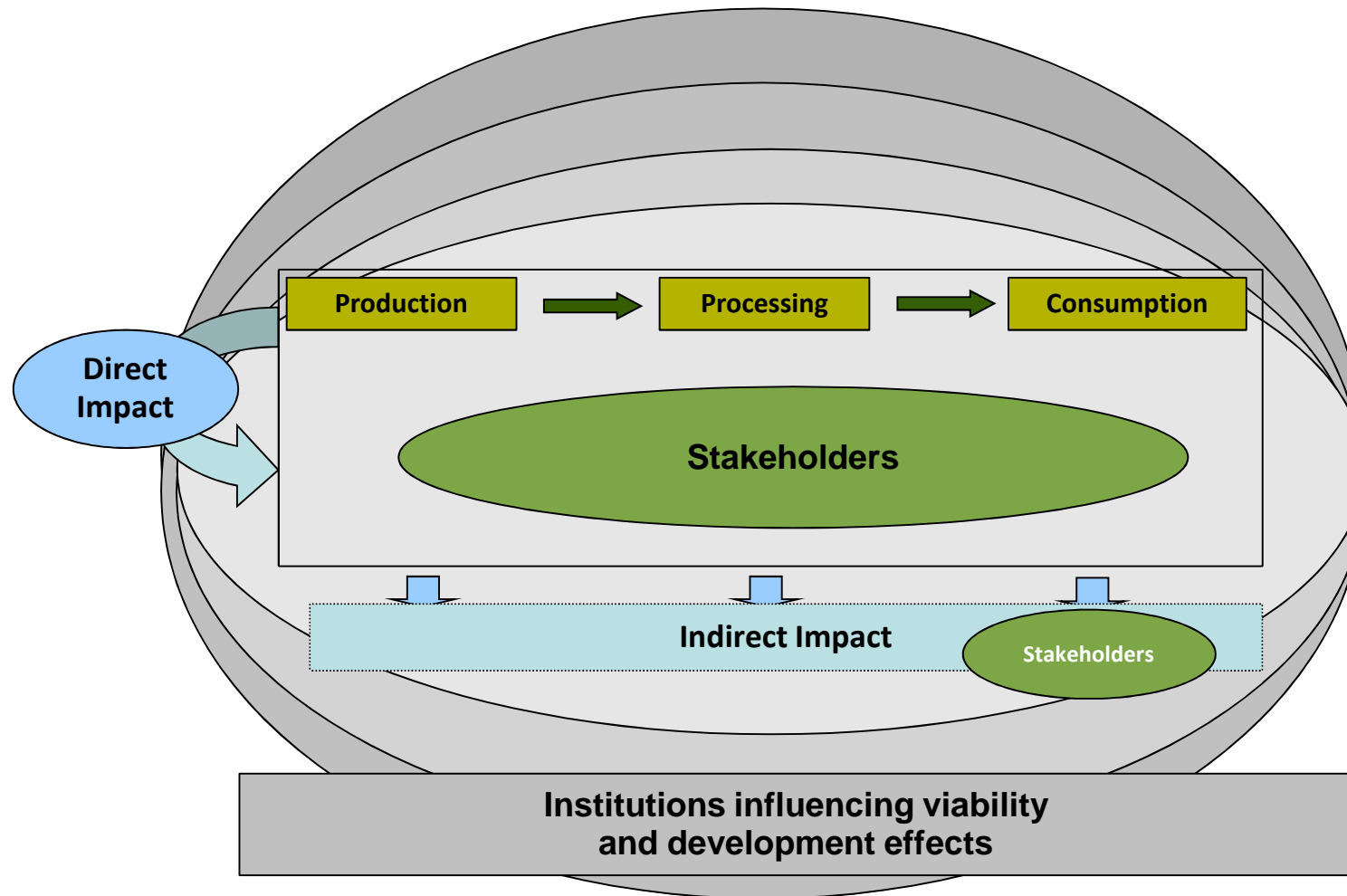
Research Questions:

- (1) What are potential effects of bioenergy on Rural Development & Food Security?
- (2) Which instruments foster bioenergy production and shape its development effects?

Approach



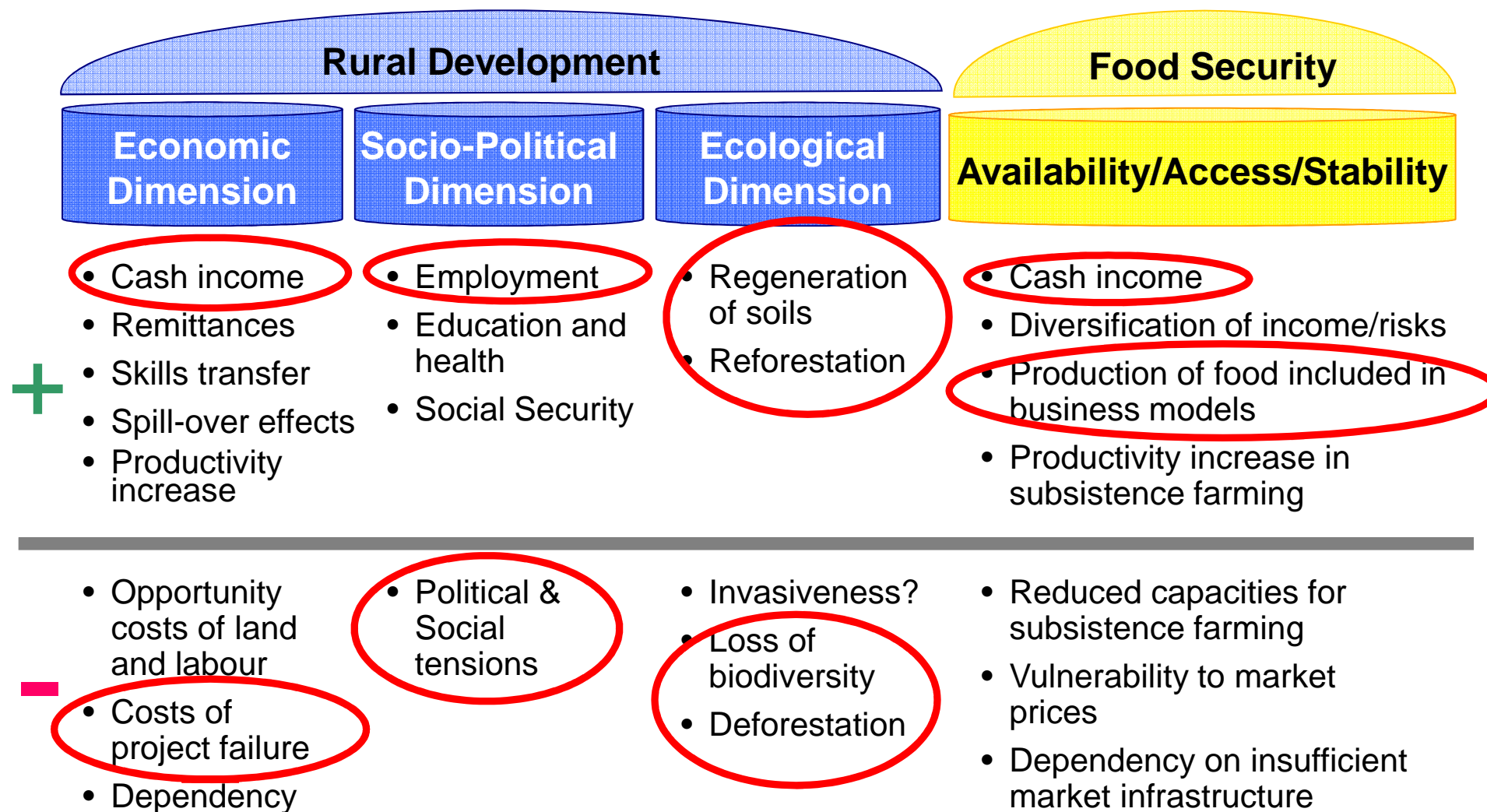
Figure: Conceptual Framework of the Study





- Three main Jatropha growing models suggested:
plantation, contract farming, community-based model
 - Plantation: 3 planned investments on 150,000 – 300,000 ha each
 - Contract Farming: 3 planned investments (one with CDM) on 64,000 ha (8,000 – 13,000 families employed)
 - Community model: trials on small scale

Jatropha Value Chains – Potential Impacts



Jatropha Value Chains – Obstacles



	Plantation	Contract Farming	Community Model
Lack of Support by Government for leaseholds	<ul style="list-style-type: none"> ➤ Fear of threatening household and national food security (self-sufficiency?) ➤ Fear of invasiveness 		
Uncertainties of Community	➤ Lack of knowledge on Jatropha and alternatives		
	➤ Fear of losing control over their land		
	➤ Fear of project failure		
	➤ Part of the community is left out in the negotiating process		
Capital & Skills	➤ Less money of investors due to economic crisis	➤ High costs while waiting for government decision	➤ Financial support and knowledge transfer crucial but scarce
Market	<ul style="list-style-type: none"> ➤ Economically viable? Missing information on yields and prices ➤ Uncertainties about how to tap the CDM market 		

Institutional Challenges for Bioenergy Production



Producers
and land title

Effect Channels

Effect Dimensions

Production / Harvesting

Processing

Distribution/
Use



Food Security
Rural Development
Environment
Agriculture
Land
Labour
Bioenergy Output Market
Policy Coordination

Institutional Challenges (II)



Food Security

- Food availability on national level no major risk, but accessibility of rural poor.
- Lack of long term strategy (food security vs. self-sufficiency; food crops vs. cash crops?)

Rural Development

- Competition for natural resources between agriculture und nature conservation/tourism
- Lack of long- and mid-term strategy for rural areas

Land

- Lack of coherent land use planning
- Lack of local capacities to manage land use decisions
- Exploitation for personal or political agendas

Bioenergy Output Market

- Domestic market: no Renewable Energy Policy & support structure in place
- International Market: economies of scale necessary but hard to reach

Tentative Conclusions & Recommendations



Conclusions:

- High potential of introducing biofuels for rural development and food security in Namibia (especially bush VCs, small-scale Jatropha and based on CDM)
- Potentials as well as risks highly depending on model (increasing with its scale)
- Economic viability unclear with all the given models
- Viability & Impacts highly dependent on variety of policy fields and institutions not yet sufficiently developed in Namibia

Recommendations:

- Design a national food security policy!
- Clarify the role of rural areas in long-term vision and poverty alleviation!
- Design integrated land use policy!
- Conduct independent research on environmental issues of bioenergy!
- Draw up a National Renewable Energy Policy!
- Strengthen mediation between different interests (national & local level)!
- Sequencing maybe preferable (starting with small-scale trials)!



Thank you for your attention!