



Towards Sustainable Biofuel Development:

Assessing the Effectiveness of the Ghanaian Legal and Institutional Framework

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THINKING beyond the canopy



Objective

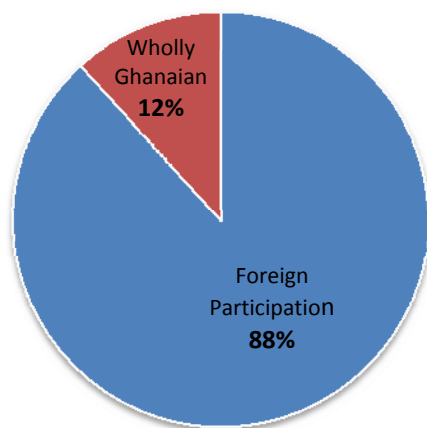
- Inventory biofuel investments → fill the gaps
 - Reality of claims
 - Official vs. Unofficial
- Establishment processes: theory vs. practice
- Insights into (potential) impact pathways
- Effectiveness of the legal and institutional framework in governing the trade-offs

Biofuel Development in Ghana

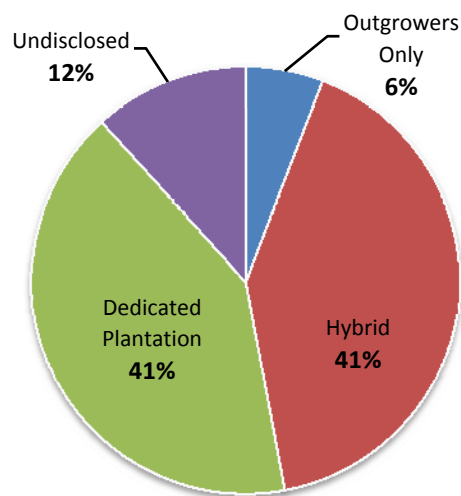
- No Biofuel Policy – under development since 2005
- Change in government rhetoric over recent years
- Jatropha cultivation dates back to 2003, through smallholders
- Wave of foreign investments in 2007
- **17 commercial biofuel developments** have been identified (6 captured through official data)
- An *estimated* **1 million and 1.1 million hectares** of land allocated to biofuel companies. 4 companies > 100,000 ha
- Not more than **10,000 hectares** are likely under cultivation

Investment Overview

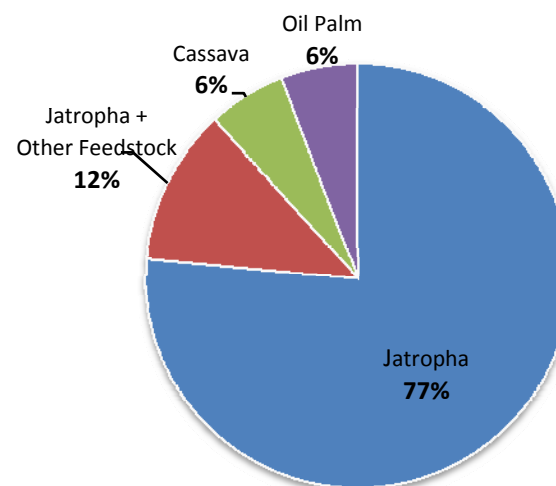
Ownership Structure

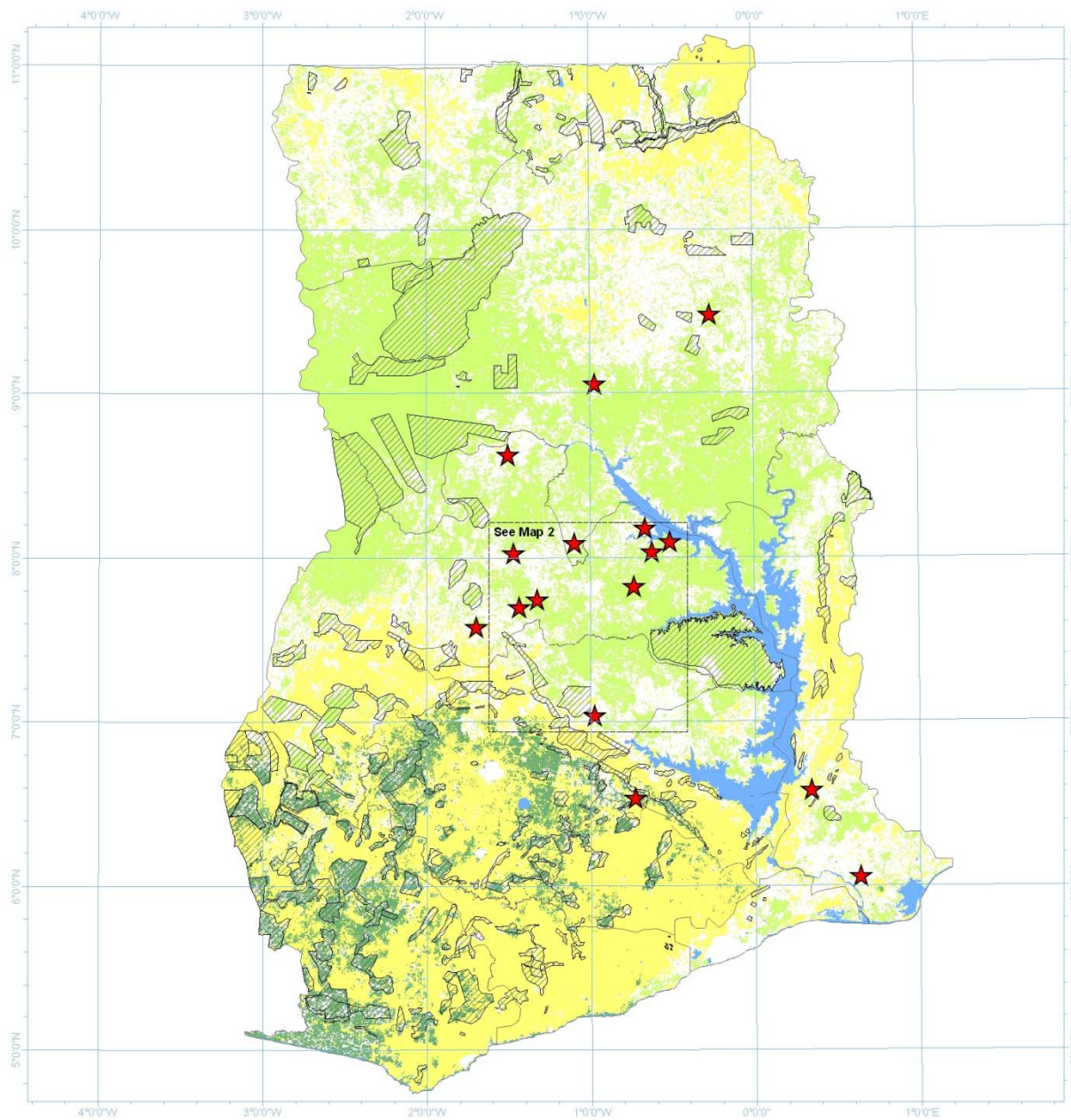


Business Model



Biofuel Feedstock



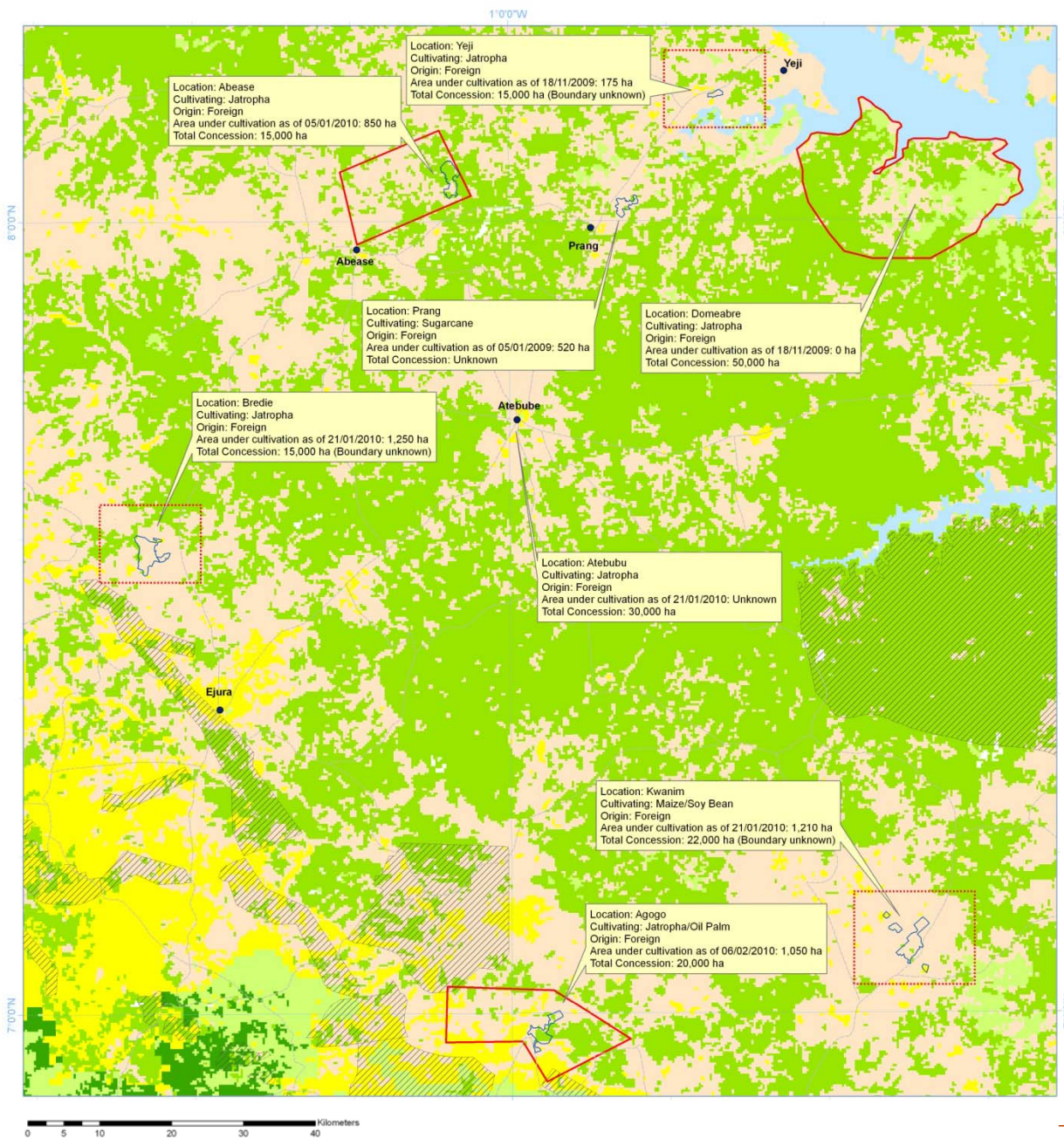


MAP 1: Large-scale Biofuel Plantations in Ghana



Legend

-  Protected Areas
-  Water Bodies
-  Cropland
-  Open - Closed Forest
-  Closed Forests
-  Large-scale Biofuel Plantations



MAP 2: Land Acquisitions in central Ghana



Legend

- Protected Areas
- Water Bodies
- Shrubland
- Cropland/Mosaic Cropland
- Mosaic Forest
- Open - Closed Forests
- Closed Forests
- Concession Area (Estimated)
- Area under cultivation

Source: Cultivated Areas derived from LANDSAT Images (various dates), Land Use from the Globcover Dataset

Establishment Procedures

Modes of Land Acquisition

- Compulsory acquisition through the right to Eminent Domain
- Direct negotiations with customary land owners
- Approval of Lands Commission in case of disposition and/or development of customary land

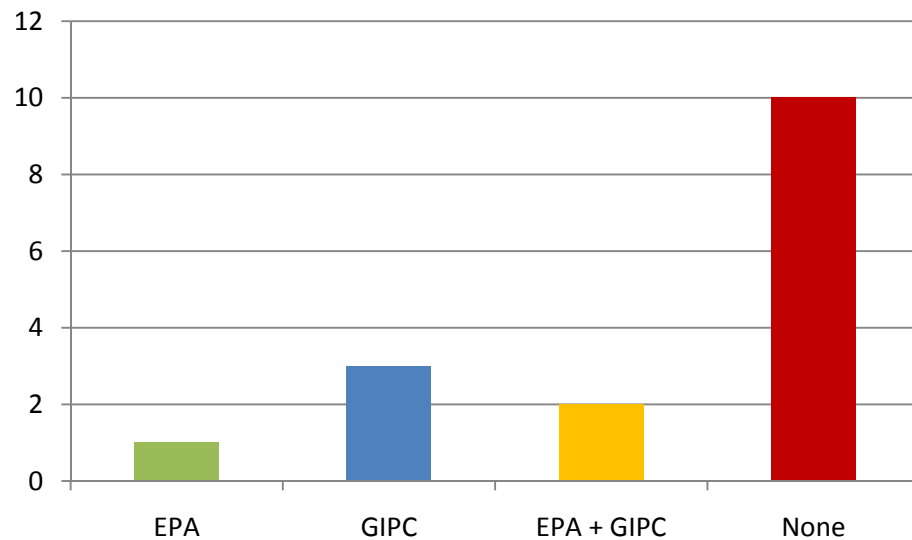
Other Obligations

- Registration at GIPC in the case of foreign participation
- Environmental Permits if plantation is > 40 ha
- Obtain Water Rights when applicable

Actual Land Acquisition Processes

- No evidence of compulsory land acquisitions through the state
- Land directly acquired from Traditional Authorities
 - 25 to 50 years leases
 - Some pay rents, some enter profit-sharing agreements.

Registration Status (n=17):



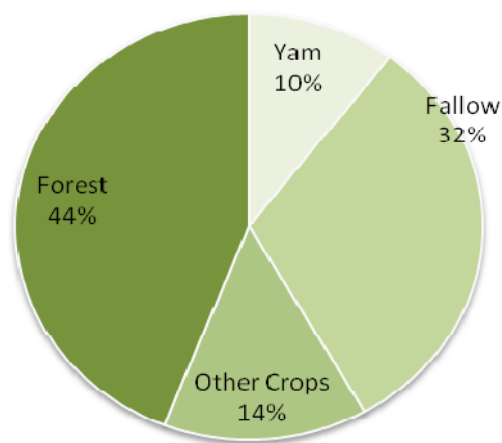
Actual Land Acquisition Processes

- Negotiations opaque with negligible community participation
- Many incidences of clear-cutting
- Extensive land loss by land users
- No formal compensation arrangements observed
- Many undocumented promises
- Across the board positive community perceptions → “Development!”

CASE STUDY Findings

- Loss of forest and agricultural land
- Significant decrease in landholdings
- Significant constraints to land recovery
- Disproportionate impact on 'migrant' households

Land use of acquired land (800 ha)



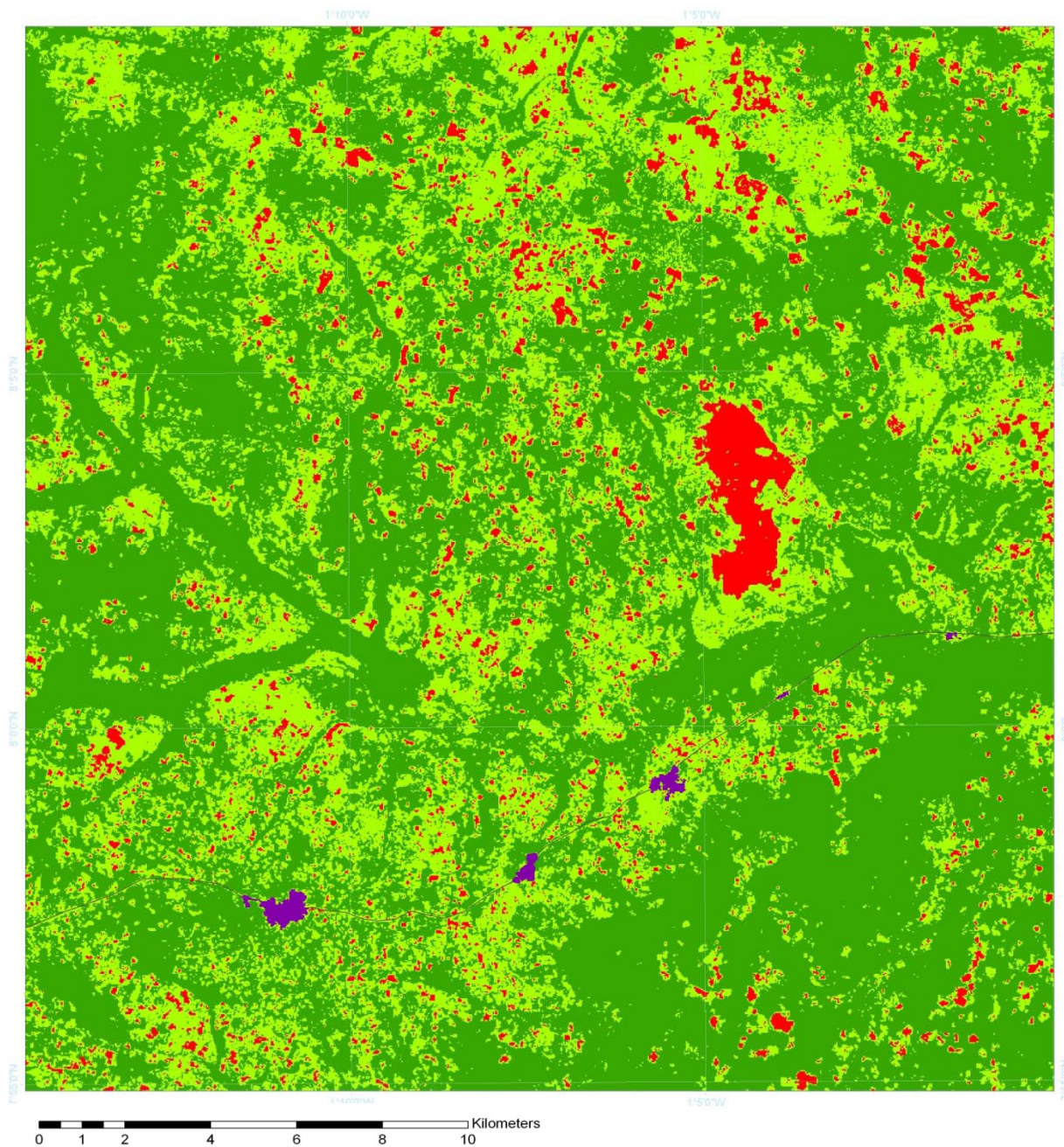


FIGURE: Surrounding Land Use at Jatropha Plantation



Legend

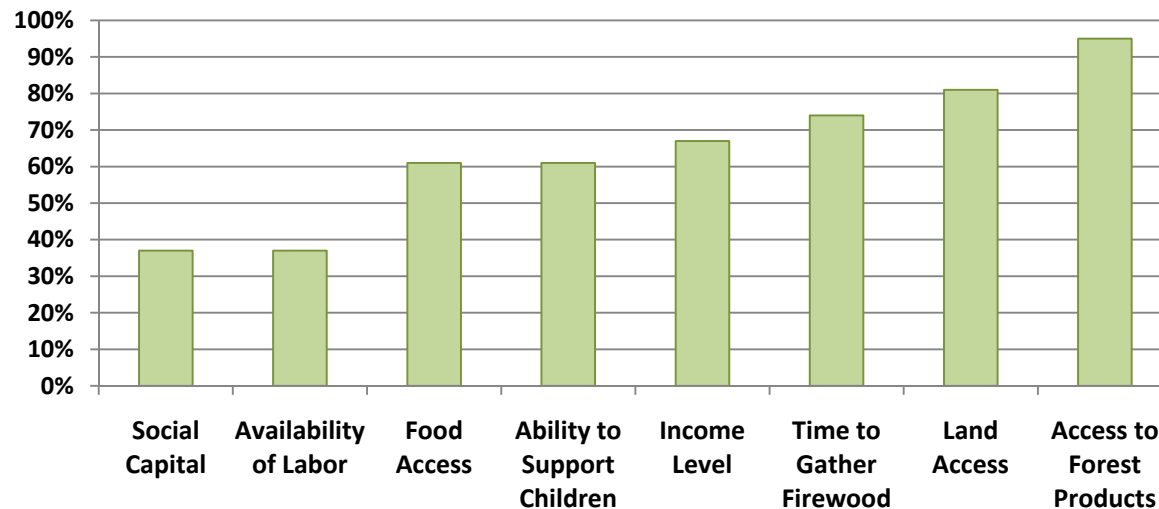
- Road
- Forested
- Secondary Forest/Fallow Land
- Agriculture
- Settlements

*Source: Data derived from
LANDSAT Image (18 Nov. 2009)*

Livelihood Impacts

- Low degree of *ex ante* livelihood diversification
- Reduction in area under cultivation/shorter fallow
- Most households experience decline in livelihood quality
- Significant impact on women

Household experience a negative impacts on:



Other Findings

- Loss of access to water sources due to damming
- Community conflicts over issues of communality
- Fear over out-migration
- Few affected households 'compensated' with employment
- Employment enhances income security, increase labor burden
- Limited employment generation (approx. 0.06 – 0.08 FT/Ha)
- Economic value of yam lower than employment
- Few other developmental benefits realized → too early?

Effectiveness of Legal and Institutional Framework

- Little collaboration between government institutions
- Lack of capacity in Regional EPA offices
- Accommodating stance of many government institutions
- Lands Commission in practice has limited influence over deals
- Few controls on customary authorities to act in the interest of land users → policy of 'non-interference'
- No mechanisms to ensure equitable distribution of costs and benefits
- Assessment of land use change in EIA is negligible
- Companies with Environmental Permits appear to have more comprehensive impact mitigation strategies

Possible Ways Forward

1. Increasing cross-accountability between government institutions

→ Clearly defined roles and responsibilities

2. Larger (consultative) role of EPA and LC in negotiation process

→ Comprehensive (methodological) guidelines and procedures

3. Using the Land Information Bank as a control mechanism (risks!)

4. Enhancing downwards accountabilities of Chiefs

→ Expansions of CLS, Land Management Committees (currently 'demand-driven')

5. Legal empowerment initiatives: Enhance 'Capacity to Claim'

6. R&R designed to address full extent of 'decapitalization'