

# HOW CAN SOUTH AFRICA'S GREEN ECONOMY PROJECTS WORK BETTER FOR THE POOR?

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HSRC seminar and roundtable, 31 May 2017

British Academy Newton Mobility Grant Project

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# British Academy Newton Mobility Grant

- **Newton Mobility Grants provide support...**
  - establish and develop collaboration with UK researchers around a specific jointly defined research project
  - one year awards to initiative new collaborative partnerships
  - strengthen the research capacity/capability
  - contribute to promoting economic development and social welfare in the country
  - initiate the development of longer-term links
- **Grant focuses on covering**
  - mobility costs (exchange visits, travel, maintenance)
  - training of early-career scholars
  - organisation of workshops and seminars

# Dr Amber Huff

- Research Fellow at the Institute of Development Studies, University of Sussex
- Convenor of Masters course “Poverty and development”
- Member of the IDS Resource Politics Research Cluster
- Member of the ESRC STEPS Centre
- Convenor of STEPS Resource Politics & Environmental Research Theme
- [www.steps-centre.org](http://www.steps-centre.org)
- [www.ids.ac.uk](http://www.ids.ac.uk)

# British Academy Newton Mobility Grant

- **Addressing South Africa's sustainable development paradox**
  - Develop conceptual framework to study green economy initiatives in South Africa
  - Identify combination of innovative social science methods to examine project processes and SD outcomes
  - Strengthen capacity to engage in sustainability research and influence policy/public debates to improve **equity and poverty reduction outcomes of green economy initiatives**
  - Training, public seminar, roundtable, workshops, collaborative writing
  - Involving young researchers within HSRC and build networks with other stakeholders

# Training-Workshop, 30 May 2017



# South African Green Fund

- Department of Environmental Affairs, administered by Development Bank of Southern Africa
- “objective is to lay the basis for South African economy to make transition to a low carbon, resource efficient and climate resilient development path delivering high impact economic, environmental and social benefits” (GF website)
- “aims to provide catalytic finance to facilitate investment in green initiatives that will support South Africa’s transition towards a green economy” (GF website)

# South African Green Fund

- Investment projects across 3 sectors: green cities and towns, low carbon economy, environmental and natural resource management
- Public finance for **national demonstration projects**
- **Green Grid Beema Bamboo project**
  - R 161 million (R97 non-recoverable grant, R 64 recoverable grant + 20% equity, R21 own funding)
  - case study reflecting green economy initiative in natural resource management in South Africa
  - emerging boom around bamboo and green economy in Africa
  - big knowledge gap in literature
  - previous research engagement with bamboo in South Africa

# Green Grid Beema Bamboo

- 500 hectares bamboo plantation in KZN, tissue culture laboratory, nursery, beema bamboo as feedstock for power plant (gasification technology) to produce bioenergy
- demonstrate the environmental and financial benefits of cultivation Beema Bamboo for bioenergy
- implementation of the process on a larger scale at suitable locations in South Africa
- sustainable development 'promises':
  - green electricity from renewable resources, climate change mitigation, carbon sequestration benefits (200 tCO<sub>2</sub>/ha/year), Eskom co-firing, mining and wasteland rehabilitation,
  - poverty reduction by creating 370 full time jobs
  - localisation, skills and technology development and transfer
  - pulp and paper industry partnerships
  - create local business opportunities



# Green economy framing

- „improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities“ (UNEP, 2011)
- „low carbon, resource efficient and socially inclusive“ (UNEP, 2011)
- „Green growth does not replace sustainable development, but is a means to achieve it “ (OECD, 2013)



# Top-down, green economy intervention

- Changing resource extraction and consumption within 'inclusive growth' development paradigm
  - reduce and replace non-renewables with renewable resources
  - minimise pollution, waste, risks, damages
  - enhance efficiency, create new industries around circular economy
  - protect and enhance biodiversity and ecosystem services.

# Technological solution to sustainable development challenge

- Using new technology and natural resource (bamboo) to generate positive economic, social and environmental outcomes
- Through technology bamboo changes from “poor man’s timber” to “miracle crop”, “wonder plant” and “green gold”
- Africa’s untapped potential and “new economic force [that] is generating income, creating jobs and protecting the environment” (UN, 2016:22)
- “Bamboo ticks many of the ‘green development’ boxes, offering a renewable resource that can help to restore degraded landscapes, provide sustainable bio-fuel, combat climate change, or provide new income streams for rural and peri-urban economies” (INBAR, 2016:3).

# Bamboo:

- The world's strongest and fastest growing grass
- More than 1662 species representing 121 genera
- Rhizomes produce new shoots/culms every year = annual harvesting (30%) with 60% permanent canopy
- Harvesting can begin from 3 – 7 years after planting (depending on species)
- Grows on degraded lands (poor soils) with less inputs and prone to few diseases
- Drought resistant
- Ecosystem services provider: soil rehabilitation, prevention of soil erosion, control slope stability, agroforestry, water purification and carbon sequestration

# Commercialisation of bamboo

- Resource that has been transformed into more than 2,000 (10,000?) uses from
  - subsistence and local products
  - to high-end value added commodities for consumer and industrial markets
- The global bamboo markets are currently estimated to be USD 60 billion and expected to rise further with bamboo substituting increasingly scarce timber and other fibre sources.
- At least 18 Africa countries have joined **International Network for Bamboo and Rattan** to initiate commercialisation of bamboo for green growth in Africa

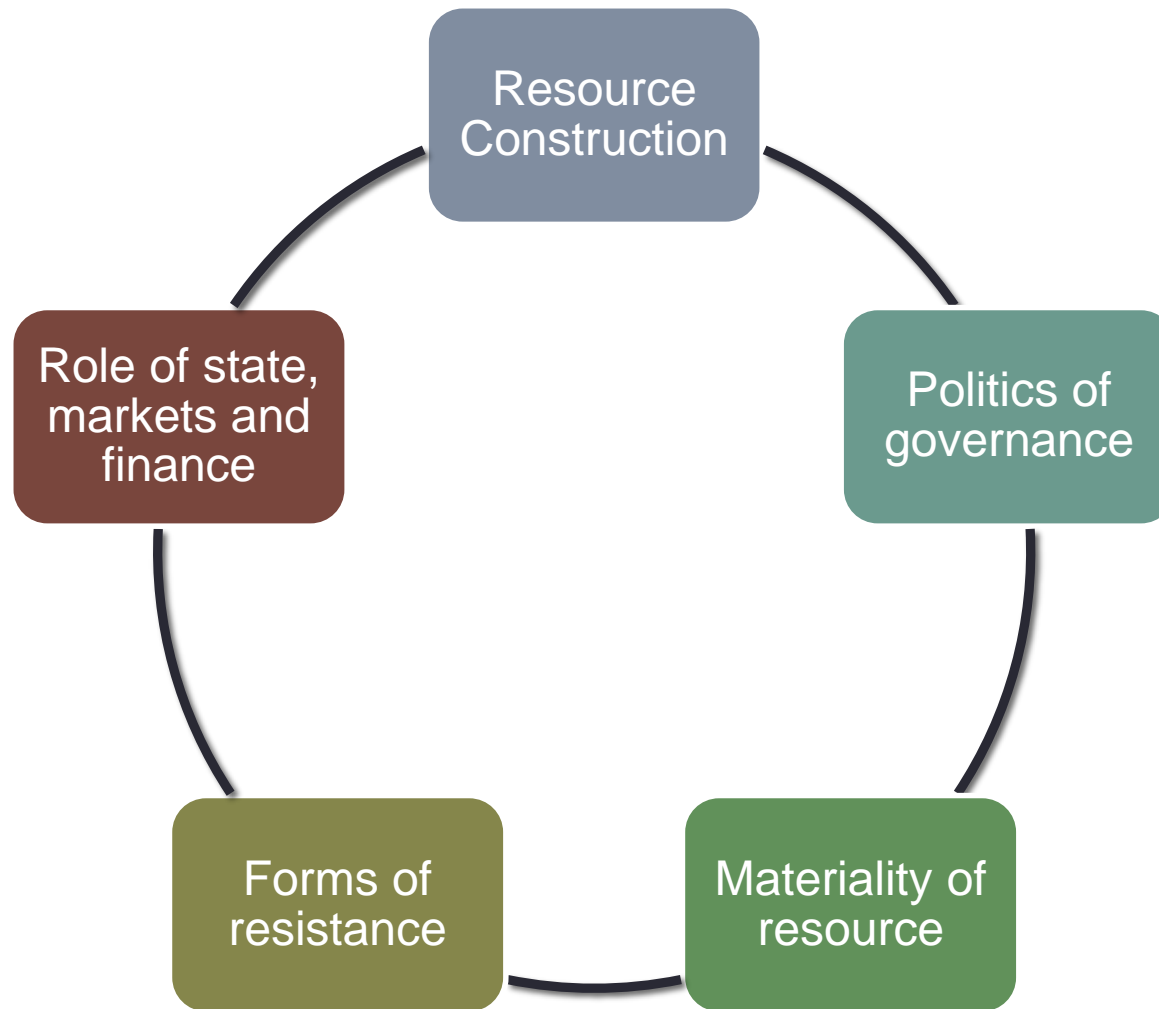
# Bamboo for green growth in SA

- Bamboo symposium 2011 in East London, Eastern Cape, organised by Industrial Development Corporation and ECDC
- Trial community bamboo projects near Port Elizabeth, Stutterheim and Centane
- Interim project steering committee (public and private sector)
- Commissioned value chain opportunity study and business plan
- National Bamboo Association of South Africa (NBASA)
- Private sector investment
  - EcoPlanet Bamboo (active carbon, fibre for composites)
  - Blue Disa – Food & Trees for Africa CSI (carbon offsetting and processing)
  - DGB CSR bamboo projects (carbon offsetting and processing)
  - Green Fund's Green Grid Beema Bamboo project (bioenergy)
  - Individual farmers in KZN

# Bamboo in social, political-economic context of South Africa

- Access to suitable land and conflicts over land use (grazing, crop cultivation)
- Complex and plural governance regimes – role of traditional authorities, state, tenure insecurity
- Challenges of working with local, heterogeneous communities in economically deprived areas
- Financial & technical challenges of installing and operating green technology
- Environmental challenges & trade-offs
- Market-related challenges
- Policy and regulatory gaps

# Green economy in social, political-economic context





# Researching the green economy:

- Use multiple methods to explore sustainability challenges in particular places and communities
- Highlight and open up discussion about how local 'green economy' interventions are embedded in broader social, political and economic relations
- Understand trade-offs, conflicts and distribution of costs and benefits across scales
- Link research and theories with practical and policy solutions to further equity, justice and sustainable development

Thank you