Resilient Futures Community of Practice project invites you to its first workshop:

**Post-Mining Transformation through the Fibrous Plant Economy**

28 May 2018 09h00 - 17h00

**Venue:** Old Mutual House Auditorium
33 Klaasens Rd, Bishopscourt, Cape Town 7708 ([map](#))

**Agenda**

1. Introductions: Prof Haroon Bhorat
2. Expert presentations
3. Data gathering roundtables: discussion on the 4 projects:
   - The **economic** opportunities of plant biomass.
   - Identification & evaluation of downstream options for **sustainable** recovery of value &/ products from fibre-producing plants.
   - Post-mining rehabilitation: Carrots & sticks in the law.
   - Fibre-rich plants: A joint role of degraded mine land **remediation** & fuelling a multi-product value chain.

**Please RSVP by Monday 21 May 2018**

For more information, click here [http://resilientfutures.uct.ac.za](http://resilientfutures.uct.ac.za)

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Please see overleaf for background.
Background

Fibrous plants such as bamboo may be used to transform degraded land into a restorative agricultural sector and a dynamic manufacturing sector that may provide employment opportunities, inclusive socio-economic growth and poverty reduction in mining communities beyond the life-of-mine.

The aim of this multi-disciplinary project is to determine through a Community of Practice (CoP) whether fibre-rich biomass, including bamboo, may be used to remediate degraded land in a way that is economically feasible; leading to enhanced economic complexity, the establishment of a fibrous plant micro-industry, and crucially, value-added input and output job creation. Growth of this industry would contribute to the economic goals of the NDP, by promoting employment in labour-intensive industries, diversifying the economy, and embracing South Africa’s current advantages. Guided by the SDGs, the focus of this CoP is on improving the consequences of mining as a case study for diversifying the economy in the current legal framework.

This 1-day workshop incorporates findings from the “Mine Land Rehabilitation and Phytoremediation, ‘Woody & Non-Woody’ Plantations and Waste: Value Chain for the Future of Clean Energy in South Africa?” workshop held on 5 July 2017, and the Scheba et al report. The report highlighted the need to better understand the actual sustainable development opportunities of fibrous biomass, including bamboo, in the country - and how to overcome the major obstacles. Much more policy attention and action is necessary to support the nascent industry, and create a conducive regulatory environment that can maximise its socio-economic benefits and minimise environmental risks.

Economic

How can economic complexity be built on the basis of an understanding of local socio-economic linkages?

Economic dynamism & complexity play a key role in generating sustainable inclusive growth and poverty reduction. The shift to higher levels of economic complexity involves diversifying an economy's productive structure; achieved by harnessing and building on existing productive capabilities; a need especially apparent in mining-based economies. The development of fibrous plant production & linked downstream manufacturing activity offers a unique path to building complexity in South Africa.

Environmental

Environmental factors that influence the ability of rapidly growing, fibre-rich plants to remediate damaged & polluted land?

The potential for land remediation through repeated cultivation cycles & the nature of the most suitable biomass, must be reviewed to address the possible environmental impacts of a plant fibre-based value chain through cultivation of degraded land. Crop selection criteria include: Preference of indigenous species; plant biomass metal absorption capability & selectivity; & productivity in terms of ability to grow in degraded environments, & ease of harvesting & processing.

Legal

What regulatory barriers exist, & how can they be addressed?

A critical analysis of existing legal & regulatory frameworks will help to determine their adequacy in providing for alternative models of mine rehabilitation. Through identifying & critiquing applicable rules, the relevance & implication of particular legal rules may be determined. Assessing their alignment & support of governance structures in relation to institutions & processes, & determining the feasibility of their amendment, is crucial. More favourable models of regulation will be identified, & adaptations in the legal framework to support &/regulate the proposed initiative will be recommended.

Engineering

What are alternatives & implications for downstream processing options?

The selection & development of viable processes & products for downstream utilisation of plant biomass must be based on a comprehensive understanding of the options (& consequences) available; taking into account environmental, socio-economic & technical drivers & constraints. Also to be identified are the various processing routes for fibre-producing plant biomass such as bamboo, flax & hemp into useful semi-fabricated & higher-end products, &/ recovery of accumulated heavy metals.