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It is the policy of the Journal to publish papers covering the technical, economic, policy, environmental and social aspects of energy research and development carried out in, or relevant to, South Africa. Only previously unpublished work will be accepted; conference papers delivered but not published elsewhere are also welcomed. Short comments, not exceeding 500 words, on articles appearing in the Journal are invited. Relevant items of general interest, news, statistics, technical notes, reviews and research results will also be included, as will announcements of recent publications, reviews, conferences, seminars and meetings.

Those wishing to submit contributions should refer to the guidelines given on the inside back cover.

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An introduction to BLOSSAM – the South African BIOenergy Systems Sustainability Assessment and Management portal

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The global bioenergy industry is advancing rapidly. New technologies and potential feedstocks are being proposed that aim for bioenergy to contribute to a wider range of economic, social, and environmental objectives. However, these advancements all require tradeoffs between potential technical advantages, and socio-economic and environmental consequences. Despite technological advances, a number of project failures have been noted with the development, design and implementation of such renewable energy systems in Africa.

The problems that need to be addressed are:

- How to screen bioenergy options based on technical feasibility, economic and financial viability, and social and environmental acceptance. This should be a first phase to prioritise and choose from the potential range of bioenergy options, in terms of their robustness and resilience;
- How to best implement technically feasible solutions, in an integrated manner, within the country's prevailing political, socio-economic and social-ecological systems; and
- How to monitor the implementation of bioenergy programmes to ensure the sustainable adoption and operation of the chosen options.

The main problem is, therefore, how to ensure that policies and decision-making on bioenergy options result in localised social-ecological advantages that outweigh disadvantages. The complex behaviours that both socio-economic and ecological systems exhibit exacerbate this problem, primarily because of the fundamental uncertainty associated with them; these behaviours must be recognised and approaches are required to assess and manage behavioural uncertainties in a sustainable way. Therefore, both public and private sector policy-makers, decision-makers, and technology developers, operating from the regional and national levels to the local level, require robust methods to guide structured assessments and the subsequent

management of proposed bioenergy systems; before they can make sound recommendations relating to bioenergy supply interventions.

In other words, developed methods must be practical for all levels of policy- and decision-makers, and technology developers, yet they must ensure that the sustainability of the integrated bioenergy supply systems are assessed comprehensively; appropriate information must be provided on technical, financial, socio-economic and environmental considerations so that the users can take informed decisions that lead to sustainable bioenergy interventions.

The BIOenergy Systems Sustainability Assessment and Management (BLOSSAM) portal, which is the outcome of a three-year parliamentary grant to the CSIR, aims to provide the comprehensive and holistic assessment, monitoring and management of bioenergy interventions in order to plan for sustainable development. BLOSSAM is a participatory and transparent process to decision-making that involves multi-stakeholder engagement coupled with expert and public opinion.

This helps to ensure stakeholder buy-in as well as general trust brokering that facilitates the process of technology transfer and increases the long-term success of bioenergy interventions. The BLOSSAM portal (www.blossam.org) is an information hub and an analytical framework with a toolbox of decision-support systems for the assessment, monitoring and management of bioenergy for sustainable development.