Integrated Food-Energy Systems for Power and Food Security in the Tropics: A Revolutionary Approach

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The Opportunity

South-South Extension of a Fully Commercialized Food-Energy System from Sri Lanka to Eastern and Southern Africa
Gliricidia trees intercropped with smallholder coconut in Sri Lanka. The trees are pruned every 8 months. The wood is feedstock for electrical power generation. The foliage is used for biofertilizer and fodder for livestock on the farm.
Smallholder harvesting his wood from his cropland for sale to the power plant
35 kv gasifier: Village-sized unit
Industrial size: Large plants of 5-15 MW
Gliricidia is distributed throughout Africa and used by farmers as an excellent source of biofertilizer and fodder.
What Needs to be Done?

• Feasibility analyses, and public-private partnership development to pave the way for

• Attracting and harnessing substantive levels of commercial and public investment in the development of an

• Agroforestry-based energy industry in Eastern and Southern Africa, with an emphasis on

• Implementing new commercial-scale projects in five countries that can fully demonstrate the potential for expansion.
18 African countries are now engaged in EverGreen Agriculture

Farmer Managed Natural Regeneration
Conservation Agriculture with trees
Trees interplanted in conventional tilled cropland
Farmer Managed Natural Regeneration +
Trees interplanted in conventional tilled cropland