

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

Dennis Garrity
Drylands Ambassador, UNCCD
Chair, EverGreen Agriculture Partnership





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

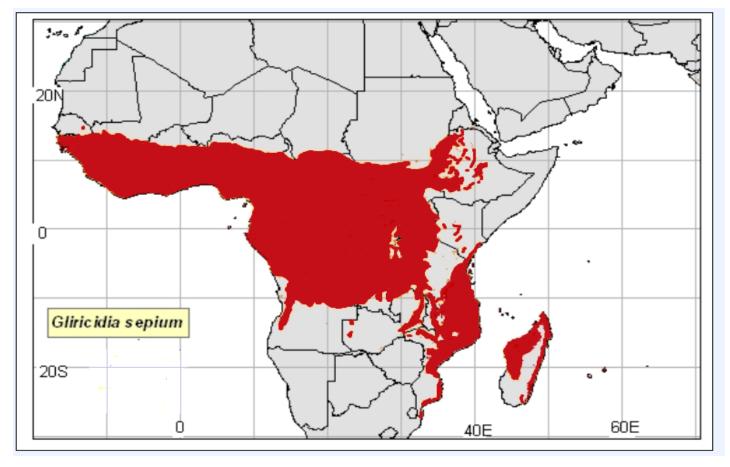


35 kv gasifier: Village-sized unit



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



