

Key impact 1 Unlocking the potential of biomass in a sustainable way (continued)

Case study

Coega Biomass Centre

Since 2022, the Coega Biomass Centre (CBC) pellet plant has been fully owned by Netherlands-based partners, iLive, Partners for Innovation, and Finco Energies. iLive and Partners for Innovation are responsible for managing and operating the plant.

Situated in the Special Economic Zone, in Coega, Port Elizabeth, South Africa, and 7km from the deep-sea port facility in Coega, the pellet plant has a production capacity of 120,000 tonnes per year. The plant had been mothballed for some 10 years before the new owners took it over and, following a full refurbishment, commissioning began in February 2024.

On acquiring the pellet plant, the partners set themselves several business goals, including supplying pellets to bulk export markets (industrial and heating sectors), diversifying into local markets (power, process steam and the cooking stove market), and demonstrating a feasible biomass model in South Africa for future expansion and duplication.

National Invasive Alien Plants (IAPs) are a serious threat to ground water, being the largest single contributor to drought, biodiversity and the economic value of agriculture and tourism in South Africa.

With over 200 million tonnes across the country, there is a legal requirement on all landowners to eradicate IAPs and reduce the threats posed by them.

Eradication of IAPs opens up new opportunities, such as biomass production. The feedstock used in the CBC production process is primarily (70%) IAPs (pine, eucalyptus and black wattle) from land restoration, with the remainder made up by sawmill processing residues (primarily pine). All feedstock is 100% FSC® certified and is sourced from the CBC managed FSC forest management group scheme, with a membership of a mixture of small landowners.

Once IAPs are harvested, group scheme members have a responsibility to prevent re-growth of the alien species. This importantly allows species to reclaim the land and the original biomes to be regenerated.

For example, the Fynbos biome, located in the Eastern Cape and Western Cape provinces, is known for its exceptional degree of biodiversity and will benefit greatly from the removal of alien species.

Working with various partners, including the Roundtable on Sustainable Biomaterials (RSB), WWF South Africa, Stellenbosch University and the University of Utrecht, CBC is supporting research and development of tools for measuring the impact of its business model.

Estimates of socio-economic and environmental outcomes promise positive impacts. When fully operational, the plant will provide over 50 direct jobs and another 250 indirect jobs throughout the value chain, such as surveying, training, harvesting, collection, transportation and processing of feedstock inputs.

A real boon to the local region that suffers from high unemployment levels, with great potential to support the 'Just Energy Transition' in South Africa through job creation and helping the local economy to grow.

Clearance and rehabilitation of an estimated 1,500ha per year of IAP-covered lands to either natural biomes or back into productive agricultural land would lead to a natural water resource saving estimated at 5,500,000 cubic meters per year, combatting drought in the region.

Further, an estimated saving in carbon emissions in excess of 70%, equating to some 200,000 tonnes of CO₂ each year, when replacing coal with CBC's biomass pellets at power plants.



COEGA
BIOMASS
CENTRE

“Demonstrating the sustainability credentials of the biomass we produce is important to Coega Biomass Centre. And with Europe as a key destination market, compliance with the recast Renewable Energy Directive (REDII) is essential. We were delighted to receive FSC and SBP certification in 2022, and included REDII in our SBP scope in 2023.”

Emiel Hanekamp

Director Biomass Supply and Sustainability

