

Project title : MASSELEC - Biomass supply potential study in Southern Côte d'Ivoire

Project place	Project cost	Role in the project	Technical and financial sponsors	Dates
Côte d'Ivoire	29 650 €	Value chain expertise on the biomass thematic		September 2024 - October 2024

Project's goals and results

Main goals

With the aim to establishing biomass power plants, Nitidæ helped identify, map and quantify biomass deposits in southern Côte d'Ivoire by collecting information from institutions, professional organisations, technical and financial partners and other stakeholders involved in the national production and processing of agricultural and forestry materials. The objective was also to determine which agricultural and industrial residues have good energy potential and are available without competing with human food or soil fertility, as well as to assess the impacts of current trends in the sector, national strategies and market variations on the availability of these resources.

Specific objectives

- SO1.** Identify potentially recoverable agricultural and industrial residues for biomass, their conversion ratios (from literature and surveys with industry stakeholders), and their current (non-)use
- SO2.** Map the available biomass deposits (industrial plantations, smallholder plantations, factories) in Southern Côte d'Ivoire
- SO3.** Quantify the available biomass deposits within a logistically accessible distance from several potential implementation sites identified by the partner
- SO4.** Analyse the current and future potential of the deposits, considering current sector trends, national strategies, and international market prospects
- SO5.** Issue operational recommendations to allow the partner to refine the scope, both geographically and in terms of biomass sources, for their future feasibility studies

Beneficiaries

Results

- R1.** The various residues are identified, along with their current use. Literature review and interviews with sector stakeholders provide conversion ratios for quantifying these deposits
- R2.** A supply basin map, based on isochrones around potential implementation sites identified by the partner, is produced. This map determines the areas of plantations within a 4-hour drive from each point
- R3.** The theoretical potential of each biomass deposit is calculated by volume, per isochrone around each potential implementation site
- R4.** Scenarios for the evolution of deposits up to 2050 are produced based on current sector trends, national strategies, and global market data
- R5.** For each deposit, opportunities and risks/threats are analysed, and an action plan to deepen the analysis is proposed

Activities

- A1.** Literature review on the industrial sectors within the study scope and their potential for biomass valorisation
- A2.** Production of isochrone maps and comparison with land use map and other relevant sources
- A3.** Identification of key stakeholders in the relevant sectors (interprofessional organizations, institutions, industrialists, cooperatives, etc.) and interviews with them. Visits to plantations and factories
- A4.** Based on data collection, volume of available industrial residues by isochrone
- A5.** Assessment of competing uses for the identified residues and the environmental impacts of their valorisation as energy