

Proposition for tutored project M2 MAFEN

Evaluating environmental impacts and circular economy benefits of coffee grounds biochar production in Southern France

Company:

Cafés du Sud SARL

126 Avenue d'Estienne d'Orves

83500 La Seyne-sur-Mer, France

SIRET : 904 234 567 00019

Specialty coffee roaster based in Southern France, focusing on sustainable agriculture, circular economy, and premium coffee experiences for both local and international markets. The company develops innovative projects around coffee valorization, including biochar production from coffee grounds, cultural events, and partnerships in the office and hospitality sectors.

Tutor: clement@ooka.fr

Clément RIBEAUD, Founder and Manager of Cafés du Sud SARL. Certified Q-Grader with extensive expertise in specialty coffee roasting, circular economy projects, and agro-food innovation. With over 10 years of experience in entrepreneurship and sustainable development, he is leading European-funded projects on the valorization of agricultural by-products, including feasibility studies on producing biochar from spent coffee grounds.

Context:

Spent coffee grounds represent millions of tons of waste worldwide. In southern France, valorizing this biomass as biochar could help reduce greenhouse gas emissions, improve waste management, and provide sustainable agricultural inputs. However, the environmental and economic impacts of such a pathway need to be assessed to validate its feasibility within a circular economy framework.

Objectives:

- Perform a bibliographic review on the environmental impacts of biochar production.
- Conduct a simplified life cycle assessment (LCA) of SCG-to-biochar pathways (landfilling vs. valorization).
- Interview stakeholders (waste managers, farmers, municipalities) to gather insights.
- Propose strategies to optimize sustainability and circular economy integration.