

# **Climate change mitigation by bio-ethanol production in Mali: feasible & sustainable?**

**Theme: Low carbon energy development**

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## **Abstract**

Production of bio-fuels is by many seen as a means of combining the objectives of (1) increasing rural incomes, (2) improving the access of rural communities to fuel and electricity and (3) mitigating climate change. On the other hand it is also claimed to cause worsened food security, loss of biological diversity and resulting in GHG emissions offsetting its mitigation effects. The study reported examines the feasibility and sustainability of producing bio-ethanol from cassava in southern Mali, and it addresses all the concerns mentioned. It is shown that depending on the choice of baseline and a number of other assumptions such a production may well be feasible and sustainable, cause increase in household incomes, better utilization of labour resources and better access to energy (e.g. for household uses), while not resulting in significant GHG-emissions nor negative effects on food security at local-to-national scales. However, this conclusion may easily be inversed under other circumstances, e.g. if forest is cleared for producing bio-fuel feed-stocks. The policy implications of these findings are discussed, especially as concerns the sustainability criteria to be applied to cases like this.