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COMMENTARY

# Biofuel certification

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**Abstract:** Scope of biofuel certification is reviewed. It has been found that a biofuel certification is needed in the biofuels industry to authenticate biodiesel and its blends for use in diesel engines.In the world, a standard energy audit method is required to evaluate the feasibility of biodiesel blend as fuel and also harmonise the research of biodiesel as fuel. Leagal measures for biofuel certification is required. There are various obstacles and challenges for biofuel certification. Therefore, this paper addresses the legal measures, obstacles and challenges for biofuel certification.

**Keywords:** biofuel certification, leagal measures, obstacles and challenges

## 1 Introduction

Scope of biofuel certification is reviewed. A working definition of biofuel performance certification has been elaborated. Certification of biofuel performance has been recognised as an effective methodology and evaluation tool to manage biofuel consumption and systematically improve biofuel performance. It has been found that a biofuels certification method is needed in the biofuels industry to authenticate biodiesel and its blends for use in diesel engines [1]. A standard energy audit method is required to evaluate the feasibility of biodiesel blend as fuel and also harmonise the research of biodiesel as fuel [2].

## 2 Leagal measures for biofuel certification

The development of biofuel certification generally involves two phases. First, broad principles are defined and established with respect to biofuel production. Compliance is necessary to be classified as sustainable. Secondly, it defines how these principles ought to be translated into practically measurable criteria, to provide guidance to biofuel producers on what they should do to produce biofuels sustainably [3].

## 3 Obstacles and challenges for biofuel certification

While the European Union does not advocate for a particular certificate, it has established minimum requirements for certificates (e.g. biofuels should not be derived from land with high carbon stocks, such as wetlands). Certification by European Union Member States and voluntary standards must be recognised by the European Commission [4]. While certification can contribute to sustainable biofuel production, its use has many problems and risks. One of the issues with certificates is the proliferation of them.When certification bodies are deemed trustworthy, they may contribute to buying or importing decisions by ensuring that production meets certain standards. However, there are hundreds of certification systems in place for various products and services. This means that consumers may not always find it easy to differentiate labels based on complete stakeholder engagement and adequate impact evaluations based on labels that only give a green image to unsustainable products [5, 6].

Indeed, several recent studies continue to examine sustainability without incorporating social considerations or focusing solely on economic sustainability [7, 8]. When social sustainability is included, it tends to focus on a development perspective with a particular focus on basic needs [9]. The evaluation of biofuel sustainability has to examine various heterogeneous opinion to judge their multidimensional effect. Consequently, capability of biofuel to accomplish one specific objective can not lead to any conclusion about overall sustainability, its strategy efficiency and its positive or negative impacts [10].

In particular, if too many standards and related certification requirements are implemented too quickly, this could restrict the development of a global biofuels market. In contrast, certification focused on a specific and limited set of issues. and has been designed with the flexibility to adapt

to policy changes and programs have the potential to increase public acceptance of the biofuel option. while safeguarding key social and environmental goals [11]. Many countries suggest that for a biofuel to be considered a contribution to achieving government targets, it needs to be certified to meet certain standards. The objective of biofuel certificates, or the expected result of applying certification criteria, is generally defined as the sustainable production of biofuels [12, 13].

Intergovernmental panel on climate change (IPCC) and International Energy Agency (IEA) reveal the increasing role of bioenergy in climate change mitigation and coherent policy measures are needed in this respect. Policy objectives are difficult to coordinate because action in one area may have unforeseen negative impacts in another. As a consequence, bioenergy policy should be modelled considering overall impacts of policy interventions [14]. Biofuel has the potential to become a promising sustainable energy source by replacing conventional fossil fuels.However, the biofuels industry is still in its initial phase as a result of technical, economic, social and regulatory barriers. 38 barriers to the sustainable development of biofuels were explored through literature and expert opinions. The study also provides some strategies to guide decision makers to formulate policies to effectively remove barriers to the sustainable growth of the biofuel industry [15].

# 4 Conclusion

A standard energy audit method is required to evaluate the feasibility of biodiesel blend as fuel and also harmonise the research of biodiesel as fuel globally. Leagal measures for biofuel certification is required. There are various obstacles and challenges for biofuel certification and there are discussed in this paper. Biofuels certification is must with international recognition in biofuels industry

# Conflict of interest

The authors report there are no competing interests to declare.

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