

7<sup>th</sup> International Congress on

# BIOFUELS AND BIOENERGY

October 02-04, 2017 Toronto, Canada

## Possibilities of biogas production from waste in refugee camp Alzaatari

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Renewable energy sources are a promising solution to minimize draining of conventional energy sources and reduction of pollution. Biogas technology is one solution that offers the conversation of waste streams to a renewable source of higher value. Anaerobic digestion of organic waste of industrial processes offers the production of energy, biogas, and the advantage of prevention of odor release and minimization of pathogens. Refugee camps are taken as temporary solution to existing circumstances. And their temporariness usually prevents the implementation of numerous vital concepts like sustainability, environmental impact, and circular economy among many other. But temporariness is not always the case some refugee camps exceed several years while some eventually turn to permanent living conditions, Jordan's fourth biggest city Zaatari as an example. The lack of sustainability in running refugee camps impacts the quality of life in the camps and the cost to run them amid many other aspects. Furthermore, Zaatari being located in Jordan where the gap between the landfill capacity and the total volume of waste produced on a daily basis was found to be 1,698 tons per day (indicating that 19 per cent of solid waste will not be landfilled due to lack of landfill capacity) further stresses out the need reconsider the running scheme at the camp. The main scope of this paper is to study the potential benefits of the application of circular economy in terms of biomass at Zaatari camp. The 80,000 inhabitants of Zaatari consume over 500,000 \$ worth of electricity each month, that accompanied by the growing deficit in landfill capacity and Jordan's high dependency on foreign energy sources all contribute to the necessity in implementing circular economy concept for the refugee camp, and for Jordan in general.

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