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ENERGY CROPS IN VIETNAM



Jatropha Flower (yeowatzup, CC BY 2.0)

Bioethanol facility (Jenette007, CC BY-SA 4.0)

WHAT ARE ENERGY CROPS?

An energy crop is a plant grown especially for energetic use. Meaning that the harvest is either combusted as solid biomass to generate electricity or heat, or used to produce gas or liquid biomass that can be used as biofuel, such as bioethanol and biodiesel.

Energy crops can be categorised as woody or herbaceous plants. While woody plants, such as fast growing tree species, are mostly combusted, plant species that contain a high amount of sugar either in their fruits, their tubers, or their stoches are mainly used for biofuel production.

WHAT TYPES OF ENERGY CROPS ARE USED IN VIETNAM?

In Vietnam, the most used energy crops are sugar cane (bagasse), cassava, wheat, sesame, peanuts, coco nuts, and jatropha. Furthermore, fast growing tree species, such as Acacia, are often cultivated and used as combustible material.

For the Vietnamese bioethanol production, cassava plays the most important role. It is used as feedstock in most of the bioethanol factories in Vietnam.

BENEFITS OF ENERGY CROPS

Energy crops can replace increasingly scarce fossil resources, such as crude oil, coal, or natural gas, for energy and fuel purposes.

Bioenergy produced by energy crops can contribute to climate and environmental protection: When energy crops are processed into bioenergy, the amount of CO₂ that is emitted does not exceed the amount of CO₂ that has been absorbed by the plant while growing. In general, bioenergy is emission free.

However, in this context it is important to consider to choose sustainable cultivation, transportation, and processing methods to make sure that greenhouse gas emissions stay low also within these steps of energy production

CONFLICTS WITH ENERGY CROPS

The cultivation of enough energy crops to meet the increasing fuel needs in Vietnam requires large areas of land. This can lead to conflicts with other potential land uses, especially with agriculture for food production.

To avoid these conflicts, there is more and more the trend of cultivating energy crops on degraded land that can not be used for food production.

Therefore, the CPEP project aims at testing the feasibility of the cultivation of energy crops on contaminated post-mining sites in Vietnam.