The Energy Garden Project

Girl carrying a heavy load of grass for burning. Photo by Michael Garrigues (2007) Nepal

The Energy Garden project is aimed to help small scale farmers use indigenous plants for bio-fuel production. The project was inspired by the Hassan Bio-fuel Park in India, which uses indigenous oil seed plants grown for shade as a source for local bio-fuel production. The project hopes to explore the possibilities of transferring the knowledge and approach developed in Hassan to Nepal and other countries. The project is being promoted by botanic gardens around the world.

Energy Garden Project has been taking place in Nepal. Photo by Zabara Alexander

Fuel efficient stoves using bio-fuel briquettes. Photo by Albert Gonzalez Farran, UNAMID.

What are Energy Gardens?

These are gardens where energy plants are grown. New technologies enable biomass to be converted more efficiently and in a more cost effective manner. The aim is to develop a model which allows local communities to become energy self sufficient in a sustainable manner, using locally grown plants.

Photo Credit: Heather Heggemeier (2013) Wisconsin Energy Institute

Bio-Energy garden after the first year at Wisconsin Energy Institute

What role do plants play?

Plants absorb energy from the sun through photosynthesis and store it in the form of vegetative growth. This growth takes a wide variety of forms from woody to soft tissues, and can be quite chemically complex including sugars, oils and fatty acids. Plants are therefore idea for bio-energy. This energy can be released through burning wood and other forms of biomass, but more recently, plant products such as vegetable oils and sugars can be broken down with the help of enzymes to create bio-ethanol, bio-diesel and bio-gasoline.

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