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Introduction to the Biomass

The use of biomass involves a strong interaction with a number of competing interest (land use, food production and market prices, agriculture subsidies, just to name a few). Thus, the evaluation of its actual convenience and sustainability may be quite tricky, well beyond the appealing, but partially misleading, notion of carbon neutral combustion process. This lecture offers an introduction to the biomass energy, focusing on the analysis of the environmental, economic and energetic cost of the whole production processes. Some examples will show how a different choice in that process can lead to opposite global effect. A comparison with other renewable energy sources will offer the basic principle of a full life cycle assessment analysis, suggesting a rational approach to the exploitation of an energy source which represents a huge asset in the seek for sustainable energy, but has to be carefully evaluated