AEBIOM
Renewable Energy House
Rue d'Arlon 63-65
1040 Brussels – Belgium
Tel: +32 2 400 10 22
Fax: + 32 2 546 19 34
info@aebiom.org
www.aebiom.org

DECLARATION

Biomass from sustainable forest: a carbon neutral source of renewable energy

AEBIOM argues that biomass use can be increased while keeping carbon neutrality in sustainably managed and productive forests and saving CO_2 by substituting fossil fuels.

Key roles of forest

Forest plays important roles for the society and economy in Europe:

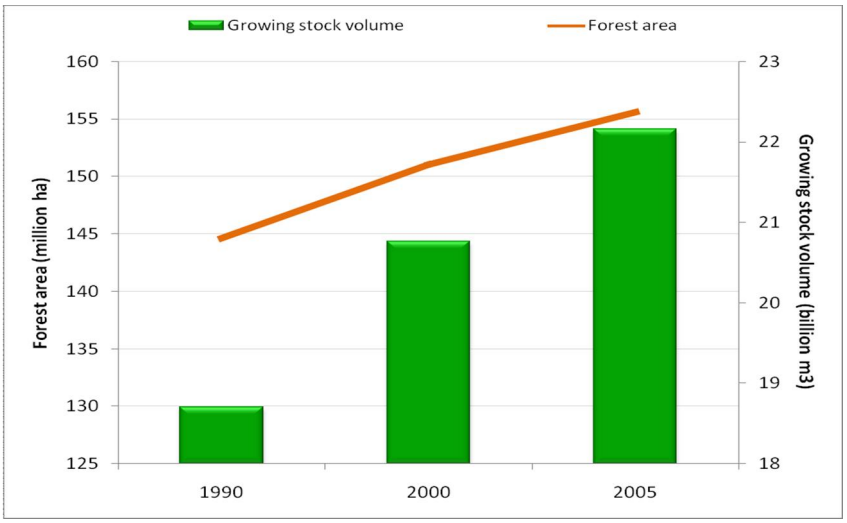
- It offers raw materials for the industry
- It delivers various forms of biomass for energy
- It secures a large number of jobs along the whole value chain
- It provides areas for recreation, leisure activities, wildlife and the preservation of the natural habitat, for the water natural cycles and the stabilization of the regional climate.

Therefore, in Europe, for centuries, forest is protected and its use is regulated by national legislations with the aim to secure a sustainable forestry in Europe.

Forest is continuously storing carbon

One aspect of a sustainable forest is to avoid the over-exploitation. It means that a stable wood stock should be permanently ensured in the forest. Such forest is a carbon neutral forest.

Several inventories of European forests prove us that this objective is over achieved. The forest area and the wood stock are significantly increasing year after year with a sequestration of roughly 400 million tons of CO_2 annually. Thus the European forest is not only producing wood for different purposes but is also an important pool for storing carbon.



Carbon stock in the forest is continuously growing
(Source: Rautinen A. and al.)

The forest is following a natural cycle, with high growth in the beginning and a progressive saturation until it reaches an equilibrium at which the growth equals the decay. Such mature forest does not produce additional biomass for industry or energy and does not uptake carbon anymore. In other words, growing forests are better sinks of carbon than old, slow growing forests. Old forests are carbon stocks but they are not sinks anymore. If we are cutting less than the growth of forests, the carbon stock is increasing. In addition, carbon of mature forests will be released by natural disturbances like forest fires, winds or infestation by insects.

A closed carbon cycle

Trees are absorbing CO_2 from the atmosphere via photosynthesis. By using wood or by decay of dead trees this CO_2 is released to the atmosphere. The carbon cycle is closed with no net CO_2 increase in the atmosphere. Burning fossil fuels means suddenly releasing the carbon (CO_2) that was stored in the earth crust for millions of years.

The life of the forest starts with planting the trees. Progressively a *carbon asset* is build up, that can be used by harvesting for industry and energy needs, giving room for vigorous growth of younger trees. Therefore, there is no carbon debt when harvesting biomass.

An intelligent strategy to fight climate change should be based on sustainable use of the forest for materials and bioenergy purposes, while fossil fuels should be kept underground forever.

AEBIOM statements

- Bioenergy can be produced while at the same time carbon stock in the forest is increasing, ensuring a carbon neutral source of renewable energy.

- Use of bioenergy instead of fossil fuels decreases CO_2 emissions, for an unlimited period as biomass is growing continuously.

- Increasing carbon stock in the forest without exploiting it is a big mistake because forest will become older, with lower annual production and consequently lower substitution of fossil fuels, while at the same time storing annually less and less carbon. Impact on climate will be significantly worse.

- In a sustainably managed forest biomass is a carbon asset and its use does not create a carbon debt. This is the case only when deforestation or over-exploitation takes place, which is not the case in Europe.

- Europe is providing a good example of sustainable forest management. Mechanisms have to be implemented to ensure that imports of wood for industry and energy from outside Europe are coming from countries and areas with sustainable forestry.

- The renewable energy policy will increase the demand for solid biomass in the coming years. Such biomass will come from forest, agriculture (ligno-cellulosic energy crops) and waste streams, and dedicated measures for additional biomass production and supply are needed.
