

## What is an ecosystem

### Man and ecosystems

#### The ecosystem is important for men

Terrestrial and water ecosystems are complex and perfectly organised natural “factories” that produce all that is required for life on Earth and to cover man’s basic requirements: food, fibres, water. Some of these functions of the ecosystems are essential to man, such as air and water depuration, climate control, the nutrient cycle, soil fertility. In addition, some ecosystems (beaches, woods, lakes, high mountains, secluded valleys) are our ideal places for recreation, tourism and meditation, so we can say that the ecosystems have permitted our society and economy to develop. 50% of the world’s population are still engaged in farming, forestry and fishing. This proportion becomes 70% if we take the sub-Sahara, Asian and Pacific countries alone. 25% of the world’s countries have economies that still depend, almost entirely, on the sectors above. Farming alone produces 1.3 trillion dollars of food and fibres a year.

#### Man and the ecosystem

The human processes of farming, industrial production and consumption (or use) of commodities are carried out by similar rules as those of the matter and energy flows of the natural ecosystems. Also in the production and consumption of commodities, matter and energy are derived from nature, pass through the productive processes and get to the consumption stage. Waste and scrap are generated and disposed of in the environment during the production and consumption of commodities. The main differences in the matter and energy flows of natural and human artificial ecosystems are:

- the speed at which resources are taken from nature and waste is given back to nature (excessive exploitation of exhaustible and renewable natural resources);
- quality of materials involved in this flow (pollution).

Both factors often prevent the artificial ecosystems from expanding, and, lacking control and corrective measures, they risk destroying their life and perhaps that of many other natural ecosystems. The speed at which natural resources are taken away is actually so high as to cause these resources to quickly disappear, so that no new productive processes can be fed. The amount and speed at which waste is produced often largely exceed the depuration and assimilation ability of the environment, also because much of this waste is non-biodegradable in the short term.