

February 2000

## 3. Deforestation

### 1. Functions of a Forest

1. Ecosystem: Various kinds of trees, fruits, and flowers nurture the lives of insects, birds, and animals. Life is supported by the food chain created in a forest.
2. Soil: Fallen leaves, animal droppings and decomposed animals help to enrich soil. Roots of trees hold the soil firmly together, preventing the natural nutrients from being washed away.
3. Water: Trees and rich soil work as a “dam,” holding rainwater and allow for it to gradually drain.
4. Air: Absorbs carbon dioxide, releasing oxygen, whereas purifying air.

### 2. Natural Forests

- Natural forests are strong ecosystems featuring diverse animals, insects, and large variety of trees, which are apt to be resistant to damage from harmful insects.
- Fallen leaves, animal droppings and decomposed animals enrich the soil and hold more water without being washed away.
- There are broadleaf trees in natural forests, which release oxygen, purify the air and are resistant to acid rain.
- Because of indiscriminate economic development and the clearing of forests, 80% of the world's virgin forests have already been lost.  
(In Europe, no virgin forest remains. In the US, less than 15% are left.)

### 3. Artificially Planted Forests (planted by humans)

- Trees of the same kind, susceptible to damage from harmful insects.  
“Silent forest” with few living creatures.
- Many trees do not shed their leaves (e.g. pine), and the soil is of poor quality and not good at water retention.
- Many are conifer trees with small leaves and release little oxygen into the atmosphere.
- Planted trees cannot grow without human nurturing.

### 4. Deforestation Today

- An area of forest equal to half the size of Japan is lost every year while a quarter of the area becomes desert.
- Huge amounts of topsoil are running off and the amount of arable land is decreasing as human population increases.
- Forests are being lost several times faster than they can grow back. If deforestation continues at the current pace, the world's forest will be totally destroyed in 100 years.
- If all forests disappear, living creatures on land will also perish soon after.

## 5. Causes of deforestation

- Commercial logging for satisfying massive consumption in developed countries.
- Indiscriminate development (industrial sites, agricultural land, resort sites, land for cash crop agriculture).
- Acid rain, melting of the permafrost.
- Though Japan has an abundant resource of trees (66% of total land is covered by forests), it is the world's largest importer of wood.

To fulfill Japan's increasing demand for wood, tropical rainforests were clear-cut in the Philippines during the 1960's while the same fate befell Indonesia in the 1970's. At present, Japan is heavily importing trees from Malaysia, Papua New Guinea, Australia and Siberia. Anti-Japan logging movements have emerged in these local areas.

## 6. What is necessary to solve the problem

- Restoration and conservation are indispensable for sustainable forest management, but the current economy has been ignoring the importance of this.
- It is necessary to force all parties to restore and preserve natural forests, aiming at self-sufficiency of forest resources in each country.
- The expense required to achieve preservation must be added onto the cost of each finished product.
- When cheap timbers from developing countries are imported, high duties should be imposed, which is used for forest restoration and preservation.
- The actions stated above need to be carried out not only for forest resources, but for all other natural resources.

## 7. What we can do?

- Start with what you can do.
- Refuse excessive wrapping when shopping. Bring your own shopping bags.
- Buy reclaimed and recycled products.
- Carry your own chopsticks (90% of disposable chopsticks are made of imported timber from China and other countries.)
- Reduce the use of disposable materials such as paper cups.
- Send back unsolicited mail which is not needed.
- Follow the "4R" principle - Refuse, Re-use, Reduce, Recycle
- Join in preservation activities such as planting trees, thinning and mowing.