



enviroscape



Tree Power

by Ingrid Strid

Fossil fuels became inexpensive and easily accessible in the mid-twentieth century, leading to the widespread use of non-renewable energy. But now fossil fuel prices are rising, and people are returning to a traditional, renewable source of energy—burning wood.

Though trees are renewable, burning them does affect the environment. Combustion of wood releases particles, carbon monoxide, and some nitrogen oxides. Compared to the combustion of fossil fuels, emissions of heavy metals and sulphur dioxide are negligible.

The trick is to burn wood in such a way as to reduce its harmful effects. Particles released by wood combustion cause respiratory malfunctions, cancer, and skin and liver abnormalities. Many of these particles are chemically stable, and are believed to concentrate at toxic levels inside organisms.

Exposure to carbon monoxide suffocates organisms dependent on oxygen for breathing. Nitrogen oxides contribute to the formation of ground-level ozone, or smog; higher up, they help destroy the Earth's ozone layer. Nitrogen oxides also contribute to acidification, which kills many organisms.

Fortunately, there are ways to minimize pollution. Particle emissions due to wood combustion can be reduced by burning small batches of dry, bark-free firewood. Exhaust gases

may be converted to carbon dioxide by a catalytic converter or an external energy source.

Different methods should be used in different situations, and some methods can perhaps be combined. According to the *Journal of Environmental Management*, 1979, emissions of sulphur dioxide, carbon monoxide and nitrogen oxides from a 25 MW wood-fuelled power plant were negligible compared to emissions from a coal-burning plant when bag filters with a collection efficiency of 99% were used.

Effective combustion technology can be combined with sound forestry management to provide a renewable source of energy with little pollution. Local trees should be burned to avoid transportation energy costs.

Not all countries have forests; people living in heavily-populated areas have exhausted the local wood supply. Many countries can no longer rely on wood as an important source of energy.

Countries that can rely on wood generally have higher rates of energy consumption. Canada's forests could likely satisfy its demand for energy, if current rates of energy consumption decreased.

Large areas should be set aside as forests. Trees soak up carbon dioxide released by the combustion of fossil fuels. Trees have the power to slow down or stop global warming, if it is occurring.

Dear Prime Minister,

The minke whales of Antarctica are the last large population of whales on earth that have not been greatly depleted by commercial whaling and their fate concerns all nations of the world.

I call on you to support the establishment of a sanctuary to protect these and all other species of whales in the Antarctic. Such an action would demonstrate to the world Japan's concern for conservation.

Yours truly,

Name:

Address:

**The Prime Minister
of Japan
2-2-1, Kasumigaseki
Chiyoda-Ku
Tokyo
JAPAN**



Haven for whales proposed

The French government has proposed that the entire area south of the 40th latitude be turned into a permanent Whale Sanctuary.

During this century, over 1 million whales have been killed, primarily by Norway, England, the Netherlands, Japan, and the Soviet Union. All large whales have been hunted systematically; seven of the eight large whale species are on the brink of extinction. The only species still occurring in moderate numbers is

the Minke Whale.

In 1986, commercial killing of whales was banned by the International Whaling Commission. Since then, Japan has been the only country to kill whales in the Antarctic region. Since the ban was imposed, more than 14,000 whales have been killed by the Japanese in the Antarctic—all in the name of science. In May 1993, IWC will meet in Kyoto, Japan, to decide if commercial whaling can be resumed, and if so, under

what restrictions.

Most whales are born and grow up south of the 40th latitude. This is also the area where most whales find their food. An Antarctic Whale Sanctuary might give whales a better chance to survive. Show the Japanese government that you care. **Please clip and sign the enclosed postcard, and give it to CEAG, c/o SUB Enquiry Desk. We'll mail it for you. Thank you on behalf of the whales.** (courtesy of Greenpeace)

Environmental activist fights persecution

by Christy Gustavison

The leader of the Green Belt Movement in Kenya has gone into hiding out of fear of being arrested for her relentless opposition to that country's political regime. Professor Wangari Maathai is a prominent environmentalist and a campaigner for greater democracy in Kenya.

She is just one of a growing number of environmentalists worldwide who are encountering difficulties with their governments for their beliefs.

Maathai began the Green Belt Movement in 1979. It aims to promote reforestation by planting green belts of trees around schools and churches all over the country. To date, the Green Belt Movement has planted 10 million trees, established 1500 green belts in Kenya, and involved 50,000 people. For her efforts Maathai has been awarded the Right Livelihood Award, the alternative Nobel Peace Prize, a United Nations Environment Program Global 500 Award and, most recently, the 1991

Africa Prize for leadership in the fight to end hunger.

Deforestation is a serious problem in Kenya, leading to a rapidly deteriorating environment, increased poverty, and malnutrition.

Already there is a shortage of fuelwood in a country where 90% of the population is rural. Trees are an

Women's chores are directly related to conservation

essential household commodity in Kenya; they are the main source of fuelwood for cooking. Forests are also an important source of food, supplementary income, and household materials like poles.

Tree-planting is designed to rehabilitate the environment and provide essential products. Trees act as

a buffer against the advancing desert and prevent soil erosion.

What sets the Green Movement apart from other grassroots environmental organizations is that most of its members are women.

Women and children are the main gatherers of fuelwood in Kenya, as in many other parts of the world. As fuelwood becomes scarce, women and children must walk farther and carry heavier loads. Women have less time to earn supplementary income, and children spend less time in school. Malnutrition increases and the quality of life declines.

Women are targets of the Green Belt Movement because their household chores are directly related to environmental conservation.

A project begins when an interested group applies to the Green Belt Movement headquarters in Nairobi. Staff visit the community to ensure that trees are planted correctly. The Green Belt Movement pays women for any seedlings they bring to help establish a tree nursery. To promote

genetic diversity, only indigenous tree species are planted. Throughout the project, women are trained to care for the seedlings until they reach maturity.

Staff also conduct education sessions on the links between environment and development, and the need for accountable public institutions. It is this last objective which has landed Maathai in so much trouble.

Her relationship with the government began to deteriorate in 1988, when the Green Belt Movement spearheaded a campaign to protest the construction of a high-rise in Nairobi. In January 1992 she was placed under house arrest for spreading "malicious rumours" that the President of Kenya, Daniel arap Moi, was about to stage a coup in order to prevent the development of democracy. In March, Maathai was beaten during a peaceful protest of political prisoners.

During the multi-party elections, Maathai campaigned tirelessly for the opposition. The election results re-

turned the President and his party to power amid charges of fraud and corruption. Maathai and other prominent opposition leaders have questioned the results and expressed their displeasure.

Today Maathai is in serious trouble with the Kenyan government because of her alleged role in Rift Valley. The government accuses her of inciting ethnic violence in the region to solicit funds for her own use. She and other opposition leaders have vigorously denied any involvement and maintain that the government is aware that they were not involved.

Maathai believes people will listen to her message even though harassment of Green Belt members may occur. The experience of the Green Belt Movement shows that there are powerful links between environmental issues and democracy in Africa today. Democracy is a prerequisite to the continued success of grassroots environmental organizations like the Green Belt Movement in Kenya.

