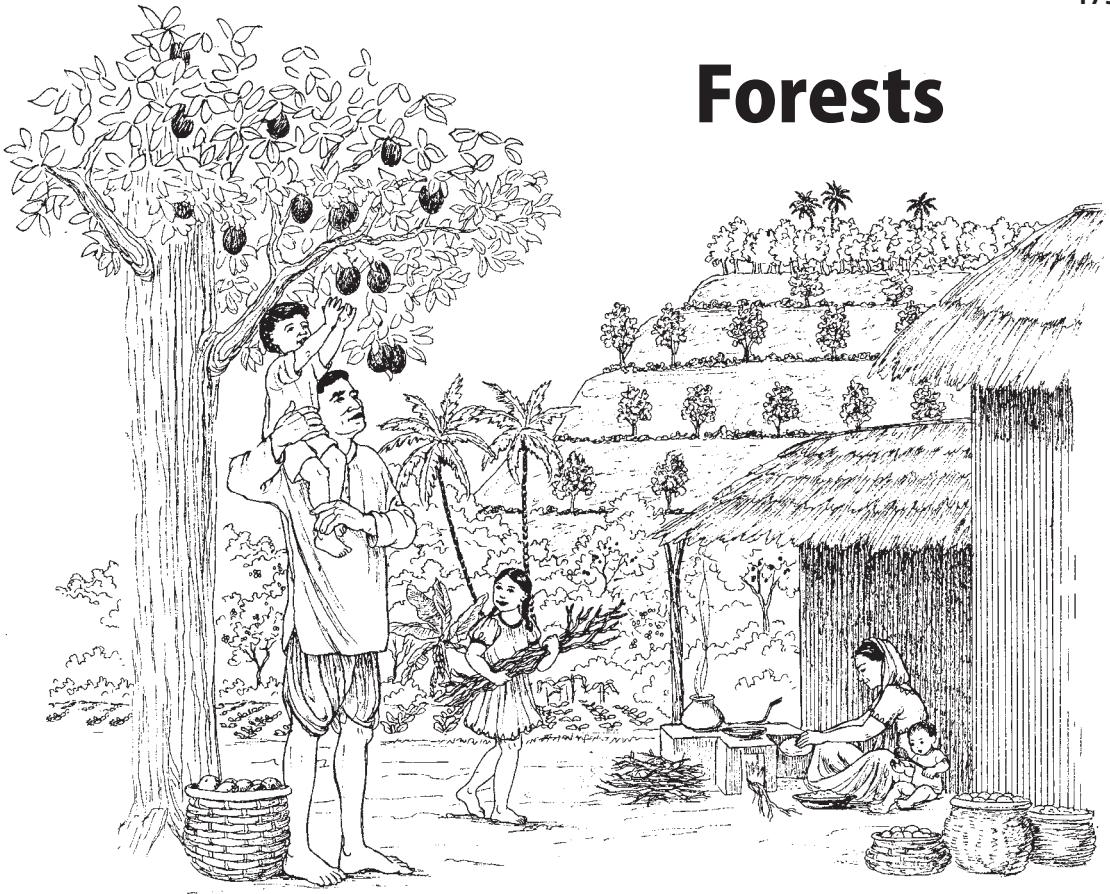


10 Forests

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Forests



Forests provide essential resources such as food, firewood, building materials, fodder, medicines, and many other things. Trees and forests also play an important role in sustaining a healthy environment. They keep the air and water clean, prevent erosion and flooding, enrich soil, make homes for birds, animals, and plants, provide shade, and make our communities beautiful. Trees and forests help to stabilize the climate and reduce climate change.

In order for forests to continue providing resources and sustaining a healthy environment, they must be well cared for, managed fairly, and used wisely. But because forest resources are needed by communities inside and outside the forest and also valued by industries, and because the land under forests is sometimes wanted for other uses, forests around the world are being cleared faster than they can grow back. Sometimes logging companies, construction companies, or other industries that clear forests, such as mining, offer people sources of income they desperately need.

However, there is a balance to be found between the need to use land and resources, and the need to protect these resources for the future. Whenever too much of a resource is used, it causes far-reaching and long-lasting harm. Many communities that have lived off the forest for generations know that they will be seriously harmed if too much of the forest is used up or cleared.

The Green Belt Movement

Wangari Maathai, a woman from the East African country of Kenya, says Mount Kenya used to be a shy mountain, always hidden behind clouds. This mountain is sacred to her people because many rivers flow from the forests that once covered the mountain's slopes. Now, Mount Kenya is no longer shy. The clouds that covered it are gone, and so are the forests. And with the loss of the forests and clouds, the rivers also have begun to dry up.

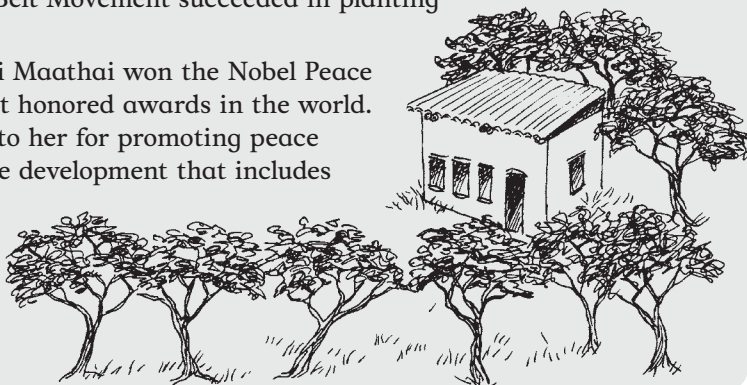
As she grew up, Wangari saw how deforestation led to soil erosion, loss of water sources, and a scarcity of firewood. She began to understand that deforestation caused poverty and drought. So Wangari began planting trees.

Wangari organized a group of women to plant trees around their homes and fields. Because they planted trees in rows or "belts," they became known as the Green Belt Movement. The women of the Green Belt Movement began to teach other people how their lives were affected by deforestation and to plant trees with them. They brought fruit trees to farmers, and planted them on hillsides to prevent erosion. By planting trees in both cities and villages to create green spaces, give shade, and to provide firewood, they showed how planting trees could solve many problems. The Green Belt Movement also planted vegetable gardens, built small dams to capture rainwater, and held workshops to help people understand the need for healthy forests.

In taking responsibility for their environment, the Green Belt Movement realized they needed the support of their government to care for the environment for the good of all Kenyans. Planting trees became an expression of a movement for peace and democracy in Kenya. When conflicts arose between different communities, the Green Belt Movement used "peace trees" to help bring them together.

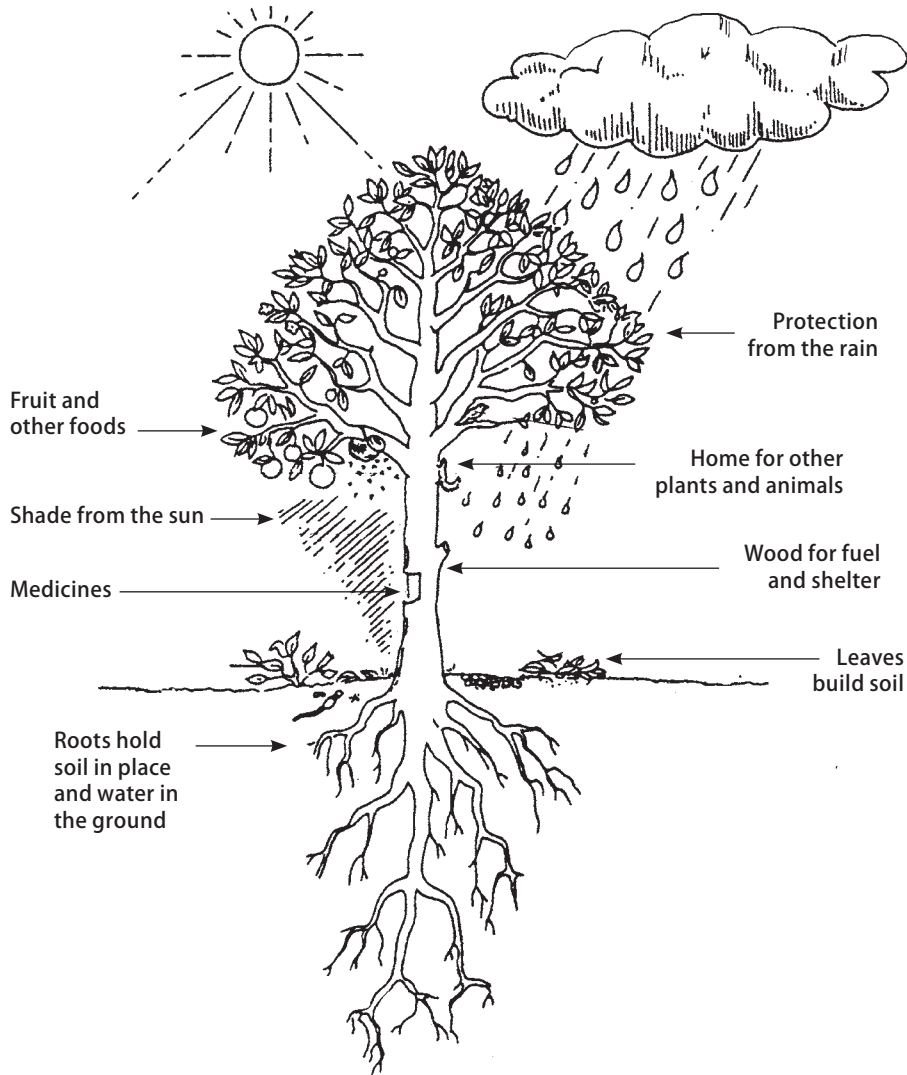
As a woman who planted trees, Wangari became a hero in her country. But she also faced many hardships. Unable to live with such a strong woman, her husband left her. Because she organized among the poor, her government arrested her. But because of her bravery, and the work of thousands of Kenyans, the Green Belt Movement succeeded in planting millions of trees.

In 2004, Wangari Maathai won the Nobel Peace Prize, one of the most honored awards in the world. The prize was given to her for promoting peace through a sustainable development that includes democracy, human rights, and equality for women. And it all started with planting trees.



Forests and Health

Forests support the health of people everywhere and stabilize the climate. Even people who live far from forests, or in areas where forests have been degraded or severely damaged, depend on the things forests provide. When forests are degraded or destroyed, community health is threatened because the processes and functions that trees and forests carry out in support of health are not done.



Trees and forests support community health and well-being in many ways.

Forests and water

Some people believe trees attract rain and hold water close to the ground. Others believe trees use more water than they make available, and that they compete with crops. Depending on the kinds of trees, where they grow, and other conditions, both of these beliefs can be true.

Rich forest soils and deep tree roots act as filters for water. When pesticides, heavy metals, and other toxic chemicals pollute surface water and groundwater, forests help filter them out. The filtered water feeds our wells, streams, and lakes, and keeps our watersheds and the people who live there healthy. Without forests to protect water sources, there is less safe water for drinking and bathing. For all of these reasons, it is usually best to leave trees standing rather than cut them down, especially if your water is clean and abundant.

But some kinds of trees, especially trees that grow fast and are not native to the area (see page 202), may use up water resources. For farmers and others who want to protect water resources, it is important to notice how different types of trees affect the water, and to make careful decisions about what trees to plant.

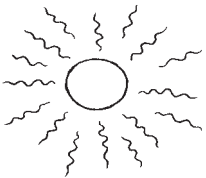


Forests and weather

Forests have important effects on the weather and the climate (the weather in a place over a long period of time). They help make weather less extreme by making warm air cooler and wetter, and making cold air warmer and drier. Trees protect houses and crops from strong winds and hot sun, and provide shelter from strong rains.

On a larger scale, forests fight global warming (see page 33) by absorbing toxic pollution. This helps keep the climate of the entire planet milder and the air and water healthier. When we lose large areas of forest, the threat of natural disasters such as hurricanes, droughts, and heat waves is increased.

**Where forests have been cleared,
the weather becomes more extreme.**



Forests prevent erosion and reduce flooding

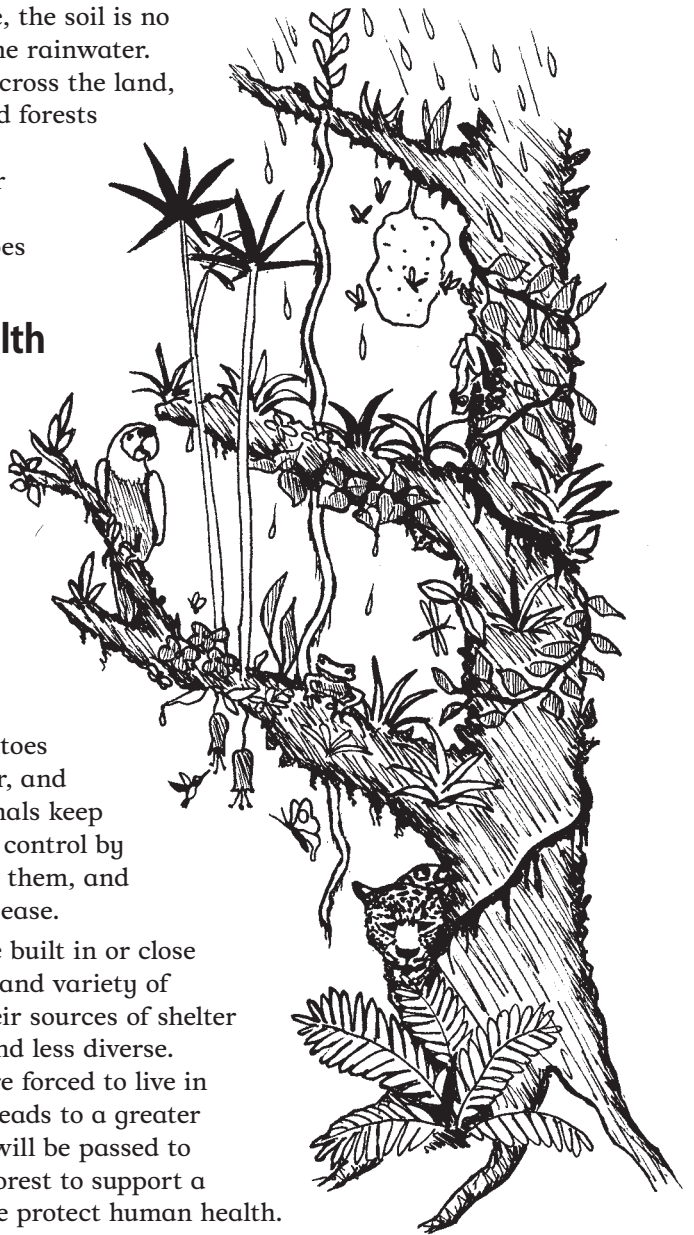
By adding leaves to the soil, providing shade for plants that grow beneath the trees, and holding soil in place with their roots, trees prevent erosion and reduce flooding. They slow rainwater and spread it across the ground, so it will sink into the soil rather than run off.

When forests are cleared, soil washes into rivers and streams. When storms come, the soil is no longer able to absorb and hold the rainwater. Instead, the water flows faster across the land, causing floods. Keeping trees and forests standing is an important way to protect the natural flow of water through the watershed. (For an activity that shows what rain does to bare soil, see page 289.)

Forest diversity and health

In a forest, it is easy to see the web of life (see page 27) because a healthy forest contains many different kinds of plants and animals. This diversity of life protects people's health in many ways. Bees and other insects that live in trees **pollinate** crops so they flower and produce fruit. Wasps and ants eat insects that attack crops. Bats and birds eat mosquitoes that spread malaria, yellow fever, and other diseases. Other forest animals keep rats, fleas, flies, and ticks under control by hunting them or competing with them, and prevent them from spreading disease.

When human settlements are built in or close to degraded forests, the number and variety of animals are reduced because their sources of shelter and food become less plentiful and less diverse. Also, the animals that remain are forced to live in closer contact with people. This leads to a greater possibility that animal diseases will be passed to people. By maintaining enough forest to support a variety of plants and animals, we protect human health.



Forests, food, fuel, and medicine

Forests contain a large variety of fruits, nuts, seeds, roots, insects, and animals that serve as food and medicine for people. When forests are degraded, it often results in hunger, malnutrition, and illness. People who depend on these resources must find other ways to survive. When foods and medicines from the forest are lost, the knowledge of how to prepare and use them is also lost. In this way, the loss of forests leads to the loss of important knowledge and traditions.

In places where resources are scarce, people sometimes feel forced to choose between keeping forests standing and cutting down trees to plant crops for food. But even for farmers who clear the forest to plant crops, keeping some trees is important. In areas where farming competes with forests, it is important to try to keep a balance between them. (For more about forests and farming, see page 302.)

How can we cook if the food and firewood from our forest are all gone!



Women's burden

Women and children often do the hard work of collecting and carrying wood for fuel. The burden of this work over many years can lead to health problems. As forests are destroyed, people must travel longer distances to collect wood. This gives them less time to do other necessary work and to go to school.

Women and children may also face physical and sexual violence when they travel to collect wood. Because of this, in some places women and girls go in groups to collect firewood during daylight hours. By planting and maintaining good firewood trees close to home, the people who collect wood can stay safe and healthy.



Carrying heavy loads over long distances can cause headaches, backaches and, especially in children, damage to the spine.

Forests and Livelihood

Forests are an important source of livelihood. Some governments and international organizations say the greatest damage to forests is caused by poor people who cut down trees to farm or earn their livelihood in other ways. But when people do not have enough food, income, or other basic needs, the need to survive becomes more important than the need to preserve forests. Sometimes people have no choice but to cut trees, whether to clear new farmland or to harvest firewood and lumber. The blame for forest destruction is rarely placed on industries that take huge amounts of wood or cut down forests for mining, oil exploration, or industrial plantations.

When people's daily needs are met they are better able to think about the future, including how to care for the environment. People who live in and care for forests know there are many ways to earn a living from the forest without causing too much damage.



Deforestation causes poverty and poverty causes more deforestation.

Farming in the forest

Farmers in many places clear spaces in the forest to plant crops, leaving the surrounding forest untouched. They farm there until weeds begin to compete with their crops. Then they clear a new plot and the forest grows back in the old plot and restores the soil. This is sometimes called “slash and burn,” or swidden farming.

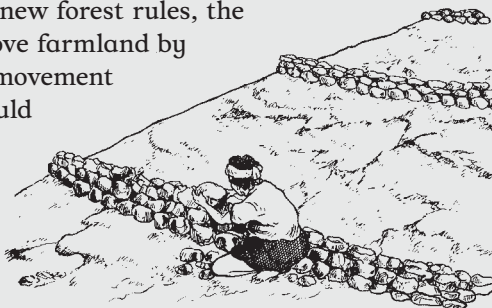
Swidden farming has been done for thousands of years. But as populations grow and settle new areas, the amount of forest available to farm this way is reduced. Neither is there enough land to let farm plots be reclaimed by forest. Swidden farming has become unsustainable, both for the farmer and for the forest. Communities that farm in forest areas can get better results and remain on their land longer if they use sustainable farming methods (see Chapter 15).

Protecting forests and livelihood

In the forests of Andra Pradesh, India, villagers clear patches of forest to grow crops. But in the months when there is little food from their farm plots, many people’s livelihoods depend on things that grow in the forest. Some villagers gather and sell wood for fuel, while others use wood to make tools to sell. The way the villagers are allowed to use forest resources is controlled by groups called “community forest committees.”

When the forest committees saw that some areas were being damaged from overuse, they made new rules to reduce the amount of wood that could be taken. The rules were very strict, and many people’s livelihoods were threatened. People who survived by selling wood for fuel and making tools no longer had this income. During the months when food was scarce, these families suffered.

The members of the forest committees came from these same communities, so they wanted to find a solution that made sure no community member went hungry, but still protected the forest. After many meetings, a decision was reached. Instead of changing the new forest rules, the forest committees would help to improve farmland by building contour barriers to slow the movement of water and prevent erosion. This would make the soil richer and provide more water for crops so farms would be more productive and there would be more food for everyone without endangering the forest.



Ecotourism

Ecotourism is a way to earn money from visitors coming to see the natural beauty of an area, or to learn about the plants and animals that live there. Some ecotourism projects bring people only to enjoy the natural beauty. Others invite them to live with people in the community to learn about protecting the environment. Still other projects invite tourists to actively work on projects to protect the environment.

Ecotourism is a good way for forest communities to earn money. But starting and running a project can be costly, and needs careful planning. Tourists require food, comfort, lodging, guides, and lots of patience in dealing with cultural differences. They may have accidents or need health care. Getting tourists to visit requires advertising in magazines or on the internet, printing brochures, and doing other forms of publicity.

Ecotourism projects are not always sustainable. They must be carefully managed so the money they bring benefits the community, not just outside agents or businesses, or a few local families. Successful ecotourism projects often limit the number of tourists who visit, in order to cause less pressure on the community and less damage to the environment.

Non-timber forest products

Non-timber forest products are anything besides wood that can be taken and sold without damaging the forest. This includes nuts, fruits, medicinal plants, and fibers. Communities that have success selling non-timber forest products have found it important to follow these guidelines:

- Set clear rules about who may harvest and sell the product, and how to best harvest it in a sustainable way. Once a product becomes successful, it is in danger of being overharvested. Collect only enough of the product that it can continue to grow and reproduce.
- Find or develop a market for the product. There is no point harvesting products if they will not sell or be used.



Carefully managed ecotourism can protect forests.

Harvesting medicine from the forest



Near the Bay of Bengal in India, many people go to traditional healers when they are sick. These healers make medicines from plants gathered in the forest. One day, people from a non-governmental organization (NGO) came to a village there to help people earn money by gathering these medicinal plants and selling them in the city. By using their organization to sell these medicines, they helped the community make money from the forest without cutting down trees.

The villagers were glad to have a new way to earn money, and many people began to collect and sell the medicinal plants. But they did not ask the healers how to collect the plants without damaging them, and they were not careful about how much they gathered.

In their excitement to earn money, some villagers harmed the trees they collected from. Instead of digging around a tree to collect a few roots some people cut down the whole tree. In a short time, the medicinal plants had mostly disappeared from the forest. This left traditional healers with no plants to use for healing. So the villagers had to spend a lot of money to buy medicines at the pharmacy when they were sick. In the end, the health of both the people and the forest suffered from harvesting plants in a way that did not protect them for the future.

Forest Destruction

Most forests are destroyed by logging companies and other corporations that profit from unsustainable resource use. When one forest is destroyed, the big companies simply move to another forest. But the people who live in or near the destroyed forest usually have nowhere else to go.

People who do not live off forests directly still use many forest products, such as books and newspapers, building materials, foods such as beef, soy, and palm oil from plantations cut out of the forest, and minerals dug from beneath it. Rarely do people consider the need to replace forests used up in these ways.

How forests are degraded and destroyed

If forest resources are not used and managed in ways that allow the forest to continue growing and producing, all of our forests will soon be gone. Causes of large-scale damage to forests include:

- **Clear cut logging** (when most of the trees in an area are cut for lumber) compacts and erodes soil, destroys wildlife, and fills waterways with silt.
- **Large commercial farming, cattle ranching, and tree plantations** often involve clearing land of forests.
- **Shrimp farms** are built by cutting down and clearing mangrove swamps and other coastal forests, often putting small fishing communities out of work, contaminating water, and leading to increased sickness, poverty, and malnutrition.
- **Paper mills** leave behind toxic waste that pollutes the land, water, and air.
- **Mining, oil, and gas companies** cut down forests and leave behind toxic waste that poisons water, land, and air.
- **Large dam projects** flood large areas of forest. People forced to move from the dam site then cut down more forest to make new homes and fields.



Corporations and governments seldom consider the effects on people's health and livelihoods when forests become products to be bought and sold.

Forest Conflicts

Because forest resources are limited, conflicts often arise among people who need to use the forest resources in different ways. Conflicts also arise between local communities that depend on the forest and industries from outside the community that want the resources the forest can provide.

Sociodramas

A sociodrama is a way to use theater to help think about conflicts and the causes of those conflicts. Sociodramas can also help people explore possibilities for action and change. (See page 17 for more about sociodramas and role plays; also see the Hesperian book, *Helping Health Workers Learn*.)

- 1 **Divide into groups** of about 5 people each and give each group a short description of a situation that might lead to conflict over forest resources. Make up situations that are believable to people, but avoid local situations that might shame or anger the people involved in them. The plays will be more realistic if the participants use a few simple costumes and props to show the parts they are playing.
- 2 **Ask each group** to spend 15 to 20 minutes to prepare a 5 minute sociodrama. Encourage everyone to play a part. Each group presents their play for the other participants. After each sociodrama is over, a discussion about community conflicts can lead to solutions. Or you can wait until all groups have presented and discuss them all together.
- 3 **How did you feel?** After presenting the sociodramas and before the discussion (see page 189), ask each participant how it felt to play their part. Ask the people who watched how they felt during each sociodrama, and how the actors made them feel about the conflict.



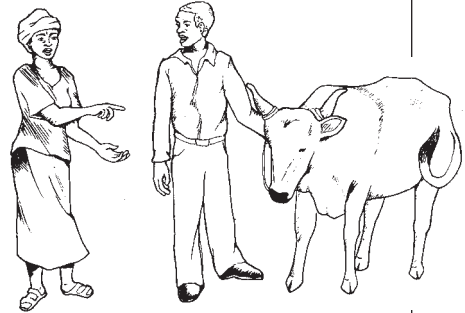
A facilitator should be aware of conflicts in the community and be sensitive to the ways different community members may react to the discussion. During sociodramas, be careful to create a safe and open environment where people are not afraid to speak.

Sociodramas (continued)

Choose some of the stories below to make sociodramas about forest conflicts. Or make up sociodramas based on real conflicts in your community.

Situation 1. Characters: man with cattle; herbal medicine collectors; community meeting participants.

After years away from the community, a man returns with 10 head of cattle and begins to graze them on community forest land. When other community members go to the forest to collect medicines and thatch, they find that the cattle have eaten so much there is little left for them. They call a meeting to discuss the problem. The man with the cattle insists he has a right to graze his cattle, no matter how much they eat. Others in the community disagree. What happens next?



Situation 2. Characters: young men cutting trees; government workers; women collecting firewood.

Several young men are cutting down trees on communal land without permission, and selling the lumber to local government workers, who take the lumber away on a truck. A woman goes to the place where she usually collects firewood and finds the young men cutting down trees. One of the men is her son. She returns to the community and tells the mothers of the other young men. The next day, the women go to the forest to tell the young men to stop cutting down trees. The first woman's son says he needs the money from selling trees to buy medicine for his baby daughter, her granddaughter. What happens next?



Situation 3. Characters: community members with axes and oxen; government men with chainsaws and trucks; village council officials.

For generations, people cut down trees using axes and hauled them out with oxen. Now, men from the local government have been coming with chainsaws, cutting down trees and saying the forest is state property. One day the government men show up with bulldozers and heavy equipment. They want to build a road into the forest to take out the biggest trees. A group of men from the community goes to the forest to confront them. What happens next?



Sociodramas (continued)

4 Discuss each sociodrama

Ask the actors to leave their props or costumes in a pile at the front of the room and return to the group. Then ask questions that help the whole group to:

- tell what happened in the sociodrama.
- identify the actions that led to conflict.
- identify the different needs that were the root causes for the conflict.
- suggest ways the conflict could be resolved in the long term.

Repeat this process with each sociodrama. The facilitator may want to write the important ideas on a large piece of paper or a chalkboard.



Having the actors “step out” of their roles before beginning the discussion prevents people from labeling one of the participants as a villain or victim. It’s important not to confuse the person with the role he or she plays.

Q: What caused the conflict?

A: One man wanted to keep cattle, but they damaged the forest.

Q: Why did the man feel he had a right to graze his cattle in the forest?

A: There was no agreement about who could use the forest, and for what purposes.

Q: How did the forest damage affect the community?

A: No more medicine and thatch.

Q: So what needs are in conflict?

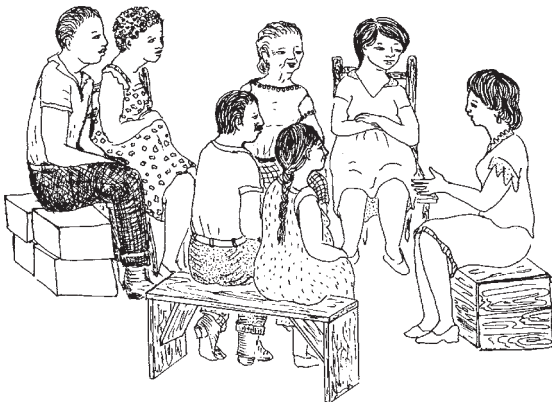
A: The need to have forest products and the need to graze cattle.

Q: Is there a way for both needs to be met?

A: The cattle could graze in areas with no plants that the community needs.

A: The cattle owner could build a fence.

A: The owner of the cattle could give up his right to collect forest products in exchange for the right to graze his cattle, and then trade for the forest products when he needs them.



Q: Will solving this conflict lead to more or less equality in the community?

If the discussion creates a lot of disagreement, it is important to end in a way that brings everyone together. Singing a song together or doing a cooperation activity can help people leave with a better feeling.

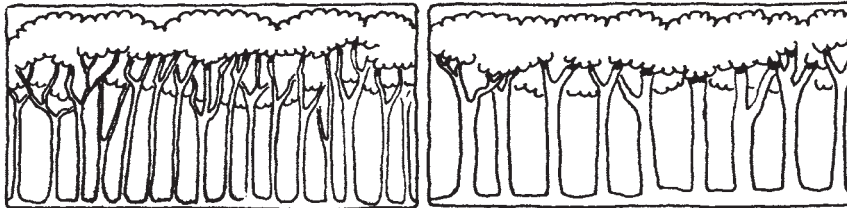
Sustainable Use of Forests

Sustainable forest management means using and caring for forests in ways that meet daily needs while protecting the forests for the future. Sustainable methods are not the same everywhere. Each community needs to find what works best for them and for their forest.

Making a sustainable forest management plan helps a community decide how best to use their forest. It can also help resist threats to the forest by industry or the government. Sometimes, you can get a better price for forest products if you can show they were produced sustainably. But the most important part of a sustainable forest management plan is that it helps local people work together to use and protect forests.

Some ways to both use and protect the forest at the same time include:

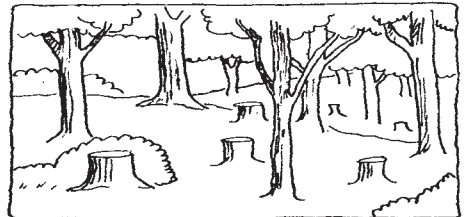
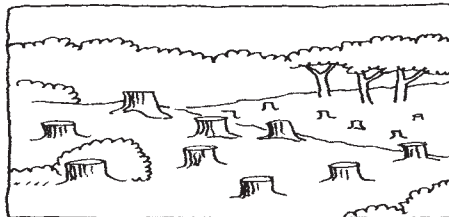
- **Thinning** vines, plants, and trees allows more sunlight into the forest, so that the plants you want can grow.



Thinning trees means cutting certain trees so the ones that remain grow wider and healthier.

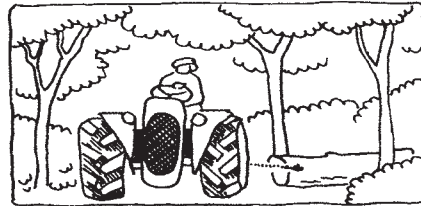
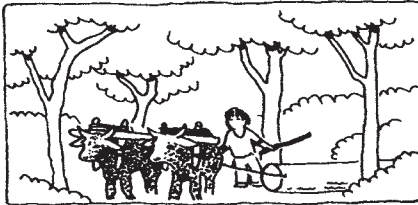
- **Enrichment planting** means planting new trees or plants under older trees or in small clearings when they do not grow back by themselves.
- **Replanting after cutting** is a way to make sure there will be new trees and seeds to replace the ones that were cut.
- **Controlled burning** can reduce brush that grows under trees. This releases nutrients into the soil, and kills pests that might hurt the trees. Controlled burns need careful planning because fires can easily burn out of control.
- **Selective logging** means cutting only some trees, while saving young trees and some healthy older trees to hold soil and provide seed for the future.

Selective logging protects some trees for the future, allowing forests to continue growing.



- **Collecting and selling non-timber forest products** rather than selling wood is a way to care for the forest while also earning money.
- **Paying** ranchers to keep grazing animals out of the forest, and paying farmers not to cut trees on part of their land, can support healthy forests and prevent conflicts.
- **Preserving wildlife corridors** (areas of connected forest or wild land) lets wildlife live in and travel through an area.
- **Planting green spaces**, smaller areas of trees in places where most trees have been cut down, or where the forest is completely gone, is a way to improve the soil, water, and air even in populated cities and towns.
- **Supporting natural regrowth** of forests by limiting the use of areas where too many trees have been cut helps forests recover.
- **Using animals** to haul logs causes less damage than bulldozers or other heavy machinery.

Animals compact forest soil less than machines.



- **Trimming bark and branches** from fallen trees before taking them out of the forest causes less damage to other plants when the tree is hauled out. The bark and branches rot and make good soil.
- **Ecotourism** earns money by showing visitors the natural beauty of a forest, without having to cut trees or damage the environment.



There are many ways to use forests that keep them healthy for the future.

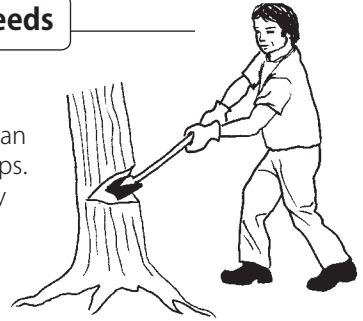
Use everyone's knowledge, consider everyone's needs

This activity helps a community consider how to use and care for forest resources in ways that benefit everyone. It can be done with up to 25 people, divided into 3 smaller groups. It is important to include everyone who will be affected by decisions about forest use.

Time: 3 to 6 hours (or in more than one session, as long as you save the maps)

Materials: Pens, pencils, notebook paper, 3 big pieces of paper with maps of your area, and sticky tape. The maps can be roughly drawn, as long as people can recognize what they intend to show.

- 1 Give 1 map to each group. Ask every person to draw pictures of what they do in the forest (cut firewood, graze cattle, gather fruit and plants, hunt, etc.) on their notebook papers.
- 2 Within each group, every person talks about what they drew and what it means to them. 1 or 2 people then draw pictures on the big map to show where and how each person uses the forest.
- 3 Bring the groups together for a discussion about what their big maps show. Are some parts of the forest used more than others? Do men, women, children and older people use the forest in different ways? Were there any surprises in the ways the forest is used?
- 4 The facilitator leads a discussion about the health of the forest by asking questions like these: Does the forest provide the same resources now that it always did? Are there fewer birds, animals, and plants than there once were? Are there places where all the trees have been cut down? What happens now in those places?



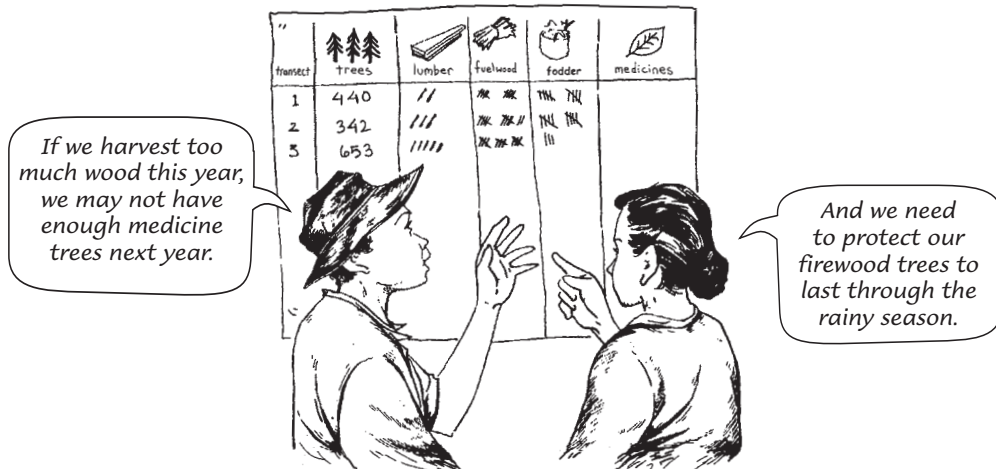
- 5 Have 1 or 2 people from each group mark their map using different colors or symbols to show places where the forest is healthy, degraded, or gone.
- 6 Think about the different areas of forest and discuss what changes people want to see. Draw or write them on the map. On the following page are some questions that can help guide a discussion.



Make a forest management plan

After doing the activity on page 191, consider these questions:

- **What benefits and resources does the forest give us?** What trees, plants and animals are used? How much is used in each season? Are there areas where these resources have grown scarce or have disappeared?
- **How do we support the forest?** Does the community plant trees, protect certain areas, or have other ways of making sure the forest stays healthy?
- **Should some parts of the forest be protected from use?** How will that affect people who use those parts of the forest?
- **Should sustainable methods be practiced in some parts?** What knowledge does the community have about caring for forests that can help to make these changes?
- **What skills do we need to make sustainable forest management a success?** If we do not have those skills, can we learn them? Will we need to rely on other organizations? How can we form strong alliances with organizations we trust to help us gain skills and knowledge?
- **How can our community keep control over our forest projects?** Well-organized communities that present a strong and clear message to outsiders about what they want usually receive greater benefits from sustainable forestry projects.
- **How will we get our products to market?** It is often more expensive to get products to national or foreign markets than to sell products locally. Local prices are lower, but the cost of selling is also lower.
- **How much will our forest products be worth?** If you wonder whether you are receiving a fair price for forest products, you may want to contact some fair trade organizations (see Resources).
- **What changes will the new plan bring?** Will the new management plan limit some people's ability to use the forest? How will the community help them in return?



Partnerships to protect the forest

Building partnerships with as many as possible of the groups that benefit from the forest helps make sure the forest is used in ways that meet everyone's needs. Partnerships with people outside your local area can also help protect your rights.

Working together to protect the Amazon rainforest

The people of Amazanga did not always live where they do now. An oil spill forced the members of the Quichua tribe to move from their traditional land in the Amazon. When their new homes were threatened by deforestation and industrial farming, the villagers decided that managing their lands according to the traditions of their people — hunting, fishing, and gathering plants for food and medicine — was the best way to protect their lands.

But this required more land than they had. Amazanga demanded that the government grant them territory to live as their ancestors had lived. “We cannot live from a piece of land like a piece of bread,” they said. “We are talking about territory, and the right to live well from the forest.” When the government ignored their demand, they asked international environmental groups for help buying back their ancestral lands.

The villagers invited their international partners to take photographs and videotapes showing traditional ways of using the forest, and to share these with people in their home countries. After several years, Amazanga raised enough money to buy almost 2000 hectares of forest.

But buying this much land created suspicion among members of the Shuar tribe who lived nearby. When the Shuar claimed ownership of the same land, the people of Amazanga understood they had made a mistake. They had built partnerships with international organizations, but had failed to make agreements with their neighbors! The Shuar were so angry they threatened violence. After many meetings, the people of Amazanga and the Shuar agreed to share the forest according to shared rules. Because the Quichua and the Shuar have similar understandings of how to best use the forest, they were able to form an alliance.

They made the land a forest preserve and agreed to a forest management plan preventing the felling of trees and building of roads. The land was declared “patrimony of all the indigenous tribes of the Amazon” and protected for future generations. By reaching out to visitors from near and far, the people of Amazanga will protect the forest, preserve their culture, and help others to protect their own forest homes.

Forest Reserves

Creating forest parks and reserves can be a way to get support from governments and international organizations to protect forests and foster ecotourism. But governments and **conservation** groups sometimes think the only way to protect and preserve a forest is to keep people out. In many cases, they are wrong. People who live in the forest know how to use and care for it. By staying in the forest and managing forest parks and reserves, local people may be better able to protect it than any government or conservation group.



Some communities maintain access to the resources in forest reserves by making agreements with the government and other local communities to manage these resources together. This is called a 'co-management scheme.'

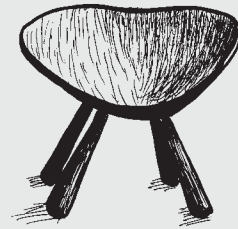
Co-management partnerships let people continue their traditional and sustainable uses of the forest and its products. Communities that manage forest reserves can also educate other communities about the importance of protecting the forest.

Forestry that sustains both people and trees

In the Amazon rainforest of Brazil, conflicts have often erupted between logging companies, cattle ranchers, and others who earn a profit from cutting down the forest, and people who live in the forest farming, harvesting rubber, and making crafts. After huge portions of the rainforest were destroyed, workers and indigenous people finally convinced the government to create “extractive reserves” — large areas of forest protected from destruction, but open to limited use.

Unfortunately, even people who lived in the forest for many years were denied the right to use the extractive reserves. The very forests they had fought so hard to protect would no longer protect their livelihoods.

People in the Tapajos Community Forest Reserve traditionally earn their living farming, hunting, and using forest products to make baskets, canoes, and other handicrafts. But they also need medicines, tools, fuel, electricity, and other things, which requires them to earn money. With some financial help, they built a carpentry workshop which they named the Caboclo Workshop, for the Caboclo people of mixed indigenous, African, and European descent. Using only trees cut down on land cleared for farming, they made furniture to sell in local markets and in stores throughout Brazil.



This income led them to think about making more wood products to earn more money. But they were not allowed to cut any standing trees unless they had a “forest inventory” and a “sustainable management plan” approved by the Ministry of the Environment.

To fulfill these government requirements, they would have to collect information about how much wood was in the forest and how much new wood grew each year. The government did not believe that villagers, many of whom could not read or write, could do such a thing. But the villagers were the real experts of the forest. They had been guiding environmental scientists through the forest for years, teaching them about plants and animals. Now the scientists taught them to use a simple tool to measure tree growth and calculate how much wood grew each year. The villagers made a plan to produce small, high-value products such as butcher blocks and stools, limiting their use of wood to the amount that could grow in a year.

The Ministry of the Environment accepted their plan, and now the Caboclo Workshop allows them to earn income without abusing the forest’s resources.

The forest dwellers of the Caboclo Workshop have done what scores of scientists, economists, and development workers have long struggled to achieve: establish a forest management plan that is sustainable for both their community and their forest.

Reforestation

Ancient forests (old forests that have never been cleared or seriously damaged) are increasingly rare. Once an ancient forest is gone, it will never grow back to contain the variety of plant and animal life that it had before. But secondary forests (forests that have been damaged but are growing back) can provide many of the same resources as ancient forests if they are allowed to grow and maintain biodiversity. And forests planted by people and managed well can also provide many resources to support community health.

A healthy forest takes a long time to grow, but there are things you can do to give it a good start. Controlling erosion, preparing the soil, and planting native trees or trees that are appropriate to your area will help a forest grow well. Following the natural order of tree growth in forests is another way to help produce a healthier forest (see Chapter 11).

Is planting trees always helpful?

Before beginning a community reforestation project, be sure it will meet the needs of your community and your local environment. Trees may compete with crops for limited water and land. Sometimes it is too much work to care for young trees in harsh environments. Planting trees where they cannot or will not be cared for leads to failed projects and dead trees.

If your community relies on forest products, such as timber or fruit, planting trees may be a good way to quickly bring back forest resources. If your community mainly relies on the forest for providing hunting grounds or protecting soil, air, and water, then you may benefit more by protecting areas of land from being used while trees regrow on their own.

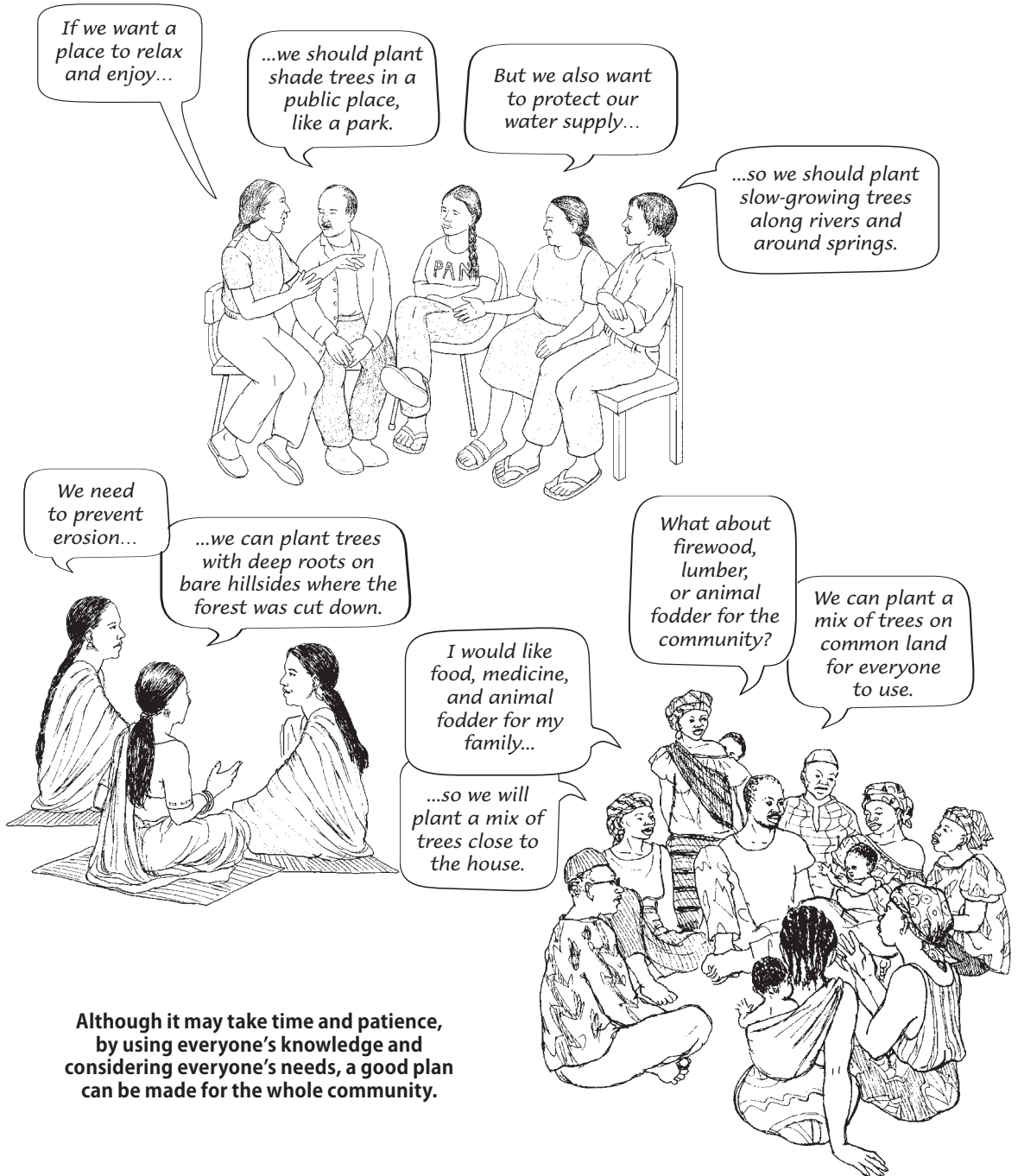
Forests are not right for all places. Few trees grow naturally in deserts, marshes, or grasslands. If people try to plant trees in these places it may disturb the balance of plants and animals. But in other places where there are few trees, such as in cities and towns, planting trees along roads, near factories, and in parks may greatly improve the health and well-being of the community.

Who owns the land, and what are the laws?

If you want to reforest land and use its products later, be sure you will be allowed to use the forest once it is grown. Knowing who legally owns the land and getting permission before planting trees can help avoid problems later. Land that once was poor and barren will become valuable once it is covered by healthy forest. Also, some places have laws that prohibit people from cutting or using certain trees, even if they planted them themselves. Find out if there are such laws where you live.

Different trees meet different needs

The kinds of trees planted should be decided based on what people in the community need and want.



Although it may take time and patience, by using everyone's knowledge and considering everyone's needs, a good plan can be made for the whole community.