22 Oil, Illness, and Human Rights

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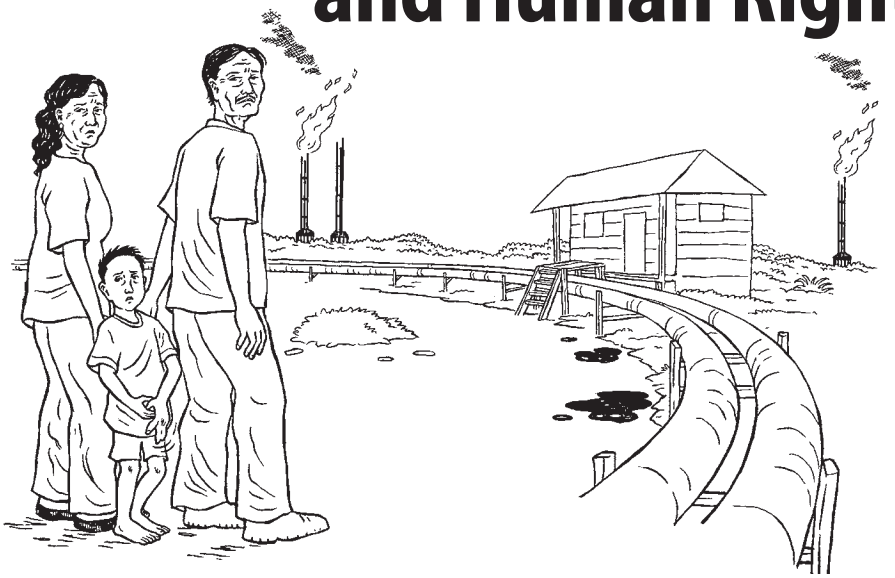
Oil, Illness, and Human Rights



Petroleum, or oil, is part of many products used every day, such as gasoline, propane, kerosene, heating oil, and asphalt, as well as many plastics, paints, pesticides, solvents, and cosmetics. Even some clothes and medicines are made from oil. But oil is toxic and has harmful effects on our health and the environment, starting with the methods used to find it, transport it, and refine it, as well as the ways in which it is then used.

People in oil-rich areas hope that oil will bring wealth. But in most cases, the wealth goes to the oil companies while the people in the communities are left with poverty, pollution, sickness, and the violence that seems to spill over wherever oil is found. Because the world economy depends on oil, the oil industry has the power to influence governments and international policies. This often leaves poor people in oil-rich communities struggling to protect themselves and their land, and people in wealthy or developing communities struggling with air pollution.

Oil, coal, and natural gas are **fossil fuels.** They are made from the remains of plants and animals that died millions of years ago, and there is only a limited amount of them. In the past 100 years, oil has become the main energy source for most of the world. Now, much of the world's oil resources have been used up. Burning so much oil and other fossil fuels has led to global warming (see page 33), one of the biggest environmental problems facing the world today. More and more, people around the world are calling for an end to the oil economy and for the development of cleaner and more sustainable forms of energy (see Chapter 23).

Oil and Community Health

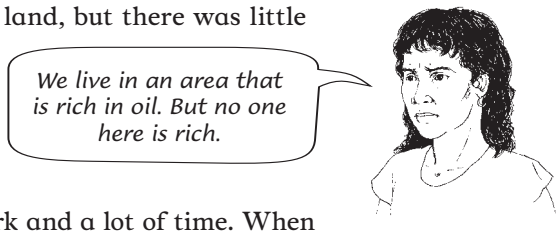
In places where oil is discovered, the economy develops rapidly, but it is an economy of misery. Poorly built oil camps are carved out of the landscape and bring with them many social problems, such as forced displacement, alcoholism, sexually transmitted infections, and HIV (see also page 474). Oil companies and governments regularly wash their hands of the communities most damaged by oil development. These communities are often left on their own to try to determine how much and what kinds of harm oil has caused, and to search for ways to restore their community's health.

Natural gas also causes health problems

Burning natural gas produces less carbon dioxide (a cause of global warming) and other pollutants than burning oil. But drilling for natural gas is similar to oil drilling, and it brings many of the same social problems. Almost everything that is true about oil in this chapter is true of natural gas as well.

Communities affected by oil organize a health study

In 1992, a group of health promoters in the Amazon jungle in Ecuador studied the way oil drilling was affecting local communities. They knew oil companies were destroying their land, but there was little understanding about how the oil affected people's health. So the health promoters began to collect information in their towns and villages.

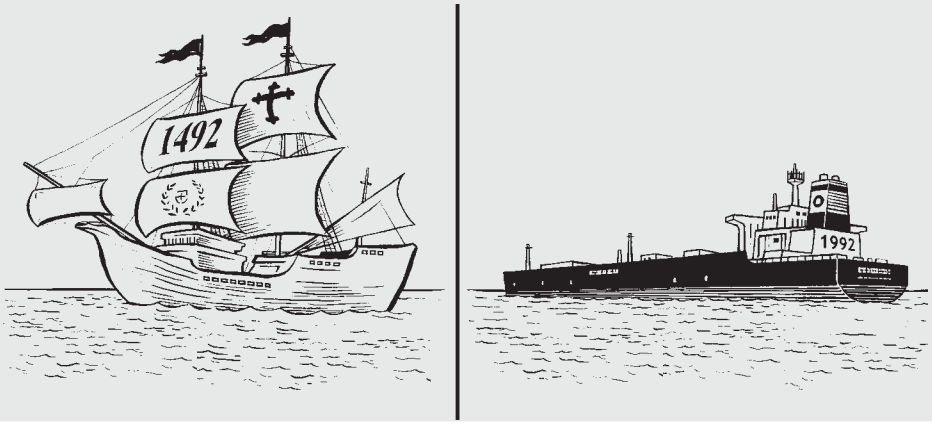


The health study took a lot of work and a lot of time. When they began, the health promoters did not know what they would learn. They tell their story in their own words throughout this chapter.

For thousands of years this region has been home to indigenous people. In our part of the Amazon jungle live many different peoples: Shuar-Achuar, Runa, Quichua, Huaorani, Siona-Secoya, and Cofan. Each of these cultures has its own language and art, and its own vision of reality. Before modern times, all of these tribes lived in harmony with nature. Then this harmony was broken. If we want to understand what is happening to us, we have to look at our history.

This was the beginning of breaking the balance between our ancestors and nature. First, the Spanish searched our lands for gold and silver. Our ancestors were forced to work as slaves digging gold and silver out of the earth. Then the English came. Instead of gold, they wanted rubber. They made slaves of us to take rubber from our lands. After this, the oil companies came. They did the same thing.

We know the oil companies are destroying our health. This is why our health promoters decided to study the pollution and how it affects us. We want to work together for a better economic, political, and cultural situation.



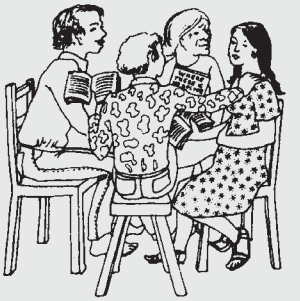
The health promoters learned that people in oil-polluted communities have more sickness than in unpolluted communities. Women in these communities suffer from many miscarriages. Children suffer from malnutrition, and often die at an early age. Many people have skin diseases that do not go away. (To learn more about the health problems caused by oil, see pages 506 to 507.)

This is just some of what they learned. After their study, they produced a book called *Cultures Bathed in Oil* so other people could learn from the work they had done.

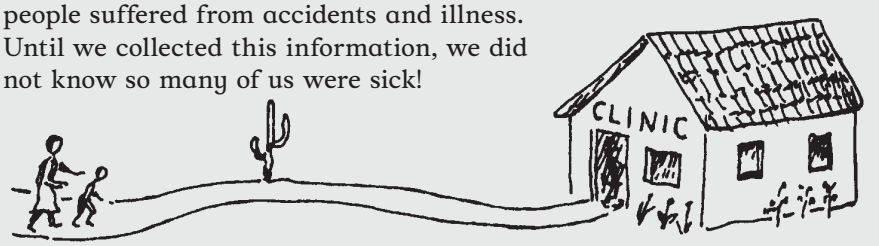
First we formed a team, adding people who had technical and medical knowledge to people from our community organizations.

Our team was made up of 6 people: 3 health promoters (2 who worked in communities and 1 who worked in a health laboratory), and 3 health technicians (a doctor, a biochemist, and a medical technician).

Here are the steps we followed to do our study, so you can do the same thing:

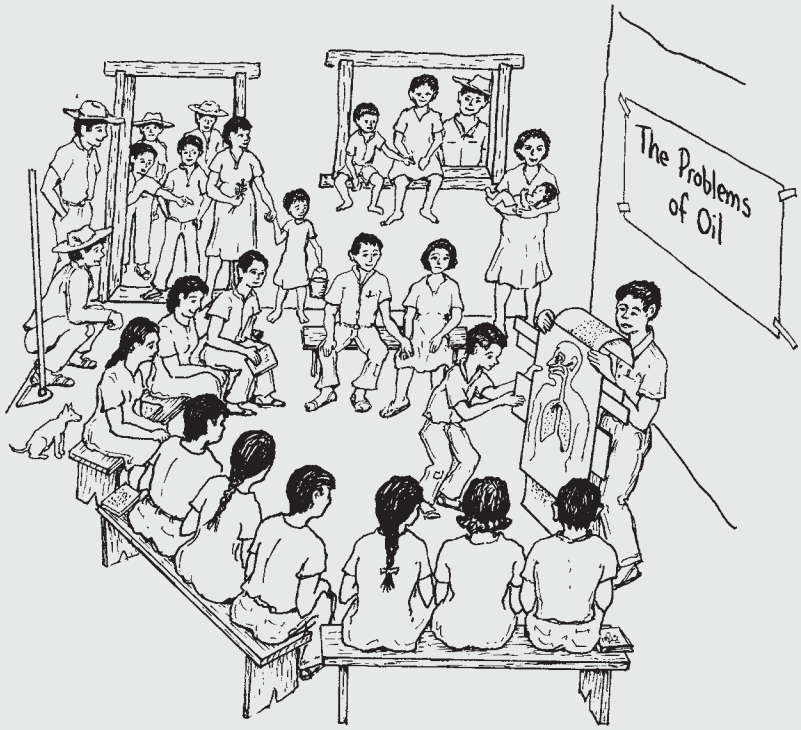


1. **We gathered information.**
   We collected information about the type of oil exploitation in our area, the chemicals used, and the health effects of these chemicals. We learned that the chemicals were known to cause miscarriages, birth defects, cancer, and other illnesses. We also learned that people get these illnesses by drinking water polluted with these chemicals.
2. **We chose which communities we would study.**
   We chose 7 communities that had water polluted because of oil development and extraction. Choosing polluted sites was easy, because nearly every community in our area is polluted by oil wells, waste ponds, or pumping stations. We also chose 3 communities that had no oil activity, but that were similar in all other ways to the first 7 communities.
3. **We collected medical histories from people in these communities.**
   We collected information from 4 years past to see what illnesses were most common from one year to the next. We learned that many, many people suffered from accidents and illness. Until we collected this information, we did not know so many of us were sick!



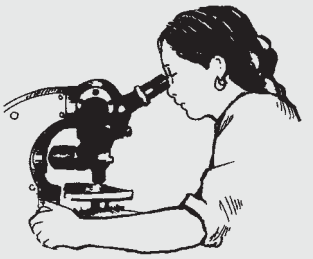
4. **We contacted scientists to help us... but they would not help.**
   We went to a local center of health studies and asked for a class in popular research methods. They were interested at first, but in the end they would not help us. Then we asked for help from the medical school nearby, and they would not help us either. The students there recommended that we study the chemicals in our drinking water. Since this was expensive, they suggested we try to raise money in other countries.

5. We organized a meeting of people from all the communities in our area.
We explained why we wanted to do this study and asked if the communities were prepared to help. At the end of the meeting, everyone voted to do it. We organized a committee including health promoters, people from different communities, and people with knowledge of how chemicals affect people and the environment, to carry out the study and analyze the results.



6. We made a work plan.
We planned to take 5 months to do the study. We would go to a different community every 15 days and stay for 3 or 4 days in each place. We would survey the community and collect samples of blood, urine, and feces for testing. When we had the test results from a lab in the city, we would return to the community to share the results. This was very important to allow us to make decisions together. We also planned to have a meeting every 2 months, where the coordinating committee and community representatives could talk about how the study was going.

7. **We searched for funding for our work and the laboratory costs.**
   We formed a commission to find the money. After a lot of searching, we got money for the study from a group of doctors in Spain.
8. **We made maps of the communities.**
   People from each of the communities made maps showing oil wells, polluted water, and locations of villages and farms. At the same time we made a list of all the people who live in each community (a census). The list included each person's name, age, and whether they were a man or a woman.
9. **We began visiting the communities and doing the study.**
   Instead of sending samples to the city, we set up a lab in the community school where we tested people's blood, urine, and feces. (You need lab equipment and some training to do these tests, so we won't explain them here.) In the mornings we went from house to house collecting the samples. Afterwards, another group went to each house doing surveys to gather information and the health promoters did a medical check-up of each person.



10. **Once we finished gathering all of the information, we put it in order.**
    Then we compared information from the polluted communities and the communities that were not polluted. We compared many things — the economic situation, the political situation, the local culture, and above all, people's health.
11. **The last step was to write it all down and discuss it together.**
    This helped all of the communities involved to decide how to take action to improve our health.

On the last day in each town or village, we had another meeting with the community about what we would do next and what more we hoped to learn.

The health study led to community action

The work of the health promoters showed people that many of their health problems were caused by oil pollution. Toxic chemicals from oil were found in the water and soil, and in people's blood, urine, and feces. Knowing this helped them begin to work toward a solution. They knew that as long as the contamination continued, it would be difficult to have safe water, healthy food, or clean air.

A group formed, calling itself the Committee of Affected People, to petition the government for help. And the organization of health promoters continued supporting people's health and showing how their health problems were caused by oil.

Health promoters and other people in the community realized their study was only the beginning of their struggle for health and justice.

Another organization, the Front for the Defense of the Amazon, began a lawsuit to sue the oil company for the damage it had caused. (To learn about this lawsuit, see page 522.) Huge areas of the rain forest had been destroyed, and environmental laws about how damage had to be repaired were ignored. The foreign-owned oil company just took its profits and left.

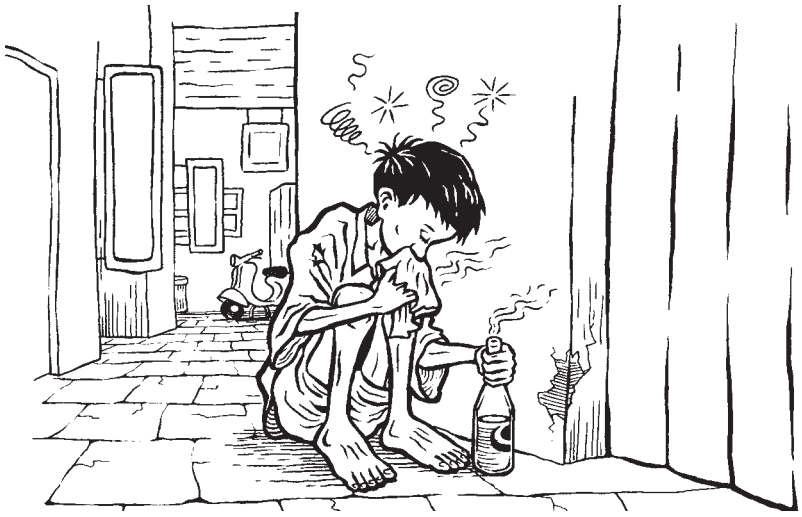
The community study and lawsuit inspired other organizations to get involved in the struggle to save the rainforest and its people. Universities and medical schools in Ecuador, England, and the United States did more studies to support the lawsuit against the oil company, and to show that oil caused terrible health problems. These studies also helped the authors of this book learn about the health effects of oil.

But the key work was done by the health promoters. By teaching themselves how to study the health effects of oil, they worked locally on an issue of global importance. By showing how their neighbors' health was being devastated by the destruction of the rain forest by multinational oil corporations, they brought local issues to the international arena. They were an inspiration to us as we wrote this book.

Oil Causes Serious Health Problems

As with other toxic chemicals, health problems from oil may be difficult to prove because they take a long time to affect people. But most people who live and work near oil drilling sites and refineries are familiar with the pollution of air and water from oil. Drilling for oil, refining it, and burning oil as fuel all lead to many serious health problems, such as the ones listed below and those discussed in more detail on the pages that follow:

- **blurred vision** and other eye problems
- **headaches,** hallucinations, euphoria (sudden feelings of happiness), tiredness, slurred speech, brain damage, coma
- **convulsions** and unusual deaths
- **nose sores** and nose bleeds
- **ear infections**
- **asthma, bronchitis, pneumonia** and other respiratory diseases
- **lung and throat** infections and cancers
- **increased risk of TB** (tuberculosis)
- **heart attacks**
- **digestive problems,** including vomiting, ulcers, and stomach cancer
- **damage to liver,** kidneys, and bone marrow
- **menstrual problems,** miscarriages, stillbirths, and birth defects
- **skin** rashes, fungus, and cancers



In some places, people sniff petrol (gasoline) fumes for drug-like effects. This is very dangerous. For some people, breathing in gasoline deeply, even once, can cause sudden death.

Long-term health effects

Oil causes reproductive health problems

Breathing fumes or swallowing food or liquids contaminated by oil and gas causes reproductive health problems such as irregular bleeding cycles, miscarriages, stillbirths, and birth defects. These problems may have early warning signs such as abdominal pain or irregular bleeding (see Chapter 16 for more information).

Oil causes cancer

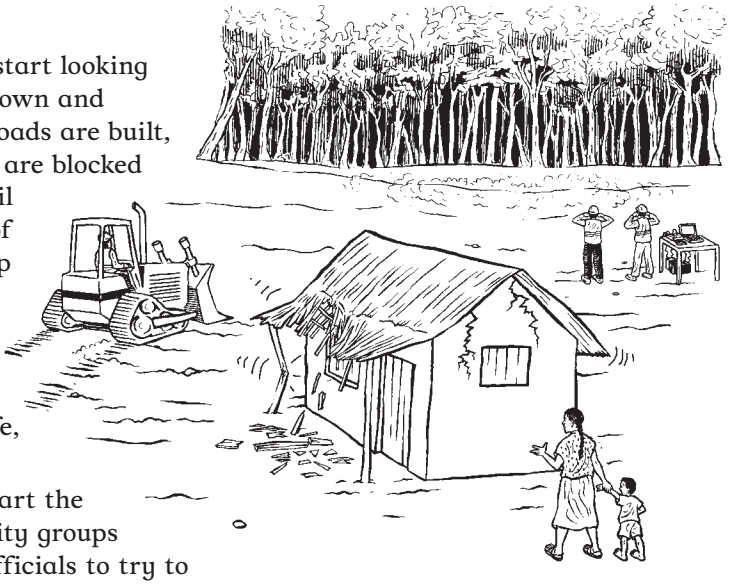
Regular contact with oil and gas causes cancer. Children living near oil refineries are much more likely to get cancer of the blood **(leukemia)** than those who live farther away. People living in areas where oil is drilled are much more likely to develop cancers of the stomach, bladder, and lungs than people living in other places. Workers in oil refineries have a high risk of cancer of the lip, stomach, liver, pancreas, connective tissue, prostate, eye, brain, and blood. (For more information about cancer, see Chapter 16.)

When Texaco began drilling for oil in Ecuador, cancer was not known in the region. Forty years later, it is one of the region's worst health problems. In 2 of the most heavily exploited oil regions of the Amazon, the community health workers did a survey of 80 communities and found high rates of cancer, especially cancer of the stomach, bladder, and mouth.

Every Part of Oil Production is Harmful

Understanding the damage caused to both health and the environment during each stage of oil production can help you respond.

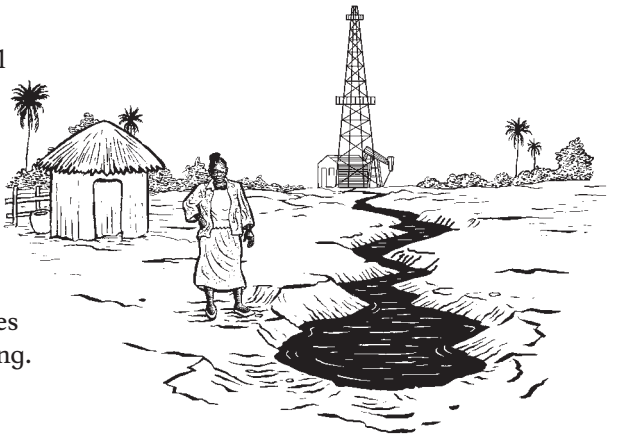
Exploration



When companies first start looking for oil, forests are cut down and homes are destroyed. Roads are built, and streams and rivers are blocked up. The search for for oil often involves a series of explosions set off to help oil companies know what is underground. This is called **seismic testing.** Seismic testing damages homes, wildlife, and the land.

Before companies start the search for oil, community groups can visit government officials to try to stop the invasion of their lands, learn from the experience of NGOs and oil-affected communities, and educate everyone about the threat to community health. The oil company must file an Environmental Impact Assessment (EIA) (see Appendix B). If the EIA shows that the project will be destructive, the community can call for it to stop. The oil company must include in the EIA a plan for disposing of waste, protecting ground and surface water, and for alerting and evacuating nearby communities in case of accidents.

Oil drilling



Oil wells are drilled to bring oil out of the ground. Oil drilling can cause fires, explosions, and other accidents that endanger workers and the community. When oil spills it pollutes groundwater and waterways, harms plants and animals, and damages resources for hunting, fishing, and farming.

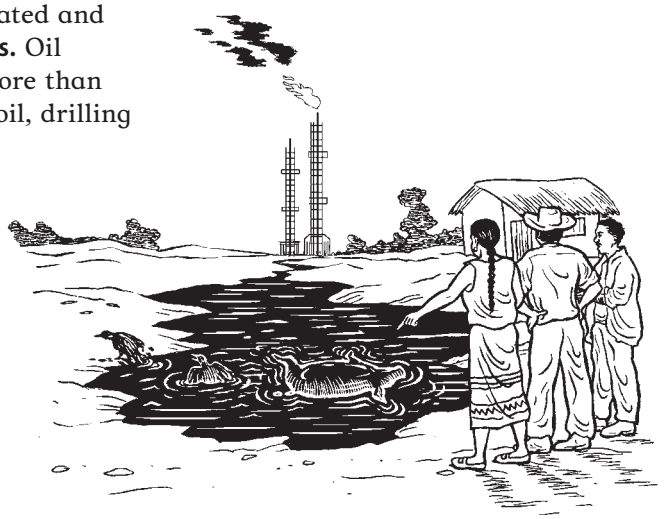
Communities can use cameras, video, radio announcements, written reports, and even children's drawings to document the harm from drilling. This documentation can be used as evidence when a community makes a demand to stop oil drilling and environmental destruction, to enforce the standards of the Environmental Impact Assessment, or to take legal action against the oil company.

Separation

Oil comes out of the ground mixed with gas, heavy metals, and toxic water. The oil must be separated from these other materials.

The dumping of the toxic water is often the largest cause of pollution. Laws about drilling in wealthy countries require the toxic water to be put back into the ground rather than dumped on the surface. This practice should be followed everywhere.

The other wastes are separated and dumped into **containment ponds.** Oil companies often do nothing more than dig a hole and dump in crude oil, drilling wastes, toxic water, and other wastes. These ponds often leak into the groundwater or overflow, contaminating groundwater and land.

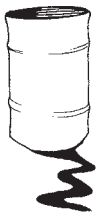


Containment ponds should be lined with concrete. The ponds must be monitored for leaks and spills, and cleaned up before the oil operation ends.

Gas flares

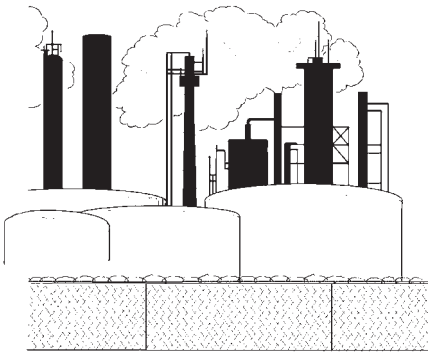
The gases found with oil are often separated by burning them off. Gas flares (see pages 511 to 512) expose workers, communities, and wildlife to pollution that causes cancer, skin diseases, asthma, bronchitis, and other health problems. The flares pollute the clouds, causing a "black rain" that poisons water sources.

Transport and storage



Oil is often spilled during transport through pipelines, trucks, and ships. Oil can also leak from storage tanks. These spills may cause damage that lasts for years to soil, groundwater, animals, and people. Oil companies should warn communities when a spill happens, contain the spill, and clean it up right away. (To reduce harm from oil spills and to learn about oil spill clean-up, see pages 514 to 519.)

Environmental Impact Assessments for oil operations should include plans for pipeline building and use. You can build regional support by organizing communities along the pipeline to oppose unsafe oil company practices.

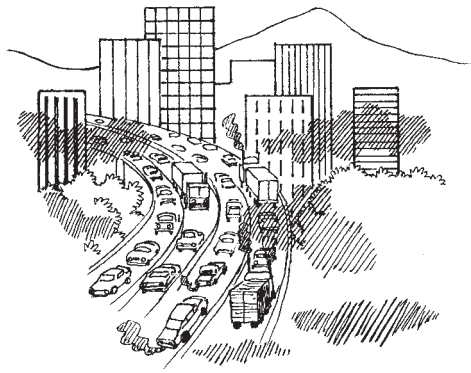


Refining

Refineries are factories where oil is made into products such as gasoline, diesel and heating fuels, asphalt, lubricating oils, and plastics. Refineries release toxic waste into water, soil, and air. Pollution from refineries leads to asthma, bronchitis, cancer, reproductive problems, and abnormal development of the brain and nervous system in children. This pollution also adds to global warming. (For more information about how communities can prevent and reduce harm from refineries, see pages 455 to 458, and page 513.)

Burning oil as fuel

Burning oil and gas in factories and in automobiles creates different kinds of air pollution. One gas created is carbon dioxide, which traps heat in the air. This is one of the major causes of global warming, causing disasters like floods, storms, droughts, and rising seawater. It also affects crops, animals, and insects, allowing diseases like malaria to spread to new areas. At the gasoline station and in crowded cities, people are exposed to toxic fumes that can cause cancer and many other illnesses.



Gas Flares

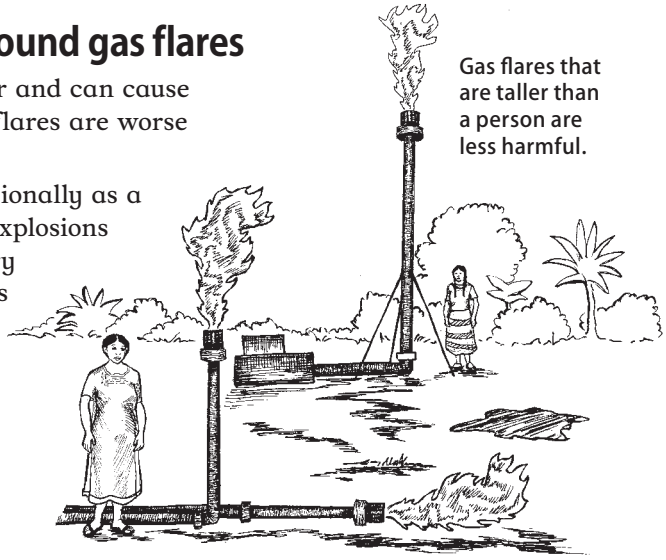
When oil is found together with natural gas, oil companies may burn the gas to separate it from the oil. Burning gas makes giant flares that light up the sky and make a loud, terrible noise. Gas flaring is dangerous, wasteful, and very polluting.

Oil companies can sell the gas rather than burn it off. But this is more costly and difficult because gas must be stored under pressure, increasing the risk of fires and explosions. So companies flare off the gas simply because it is less costly, even though it increases the harm to people and the environment.

Health and safety around gas flares

All gas flares pollute the air and can cause health problems. But some flares are worse than others.

Gas may be flared occasionally as a safety measure to prevent explosions (called **safety flares**), or every day as part of oil operations (called **routine flares**). Each kind of flaring requires a different response.



Gas flares that are taller than a person are less harmful.

Gas flares that are the height of a person, or flares that are horizontal to the ground, are very dangerous.

Safety flares

Refineries use safety flaring to relieve pressure when too much gas is in the pipes. Even though it does not happen all the time, it is still very harmful! **If there is safety flaring in your community,** demand advance notice from the company about when flares will occur. The company should always warn nearby communities 24 hours before flaring will happen.

When there is a flare, everyone should stay as far away as possible. Stay inside with doors and windows closed. (For what to do in an emergency, see page 457.)

Routine flares

In some places, gas is flared every day, simply because it is cheaper for the company. It is very difficult for people who live near routine gas flaring to take precautions all the time. The only way to be safe from routine flaring is to stop it.

Flaring can be stopped!

The worst routine gas flaring in the world occurred for many years in the Niger Delta of Nigeria. Gas flaring by international oil companies in Nigeria has cost many lives. And the poisons released by Nigerian gas flares have contributed more to climate change and global warming than all other sources in sub-Saharan Africa combined.

Comrade Che Ibegwura, a man from Rivers State, Nigeria, said: "For years, we have lived with continuous flaring of gas. Our farmlands have been polluted. We labor hard to plant, but little comes out. Our roofs are corroded. Our air is polluted. Our children are sick. Even the rainwater we drink is contaminated with black soot from the gas flares. We cannot continue with this suffering."

In 2005, after many years of protest and struggle, routine gas flaring was outlawed in the Niger Delta. A judge ruled that all the oil companies in Nigeria must stop gas flaring right away because of the health problems it causes, and because it violates the human right to a healthy environment.

If there is routine flaring near you:

- Discuss the dangers of gas flaring and form a committee to complain to the company and government officials. Also speak with health workers, journalists, and NGOs.
- Keep a record of your campaign. Encourage people to mark the days and times of flares and the problems they caused.
- Organize meetings to share these records with other communities, journalists, and government officials. Keep records of your talks with them. Writing down or filming what the officials say will also show that you are serious. Most importantly, do not give up!

These actions may not stop flaring right away. But the common goal of stopping the flaring can unite the community and build strength to protect everyone's health in the long term.

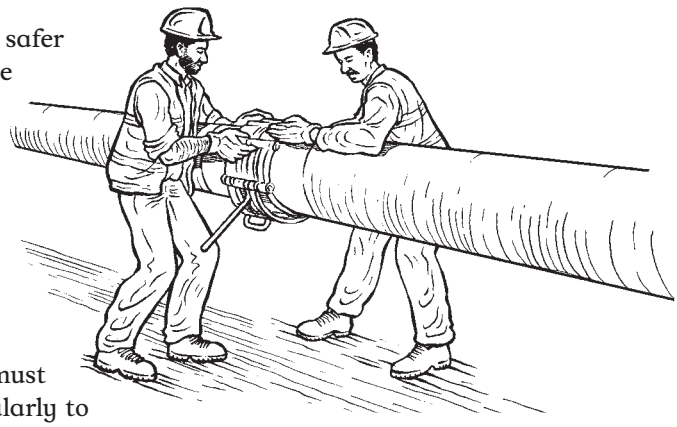
Oil Refineries

Oil refineries are factories where oil is made into gasoline and other fuels, and into materials such as asphalt and plastic. Oil refineries are a major source of air pollution for people who live near them and work at them. Chemicals in and around refineries cause cancer, reproductive harm, breathing problems such as asthma and emphysema, and birth defects, as well as other health problems such as headaches, nausea, dizziness, and stress. Refineries are also a major source of the gases that cause global warming.

Making refineries safer

Refineries do not have to cause such terrible health problems. Pollution could be prevented if oil companies would do all they could to prevent accidents and contain toxic gases and liquids at all stages of the refining process. If you and your community are working to make a refinery safer, your campaign might focus on some of these ideas:

Air pollution monitoring can identify problems and stop emergencies before they happen. The companies should monitor the air and respond to problems immediately. If they will not monitor pollution, communities can (see pages 455 to 457).



Gas flares can be replaced with safer methods, such as recovering the gases for reuse (see page 511).

Tanks used to store crude oil, gasoline, and other substances sometimes release toxic fumes when they are filled, emptied, or cleaned. These fumes can be contained with better equipment and procedures. Tanks and valves must be inspected and repaired regularly to prevent leaks into the air and the groundwater.

Tankers and barges filled with oil and gasoline release fumes into the air and leak liquids into water. Safety systems should be used at all times to prevent spills and toxic fumes. Tankers should have double- or triple-lined hulls to prevent spills.

Wastewater containing toxic chemicals often spills or leaks into groundwater. By building and maintaining wastewater systems, these problems can be avoided.

Dirty crude oil makes more waste and pollutes air and water, especially if a refinery was built to process cleaner, lighter forms of oil. Refining cleaner oil results in less pollution.

Oil Spills

Wherever there is oil, there are oil spills. Ships and trucks have accidents, and pipelines leak. It is the oil companies' responsibility to prevent spills and to clean them up when they happen.

There is a saying: "Oil and water do not mix." But when oil spills in water, toxic chemicals from the oil do mix with the water and stay there for a long time. The thicker part of the oil spreads over the surface and prevents air from getting into the water. Fish, animals, and plants that live in the water are not able to breathe. When oil spills in water, the chemicals left behind may make the water unsafe to drink, even after the oil we can see is removed.

When oil spills on land, it destroys the soil by choking out the air and killing the living things that make soil healthy. Something similar happens when oil gets on our skin or the skin of animals. The oil covers the skin and blocks air from getting in. Toxins from the oil also enter the body through the skin, causing illness.

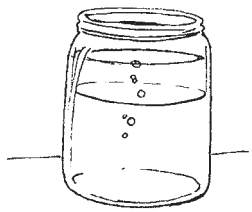
Do oil and water mix?

This activity can help people understand the effects of an oil spill in water.

Time: 1½ hours

Materials: Clear glass jar, water, vegetable oil

1. Fill a jar with water. Add 2 spoonfuls of vegetable oil. Shake the jar to mix the oil and water. Leave the jar alone for an hour.
2. Return to the jar. You will see that most of the oil has settled on top. Vegetable oil is harmless, but imagine the jar is a river with an oil spill. Begin a group discussion about the effects this might have. Imagine fish trying to survive in this river with a layer of oil, blocking air and sunlight. Imagine what happens to birds trying to hunt for fish in the river.
3. Use a spoon to try to skim oil off the surface. After you have skimmed off as much oil as you can, see if some bubbles of oil remain in the water. This is oil that sinks into the water. Consider the old saying, "Oil and water do not mix." Discuss with the group what happens when oil and water do mix.



Water pollution from oil

It is very harmful to drink water that has oil in it. The water that comes out of the ground when oil is drilled is also very toxic.

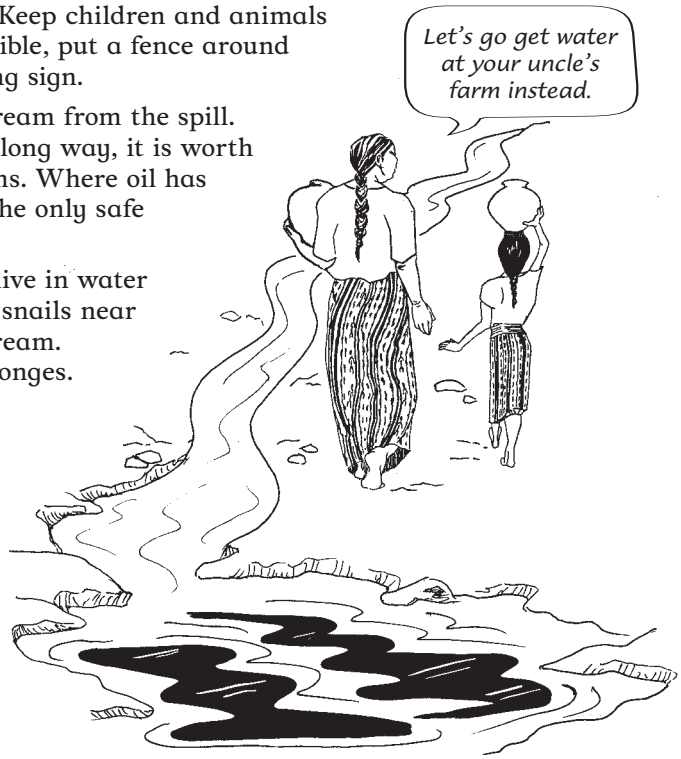
Filters that clean oil and toxic chemicals out of water are very costly. Boiling water, using solar disinfection, and adding chlorine to water (see pages 92 to 99) kill germs but **cannot** get rid of oil pollution.

Adding chlorine actually makes oil pollution worse because it combines with some of the chemicals called "phenols" to form an even more toxic chemical called "chlorophenol."

If an oil spill has been cleaned up, even if you do not see oil in the water, the water is still probably not safe. Many of the toxins in oil settle into the water and stay for a long time. The only way to be sure water is safe is to have it tested.

How to keep safe after an oil spill

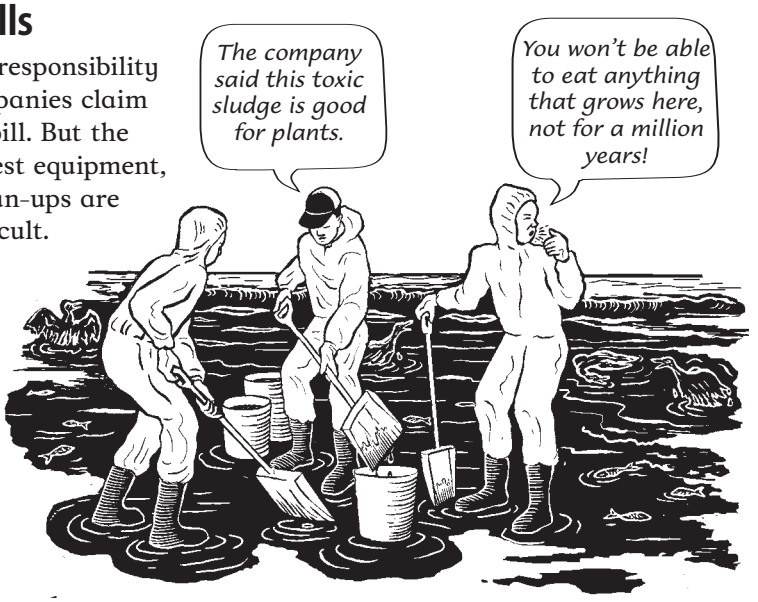
- Avoid contact with the oil. Keep children and animals away from the spill. If possible, put a fence around the area and post a warning sign.
- Use a source of water upstream from the spill. Even if you have to walk a long way, it is worth it to prevent health problems. Where oil has spilled, rainwater may be the only safe water to drink.
- Avoid eating animals that live in water such as crabs, shrimp, and snails near the spill and areas downstream. They soak up toxins like sponges.
- Avoid bathing in affected water. If somebody falls in the water, they should wash right away with strong soap and clean water.
- Notify neighbors, government officials, the press, and NGOs that are concerned about health and the environment.
- Teach people about the dangers of oil at schools and community gatherings.



Cleaning up oil spills

Cleaning up spills is the responsibility of the oil company. Companies claim they can clean up any spill. But the truth is, even with the best equipment, oil spills and oil spill clean-ups are very dangerous and difficult. In most cases, people affected by spills have no protective equipment.

The oil company should start clean-up as soon as spills happen. Because toxins from oil settle into water and soil, removing the black sludge from the surface does not always remove the source of harm (see page 514).



Whenever there are spills, on water or on land, the chemicals in the oil poison people, animals, plants, land, and water.

Oil spill clean-up makes workers sick

When an oil tanker named Exxon Valdez ran aground off the coast of Alaska in 1989, it spilled millions of gallons of oil into the water. The spill killed countless animals and birds, and destroyed the local fishing industry. The oil caused damage that continues to this day.

The Exxon company hired 10,000 workers to clean up the oil and rescue the animals. Using the best equipment, they worked 12 to 16 hours a day for many months cleaning the spill and trying to prevent the oil from spreading. They wore protective clothing to keep the oil off their skin and masks to keep them from breathing toxic fumes.

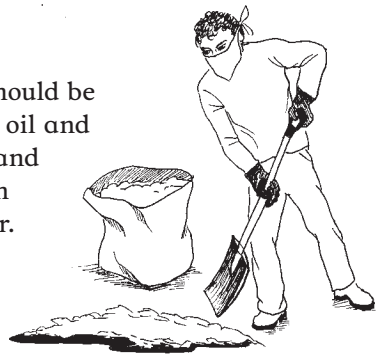
At the end of each day, the workers removed their raincoats, boots, and gloves. The suits and the workers themselves were cleaned with chemical solvents. The next day they put the suits back on and went back to work. But despite the protective gear, many workers complained of coughing, headaches, dizziness, and runny noses. "At night, in the bunks, everyone was coughing. It was like a TB ward," said one worker. 10 years later, many of the workers have developed memory loss, lung damage, and cancer. Hundreds of them have died.

Exxon was sued to pay for the damage. But all these years later, they have paid nothing at all.

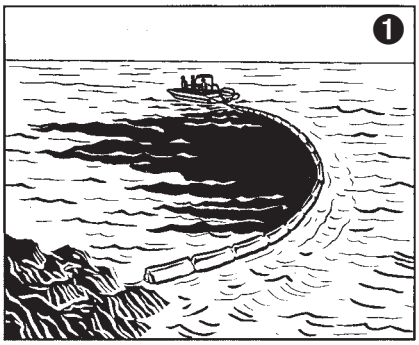
What to do in case of an oil spill

When oil spills or leaks from a storage tank, it should be contained and absorbed. Once it is absorbed, the oil and any material used to absorb it must be removed and disposed of safely, for example, in a pit lined with concrete, so they will not pollute the groundwater.

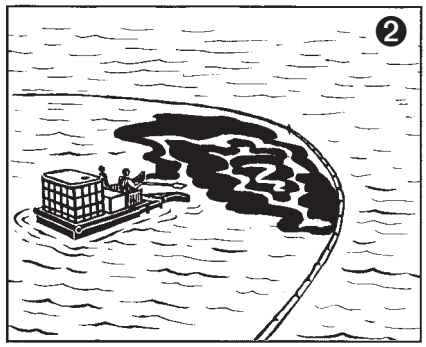
Oil spills on water can also be contained and absorbed, but this is difficult without special equipment. Anyone who enters the water to clean up spilled oil can get very sick. Trying to remove oil from water by collecting it in buckets is dangerous and does not work well. With proper equipment and training, this is how oil spills in water are cleaned up:



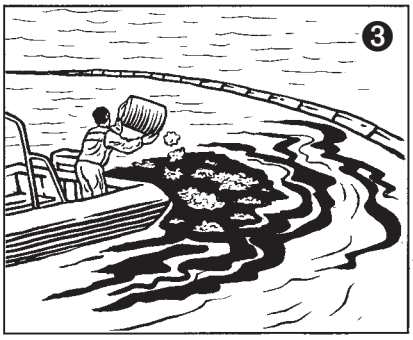
Some materials that absorb oil are straw, sawdust, ground corncobs, feathers, clay, wool, and sand.



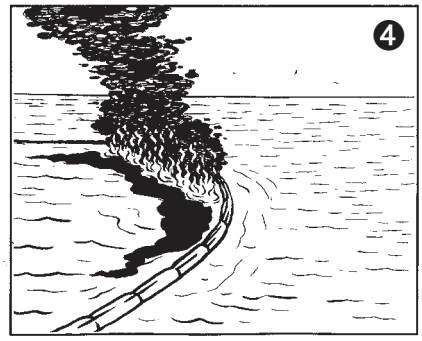
Oil is kept in place with a boom, a kind of floating fence held by anchors, or tied to boats or to things on shore. The boom prevents most of the oil from floating away.



A machine called a skimmer takes oil off the surface of the water and sucks it through a hose into a waste storage tank.



Oil that remains in the water is absorbed with materials like sawdust, peat moss, feathers, or clay.



After as much of the oil as possible is skimmed from the surface, soaked up, and removed, what is left is set on fire and burned away. Burning the oil makes toxic smoke, but may be better than leaving oil in the water.

If you clean up an oil spill, protect yourself!

Whether you and your community have to clean an oil spill on your own or are paid by an oil company to clean an oil spill, you should know:

- Oil is always toxic. Touching or breathing it can lead to serious health problems (see page 506).
- Solvents used to clean oil are also toxic and can lead to serious health problems (see page 516).
- High-pressure hoses commonly used to spray oil off of rocks cause oil to **vaporize** (become a gas) and make the oil easy to breathe in. This can lead to problems of the throat and lungs.
- The company responsible for the spill and for cleaning it up should provide you with protective clothing, including a body suit, gloves, boots, respirator, safety glasses, and a head covering (see Appendix A).
- Working long hours in oil-contaminated water or being exposed to solvents can cause serious health problems. It is best to work fewer hours and to rest away from toxic fumes between work shifts.

Make a safety plan for emergencies

If you live where there is oil drilling or refineries, work with your community to make a safety plan to protect everyone's health in case of emergencies such as flares or spills. (To learn what a safety plan includes, see page 545.)

Map your community

Part of a safety plan is to know where problems may break out and where the resources are to prevent and recover from an emergency. Mapping the community can help.

Together with others from the community, draw a map of where you live. Include oil wells, drilling sites, pipelines, waste pits, refineries, and other sources of pollution. Also, include places where you get water, grow or collect food, and keep animals, as well as community resources.

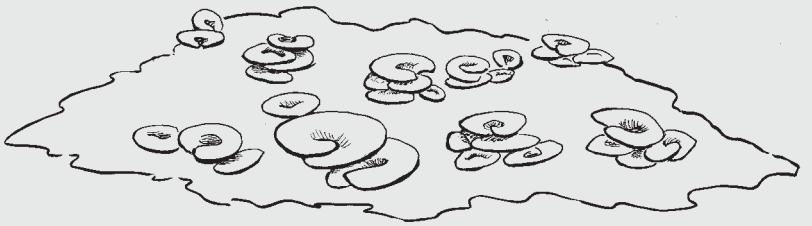
Talk about where there have been spills, accidents, or pollution in the past. What was the impact? Mark the map where you have seen the effects of oil spills. Then make a list of your available resources and a plan for how to use them in case of an emergency.

Meet and make your plan

WHAT WE NEED	RESPONSIBLE
• An upstream water source or a community water tank.	• Joseph
• Change stored water every 6 to 12 months.	• Sala, Naisha, Njuma
• Trucks or other vehicles to get people safely away.	• Ahmed's taxi, Kwame's truck
• Choose 1 or more people to alert nearby communities, officials, and the media in an emergency.	
• A school, church, or other meeting place.	
• Telephone or radio to call for help, and alert officials and media.	
• Telephone numbers for hospitals, clinics, and health workers.	

Restoring land damaged by oil

Oil spills cause severe long-term harm to land. If the oil is cleaned up and land is left to recover for many years, it may be possible to restore land to make it fertile again. But it will take a long, long time. (For more information on restoring land, see Chapter 11 and page 496.)



A new way to clean spilled oil?

After a diesel fuel spill in the USA, different companies were asked to see what they could do to clean it up. The soil where the oil spilled was mounded up in piles, and each company was given one pile to work with.

One of the companies was a small business devoted to growing and selling edible mushrooms. The man who ran the business had seen mushrooms growing after forest fires and other natural disasters. He believed mushrooms had the power to restore damaged land. His team went to work filling their oil-soaked pile with the root fibers of oyster mushrooms. Then they covered the pile and waited.

When they uncovered the pile 6 weeks later, what they saw was amazing. The soil was covered with huge mushrooms, some as big as 30 cm across. They took the mushrooms and soil to a laboratory and tested them. The mushrooms had no trace of oil or any of the toxic chemicals that oil contains. The mushrooms had completely cleaned the soil!

The exciting part of the story is what happened next. After the mushrooms matured, flies came in and laid eggs in them. Maggots appeared, birds flew in, and other small animals began to eat the mushrooms and the maggots. The birds and animals carried in seeds, and plants started growing. The polluted pile of dirt was transformed into a rich garden of life.

This method worked in the experiment, but no one knows yet if it will work as well in all conditions and all places. More work needs to be done to find out if mushrooms or other "natural remedies" can clean up oil spills.

Environmental Justice

One of the only ways for people to protect their health in oil-rich areas is to make sure that whoever controls oil resources works in a way that protects people from the health risks and provides them with the benefits. Because oil is so valuable, they have a lot of wealth to work with.

Women protest oil exploitation

The Niger River Delta in Nigeria was once a fertile land with plenty of fish, wildlife, and healthy farms. When oil companies first came to this region, they promised economic benefits to all the people. But after more than 30 years of oil development, the companies have not kept their word. As one Nigerian woman explained, "We are angry. Since 1970 when the company came here, they have denied us every living thing. We have nothing to show except the pollution of our rivers and creeks, destruction of our forests and mangroves, and the terrible noise of the gas flaring. We have no hope, while they are making millions with our gifts from God. They do not care or hear our cries."

(story continues on next page)

Nigerian women began a campaign of peaceful protest involving people from every tribe in the region. The women demanded that Chevron-Texaco, one of the main oil companies working in the region, provide jobs, resources for education, water, electricity, and community development. And they demanded compensation for all of the damage the oil company had done.

Chevron-Texaco called for the government to respond with an iron fist. Police and the military fired tear gas and attacked the women, beating and torturing them. Many were injured and some were killed. But the women responded with determination and creativity. Some picketed the oil company headquarters, others occupied the main export terminal, and hundreds more took over 4 flow stations in the Niger River to stop the companies from shipping the oil. Chevron-Texaco lost over $100,000 each day the women occupied the terminal and flow stations!

The oil company officials finally gave in. Chevron-Texaco agreed to create jobs and to set up a microcredit program to help women start their own businesses. They also promised to provide schools, hospitals, and water and electricity for the villages.

The brutal actions of the oil companies and their government allies in Nigeria show they will stop at nothing to increase their profits. The women in Nigeria have inspired people around the world to demand a share of the benefits, not the suffering, from oil development. Otherwise, they will stop oil development altogether.

Oil and the Law

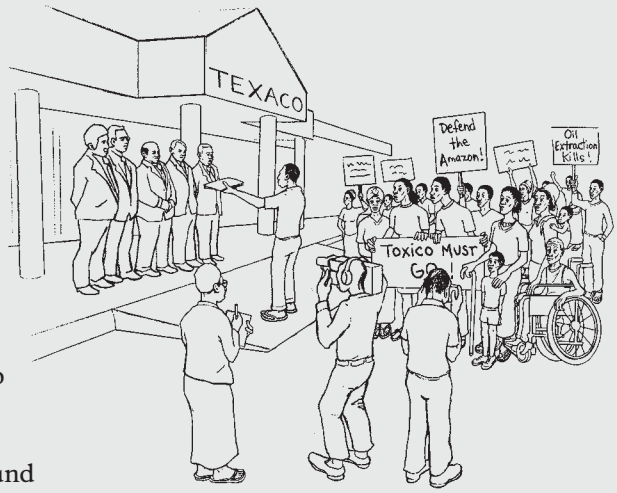
Many countries make laws to protect people, water, and wildlife from pollution, and to gain safe working conditions. Regional and international laws and agreements also exist to hold oil companies accountable for spills. But laws are effective only if people work together to make sure they are enforced. (For more about international laws, see Appendix B.)

The oil company should have filed an Environmental Impact Assessment (EIA) before drilling for oil. The EIA states what the company is legally responsible for in case of a spill. Discuss how your community can use the EIA to hold the company accountable in an emergency. For example, can you demand they shut down the pipeline that caused the spill until they clean it up? Can the company supply the community with drinking water, or pay for health services and damage to property? (To learn about EIAs, see Appendix B.)

The case against Texaco

When Texaco came to drill for oil in Ecuador, the Cofan people there had no idea the US oil company would destroy their lives. For over 20 years the company dumped millions of liters of oil and toxic waste water into the environment.

Rivers that had supported the Cofan for generations became useless as sources of food. People spent many hours each day searching for drinkable water and hunting for animals. Many people fled the area due to the destruction. The Cofan leaders say that Texaco destroyed their traditional way of life and caused illness for thousands of people. The Cofan population shrunk from 15,000 people to only about 500.



The victims of Texaco's contamination formed the Front for the Defense of the Amazon. They organized medical care for those suffering from serious illnesses. They helped to organize studies of the health effects of Texaco's oil operations. They talked to environmental activists from the capital city of Quito and to lawyers in the United States. Together they came up with a plan. The leaders and activists traveled by foot, canoe, and plane to New York City to file a billion dollar lawsuit against Texaco.

Texaco tried to have the case dismissed. The company claimed the case should be tried in an Ecuadoran court because the pollution happened in that country. The activists worried that it would be hard to get justice in Ecuador. They explained to the judge that the decisions to pollute the Amazon had been made in the United States. The judge agreed to listen to them. This was the first time an international case had been accepted in an American court! The Cofan leaders were overjoyed.

For 10 years Texaco fought to dismiss the case. A new judge decided that the case should be tried in Ecuador, but if a just outcome was not given, the case could be retried in New York. The lawsuit is still not over. The people continue to suffer health problems as oil is pumped out of the rainforest. Their persistence in seeking justice from the Texaco Corporation has taught many people about the damage done by oil, and has forced Texaco and other oil companies to use safer methods of drilling for oil.