



DESERTIFICATION

Halima Leaves Her Village

ASSAKA, NIGER

Nearing starvation because of the drought affecting the western portion of her African country, little Halima and her family have decided to leave their village of Assaka, Niger, in search of more fertile ground.

With only half as much rain as in previous years, harvests were catastrophic. Many people have been forced to eat seeds found in termites' nests, roots and a bitter fruit called anza.

Experts believe that over the next 75 years, global warming will cause droughts around the planet, leaving tens of millions of people vulnerable to water and food shortages. Those droughts will gradually kill off vegetation that absorbs significant quantities of CO₂, a greenhouse gas. In the process, we will lose an important line of defense against the greenhouse effect. ♣



RISING SEA LEVELS

Whole Islands Could Disappear Under Water!

MALE, MALDIVES

After setting out by boat from Tadoussac several months ago, the Brown family finally arrived in Male, the capital of the Maldives, an archipelago in the Indian Ocean. Eleven-year-old Philippe soon made friends with Mahomed, who told him that one day his islands might be swallowed by the sea! But his father reassured him that it won't happen overnight.

"I learned that sea levels could rise by 50 centimetres over the next 100 years," recounts Philippe. The reason is that global warming is causing the oceans to warm up, and warm water takes up more space than cold water. What's more, melting glaciers in Greenland and the Arctic are releasing huge amounts of water into the ocean. Islands and coastlines around the world could be flooded, forcing their inhabitants to move elsewhere. ♣



GLOBAL WARMING

Strawberries All Year Round?

LENNOXVILLE, QUÉBEC, CANADA

Anne-Sophie has good reason to be happy. The young woman just received her university degree in agricultural science. Armed with her new expertise, she intends to help run the family's strawberry farm in the Eastern Townships, following in her father's and grandfather's footsteps.

A true optimist, the young woman is looking forward to a "fruitful" career. "With warmer temperatures in temperate countries, the summer will last longer. We'll have a longer growing period for our strawberries!" Her younger brother Éric is not as enthusiastic. Will winter still be cold enough to freeze the pond where he plays hockey?

Because the planet is warming up, some regions could experience longer, hotter summers and shorter, milder winters. ♣



AIR, WATER AND SOIL POLLUTION

Rain that Chases the Fish Away!

NOVA SCOTIA, CANADA

Back from a fishing trip with his father, Anthony looks a little down in the dumps. Like most fishermen, they came home practically empty-handed this year.

Apparently the salmon have deserted the river because of pollution. The pollutants released into the air, mainly due to the burning of fossil fuels, mix with rain and fall back into the lakes and rivers. The result is known as "acid rain."

In Nova Scotia, like in Québec, much of the pollution that causes acid rain comes from the United States. In that country, unfortunately, a lot of the electricity is generated by burning coal.

Acid rain can be toxic for some species of fish, amphibians (like frogs) and even the forest and the animals that live there. Acid rain leaches nutrients from the soil, weakening plants and making them more vulnerable to diseases and infestations. In acidified lakes and rivers, fish have difficulty reproducing and their population drops as a result. ♣

AIR POLLUTION

Grandma Can't Breathe!

MEXICO CITY, MEXICO

Belinda's family is celebrating. The 77-year-old grandmother is finally coming back home after a stay at the hospital. "I can't wait to prepare delicious meals for my family," she says.

Her respiratory problems began Monday afternoon, on a hot, sunny, still day. The city was covered in thick smog, a yellowish fog caused by pollution. Unfortunately, from now on Belinda will have to stay at home when smog levels are high to avoid breathing too much unhealthy air.

The pollution is caused primarily by human activity like the use of fossil fuels for transportation (cars, planes, etc.), heating and manufacturing. ♣





SHIFTING CLIMATE ZONES

The Forest Is Moving!

VAL-D'OR, QUÉBEC, CANADA

Can you picture a black spruce in Abitibi picking up its branches one fine morning, packing its bags and setting out for the tundra 500 kilometres to the north? While the image might seem comical, that's what could happen to many plants, mammals, birds, insects and fish all around the world over the next several hundred years.

Temperature plays a key role in determining the animal and plant species that live in a given area. Generally speaking, the further north you go, the colder the climate, and the vegetation changes accordingly. That's why bison live in the prairies where grass is plentiful, while caribou prefer the tundra to the north where they can find lichen to eat.

Under the influence of global warming, climate zones could very well shift northwards. To continue to live in the climate they prefer, animals would have to migrate north as well. Unfortunately, even if it takes several centuries, the change may well be too sudden for some species, which could die off as a result. ♦



AIR POLLUTION

Coming Soon: Children in the Schoolyard!

XI'AN, SHAANXI, CHINA

Schoolchildren in Xi'an, the capital of the province of Shaanxi, couldn't be happier. In a few years they'll be able to play outside at recess again without any risk of developing respiratory illnesses.

For several years, the children have been confined to the gymnasium—and not just on rainy days—because of serious air pollution.

Most families in the area heat their homes with coal, giving off pollution that remains suspended in the air at low altitudes and creates smog. It also contributes to the greenhouse effect and climate change.

However, local authorities have just announced the construction of a hydroelectric power plant in partnership with Enercorp International. An extensive program to replace current heating systems with cleaner, electric systems has also been promised.

Of course, citizens are being asked to help in the effort to clean the air by taking their cars less often and saving energy. For now, though, local school children are thinking only about the prospect of playing ball under a clear blue sky! ♦

EXTREME WEATHER

Puppy Pulled from the Water!

NEW ORLEANS, LOUISIANA, UNITED STATES



A dramatic rescue took place in New Orleans yesterday as local children saved an abandoned puppy that had been floating on a wooden door. As you may recall, a large section of the coastal city was flooded in the wake of Hurricane Katrina.

The waves created by the violent storm washed away the dikes that were supposed to protect the city. Water poured through city streets, causing many deaths and injuries and forcing tens of thousands of people to evacuate their homes.

Experts say that because of climate change, we can expect even more extreme weather events like tornadoes, violent storms, torrential downpours and large temperature swings in the future. ♦



FINDING ALTERNATIVES TO RADIOACTIVE WASTE

Sunshine in a Can?

GENEVA, SWITZERLAND

Nadine has just won first prize in a science contest for her device that transforms the sun's rays into electricity. "I wanted to show that there are other ways than nuclear power to generate electricity. By generating power better and not wasting it, we can help protect the environment!"

Like many other countries around the world, Switzerland generates much of its power in nuclear plants. Nuclear generating stations don't produce pollution or greenhouse gases, and the radioactive waste can be stored safely. Despite such precautions, however, some countries fear the risk of an accident and prefer not to use nuclear power. ♦

AN EVENT NOT TO BE MISSED!

World Conference of Young Energy Scientists

in Gustville, Québec, Canada.

NEXT BIG GATHERING OF SCIENTISTS INTERESTED IN THE "ENERGY OF TOMORROW" TO BE HELD IN GUSTVILLE!

Make sure you attend the **10th World Conference of Young Energy Scientists** at the Gustville Conference Centre. The highlight of the event will be a debate on the pros and cons of various power sources used around the world. Tell us what you think!

Take part in *The Great E² Challenge* and help us determine which power sources are best suited to provide the "energy of tomorrow"!