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orrential rain has washed away the blood where the family fell under a hail of wooden spears. But memories of what happened this summer are still fresh in the minds of those who live and work here.

At first the security guard inside the perimeter fence of the oil drilling station is nervous and warns us to keep our distance as we approach. Darkness is falling and he is alone on duty. But he slowly opens up and describes how, on a morning in August, a 12-year-old girl, run through with two spears nearly 12ft in length, managed to stagger to the front gate of the drilling station to raise the alarm before she collapsed and died.

A short distance away, on a dirt track hidden from view by dense foliage, the bodies of her mother and 17-year-old brother were found by oil workers, pierced by more than a dozen similar spears. Her baby brother had been kidnapped. Before she died, the girl gave a description of their attackers: they were almost entirely naked.

From the shape of the spears and the coloured feathers on them, they have since been identified as almost certainly belonging to one of the world's last known "uncontacted" tribes: the Taromenane.

In the whole of its history the tribe has never had any peaceful contact with the outside world. choosing to live totally isolated from civilisation in this area of breathtaking beauty at the headwaters of the Amazon. They are supposed to be a protected people, but they are fighting for their survival and that of their ancestral land. It is a struggle with surprising implications for all of us.

Sandra Zavala, her son Byron and daughter Damaris were easy targets, stragglers behind a group of men with machetes who were working to clear a path through the rainforest. Oil exploration in the forest has encouraged illegal logging and colonisation by poor Ecuadoreans from other parts of the country and led to clashes in which many innocent lives have been lost. Sandra, 35, and her children were just the latest victims in a vicious turf war triggered by our thirst for oil.

Close to Ecuador's borders with Colombia and Peru, this swathe of territory — much of it now included in the Yasuni national park — is also at the forefront of another, global battle. Yasuni is home to a vast array of rare flora and fauna. It has the largest number of tree species per hectare in the world (more in just one hectare than the whole of North America), together with endangered monkeys, pumas and jaguars and 44% of the entire bird population of the Amazon basin stretching far beyond its borders. But beneath the surface is immense wealth of a different kind: more than a billion barrels of crude oil.

Ecuador's president, Rafael Correa, is promoting a plan he describes as "not only simple, but audacious and revolutionary". In the run-up to next month's UN climate-change conference in Copenhagen, he and his team have been circling the globe to drum up support for a scheme that would leave 850m barrels of oil in the eastern section of the park untouched underground.

In return for not pumping this oil, they are ask-60 ing other countries to pay Ecuador \$350m a year





for the next 10 years to compensate for lost income. Correa's plan is designed to preserve what is left of Yasuni's unique biosphere and the territory of its indigenous people and would also prevent carbon-dioxide emissions caused by extracting and burning this oil - an estimated total of 410m metric tons of CO<sub>2</sub>.

In Yasuni, meanwhile, the battle is raging for control of resources. Active drilling and oil production are taking place in several blocks of land, including one close to the heart of the park operated by the Spanish conglomerate Repsol and

indigenous people, many of whom have been co-opted to work for the oil companies.

In an effort to protect the territory of these indigenous communities, the southern half of Yasuni and an area beyond was marked out two years ago as a so-called "untouchable zone" where they could continue their hunter-gatherer existence undisturbed. But the Taromenane have no way of knowing that such a zone exists, let alone its limits. They only know that their ancestral land is under threat. Those who attacked the Zavala family a few miles beyond the

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two in the northwest operated by the Chinese company Petro Oriental, which runs the drilling station where the Zavalas were killed. The family came from a small community of settlers, Los Reyes, that has sprung up close to the oil wells.

The Taromenane have killed settlers and illegal loggers before, in retaliation for attacks on their dwindling numbers. In 2003, 26 Taromenane women and children were ambushed and killed. Their attackers were never caught but are thought to have been Waorani, another, larger group of

boundary of the zone did not keep the kidnapped baby. They stole back to the area two days later and left the infant propped in a hollow tree trunk close to where his mother had died. He was quickly found, dehydrated but otherwise well.

In line with official policy of not forcing contact with the Taromenane, no action was taken in the aftermath of the killing. (In the past, indigenous peoples have been decimated by diseases brought in through forced contact with the outside world.) "We don't want to put these tribes in a



Above: 14,000 barrels of crude oil were spilt in February

Top left: Baby Zavala, kidnapped by tribesmen who killed his mother and siblings, is safe

Above left: digging up contaminated soil

Left: Yasuni is unique in its rich biodiversity

crystal box and conserve them for eternity," says a government spokesman, Eduardo Pichilingue. "We want to leave it up to them to decide how and when they change. They have that right."

Instead of punishing the tribe, the government called for the Hormiguero Sur drilling station to be closed down. But as we stand talking to the guard there two months later, straining to make ourselves heard above the roar of a generator pumping oil, it is clear this order is being ignored. Attempts to challenge Petro Oriental executives at a nearby headquarters are met with indifference.

"We can't comment," said Luis Gomez, director of community relations. "All I can say is we get

blamed for everything bad that goes on around here. It's even our fault, they say, when a wife leaves her husband." He laughs, before hastily ushering us out of the floodlit compound.

This brushoff is mild compared to the repeated stonewalling of the Spanish company Repsol, which has drilling operations close to the heart of Yasuni. In addition to triggering tensions of the kind that led to the deaths of the Zavala family, Repsol has recently been accused of causing some of the worst environmental destruction in this part of the Amazon rainforest, with a series of huge oil spills. According to the Spanish branch of Greenpeace, Repsol sent 14,000 barrels of crude oil gushing over the landscape in February. The spill caused such widespread pollution that environmental activists called for all concessions granted to Repsol throughout the Amazon region to be withdrawn. Repsol refuses to comment.

We were initially given permission by Repsol to visit a scientific research station run by Ecuador's Catholic University within its concession area. From there we planned to travel to some of the indigenous communities said to have been affected by the spills.

But when we arrive by motor launch at Repsol's first security outpost, we find a notice pinned on a perimeter fence warning employees: "It is your responsibility to maintain strict secrecy regarding your work." As our photographer starts taking pictures, he is warned by security guards with submachineguns to put his cameras away.

At the scientific station: impasse. Repsol backtracks on its offer of co-operation and says it has nobody for us to liaise with locally. Fearing repercussions from the oil company, which controls all access roads to and from the university-run scientific station, academic staff there become anxious and reluctant to talk. They withdraw an offer of a truck to visit indigenous communities several hours' drive away and seem keen for us to leave.



Stark evidence of the long-term destruction caused by oil companies in Ecuador's Amazonian rainforest lies less than 100 miles northwest of Yasuni. In parts of the rainforest as yet untouched by the incessant search for oil, the song of rare birds and the screeching of monkeys fill the air. But close to the oil installations, the only signs of wildlife are the vultures circling on thermal currents above flare stacks burning off unwanted gas and emitting an acrid smell.

People in the sprawling area between the oil towns of Coca and Lago Agrio, which has been booming since the 1960s, have had a chilling foretaste of what others may face unless the drilling is contained. Here, in a region dubbed "the Rainforest Chernobyl", decades of drilling by the American giant Texaco, taken over in 2001 by the Chevron Corporation, has led to toxic contamination over thousands of miles. Local communities are suffering catastrophic rates of cancer and other diseases, which has prompted a historic \$27-billion court battle. If the 30,000 Ecuadorean plaintiffs are successful, legal history could be made, with the largest damages award >>> 61

ever handed down in an environmental case.

A few miles east of Coca lies the village of San Carlos. Most who live here came to the area in the 1970s to farm along routes cut through the rainforest as oil exploration began. There is little forest left now and little productive farming. Much of the land in this region that stretches north to the border with Colombia was long ago contaminated by millions of gallons of toxic waste, gas and crude oil released untreated into the environment. Most of the inhabitants have depended for decades on contaminated drinking water from polluted rivers and streams. Rates of cancer of all kinds are nearly four times higher than in areas where there is no oil drilling. The incidence of other illnesses such as skin and bone disease, respiratory and digestive problems and spontaneous abortions are also far higher. Most of the people living here have been dependent for decades on contaminated drinking water taken directly from polluted rivers and streams.

Beatrice Mainaguez cradles a photograph of her younger sister Maria, who died of uterine cancer three years ago aged 35. She talks of the "bitter pain" of watching her grow thinner and thinner before she died. Maria, a mother of five. had lived in San Carlos since she was an infant. Her family took their drinking water from a creek that ran close to one of the many oil wells Texaco sank in and around San Carlos in the 1970s and '80s. It was not until four years ago that the family

specialist doctors to diagnose them properly or analyse the causes. But to anyone who lives round here it's obvious that the problems are related to pollution caused by the oil companies."

Walk anywhere near these waste pits and you still sink ankle-deep in tar. Other stretches of land that appear green move unnervingly underfoot; poke a stick through the grass and you simply find lakes of black sludge.

Last year a team of engineers, doctors and biologists submitted a court-ordered report, which concluded that Texaco had polluted streams and drinking water across an area of nearly 2,000 square miles, and caused 2,091 cases of cancer, leading to 1,401 deaths between 1985 and 1998. Chevron's lawyers say the area's health problems are caused only by poverty and poor sanitation.

Faced with the possibility of losing the legal battle and having to pay staggering levels of compensation, the company has now made moves to argue before an international court of arbitration in the Hague that the case against the oil companies in Ecuador has been unfair. The outcome is still uncertain: the judge in Ecuador is not due to hand down his judgment until next year.

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So far only Germany has made a concrete effort to support Correa's plan, offering to donate \$50m a vear for the next decade - on condition that an international trust fund be set up into which donor countries would pay money. All donors would

## LAND THAT APPEARS GREEN MOVES UNNERVINGLY UNDERFOOT.

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IF YOU POKE A STICK THROUGH THE GRASS

shack was connected to mains water, and eight months ago to electricity.

A short distance away, Orlando Molina hugs his daughters Sofia, 15, and Yuri, 17, who squirm with embarrassment as he asks them to roll up their trouser legs to show me the bone deformities both were born with.

Orlando savs doctors told him the deformities were likely to have been caused by their mothers' milk being leached of nutrients because she drank water that had drained through soil contaminated by spills from the Texaco wells. His extended family used to live on a coffee farm within a few hundred feet of a Texaco facility on the outskirts of San Carlos that was subsequently taken over by the state company Petroecuador. Both his parents died of stomach cancer, his sister of breast cancer and a brother of prostate cancer.

Orlando spent most of the \$4,500 Petroecuador eventually gave him for gobbling up his small landholding on medical treatment to help straighten his daughter's legs. With the \$1,200 left over he bought a two-room wooden shack where his family of six now live.

"Sixty-five per cent of the population around here are suffering from respiratory and gastric problems, skin disease and other illnesses," says Rosa Moreno, a nurse who has been in the San 62 Carlos area for 25 years. "We don't have any

receive "Yasuni bonds" guaranteeing that their contributions would be returned, with interest, if Ecuador were ever to tap the protected oil reserves. Spain, France and Italy have also expressed interest by cancelling debts owed by Ecuador. The British government has not vet been formally approached, but when Correa's advisers were due to meet MPs earlier this year to discuss the plan. they were told that our parliamentarians were too busy dealing with the expenses scandal.

Correa has made it clear that if he does not get backing for his plan, he will be forced to allow further drilling in Yasuni. "Climate change has been produced principally by the rich countries," he has said, "and they have a duty to take responsibility for that. What we are proposing is a constructive way to redress the imbalance and stop further polluting of the planet."

The entire Amazon region is the largest green lung in the world. Its trees and plants produce one-fifth of the Earth's oxygen and absorb as much CO<sub>2</sub> every year as is created by the burning of fossil fuels in the entire EU. Preserving the natural environment in this area is a key element of the fight against global warming.

The bloodbath among the locals must also come to an end: the Zavala family were innocents swept up in the thirst for oil.

But is anyone really listening? ■



e have seen the future, said new Labour in 1997, and the future is green. Unhappily, the future was also Gordon. For a while it looked okay. Even the Treasury, it seemed, might have a green alint in its eye. Ambitious targets were set, notably a 20% cut in CO2 emissions, from a 1990 baseline, by 2010 (a target that will be missed by a wide margin). But what followed was 10 years when green taxes went down, not up. Carbon emissions went up, not down.

The problem with environmental policies is that they take a long time to deliver. Transport is the classic example. Motorists and, especially, the haulage industry have a vast capacity for rage, and ministers who block the road soon run into trouble.

Blair-Brown inherited the Tory 'fuel duty escalator', which raised fuel tax by at least 5% above inflation annually. In his first budget, Brown whacked on an immediate 9.3% and jacked up the escalator to 6%. More good things followed in 1999, including the Climate Change Levy, which taxed businesses on the energy they used. But that was pretty much the limit of Gordon's greenery. The fuel

escalator was scrapped in November 1999, and the fuel-tax protests that blocked the refineries in 2000 were followed by a cut in 2001.

In the same year, differential rates of vehicle excise duty (VED) were introduced, based on engine size and, later, on carbon output. The very smallest and cleanest city cars, in Band A. pay no VED at all. The biggest emitters, in Band M, pay £405. But Friends of the Earth reckons it would take a top rate of at least £2,000 to have a significant effect on carbon emissions.

In the 10 years from 1997, UK traffic rose by more than 11%. Since 1980, vehicle emissions have grown by 54%, now accounting for 24% of the national total. In real terms motoring has dropped in cost by more than 8%, while bus and rail fares have risen by 17% and 7% respectively. Policy on air transport is equally perverse. The

warming effect of a tonne of CO<sub>2</sub> from a jet is equivalent to between two and four tonnes burnt on the ground. Yet there are plans to expand Heathrow. Stansted and Birmingham airports, and though Air

Passenger Duty on the cheapest international flights went up on November 1, it is still only £1 more than it was in 1997: £11 instead of £10.

In the eight years before Blair, green taxes rose from 7.8% to 9.4% of the UK's annual take. In the eight years that followed, they fell back to 7.7%. Where taxes were introduced or raised. they did not bite hard enough. The £8-per-tonne annual escalator added to the Landfill Tax (to promote recycling) has made only a marginal impact: 57% of municipal solid waste went to landfill, against an EU average of 42%; and British consumers discarded 572 kilograms of rubbish per head against a European average of 522 kilograms. The result has been a rash of headlines denouncing local recycling schemes as scams, and an erosion of public support.

The government is due some credit. Spurred by the apparent greening of the Conservative party, this year's budget brought an aboveinflation increase in fuel tax. The long-awaited Marine and Coastal Access Bill will go some way towards providing the protection marine species and habitats are gasping for. More importantly, the new Climate Change Act makes Britain the first country to set legally binding targets for cutting greenhouse emissions (an 80% cut by 2050), and will at last feed aviation and shipping into its calculators

## WHAT IS THE REST OF THE WORLD DOING?

#### **DELHI: BAN ON PLASTIC BAGS**

Earlier this year, India's capital awoke to headlines announcing five-year jail sentences or stiff fines for using polythene bags. The ban will be enforced gently at first to allow a switch to cotton, recycled-paper or compostable bags.

#### **ISTANBUL: SPEEDY BUSES**

One of the most congested, polluted bridges in Turkey, the six-lane First Bosphorus Bridge in Istanbul could take three hours to cross until Bus Rapid Transport got its own section this year. The ride now takes 25 minutes, and 800,000 passengers a day are expected.

#### **FRANCE: PLANES TO TRAINS**

Reports suggest France is phasing out planes in favour of more high-speed trains. In 2007, a decision was taken to create another 2.000 kilometres of high-speed tracks by 2020. Flight data for 2009 show a 3% drop in passenger numbers, partly as a result of new rail lines.

#### **MALDIVES: GOING GREEN**

This year plans were announced to make the Maldive islands the world's first carbon-neutral country by 2020. Solar panels, wind turbines and biomass will replace fossil fuels.

### **CHICAGO: ECO-FRIENDLY LIGHTS**

Five years ago Chicago fitted LED lights in all city traffic lights. The move cuts energy use by 85%, saving \$2.55m in energy bills, \$100,000 in materials and 23,000 tonnes of  $CO_2$  a year.



#### **PARIS: GREEN CYCLING**

In July 2007, 10,000 pearl-grey Velibs were released city-wide for public use. The 24/7 cycle-hire scheme, the largest in the world, logged 1m rides in 18 days. Paris now has 20,000 Velibs — and the idea is spreading.

