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RESOURCE BOOKLET

READ THESE INSTRUCTIONS FIRST

This Resource Booklet contains Documents 1 and 2 which you should use to answer the questions.

You should spend approximately 10 minutes reading the documents before attempting to answer the questions. This is allowed for within the time set for the examination.



This document consists of **3** printed pages and **1** blank page.

The documents below consider the issue of industrial pollution and how it is being tackled in different countries. Read them **both** in order to answer **all** the questions on the question paper.

Document 1: adapted from 'Nigeria: World oil pollution capital', an article published on the BBC website, June 2010.

Visitors to the Nigerian village of Kpor, deep in the Niger Delta, are greeted by strange sights: silver frogs blink from gleaming puddles, sunlight bounces from an eerie black lake, and dragonflies hover over cauldrons of tar. This is Rivers State, an area abundant in oil and gas. Environmentalists call the Delta the global capital of oil pollution, but unlike the Gulf of Mexico, there are no underwater robots, flotillas of scientists or oil booms here.

On 12 May 2009, Shell's Bomo manifold blew up, leaking massive amounts of crude. Local people say 39 hectares were contaminated. A second leak – from a derelict oil tap – had already been continuously spilling oil for years. Shell hired a local company to clean up, but the area remains an oil slick.

"It kills our fish, destroys our skin, spoils our streams, we cannot drink," says Saturday Pirri, a local palm wine tapper. "I have no livelihood left." His father taught him to make palm wine but today the trees yield only a quarter of what they once provided.

In the Niger Delta, there is little independent monitoring of spills, and the companies themselves disclose virtually no data about their own pollution. But, according to the Nigerian government, there were more than 7,000 spills between 1970 and 2000. Environmentalists believe spills – large and small – happen at a rate of 300 every year.

"It is a grave situation," says Kingsley Ogundu Chinda, environment commissioner in Rivers State. "I blame the owners of the facilities. They are economical with the truth. They are not sincere in their practice. They are not sincere with the people." He also says the government has failed to force companies to observe the law.

It is a dangerous and unpredictable business. Oil workers and oil contractors are regularly kidnapped for ransom. Heavily armed militants blow up pipelines, stealing oil in a process known as "bunkering".

Shell says most of the spills are caused by sabotage, and therefore beyond their control. It is impossible to verify. "We take every precaution that a spill as a result of our operation is kept to an absolute minimum," says Mutiu Sunmonu, Shell's managing director in Nigeria. But oil industry insiders also speak of derelict infrastructure. They talk of decades-old pipelines, rusting oil taps, corroding manifolds, and historic underinvestment reaching back decades.

We decided to examine flow stations and pipelines for ourselves.

"Getting close is not easy," shouts Evangelist Ibinabobo Sanipe, over the roar of the speedboat. As national secretary of the Oil and Gas Host Communities Association, he is travelling with us. "The military guard this place fiercely," he warns.

Before long, a big military vessel warns us to pull over, with our hands in the air. But with just a few jokes and handshakes, the soldiers are smiling and joking. We continue our journey, having paid no bribe, and shown no identification.

Document 2: adapted from 'China plots course for green growth amid a boom built on oil', an article published in the British newspaper *The Guardian*, February 2011.

Hopes in China for a cleaner future are rising ahead of a national blueprint to tackle pollution, waste, and champion renewable technology.

The five-year plan, to be announced in March 2011, is being hailed as the greenest strategy document in the country's history. This has big implications for the outside world. It could affect the colour of the sky, the planet's temperature and the welfare of billions of people.

"The environment tax is going to happen. This is evident in the proposals for the next five-year plan," said Ma Zhong, director of the school of environment and national resources at Renmin University.

Other radical measures still under discussion include a possible cap on energy use and a shift away from GDP-based performance evaluation, academics and government advisers say.

The five-year plan will see a growth in both black and green power consumption. Even as coal use rises, Beijing will blaze further along the trail towards a low-carbon economy. Its wind power generating capacity has doubled annually for four years and in 2010 became yet another field in which China surpassed the US to become number one. Seven of the planet's top 10 solar panel makers are now Chinese.

The country's high-speed rail network – non-existent in 2008 – will be bigger than the rest of the world combined within two years. According to one domestic carmaker, China will soon unveil plans for 10 million electric car charge-and-park places by 2020. In these and other fields, such as eco-city development and public transport construction, the five-year plan is likely to set ambitious spending targets.

A longer term solution to the smog shrouding many Chinese cities will be tighter factory and vehicle controls. Last week, the government said it would widen pollution reduction targets by adding nitrogen oxide – roughly a third of which comes from vehicle exhausts – and ammonia, a source of water contamination from chemical and textile plants.

"I'm hopeful about the next five-year plan," said Li Bo of Friends of Nature. "The government is prepared to go further than before. But we should do even more."

Copyright Acknowledgements:

Document 1 © adapted: Caroline Duffield; *Nigeria: World Pollution Capital*; www.bbc.co.uk/news/10313107; 15 June 2010.

Document 2 © adapted: Jonathan Watts; *China plots course for green growth amid a boom built on dirty industry*; The Guardian News and Media Ltd; www.guardian.co.uk/world/2011/feb/04/china-green-growth-boom-industry; 4 February 2011.

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