Oil fouls everything in southern Nigeria. It spills from the pipelines, poisoning soil and water. It stains the hands of politicians and generals, who siphon off its profits. It taints the ambitions of the young, who will try anything to scoop up a share of the liquid riches – fire a gun, sabotage a pipeline, kidnap a foreigner.

National Geographic, February 2007

The Niger Delta covers an area of 70,000 km², making up 7.5% of Nigeria’s land area. It contains over 75% of Africa’s remaining mangrove. A report published in 2006 estimated that up to 1.5 million tonnes of oil has been spilt in the delta over the past 50 years. The report, compiled by WWF, says that the delta is one of the five most polluted spots on Earth. Pollution is destroying the livelihoods of many of the 20 million people who live there. The pollution damages crops and fishing grounds and is a major contributor to the upsurge in violence in the region. People there are dissatisfied with bearing the considerable costs of the oil industry but seeing very little in terms of the benefits. The report accused the oil companies of not using the advanced technologies to combat pollution which are evident in other world regions. However, Shell claims that 95% of oil discharges in the last five years have been caused by sabotage.

The flaring (burning off) of unwanted natural gas found with the oil is a major regional and global environmental problem. The gas found here is not useful because there is no gas pipeline infrastructure to take it to consumer markets. It is estimated that 70 million m³ are flared off each day. This is equivalent to 40% of Africa’s natural gas consumption. Gas flaring in the Niger delta is the world’s single largest source of greenhouse gas emissions.

The 2006 report and other recent studies have also highlighted the poverty and inadequate infrastructure in the area, which has been cited as a major factor in the political insecurity of the region. Oil pipelines and facilities are regularly attacked and oil company employees are forced to live in heavily guarded compounds.

The development of the oil industry

Oil was first extracted from the Niger delta in 1956 (Figure 1). The low-sulphur oil quickly gained important export markets around the world and by the mid-1970s Nigeria had joined the influential Organisation of Petroleum Exporting Countries (OPEC).

Nigeria is the world’s sixth largest oil exporter. The main destinations of its oil exports are the USA (40%) and Western Europe (21%). Production is dominated by five major transnational corporations (TNCs) – Shell, Total, Agip, ExxonMobil and Chevron. Together they operate 159 oilfields, 275 flow stations and 7,250 km of pipelines. Many of these new oilfields are offshore.

In 1960, farm products such as palm oil and cacao beans accounted for nearly all of Nigeria’s exports. Today, oil makes up 90% of export earnings and 80% of its revenue. Nigeria is the most populous...
Oil exporting countries are effective in terms of oil reserves, production, and export. The table below shows the comparison of Nigeria’s oil export revenues and its GDP.

<table>
<thead>
<tr>
<th>Country</th>
<th>Oil exporting revenues (billion $ 2005)</th>
<th>GDP per capita ($ 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>153</td>
<td>43,400</td>
</tr>
<tr>
<td>Russia</td>
<td>122</td>
<td>42,300</td>
</tr>
<tr>
<td>Norway</td>
<td>53</td>
<td>19,200</td>
</tr>
<tr>
<td>Iran</td>
<td>47</td>
<td>12,800</td>
</tr>
<tr>
<td>UAE</td>
<td>46</td>
<td>11,400</td>
</tr>
<tr>
<td>Nigeria</td>
<td>45</td>
<td>11,100</td>
</tr>
<tr>
<td>Kuwait</td>
<td>39</td>
<td>8,300</td>
</tr>
<tr>
<td>Venezuela</td>
<td>38</td>
<td>7,200</td>
</tr>
<tr>
<td>Algeria</td>
<td>36</td>
<td>6,100</td>
</tr>
<tr>
<td>Libya</td>
<td>28</td>
<td>1,400</td>
</tr>
</tbody>
</table>

Figure 2: Comparison of Nigeria’s oil export revenues and its GDP

The question is – where has the money gone? A recent international report used the terms ‘the cancer of corruption’ and ‘the institutionalised looting of national wealth’. Nigeria’s anti-corruption agency estimated that in 2003, 70% of oil revenues – more than $14 billion – had been stolen or wasted. Each one of Nigeria’s 36 state governments receives a share of oil money but ‘trickle-down’ to the country’s poor is extremely limited.

Environmental disaster
One of the world’s largest wetlands and Africa’s largest remaining mangrove forest has suffered an environmental disaster.

- Oil spills, acid rain from gas flares and the stripping away of mangroves for pipeline routes have killed off fish.
- Between 1986 and 2003, more than 20,000 hectares of mangroves disappeared from the coast, mainly due to land clearing and canal dredging for oil and gas exploration.
- The oilfields contain large amounts of natural gas. This is generally burnt off as flares rather than being stored or re-injected into the ground. Hundreds of flares have burned continuously for decades. This causes acid rain and releases greenhouse gases.
- The government has recognised 6,817 oil spills in the region since the beginning of oil production. Critics say the number is much higher.
- Construction and increased ship traffic have changed local wave patterns causing shore erosion and the migration of fish into deeper water.
- Various types of construction have taken place without adequate environmental impact studies.

The federal environmental protection agency has only existed since 1988 and environmental impact assessments were not compulsory until 1992. An environmental impact assessment is a document required by law detailing all the impacts on the environment of an energy or other project above a certain size.

Local people who have been forced to give up fishing because of reduced fish stocks often find it difficult to get another job. Many local people feel that most jobs go to members of the country’s majority ethnic groups – such as the Igbo, Yoruba, Hausa and Fulani, who traditionally come from elsewhere in Nigeria. An added problem is a history of ethnic rivalry in an area inhabited by more than 20 ethnic groups. The people of the Niger delta also accuse the government of inadequate investment in the region in terms of schools, hospitals, housing and other forms of infrastructure.

The Gbaran Integrated Oil and Gas Project
The largest new development in the delta is the Gbaran Integrated Oil and Gas Project (IOGP), operated by Shell. It is located along the Nun River, a distributary of the Niger formed where the Niger river splits in two: the Nun and Forcado rivers. The project is designed to produce 120,000 barrels of oil a day and deliver one billion standard cubic feet a day of gas to the plant at Bonny by late 2008. It will involve activity in

- Various types of construction have taken place without adequate environmental impact studies.

Nigeria nationalised its oil industry in 1971. In a joint venture arrangement, the Nigerian National Petroleum Corporation, which is owned by the government, manages 55–60% of TNC oil operations.
12 producing fields and 15 new fields. The scale of the project is illustrated by the $420 million contract awarded to Saipem for pipelines, flowlines, fibre optic and high-voltage electrical cables to connect Gbaran with the central processing facility in the area. In total, 340 km of pipelines and flowlines will be installed.

Shell has pledged to minimise the environmental impact of flared gas, which has been a significant problem in the Niger delta region in the past.

The design seeks to minimise the environmental and social impact of the project. This will be done partly by concentrating facilities in as few locations as possible and by making the best possible use of existing pipeline routes. Overall, the project will have an impact on over 90 communities in Bayelsa and Rivers States. Seventeen communities will be directly affected by the central processing facilities, while the remaining communities are along the pipeline route.

After ongoing criticism of the actions of the oil industry in the region, Shell along with the other main oil companies has been trying to improve its actions and image. Shell is financing a series of community development projects with a social investment fund that has been set aside as part of the project. Funds have been allocated to:

- entrepreneurship and skills development
- employment creation
- educational infrastructure
- scholarship awards
- health programmes
- potable (drinking) water.

The sum of $30 million will be invested in these community-related schemes over a four-year period from 2006. In 2005, the company agreed to 70% of the $73 million cost of the Ogbia–Nembe road which will connect communities in the area with major cities such as Port Harcourt and Emakalakala.
Activities

1  Study Figure 1.  
   (a) Describe the location of the Niger delta.  
   (b) What is the function of the oil terminals?  
   (c) Suggest reasons for the location of the oil terminals.

2  Suggest why Nigeria refines a relatively small proportion of the oil it produces and exports much of the oil in a crude state to be refined in other countries.

3  What benefits has the oil industry brought to the Niger delta and to the country as a whole?

4  Describe the problems created by oil development in the region.

5  If violence against the oil industry reached such a scale that it caused a major reduction in Nigeria’s oil exports, what would be the consequences?

6  Look at Figure 2.  
   (a) Compare Nigeria’s oil revenues with the export earnings of the world’s other main oil exporters.  
   (b) Now compare Nigeria’s GDP per capita with that of the other major oil exporting countries.

7  Why are foreign companies so active in Nigeria’s oilfields?

8  (a) Describe Nigeria’s energy consumption for 2004, shown in Figure 3.  
   (b) Explain the pattern of this energy mix.  
   (c) Suggest why coal, nuclear power and other renewable sources of energy are not part of Nigeria’s current energy consumption.  
   (d) Find out where Nigeria’s HEP is produced.

Student research
9  (a) Describe the location and scale of the Gbaran Integrated Oil and Gas Project.  
   (b) How is Shell trying to improve the reputation of the oil industry in the region?

Figure 3: Nigeria’s energy consumption, 2004