



International  
Association  
of Oil & Gas  
Producers

www.ogp.org.uk

# Summary of Environmental Performance Indicators paper - 2001 data

Over the past few years, the International Association of Oil and Gas Producers (OGP) has been developing a project to collect environmental performance information from its member companies, on an annual basis. The initiative has two principal objectives. First, data from the world wide membership will allow individual members to compare their performance against other companies operating in the same or different geographical area, with the overall aim of identifying and disseminating best practices, thereby improving the efficiency of operations (at the company level and overall) and contribute to the reduction of the industry's environmental footprint. Secondly, such a reporting system would demonstrate the industry's wish to be more transparent concerning its operations, responding to the wishes of its shareholders and other external stakeholders.

A base set of indicators was identified comprising:

- Emissions to air;
- Aqueous discharges;
- Discharges of oil-based and synthetic drilling fluids on cuttings;
- Accidental spillages of oil and chemicals; and
- Energy Consumption.

Data are collected on an annual basis using common and agreed definitions set out in a Users Guide circulated to all OGP member companies. Over the four years for which data have been collected, a number of refinements have been made to the data collection process, reflecting developing experience and identified frequently occurring errors in reporting. Paramount in the data preparation process has been the quality of data supplied, in terms of accuracy (both numerical and in respect of the Users' Guide requirements) and quality. Contributing companies have been requested to supply information on the quality checks that underpin the data.

In the initial phase of this programme, compiled data, aggregated and averaged on a regional basis, have been circulated internally amongst the participating companies and the wider OGP membership.

The database that is summarised in this report comprises information from 26 OGP member companies (almost two thirds) and corresponds to production of 2310 million tonnes of oil equivalent. This is approximately one third of total world production. On a regional basis, the coverage is uneven, being almost complete in Europe to around 10% of known production in the Middle East and the Former Soviet Union.

## I Database

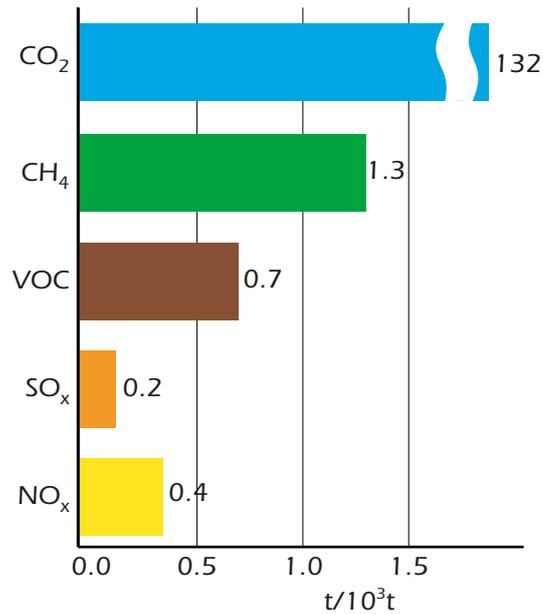
The production in the database expressed as a proportion of the BP energy review regional production figures varies from almost complete coverage in Europe to about 10% for activities in the Middle East and FSU;

- 26 companies submitted data for an average of 7 countries each;
- 61 countries featured in the reported data;
- The hydrocarbon production associated with the database was 2310 million tonnes, some 40% of the production in the BP Energy Review 2001;
- The production in the database as a proportion of the BP Energy Review regional production varied from 10% (Middle East and FSU) to 102% (Europe);
- Reports submitted contain gaps of information in many cases.

## 2 Gaseous emissions

### Emissions per thousand tonnes production - 2001

Tonnes per thousand tonnes



For every thousand tonnes of oil and gas production there were:

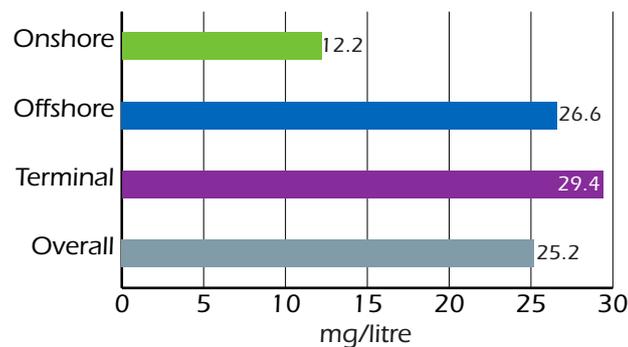
- 132 tonnes of carbon dioxide emitted;
- 1.34 tonnes of methane emitted;
- 0.73 tonnes of volatile organic compounds emitted;
- 0.21 tonnes of sulphur oxides emitted; and
- 0.36 tonnes of nitrogen oxides emitted.

Gas emission rates were higher onshore than offshore.

## 3 Aqueous discharges

### Oil discharged per unit of produced water discharged - 2001

milligrammes oil per litre of produced water discharged

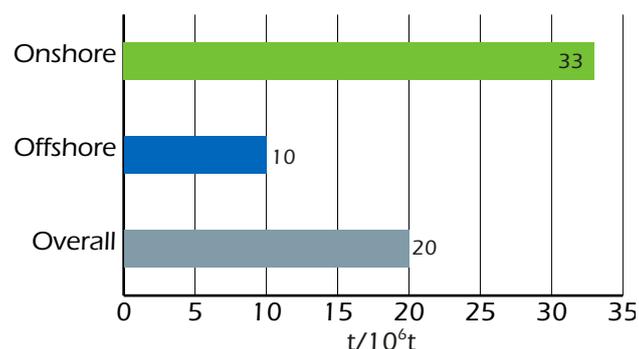


- The overall average oil content in produced water discharges was 25 tonnes per million tonnes of produced water (25 mg/l). Offshore the average oil content in produced water was 27 mg/l, whilst onshore it was 12 mg/l;
- 10.3 tonnes of oil were discharged in produced water for every million tonnes of hydrocarbon produced. The offshore rate was nearly 8 times the onshore rate;
- 0.5 tonnes of produced water were re-injected for every tonne of hydrocarbon (expressed as oil and gas equivalent) produced;
- For every tonne of produced water discharged, 1.2 tonnes of produced water were re-injected.

## 4 Oil and chemical spill data

### Oil spilt per unit of hydrocarbon production - 2001

Tonnes per million tonnes



- For every million tonnes of hydrocarbons produced, almost 20 tonnes of oil were spilt;
- The reported spillage rate was higher onshore than offshore.

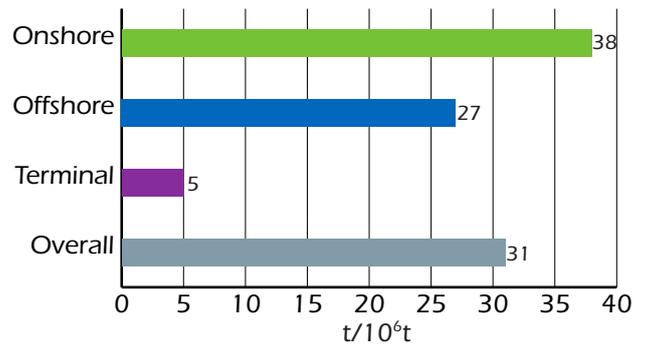
## 5 Total oil discharges

The total quantity of oil discharged onshore is the sum of oil discharged with produced water and oil that is spilt.

- The total oil discharged/spill rate onshore was 38 tonnes per million tonne of hydrocarbons produced. Offshore it was 27 tonnes per million tonne;
- Oil spills accounted for 95 percent of the discharge/spill rate onshore. Offshore spills contributed almost 39% of the total figure;
- 31% of the total rate was from oil discharged in produced water.

### Total oil discharged/spilt per unit of hydrocarbon production - 2001

Tonnes per million tonnes

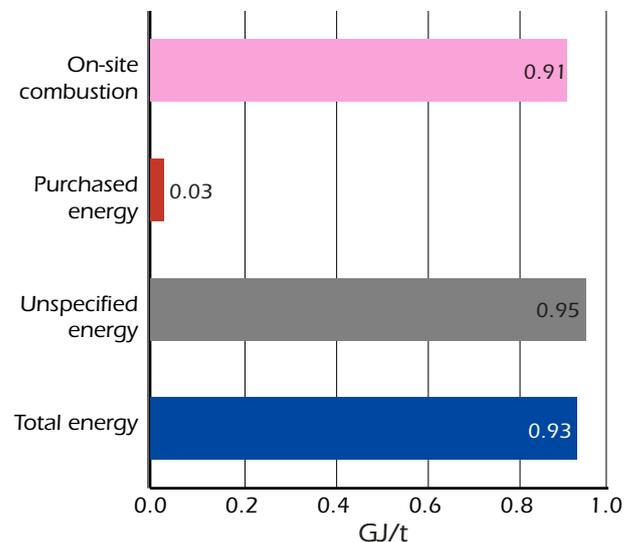


## 6 Energy consumption

- Every tonne of hydrocarbon production consumed on average 0.93 GigaJoules of energy;
- Where the breakdown is available the figures show that energy requirements were largely met by combustion of fuels on site rather than by purchase;
- Energy not identified as onsite combustion or purchased energy is categorised as 'unspecified';
- The total energy calculation includes information from all three categories;
- Data are only included where both energy consumption and the production level are reported.

### Energy consumed per unit of hydrocarbon production - 2001

GigaJoule per tonne



## What is OGP?

The International Organisation of Oil & Gas Producers represents the world's oil and gas industry. Our members include private and state-owned oil and gas companies, national associations and petroleum institutes.

## What do we do?

Our purpose is to:

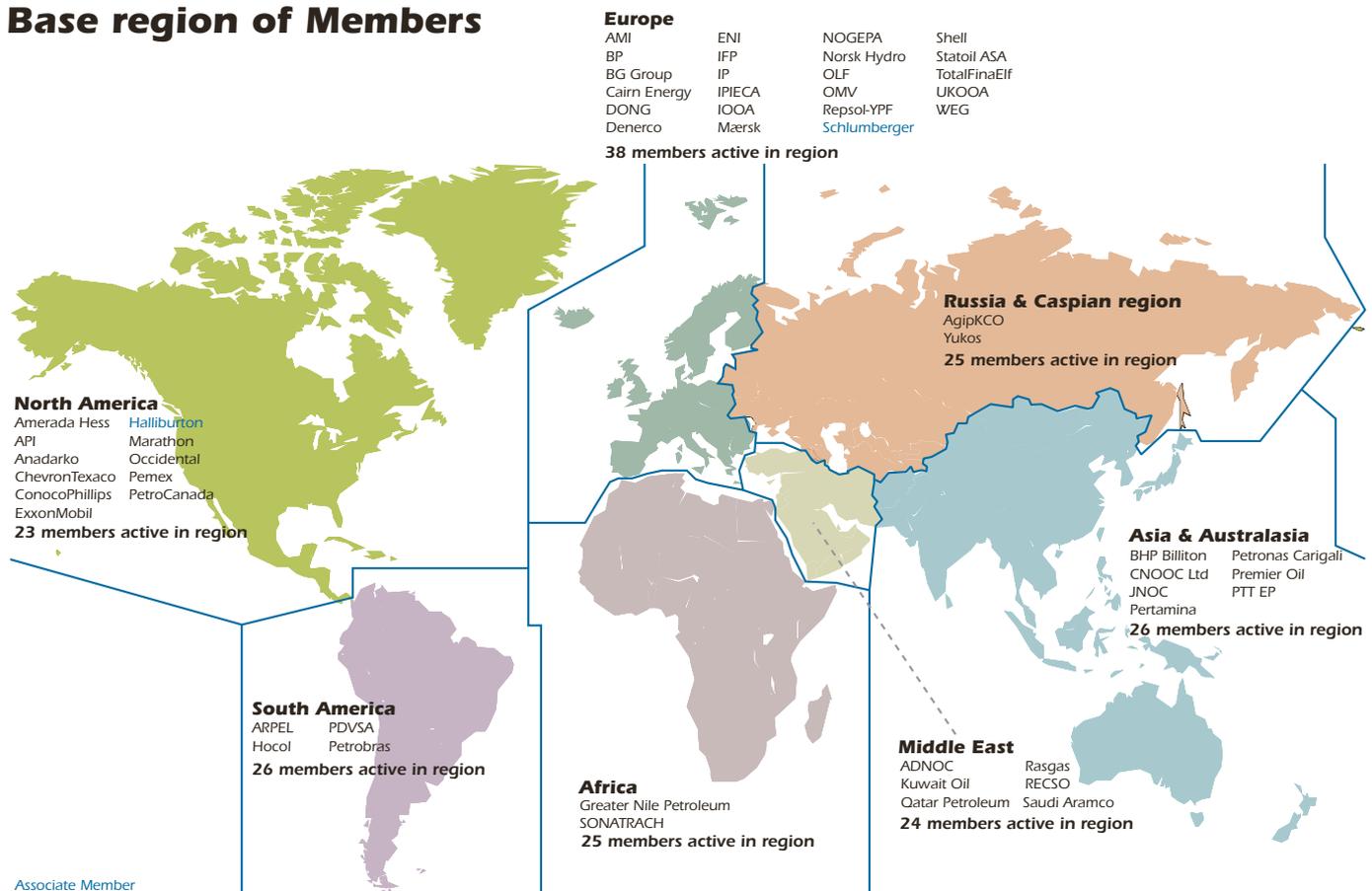
- provide information about the oil and gas exploration and production industry;
- represent our members' interests at global and regional regulatory bodies; and
- develop operating guidelines

## What are our aims?

We aim to:

- increase understanding of the industry;
- work with international regulators to develop workable proposals which take full account of industry views;
- contribute to continuous improvements in industry operating standards;
- be a visible and approachable organisation to which governments and others refer on matters relating to the industry;
- maintain a large, diverse and active membership; and
- communicate issues affecting members to international bodies and the public.

## Base region of Members



## Global experience

The International Association of Oil & Gas Producers (formerly the E&P Forum) has access to a wealth of technical knowledge and experience with its members operating around the world in many different terrains. We collate and distil this valuable knowledge for the industry to use as guidelines for good practice by individual members.

## Internationally recognised source of industry information

Many of our guidelines have been recognised and used by international authorities and safety and environmental bodies. Requests come from governments and non-government organisations around the world as well as from non-member companies.

## Consistent high quality database and guidelines

Our overall aim is to ensure a consistent approach to training, management and best practices throughout the world.

The oil and gas exploration and production industry recognises the need to develop consistent databases and records in certain fields. The OGP's members are encouraged to use the guidelines as a starting point for their operations or to supplement their own policies and regulations which may apply locally.