

## DENMARK

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**M**ineral production in Denmark includes the extraction of sand, gravel, stone, clay, chalk, limestone, peat and salt, including a minor proportion of sand, gravel and stone dredged from the seabed. Oil and gas are extracted from wells offshore.

The total production of raw materials, excluding oil, gas and salt, was 37 million m<sup>3</sup> in 2002 or 6.8 m<sup>3</sup> per inhabitant. Oil production was 21.5 million m<sup>3</sup> or 4 m<sup>3</sup> per inhabitant. The corresponding figures for the production of gas (total production minus fuel, burn-off and injection) are 7.3 billion Nm<sup>3</sup> or 1,356 Nm<sup>3</sup> per inhabitant.

### **Mineral production**

In 2000, the production of land-based minerals was 33.8 million m<sup>3</sup>, declining to 32.8 million m<sup>3</sup> in 2001 and falling further in 2002, to 31.2 million m<sup>3</sup>. Production from 1990 to 1999 was in the range 28.1-35.0 million m<sup>3</sup>. Seabed production of raw materials fell to 7.1 million m<sup>3</sup> in 2000, decreased to 5.4 million m<sup>3</sup> in 2001 but rose slightly, to 5.8 million m<sup>3</sup> in 2002.

Around 80% of the total land- and seabed production of raw materials comprises sand, gravel and stone. Chalk and limestone represent the second-biggest group (about 10% of the total). Most of the sand, gravel and stone is used for roads and construction (65%), with a further 30 % for concrete and mortar.

In 2000, output of chalk and limestone was 3.4 million m<sup>3</sup>, it rose to 3.5 million m<sup>3</sup> in 2001 and fell back to 3.2 million m<sup>3</sup> in 2002. Annual production from 1990 to 1999 was in the range 2.9-3.3 million m<sup>3</sup>.

Clay production, used for bricks and cement totalled 788,000 m<sup>3</sup> in 2000, it declined to 720,000 m<sup>3</sup> in 2001 and to 663,000 m<sup>3</sup> in 2002. Annual production between 1990 and 1999 was in the range 462,000-828,000 m<sup>3</sup>.

The production of moler (a diatomaceous deposit used for insulating purposes and granulates) rose to 227,000 m<sup>3</sup> in 2000, increased to 231,000 m<sup>3</sup> in 2001 and to 254,000 m<sup>3</sup> in 2002. Annual production between 1990 until 1999 was in the 195,000-197,000 m<sup>3</sup> range, with a peak production of 256,000 m<sup>3</sup> in 1998.

The output of quartz sands increased to 479,000 m<sup>3</sup> in 2000, increasing to 488,000 m<sup>3</sup> in 2001 but declining to 464,000 m<sup>3</sup> in 2002. Annual production between 1990 and 1999 ranged from 186,000 m<sup>3</sup> to 279,000 m<sup>3</sup>.

Expanded clay for insulating materials and light expanded aggregates decreased to 313,000 m<sup>3</sup> in 2000, decreasing further to 234,000 m<sup>3</sup> in 2001 and slipping to 221,000 m<sup>3</sup> in 2002. Annual production between 1990 and

1999 was in the 303,000-352,000 m<sup>3</sup> range. Production of peat continued declined in 2000 to a total of 247,000 m<sup>3</sup> but increased in 2001 of 287,000 m<sup>3</sup> and again in 2002, to 336,000 m<sup>3</sup>. Annual production between 1990 and 1999 ranged between 399,000 m<sup>3</sup> and 253,000 m<sup>3</sup>.

On behalf of the Dansk Undergrunds Consortium (DUC), Maersk Olie and Gas A/S produces oil and gas from offshore fields in the North Sea. In 1989, there were five production fields and the number has gradually increased to a total of 17 offshore fields operating in 2002. Oil production increased to 21.1 million m<sup>3</sup> in 2000, dipped to 20.2 million m<sup>3</sup> in 2001 but rose to 21.5 million m<sup>3</sup> in 2002. Annual production from 1993 until 1999 was in the 9.7-17.4 million m<sup>3</sup> range.

In 2000, gas production totalled 7.13 billion Nm<sup>3</sup>. It rose to 7.33 billion Nm<sup>3</sup> in 2001 but dipped to 7.30 billion Nm<sup>3</sup> in 2002. Annual production between 1993 and 1999 was in the 4.01-6.77 billion Nm<sup>3</sup> range.

### **Economical importance**

The prevailing tax rate for non-energy raw materials is currently DK5/m<sup>3</sup> and in 2002 this brought in revenues of DK156 million from land-based mineral rights, compared with DK164 million in 2001 and DK169 million in 2000. The corresponding figures for sea-based production were DK29.0 million, DK27.0 million and DK35.7 million.

Government revenues from oil and gas production are linked to the international price of crude oil, and the exchange rate between the Danish krone and the US dollar. Last year, tax and royalties from oil and gas rights were estimated at DK9.9 billion. This compares with DK9.63 billion in 2001, DK8.72 billion in 2000 and DK3.56 billion in 1999.