

## Investigating Oil Production and Consumption with Web GIS

Crude oil (petroleum) was formed from the remains of tiny sea animals and plants that lived millions of years ago in marine (water) environment. In this activity, you will use Web GIS to investigate patterns of crude oil (petroleum) production and consumption. You will:

1. Examine countries with oil reserves.
2. Analyze crude oil production and consumption of countries in 1980 and 2008.
3. Investigate the relationship among countries' crude oil consumption and their populations.

Read **all** instructions on your handout and answer **each** question.

1. Which 4 countries have the most oil reserves in the world? List each country and the amount of oil reserves in the **Top 4 Countries with Oil Reserves Data Chart** below.

**Top 4 Countries with Oil Reserves Data Chart**

Country Name	Oil Reserves (Billions Barrels)

**Important Note for Questions 2-6:** In 1980, Russia and other countries in Eastern Europe belonged to the Soviet Union. No oil production and consumption amounts were reported for Russia in 1980. Therefore you should not include Russia in your responses to Questions 2-6 below.

2. Which 3 countries **increased** their oil production the most between 1980 and 2008?  
**Helpful hint:** Click the **Change in Production** column twice to sort it in descending order.

*i.* \_\_\_\_\_

*ii.* \_\_\_\_\_

*iii.* \_\_\_\_\_

3. Which 3 countries **decreased** their oil production the most between 1980 and 2008?  
**Helpful hint:** Click the **Change in Production** column twice to sort it in ascending order.

*i.* \_\_\_\_\_

*ii.* \_\_\_\_\_

*iii.* \_\_\_\_\_

4. Which 3 countries **increased** their oil consumption the most between 1980 and 2008?  
**Helpful hint:** Click the **Change in Consumption** column twice to sort it in descending order.

i. \_\_\_\_\_

ii. \_\_\_\_\_

iii. \_\_\_\_\_

5. Which 3 countries **decreased** their oil consumption the most between 1980 and 2008?  
**Helpful hint:** Click the **Change in Consumption** column twice to sort it in ascending order.

i. \_\_\_\_\_

ii. \_\_\_\_\_

iii. \_\_\_\_\_

6. Which 3 countries' populations increased the most between 1980 and 2008?  
**Helpful hint:** Click the **Pop. Change** column twice to sort it in descending order.

i. \_\_\_\_\_

ii. \_\_\_\_\_

iii. \_\_\_\_\_

Oil Data Chart

Country	Oil Produced in 2008 (Thousand Barrels per Day)	Oil Consumed in 2008 (Thousand Barrels per Day)	Per Capita Consumption 2008 (Barrels per Capita, 2008)	Population in 2008
United States	8,498.418	19,418.6895		303,824,640
Norway	2,465.9551	217.3		4,644,457
Russia	9,789.7627	2,900		140,702,096
China	3,973.126	7,850		1,330,044,544
India	883.5065	2,940		1,147,995,904

The countries in the chart above have been ordered based on their per capita consumption from highest to lowest. Use the chart to answer the questions below.

7. From where do you think India imported the additional oil it needed for consumption?

\_\_\_\_\_

8. Where do you think Norway exported the oil it produced that was not consumed?

---

9. How was the oil transported to those countries?

---

10. What relationship exists between oil consumption and population change in a country?  
**Helpful hint:** Look at your answers to questions **4** and **6**.

---

11. What do you think causes this relationship?

---

12. How can a country decrease its oil consumption?

---

13. What patterns do you see in the data between per capita consumption and population?

---

---

---

---

---

---

---