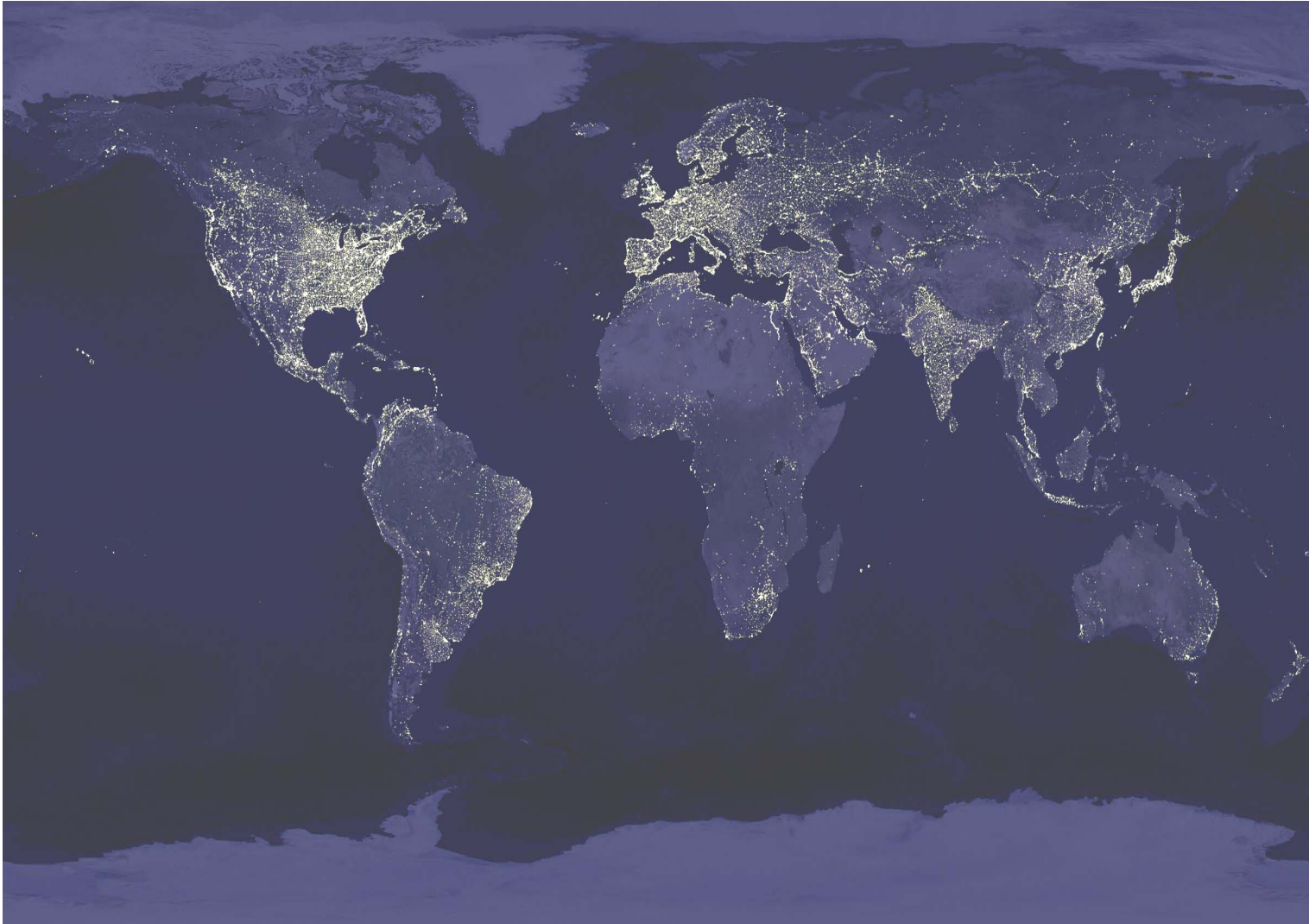


Resources



climateprediction.net

MJ Harris
August 2004

Population

By 2010, 800 m will be added to the global population.



What implications could this have on demand for resources eg energy, water, food and land?



Food

25,000 die daily from starvation
815m suffer from malnutrition



To what extent do you think that famine is due to physical rather than human or political factors?



Cities

In 1900, 10% lived in cities.
Now it's 50% - and rising.



How might urbanisation affect the demand for resources?



Pollution

Half the world's urban residents are exposed to potentially harmful amounts of SO₂, ozone and particulate matter in "smogs".



How could the level of pollution be reduced ?



Biodiversity

Every year thousands of species become extinct due to human activity and loss of natural habitat.



Forestry

Logging and land conversion to accommodate human demand has cut world's forests by 50%.



**What problems can result from deforestation?
What are the possible solutions?**



Wetlands

Urban and industrial development has claimed half the world's wetlands since 1900



What is the importance of wetlands?



Water

By 2020, reserves of fresh water for drinking and irrigation will fall 30%. Consumption has doubled since 1950.

Much is polluted. 6,000 die daily from diarrhoea.



Why has water consumption doubled since 1950?



Refugees

By 2025, refugees fleeing floods and natural disasters could quadruple to 100m.



Which areas are particularly vulnerable to natural disasters? Why?



Energy

For global development to be fair and sustainable, MEDCs may need to cut energy and resource use by 90% by 2050.

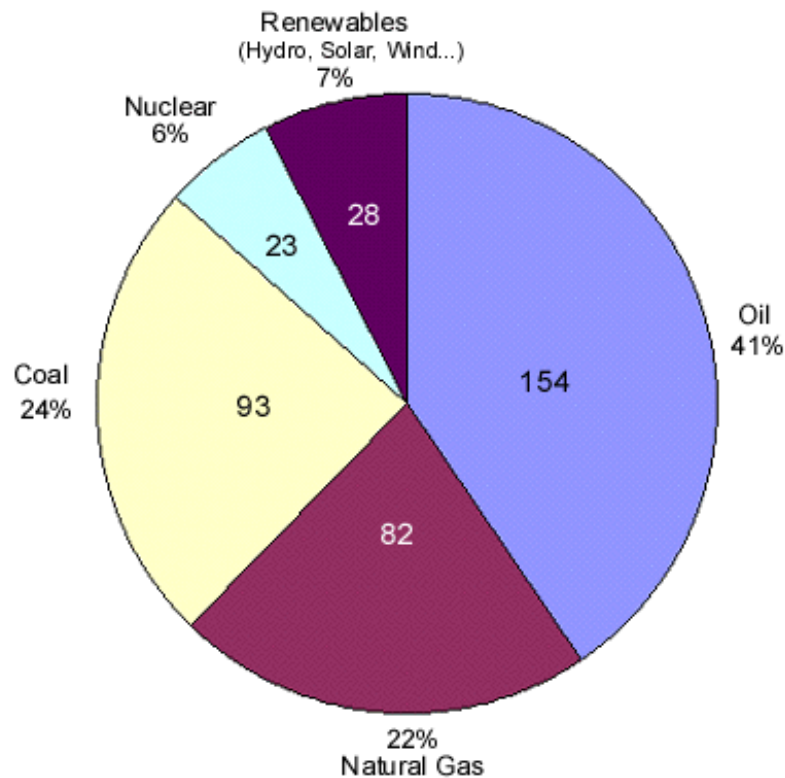


What else could MEDC's do to reduce the environmental impact of high levels of energy consumption?



Sources of Energy

Fossil fuels currently provide 87% of world energy



What are the problems of relying on fossil fuels as the major source of energy?

What are the alternatives?

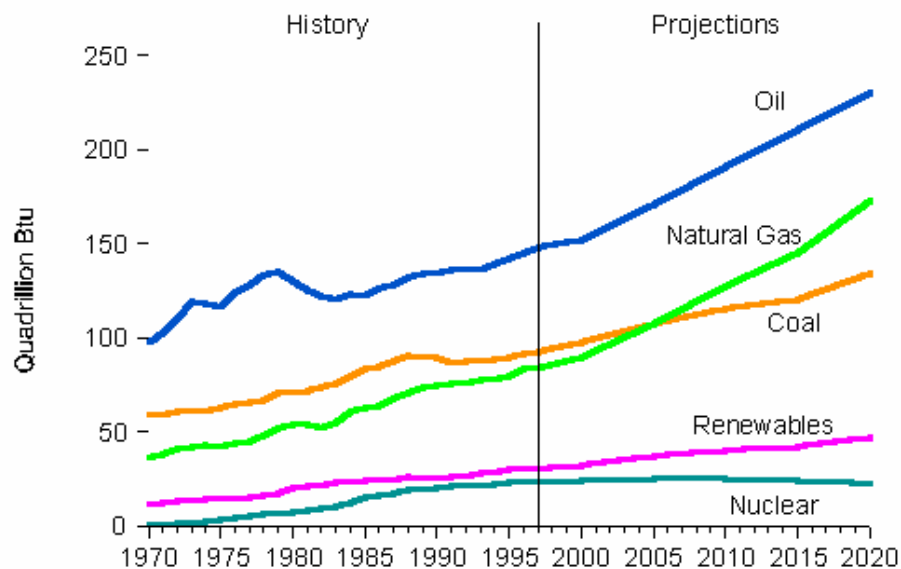
http://www.ecoworld.org/Home/Images/World_Energy_Consumption_Pie_97.gif



Future energy consumption

Fossil fuels are predicted to still be the major source of energy in 2020

World Energy Consumption by Fuel Type, 1970-2020



<http://www.fi.edu/guide/hughes/images/img002.gif>

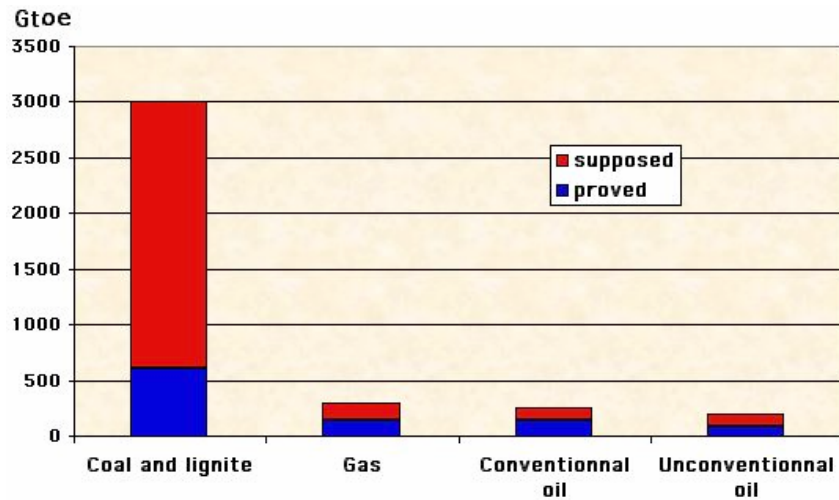
Describe the predicted future consumption pattern for the various fuel types?

How are such predictions made?

How reliable are they?



Fossil fuels - the future



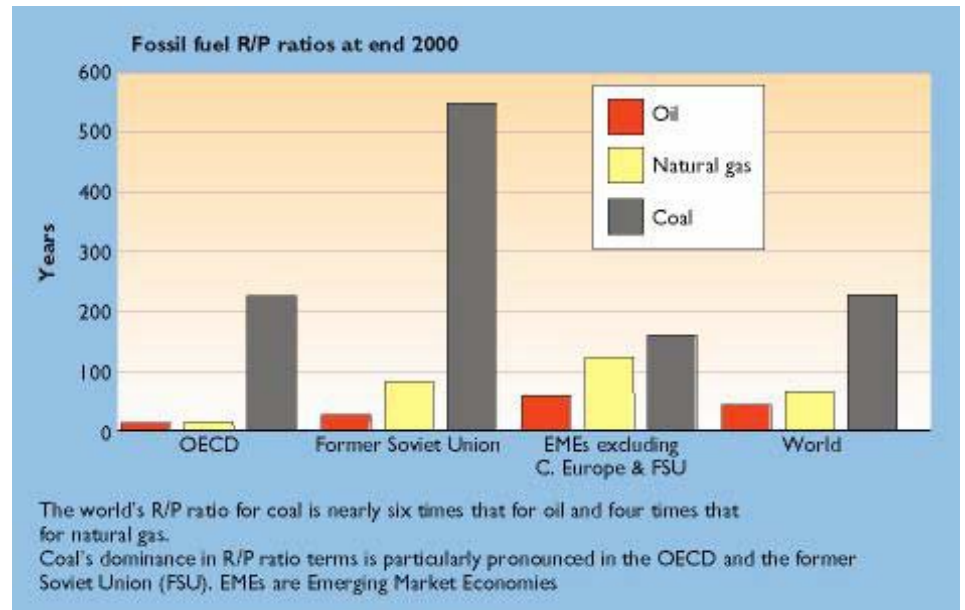
http://www.manicore.com/anglais/documentation_a/articles_a/palace_graph2.jpg

What does the graph suggest about how long oil, natural gas and coal reserves will last ?

How reliable are predictions about future energy supplies and consumption?

Explain the difference between proved and supposed reserves.

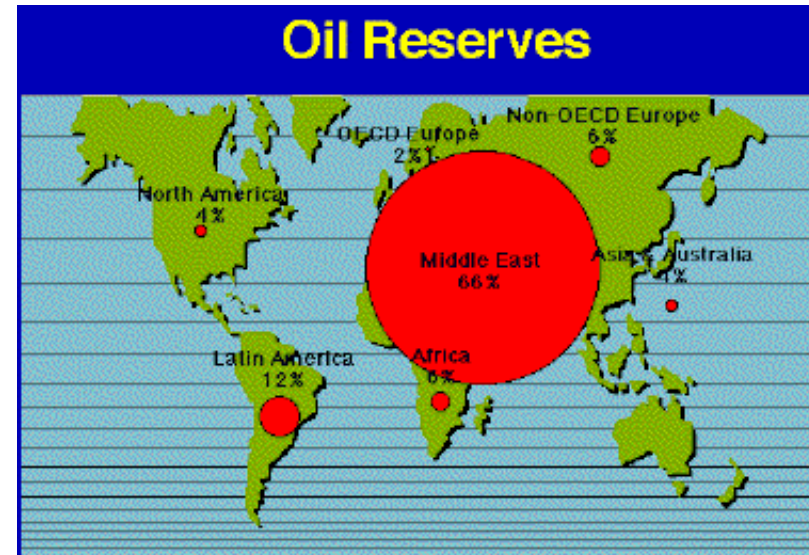
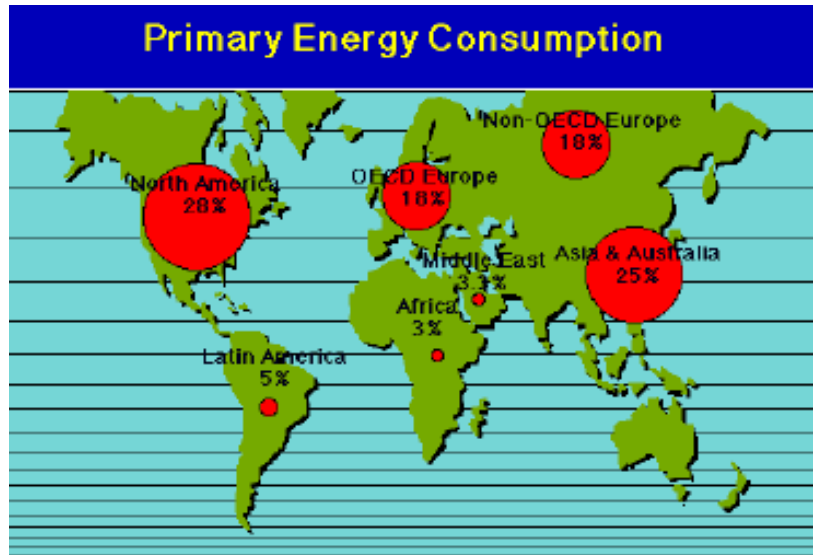
Comment on the supposed future reserves for each fossil fuel.



http://www.open.ac.uk/T206/illustrations/figure1_16.htm



Current energy consumption and oil reserves



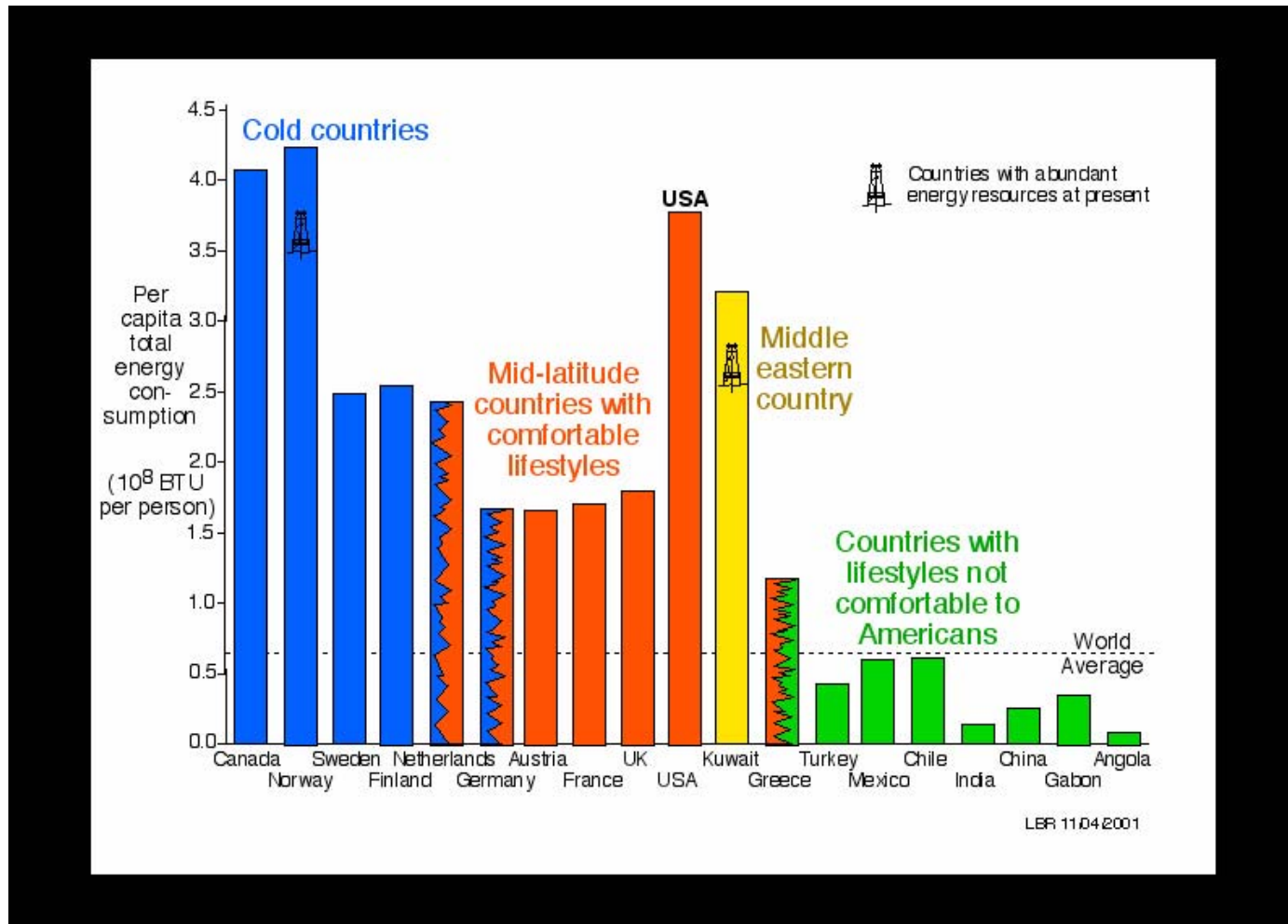
<http://earthsci.org/energy/fuels/fuels.htm>

Comment on the pattern of a) primary energy consumption and b) oil reserves?

How might the pattern of primary energy consumption change in the next 50 years?



Energy consumption levels vary from country to country



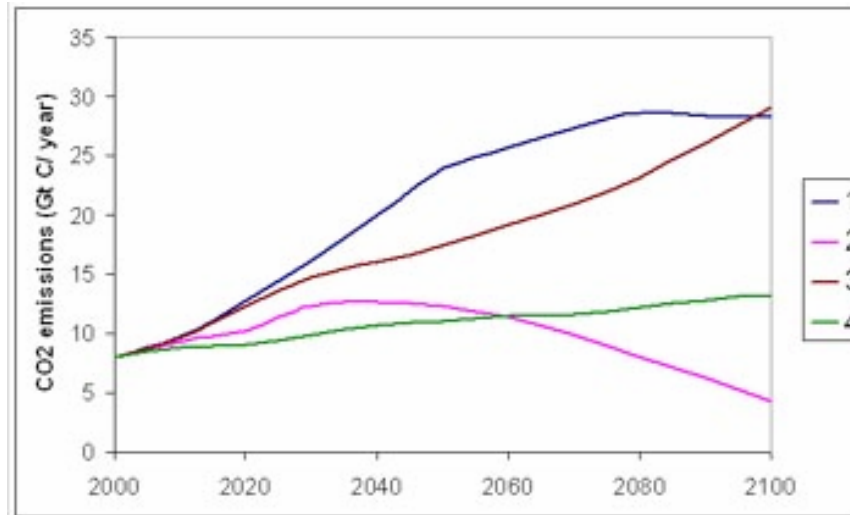
<http://www.gly.uga.edu/railsback/CO2/9-2WorldEnergyConsumption.jpeg>



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Comment on the varying levels of energy consumption per capita in the countries shown above.

Future energy consumption will affect the levels of CO₂ emissions



http://www.climateprediction.net/schools/emissions_development.php

The IPCC have identified four scenarios for future energy consumption

World 1: Rapid rise in global wealth using mainly fossil fuels

World 2: Rapid rise in global wealth using mainly renewable energy

World 3: Slow rise in global wealth, increasing use of fossil fuels

World 4: Slow rise in global wealth, not much increase in the use of fossil fuels

Which scenario would produce most CO₂?

Which do you think is most likely? Why?



Transport

In the last 20 years there has been a two-thirds increase in global household energy use, road vehicle fleets have doubled, and air traffic has quadrupled.



What problems could result from this?



Waste

As population, consumption and wealth increase, so does the quantity of waste. MEDCs produce 2 tonnes per person.



What could be done to reduce the problem of waste?



More Information

[BBC Disposable Planet](#)

Use this website to:

- **Describe the problem of world resources. What is the evidence that our use of resources is unsustainable.**
- **Use relevant figures and cover at least a couple of different types of resource in more detail.**

