



**British  
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL



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# Mineral statistics in BGS - the example of China

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# A few facts about China

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**Fourth largest land area  
in the world**

**Population > 1.3 billion**

**94% live in eastern third**

**GDP has grown tenfold  
in the last 30 years**

# A world leader in mineral production

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Alumina	Aluminium	Antimony	Arsenic
Asbestos	Barytes	Bauxite	Bentonite
Beryl	Bismuth	Borates	Bromine
Cadmium	Chromium (ore)	Coal	Cobalt (ore)
Cobalt (metal)	Copper (ore)	Copper (smelter)	Copper (refined)
Diamond	Diatomite	Feldspar	Ferro alloys
Fluorspar	Fuller's earth	Germanium	Gold
Graphite	Gypsum	Iodine	Iron ore
Pig iron	Crude steel	Kaolin	Lead (ore)
Lead (refined)	Lithium	Magnesite	Magnesium
Manganese (ore)	Mercury	Mica	Molybdenum
Natural gas	Sodium carbonate	Nepheline syenite	Nickel (ore)
Nickel (smelter)	Perlite	Petroleum	Phosphates
Platinum group	Potash	Rare earths	Salt
Selenium	Sillimanite	Silver	Strontium
Sulphur & Pyrites	Talc	Tantalum/Niobium	Tellurium
Tin (ore)	Tin (smelter)	Titanium	Tungsten (ore)
Uranium	Vanadium	Vermiculite	Wollastonite
Zinc (ore)	Zinc (slab)	Zirconium minerals	

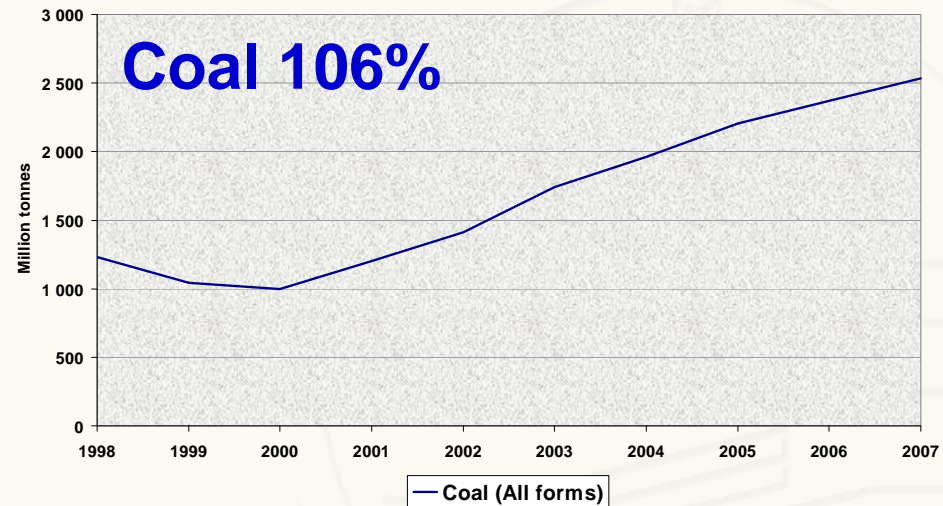
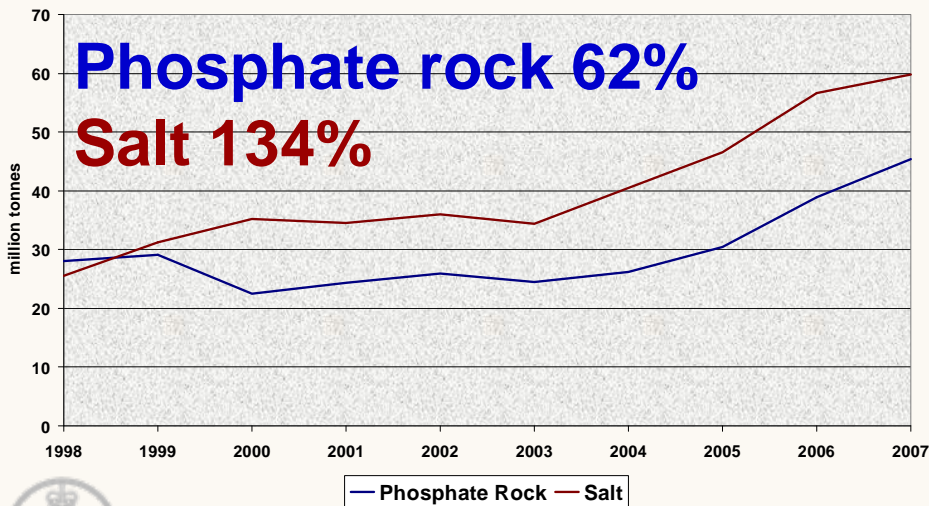
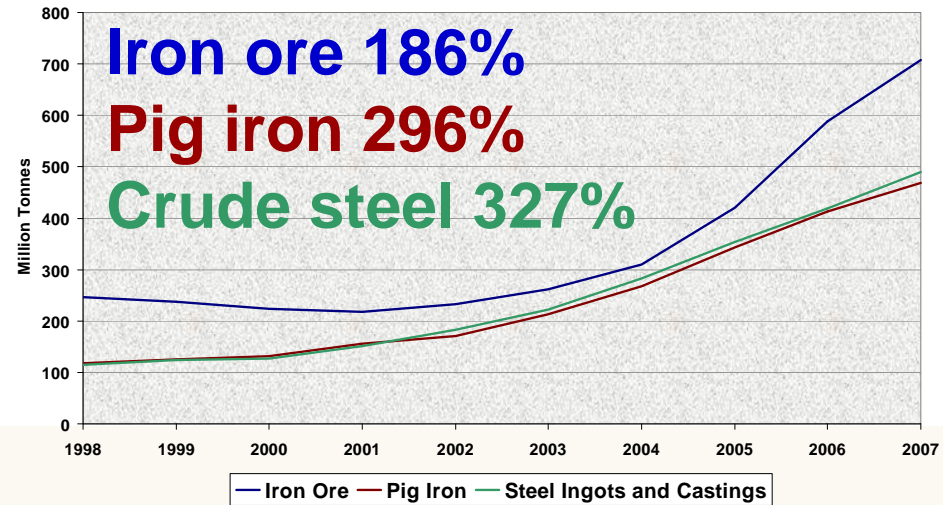
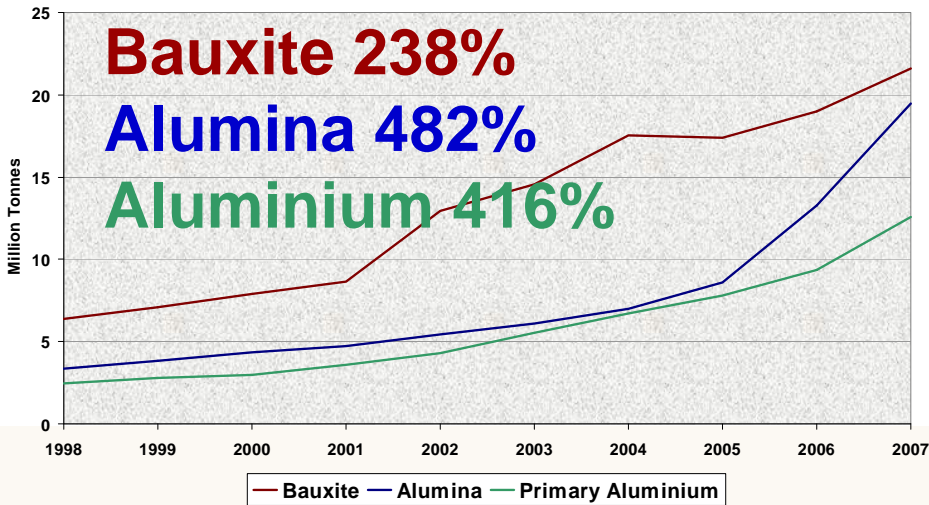


# The scale of production

- More than **80%** of the world's production of **antimony, graphite, rare earths and tungsten**
- More than **50%** of the world's production of **magnesite, mercury, fluorspar and barytes**
- More than **30%** of the world's production of **coal, bismuth, iron & steel, lead, mica, talc and tin**

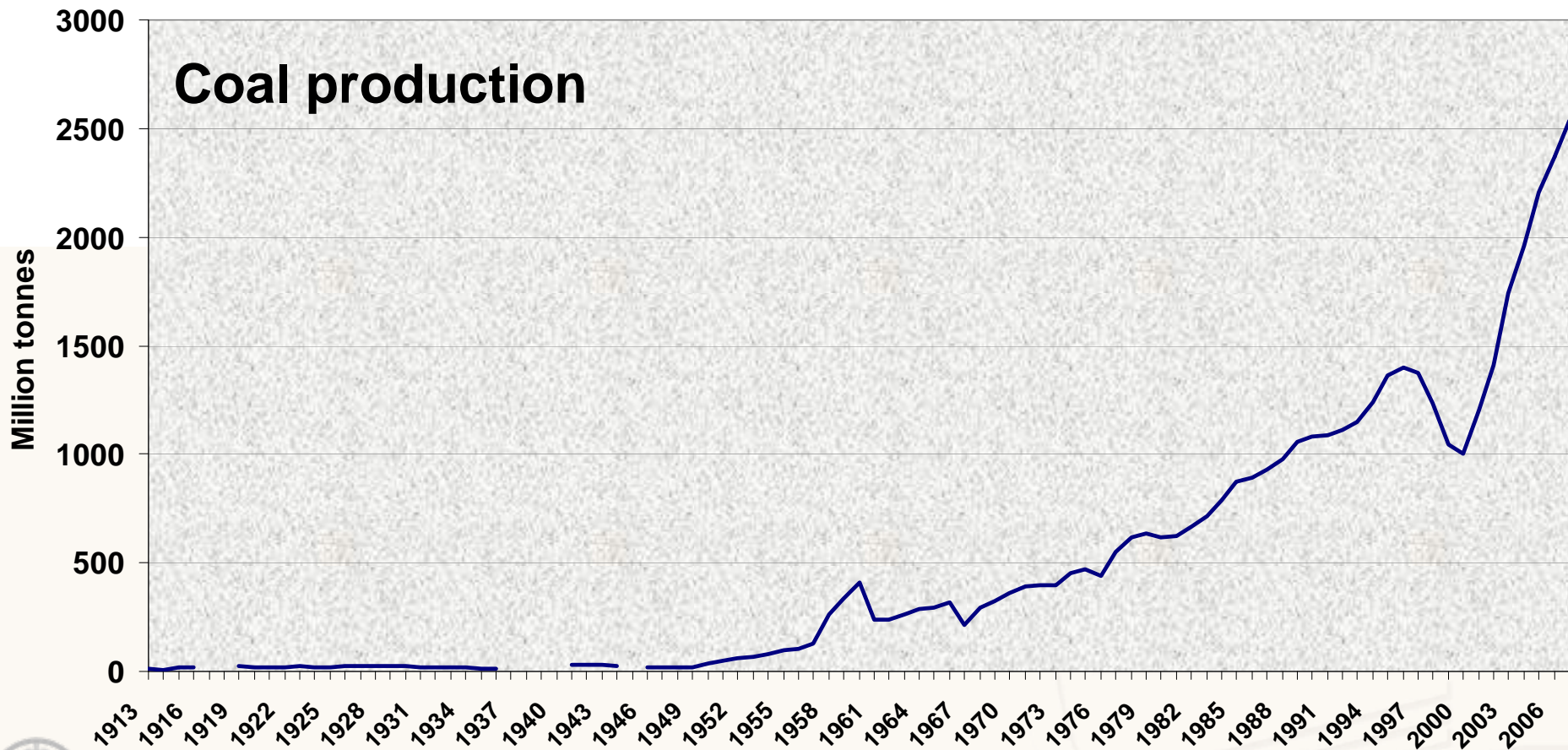


# Trends in production data 1998-2007

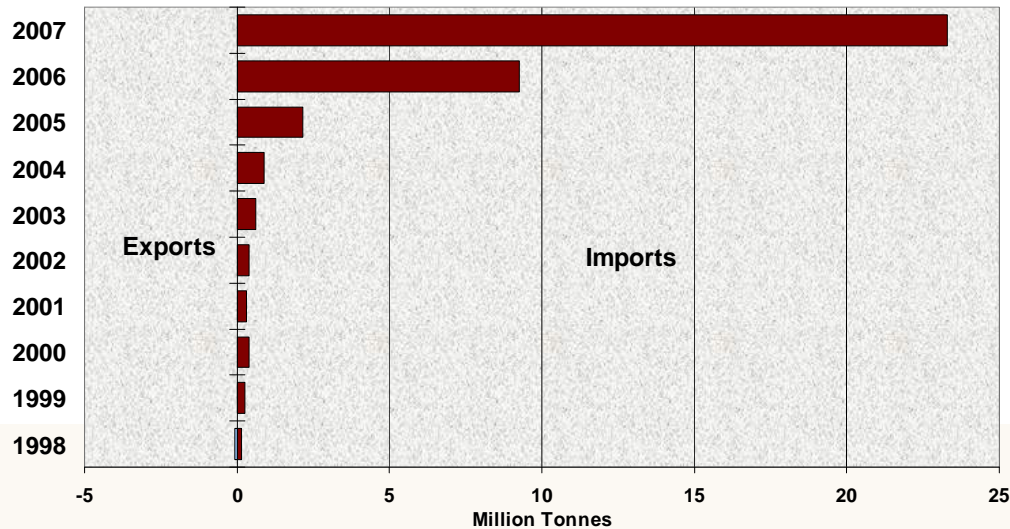


# Historical trends

BGS has data back to early 20<sup>th</sup> century



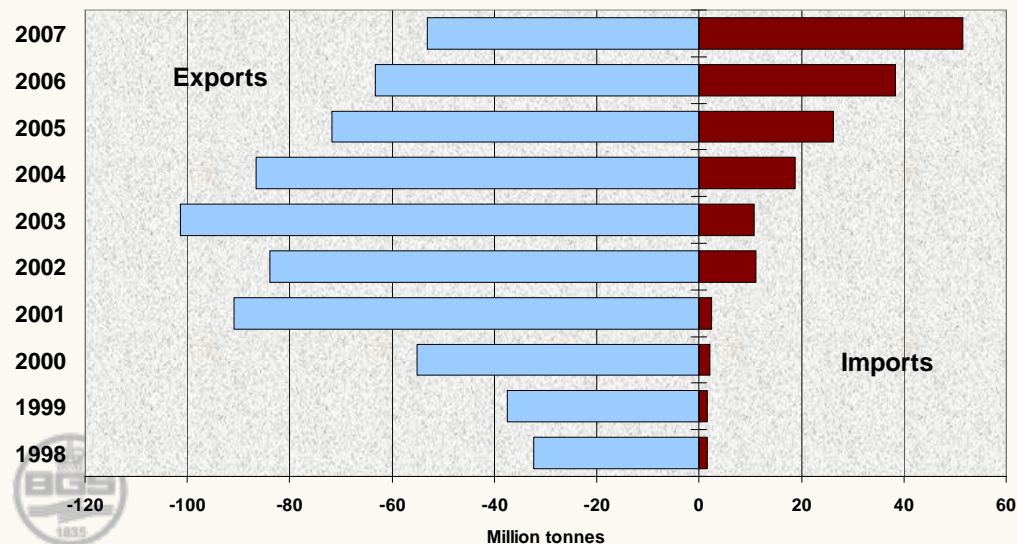
# Trends in trade statistics



## Bauxite

Imports have increased by > 15,000%

Exports have reduced from approx 84,000 tpa to zero

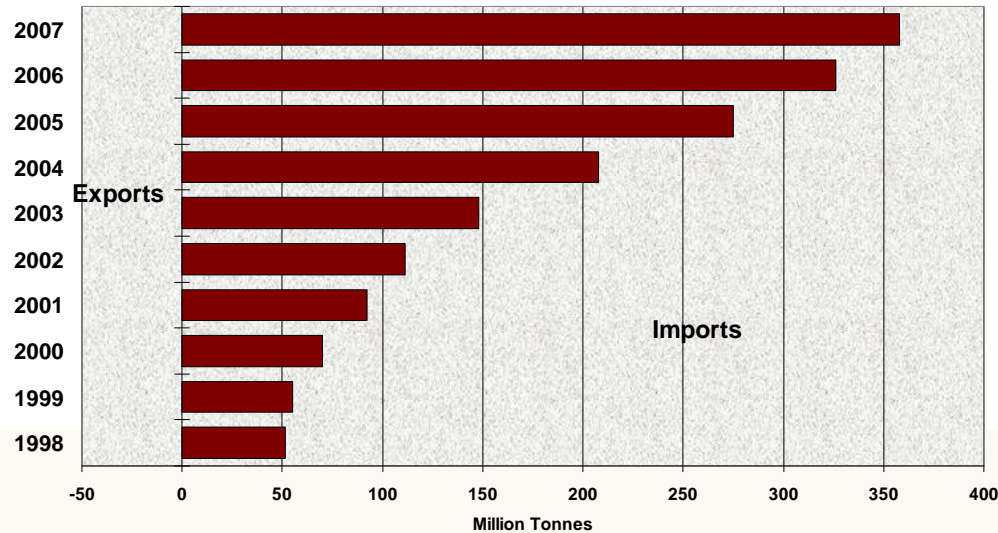


## Coal

Imports have increased by > 300%

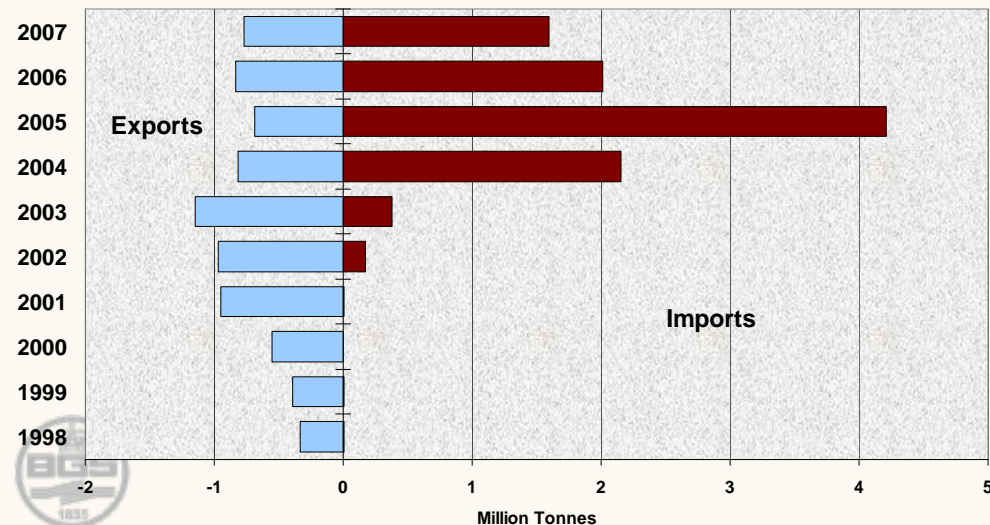
China is still a net exporter of coal – but only just!

# Trends in trade statistics



## Iron Ore

Imports have increased by nearly 600%



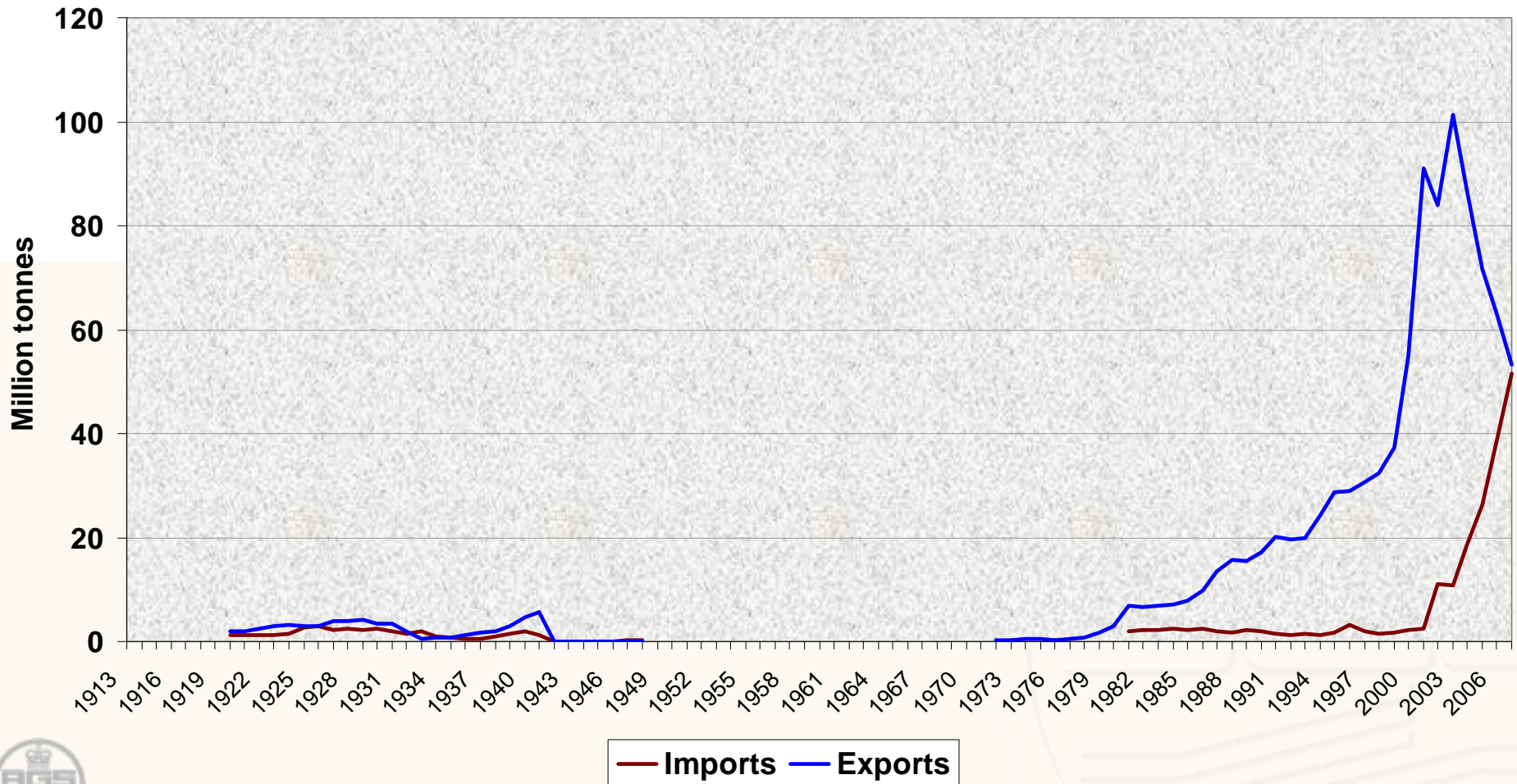
## Salt

In 2004 China changed from being a net exporter to a net importer of salt



# Historical trends in trade

BGS also has historical trade data – for example: coal



# How reliable is the data?

- Previously, Govt ministries controlled state-owned companies

**data reliable but confidential**

- Recently state controls have loosened, more private companies and industry associations are now involved:

**more data available but less reliable**

*“... since China reform many government ministries and offices were cancelled. Now no government office controls the industrial minerals industry ...”*

# How reliable is the data?

- Production statistics may be collected from large producers only
- Small companies outside of controls
- Metal statistics are more reliable than industrial minerals data

*“... major metal producers dominate production of metals in China and it is not very difficult for administrations or associations to collect data from them ...”*

*“... there are many small producers of industrial minerals in China, the association could not collect information from all producers ...”*



# How reliable is the data?

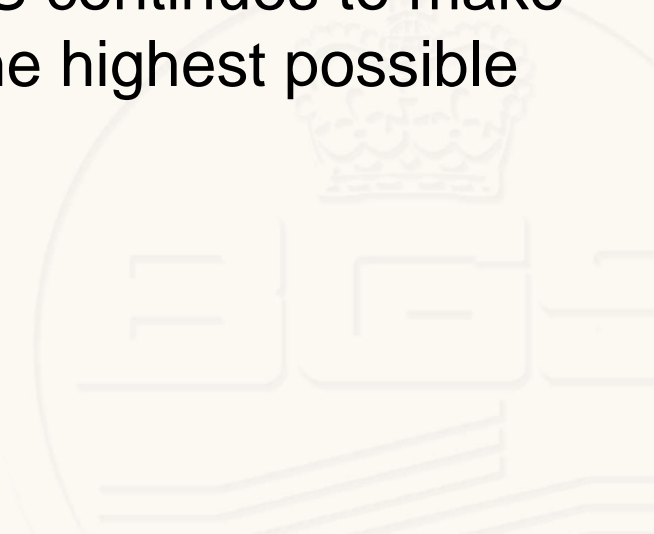
- BGS receives industrial minerals data from a contact in China – but it is important to know who your friends are!

*“ ... actually, there are three levels of cost available in China, the lowest one for a close friend, the normal one for Chinese and the much higher one for foreigner ... ”*



# Conclusion

- China's growth in GDP has been around 10% per year for several years and this is reflected in their mineral production and trade
- China is the world's largest producer of approximately half the commodities we monitor
- Data collection is difficult, but the BGS continues to make every effort to ensure our data is of the highest possible quality



# MineralsUK

Centre for sustainable mineral development

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China and South East Asia  
Mineral Production



2001–2005



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Thank you

