

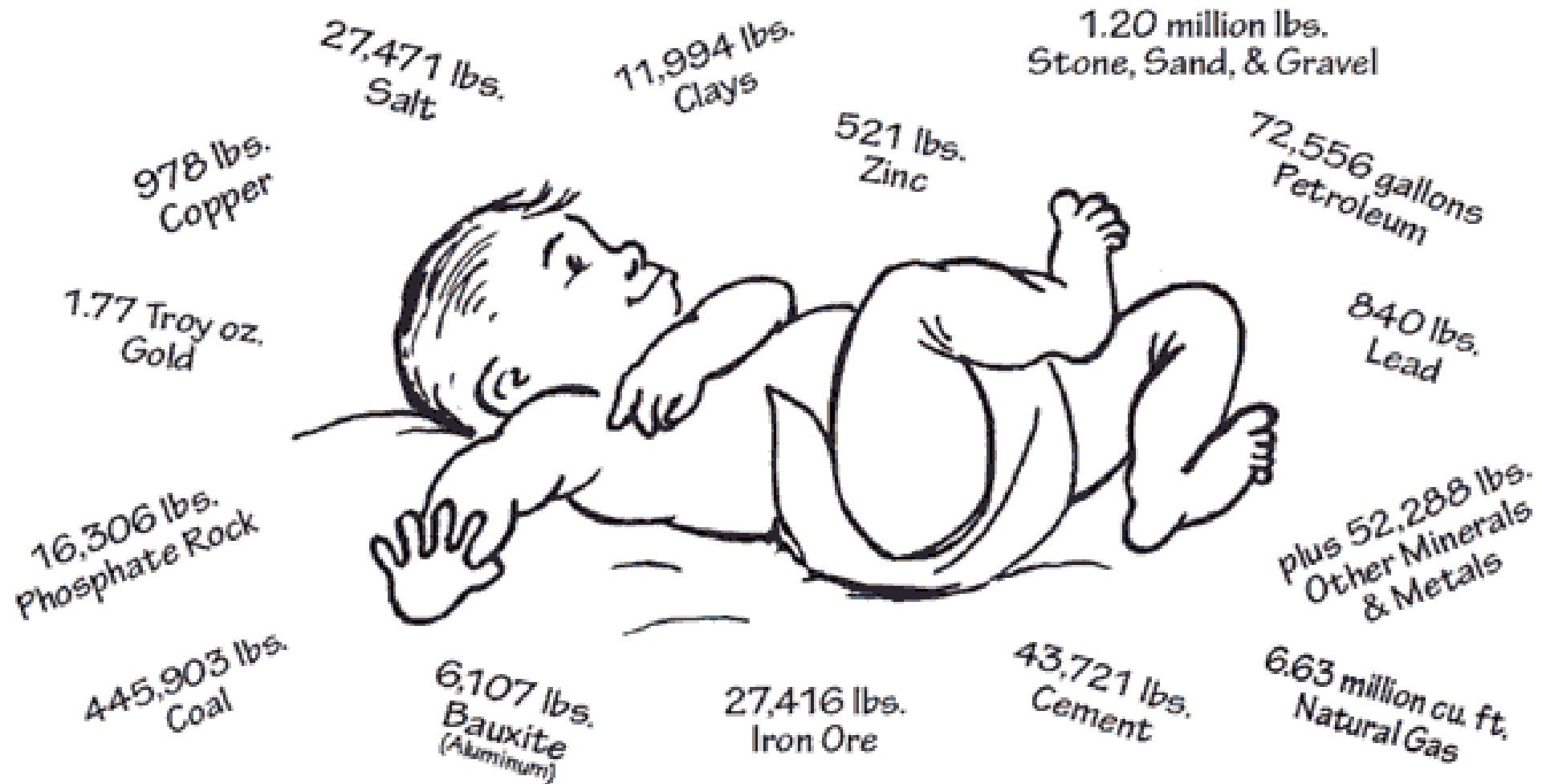
Czech Foreign Trade on Mineral Raw Materials

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Every American Born Will Need...



3 million pounds of minerals, metals, and fuels in their lifetime

Sources of minerals for the Czech economy

- Only few countries in the World have so huge mineral potential, that they are not dependent on the import of raw materials
- Major part of countries in the World have to import some part of commodities
- Especially in Europe – many countries are dependent on import of minerals, because EU countries consume many times more minerals than produce
- Also for the Czech Republic the import of some commodities is essential

- **Ways of securing raw materials in the Czech Republic**
 - 1) Domestic production
 - 2) Import
 - 3) Recycling (for example some metals)
- In many cases is a mixture of more than one ways

Situation in the Czech Republic (main principles)

- **Ores, Metals – 100% import dependency, incl. strategic metals,**
- **Industrial Minerals (part) – covered by domestic resources: raw materials for typical Czech industrial branches – porcelain production & ceramic production (kaolin, some kinds of clays, feldspars); glassmaking industry (silica sand, feldspars); building materials industry (limestones); many of these commodities or products from them are also items of Czech export**
- **Industrial Minerals (rest) – import dependency (in some cases to 100%), for example talc, graphite, fluorite, barite**
- **Construction Materials – covered nearly exclusively by domestic resources; small amounts of import / export**
- **Crude Oil, Natural Gas – nearly 100% import dependency (domestic mining production covers only few % of domestic consumption)**
- **Lignite – domestic consumption is still covered exclusively by domestic mining production**
- **Hard Coal – main part of domestic consumption is covered by domestic mining production, but hard coal is simultaneously items of export and import, too.**

Examples of imported raw
materials

Ores, concentrates

- Metal mining was finished in 90. in the Czech Republic – all needed ores, all needed concentrates and all needed metals must to be imported to the CZ
- Semi domestic source is only recycled metals
- The biggest volume of imported ores is represented by iron ores and concentrates (5-8 MT), last years around 6 MT
- Iron ores are imported traditionally from Ukraine and Russian Federation
- Second most important ore import is represented by titanium ores and concentrates (TiO₂ production)
- The volume of imported titanium ores is 100.000 – 150.000 tons/year; ores are imported from Ukraine, India and Norway
- Third most important ore is bauxite and than manganese ores and concentrates

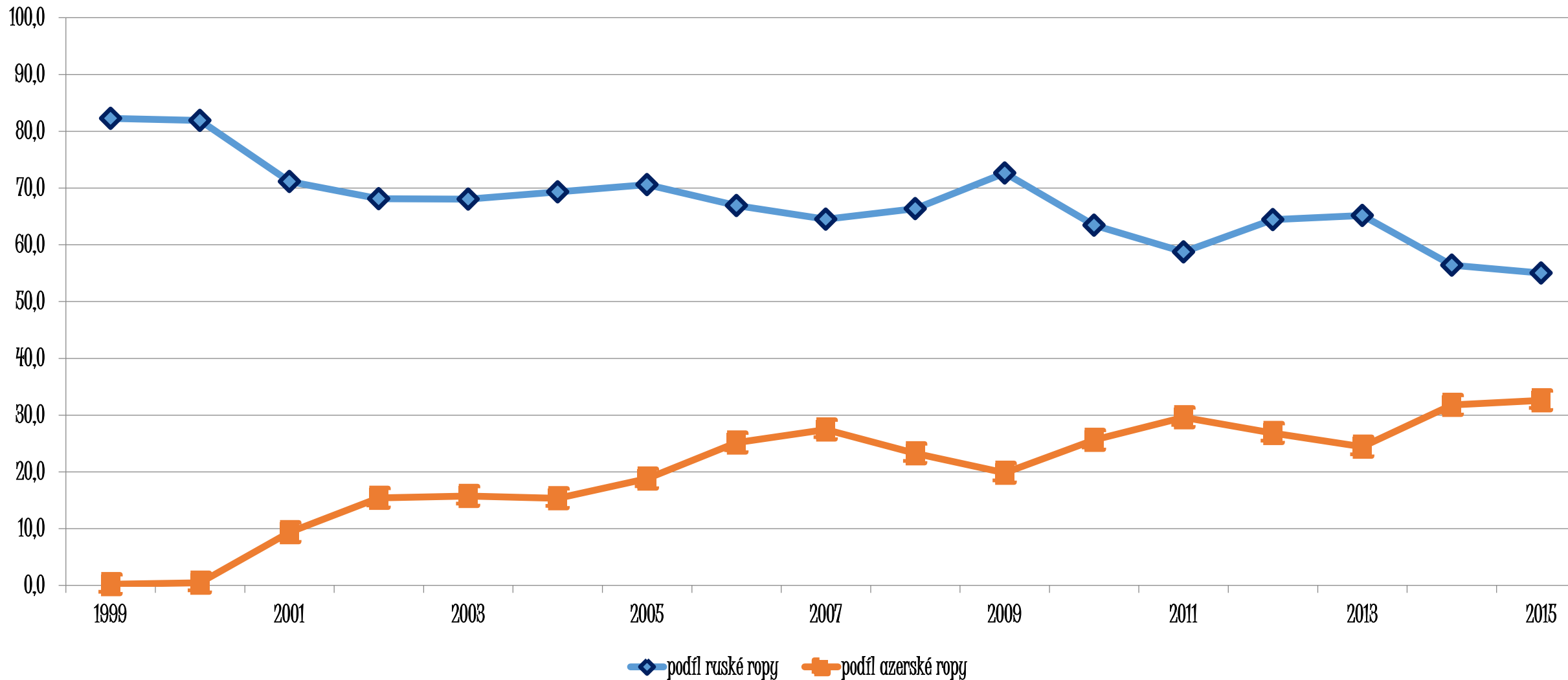


Crude oil

- Czech Republic has to import more than 95%; domestic production covers only 2-4%
- Volume of crude oil import oscillates traditionally between 5,8 MT and 7,8 MT, last years around 7 MT
- Financial value of imported crude oil dependent on world crude oil prices and oscillates a lot (for example 33 milliard CZK in 2002 x 117 milliard CZK in 2015).
- The most important supplier of crude oil to the Czech Republic is still Russian Federation, but its role is continuously decrease – from 100% at the beginning of 90. to 82% in 1999, or 55% in 2015 respectively.
- During last years in increasing the role of the crude oil import from Azerbaijan – around 25% from 2006 x 33% from 2011.



Role of the Czech import of Russian and Azerbaijani crude oil



Examples of exported raw
materials

Kaolin

- Czech kaolin is very important item of the Czech export in the area of raw materials
- The volume of the Czech export traditionally fluctuate between 300.000 and 550.000 tons/y, in last years around 500.000 tons/y.
- Czech kaolin is exported to many European as well as Non-European countries (40 countries in 2015)
- Among traditional customers are Germany, Slovakia, Italy, Belgium, Poland, France, Austria, but also UAE, Iran, Bangladesh, India, Turkey, Saudi Arabia, Australia, Myanmar.
- Beside kaolin itself, from the Czech Republic is exported also wide spectrum of products made from kaolin
- Small amount of high quality kaolin (special types) are also imported to the Czech Republic – from UK and Germany



Feldspars

- Feldspars are raw materials which is passing through growing interest during last two decades thanks to its ability generate energy savings during the process of ceramic or glass making
- Important part of the Czech feldspars are exported
- The volume of the Czech feldspars export is growing dynamically – from 60.000 tons/y in 1999 to 180.000 tons/y in 2015
- Traditional customers are CEE countries – Poland, Slovakia, Hungary, in the last years some part of Czech feldspars is imported to Germany, too
- Czech market is save from cheap Turkish and Italian feldspars thanks to bad transport accessability of the CEE region



Silica sand

- Also silica sand, analogous to kaolin, is typical Czech Industrial Minerals, which is largely used in the Czech traditional industry as well as it is important item of the Czech export in the field of raw materials.
- Czech silica sand (glass making quality) was exported to 70 different countries during last 5 years – apart from EU countries for example to Egypt, Algeria, Saudi Arabia, UAE, Turkmenistan, Nigeria, India, Lebanon, Panamá, Turkey, Peru or Japan.

