10. Raw materials, energy and water as a location factor of industry

Industry transforms the goods found in the nature and makes them suitable for human consumption.
Industry = connection between the raw materials in nature and social consumption.

Structure and location of industry
2 most important factors that influence a region:

- Structure = resources that region has at its disposal (raw materials and energy reserves), i.e. economic structure of a region
- Location = relative ease of access and communications that an area possesses, i.e. closeness to (central) market

	Location		
Structure	*Central*	*Fair*	*Remote*
Very good	Core (BA)	Secondary core (TT, TN, NR)	Growth pole potential (ZA)
Medium	Secondary core (MY, MA, DS)	Marginal (PD, TO)	Inner periphery (IL, NO)
Poor, out-dated	Growth pole potential (ZH)	Inner periphery (TS, DT, GE)	Outer periphery (SV, ME, MI)

Grid = potential for regional prosperity

Natural factors influencing location of industry
= *raw materials, water, energy*
The raw material-producing sites attract industrial activities which process great masses of material and produce products of much lower mass.

- e.g. metallurgy and cellulose production – the transportation of the raw materials (iron ore and wood) over long distances makes production expensive ⇔ the processing industry is located nearby the sources of the raw materials

Energy resources influence the location of industrial sectors which use the large quantities of fuel or electricity in their production processes.

- e.g. electricity production requires a lot of fuel and the smelting industry (aluminium or non-ferrous metals) requires a lot of electrical energy (Norway = hydro plants + aluminium processing factories)

Raw materials reserves in the world
Oil
Saudi Arabia 25%, Iraq/UAE/Kuwait 10%, Iran 9% => >60% lie in Middle East.
Major trade flows from Middle East to North America, EU, SE & East Asia, from Russia and CIS to EU.

Natural gas
Russia + CIS 38%, Iran 14%, major pipelines to EU from Russia and CIS through Central EU to Western EU.

Coal
USA 24%, Russia + CIS 22%, China 15%, major trade flows from USA to EU, from AUS to Japan and to EU.

Electric energy
production per capita: 1. CAN + ISL + NOR + SWE, 2. USA + Russia & CIS + West EU

- NOR = **99%** of total electricity production comes from hydro plants, ISL **94%**, CAN = **64%**
- Geothermal heat: ISL, DK, NL, B

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