

Zdroje a jejich kategorie





Zastoupení druhů surovin ve světové ekonomice

- podle objemu - velikosti těžby
- podle hodnoty těžby

Zdroje v čase a prostoru

- změny struktury v čase a prostoru
- stav v ČR

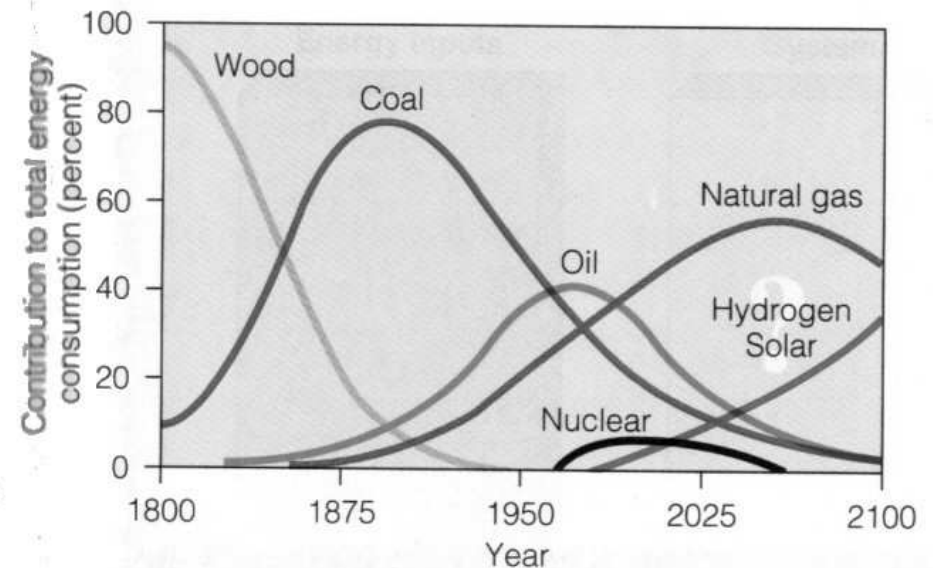


Figure 18-4 Shifts in the use of commercial energy resources in the United States since 1850, with projected changes to 2100. Shifts from wood to coal and then from coal to oil and natural gas have each taken about 50 years. Affordable oil is running out, and burning fossil fuels is the primary cause of air pollution and projected warming of the atmosphere. For these reasons, most analysts believe we must make a new shift in energy resources over the next 50 years. Some believe that this shift should involve improved energy efficiency and greatly increased use of solar energy and hydrogen. (Data from U.S. Department of Energy)

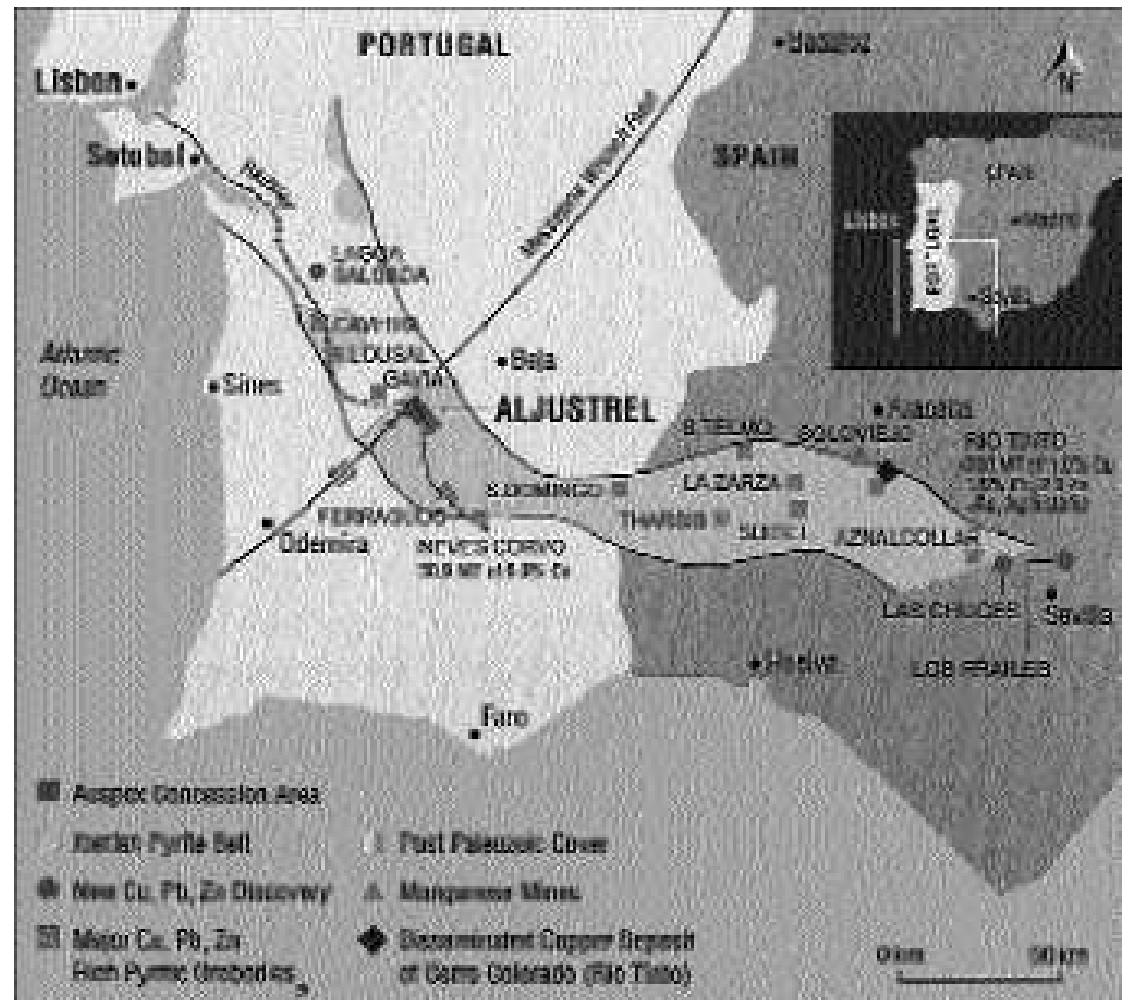
Základní kategorie zdrojů nerostných surovin ve světě

- podle lokalizace – odlišné ekonomické, technické a právní faktory
- na Zemi: na povrchu, v litosféře, v hydrosféře
- netradiční zdroje
- extraterestrické

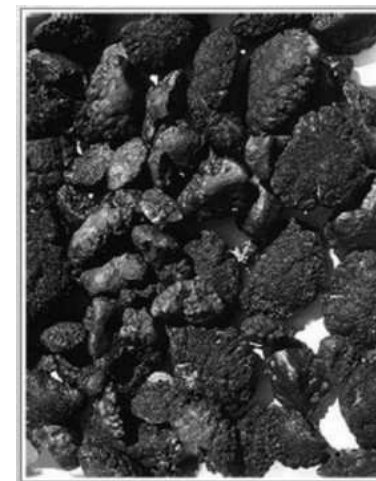


Zdroje v litosféře

velké množství
forem a typů
zdrojů



Zdroje na oceánském dnu



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IOM's Interactive Map
www.iom.gov.pl

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HAWAII

CLARION FRACTURE ZONE

CLARION FRACTURE ZONE

155° 0' 145° 0' 135° 0' 125° 0' 115° 0'

15° 0' 10° 0'

1 2 3 4 5 6 7 8 9 10 11

DISPOSITION OF SECTORS OF REGISTERED PIONEER AREAS IN THE CLARION-CLIPPERTON

PIONEER AREAS OF THE REGISTERED PIONEER INVESTORS:
1. JAPAN (JORD), 2. FRANCE (IFREMER/AFERNOD), 3. RUSSIA (YUZHNMORGEOLOOIYA),
4. CHINA (COMRA), 5. KOREA (KORDI),
6. INTEROCEANMETAL JOINT ORGANIZATION (IOM),
7. RESERVED FOR THE INTERNATIONAL SEA-BED AUTHORITY

AREAS CLAIMED BY CONSORTIA:
8. OMA, 9. OMI, 10. OMI-IL, 11. LOCKHEED MARTIN SYSTEMS Co. Inc.

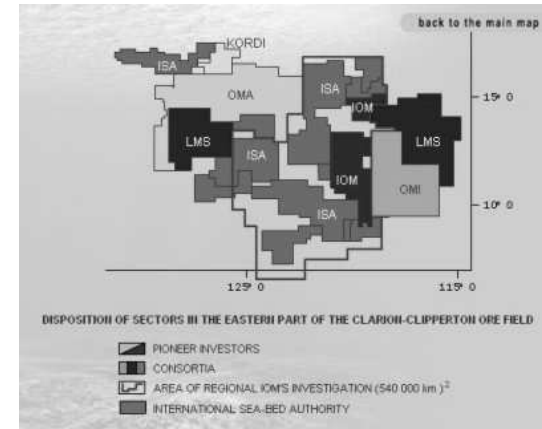
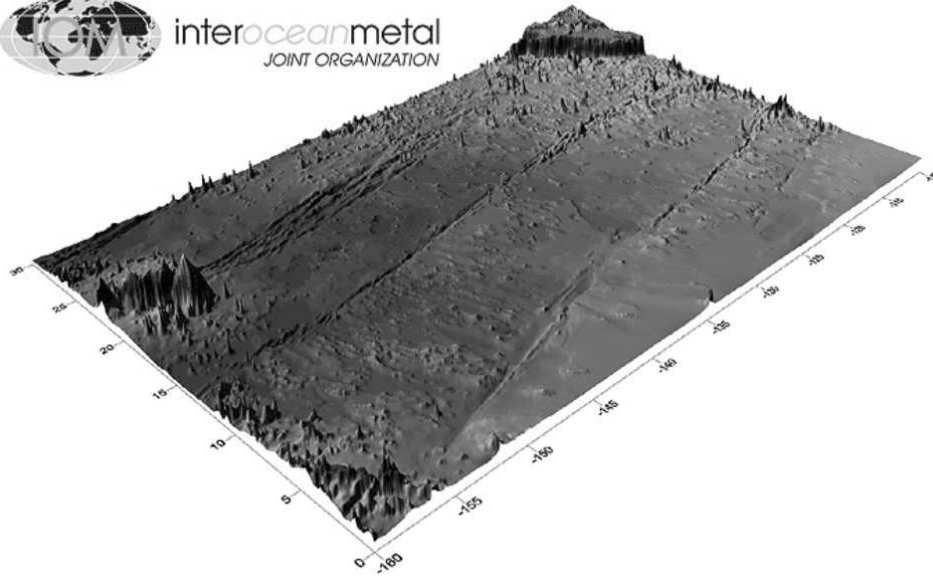
3D Map
Click here

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Průzkum a těžba dna oceánů



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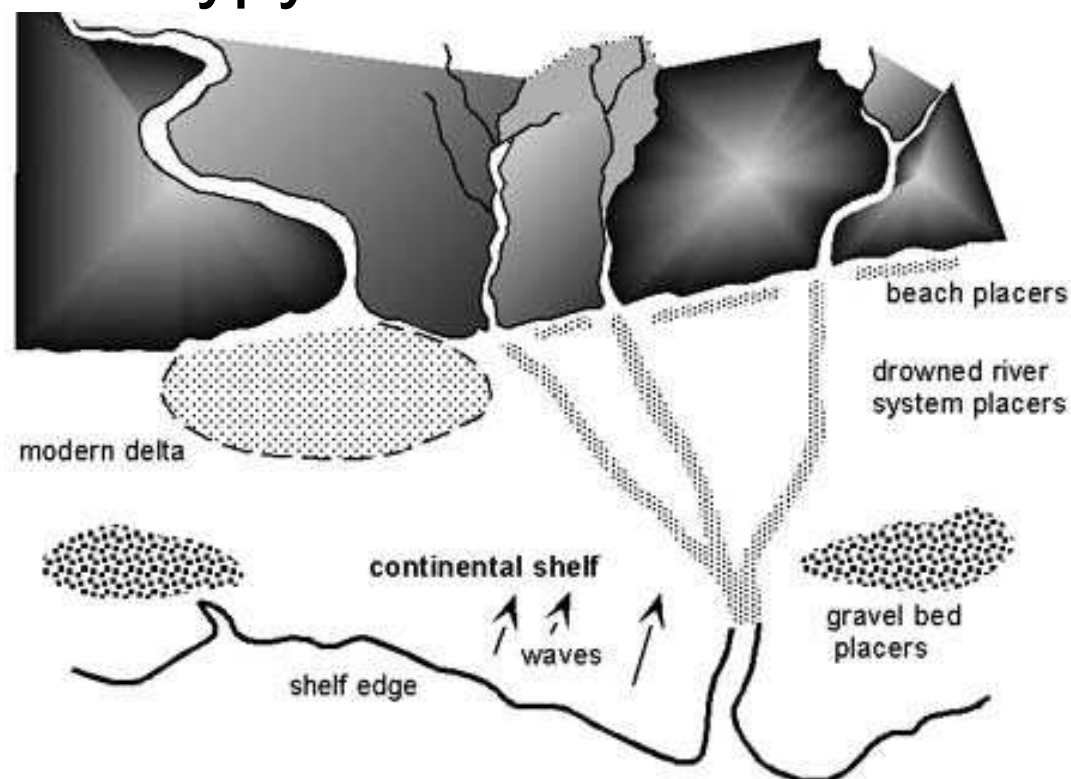


Dredging device before deployment; it is used for big scale sampling (800-1000 kg of the total sample's weight) aimed to metallurgical studies.



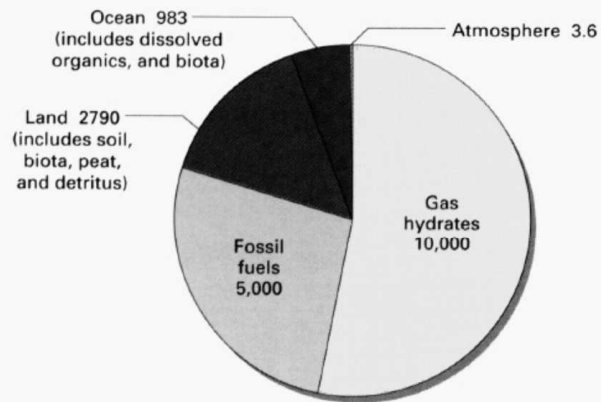
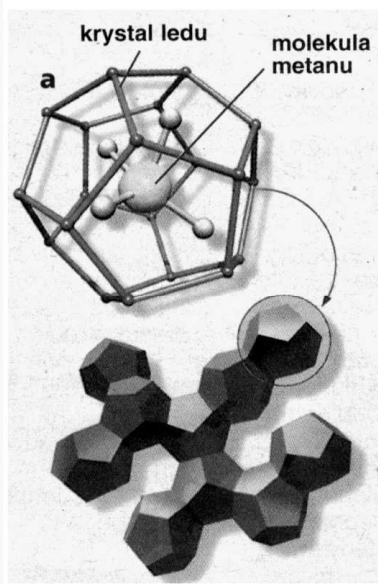
Těžba na pobřeží a šelfech

- proč právě třeba v ekologicky citlivém prostředí
- plážová ložiska – rozsypy
- uhlovodíky
- mořská voda



Uhlovodíky na šelfech

- ropa, zemní plyn
- hydráty metanu



Distribution of organic carbon in Earth reservoirs (excluding dispersed carbon in rocks and sediments, which equals nearly 1,000 times this total amount). Numbers in gigatons (10^9 tons) of carbon.

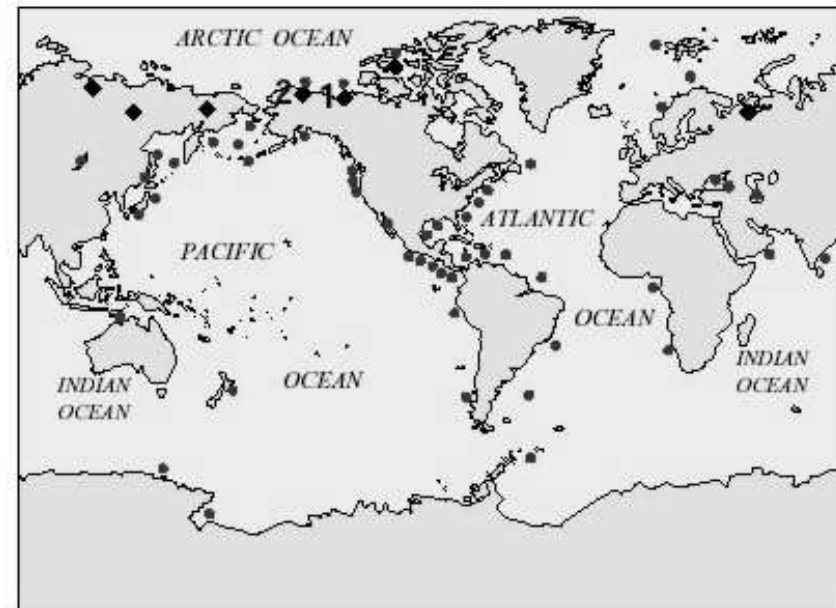
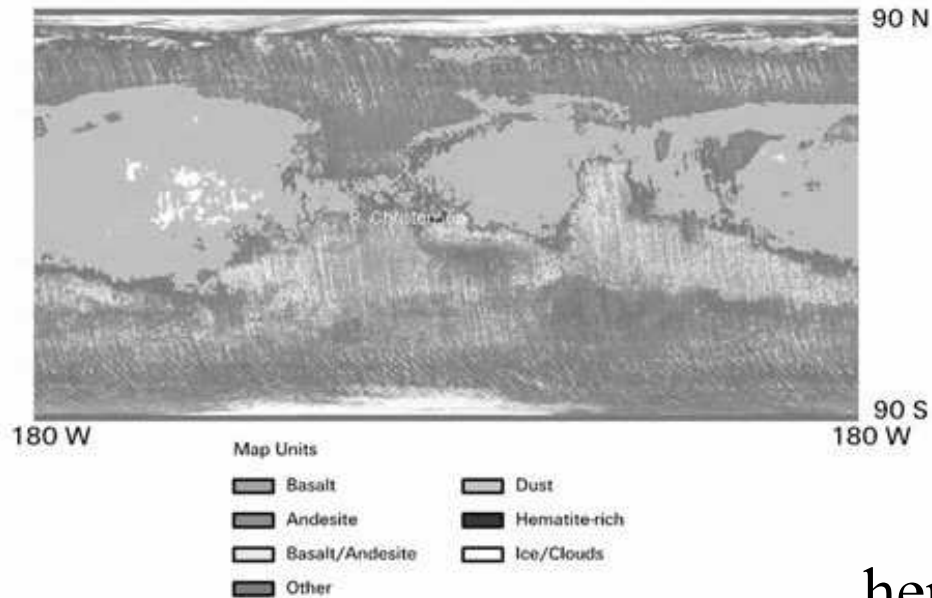


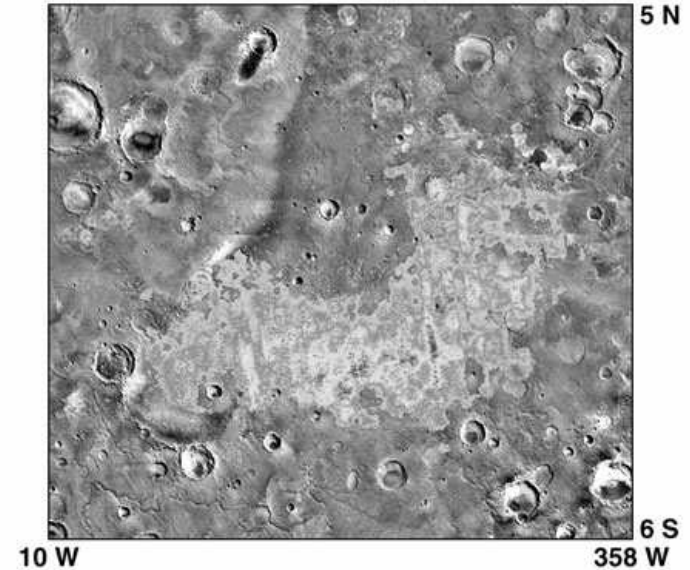
Figure 1. Known and inferred natural gas hydrate occurrences in marine (red circles) and permafrost (black diamonds) environments. Modified from K. A. Kvenvolden, U.S. Geological Survey (written commun., 1999). The USGS is studying hydrates at sites 1 (Mackenzie Delta, Canada) and 2 (North Slope, Alaska).

Extraterestrické zdroje

TES Geologic Map of Mars



TES Hematite Abundance



hematit z Marsu

P. Christensen



Ironmeteorite	Stonymeteorite	Earth'scrust
Iron 91%	Oxygen 36%	Oxygen 49%
Nickel 8.5%	Iron 26%	Silicon 26%
Cobalt 0.6%	Silicon 18%	Aluminum 7.5%
	Magnesium 14%	Iron 4.7%
	Aluminum 1.5%	Calcium 3.4%
	Nickel 1.4%	Sodium 2.6%
	Calcium 1.3%	Potassium 2.4%
		Magnesium 1.9%

Source:
Encyclopaedia
Britannica

