Science for Peace Meeting 7.12.2022

The EU Oil Embargo (started 5.12.22) some background infos

see for example:

"Will EU oil embargo really hurt Russian war machine?"

https://www.dw.com/en/will-eu-oil-embargo-really-hurt-russian-war-machine/a-63983159 **Quote:**

"The EU has stopped buying Russian seaborne crude oil as it seeks to deprive Moscow of a key revenue source fueling its war in Ukraine. The move will hurt Russia but not as much as the bloc would have liked."

- .. some background informations (where to find data about the oil problem)
- Will it help the promised CO2 emission reductions?

50% reductions by 2030 were promised again and again (or about 5% / year!)

Data about Energy and Oil?

For example: Have a look at

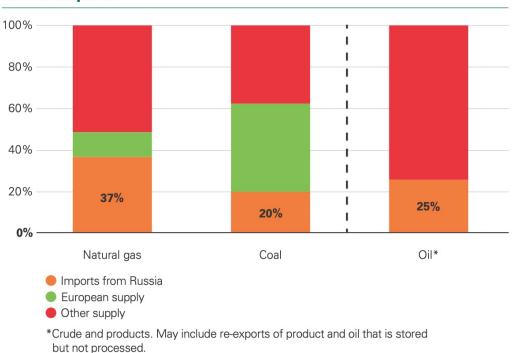
"Annual BP Statistical Review of World Energy"

https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2022-full-report.pdf



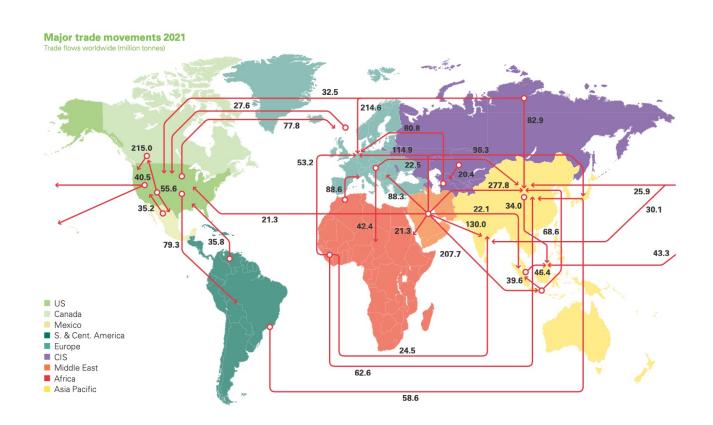
Russia accounted for almost 40% of Europe's gas use in 2021.

Russian share of EU-27 Natural gas and Coal consumption and Oil imports



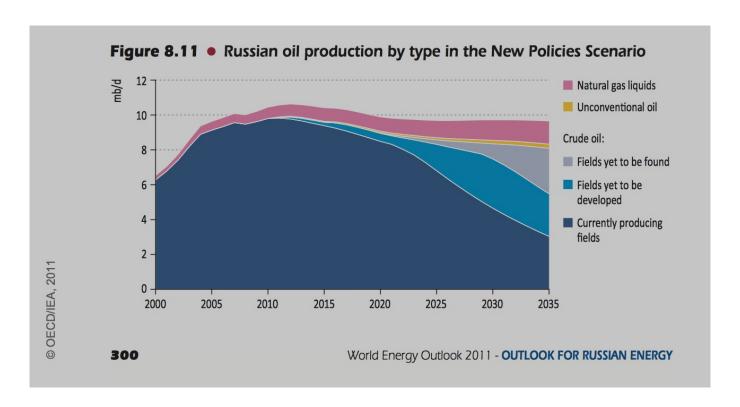
Oil trade around the globe

Russian oil goes more and more anyway to China etc



Future Oil Extraction in Russia?

IEA (2011) expected a declining oil production in Russia

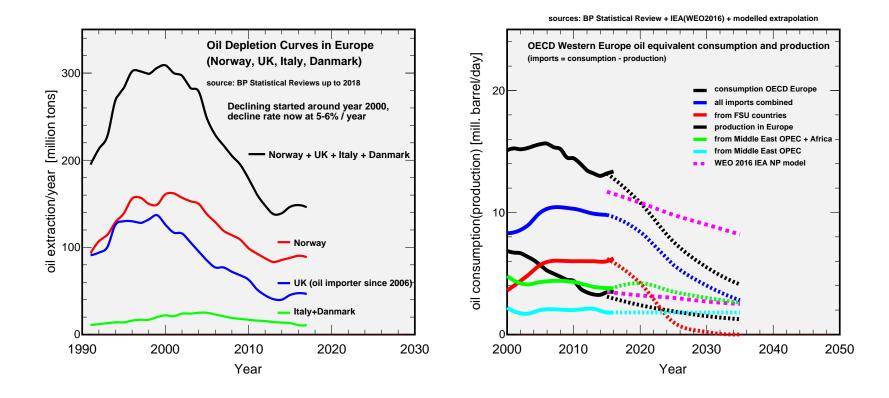


from IEA http://www.iea.org/publications/freepublications/publication/weo2011_web.pdf

Oil consumption the future for Western Europe (EU+CH+Nor)

Expect steeply declining imports from Russia -5-6% per year curves perhaps with ± 2 years uncertainty.

without growing imports from Africa/Middle east: oil consumption in Western Europe must decline (my 2014/2015 estimate) (a hypothetical "fair" sharing of the declining total available oil?)



must learn to live with 5-6%/year oil consumption decline in Western Europe!

Important points to be discussed/studied (from my lecture in 2018)

Energy resources and especially oil much more finite than we want to believe! Especially in Western Europe, South America and Africa!

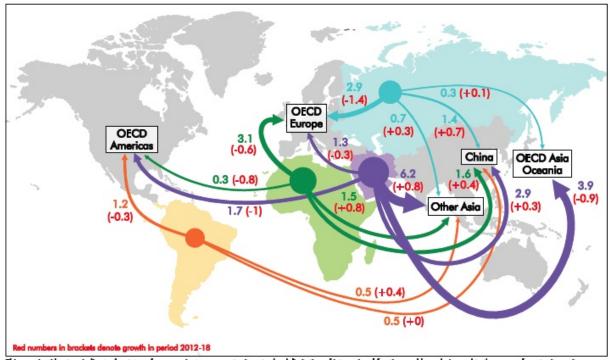
- Nobody knows how to run a globalised and industrialised world without oil!
- Is it really true that: "Rich people and people in rich countries" have no problem paying a factor 2-x higher oil price?
- All(!) energy resources within Western Europe are in production decline.
 Russian oil is of fundamental importance for "our way of life" in Western Europe!
 - For how long will and can Russia deliver todays amount of oil (and gas) to Western Europe? (Who will benefit from todays EU-Russia conflict?)
- African and Latin American countries will never become importers of substantial amounts of oil and other energy resources.
- Which countries will get the access to the only large remaining conventional oil resources in the Middle East (about 60% of the exploitable oil).
- What happens if "friendly" countries limit the "free oil (and gas) flow" into neighbouring (richer) countries?

Importing oil to OECD Europe (=EU+CH+Norwegen) (II)

The near future reality: IEA oil expectations for OECD Europe Imports (consumption) expected to decrease by 20% (2012 bis 2018!) Key Trade crude imports will decrease during the next 5 years by 2.3 mbd! Source Oct. 2013 IEA market oil report http://www.iea.org/Textbase/npsum/MTOMR2013sum.pdf see also the 2014/15 updates

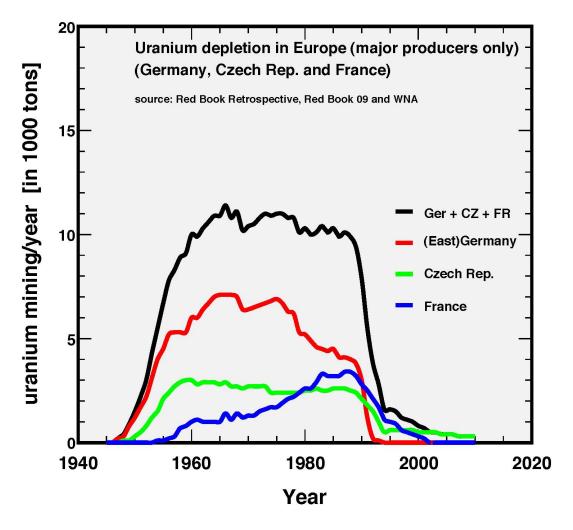
http://www.iea.org/newsroomandevents/speeches/140617_MediumTermOilMarketReport2014_Slides.pdf

Crude Exports in 2018 and Growth over 2012-18 for Key Trade Routes (million barrels per day)



Western Europe: Uranium terminated

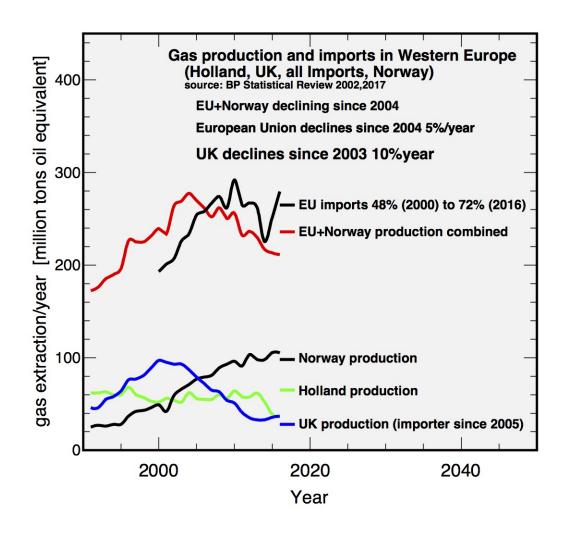
Uranium extraction: stopped since 2000, despite claims that: (1) uranium price is negligible and (2) the goal of import independence (100% imports since 2000) imports in 2013 = 198 Mtoe



(source: IAEA Red Book uranium resources, various years)

OECD Western Europe: Gas 2%/year decline

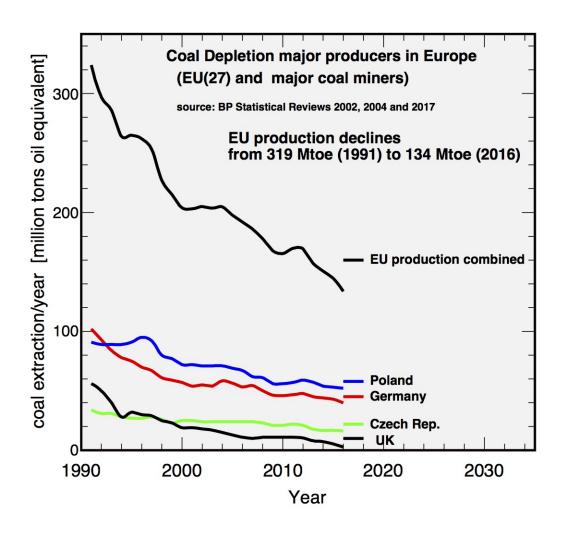
Gas extraction: Major producers plateau or in decline despite high gas prices and 72% imports (increasing) Imports in 2016 = 279.5 Mtoe/year



(source: BP World Energy Review 2017)

OECD Western Europe: Coal 3%/year decline

Coal extraction: Major producers in decline, despite high prices and 44% imports
Imports in 2016 = 133 Mtoe



(source: BP World Energy Review 2002. 2005, 2017)