

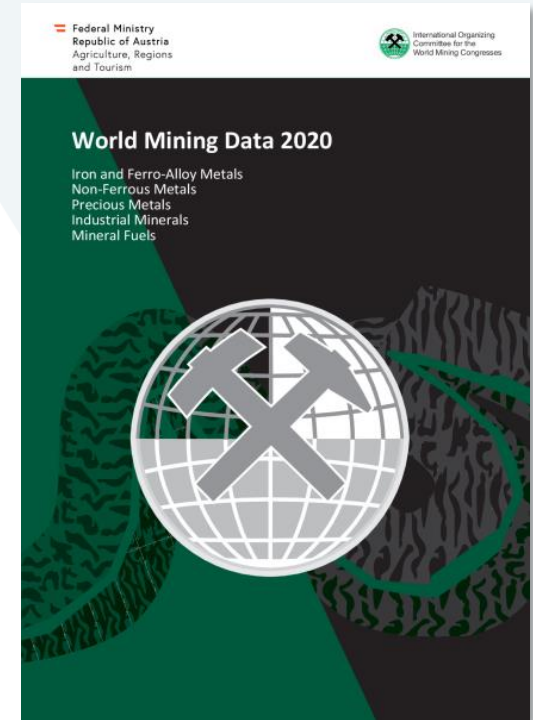


Report on Mining Statistics

101th IOC Meeting, 11th Dec. 2020

Москва, Virtual Zoom Meeting

Christian Reichl
Fed. Ministry of Agriculture, Regions and Tourism
Directorate IV/5 Mineral Resources Policy
Vienna, Austria





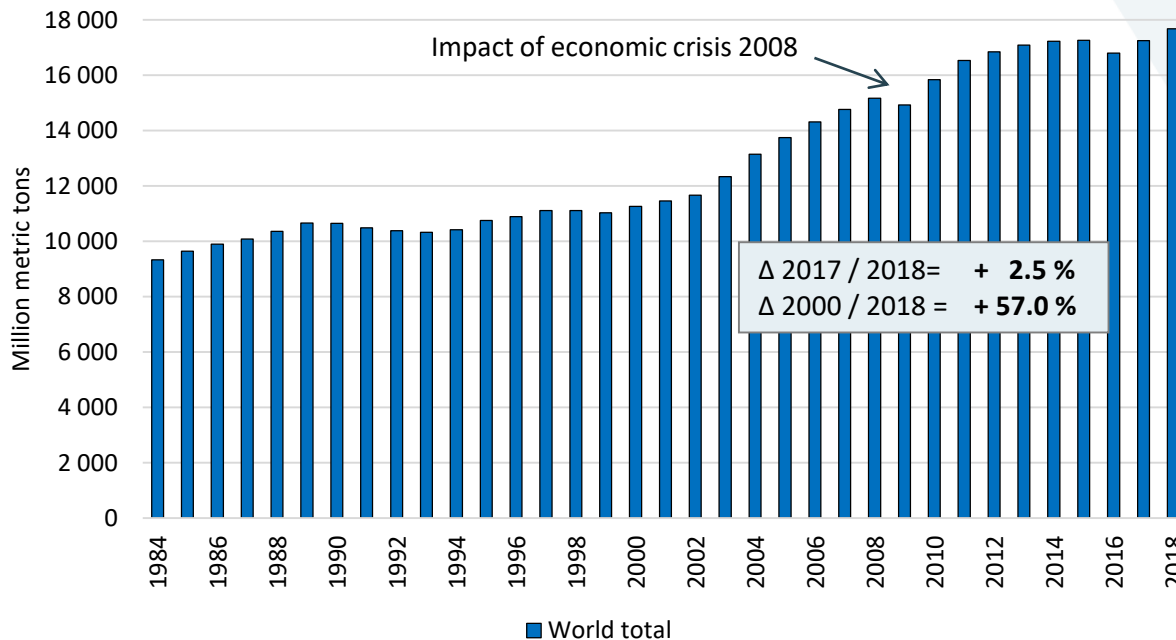
WMD 2020, Production 2018

	Production 2018 in Million metr. t	Share 2018 %	$\Delta\%$ 2000 / 2018	$\Delta\%$ 2017 / 2018
Asia	10,305	58.3	+104.3	+3.1
North America	2,665	15.1	+16.9	+7.2
Europe	1,418	8.0	-19.1	-3.1
Oceania	1,211	6.8	+135.0	+1.1
Latin America	1,108	6.3	+22.0	-3.7
Africa	977	5.5	+27.6	+1.9
Total*	17,685	100.0	+57.0	+2.5

* without construction minerals



WMD 2020

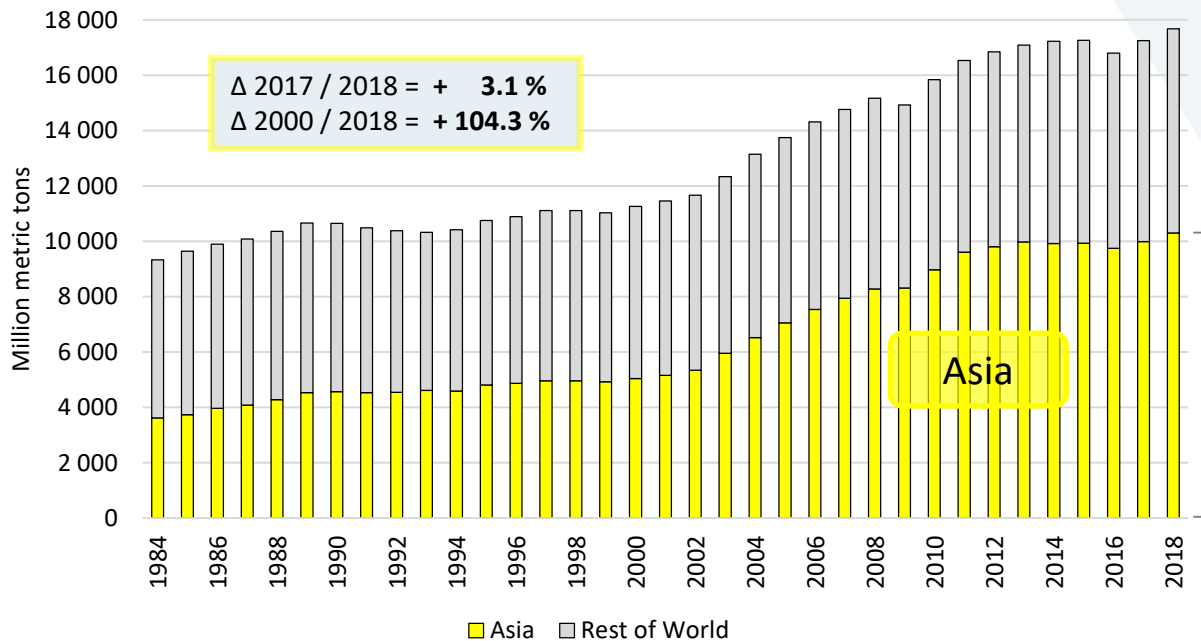


2018 17.7 Bln metr. t
2015 17.3 Bln metr. t
2000 11.3 Bln metr. t
1985 9.6 Bln metr. t

World mining production 1984 – 2018
by continents
(without construction minerals, in Million metr. t)



WMD 2020, Asia

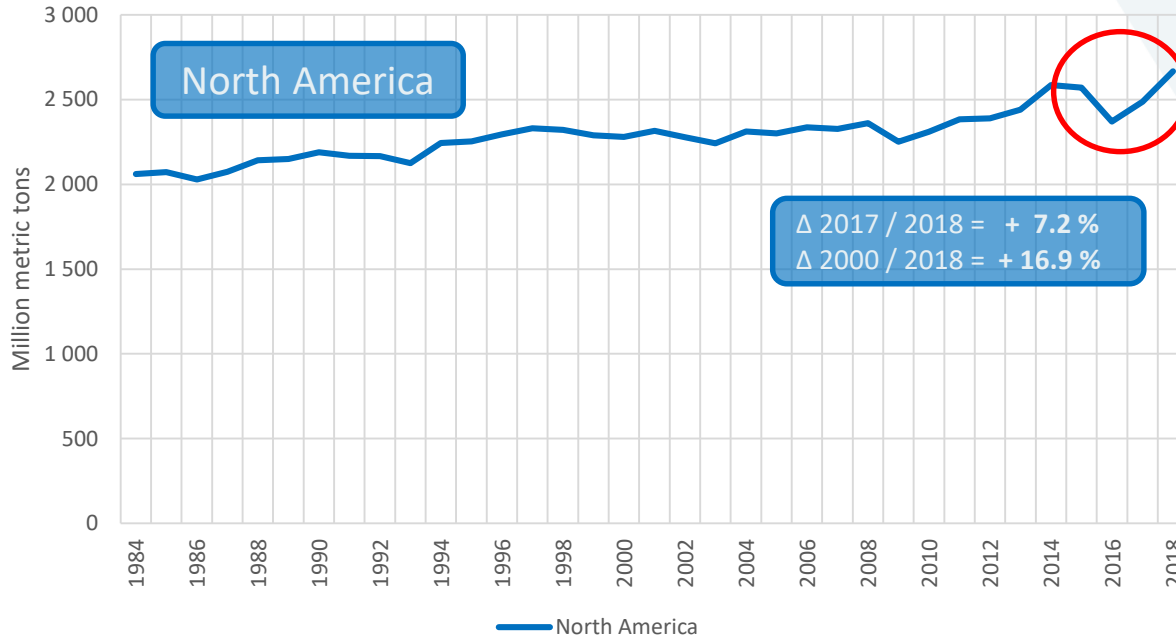


- ++ in 2018 Steam Coal
 China, India, Indonesia
- ++ in 2018 Gas Russia, Iran
- + in 2018 Aluminium China
- in 2018 Iron Ore China

World mining production 1984 – 2018
 by continents
 (without construction minerals, in Million metr. t)



WMD 2020, North America

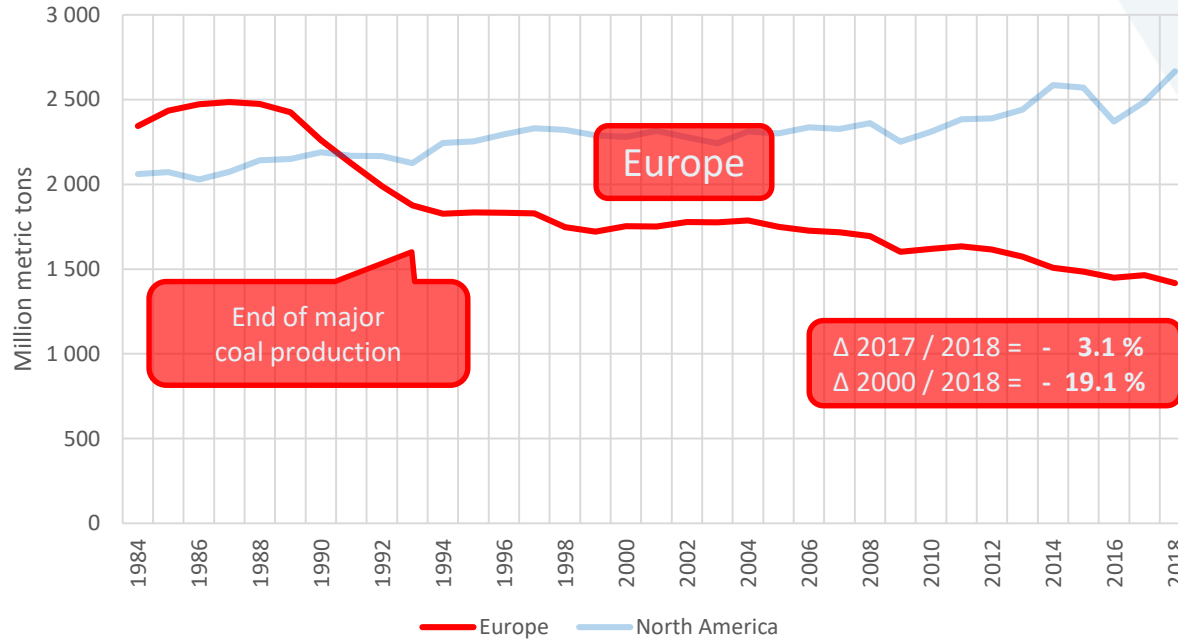


- ++ in 2014 US Oil & Gas
- in 2016 US Coal, Oil & Gas
- ++ in 2017, 2018 US Oil & Gas,
Canadian Oil & Oil Sands, Gas

World mining production 1984 – 2018
by continents
(without construction minerals, in Million metr. t)



WMD 2020, Europe

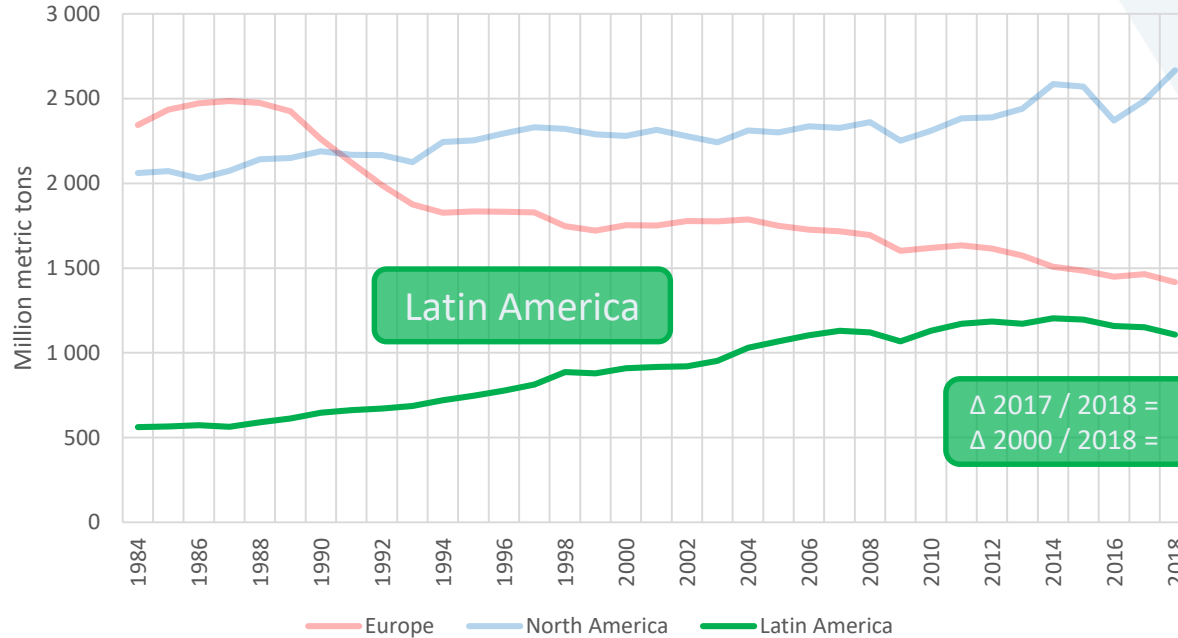


Steady declining Trend
in the past years:
reduced Oil & Gas Production in
North Sea
(N, UK, NL, DK)
reduced Coal Production
(POL, UK, D, CZ)

World mining production 1984 – 2018
by continents
(without construction minerals, in Million metr. t)



WMD 2020, Latin America



Venezuela:

-- in 2017, 2018 Petroleum

Brazil:

+ in 2018 Iron Ore

- in 2018 Petroleum

Colombia:

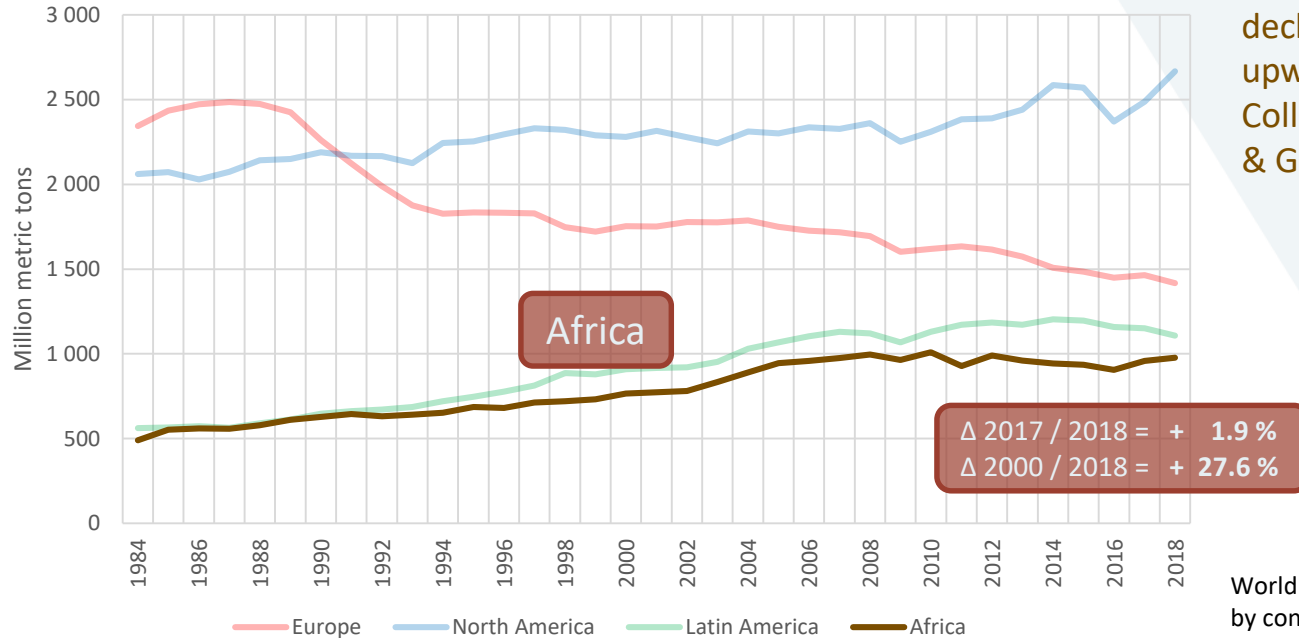
- in 2018 Steam Coal

Δ 2017 / 2018 = - 3.7 %
 Δ 2000 / 2018 = + 22.0 %

World mining production 1984 – 2018
by continents
(without construction minerals, in Million metr. t)



WMD 2020, Africa

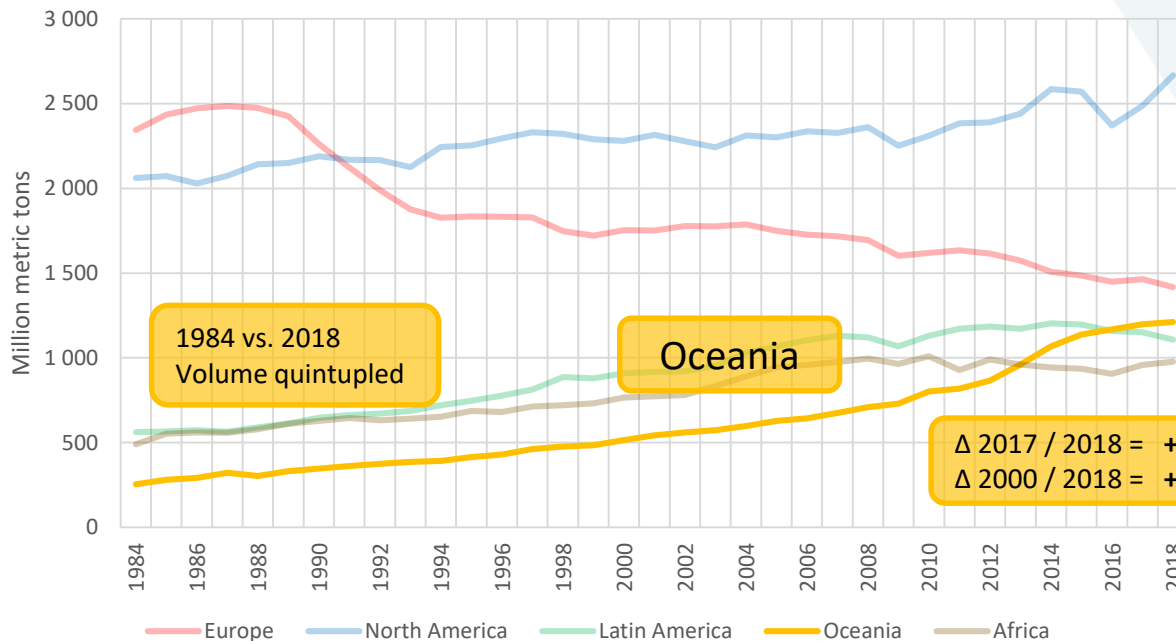


declining Trend from 2012 and
upward Trend since 2017:
Collapse and Restart of Libya's Oil
& Gas Production (Civil war!)

World mining production 1984 – 2018
by continents
(without construction minerals, in Million metr. t)



WMD 2020, Oceania



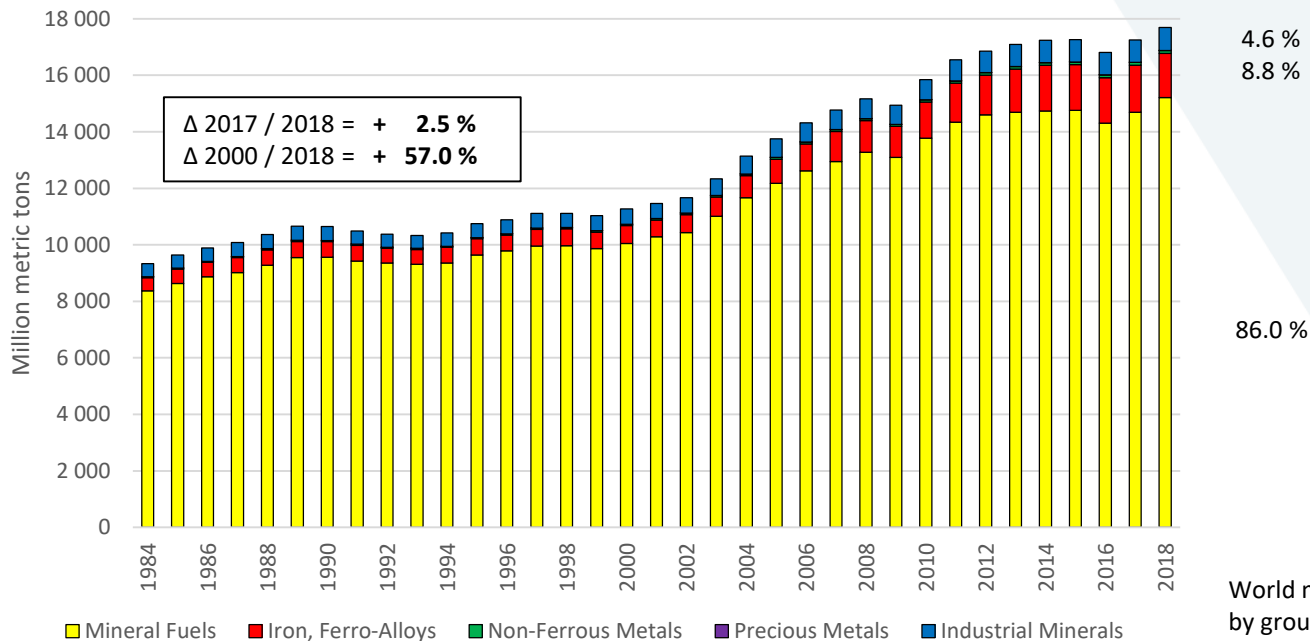
Mining Production:
Oceania (AUS) reached
Africa in 2013, LAM in 2016.

Australia:
++ Iron Ore
++ Nat. Gas (doubled in 5 yrs)

World mining production 1984 – 2018
by continents
(without construction minerals, in Million metr. t)



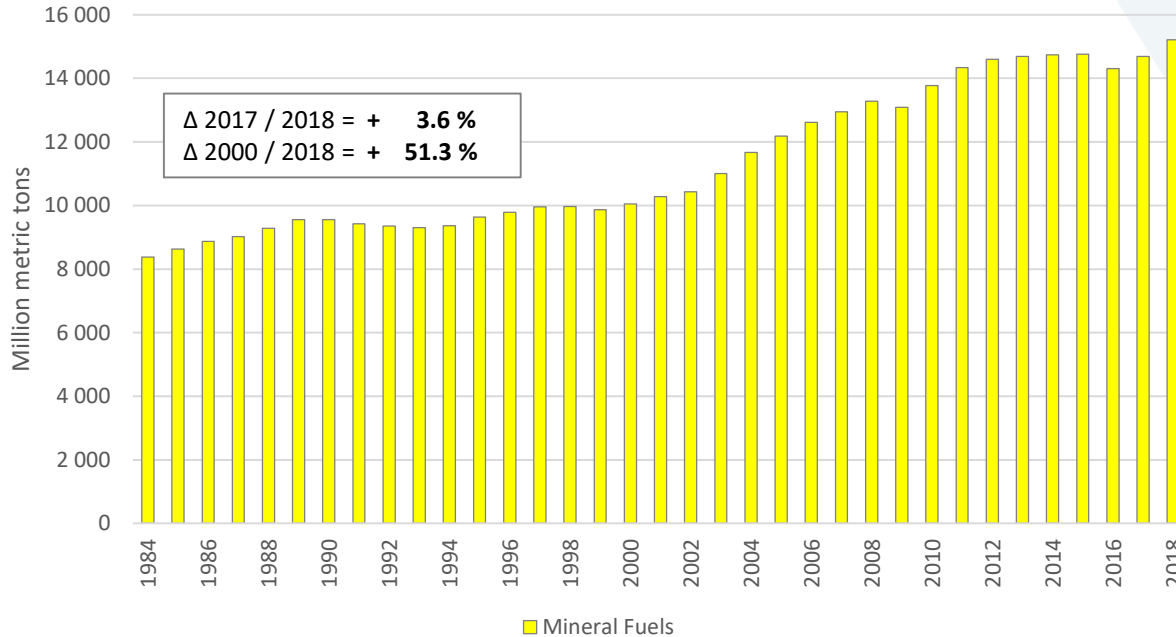
WMD 2020, Groups of Commodities



World mining production 1984 – 2018
 by groups of minerals
 (without construction minerals, in Million metr. t)



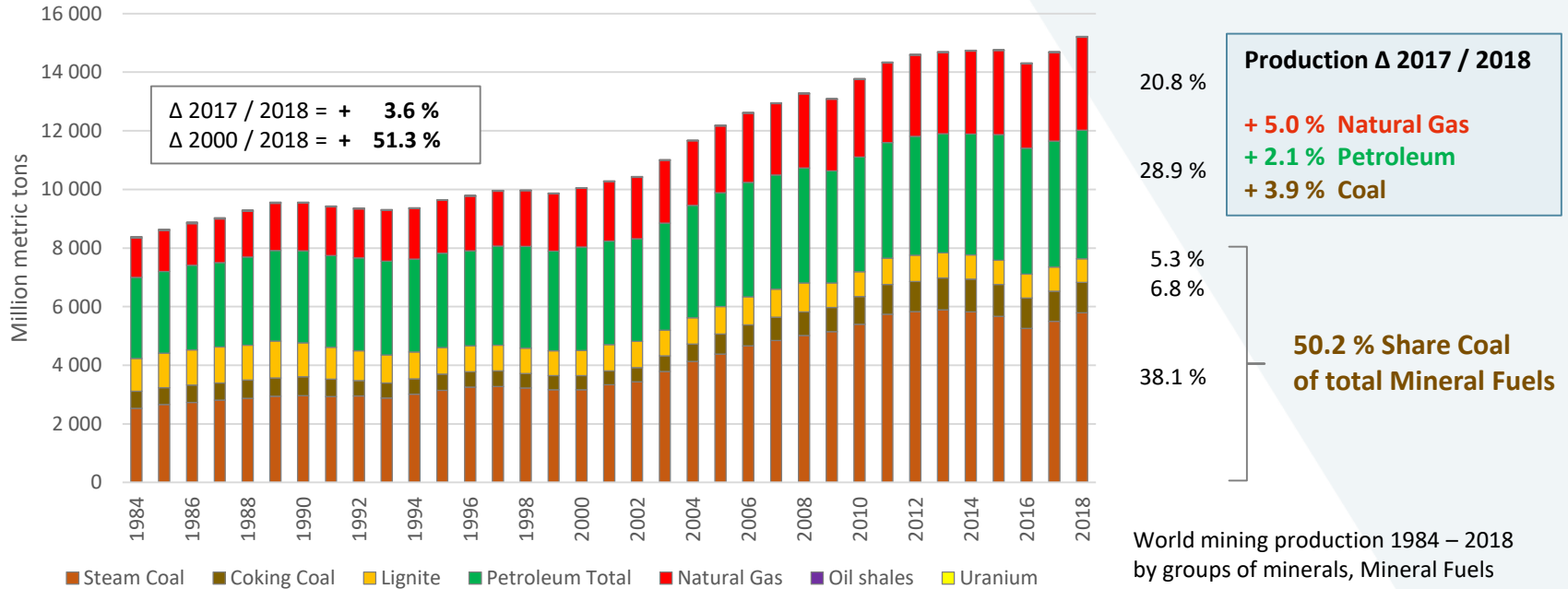
WMD 2020, Mineral Fuels



World mining production 1984 – 2018
by groups of minerals, Mineral Fuels
(in Million metr. t)

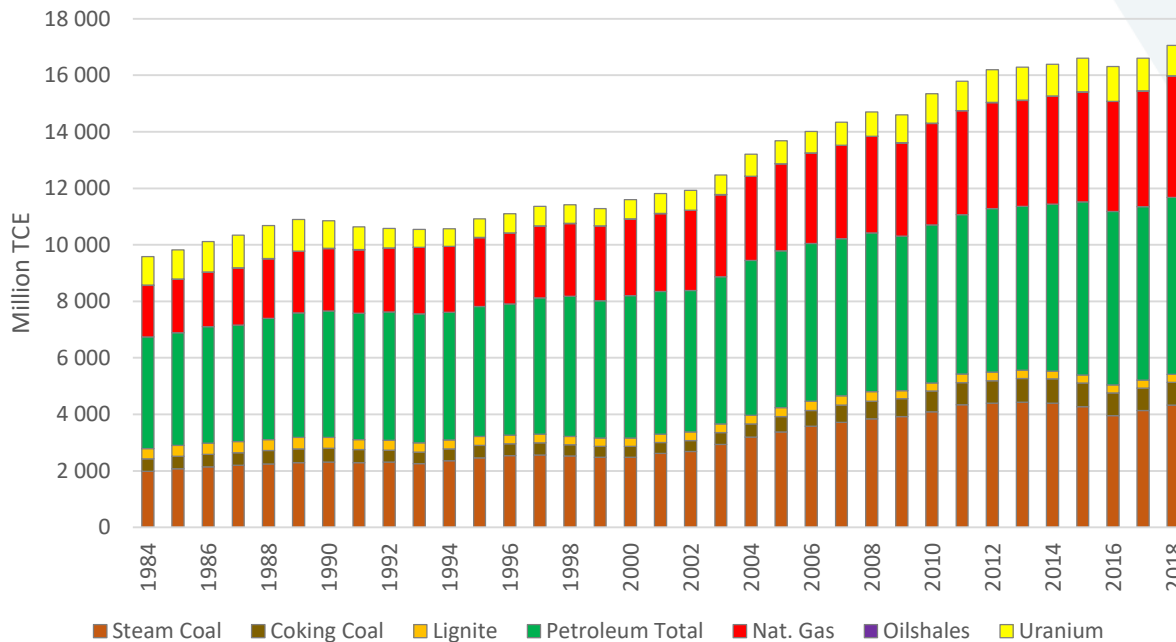


WMD 2020, Mineral Fuels





WMD 2020, Mineral Fuels in TCE



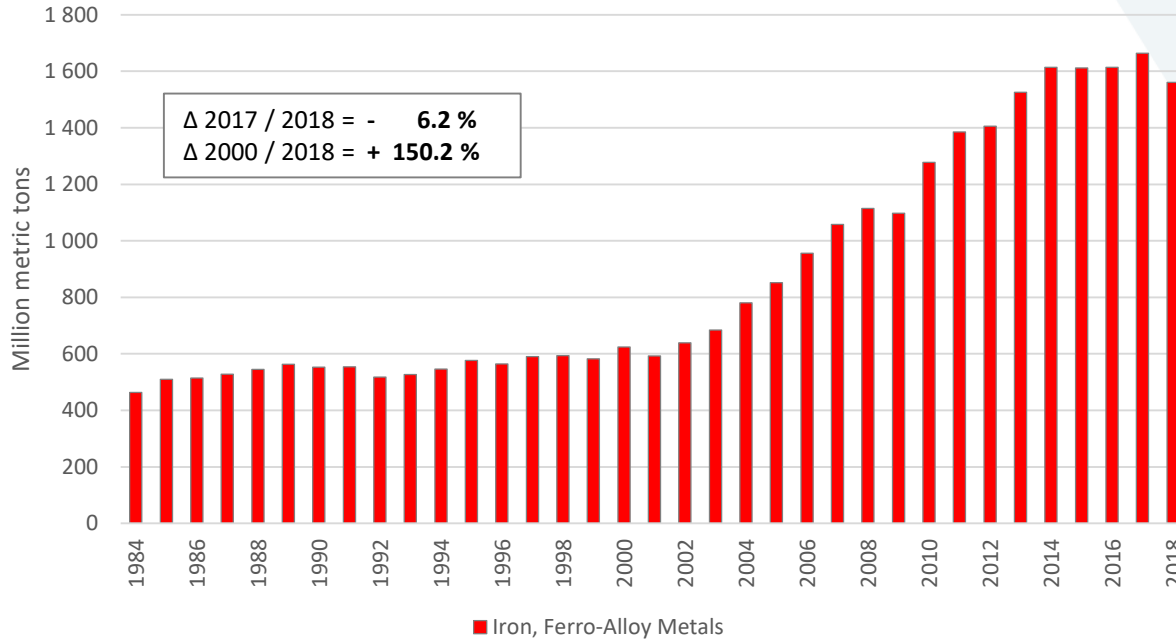
in 2018:

17.1 Billion TCE
 ≈ 499,834 PJ (Petajoule)
 ≈ 500 EJ (Exajoule, 10¹⁸ J)

World mining production 1984 – 2018
 by groups of minerals, Mineral Fuels
 (in Million tons of coal equivalent, TCE)



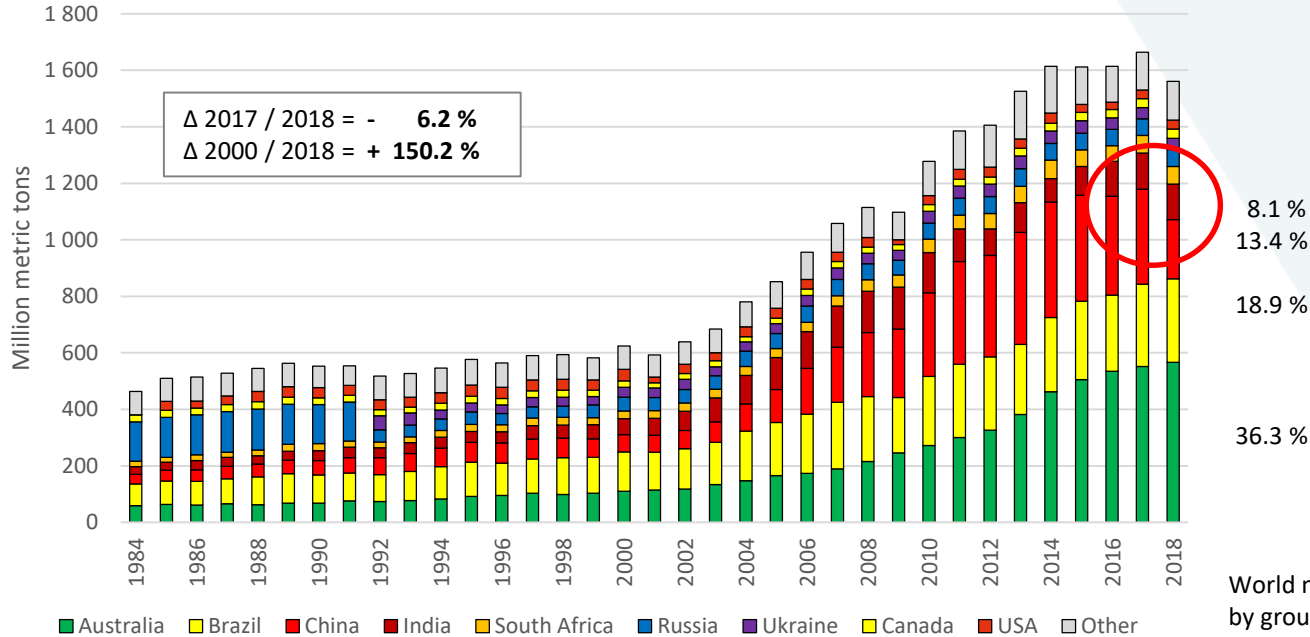
WMD 2020, Iron & Ferro-Alloy Metals



World mining production 1984 – 2018
by groups of minerals (in Million metr. t)



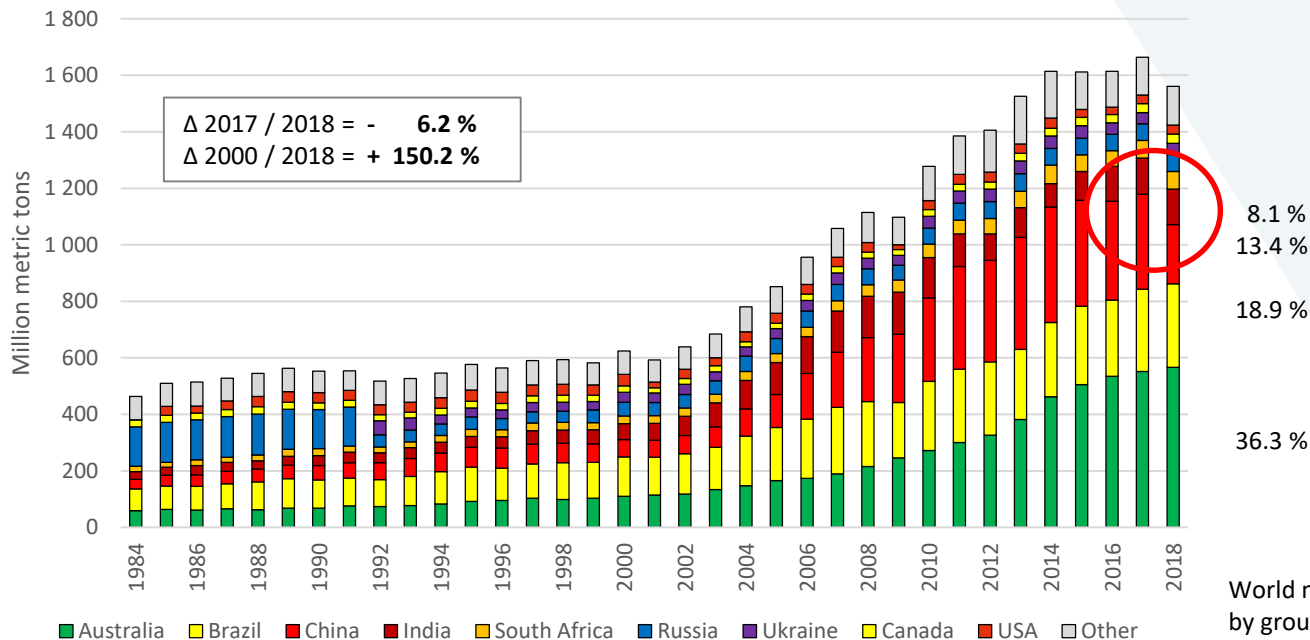
WMD 2020, Iron & Ferro-Alloy Metals



World mining production 1984 – 2018
 by groups of minerals (in Million metr. t)



WMD 2020, Iron & Ferro-Alloy Metals



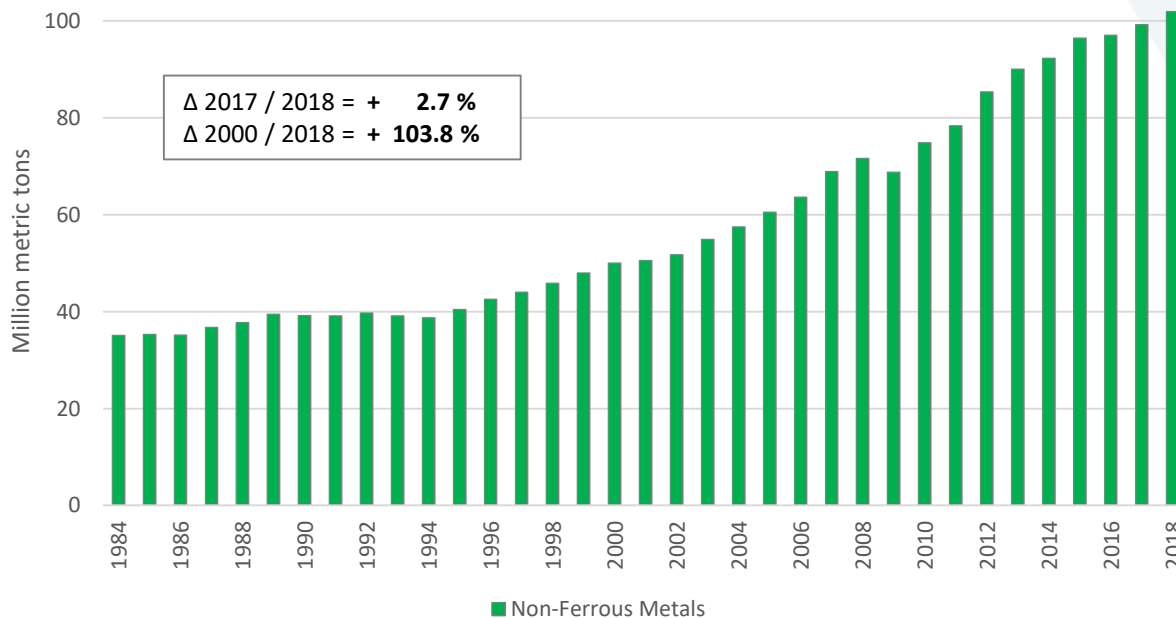
... perhaps we have to adjust Chinese Iron Ore content data in next WMD Edition! (like USGS & RMG Consulting did it these days)

Chinas Official Statistics:
 2016 1,280.9 Mt Iron Ore
 2017 1,229.4 Mt Iron Ore
 2018 763.4 Mt Iron Ore
 2019 844.4 Mt Iron Ore

World mining production 1984 – 2018
 by groups of minerals (in Million metr. t)



WMD 2020, Non-Ferrous Metals



„linear“ upward trend

Production Δ 2017 / 2018

+++ Rare Earth (+26.9 %)

+++ Lithium (+24.5 %)

-- Arsenic (-9.0 %)

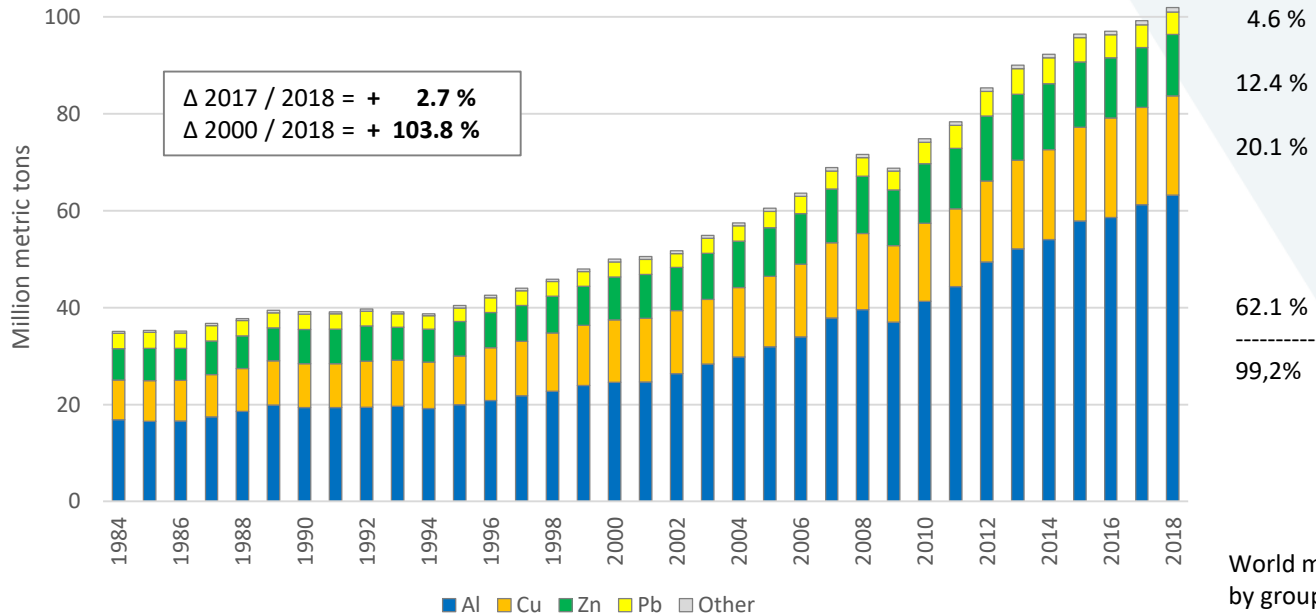
-- Cadmium (-8.6%)

-- Antimony (-6.5 %)

World mining production 1984 – 2018
by groups of minerals, Non-Ferrous Metals
(in Million metr. t)



WMD 2020, Non-Ferrous Metals

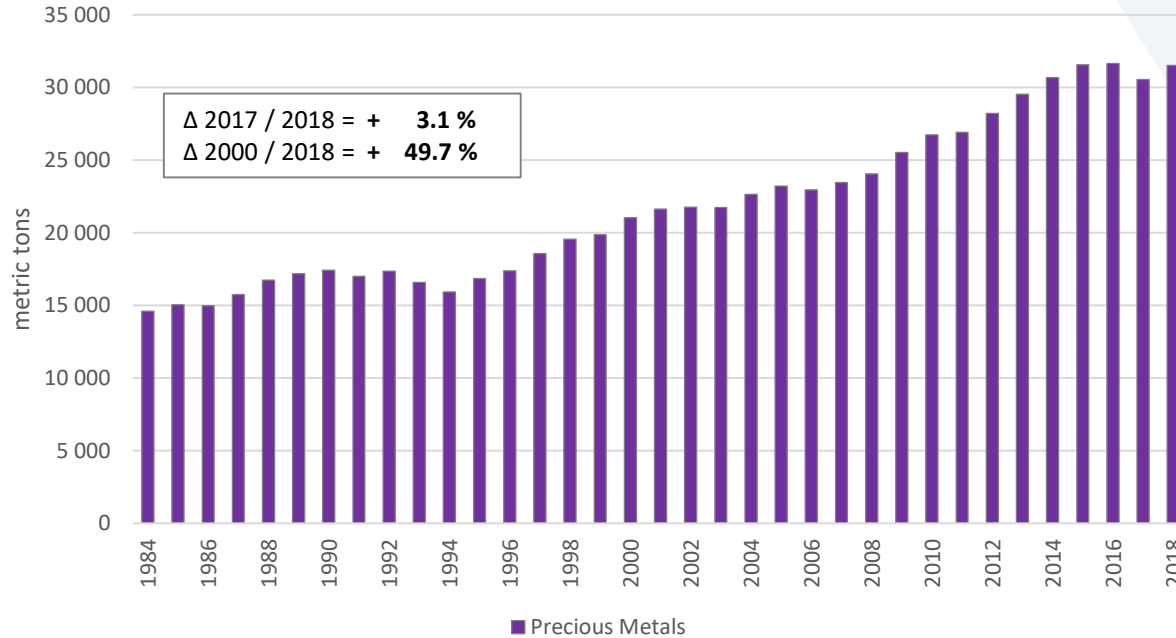


4 Metals
 ≈ 99 %

World mining production 1984 – 2018
 by groups of minerals, Non-Ferrous Metals
 (in Million metr. t)



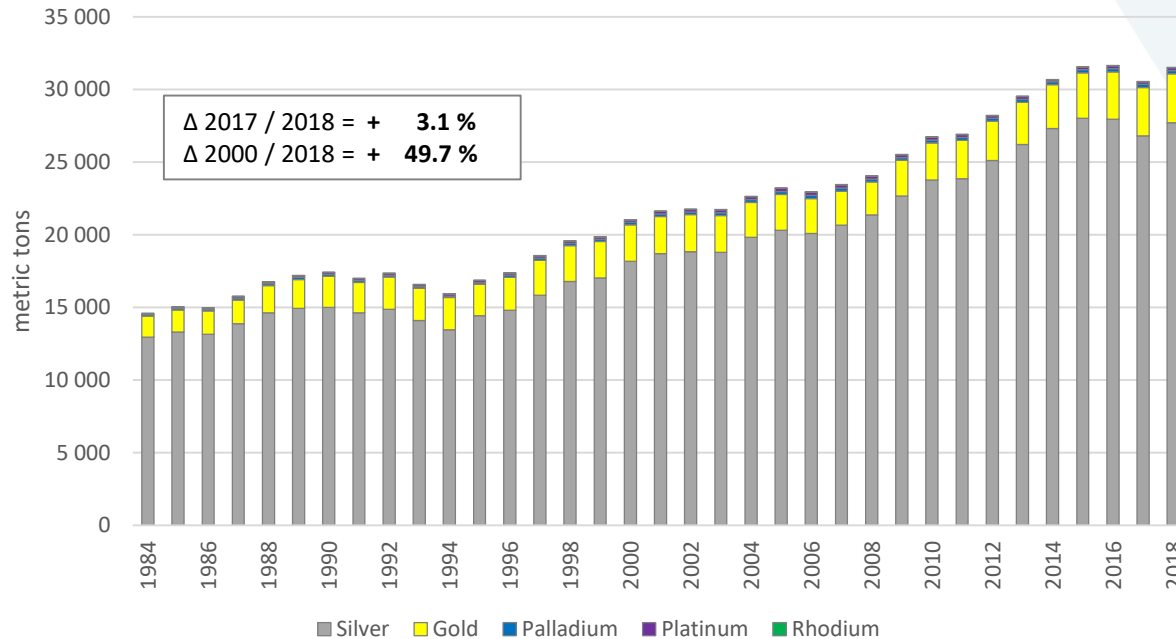
WMD 2020, Precious Metals



World mining production 1984 – 2018
by groups of minerals, Precious Metals
(in metr. t)



WMD 2020, Precious Metals



Production in 2018

3 368 tons of primary Au
27 699 tons of primary Ag

223 tons of primary Pd
189 tons of primary Pt
23 tons of primary Rh

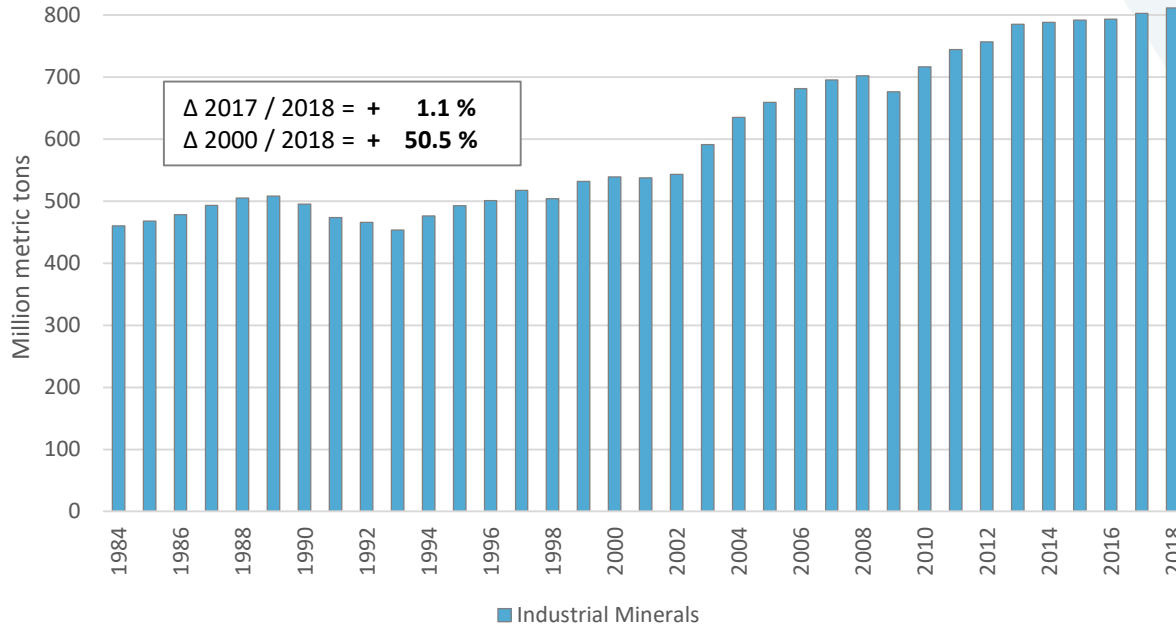
10.7 %

87.9 %

World mining production 1984 – 2018
by groups of minerals, Precious Metals
(in metr. t)



WMD 2020, Industrial Minerals



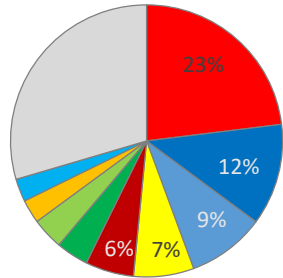
Production Δ 2017 / 2018

- ++ Fluorspar (+20.0 %)
- ++ Graphite (+16.1 %)
- + Boron (+6.2 %)
- + Magnesite (+4.9 %)
- Phosphates (-9.6 %)

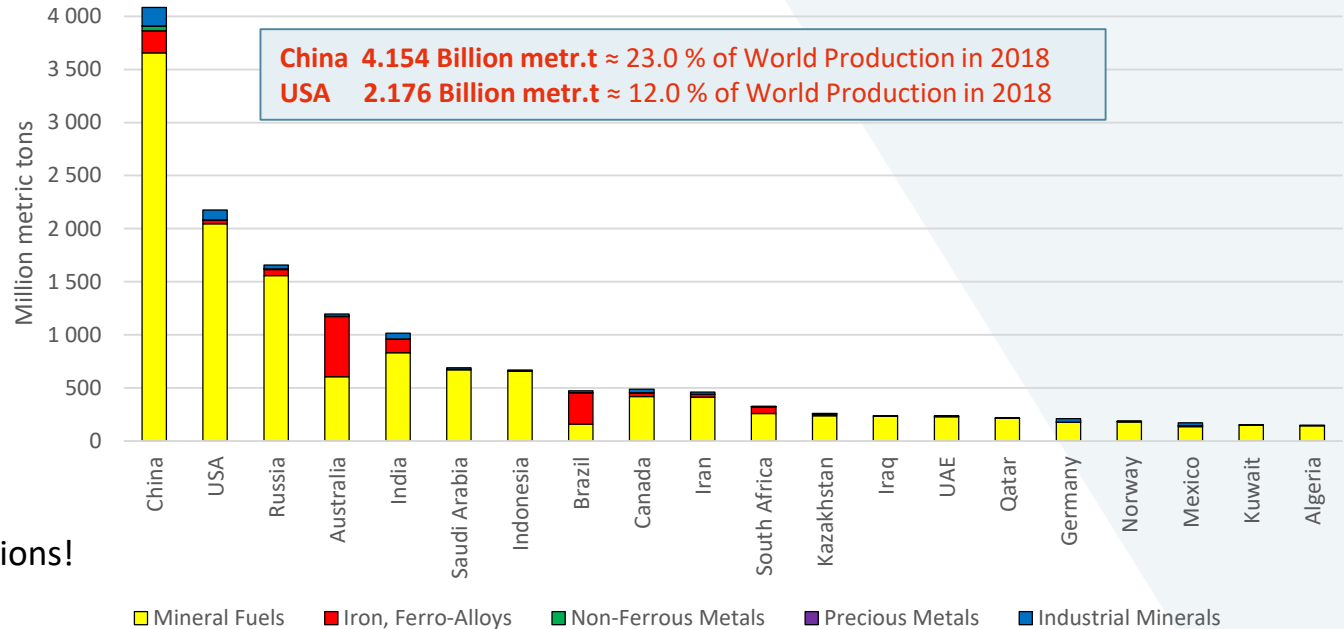
World mining production 1984 – 2018
by groups of minerals, Industrial Minerals
(in Million metr. t)



WMD 2020: Top Producer Countries 2018

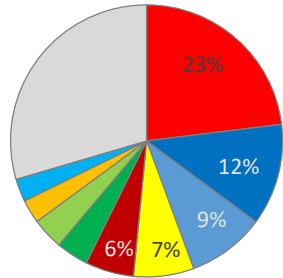


China, USA, Russia, Australia and India are the 5 biggest mining nations!

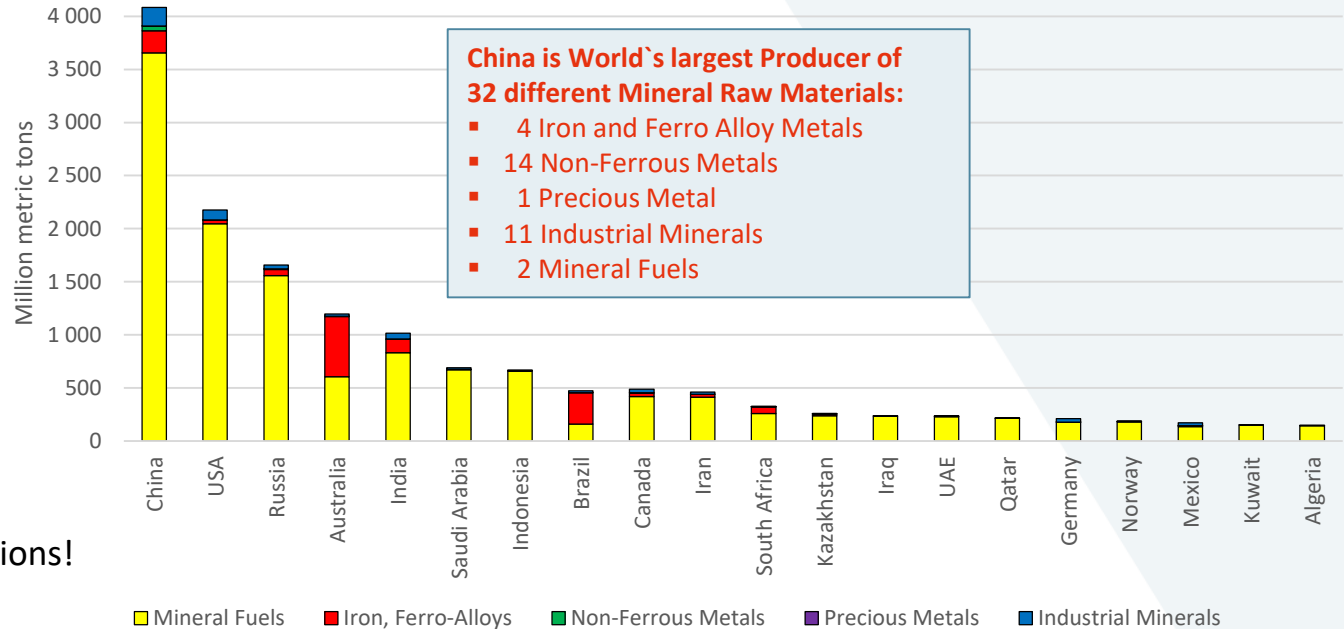




WMD 2020: Top Producer Countries 2018

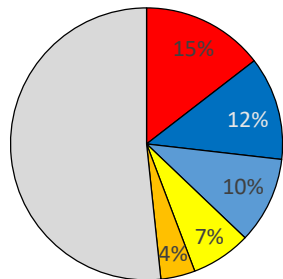


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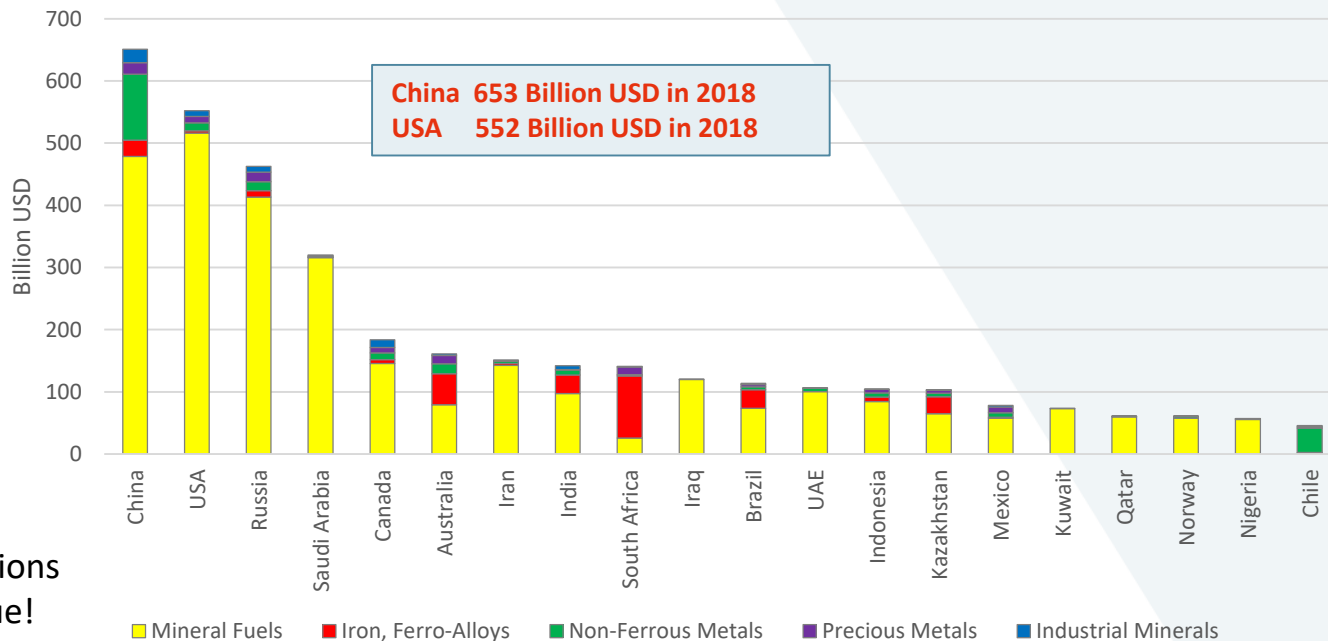




WMD 2020: Top Producer Countries 2018 by Value

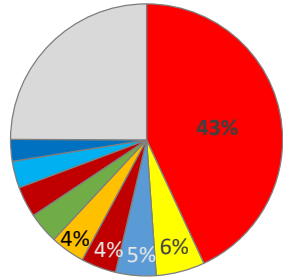


China, USA, Russia, SA and Canada are the 5 biggest mining nations expressed in mining value!

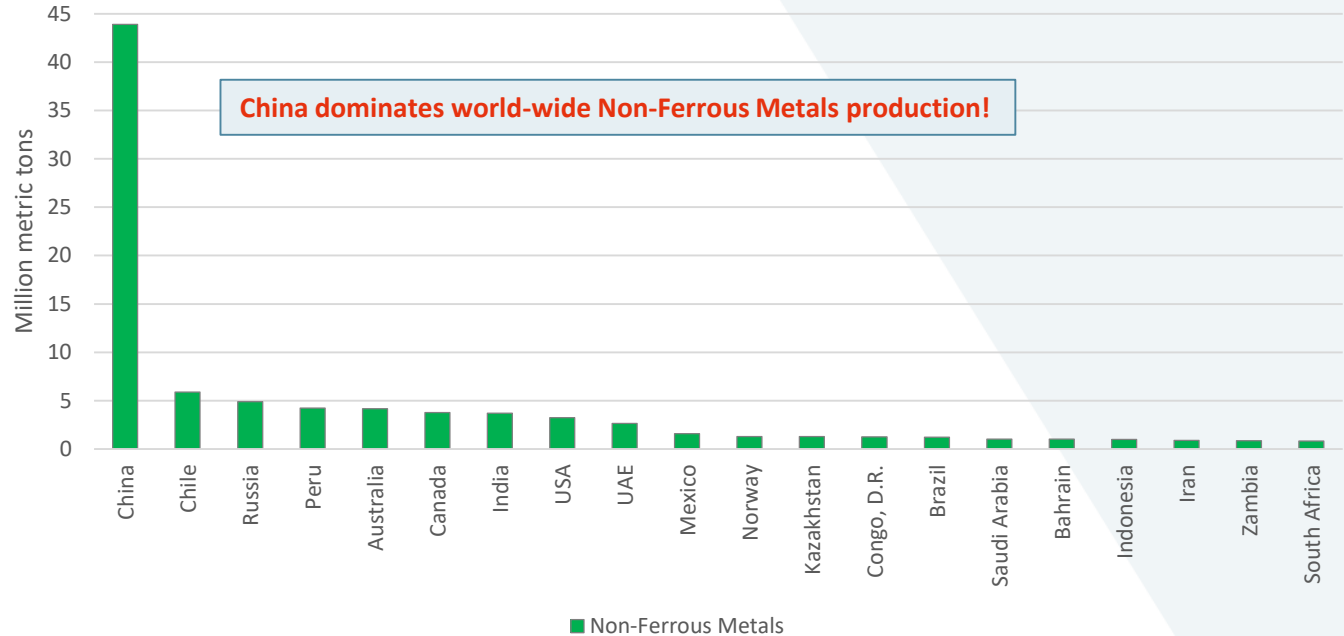




WMD 2020: Top Producer Countries 2018, Non-Ferrous Metals

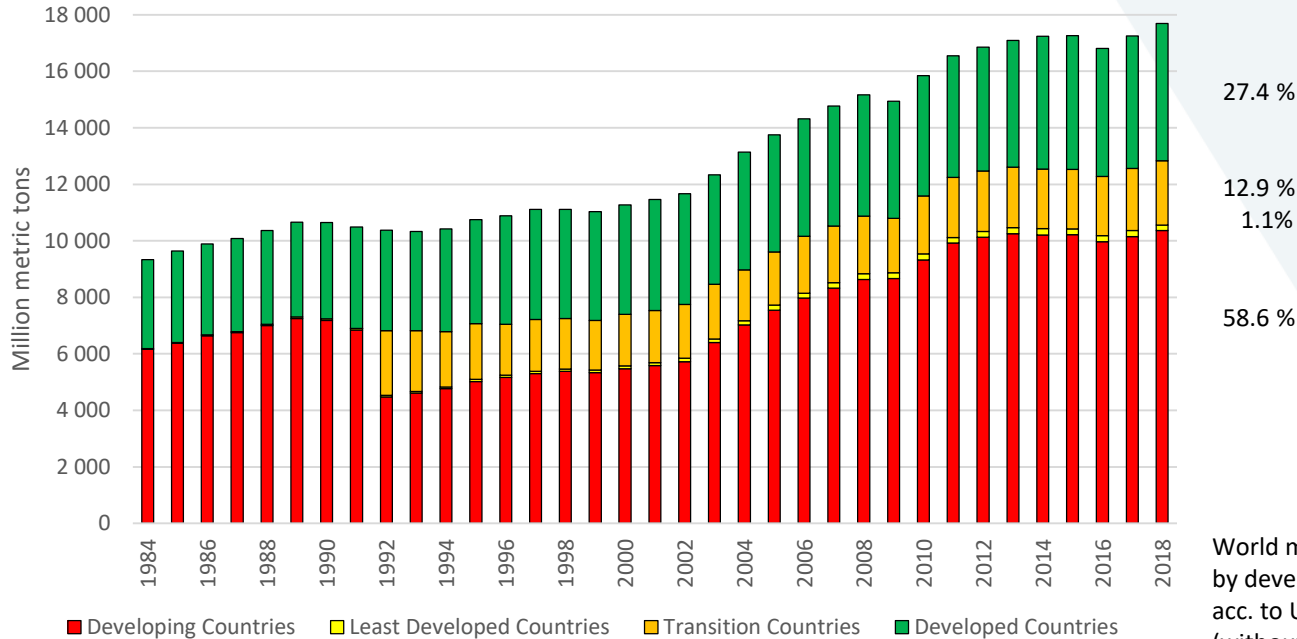


China, Chile, Russia, Peru and Australia are the biggest producers!





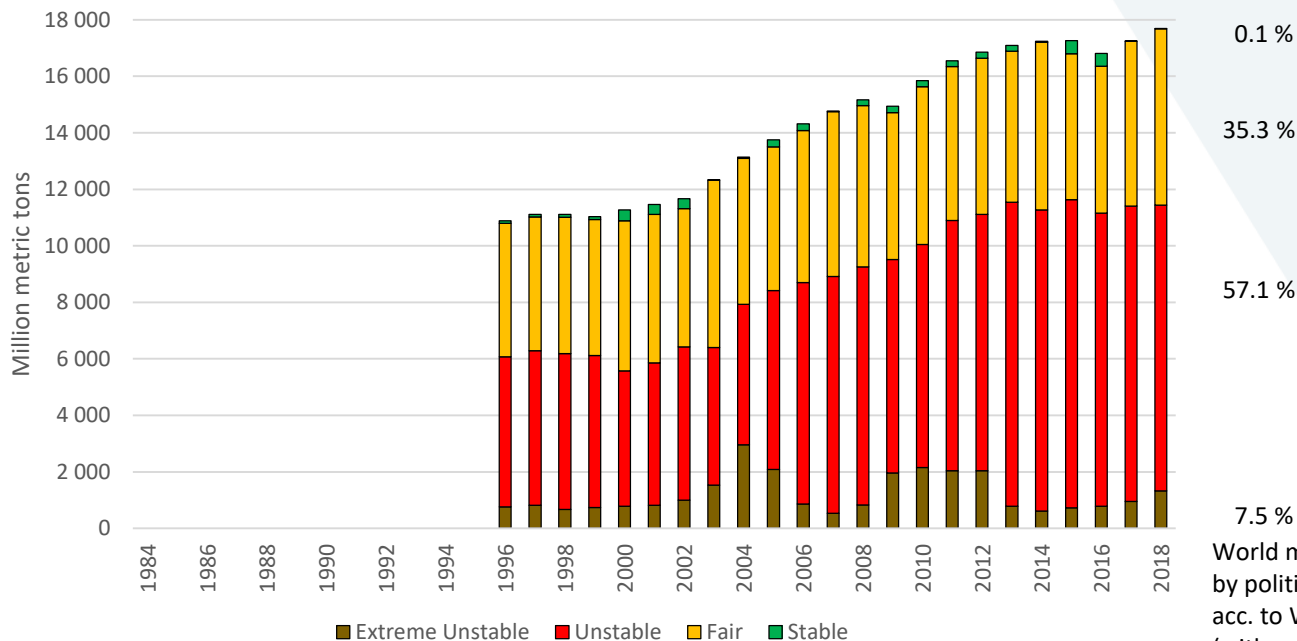
WMD 2020: Production vs. Development Status



World mining production 1984 - 2018
 by development status of producer countries
 acc. to United Nations
 (without construction minerals, in Million metr. t)



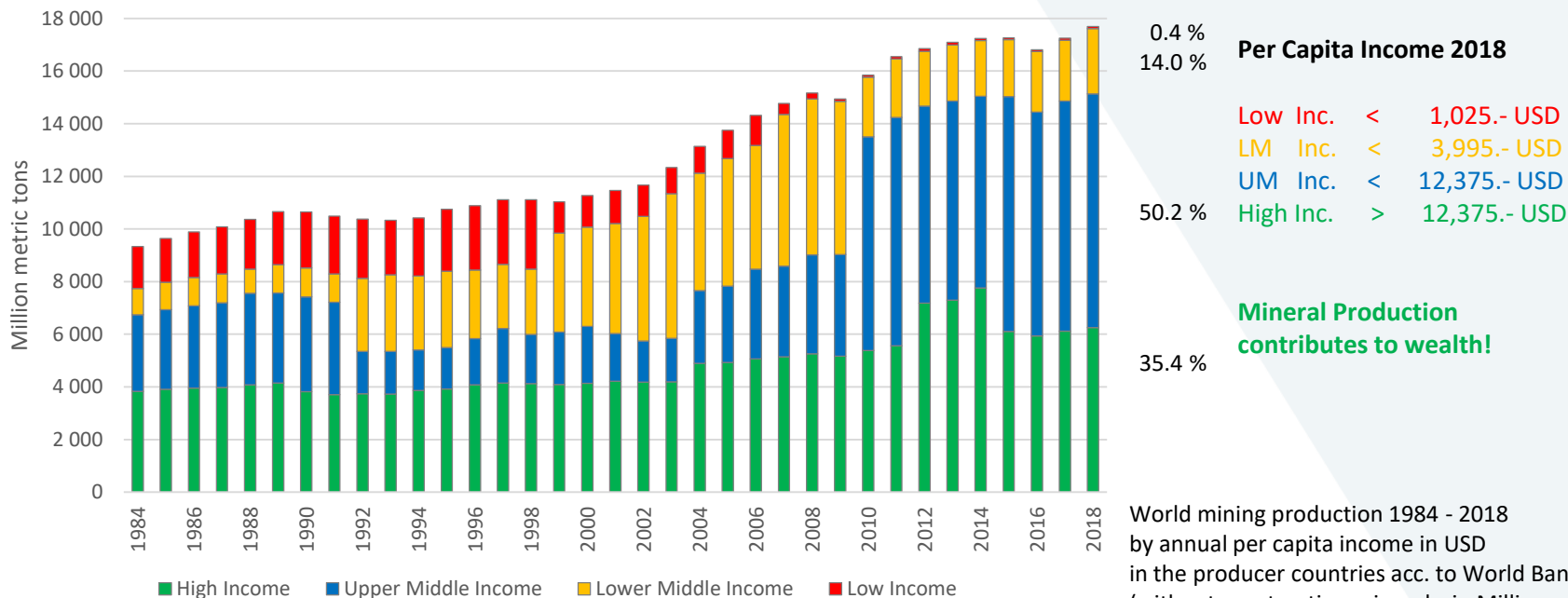
WMD 2020: Production vs. Political Stability



World mining production 1984 - 2018
 by political stability of the producer countries
 acc. to WGI by World Bank (avail. from 1996 on)
 (without construction minerals, in Million metr. t)

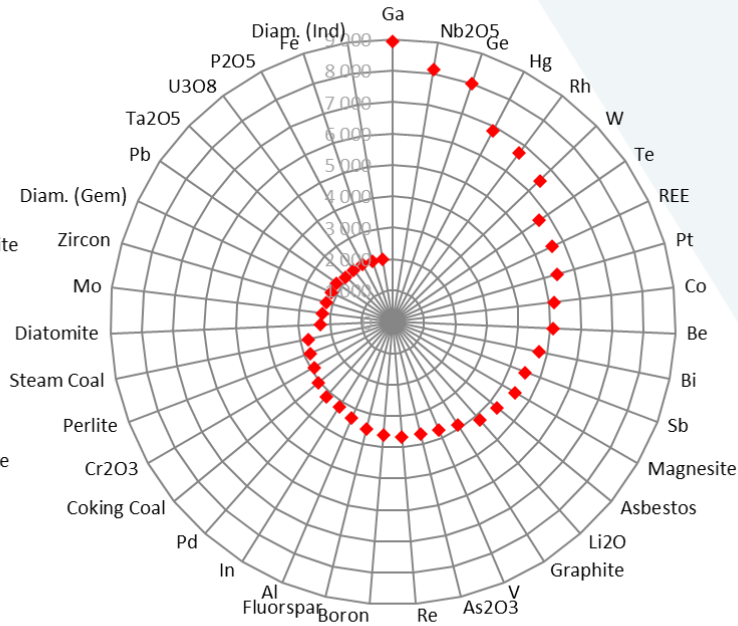
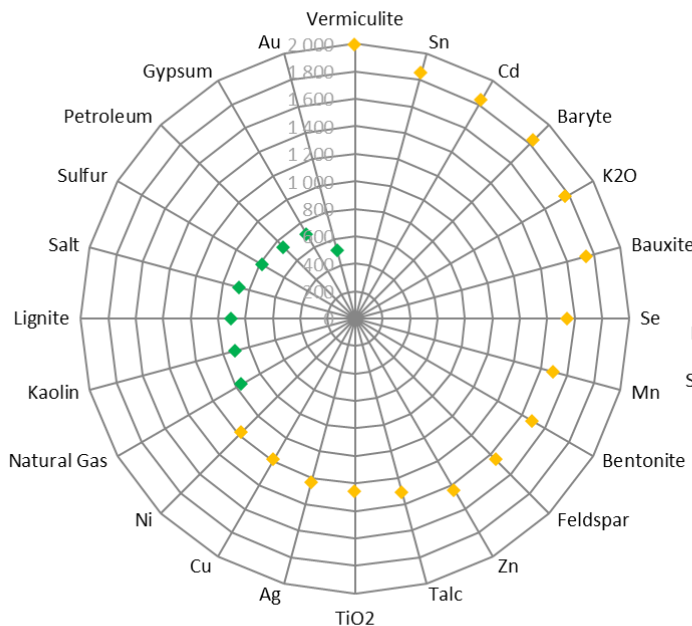


WMD 2020: Production vs. Annual Per Capita Income





WMD 2020: Supply Risk; Herfindahl-Hirschmann-Index (HHI)



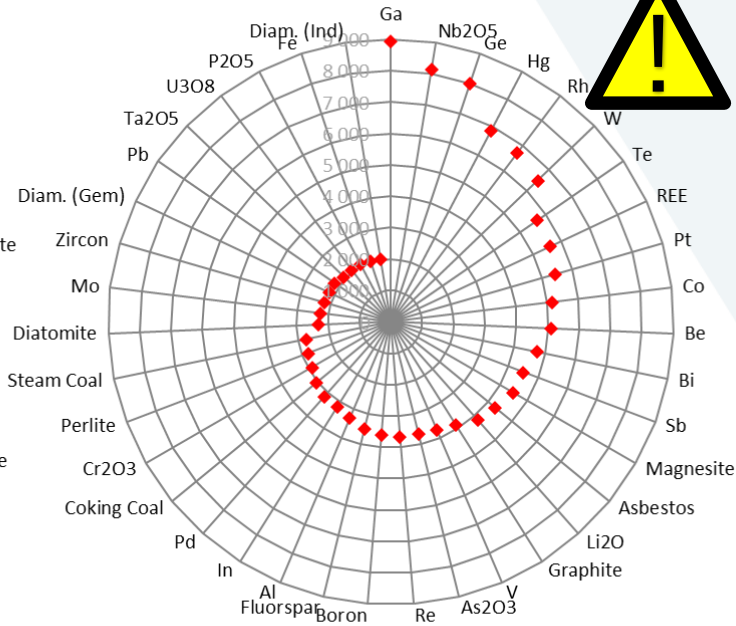
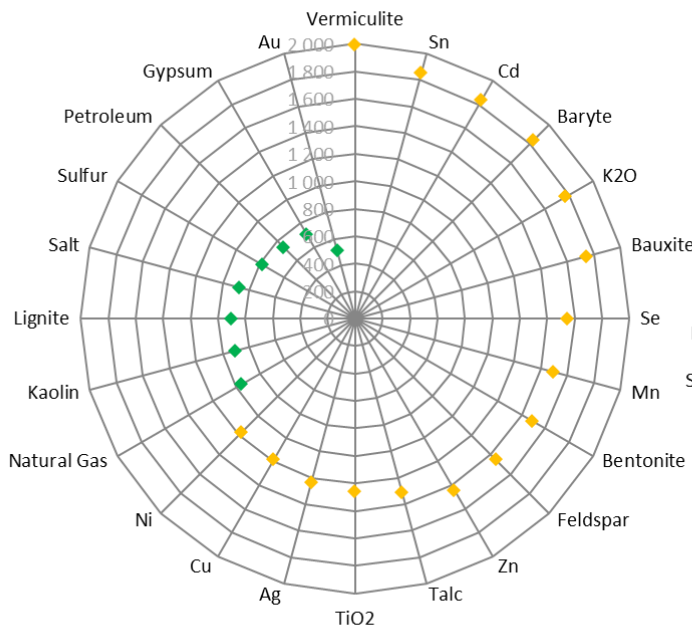
Country Concentration 2018

- HHI < 1 000; low
8 Commodities
- HHI < 2 000; moderate
16 Commodities
- HHI > 2 000; high
39 Commodities

- 2008 HHI > 2 000: 32 Comm.
- 2010 HHI > 2 000: 32 Comm.
- 2012 HHI > 2 000: 34 Comm.
- 2014 HHI > 2 000: 38 Comm.
- 2016 HHI > 2 000: 39 Comm.
- 2018 HHI > 2 000: 39 Comm.



WMD 2020: Supply Risk; Herfindahl-Hirschmann-Index (HHI)



Country Concentration 2018

HHI < 1 000; low

8 Commodities

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World Mining Data 2020

WMD 2020 are available in **pdf format**  or **xlsx format**  at: <http://www.wmc.org.pl/> or <https://www.world-mining-data.info> or **can be ordered in printed form.**

Questionnaires for production figures 2019 were sent to IOC Members. We would be grateful for returning the questionnaires not later than

End of December 2020

by fax to:

DI Christian Reichl
Fed. Ministry of Agriculture, Regions and Tourism
Directorate IV/5 Mineral Resources Policy
Denisgasse 31, 1200 Vienna, Austria
0043 1 71100 608529

or by email to:

wmd@bmlrt.gv.at
christian.reichl@bmlrt.gv.at

to prepare WORLD MINING DATA 2021 as scheduled.



Thanks for Your Attention!

Christian Reichl
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