Fachgespräch „Carbon Bubble“

24. April 2015

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Graffiti by Banksy (photo: Romany WG)

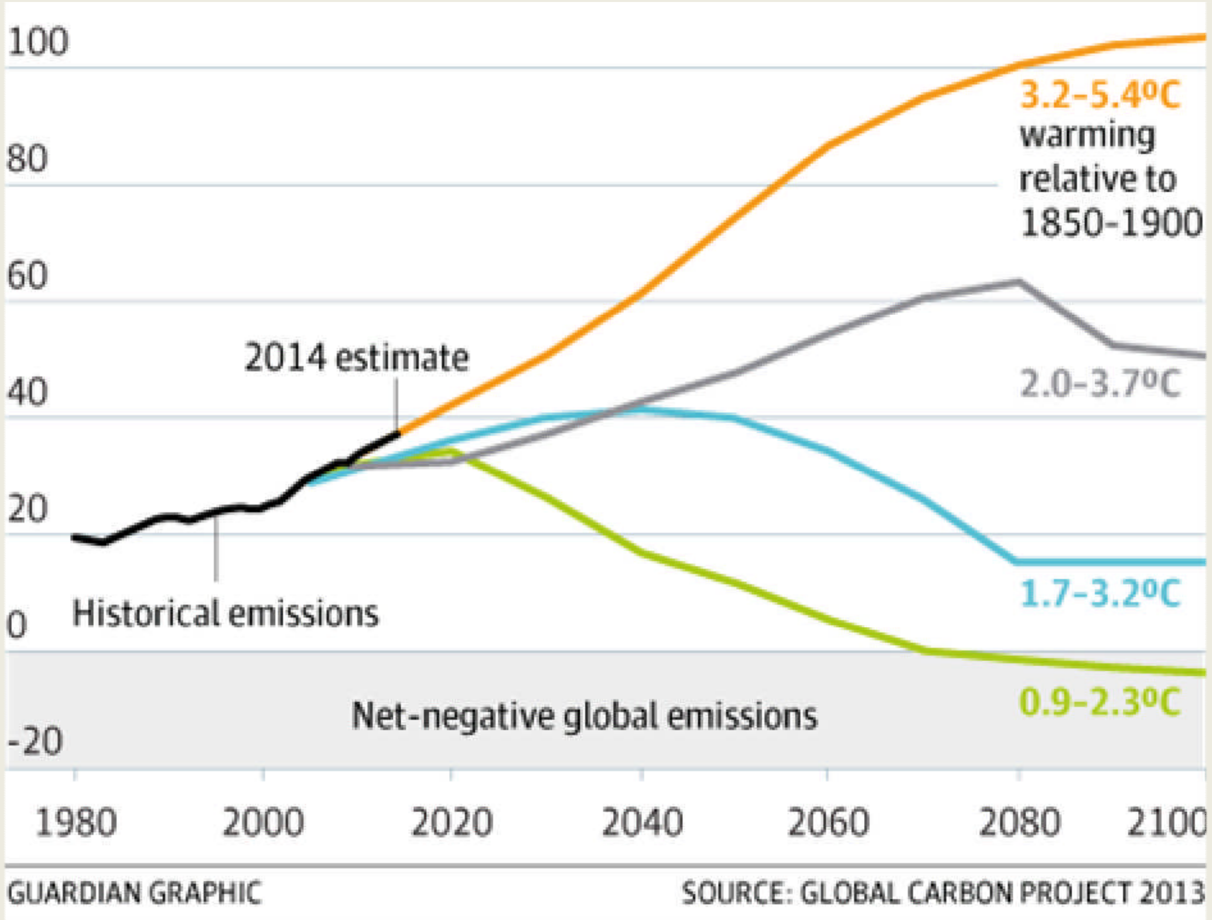
Punkte

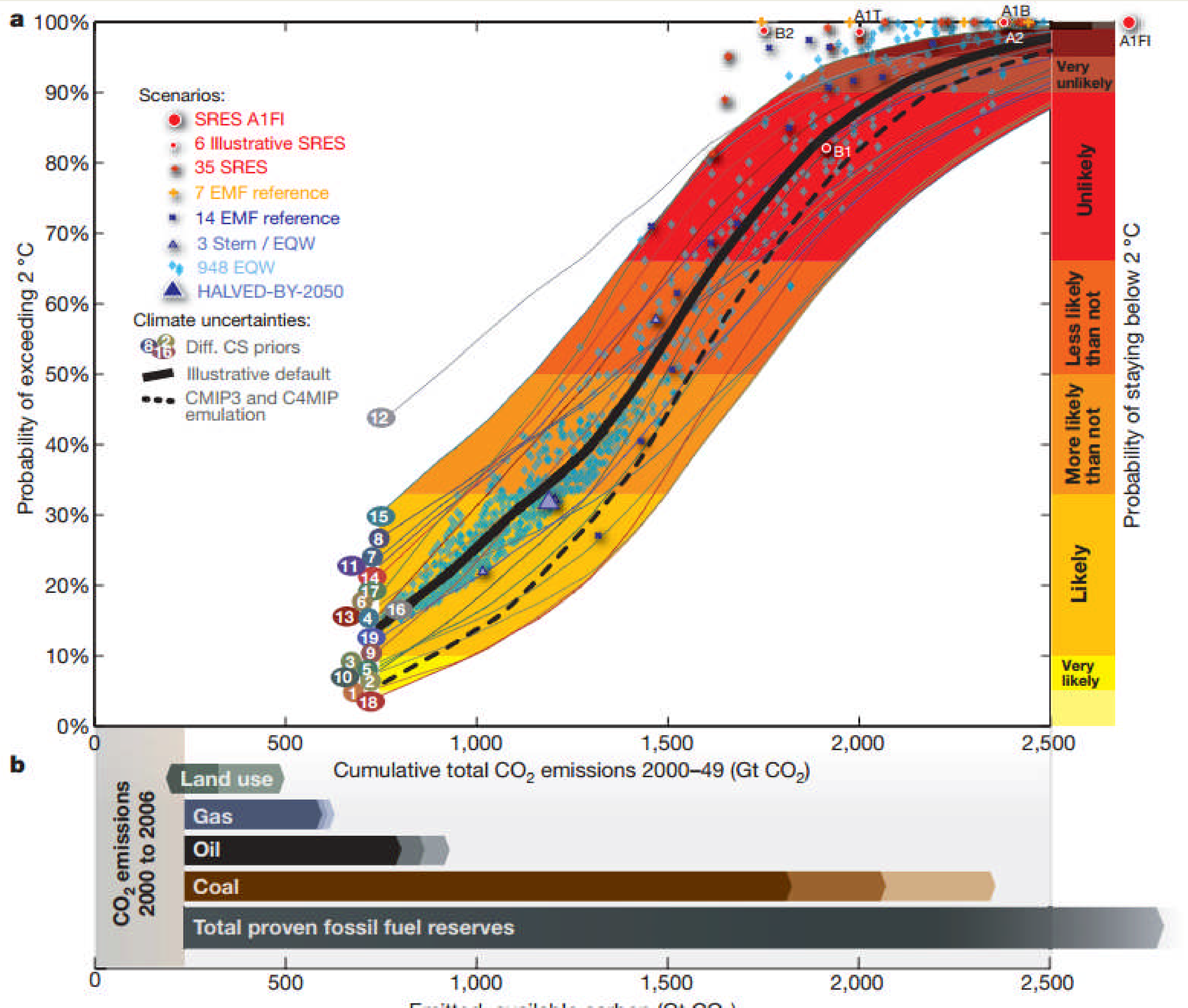
- Carbon Budget

- Carbon Bubble

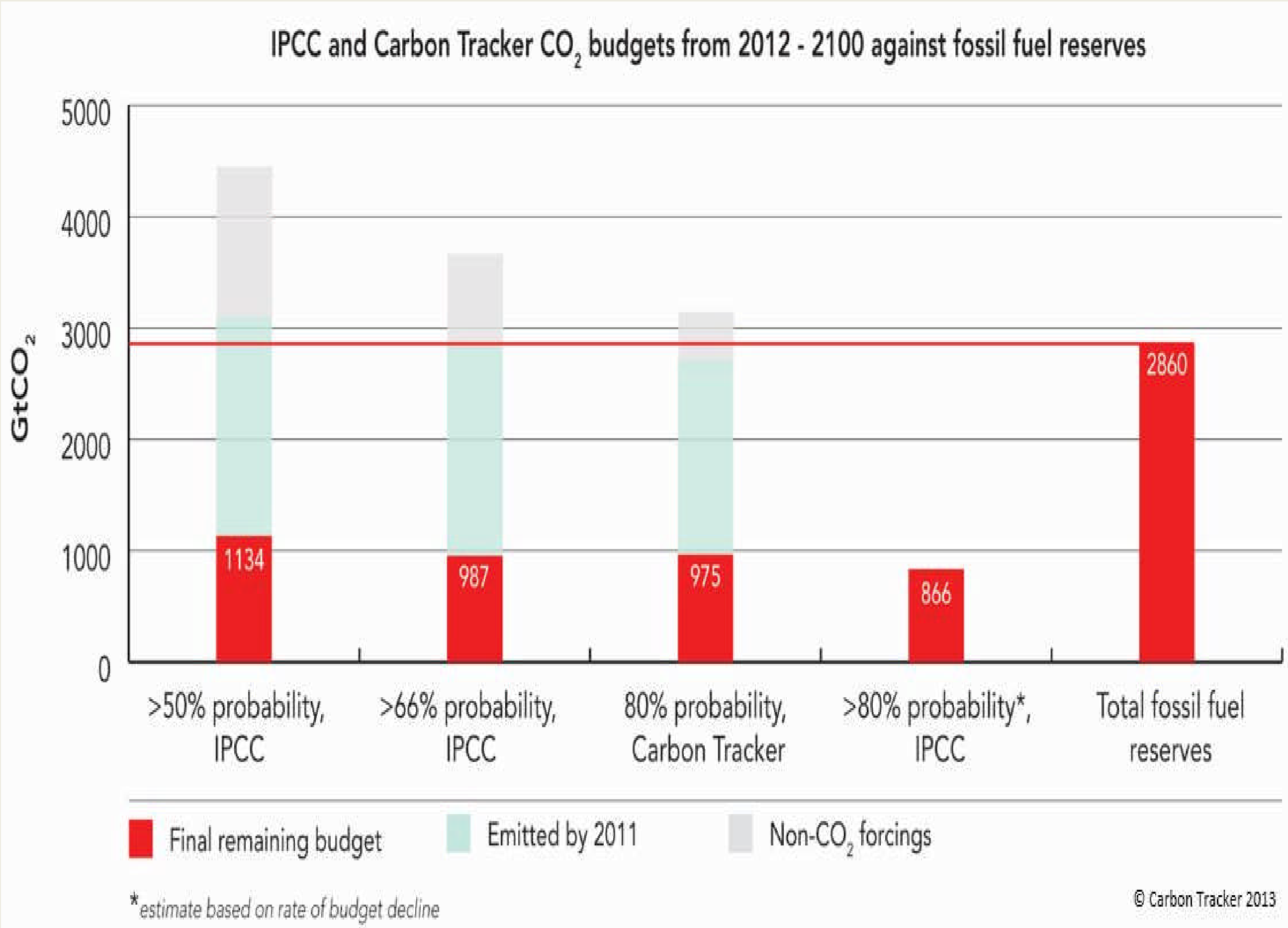
- Was heißt das für den Kapitalmarkt und für die (deutsche) Diskussion

Emissionsszenarien:




a
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Probability of exceeding 2 °C
Scenarios:
SRES A1FI
6 Illustrative SRES
35 SRES
7 EMF reference
14 EMF reference
3 Stern / EQW
948 EQW
HALVED-BY-2050
Climate uncertainties:
Diff. CS priors
Illustrative default
CMIP3 and C4MIP emulation
B2
A1T
A1B
A2
A1FI
B1
Very unlikely
Unlikely
Less likely than not
More likely than not
Likely
Very likely
Probability of staying below 2 °C
0
500
1,000
1,500
2,000
2,500
Cumulative total CO_2 emissions 2000–49 (Gt CO_2)
b
CO_2 emissions 2000 to 2006
Land use
Gas
Oil
Coal
Total proven fossil fuel reserves
Emitted, available carbon (Gt CO_2)

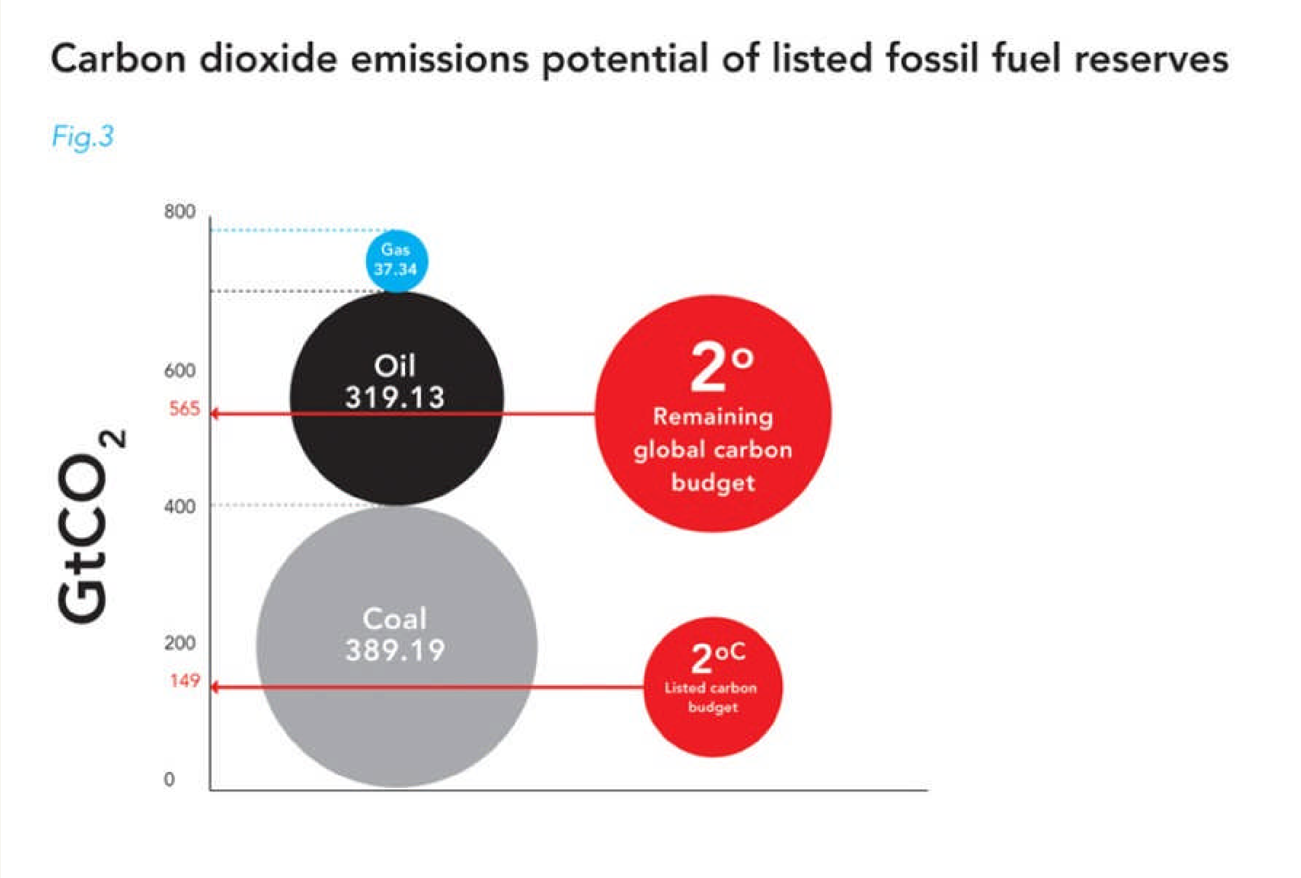
Carbon Budget



Carbon Tracker:

- Already in 2011, the world has used over a third of its 50-year carbon budget of 886GtCO_2, leaving 565GtCO_2
- All of the proven reserves owned by private and public companies and governments are equivalent to 2,795 GtCO_2
- Fossil fuel reserves owned by the top 100 listed coal and top 100 listed oil and gas companies represent total emissions of 745GtCO_2
- Only 20% of the total reserves can be burned unabated, leaving up to 80% of assets technically unburnable

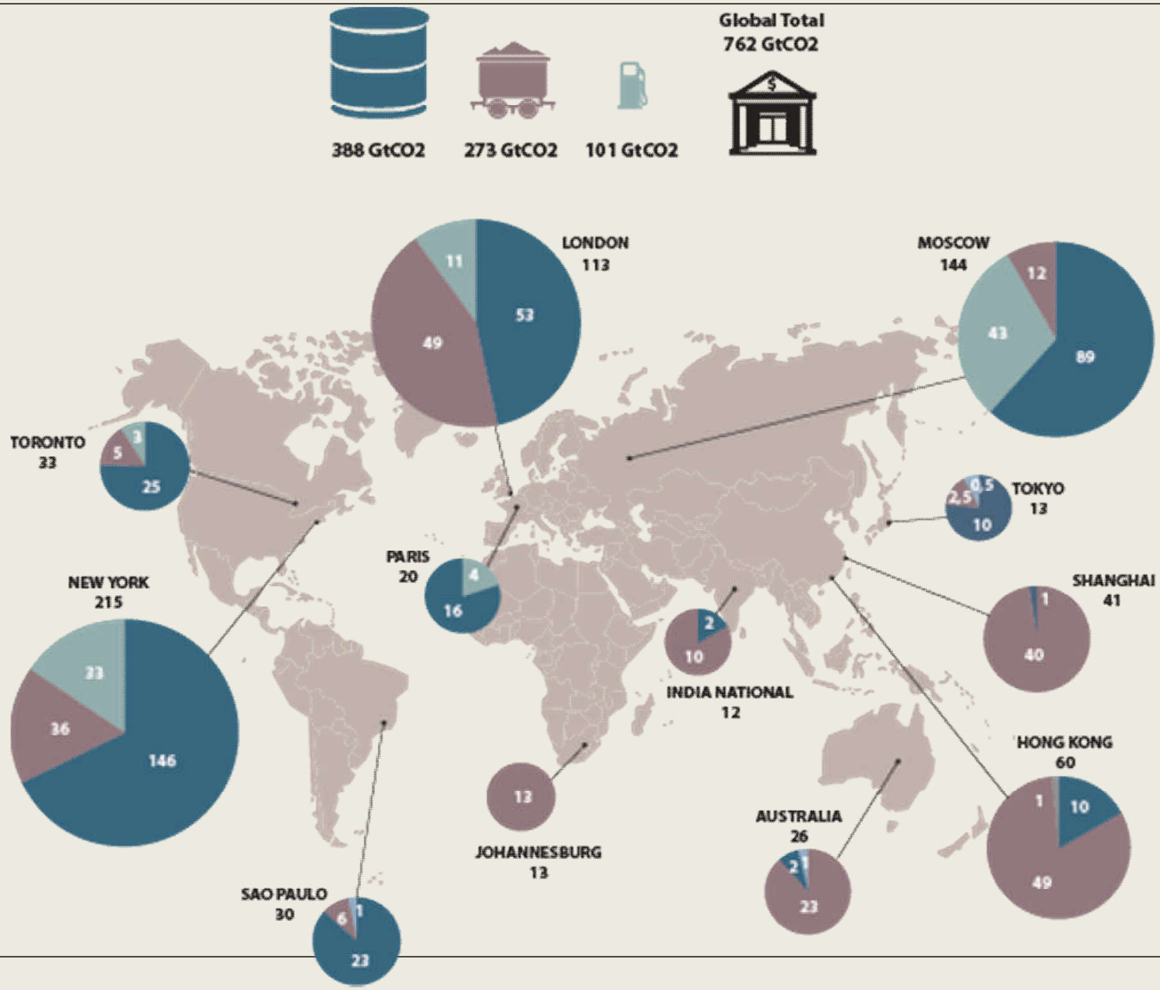
Budgets & Reserven 100 größten börsennotierter Öl-/Kohle-/Gasunternehmen



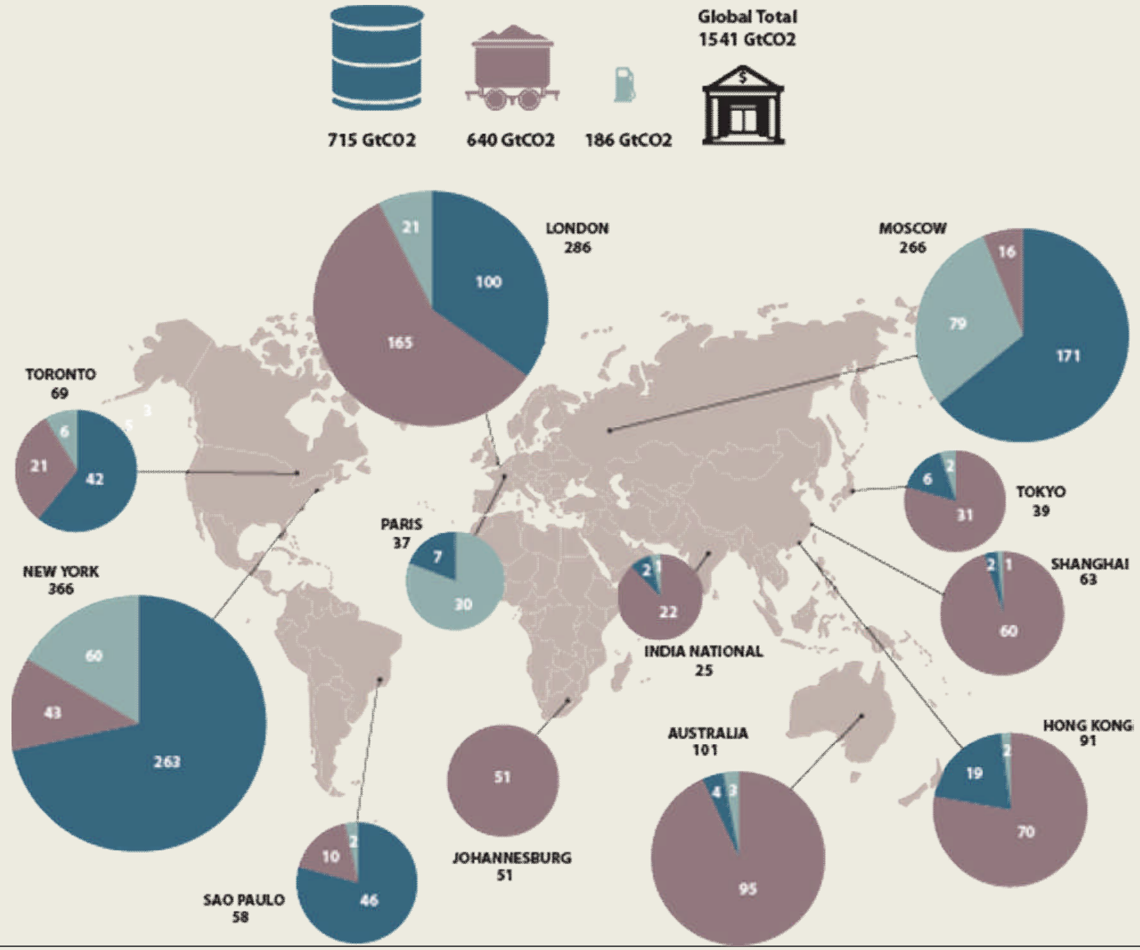
Hintergrund: „stocks of carbon“

- ***Company-level:***
  - ***Coal/Oil/Gas Reserves x CO_2 factor = Company CO_2 potential***
- ***Exchange-level:***
  - ***Sum of company CO_2 potentials = Exchange total***
- ***Global-level:***
  - ***Sum of exchange totals = Listed reserves CO_2 potential***

Aktuelle (2013) Reserven an Börsen

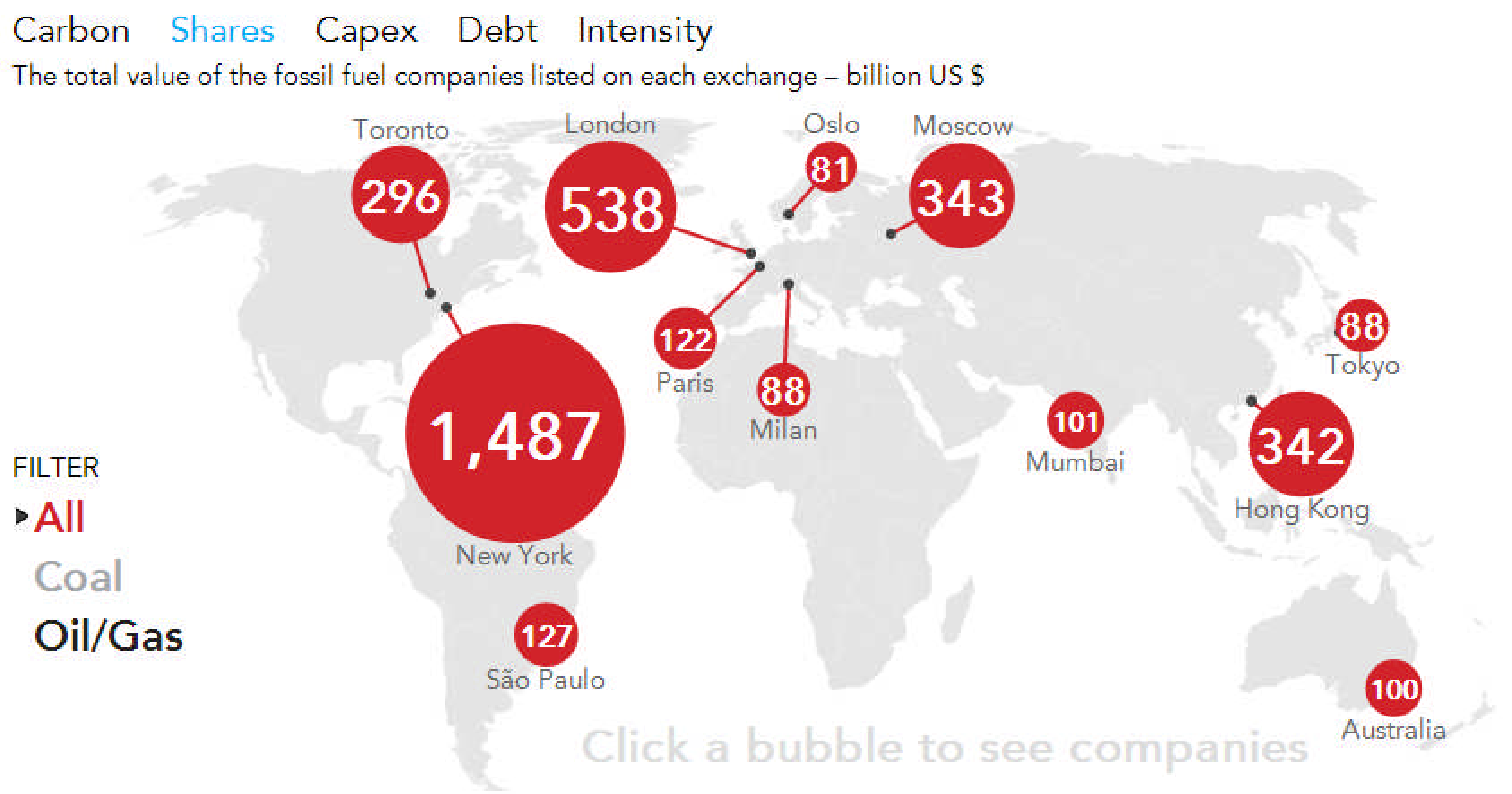


Ressourcen an Börsen (2013)



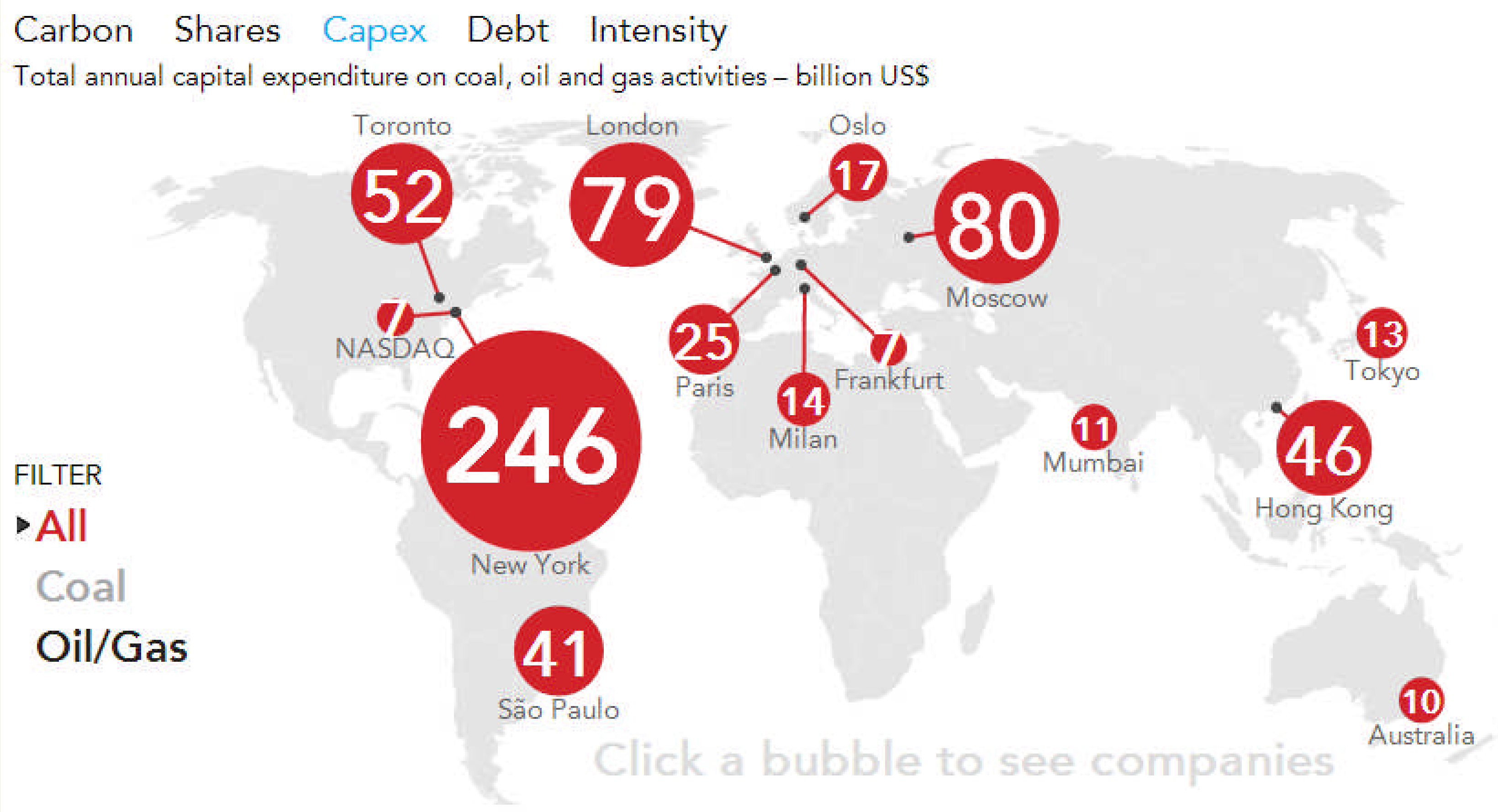
Marktkapitalisierung → -30% @ risk

(http://www.theguardian.com/environment/interactive/2013/apr/19/countries-exposed-carbon-bubble-map)



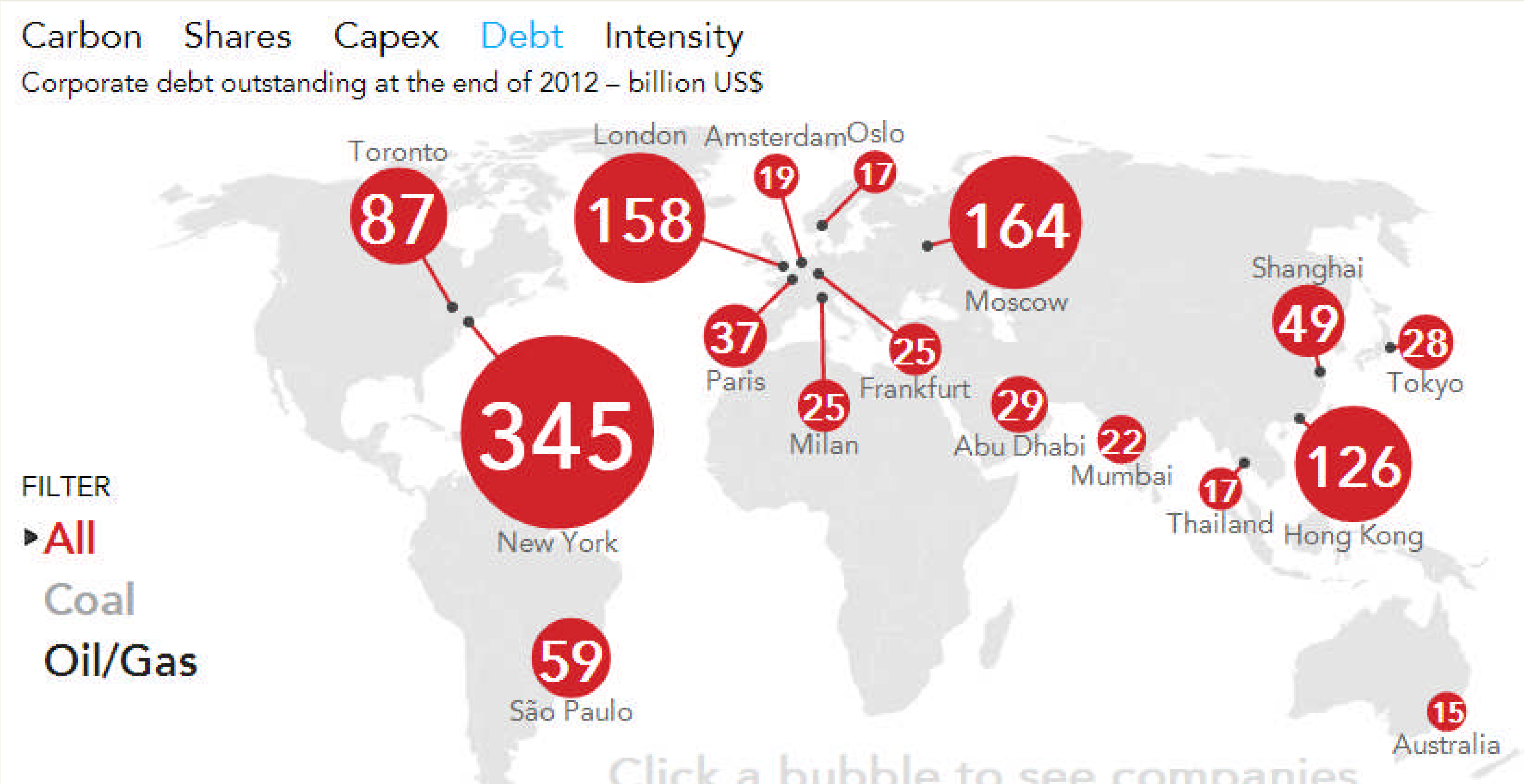
Capex der Unternehmen:

II(http://www.theguardian.com/environment/interactive/2013/apr/19/countries-exposed-carbon-bubble-map)



Debt der Unternehmen:

II(http://www.theguardian.com/environment/interactive/2013/apr/19/countries-exposed-carbon-bubble-map)



Wo liegen die „unburnable resources“?

(Quelle: nature 14016)

RESEARCH LETTER

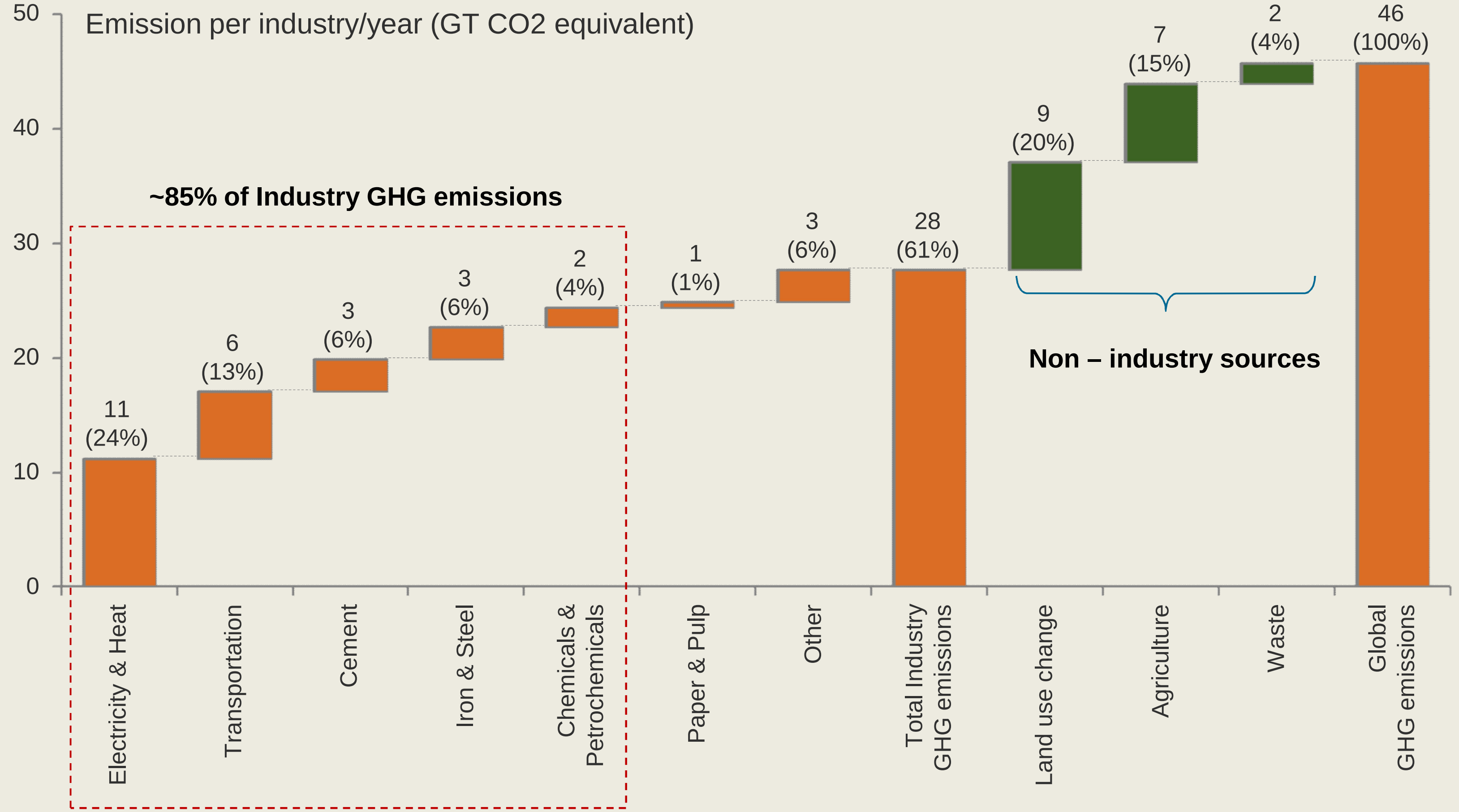
Extended Data Table 3 | Regional distribution of resources unburnable before 2050 in absolute terms and as a percentage of current resources under the 2 °C scenario that allows CCS

Country or region	Conven oil		Unconven oil		Conven Gas		Unconven Gas		Hard Coal		Lignite	
	Gb	%	Gb	%	Tcm	%	Tcm	%	Gt	%	Gt	%
Africa	141	50%	70	100%	28	61%	35	100%	42	94%	2.8	56%
Canada	43	72%	633	99%	3.6	73%	18	71%	34	98%	39	97%
China and India	54	60%	110	100%	8.0	80%	35	88%	1,003	93%	106	88%
FSU	201	54%	360	100%	63	67%	27	89%	576	99%	480	98%
CSA	198	55%	447	99%	23	76%	51	92%	21	85%	6.3	63%
Europe	64	58%	30	100%	18	72%	16	78%	69	99%	142	89%
Middle East	554	53%	10	100%	72	68%	20	100%	10	100%	5.0	99%
OECD Pacific	23	77%	130	100%	9.0	90%	15	74%	116	97%	198	99%
ODA	38	51%	5.0	100%	14	55%	12	78%	34	84%	142	92%
United States	99	52%	650	100%	19	75%	20	50%	556	99%	317	95%
Global	1,417	54%	2,445	100%	257	69%	247	82%	2,462	96%	1,438	95%

Schlussfolgerungen I

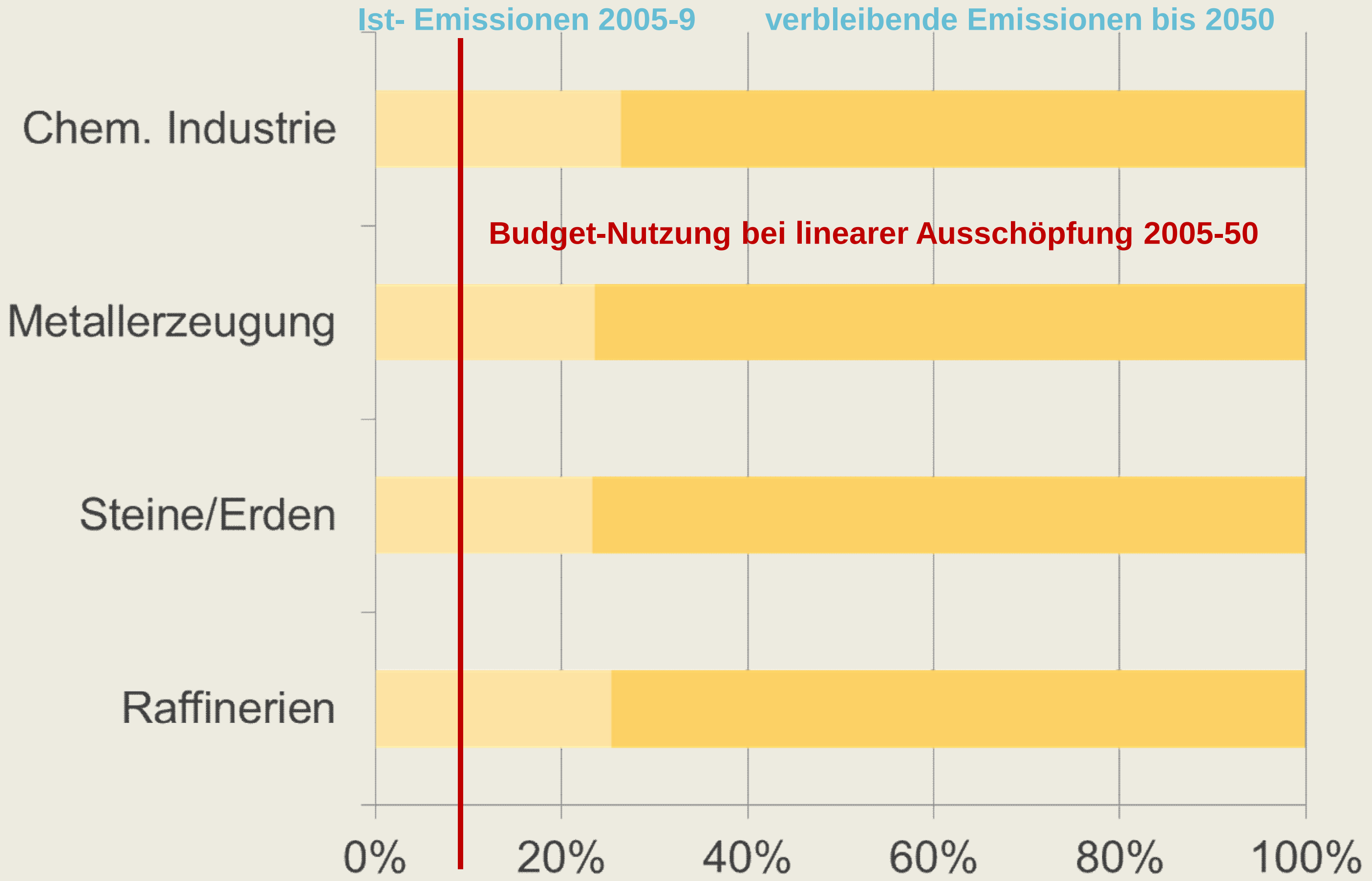
- Fossile Brennstoffe und die Industrien sind zentral für die Dekarbonisierung → erlauben/verlangen besonderen Ansatz
- Nächste/ neue Phase von Explorationsinvestitionen muss verhindert werden → Investoren spielen eine Rolle
- Für Deutschland muss das Konzept der Carbon Bubble weiterentwickelt werden → deutsche Unternehmen und Börsenplätze, deutsche Investoren

Kontext: emissionsintensive Industrien verursachen ~85% der Industrie-THGs



Source: IEA CO2 emissions from fuel combustion 2011 (data for 2009); IEA 2005 'Tracking Industrial Energy Efficiency and CO2 emissions', prepared by BCG

Aus aktuellen Emissionspfaden baut sich ein unternehmerisches Risiko/ Handlungsdruck auf



Öko-Institut für WWF 2011, unveröffentlicht!

Schlussfolgerungen II

- Erweiterung auf die Herausforderung der „verbrauchsintensiven Industrien“

- Future emissions =/= reserves oder resources, sondern Emissionsziele und Branchenemissionskorridore

- Transition – oder Transformationspläne der Unternehmen abfordern, durch Politik und Investoren

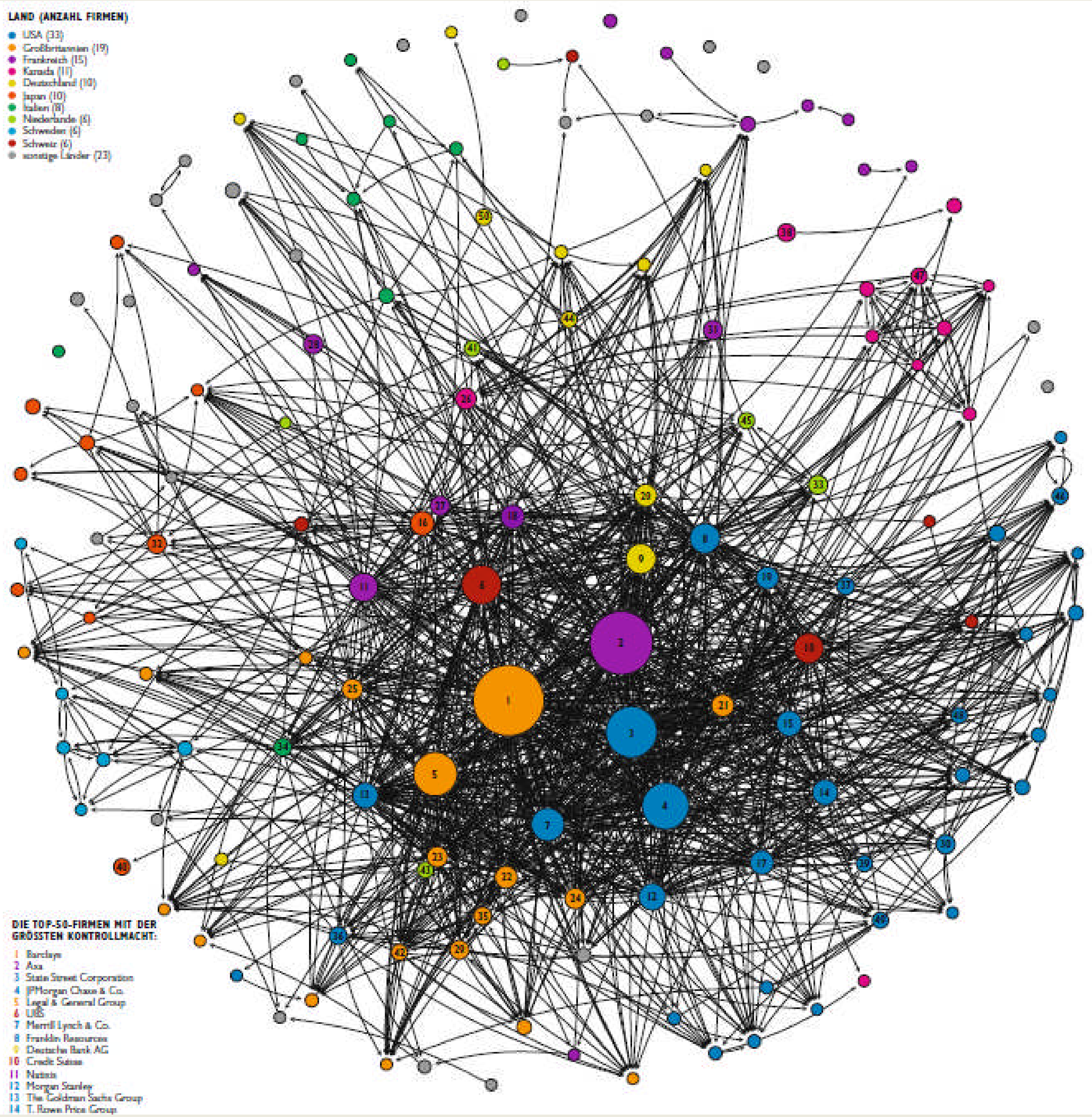
Vielen Dank!

www.wwf.de

Wem gehört die Welt? (Zeit 5/12)

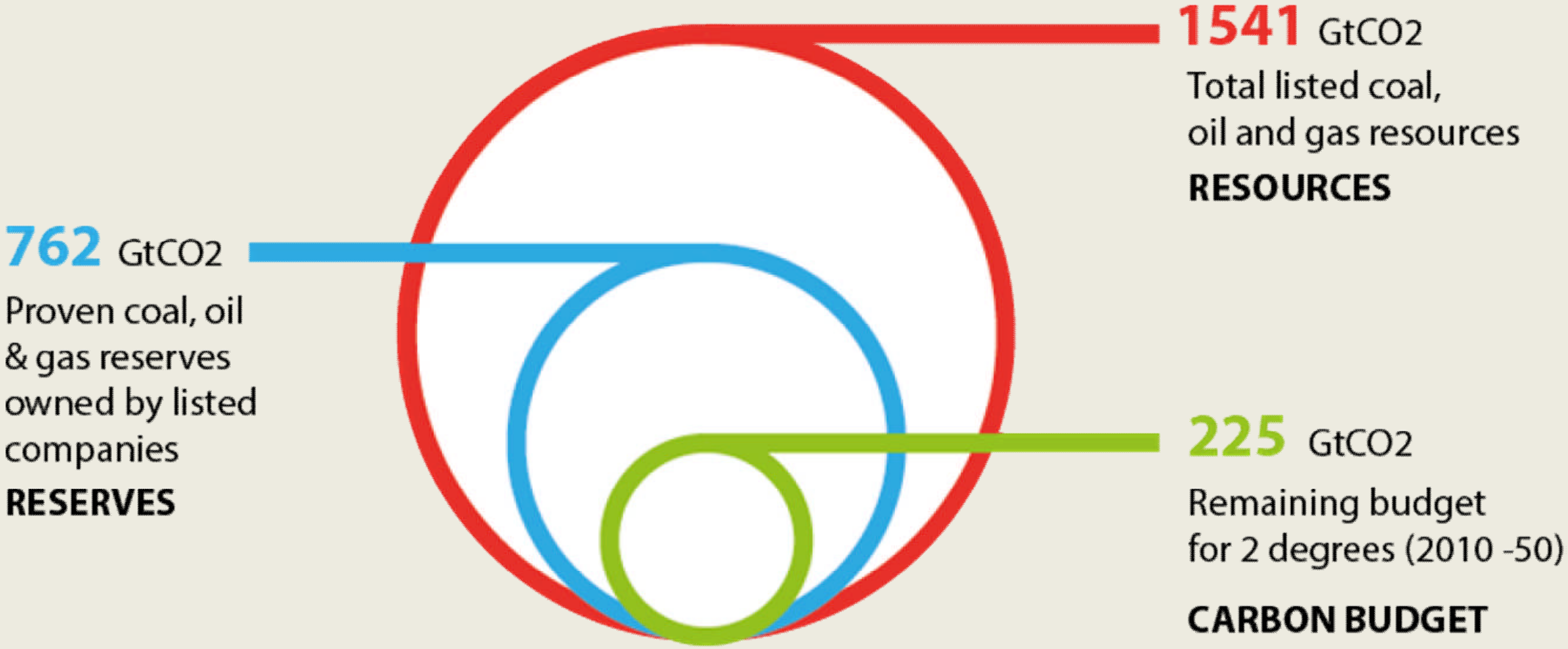
DIE TOP-50-FIRMEN MIT DER GRÖSSTEN KONTROLLMACHT:

1 Barclays
2 Axa
3 State Street Corporation
4 JPMorgan Chase & Co.
5 Legal & General Group
6 UBS
7 Merrill Lynch & Co.
8 Franklin Resources
9 Deutsche Bank AG
10 Credit Suisse
11 Natixis
12 Morgan Stanley
13 The Goldman Sachs Group
14 T. Rowe Price Group
15 Legg Mason
16 Mitsubishi UFJ Financial Group
17 Northern Trust Corporation
18 Société Générale
19 Bank Of America
20 Allianz
21 Invesco
22 Lloyds TSB
23 Aviva
24 Old Mutual Public Limited Company
25 Schroders
26 Sun Life
27 Crédit Agricole
28 Caisse Nationale des Caisses d'Epargne et de Prévoyan
29 Standard Life
30 Lehman Brothers
31 BNP Paribas
32 Nomura Holdings
33 ING Groep
34 Unicredito Italiano
35 HSBC Holdings
36 Ameriprise Financial
37 Affiliated Managers Group
38 The Canadian Depository for Securities
39 Janus Capital Group
40 Resona Holdings
41 Fortis
42 HBOS
43 Aegon
44 Union Asset Management Holding AG
45 ABN Amro Holding
46 Citigroup
47 Royal Bank of Canada
48 Prudential Financial
49 Marsh & Mclennan Companies
50 DZ BANK AG Deutsche Zentral-Genossenschaftsbank



Carbon budget deficit for listed companies

Only 20% of proven reserves can be burnt to keep global warming below 2 degrees celsius



RESOURCES: the estimated amount of hydrocarbon contained in the deposit
RESERVES: the amount of resources that are technologically and economically feasible to extract

For more technical definitions, please visit www.carbontracker.org