Theorie & Praxis der sozialökologischen Transformation

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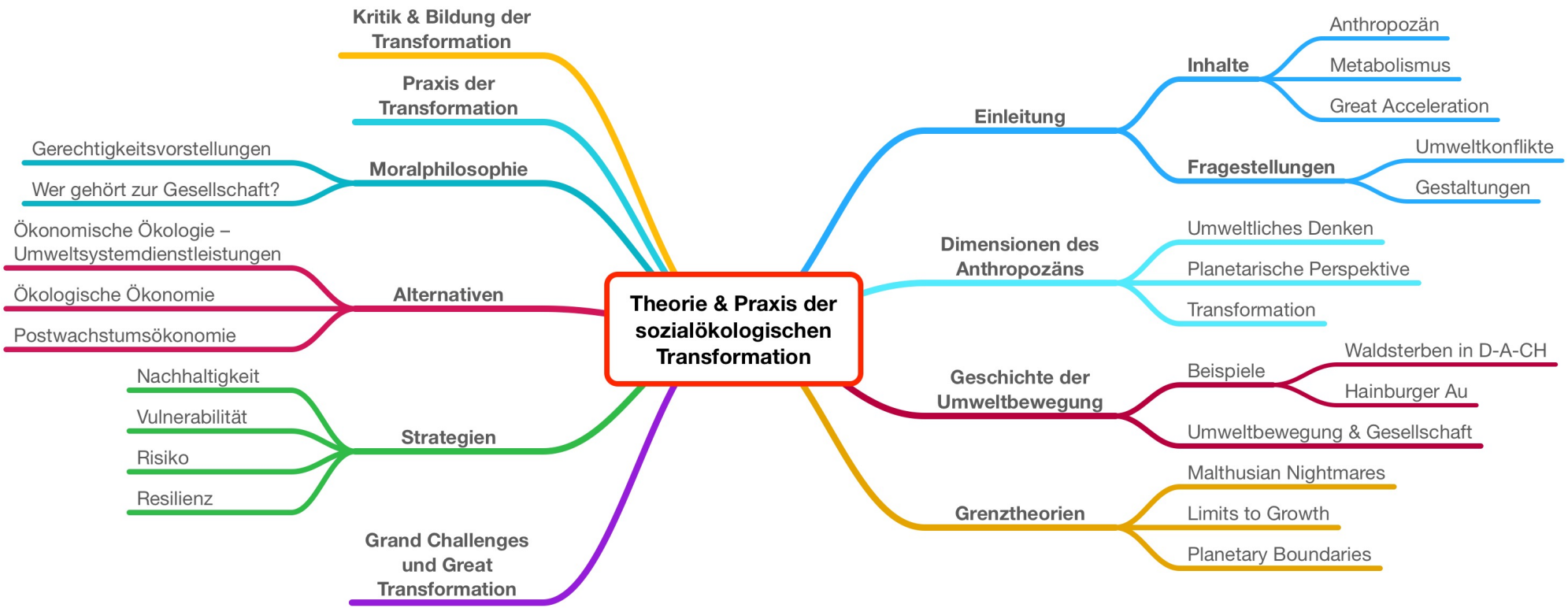
Seminarinhalte



Sitzungen & Aufgaben

Sitzung	Protokoll & Thesen	Transformationsbeispiel
1. Das Anthropozän		
2. Dimensionen des Anthropozäns	Maria Resch	
3. Die Geschichte der Umweltbewegung	Katharina Falkinger	
4. Grenztheorien	Fiona Mitterbauer	~~Axel Kolbeinsson~~
5. Grand Challenges	Johannes Pargfrieder	Christina Koppenberger
6. Strategien	Zvonimir Marina	Barbara Schneckenreither
7. Alternativen		Axel Kolbeinsson
8. Moralphilosophie	Pauline Sandner	
9. Praxis der Transformation		Julian Kraus
10. Kritik und Bildung der Transformation		

Grenztheorien

	Auslöser der Sorgen	Limitationen	Scale	Handlungsoptionen	Tatsächliche Entwicklung
Robert Thomas Malthus (1798)	• Bevölkerungswachstum	• Nahrung	regional	• Evolution • Enthaltsamkeit • Bildung	• Produktivitätssteigerungen bei der Nahrungsmittel-produktion
Club of Rome & Maedows et al. (Meadows et al. 1972)	• Bevölkerungswachstum • Ressourcenverbrauch & Schadstoffemission	• Nahrung • Ressourcen • Emissions-senken	global	• Wachstumsgrenzen • Kreislaufwirtschaft • Verzicht • Geburtenkontrolle	• Peak Oil verzögert • Ressourcenknappheit reizt kaum zum Systemwechsel
Planetary Boundaries (Rockström et al. 2009; Steffen et al. 2015)	• Bevölkerungswachstum • Ressourcenverbrauch & Schadstoffemission • Eingriff in Stoff- und Regelkreisläufe	• Ressourcen • Emissions-senken • Tipping Points	planetarisch	• Expliziter Verzicht auf Nennung von Handlungsoptionen	• offen

Malthus, Thomas Robert (1798): **An Essay on the Principle of Population.** London. Electronic Scholarly Publishing Project. (www.esp.org/books/malthus/population/malthus.pdf (12.10.2019)).

Meadows, Donella H.; Dennis L. Meadows; Jørgen Randers und William W. Behrens III (1972): **The Limits to Growth: A report for the Club of Rome's Project on the Predicament of Mankind.** New York. Universe Books.

Rockström, Johan et al. (2009): **Planetary boundaries: Exploring the Safe Operating Space for Humanity**. In: *Ecology and Society* 14(2). S. 32.

Gesellschaftlicher Metabolismus

Metabolismus

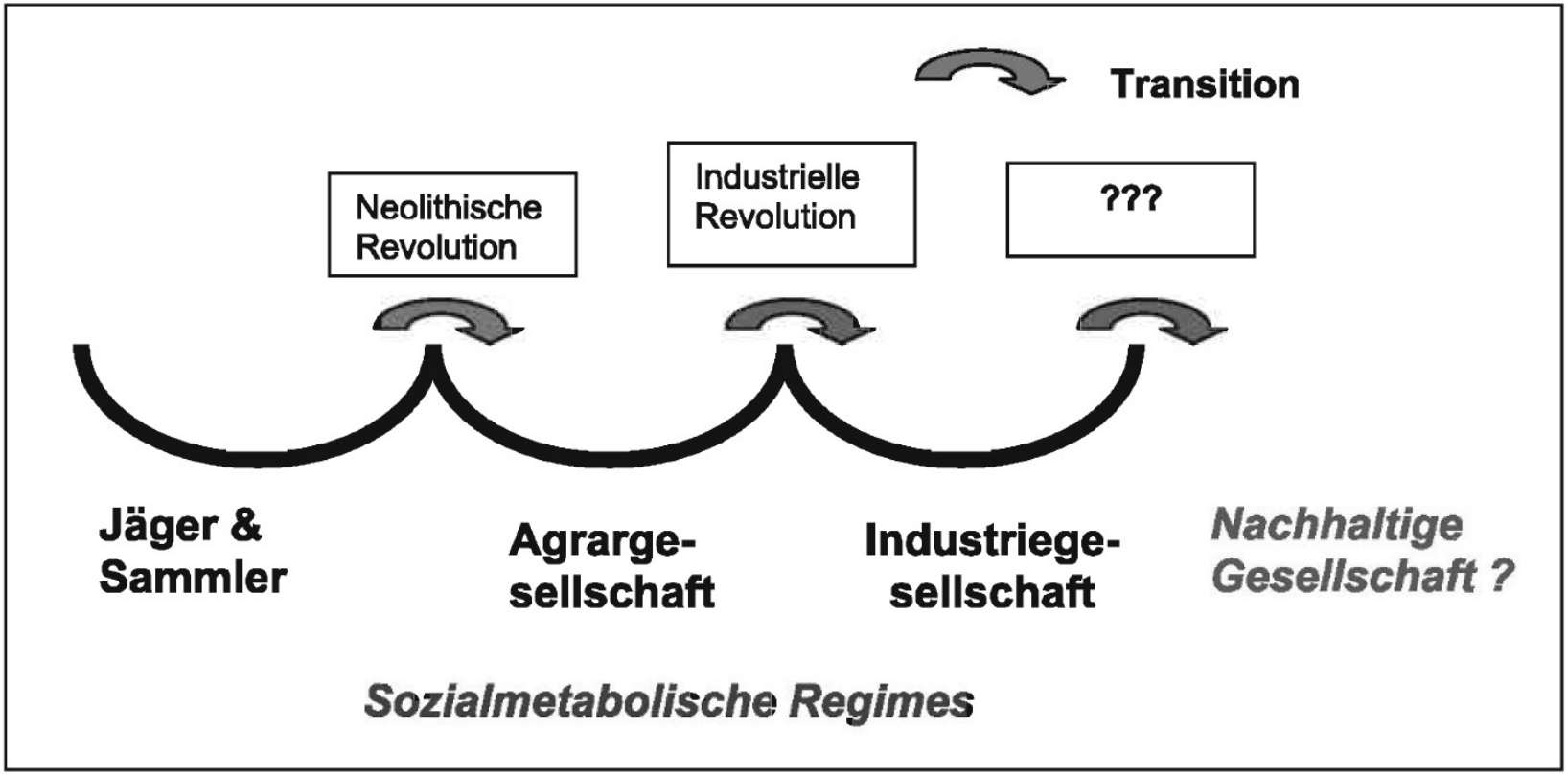


Abbildung 9 Transition zu nachhaltiger(er) Gesellschaft als revolutionäre Veränderung des sozialmetabolischen Regimes (Quelle: Sieferle et al. 2006, verändert nach Fischer-Kowalski et al. 2010)

Fischer-Kowalski, Marina; Andreas Mayer und Anke Schaffartzik (2011): **Zur sozialmetabolischen Transformation von Gesellschaft und Soziologie.** In: Groß, M. (2011) (Hg.): *Handbuch Umweltsoziologie.* S. 97-120. Wiesbaden. VS Verlag für Sozialwissenschaften.

Gesellschaftlicher Metabolismus

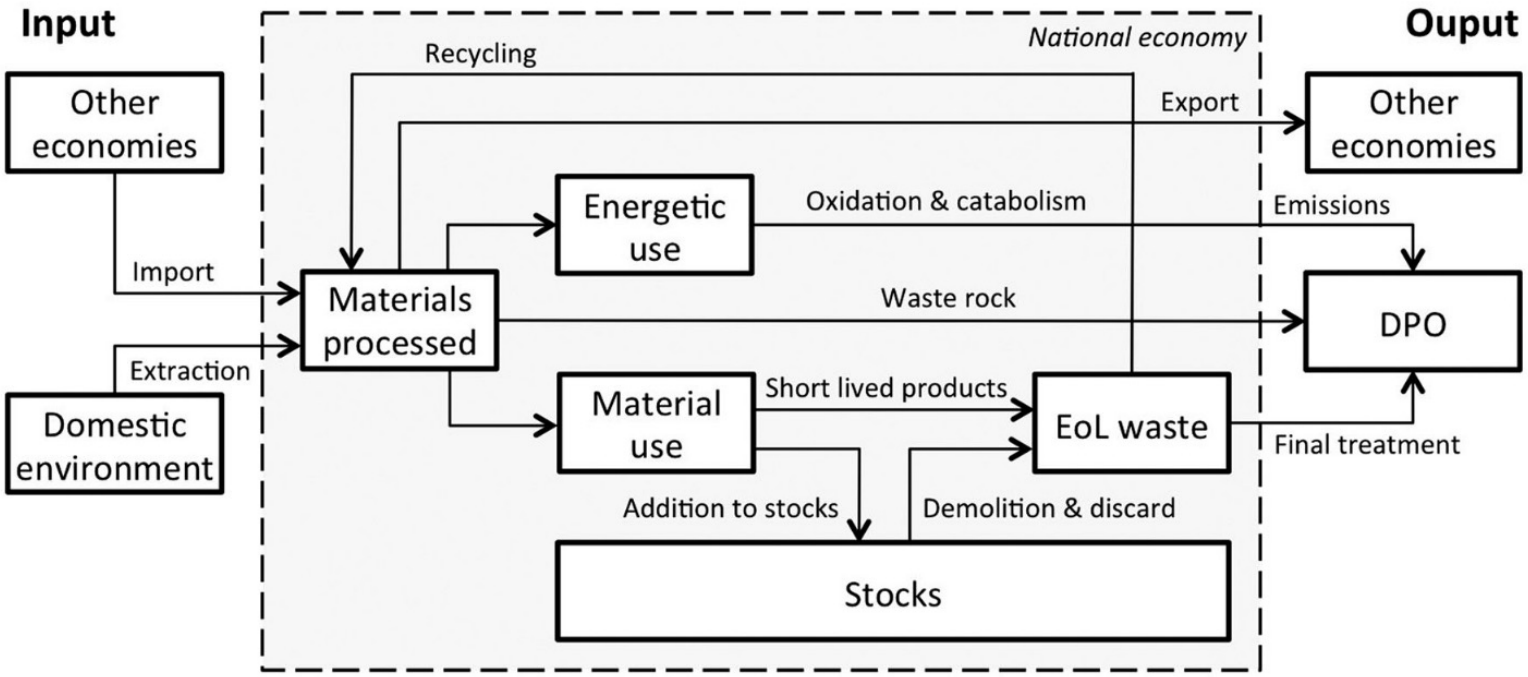


Figure 1 General model of economy-wide material flows from resource inputs imports and extraction to outputs of wastes and emissions and exports. All flows shown in the model have been quantified to assess the key characteristics of the circular economy. EoL waste = end-of-life waste; DPO = domestic processed output.

Haas, Willi; Fridolin Krausmann; Dominik Wiedenhofer und Markus Heinz (2015): **How Circular is the Global Economy?An Assessment of Material Flows, Waste Production, andRecycling in the European Union and the World in 2005.** In: *Journal of Industrial Ecology* 19(5), S. 765-777. S. 769.

Gesellschaftlicher Metabolismus

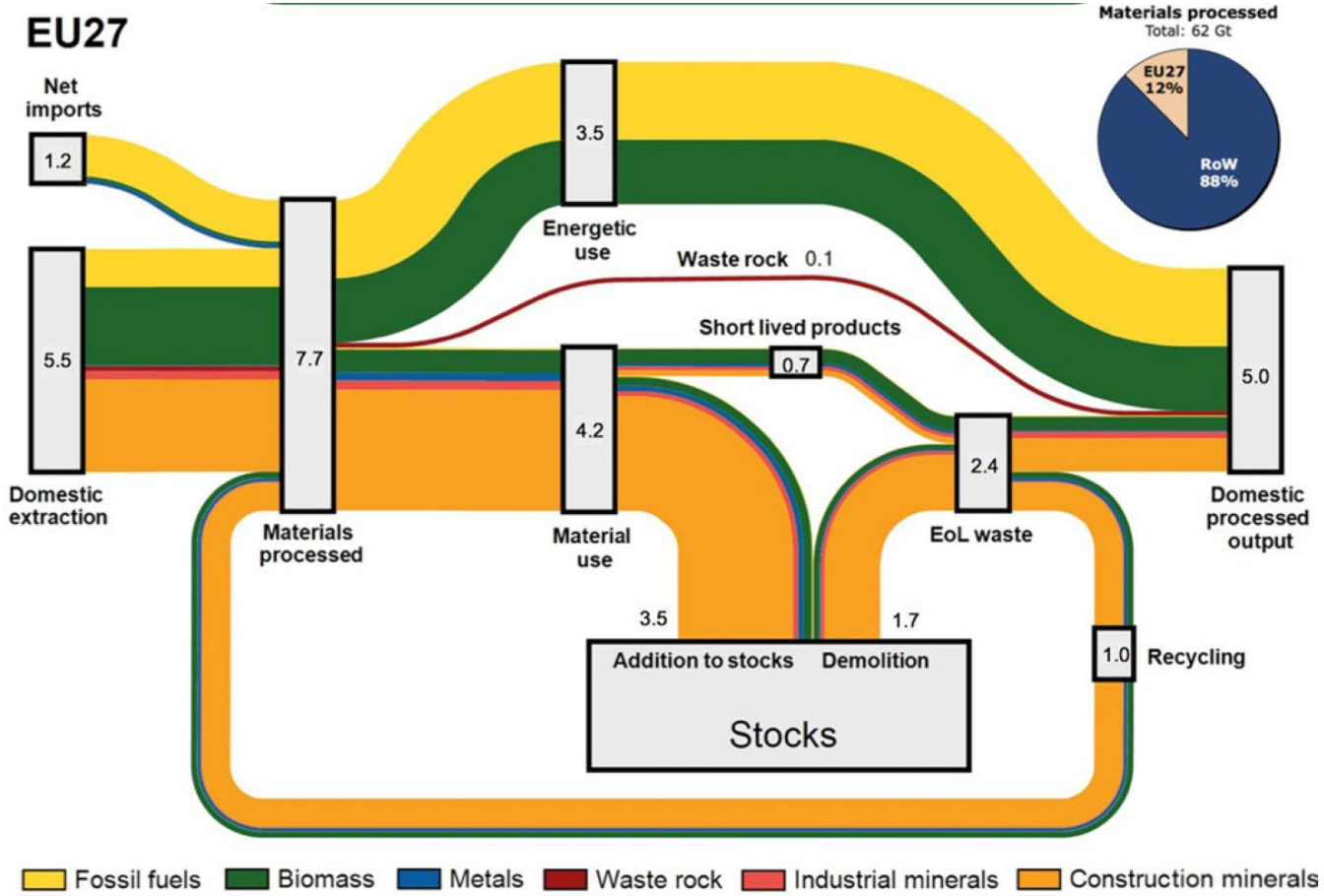
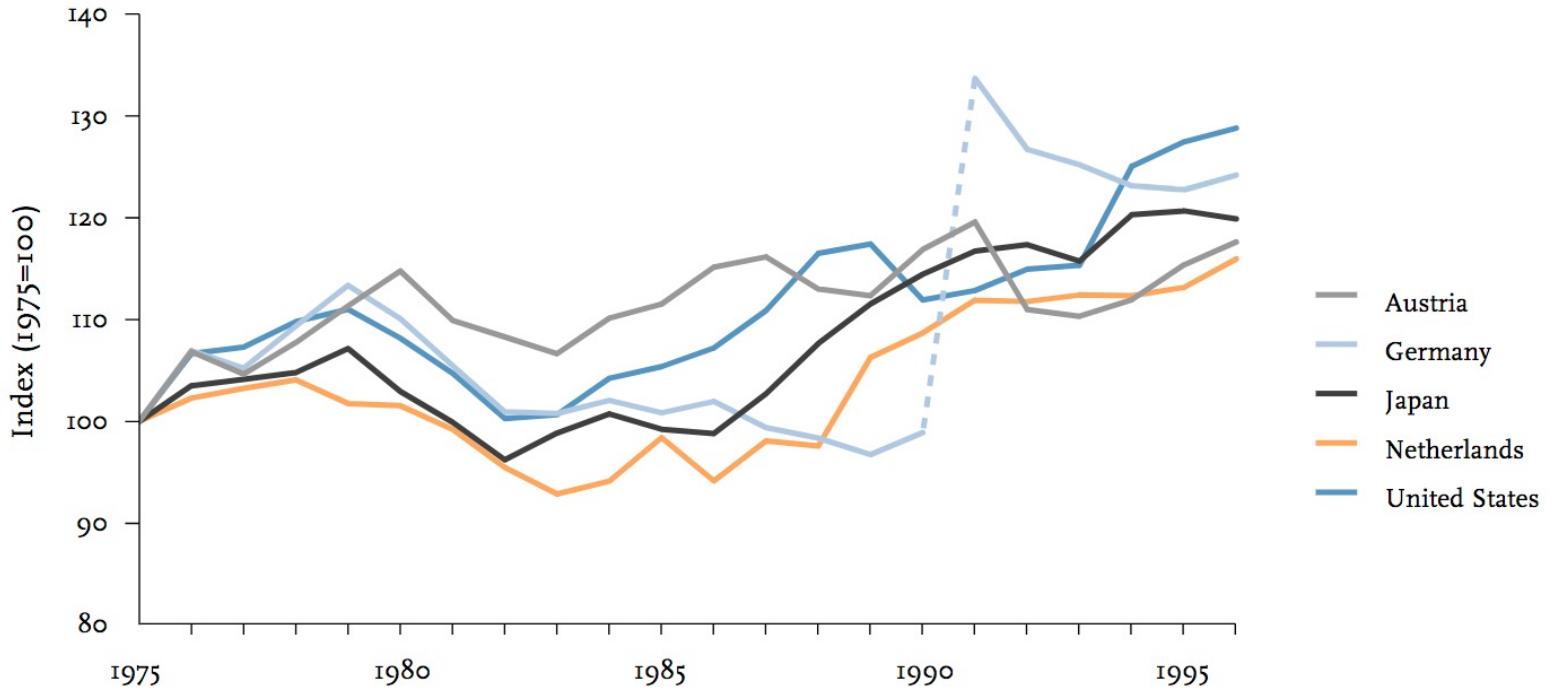


Figure 2 Sankey diagram of material flows through the global economy (world) and the EU-27 in 2005. Numbers show the size of flows in Gt/yr. For a definition of flows, see the article text. EU = European Union; EoL waste = end-of-life waste; Gt/yr = gigatonnes per year; RoW = rest of the world.

Haas, Willi; Fridolin Krausmann; Dominik Wiedenhofer und Markus Heinz (2015): **How Circular is the Global Economy?An Assessment of Material Flows, Waste Production, andRecycling in the European Union and the World in 2005.** In: *Journal of Industrial Ecology* 19(5), S. 765-777. S. 770

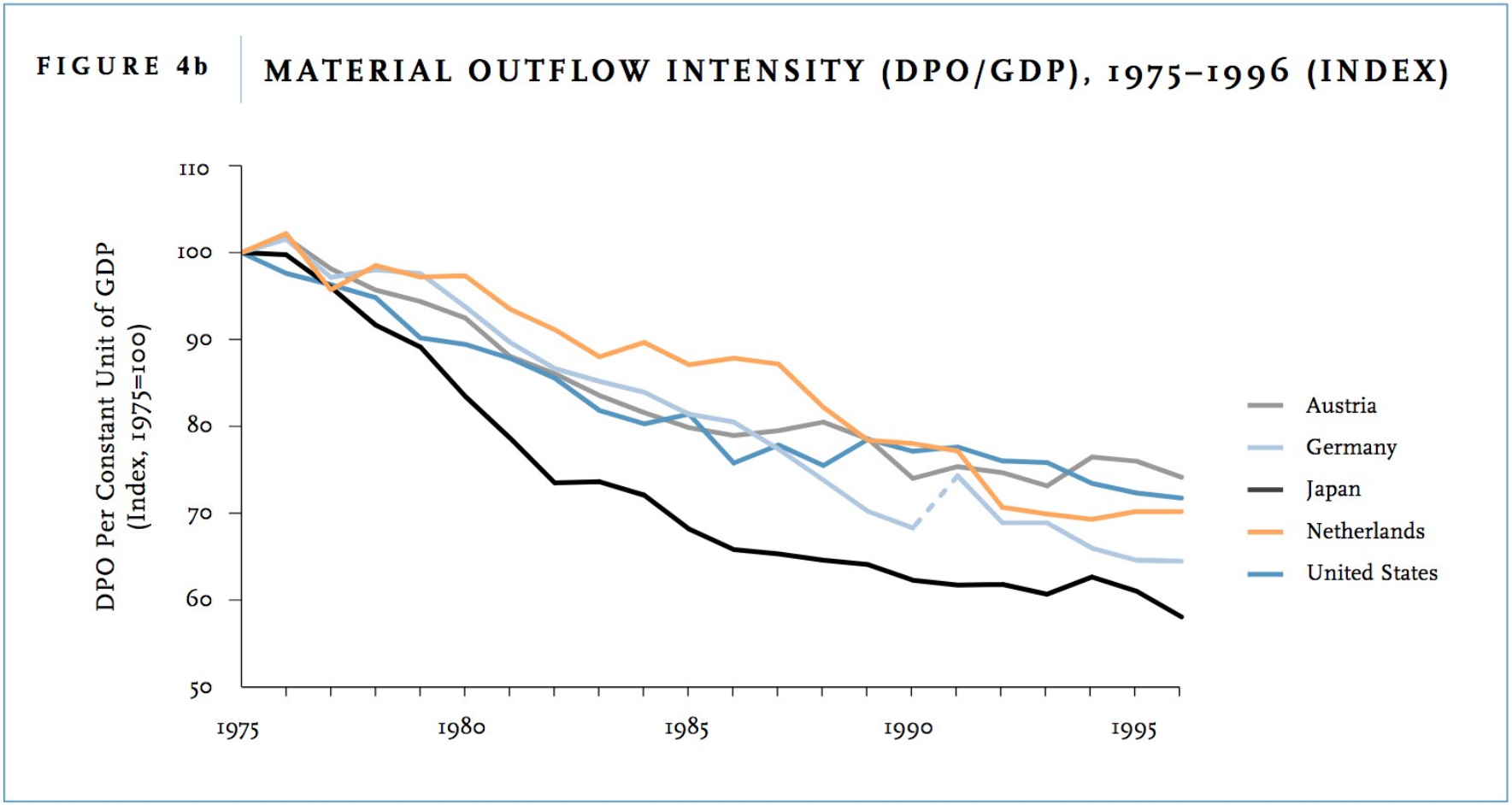
Domestic Material Output

FIGURE 4a DOMESTIC MATERIAL OUTPUT (DPO), 1975–1996 (INDEX)



Matthews, Emily et al. (2000): **The Weight of Nations. Material Outflows from Industrial Economies.** Washington. World Resources Institute. (http://pdf.wri.org/weight_of_nations.pdf (10.6.2016)). S. 18

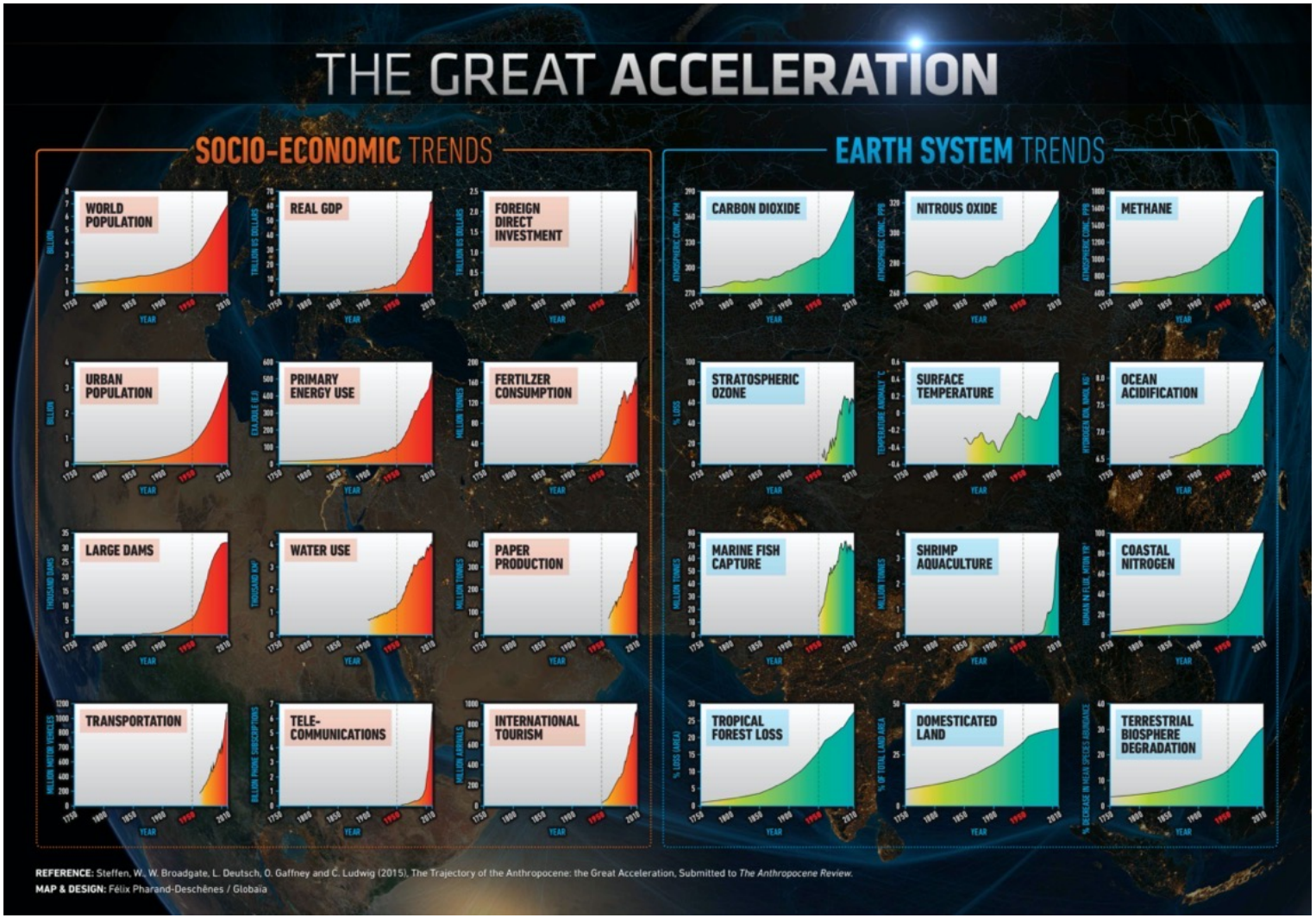
Materialverbrauch in Relation zum BIP



Matthews, Emily et al. (2000): **The Weight of Nations. Material Outflows from Industrial Economies.** Washington. World Resources Institute. (http://pdf.wri.org/weight_of_nations.pdf (10.6.2016)). S. 18

Great Acceleration

The Great Acceleration



http://www.igbp.net/images/18.950c2fa1495db7081ebd1/1421396650502/Great%2BAcceleration%2B2015%2Bigbp%2Bsrc%2Blow%2Bres.jpg

Great Acceleration

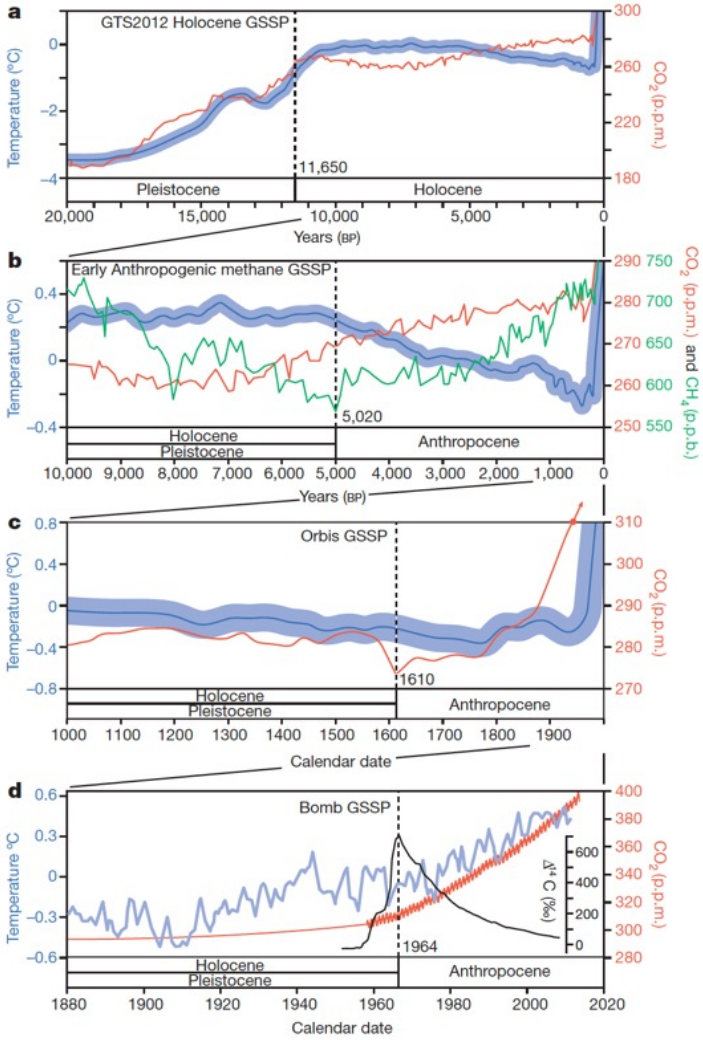
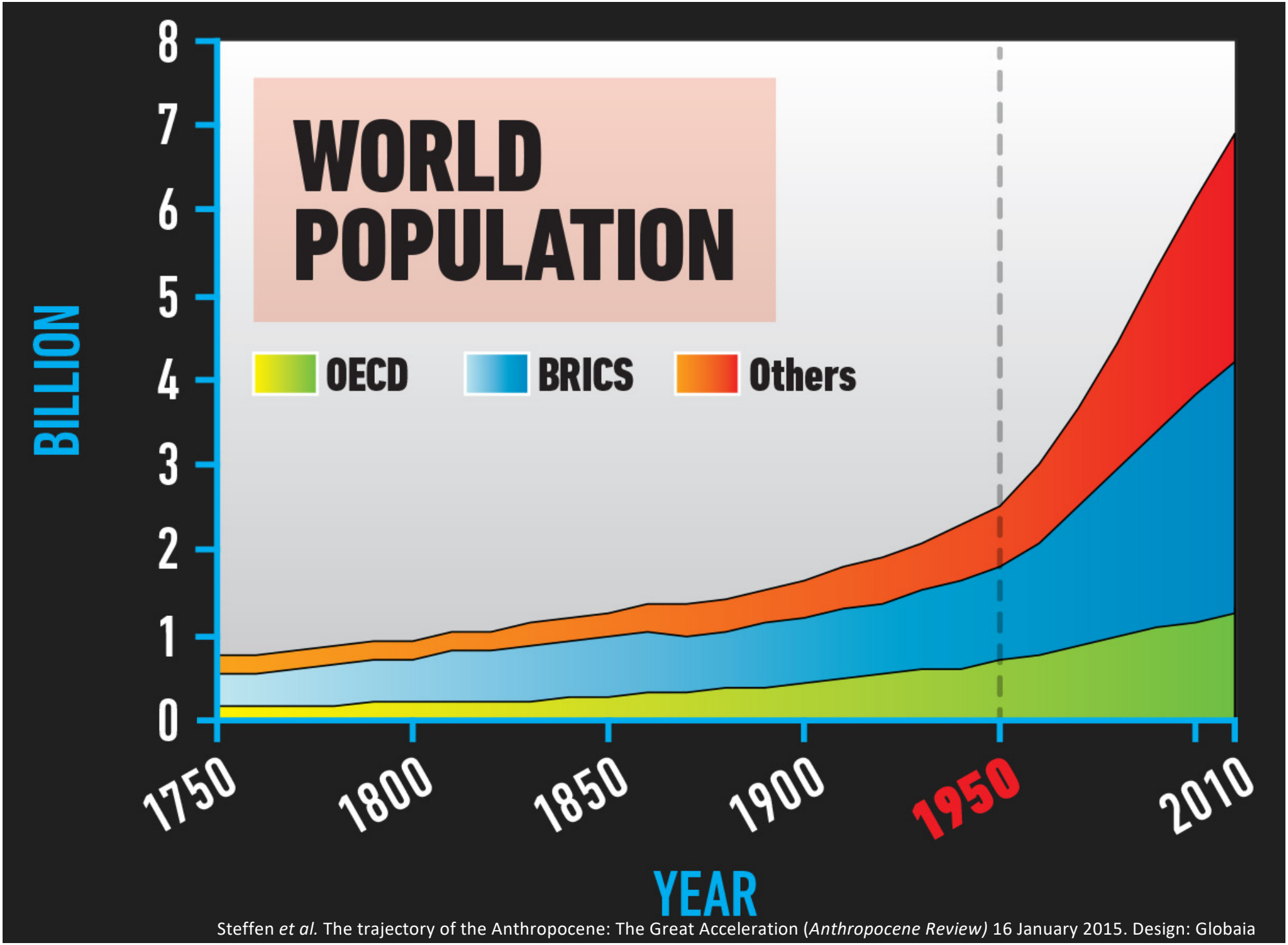
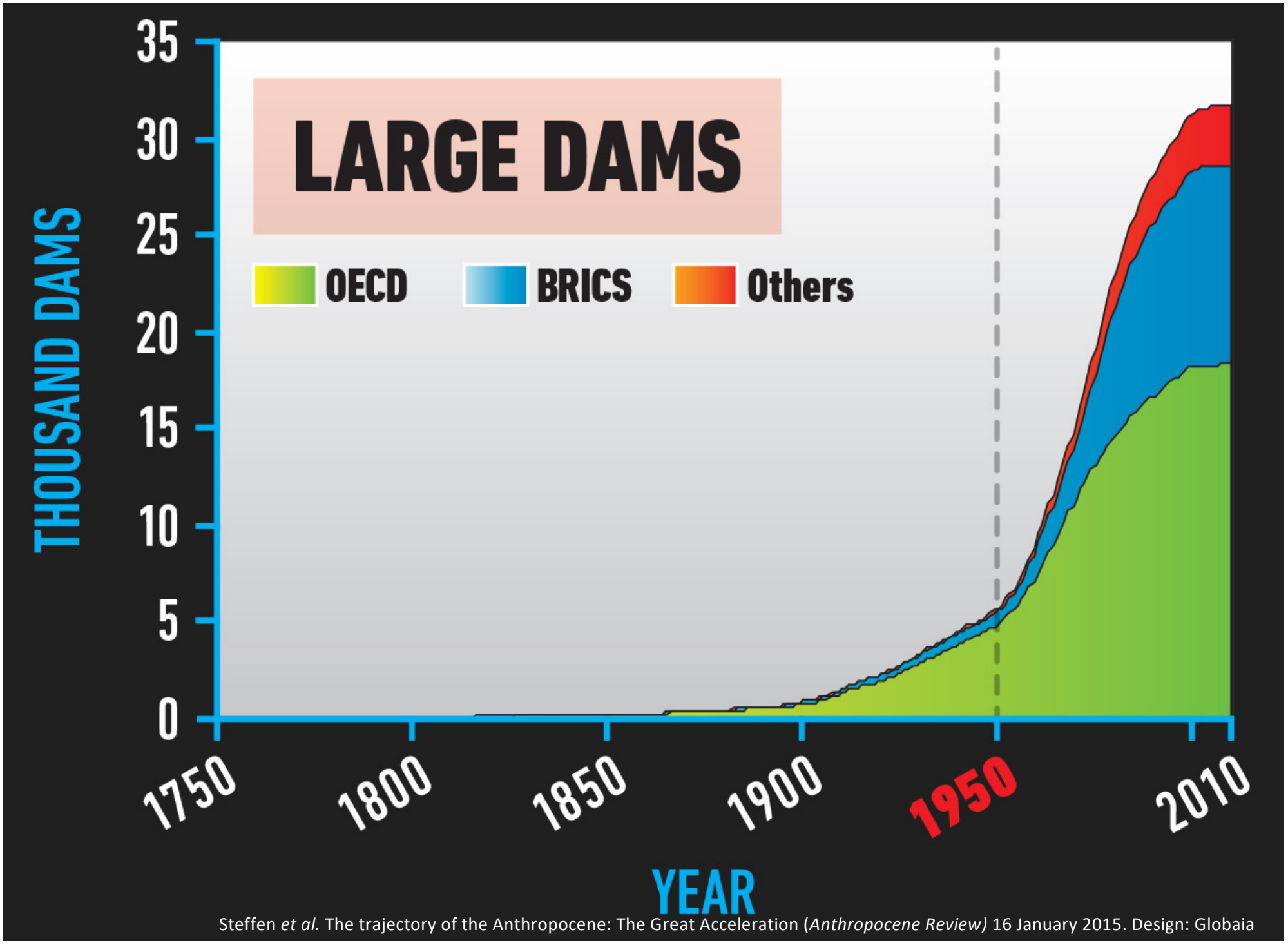


Figure 2 | Defining the beginning of the Anthropocene. **a**, Current GTS2012 GSSP boundary between the Pleistocene and Holocene[38] (dashed line), with global temperature anomalies (relative to the early Holocene average over the period 11,500 BP to 6,500 BP)[112] (blue), and atmospheric carbon dioxide composite[113] on the AICC2012 timescale[114] (red). **b**, Early Anthropogenic Hypothesis GSSP suggested boundary (dashed line), which posits that early extensive farming impacts caused global environmental changes, defined here by the inflection and lowest level of atmospheric methane (in parts per billion, p.p.b.) from the GRIP ice core[59] (green), with global temperature anomalies (relative to the average over the period 1961 to 1990)[115] (blue), and atmospheric carbon dioxide[113] (red). **c**, Orbis GSSP suggested boundary (dashed line), representing the collision of the Old and New World peoples and homogenization of once distinct biotas, and defined by the pronounced dip in atmospheric carbon dioxide (dashed line) from the Law Dome ice core[75,76] (blue), with global temperature data anomalies (relative to the average over the period 1961 to 1990)[115] (red). **d**, Bomb GSSP suggested boundary (dashed line), characterized by the peak in atmospheric radiocarbon from annual tree-rings (black)[103] (the $\Delta^{14}C$ value is the relative difference between the absolute international standard (base year 1950) and sample activity corrected for the time of collection and $\delta^{13}C$), with atmospheric carbon dioxide from Mauna Loa, Hawaii, post-1958[116], and ice core records pre-1958[75,76] (red), and global temperature anomalies (relative to the average over the period 1961 to 1990)[116] (blue).

Lewis, Simon L. und Mark A. Maslin (2015): **Defining the Anthropocene.** In: *Nature* 519, S. 171-180. S. 174



Steffen *et al.* The trajectory of the Anthropocene: The Great Acceleration (*Anthropocene Review)* 16 January 2015. Design: Globaia



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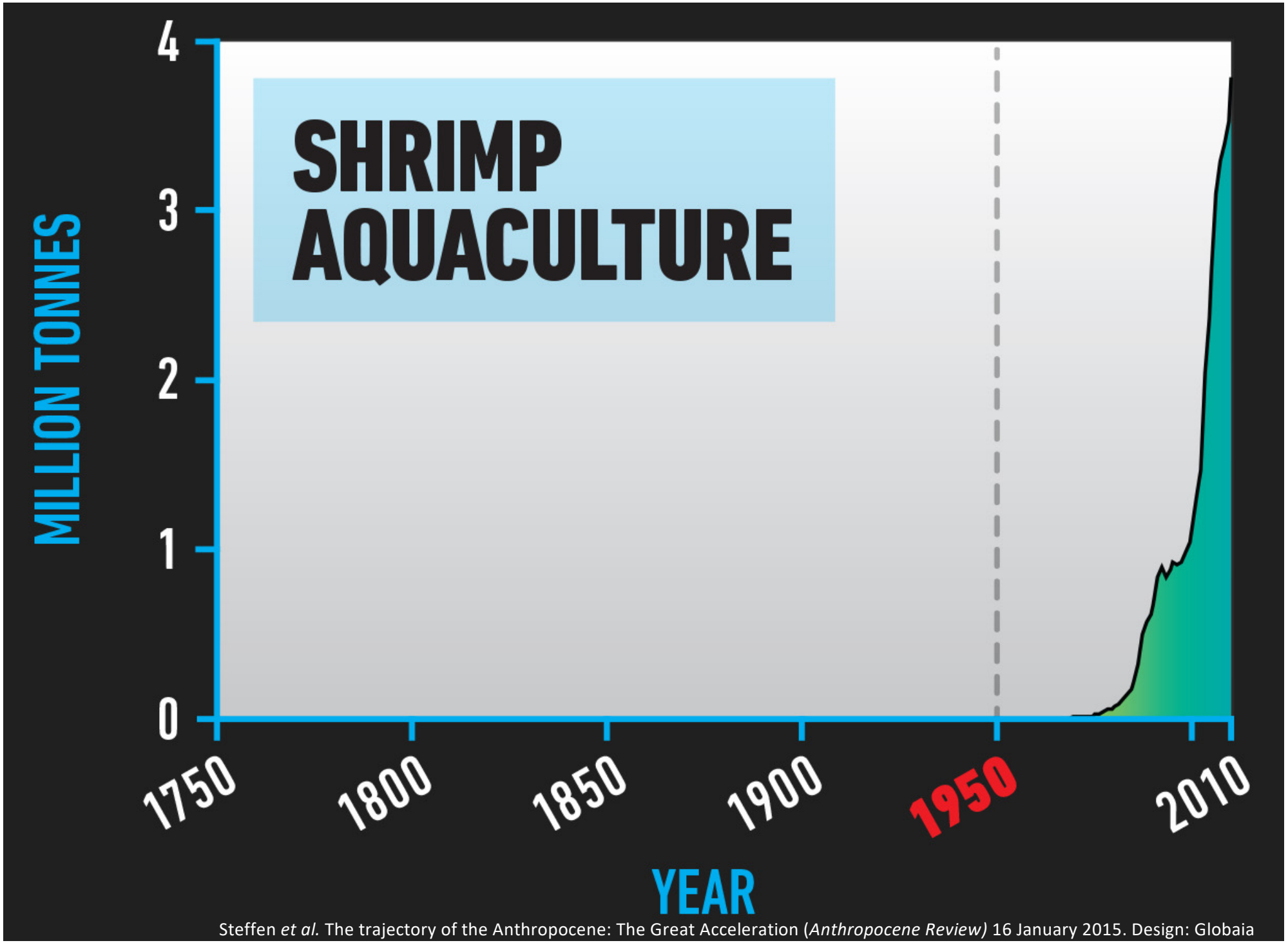
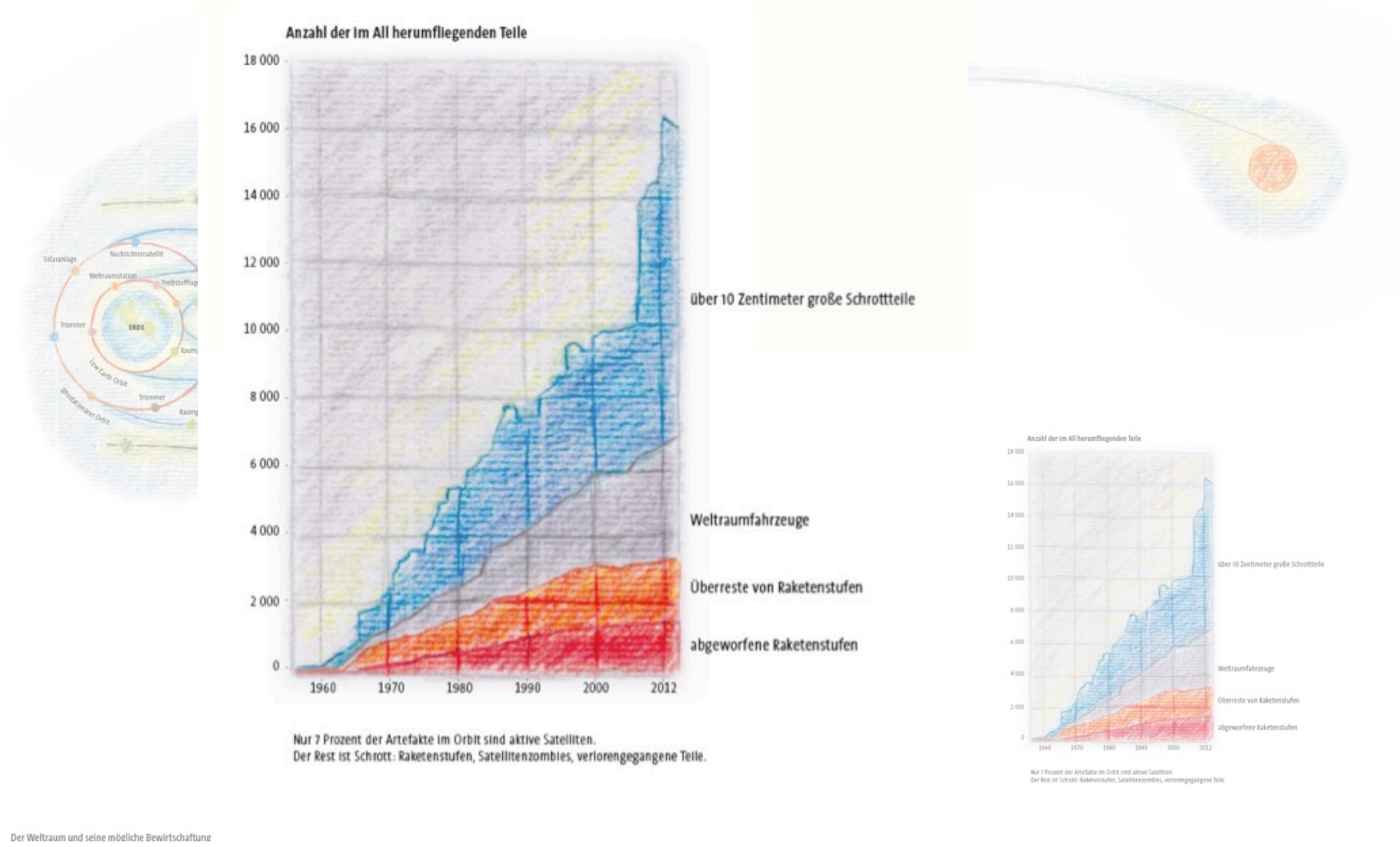


Steffen *et al.* The trajectory of the Anthropocene: The Great Acceleration (*Anthropocene Review)* 16 January 2015. Design: Globaia

Great Acceleration auch im All



Der Weltraum und seine mögliche Bewirtschaftung. Aus: Le Monde Diplomatique (2012)(Hg.): Atlas der Globalisierung. Die Welt von morgen. S. 48-49

Grand Challenges & Great Transformation

Great Challenges – Idee & Ursprünge

„In the 20th century, science and politics collaborated to ›solve problems.‹ In the 21st century, they collaborate to ›tackle grand challenges.‹" (Kaldewey 2018: 161)

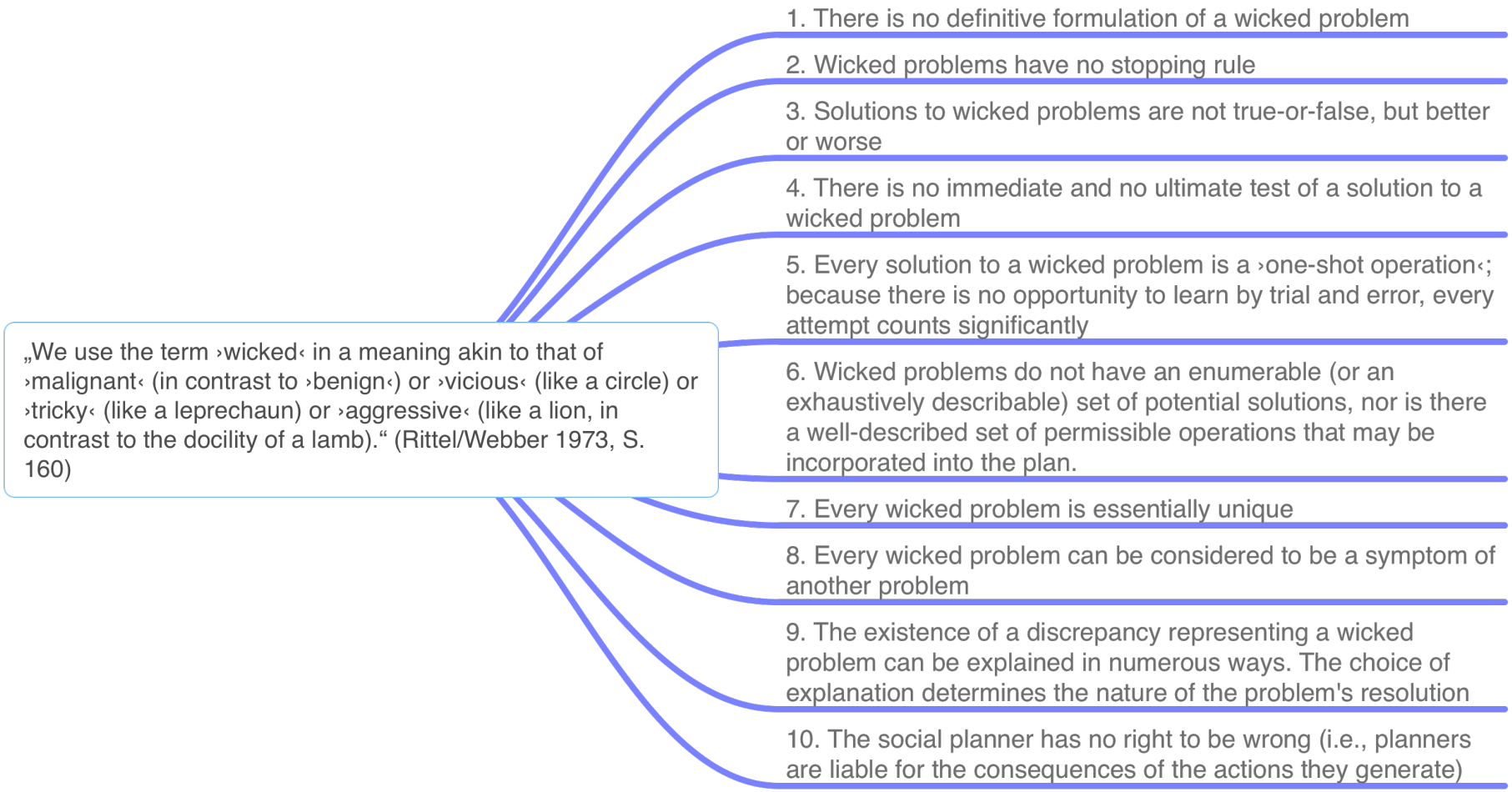
- Forschungs- und Innovationspolitik in den 1980er und 1990er Jahren
- Klimawandel ab den 1980er Jahren an Fahrt gewinnt
- Nachhaltigkeitswissenschaft
- Modus-2-Forschung
- Transdisziplinarität
- gesellschaftliche Transformationsprozesse
- Erklärung von Lund: „Europe must focus on the Grand Challenges of Our Time"
- Gates-Foundation 2003, Grand Challenges in Global Health

Kaldewey, David (2018): **The Grand Challenges Discourse. Transforming Identity Work in Science and Science Policy.** In: *Minerva* 56(2), S. 161-182.
Wissenschaftsrat (2015): **Zum wissenschaftspolitischen Diskurs über Große gesellschaftliche Herausforderungen.** (= Positionspapier, Drs. 4594-15). (www.wissenschaftsrat.de/download/archiv/4594-15.pdf (2.3.2019)).

Globale Ziele

http://www.globalgoals.org/de/

Grand Challenges = Wicked Problems



Rittel, Horst W. und Melvin M. Webber (1973): **Dilemmas in a General Theory of Planning.** In: *Policy Sciences* 4, S. 155-169.

The Tyranny of Small Decisions

„Because change takes place in this fashion [small decisions lead to big changes], it sometimes produces results that conflict with the very values the market economy is supposed to serve. In some instances, this seems to be because certain kinds of economically significant votes never get taken in the ballot box of the market place. In others, of which economists have long been aware, because the individual transactions have consequences extending beyond the transacting parties themselves, so that the sum-total of economic costs and benefits do not get calculated by the market. In others, not because of inherent defects of the market system itself but because of imperfections of competition. All have these characteristics in common: that 'large' changes are effected by a cumulation of 'small' decisions; that consumers never get an opportunity to vote with their dollars on the large changes as such; and if they were given the opportunity, they might not approve what they have wrought." (Kahn 1966: 45)

Kahn, Alfred E. (1966): **The Tyranny of Small Decisions: Market Failures, Imperfections, and the Limits of Economics.** In: *Kyklos* 19, S. 23-47.

Grenzen des Wissens

- Wie ist die Argumentation von Burton (2017)?
- Was ist die Pointe seiner Argumentation?
- Was folgt daraus für mich persönlich?
- Was folgt daraus für Bildungsprozesse?

Burton, Robert (2017): **Our world outsmarts us.** In: *Aeon*. 3.5.2017. (https://aeon.co/essays/the-complexity-of-social-problems-is-outsmarting-the-human-brain? (17.10.2020)).