

The Limits to Growth

Do we 'read it' in SDGs?

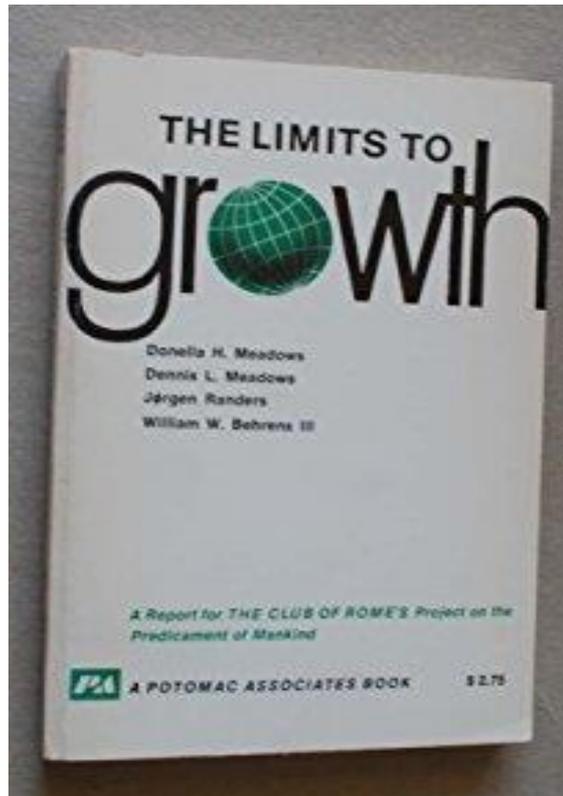


Dr Timothy Bedford, Riga, April 2017

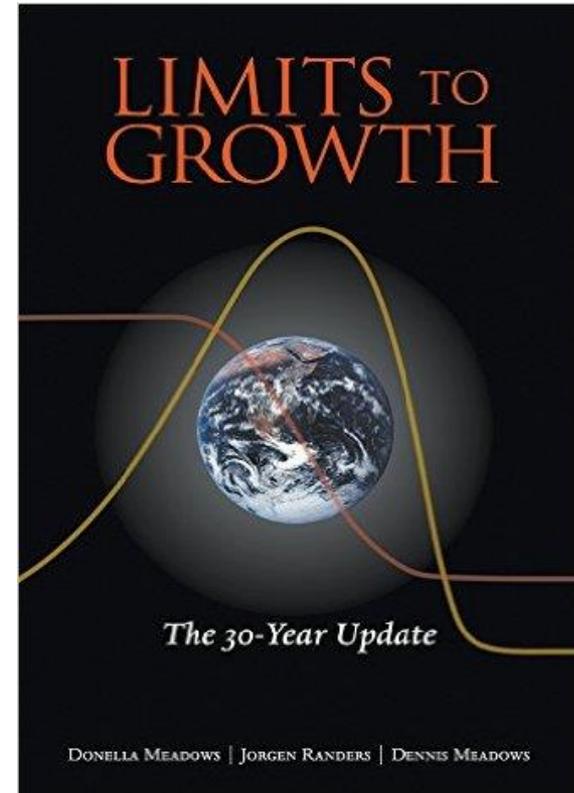
The Limits to Growth

by Donella Meadows, Dennis Meadows, Jorgen Randers & William Behrens III

1972



2004



Exponential growth will lead to overshoot and collapse by 2100 due to nonrenewable resource depletion.

Limits to Growth on a Finite Planet?

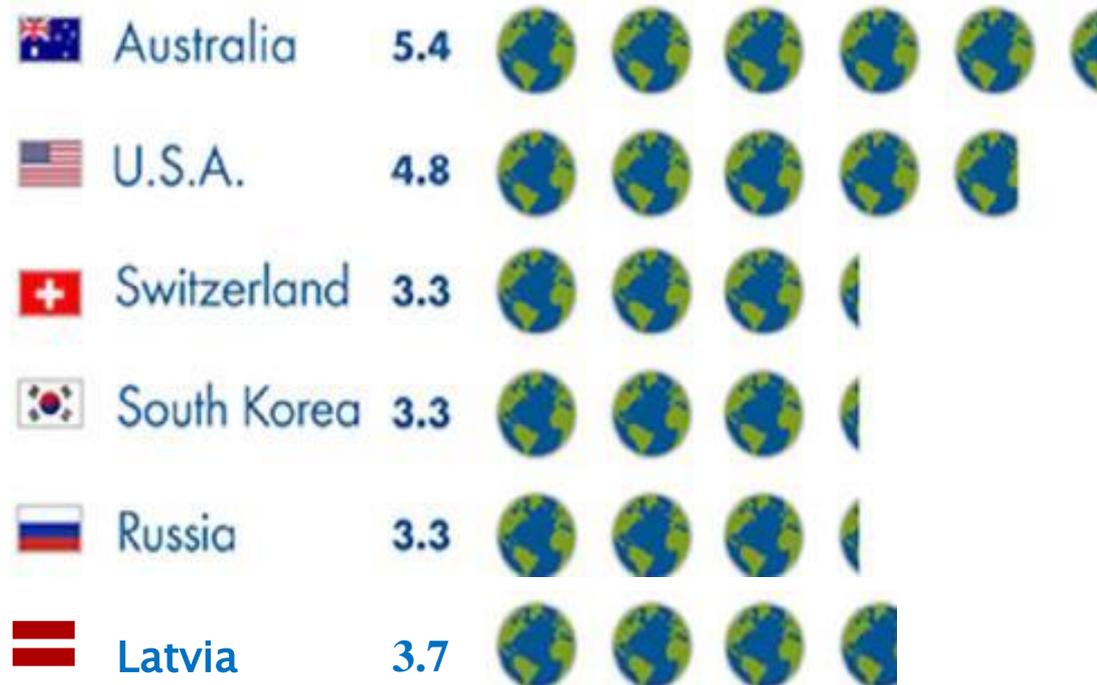


- 1. Resources are being used faster than they are regenerated.**
- 2. Wastes are being produced faster than they can be absorbed.**

Limits to Growth: Ecological Overshoot

Humanity currently uses the equivalent of 1.5 planets to provide the resources we use and absorb our wastes. By 2050, this will rise to between 180% and 220% of the Earth's biological capacity (GFN 2016).

How many Earths do we need if the world's population lived like...

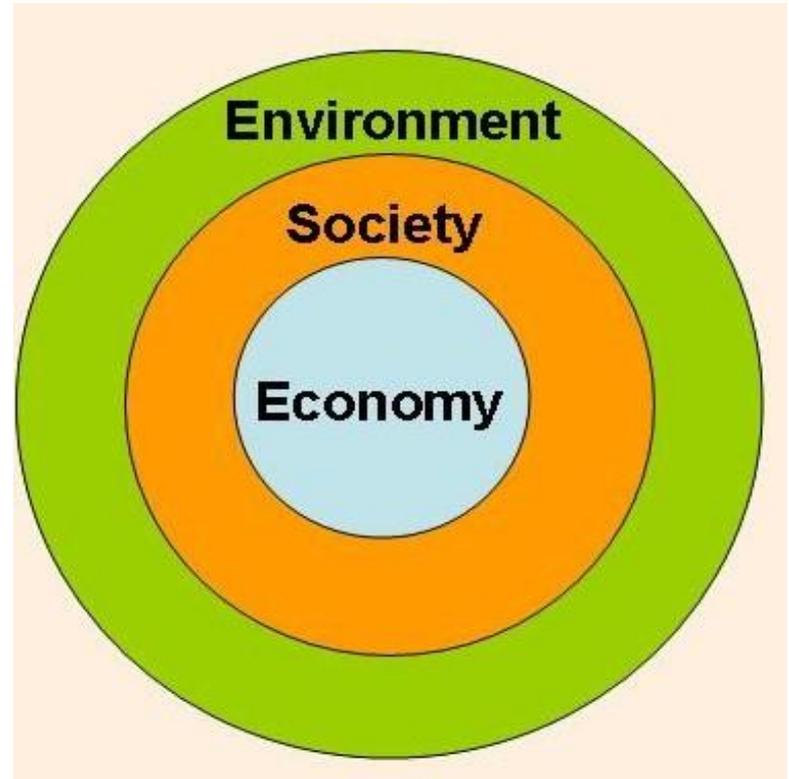
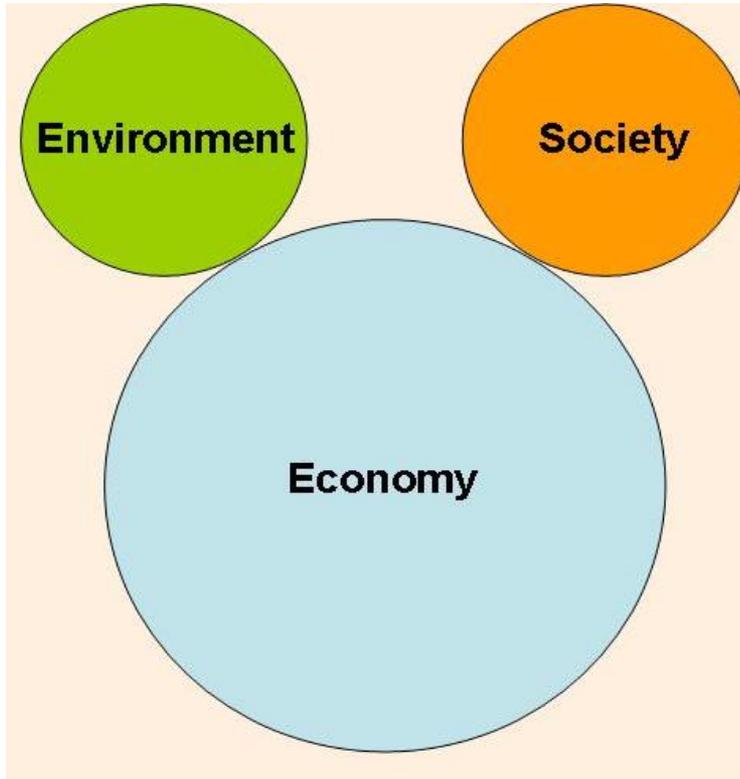


Limits to Growth: Resources

When will the world supplies run out?

Coal 2054	Oil 2049	Gas 2047	Uranium 2092
Aluminum 2092	Phosphorus 2088	Tantalum 2058	Titanium 2056
Copper 2044	Silver 2029	Indium 2024	Antimony 2020

Weak vs. Strong Sustainability



Ecosystems sustain societies that create economies



“The economy is an open subsystem of the Earth's ecosystem, which is finite, non-growing, and materially closed. Therefore sustainable economic growth is an impossibility - and an oxymoron.”

(Daly & Townsend, 1993)

“Anyone who believes that exponential growth can go on forever in a finite world is either a madman or an economist.”

(Kenneth Boulding, 1910-1993)

Economic Growth and Progress

Gross Domestic Product (GDP) is a measure of the total output of traded goods and services.

Economic Growth is a proxy for progress so the thinking goes:
Economic Growth = Increase in GDP = Increase in Welfare

Problems:

- ▶ Income distribution
- ▶ Composition of output
- ▶ Social and environmental costs

GDP & Well-Being

“GDP measures everything, in short, except that which makes life worthwhile.” (Robert Kennedy, 1968)

”The welfare of a nation can scarcely be inferred from a measure of national income.” (Kuznets, 1934)

**“Those attempting to guide the economy are like pilots trying to steer a course without a reliable compass.”
(Stiglitz, Sen & Fitoussi, 2009)**

Growth Obsession

- ▶ Educational Institutions
- ▶ UN / IMF / WB / WTO / OECD
- ▶ EU 2020 Growth Strategy
- ▶ EU Beyond GDP Initiative 2007-
- ▶ National Governments
- ▶ **Economic Growth is mentioned 17 times in SDGs**

SDGs & Economic Growth

- ▶ “Promote **sustained, inclusive and sustainable economic growth**, full and productive employment and decent work for all.” (Goal 8)
- ▶ “We recognize that domestic resources are first and foremost generated by **economic growth.**” (Clause 66)
- ▶ “Sustained, inclusive and **sustainable economic growth** is essential for prosperity.” (Clause 27)
- ▶ “International trade is an engine for **inclusive economic growth** and poverty reduction...” (Clause 68)
- ▶ “Sustain per capita **economic growth**... at least 7 per cent GDP growth per annum in the least developed countries.” (Goal 8.1)

SDGs & Economic Growth

Comments:

- ▶ Goal 8 is locked into the growth paradigm.
- ▶ If LDCs are to catch up with the North it would need at least 3.4 Earths to sustain this. (GFN)
- ▶ Promotion of neo-liberal trade policies within WTO framework leads to more international trade and increases CO2 emissions. (Frankel, 2009)

SDG Goal 8.4

“Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation.”

Comments:

- ▶ Emphasis is on efficiency and relative decoupling and not absolute decoupling.
- ▶ Efficiency gains can increase consumption (Jevons paradox).
- ▶ No reference in sustainable consumption to reducing EF below 1.
- ▶ New energy sources could worsen the environment putting an already out of balance system on steroids. (Capra, 2014)

SDG Goal 1

“End poverty in all its forms everywhere.”

- A \$5/day target, and a 2.2% GDP growth rate would take 120 years to achieve and require a 176 fold increase in global GDP. (Woodward, 2015)
- Given limits to CO2 emissions addressing poverty through redistribution rather than growth should be the major priority.
- GDP has grown by 271% since 1990, the number of people living on less than \$5/day has increased by more than 370 million. (Hickel, 2015)

SDG Goal 4.7

“By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development...”

Education for people and planet: Creating sustainable futures for all
(UNESCO 2016)

- “Education contributes to **economic growth.**” (p. 38)
- “If education is to continue to drive **growth**, it must keep up with the rapidly changing world of work.” (p.16)
- “A future where **economic growth** does not exacerbate inequalities but builds prosperity for all.” (Foreword)
- “Education has a key role to play in moving towards **environmental sustainable and inclusive economic growth.**”(p. 38)
- “Education of good quality can help ensure **economic growth** does not leave anyone behind.” (p. 38)

Education of a different kind

“[The destruction of the ecosphere] is not the work of ignorant people. It is, rather, largely the result of work by people with BAs, BSs, LLBs, MBAs, and PhDs.”

(D. Orr, 1991)

“The volume of education continues to increase, yet so do pollution, exhaustion of resources, and the dangers of ecological catastrophe. If still more education is to save us, it would have to be education of a different kind: an education that takes us into the depth of things.”

(E.F. Schumacher, 1973)

Conclusion

- ▶ **SDGs agenda leaves economic growth as the basis of development that is tied to a failing economic model that does not respect planetary limits.**
- ▶ Believing that the SDGs are sufficient to address the sustainability gap and climate change would be folly.
- ▶ Waiting until 2030 for new SDGs could be too late.
- ▶ A new strong sustainability paradigm is urgently needed with economic objectives and policies that foster well-being for all **within the limits of a finite planet.**

References

Capra F (2014) Interview: Systems Thinking and System Change

<http://www.greattransition.org/publication/systems-thinking-and-system-change>

Daly H. E, & Townsend K. N. (1993) Valuing the Earth: Economics, Ecology, Ethics

Deane P and Cole W. A. (1967) *British Economic Growth, 1688-1959: Trends and Structure*. Cambridge: Cambridge University Press

Frankel J, (2009) Environmental Effects of International Trade. Faculty Research Working Paper Series. Harvard University

Global Footprint Network: <http://www.footprintnetwork.org>

References

Hickel J (2015) The Problem with Saving the World. Jakobin
<https://www.jacobinmag.com/2015/08/global-poverty-climate-change-sdgs>

Kuznets S. 1934. National Income, 1929-1932. 73rd US Congress, 2d session, Senate document no. 124, page 7

The Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) (2009) Stiglitz-Sen-Fitoussi Commission The Final Report.
http://library.bsl.org.au/jspui/bitstream/1/1267/1/Measurement_of_economic_performance_and_social_progress.pdf

Woodward D. (2015) Incrementum ad Absurdum: Global Growth, Inequality and Poverty Eradication in a Carbon-Constrained World. World Economic Review 4: 43-62 <http://wer.worldeconomicsassociation.org/files/WEA-WER-4-Woodward.pdf>

UN (2015) General Assembly Resolution A/RES/70/1: Transforming our world: the 2030 Agenda for Sustainable Development