



2024年(第33回) ブループラネット賞
受賞者記念講演会

2024 Blue Planet Prize
Commemorative Lectures

ロバート・コスタンザ教授

講演スライド集

持続可能でウェルビーイングな
未来を創るために

Professor Robert Costanza

Slides for the Lecture

Creating a Sustainable

Wellbeing Future

2024 Blue Planet Prize Commemorative Lectures



Creating a Sustainable Wellbeing Future

Prof. Robert Costanza

Professor of Ecological Economics, UCL
Editor in Chief, *The Anthropocene Review*

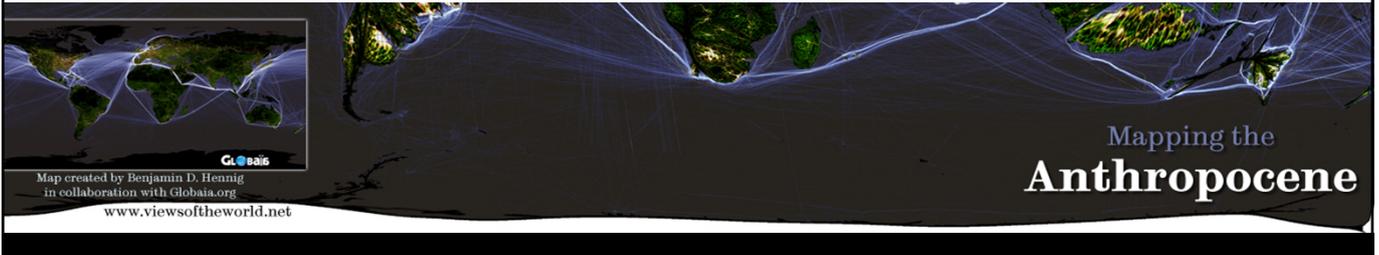


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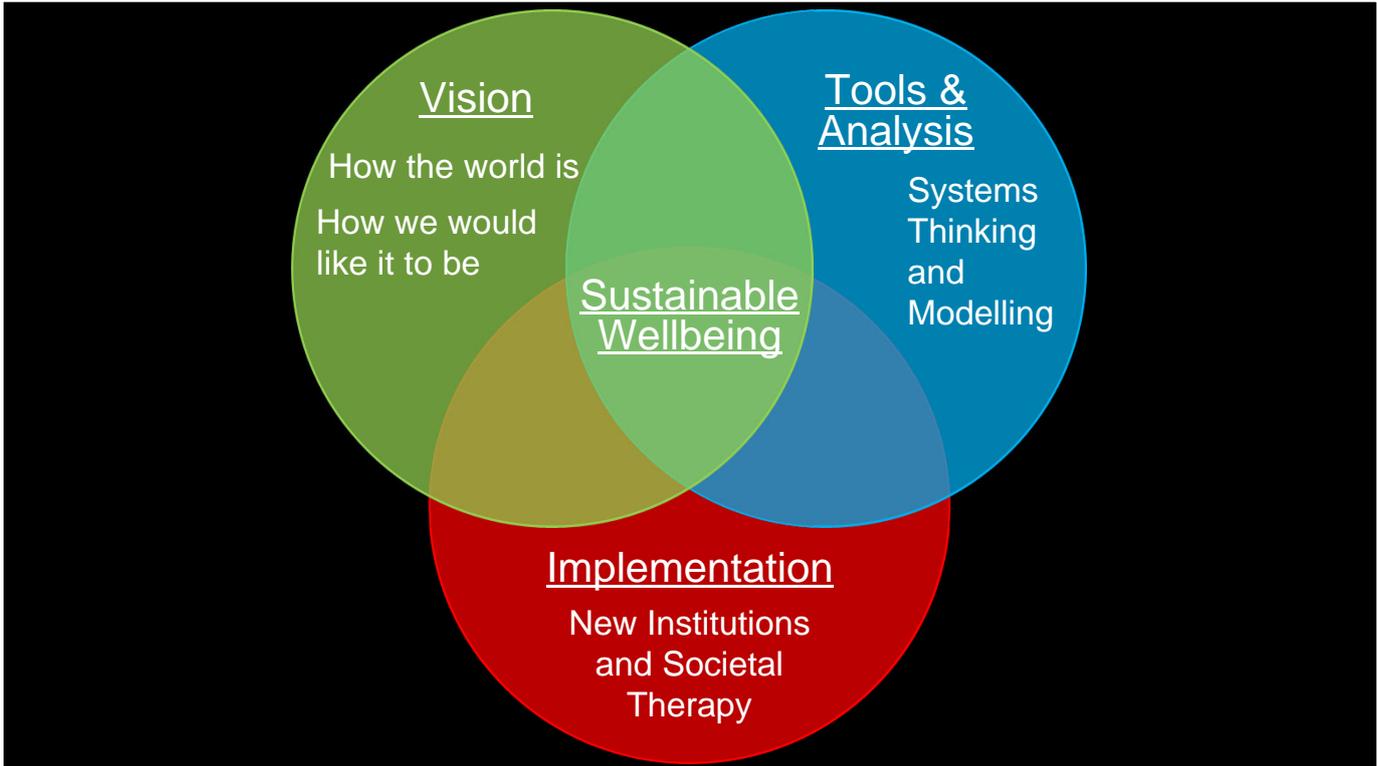
Business as usual is not an option

To create a sustainable and desirable Anthropocene, we need
to think and act differently

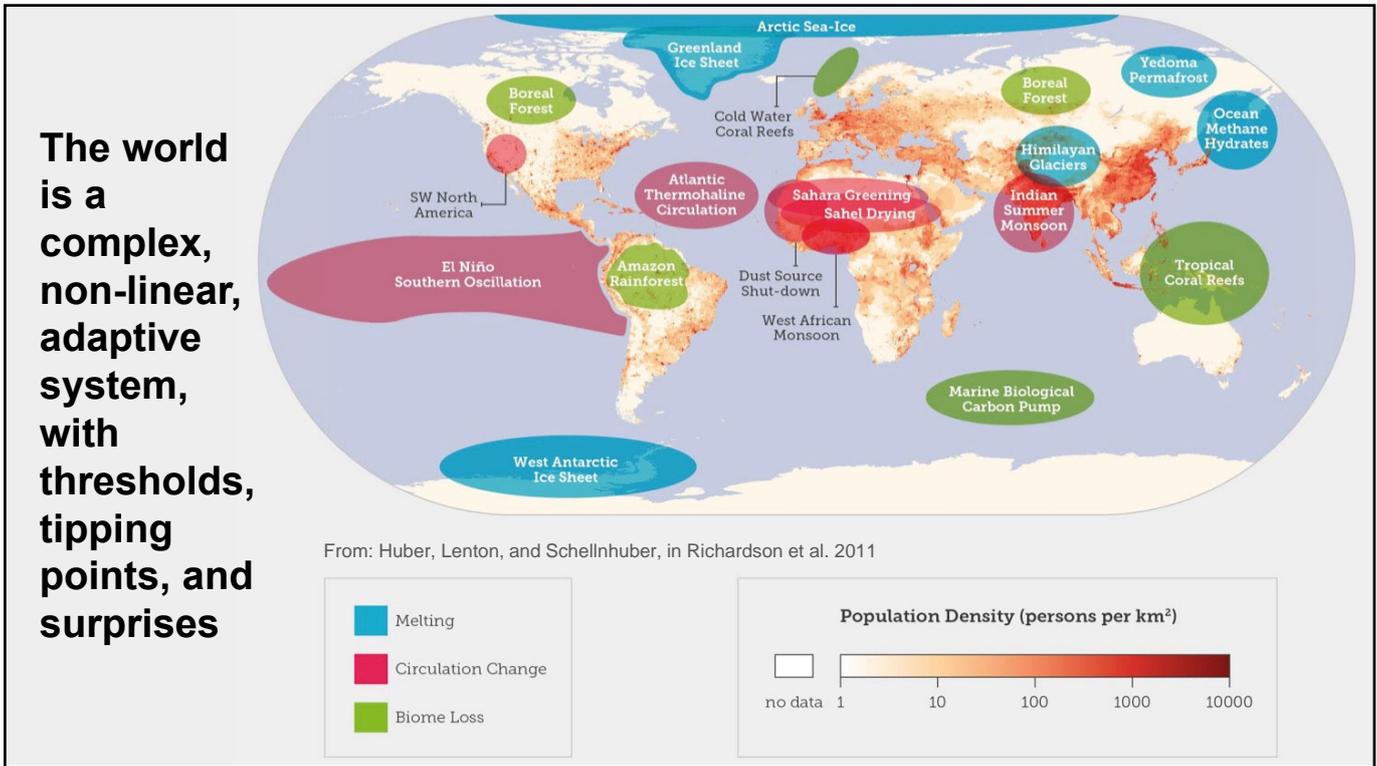
The time is now to build economies and societies based on
the goal of the **sustainable wellbeing of humans and the rest
of nature** rather than the single-minded pursuit of GDP growth



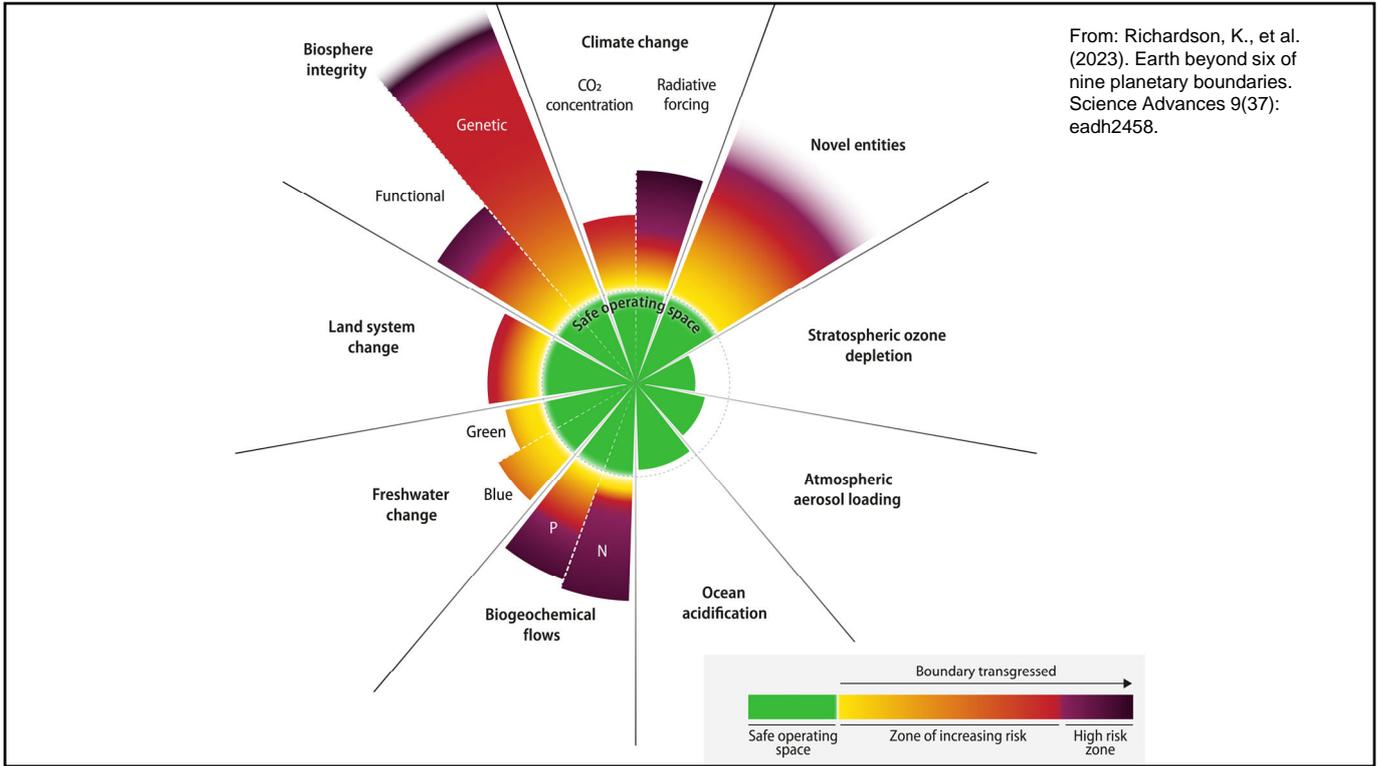
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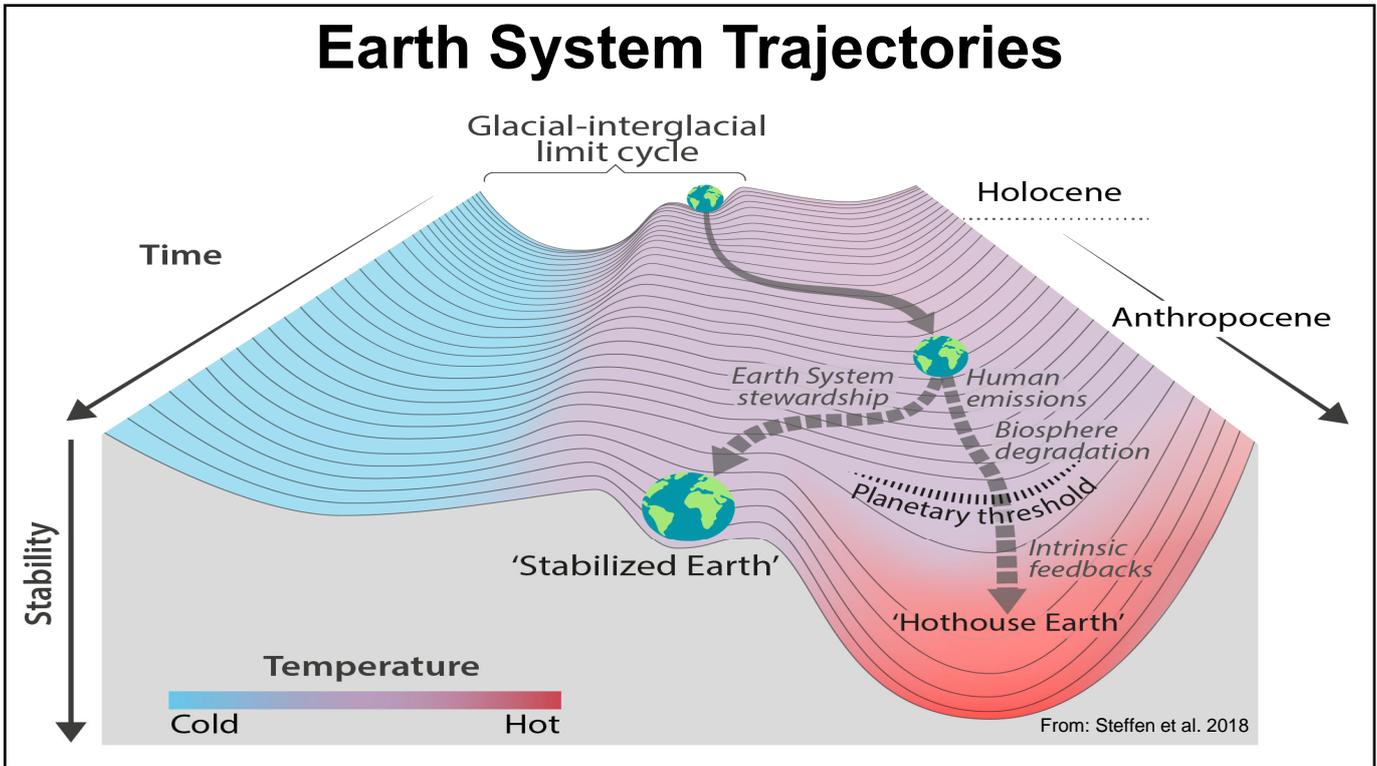
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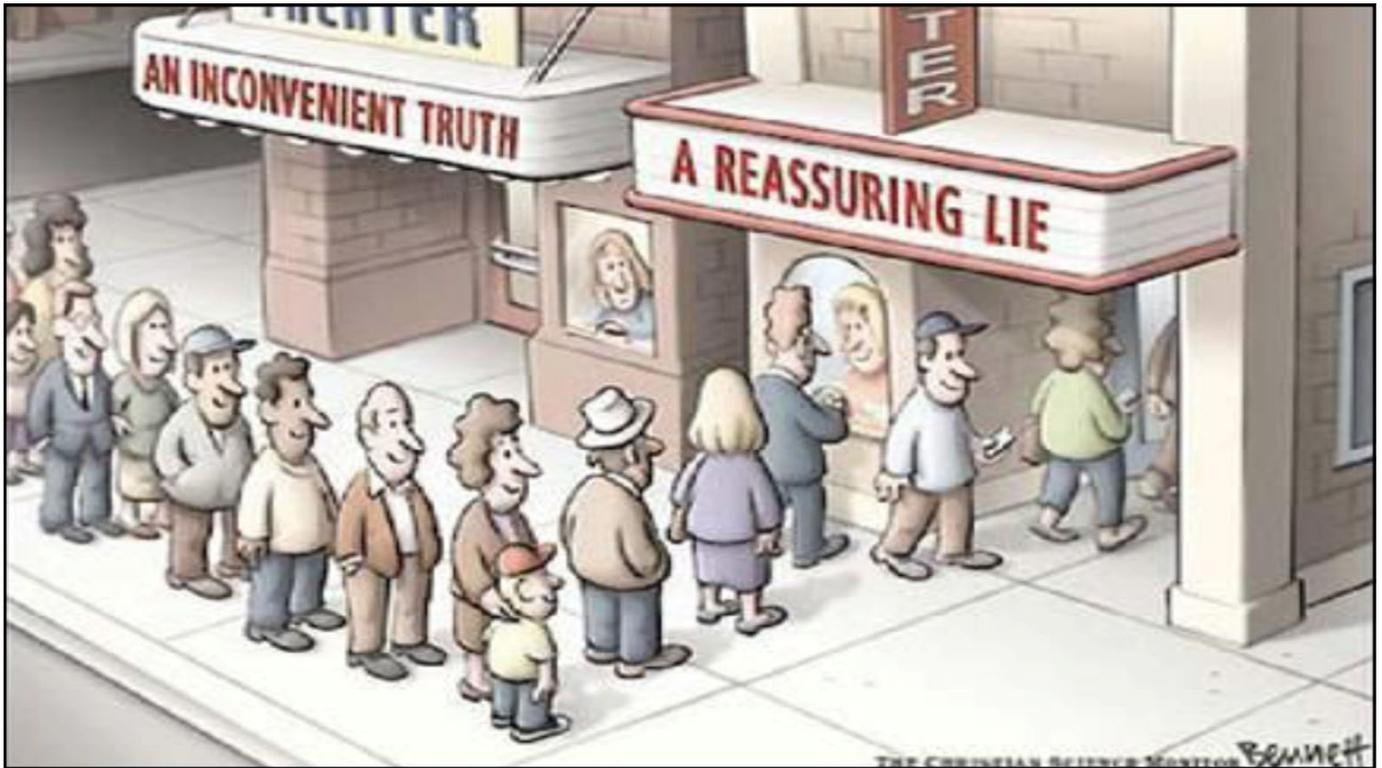
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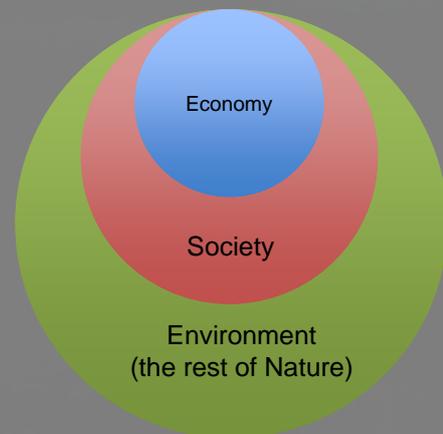
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We need a **third** movie that is a new vision and narrative...

A sustainable and desirable economy in society in the rest of nature



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An Introduction to Ecological Economics Second Edition

Second Edition

An Introduction to Ecological Economics

Robert Costanza
John H. Cumberland
Herman Daly
Robert Goodland
Richard B. Norgaard
Ida Kubiszewski
Carol Franco

Integrated Questions/Goals:

- Ecological Sustainable Scale
- Socially Fair Distribution
- Economically Efficient Allocation

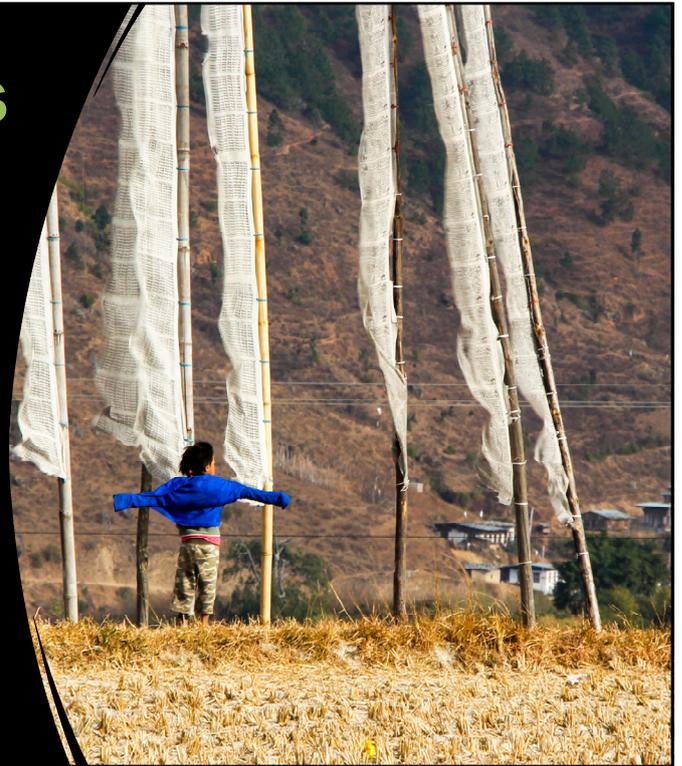
CRC Press

ISBN: 978-1-56670-684-3

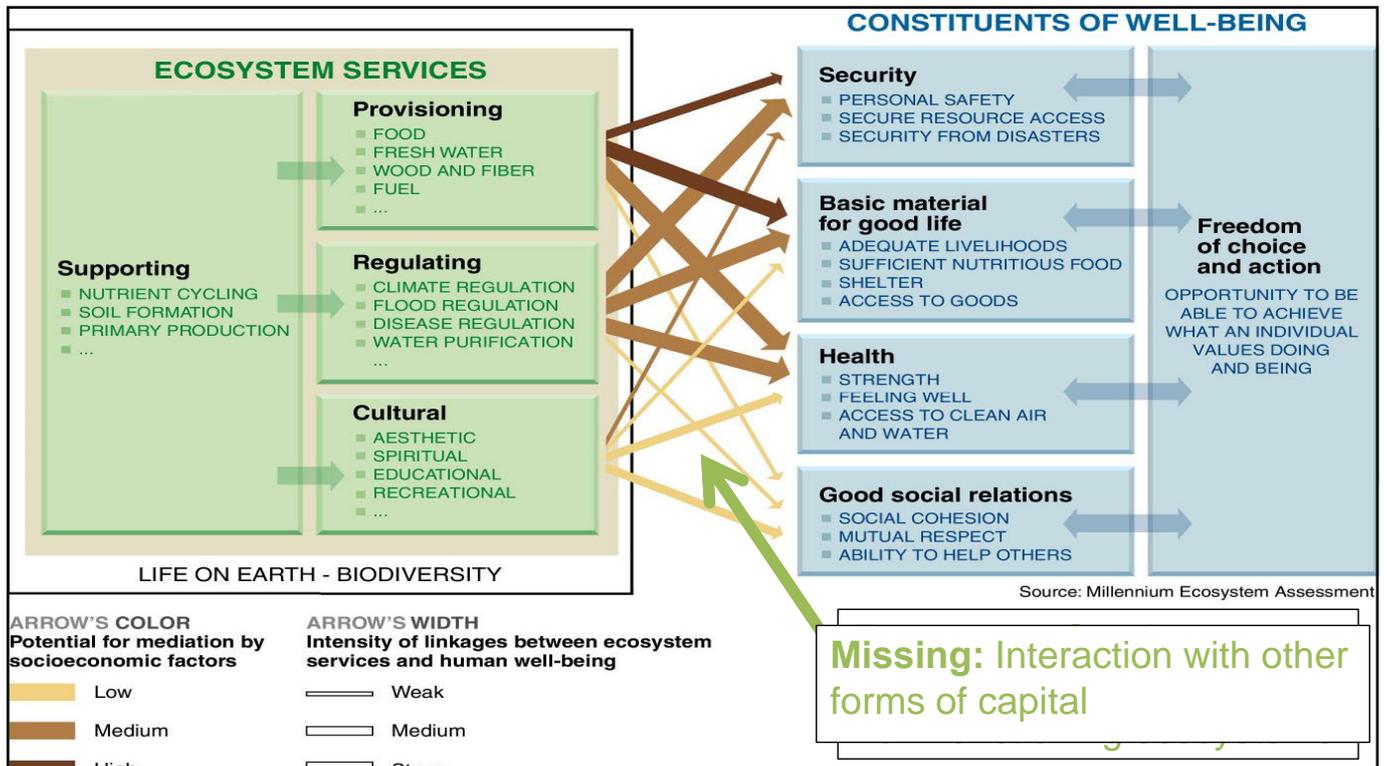
www.crcpress.com

Overlapping Ideas

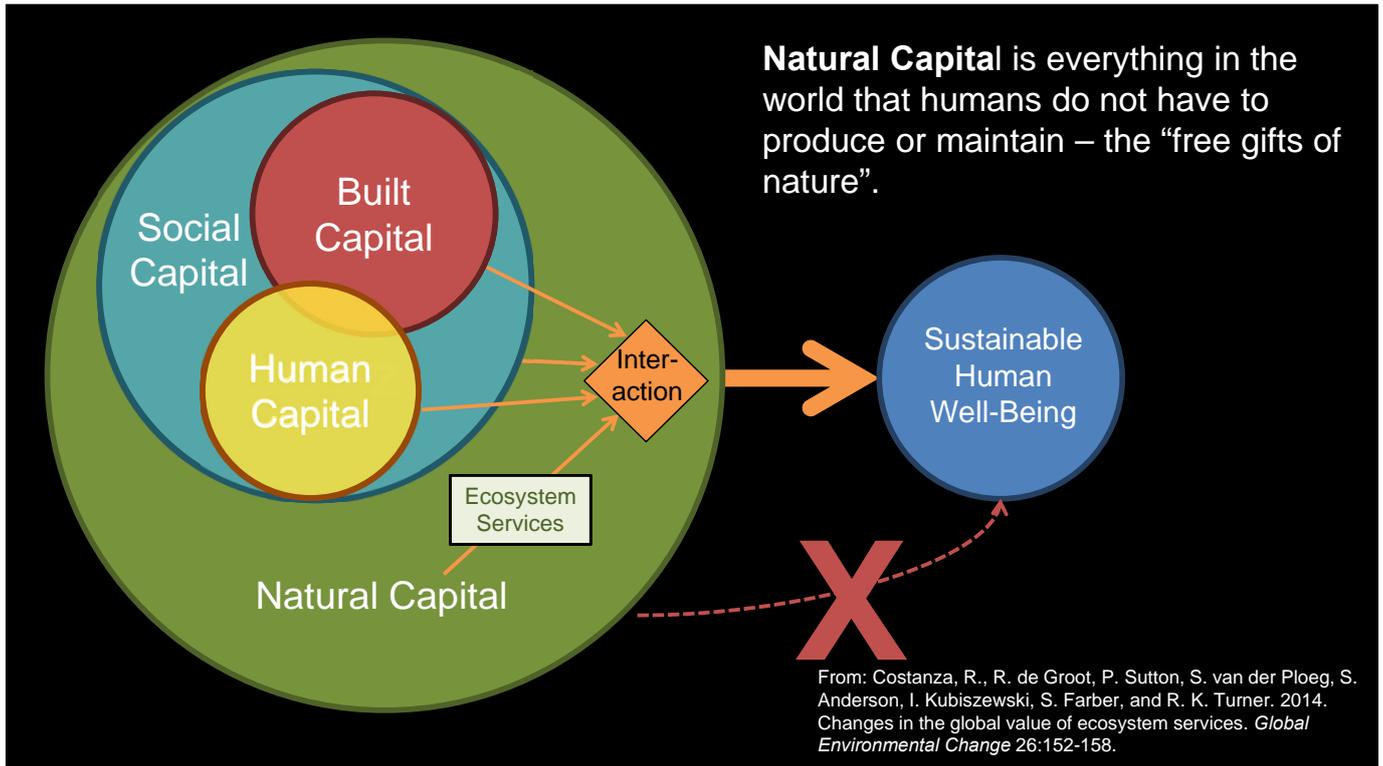
- Ecological Economy
- Wellbeing Economy
- Circular BioEconomy
- Regenerative Economy
- Ecological Civilization
- Doughnut Economy
- Steady State Economy
- Lagom Economy
- ... and more



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ipBes Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

Home • About IUCN • How we work • Programmes • Ecosystem Management Programme • IPBES

IPBES
 IPBES negotiations
 IUCN's support to the IPBES process
 News and Events
 Contacts

Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)

What is IPBES?

The "Intergovernmental Platform on Biodiversity and Ecosystem Services" is a mechanism proposed to further strengthen the science-policy interface on biodiversity and ecosystem services, and add to the contribution of existing processes that aim at ensuring that decisions are made on the basis of the best available scientific information on conservation and sustainable use of biodiversity and ecosystem services. IPBES is proposed as a broadly similar mechanism to the Intergovernmental Panel on Climate Change (IPCC).

What is the science-policy interface?

Science-policy interfaces are social processes which encompass relations between scientists and other actors in the policy process, and which allow for exchanges, co-evolution, and joint construction of knowledge with the aim of enriching decision-making at different scales. This includes 2 main requirements:

a) that scientific information is relevant to policy demands and is formulated in a way that is accessible to policy and decision makers; and

b) that policy and decision makers take into account available scientific information in their deliberations and that they formulate their demands or questions in a way that are accessible for scientists to provide the relevant information. [Click here for a graphic showing the cycle of](#)

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ESP The Ecosystem Services Partnership (<http://www.es-partnership.org>)

Worldwide Network to enhance the Science and practical Application of ecosystem services assessment



> [Homepage](#)

- Home
- About the Partnership
- Become a member
- ESP Services
- ESP Working groups
- ESP Conferences 2012
- Journals
- News
- Upcoming events
- Vacancies
- Links
- Contact

Welcome to the new ESP website

Several pages and functionalities are still under construction or are being updated. If you have any suggestions please contact [ESP Support Team](#).

ESP Services

- Networking & Outreach
- Case studies & Showcases
- Data & Knowledge sharing
- Training and Education
- Guidelines & Toolkits
- Funding/Cooperation calls
- Contact
- Support & FAQ
- Members & Partners
- **Become a Member**

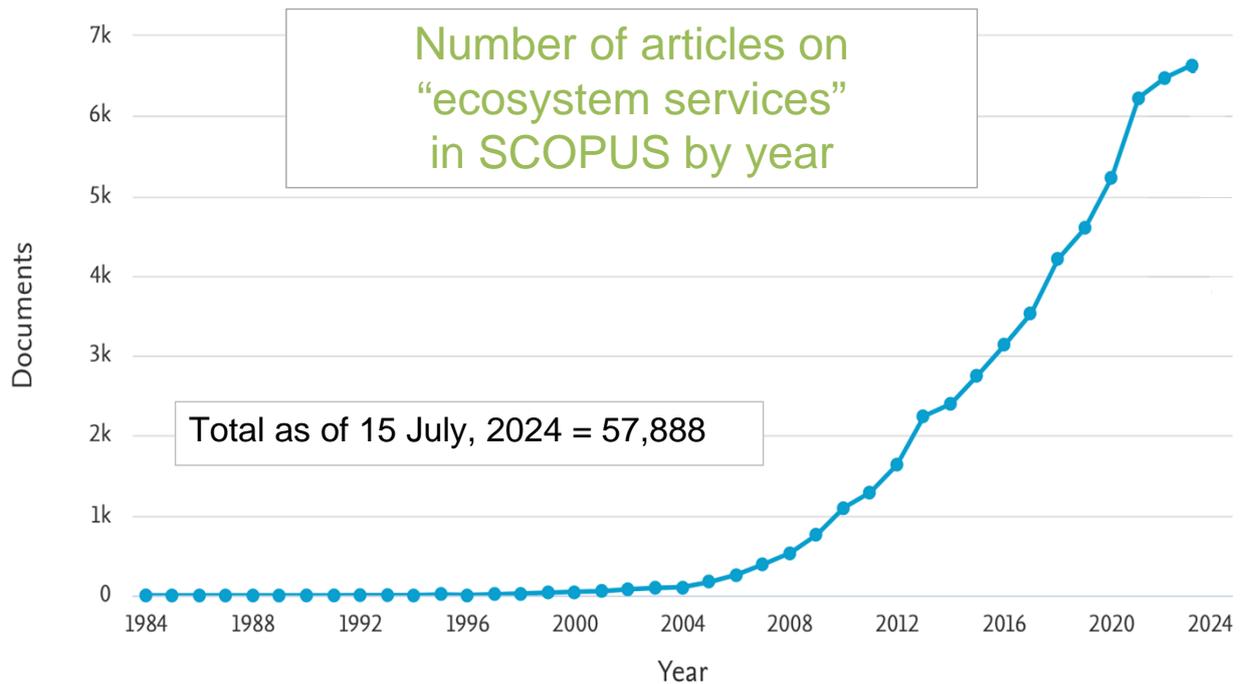
ESP Activities and Networks

- Thematic Working Groups
- Biome Expert Groups
- National ESP Networks



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Documents by year



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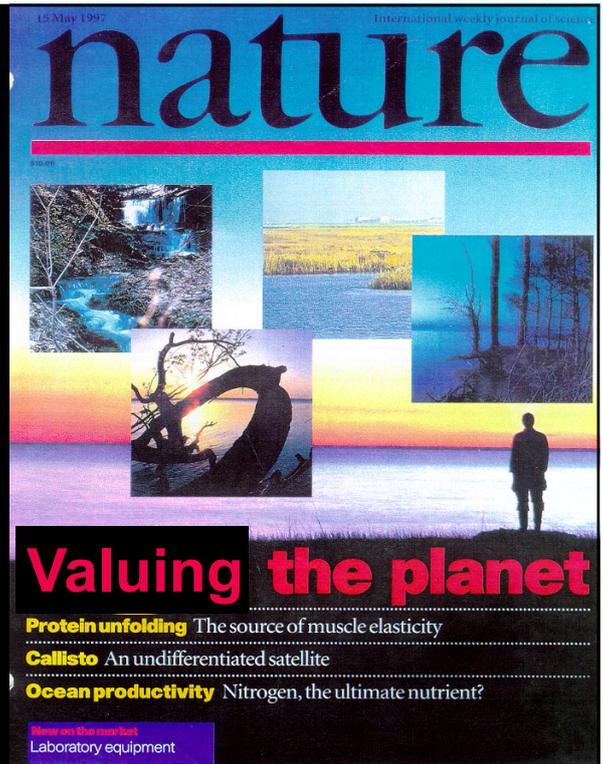
NATURE VOL 387 15 MAY 1997

The value of the world's ecosystem services and natural capital

Robert Costanza, Ralph d' Arge, Rudolf de Groot, Stephen Farber, Monica Grasso, Bruce Hannon, Karin Limburg, Shahid Naeem, Robert V. O' Neill, Jose Paruelo, Robert G. Raskin, Paul Sutton & Marjan van den Belt

For the entire biosphere, the value (most of which is outside the market) is estimated to be in the range of US\$16–54 trillion per year, with an average of US\$33 trillion per year.

2nd most cited article in the Ecology/Environment area according to the ISI Web of Science with more than 10,000 citations – which puts it in the top 0.01% of all papers ever published.



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Misconceptions about the valuation of ecosystem services

- Ecosystem Services is not an anthropocentric concept
- Valuation \neq Privatization, Commodification, or Trading
- “Intrinsic values” are more about rights than valuation

Also, we cannot avoid valuation:
decisions about ecosystem in a world of trade-offs are
implicit valuations

From: Costanza, R. 2024. Misconceptions about the valuation of ecosystem services. 2024. *Ecosystem Services* 70:101667.

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Range of uses for ecosystem services valuation

Use of Valuation	Appropriate values	Appropriate spatial scales	Precision Needed
Rising awareness and interest	Total values, macro aggregates	Regional to global	Low
National income and well-being accounts	Total values by sector and macro aggregate	National	Medium
Specific policy analysis	Changes by policy	Multiple depending on policy	Medium to high
Urban and regional land use planning	Changes by land use scenario	Regional	Low to medium
Payment for ecosystem services	Changes by actions due payment	Multiple depending on system	Medium to high
Full cost accounting	Total values by business, product, or activity and changes by business, product, or activity	Regional to global, given the scale of international corporations	Medium to high
Common asset trusts	Totals to assess capital and changes to assess income and loss	Regional to global	Medium

From: Costanza, R., et al. 2014. Changes in the global value of ecosystem services. *Global Environmental Change* 26:152-158.

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Australian Bureau of Statistics

Statistics Census Participating in a survey About

Home > Statistics > Detailed methodology information > Information papers > Measuring and Valuing Australia's Ecosystems Cite Print

On this page

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- [The first release of the National Ecosystem Accounts](#)
- [Conclusion and further information](#)
- [Appendices](#)
- [Data downloads](#)
- [Glossary](#)
- [Abbreviations](#)
- [References](#)

Measuring and Valuing Australia's Ecosystems

First look at how Australia's ecosystems can be measured and valued.

Released 17/09/2024

Executive summary

In 2025, the Australian Bureau of Statistics (ABS) will release the first comprehensive set of National Ecosystem Accounts for Australia. The release is part of an ongoing ecosystem accounts program between the ABS and the Department of Climate Change, Energy, the Environment and Water (DCCEEW). The accounts will cover the entire Australian territory, encompassing terrestrial, freshwater, and marine realms. The inaugural release, developed from existing datasets, will showcase the potential of extensive ecosystem accounts to deliver environmental information for decision-makers, and will provide a platform for feedback on utility and future enhancements.

Central to the ongoing program of ecosystem accounts are user needs and a comprehensive statistical framework. The comprehensive framework enables the organisation of data about habitats and landscapes, measuring ecosystem services, and linking this information to economic and other human activities. Over time, the program will provide a time series of information on environmental change and how this impacts our economy. Extensions to ecosystem accounts will also be developed exploring thematic areas such as biodiversity and climate change, providing targeted insights for specific policy areas. The first release will be followed by a consultation process to ensure the accounts are fit-for-purpose.

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ESVD
ECOSYSTEM SERVICES VALUATION DATABASE

Home About us Our Database Publications Projects Our Services

WE CREATED THE LARGEST DATABASE WITH STANDARDIZED MONETARY VALUES FOR ALL ECOSYSTEM SERVICES GLOBALLY

We created the largest publicly available database and tool with standardized monetary values for all ecosystem services and all biomes on all continents. All the information in the ESVD comes from over 30 years of peer-reviewed academic research and official reports on monetary valuation of ecosystem services.

OUR DATA IS

- Completely Free
- State of the art & Reliable
- Used in decision-making
- Used by global leading organisations, businesses and NGO's

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Global Environmental Change 26 (2014) 152-158

Contents lists available at ScienceDirect

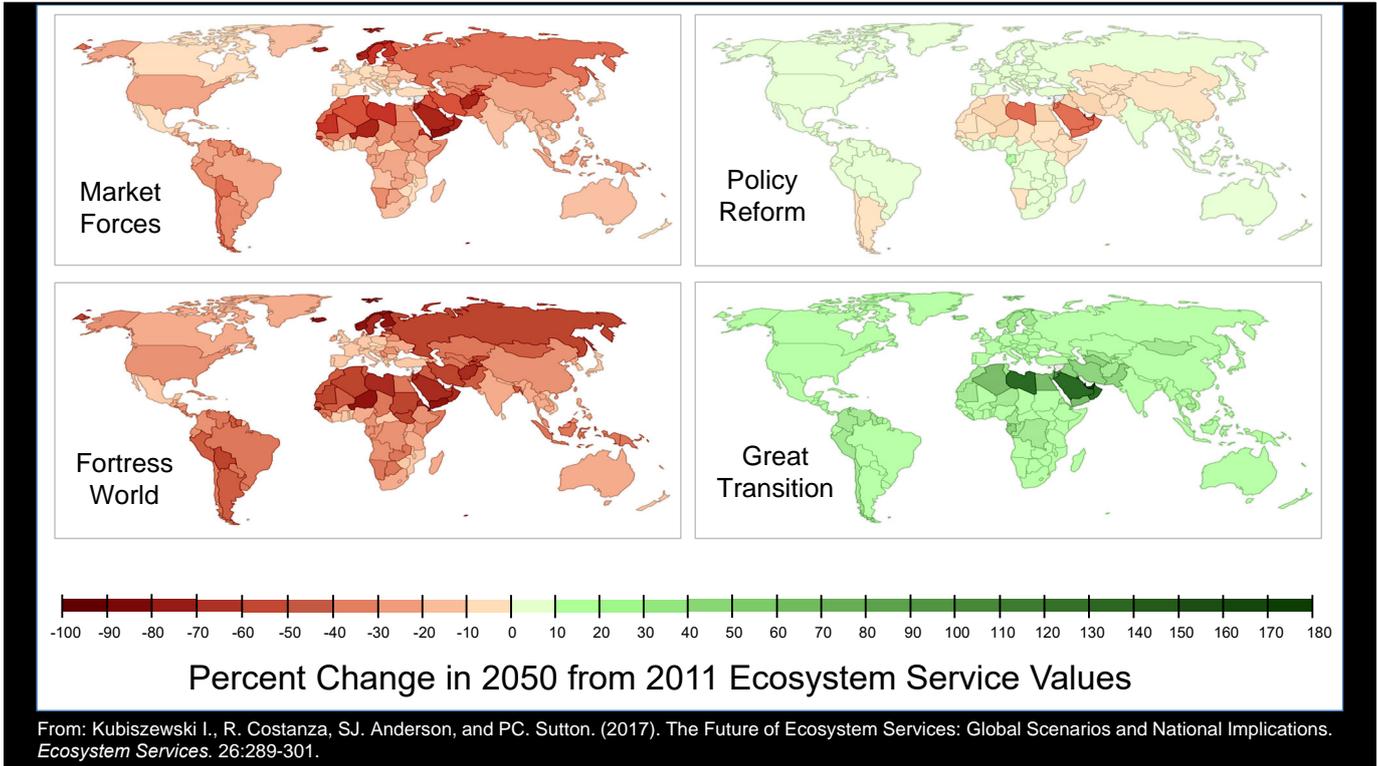
Global Environmental Change

...we estimated the loss of ecosystem services from 1997 to 2011 due to land use change at \$4.3–20.2 trillion/yr.

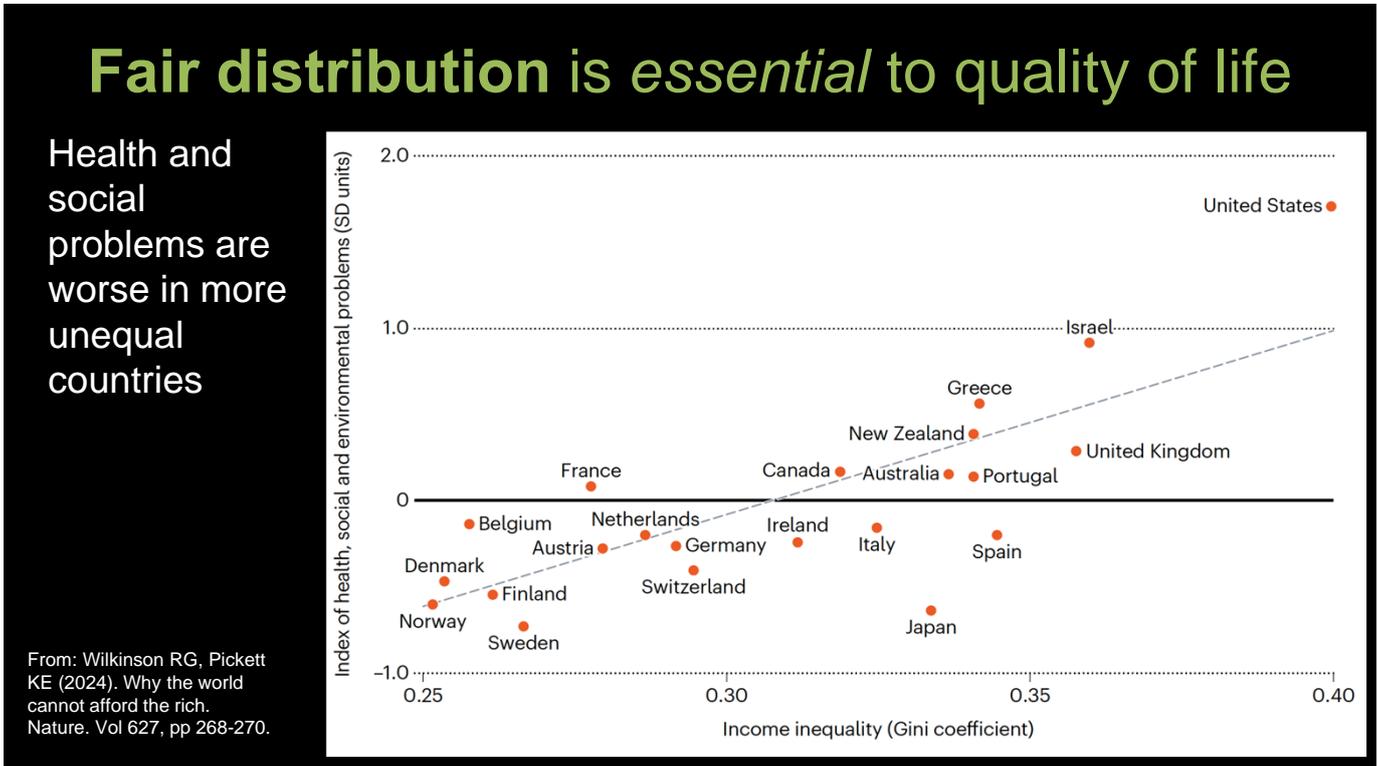
Robert Costanza^a, Rudolf de Groot^b, Paul Sutton^c, Sander van der Ploeg^d, Sharolyn J. Anderson^d, Ida Kubiszewski^a, Stephen Farber^e, R. Kerry Turner^f

^a Crawford School of Public Policy, Australian National University, Canberra, Australia
^b Environmental Systems Analysis Group, Wageningen University, Wageningen, The Netherlands
^c Department of Geography, University of Denver, United States
^d Barbara Hardy Institute and School of the Natural and Built Environments, University of South Australia, Australia
^e University of Pittsburgh, United States
^f University of East Anglia, Norwich, UK

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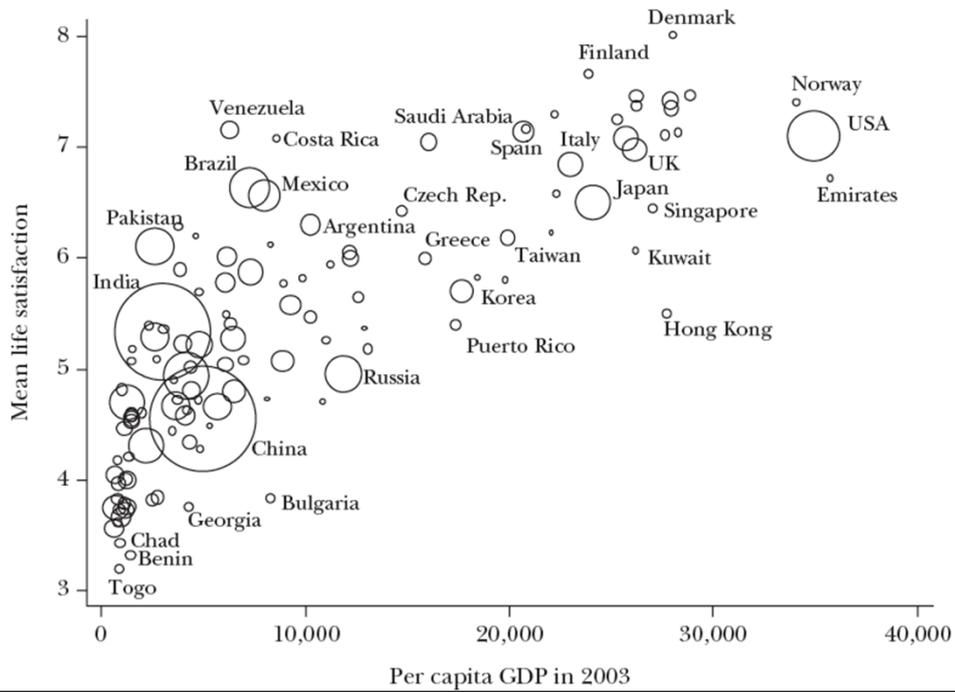


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Life Satisfaction and Per Capita GDP around the World



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“The welfare of a nation can scarcely be inferred from a measurement of national income as defined by GDP...Goals for ‘more’ growth should specify of what and for what.”

Simon Kuznets

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Time to leave GDP behind

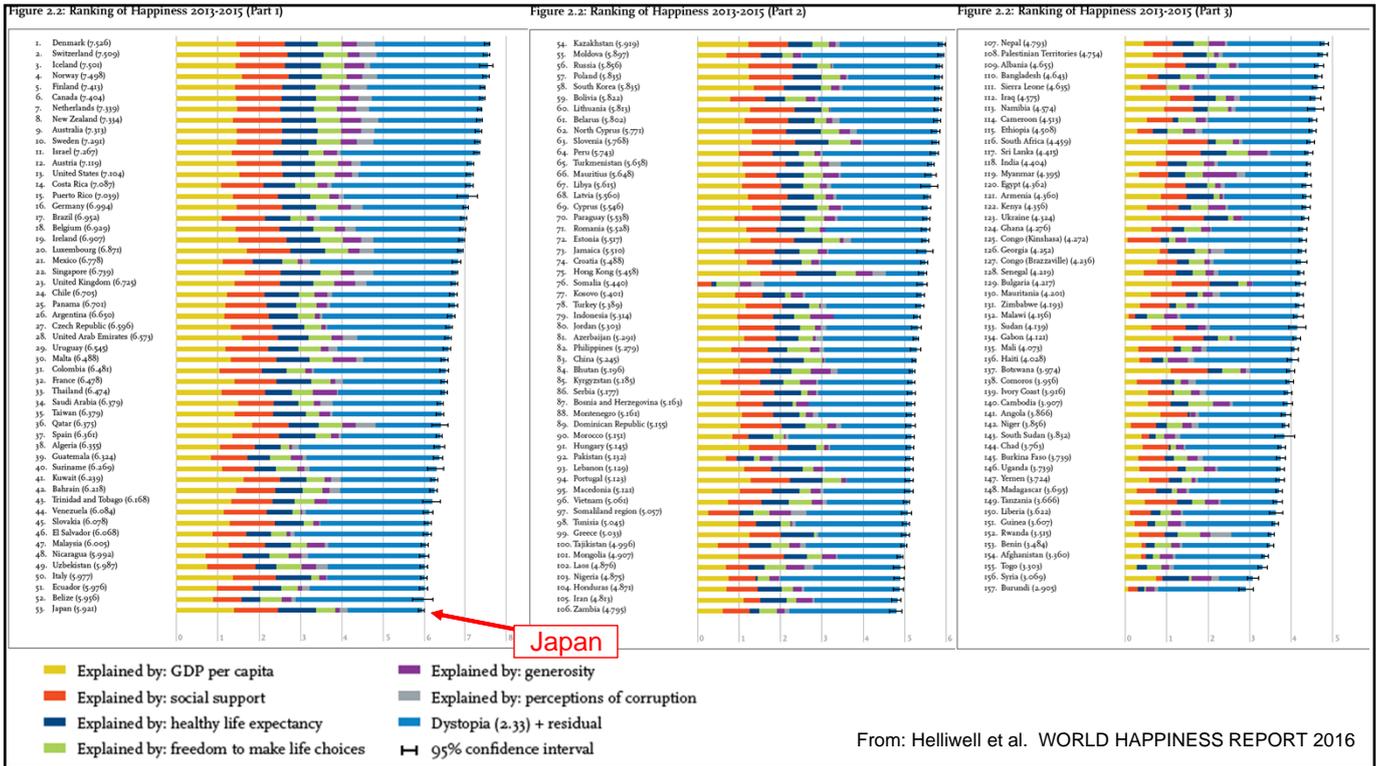
Gross domestic product is a misleading measure of national success. Countries should act now to embrace new metrics, urge **Robert Costanza** and colleagues.

16 JANUARY 2014 | VOL 505 | NATURE | 283

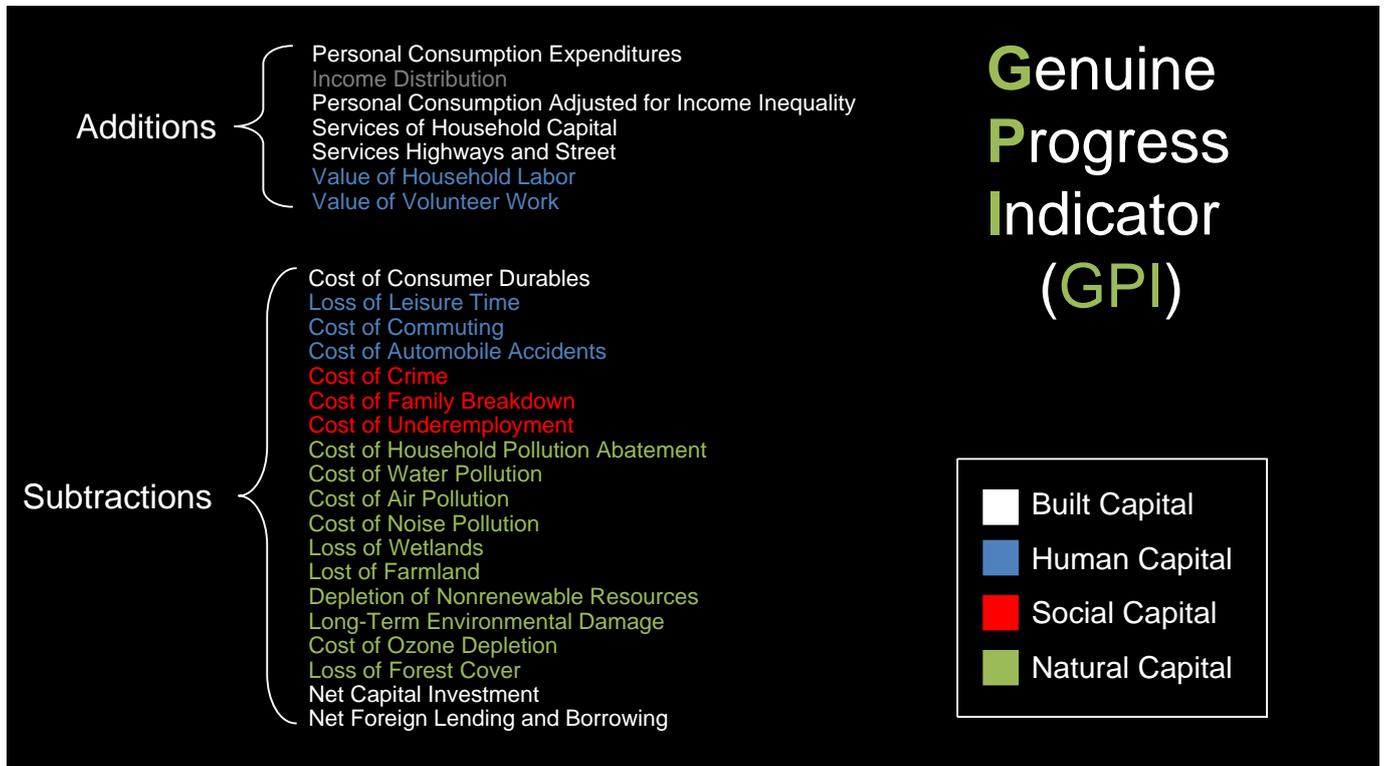
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Indicator	Units	Indicators	Explanation	Area coverage	Time
Genuine Progress Indicator (GPI)	\$	26	Personal Consumption Expenditures weighted by income distribution, with volunteer and household work added and environmental and social costs subtracted.	17 countries + regions	1950-present
Genuine Savings	\$	5	Level of saving after depreciation of produced capital; investments in human capital; depletion of minerals/energy/forests; and damages from air pollutants are accounted for	140 countries	1970-2008
Inclusive Wealth	\$	8	Asset wealth including, built, human, and natural resources	20 countries	1990-2008
Australian Unity Well-Being Index	Index #	14	Annual survey of various aspects of well-being and quality of life	Australia	2001-present
World Values Survey	Index #	100's	Periodic (5 so far) survey of a broad range of social, environmental, and economic variables	73 countries	1981-2008
Gallup-Healthways Well-Being Index	Index #	39	Annual survey in six domains: live evaluation, physical health, emotional health, healthy behavior, work environment, and basic assets	50 states in US	2008-present
Gross National Happiness	Index #	33	In-person survey in nine domains: psychological well-being, standard of living, governance, health, education, community vitality, cultural diversity, time use, ecological diversity	Bhutan	2010
Human Development Index (HDI)	Index #	4	Index of GDP/person, spending on health and education, and life expectancy	177 countries	1980-present
Happy Planet Index	Index #	3	HPI = subjective well being * life expectancy / ecological footprint	153 countries	3 yrs
Canadian Index of Well-Being	Index #	80	Includes community vitality, democratic engagement, education, environment, population, leisure, living standards, and time use	Canada	1994-present
National Well-Being Index	Index #	5	proxies for built, human, natural and social capital with weights based on regression with subjective well-being	56 countries	1 yr
OECD Better Life Index	Index #	25	Includes housing, income, jobs community education, environment, civic engagement, health, life satisfaction, safety, and work-life balance	36 OECD countries	1 yr
Well-Being of Nations	Index #	63	63 indicators in 20 domains weighted and ranked	180 countries	1990-2000

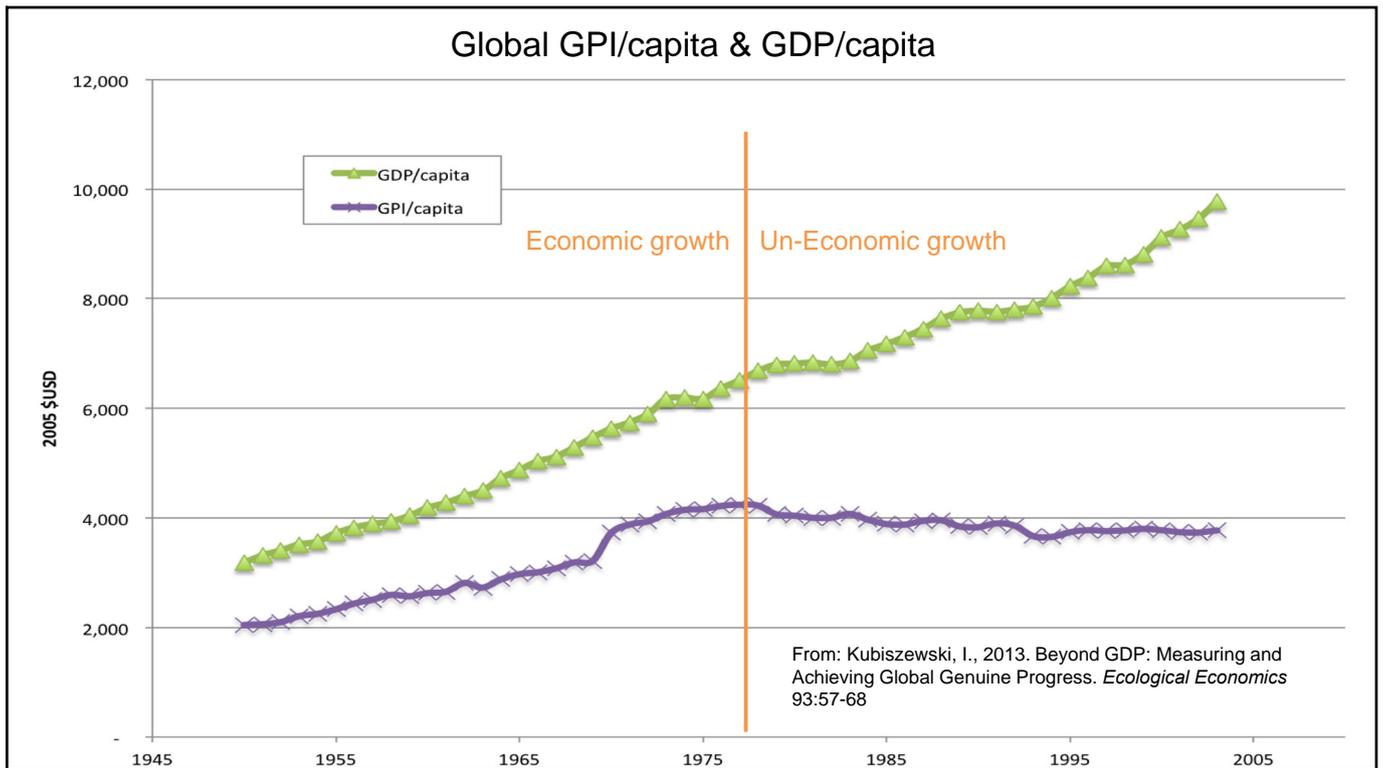
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To create sustainable wellbeing economies and societies requires:

- Breaking our addiction to the "growth at all costs" economic paradigm, to fossil fuels, to over-consumption in high-income countries, and inequality.
- A key step in the therapy is building a shared vision of a more sustainable and desirable future that focuses on the wellbeing of all humans and the rest of nature.

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Contents lists available at ScienceDirect

Ecological Economics

journal homepage: www.elsevier.com/locate/ecolecon



Overcoming societal addictions: What can we learn from individual therapies?

Robert Costanza^{a,*}, Paul W.B. Atkins^b, Mitzi Bolton^a, Steve Cork^a, Nicola J. Grigg^c,
Tim Kasser^d, Ida Kubiszewski^a

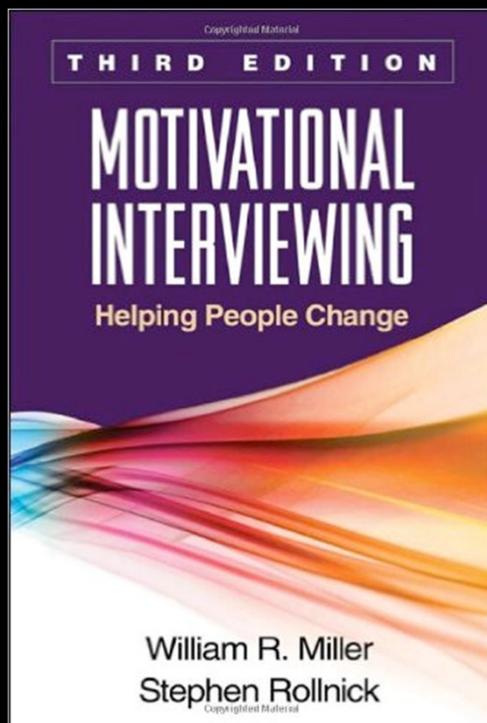
^a Crawford School of Public Policy, the Australian National University, Canberra, Australia

^b Australian Catholic University, Sydney

^c CSIRO Land and Water, Canberra, Australia

^d Knox College, Galesburg, IL, USA

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Motivational Interviewing (MI) is one of the most effective therapies for the treatment of substance addictions.

Based on engaging addicts in a **positive discussion** of their goals, motives, and futures.

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UN Sustainable Development Goals (SDGs)



Transforming our world:
The 2030 agenda for sustainable development

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Focus on GDP growth

Market Forces

The market knows best
Inequality not addressed

Policy Reform

Need planning and government
Equity maintained

Individualism

Community

Fortress World

Everyone for themselves
Limited Governance

Great Transition



Focus on Well-being

From: Kubiszewski, I., R. Costanza, S.J. Anderson, and P.C. Sutton. (2017). The Future of Ecosystem Services: Global Scenarios and National Implications. *Ecosystem Services*. 26:289-301.

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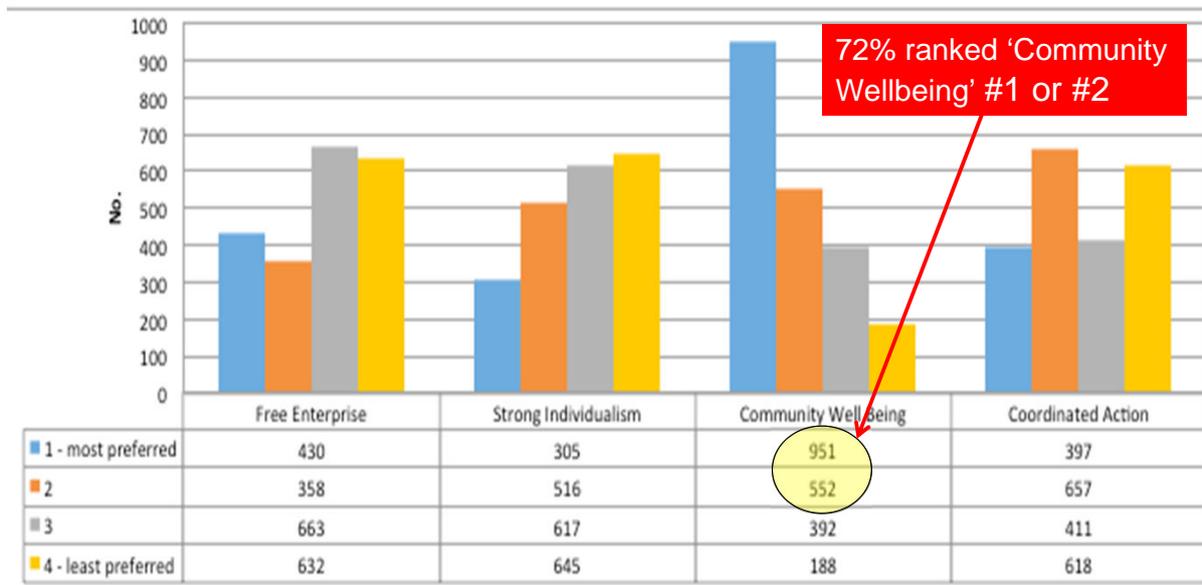
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From: Costanza, R., I. Kubiszewski, S. Cork, P.W.B. Atkins, A. Bean, A. Diamond, N. Grigg, E. Korb, J. Logg-Scarvell, R. Navis, and K. Patrick. 2015. Scenarios for Australia in 2050: A synthesis and proposed survey. Journal of Future Studies. 19:49-76.

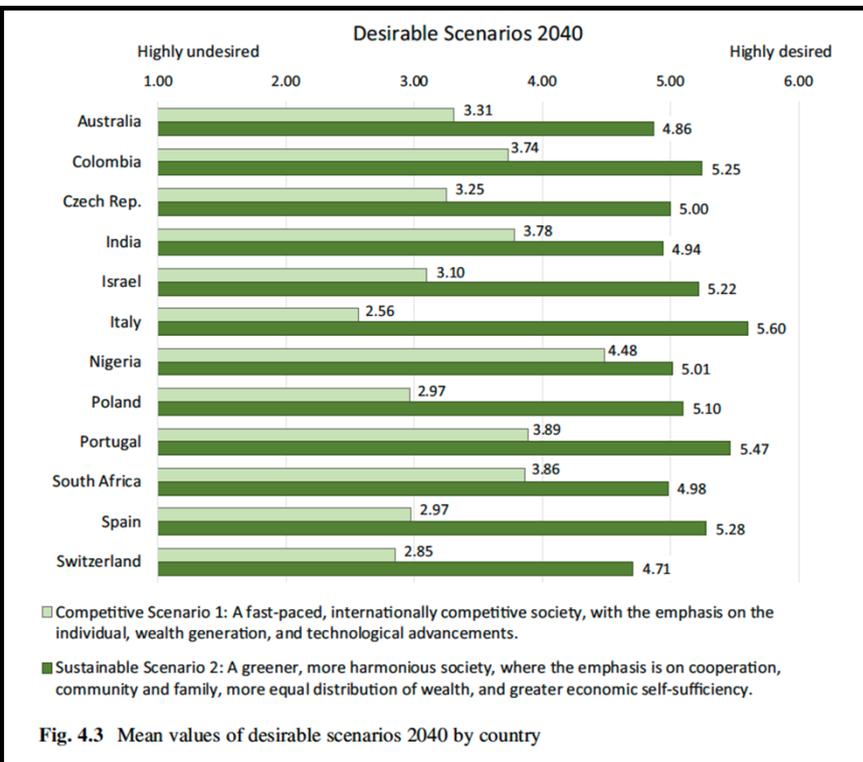
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Preferences for the four scenarios among Australians (n= 2,083)



From: Chambers, I., R. Costanza, et al. 2019. A public opinion survey of four future scenarios for Australia in 2050. *Futures*. 107:119-132

39



From: Krafft AM, et al. 2023. Long-term Future Expectations and Collective Hope. Chapter 4 in *Hope across cultures*. Springer

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Contents lists available at ScienceDirect

Journal of Environmental Management

journal homepage: <http://www.elsevier.com/locate/jenvman>



Discussion

Common asset trusts to effectively steward natural capital and ecosystem services at multiple scales



Robert Costanza^{a,*}, Paul W.B. Atkins^b, Marcello Hernandez-Blanco^c, Ida Kubiszewski^a

^a Crawford School of Public Policy, Australian National University, Canberra, Australia

^b The ProSocial Institute, Canberra, Australia

^c Environmental Consultant, San José, Costa Rica

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Elinor Ostrom's 8 core design principles for sustainable commons management

1. Clearly defined boundaries
2. Proportional equivalence between benefits and costs
3. Collective choice arrangements
4. Monitoring
5. Graduated sanctions
6. Conflict resolution mechanisms
7. Minimal recognition of rights to organize
8. Polycentric governance

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Claim the Sky!

By asserting that we all own the atmosphere as a common asset, we can begin to use the Public Trust Doctrine and the legal institutions surrounding property rights to protect the climate, charge for damages, and provide rewards to those that improve this shared resource, by creating an Earth Atmospheric Trust.

Barnes, P. R. Costanza, P. Hawken, D. Orr, E. Ostrom, A. Umana, and O. Young. 2008. *Creating an earth atmospheric trust*. *Science*. 319:724
Costanza, R. 2015. *Claim the sky!* *Solutions* 6(1):18-21.



INVOICE

Date: [Soon]

To: [Company XX]

Under the Public Trust doctrine, you are hereby assessed for damages to the Global Atmospheric Commons:

\$(X,XXX) per cumulative ton of CO₂ equivalent introduced into the global economy from 1988 to 2017 (based on the latest IPCC estimates of damages), plus ongoing damages:

= \$(X,XXX.00)

Deposit this amount to the Global Atmospheric Trust Fund within 90 days or face legal action and sanctions by the shareholders of the Trust—the people of Earth.

Monies in this fund will be used exclusively to maintain and improve the atmosphere for the benefit of all shareholders, present and future. These uses include, but are not limited to:

1. Investment in community owned, low-carbon emitting renewable energy sources, such as wind and solar.
2. Investment in carbon sequestration projects including forests, soils, and wetlands.
3. Investment in urban infrastructure improvements to reduce car use and improve building energy performance.
4. Investment in technology development to enhance and accelerate the above.

As an alternative to paying this invoice in full, you may invest an equivalent amount in projects that have been approved and monitored by the Trust in one of the categories above.

Signed,



Shareholders in the Earth Atmospheric Trust

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Wellbeing Economy Alliance (WE All)

A meeting in Glasgow, Scotland, in Oct. 2017, with five governments (Scotland, Sweden, Costa Rica, Slovenia, and New Zealand) committed to creating the Wellbeing Economy Alliance.

wellbeingeconomy.org

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