

Supplementary Information to:
Time to leave GDP behind (Comment in *Nature* 505, 283–285; 2014)

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Table S1. Some alternative National Indicators of Welfare and Well-Being.

Indicator	Type	Units	Domains	Indicators	Explanation	Area coverage	Temporal Coverage	References	Website
Index of Sustainable Economic Welfare (ISEW) and Genuine Progress Indicator (GPI)	GDP modification	\$	4	26	Personal Consumption Expenditures weighted by income distribution, with volunteer and household work added and environmental and social costs subtracted.	17 countries, several states and regions	1950-various	1-3	http://genuineprogress.net/
Genuine Savings	Income accounts modification	\$	3	5	level of saving after depreciation of produced capital; investments in human capital ; depletion of minerals, energy, and forests; and damages from local and global air pollutants are accounted for	140 countries	1970-2008	4,5	http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/ENVIRONMENT/EXTTEEJ0_contentMDK:20502388~menuPK:1187778~pagePK:148956~piPK:216618~theSitePK:408050,00.html
Inclusive Wealth Index	Capital accounts modification	\$	4	8	Asset wealth including, built, human, and natural resources	20 countries	1990-2008	6	http://www.ihdp.unu.edu/article/iwr
Australian Unity Well-Being Index	Survey-based index	Index #	14	14	Annual survey of various aspects of well-being and quality of life	Australia	2001-present	7	http://www.deakin.edu.au/research/acqpl/auwbi/index.php
World Values Survey	Survey-based index	Index #	10	100's	Periodic (5 "waves" so far) survey of a broad range of variables. Most used for international comparisons is ranking of "how satisfied are you with your life?" question.	73 countries	1981-2008 intermittent	8,9	http://www.wvsevsdb.com
Gallup-Healthways Well-Being Index	Survey-based index	Index #	6	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	10	http://www.well-beingindex.com/
Gross National Happiness	Survey-based index	Index #	9	33	Detailed in-person survey around nine domains: psychological well-being, standard of living, governance, health, education, community vitality, cultural diversity, time use, and ecological diversity	Bhutan	2010	11	
Human Development Index (HDI)	Composit Index	Index #	3	4	Index of GDP/person, spending on health and education, and life expectancy	177 countries	1980-present	12	http://hdr.undp.org/en/
Happy Planet Index	Composit Index	Index #	3	3	HPI = subjective well being * life expectancy / ecological footprint	153 countries	3 yrs	13,14	http://www.happyplanetindex.org/
Canadian Index of Well-Being	Composit Index	Index #	8	80	Includes community vitality, democratic engagement, education, environment, population, leisure, living standards, and time use	Canada	1994-present	15	https://uwaterloo.ca/canadian-index-wellbeing/
National Well-Being Index	Composit Index	Index #	5	5	proxies for built, human, natural and social capital with weights based on regression with subjective well-being	56 countries	1 yr	16,17	
OECD Better Life Index	Composit Index	Index #	11	25	Includes housing, income, jobs community education, environment, civic engagement, health, life satisfaction, safety, and work-life balance	36 OECD countries	1 yr	18,19	http://www.oecdbetterlifeindex.org
Well-Being of Nations	Composit Index	Index #	20	63	63 indicators in 20 domains weighted and ranked	180 countries	1990-2000	20	http://sedac.ciesin.columbia.edu/data/set/ciesic-wellbeing-of-nations
Sustainable Society Index	Composit Index	Index #	5	22	22 indicators in 5 domains ranked with various weightings	150 countries	2 yrs	21	http://www.ssfindex.com/

References

- 1 Daly, H. E. & Cobb, J. B., Jr. For the common good: Redirecting the economy toward community, the environment, and a sustainable future. (Beacon Press, 1989).
- 2 Talberth, J., Cobb, C. & Slattery, N. The Genuine Progress Indicator 2006: A tool for sustainable development. (Redefining Progress, Oakland, CA, 2007).
- 3 Kubiszewski, I. et al. Beyond GDP: Measuring and achieving global genuine progress. *Ecological Economics* 93, 57-68 (2013).
- 4 Hamilton, K. & Clemens, M. Genuine savings rates in developing countries. *The World Bank Economic Review* 13, 333-356 (1999).
- 5 Pillariseti, J. R. The World Bank's 'genuine savings' measure and sustainability. *Ecological Economics* 55, 599-609 (2005).
- 6 Duraipappah, A. K. & Mu-oz, P. Inclusive wealth: a tool for the United Nations. *Environment and Development Economics* 17, 362-367 (2012).
- 7 Cummins, R. A., Eckersley, R., Pallant, J., Van Vugt, J. & Misajon, R. Developing a national index of subjective wellbeing: The Australian Unity Wellbeing Index. *Social indicators research* 64, 159-190 (2003).
- 8 Diener, E. & Suh, E. M. 22 National Differences in Subjective Well-Being. *Well-being: The foundations of hedonic psychology*, 434 (2003).
- 9 Diener, E. & Suh, E. Measuring quality of life: Economic, social, and subjective indicators. *Social indicators research* 40, 189-216 (1997).
- 10 Gallup-Healthways. Gallup-Healthways Index Methodology Report. (2009).
- 11 Karma Ura, D. Gross National Happiness. The Centre for Bhutan Studies, <http://www.grossnationalhappiness.com/gnhIndex/introductionGNH.aspx>, retrieved October 19, 2009 (2008).
- 12 UNDP. Human Development Index. (UNDP, New York, 1996).
- 13 Marks, N., Abdallah, S., Simms, A. & Thompson, S. The (un) Happy Planet Index: An index of human well-being and ecological impact. New Economics Foundation, London (2006).
- 14 Abdallah, S., Thompson, S., Michaelson, J., Marks, N. & Steuer, N. The Happy Planet Index 2.0: Why good lives don't have to cost the Earth. (2009).
- 15 Michalos, A. C., Sharpe, A. & Muhajarine, N. An approach to the canadian index of wellbeing. 2010 (2010).
- 16 Vemuri, A. W. & Costanza, R. The role of human, social, built, and natural capital in explaining life satisfaction at the country level: Toward a National Well-Being Index (NWI). *Ecological Economics* 58, 119-133 (2006).
- 17 Abdallah, S., Thompson, S. & Marks, N. Estimating worldwide life satisfaction. *Ecological Economics* 65, 35-47 (2008).
- 18 Keržnyi, ċ. The Better Life Index of the Organisation for Economic Co-operation and Development. *Public Finance Quarterly* 56, 518-538 (2011).
- 19 Kasparian, J. & Rolland, A. OECD's 'Better Life Index': can any country be well ranked? *Journal of Applied Statistics* 39, 2223-2230 (2012).
- 20 Prescott-Allen, R. The wellbeing of nations: a country-by-country index of quality of life and the environment. (Island Press, 2001).
- 21 Van de Kerk, G. & Manuel, A. R. A comprehensive index for a sustainable society: The SSI-the Sustainable Society Index. *Ecological Economics* 66, 228-242 (2008).

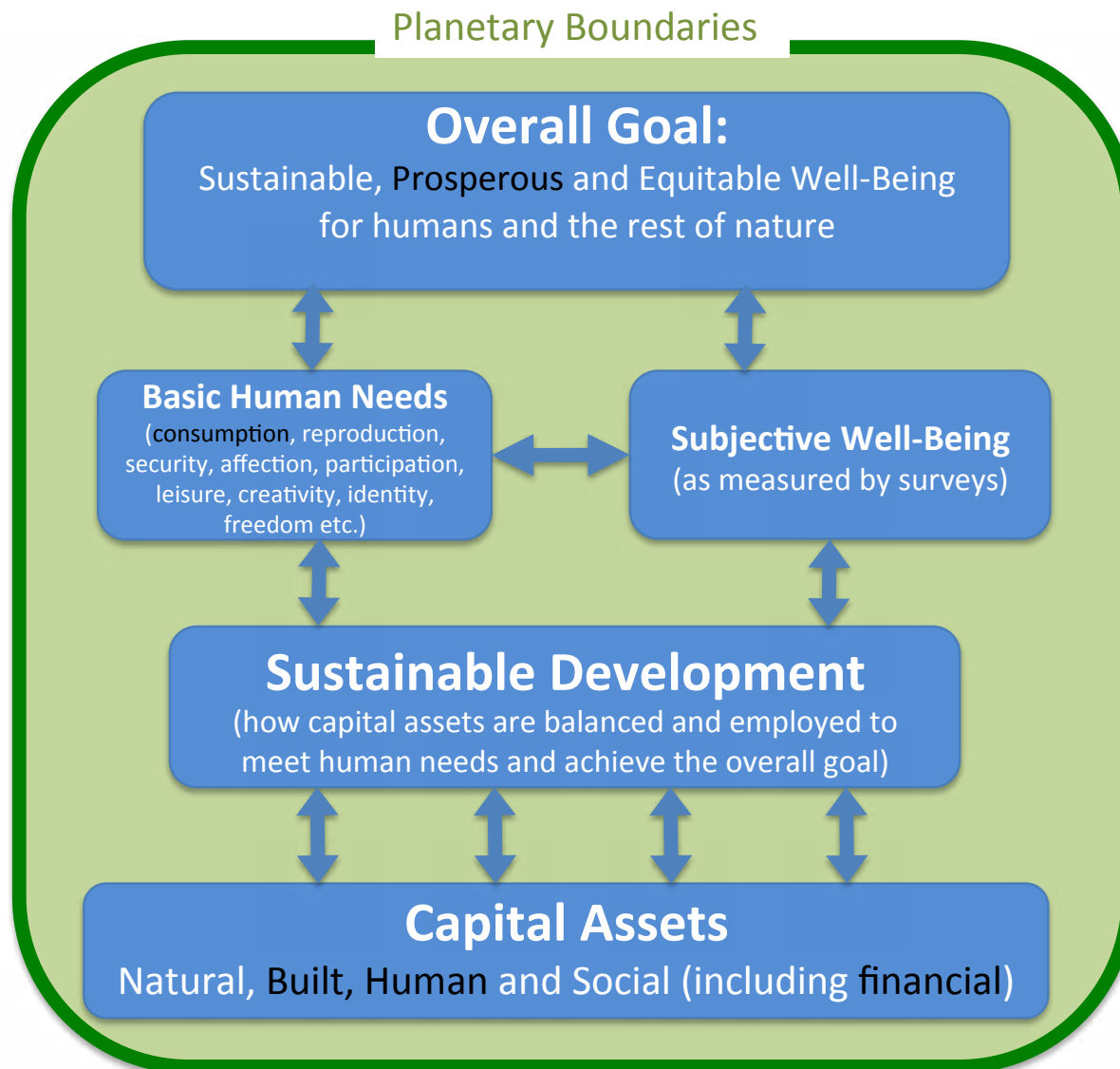


Figure S1. Relationship between the overall goal of sustainable well-being and the subjective and objective elements that contribute to it. Only the items in black are currently partially picked up in GDP. Double-headed arrows indicate that influences go in both directions and that all elements are interconnected. Source: www.asap4all.org