



Policy Brief

# MOVING BEYOND GDP: A STOCK-FLOW APPROACH TO MEASURING WELLBEING FOR THE G20

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*Task Force 5  
Inequality, Human Capital and Well-being*



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# Abstract

An inclusive economic recovery from the pandemic and effective climate action will require concerted global policy efforts. To achieve this, the G20 countries need to move urgently beyond GDP and use a comprehensive approach to assessing national progress. The proposed framework takes into consideration both stocks and flows and encompasses indicators of economic, as well as environmental, social, and human factors that are the basis for wellbeing in the long-term. Recommendations include convening a G20 study group, engaging statistical agencies, and shaping policies along these new measures. G20 countries are ideally positioned to lead on all of this.

# Challenges

Countries need to move beyond GDP and advance steps to measure wellbeing

GDP continues to be the indicator most prioritized by decision-makers, although it is increasingly understood that wellbeing in the long run is determined not by the nation's GDP (or market income) but by the portfolio of assets that make up its inclusive wealth<sup>1</sup> and by the flows emanating from this portfolio (Dasgupta, 2021; UNEP, 2018; World Bank, 2018 and 2021). A central question is whether market income is being used to expand the inclusive wealth portfolio or whether assets such as natural resources are being destroyed to generate income for current benefit at the expense of the future. Equally important is what kind of wealth is being created.

The reality is that GDP expansion is often associated with the deterioration of wealth, especially natural and social capital, and that these losses are not taken into account in assessing national progress through GDP. Examples include not only climate change, urban air pollution, and biodiversity loss, but also growing social inequality, time stress for families and mounting public/private debt. Against this backdrop, more and more countries are taking steps to measure their wellbeing beyond GDP. Examples include the OECD wellbeing framework (Brandt et. al., 2022), Canada's quality of life framework (Department of Finance Canada, 2021), Pakistan's inclusive wealth (UNEP, 2021) or Indonesia's ongoing expansion<sup>2</sup> of its previous work on inclusive wealth (Kurniawan and Managi, 2021).

However, the creation and existence of wellbeing frameworks should not be limited to simple statistical exercises. It should aim at influencing policy making and eventually people's quality of life in a tangible manner. In this respect, New Zealand provides a good example, since it was the first country to commit (in 2019) to regularly measuring wellbeing through its "wellbeing budget framework"<sup>3</sup>, thereby organizing its budgeting process around that includes a broad set of stock and flow measures. It is urgent that more countries follow and adopt integrated

<sup>1</sup> Inclusive wealth comprises stocks of human, natural, social, produced and financial capital. See section *Proposal* of this brief and the related TF9 policy brief on inclusive wealth for further details.

<sup>2</sup> <https://www.iisd.org/projects/measuring-wealth-promote-sustainable-development>

<sup>3</sup> <https://www.treasury.govt.nz/information-and-services/nz-economy/higher-living-standards/measuring-wellbeing-lsf-dashboard>

approaches towards wellbeing. These should guide policy making coherently across government departments and be used to assess the policy impact on multidimensional wellbeing.

Given the proliferation of proposals and innovations developed in the academic literature, intergovernmental organisations, and national governments, it will be of utmost importance to align existing efforts. Frameworks currently developed and implemented by individual countries do not (yet) allow for international comparison and will thus not serve the purpose of complementing GDP as an important cross-national measure. To prevent confusion and duplication of efforts, headline indicators should be developed in a way that are comparable across countries to allow for tracking progress throughout the G20 countries and beyond.

Every nation would gain important insight into development by measuring a broader (but not overly large) set of stock and flow measures. This framework should focus on measuring the inclusive wealth portfolio along with a small set of flow indicators related to both market and non-market sources of wellbeing in the economic, social, and environmental domains. We call this limited and focused set of indicators the **wellbeing framework** for simplicity from here on. Countries where the wellbeing framework is well measured and managed will be prosperous, with efficient use of natural resources and strong social cohesion. Such countries will have greater resilience and societal capacity to deal with shocks, both slow-moving ones like climate change and fast-moving ones like earthquakes or pandemics. In countries where the framework is ignored and some stocks/flows allowed to deteriorate, resilience to shocks will be diminished.

#### The necessity to start engaging policymakers

In order to tackle the major challenges of our time, the wellbeing framework is needed to serve as the global authority on assessing progress. Measuring, evaluating, and informing policies on economic, environmental, and social performance is needed to develop capacity, data, indicators, global data-driven analysis, and knowledge to identify governance gaps and make informed policy decisions with exacted solutions driving more prosperous, inclusive, and equitable societies.

Decision makers must be informed of the importance of moving beyond GDP and toward the wellbeing framework. Governments around the world are accustomed to using GDP as the sole goalpost for assessing progress. It is unlikely they will simply put GDP aside to make room for a new framework. G20 countries can show others why moving beyond GDP matters and how

focusing on the wellbeing framework will result in decisions that build human, social and natural capital, reduce inequality, and improve wellbeing. They should make it clear that the wellbeing framework is not intended to replace GDP, but to complement it.

Making the case that the wellbeing framework is needed requires a commitment to its regular measurement. This is complex work that must involve national statistical offices. G20 statistical offices are among the best in the world and are up to the task. However, they will require additional resources to carry it out, as measuring the wellbeing framework is a significant undertaking.

Once decision makers are engaged and statistical offices have begun producing the data required to measure the indicators of the wellbeing framework, the new indicators must be used to shape new and more sustainable decisions. This will be a multi-year process, as decision-making processes will not change overnight. As nations with already high levels of wellbeing, G20 countries have good reason to support this transition, since protecting existing wellbeing is easier than creating or rebuilding it. G20 countries also have the resources to see the transition through. Their success stories can show others the way.

# Proposals for G20

World leaders increasingly believe it is time to move beyond GDP. At their 2018 meeting in Canada<sup>4</sup>, G7 heads recognized that GDP is “insufficient for measuring success.” In the same vein, the UN Secretary-General wrote in 2021 that “it is time to collectively commit to complementary measurements”<sup>5</sup>. In line with previous G20 Presidencies, the Indonesian G20 Presidency under the motto “Recover together, recover stronger” places emphasis on inclusive and sustainable growth, which means economic growth that is socially and environmentally acceptable.

We recommend G20 countries begin measuring the wellbeing framework consistently and using it to guide decision-making toward more sustainable outcomes. The stock component of the framework—based on inclusive wealth—reveals the availability of assets for the benefit of those alive today but, equally importantly, for the future. The flow component—based on indicators of economic performance, social solidarity and participation, personal agency and opportunities, as well as environmental sustainability—tells us the extent to which stocks are being accumulated or depleted over time and how the stocks are being used to enhance wellbeing today. Such a joint approach allows for the evaluation of the trade-off between current and future wellbeing and contribute to informing policy decisions. The stock and flow components are laid out more fully below.

## Stock component of the wellbeing framework

We propose inclusive wealth as the basis for the stock component of the wellbeing framework. Increased inclusive wealth signals increased wellbeing in the future. As the 2021 review of *The Economics of Biodiversity* noted, judging “whether the path of economic development...is sustainable” requires nations to adopt “inclusive measure[s] of their wealth” (Dasgupta, 2021). Measuring inclusive wealth involves placing a value, where appropriate, on stocks of human, natural, social, produced, and financial capital and then aggregating this value and expressing it

<sup>4</sup> <http://www.g7.utoronto.ca/summit/2018charlevoix/communique.html>

<sup>5</sup> [https://www.un.org/en/content/common-agenda-report/assets/pdf/Common\\_Agenda\\_Report\\_English.pdf](https://www.un.org/en/content/common-agenda-report/assets/pdf/Common_Agenda_Report_English.pdf)

in inflation-adjusted per capita terms. Where monetary valuation is not appropriate, biophysical measures may be used.<sup>6</sup>

- **Produced capital** includes roads, railways, ports, houses, machinery, and a wide variety of other manufactured assets and physical infrastructure.
- **Financial capital** covers stocks, bonds, and other financial assets.
- **Natural capital** includes market natural resources such as timber, minerals, oil and gas. It also includes ecosystems of all kinds; for example, wetlands that help create clean drinking water and forests that act as carbon storehouses.
- **Human capital** represents the collective knowledge, skills and capabilities of the population. It is the result of lifelong learning in both formal and informal settings.
- **Social capital** as a stock, results from civic engagement, trust, and cooperation of the population. It includes the norms and behaviours that define interactions between members of society, including fundamental elements such as rights, laws, social inclusion, and governance.

### Flow component of the wellbeing framework

The proposed flow indicators comprise measures of market-based wellbeing based on traditional GDP along with indicators of non-market wellbeing derived from stocks of human, social, and natural capital. They are related to fundamental human needs and may be described intuitively as follows: **Market-based wellbeing captures** people's important material needs; **non-market social services** cover the need for social belonging and embeddedness in the society, as well as the need to influence one's own fate through one's own efforts, and **non-market social services** involve living respectfully of planetary boundaries.

- **Market-based wellbeing – GDP.** Moving beyond GDP does not mean replacing it, but rather complementing it with new sets of indicators. Thus, it is important for national statistical offices to continue tracking and monitoring it. Despite its limitations, GDP will still contribute to the debate on national progress, as it remains an established and succinct measure of market-based wellbeing. It should be supplemented by measures of income inequality and poverty, such as the Gini index, the inter-decile income share ratio (S90/S10), as well as

<sup>6</sup> Further details are provided in the accompanying policy brief for TF9. For the methodological approach to wealth measure see UNEP (2018), World Bank (2018 and 2021), and Smith et. al. (2018).



monetary poverty measures or poverty measures reflecting deprivations (like the Multidimensional Poverty Index)<sup>7</sup>.

- **Non-market social services.** Social services are part of the various types of social assets yielding streams of benefits for the society (Solow, 2000). These benefits should be measured given their significant contribution to productivity, policy effectiveness and wellbeing, and society's response to collective challenges (Lima de Miranda and Snower, 2022). The measurement should be based on a few major ethical foundations and be related to fundamental social characteristics, covering people's social needs and purposes (summarized here under the term solidarity), as well as individual empowerment, civil liberties, and human capabilities (agency). Examples of services to measure related to solidarity include giving behavior (such as charitable giving and volunteering), trust, and inclusion, while agency measures should incorporate confidence in empowering institutions, freedom, and health and education services and outcomes as proposed for example in the Solidarity and Agency Indexes of the SAGE Dashboard (Lima de Miranda & Snower, 2020).
- **Non-market ecosystem goods and services.** The majority of ecosystem services such as clean air and water, wildlife populations, and recreational sites are not traded. These services are usually not valued or are undervalued since they are not part of the market. Yet, they significantly contribute to wellbeing. Accounting for the values of ecosystem services can help improve decision making by informing efficient use of environmental resources. Measures in this area should include climate change performance, environmental health, as well as ecosystem vitality. Making the multiple interrelationships of human wellbeing with ecosystem services and the different dimensions of climate change is an important task to represent inclusive wellbeing and to allow for development within planetary boundaries.

These key dimensions of success and progress are related to normative goals that are common throughout the G7 and beyond, including the Sustainable Development Goals. They address separate human needs and motivations and are thus not routinely substitutable for one another. For example, severe social alienation and disempowerment cannot be compensated by material rewards. As a result, these indicators need to be assessed separately, rather than averaged in a single index—much like the altitude and speed on an airplane's dashboard need to be

<sup>7</sup> <https://ophi.org.uk/multidimensional-poverty-index/>

measured separately, rather than averaged. We propose to develop a small and concise set of headline indicators for the flow component along the dimensions economic, social, and environmental wellbeing that are comparable across the G20 countries.

### From strategy to action

For G20 nations to progress beyond GDP and start measuring the full suite of stocks and flows relevant to well being, we recommend that the G20 convene a Study Group to discuss the wellbeing framework. By creating such a Study Group, the Indonesian G20 Presidency can make a major contribution towards aligning the G20 members around concrete goals and steps that could be monitored in the future. An important task will be to agree on a small set of internationally comparable headline indicators to allow for tracking progress on the dimensions of economic, social, and environmental level.

At the national level, each G20 nation should engage its own decision-makers and international partners in discussions about decision-making using the wellbeing framework. Such discussions must be tailored to national and regional circumstances. While the basic arguments do not vary from country to country, the context in which the arguments must be made do. Discussions should be held at high levels where decisions are ultimately made. They should make it clear that the wellbeing framework is not intended to replace GDP, but to complement it. In addition, there should be a consensus on the set of indicators and methodological approaches adopted by national statistical offices. The desired endpoint would see a small suite of additional indicators comparable across countries displayed prominently on the decision makers' dashboards along with GDP.

Second, G20 countries should mandate and fund their national statistical offices to start measuring the wellbeing framework. While progress has already been made by some countries, we argue that all G20 nations should systematically monitor progress through this framework, allowing for a comparable assessment of national progress. This aligns well with the three pillars of the Indonesian G20 presidency (promoting productivity, increasing resilience and stability, and ensuring sustainable and inclusive growth). Advanced national statistical offices should be able to produce estimates for most elements of the framework in 2-3 years.

Third, G20 countries should commit to integrating wellbeing indicators into their decision-making processes and sharing their experiences with others. We recommend that these key dimensions of success and progress—which are related to normative goals common throughout the G20 and beyond, including the Sustainable Development Goals—be monitored for the G20 countries and beyond to inform development strategies and budget priorities. Initially, this

should focus on the shaping of new policies and should explore how these measures help predict public compliance with policies such as pandemic containment and climate action.

G20-informed policy agendas, legislative and regulatory mechanisms, tools, and innovations are in a position to consider measurable economic, social, and environmental processes that can propagate equitable, inclusive, and spatially efficient forms of normativity. As such, the recovery policies and recommendations ought to be actioned in a way that is proportionately universal, recognizing that universal responses are needed to trigger social and environmental investment, legislative and policy interventions, increased awareness, and appropriate behavioral changes.

## **RELEVANCE TO G20**

The calls from the UN and other multi-lateral institutions to move beyond GDP are growing louder. Ultimately, though, it is nations and not international organizations that must tackle this challenge. GDP is woven into the fabric of national policies, laws, and institutions in myriads of ways. Reward systems for politicians, public officials, and business leaders are tied to its growth. None of this will be easily changed. But change is essential if the world is to move away from the path of “short-termism” carved by over reliance on GDP, with all its negative consequences for wellbeing, and on to the path of sustainability.

In line with previous G20 Presidencies, the Indonesian G20 Presidency under the motto “Recover together, recover stronger” places emphasis on inclusive and sustainable growth. To measure the effectiveness of government policies that are meant to address these needs, a comprehensive measurement tool accounting for both stocks and flows of assets is needed that can serve as the global authority on assessing economic, environmental, and social wellbeing. The wellbeing framework proposed here meets this need. With such measures, the G20 Presidency will have the groundwork for assessing its progress with regard to its priorities. As a multinational forum, the G20 has unique capabilities to set global agendas and influence global norms; and is therefore a predestinated forum to develop a framework for multilevel governance to encourage the recoupling of economic, political, and social domains around the world.

Leading this transition will require significant investment of public resources, as well as the capacity to take risks and for learning by doing. It will also require cooperation among like-

minded countries, as there is too much for any one country to do. The G20 is, thus, the ideal group to move beyond GDP and embrace the wellbeing framework.



# References

- Brandt Nicola, Exton Carrie and Fleischer Lara, “wellbeing at the heart of policy: lessons from national initiatives around the OECD”. Forum New Economy, 2022. <https://newforum.org/wp-content/uploads/2022/02/FNE-BP01-2022.pdf>
- Dasgupta Partha. “The economics of biodiversity: The Dasgupta Review”, HM Treasury, 2 February 2021, <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>
- Department of Finance Canada, *Toward a Quality of Life Strategy for Canada*, 19 April 2021, <https://www.canada.ca/content/dam/fin/publications/mwmtqlsc-mqivsqvc/mwmtqlsc-mqivsqvc-en.pdf>
- Kurniawan Robi and Managi Shunsuke. “Economic Growth and Sustainable Development in Indonesia: An Assessment”, in *Bulletin of Indonesian Economic Studies*, Vol. 54, No. 3 (11 December 2018) p. 339-361. DOI: 10.1080/00074918.2018.1450962
- Lima de M. Katharina and Snower J. Dennis, “Recoupling Economic and Social Prosperity”, in *Global Perspectives* Vol.1, No.1, 1867 (20 February 2020), <https://doi.org/10.1525/001c.11867>
- Lima de M. Katharina and Snower J. Dennis (2022). “The Societal Responses to COVID-19: Evidence from the G7 Countries”. PNAS, 119(25), e2117155119.
- Smith Robert, Vaughan Scott, Clarke Kieran, and McLaughlin David. “Comprehensive wealth in Canada 2018 – Measuring what matters in the long term”. International Institute for Sustainable Development, 26 October 2018, <https://www.iisd.org/publications/comprehensive-wealth-canada-2018-measuring-what-matters-long-term>
- Solow M. Robert. “Notes on Social Capital and Economic Performance” in Dasgupta Partha and Serageldin Ismail (eds), *Social Capital: A Multifaceted Perspective*, Washington DC, World Bank., 2000, p. 6–9.
- United Nations Environmental Programme (UNEP), *Inclusive Wealth of Pakistan: The Case for Investing in Natural Capital and Restoration*, Nairobi, Kenya, 4 June 2021, <https://wedocs.unep.org/bitstream/handle/20.500.11822/36257/IWP.pdf>
- United Nations Environment Program (UNEP), “*The inclusive wealth report 2018*”, Nairobi, Kenya, 21 November 2018, <https://www.unep.org/resources/report/inclusive-wealth-report-2018>
- World Bank, “*The Changing Wealth of Nations 2018: Building a Sustainable Future*”, Washington DC, World Bank, 30 January 2018, <https://openknowledge.worldbank.org/handle/10986/29001>

World Bank, *"The Changing Wealth of Nations 2021: Managing Assets for the Future"*, Washington, DC: World Bank, 27 October 2021, <https://openknowledge.worldbank.org/handle/10986/36400>