

## Measuring Progress: Indicators for Degrowth

A steering paper for the “Indicators for Degrowth” workshop at the 2<sup>nd</sup> Conference on Economic Degrowth for Ecological Sustainability and Social Equity

*Daniel W. O’Neill*

Center for the Advancement of the Steady State Economy  
c/o Sustainability Research Institute  
University of Leeds, Leeds, LS2 9JT, UK  
d.oneill@leeds.ac.uk

### Introduction

The question that this workshop is intended to address is: “Do we need to measure progress towards sustainable degrowth, and if so, how?” In the following paper, I discuss the arguments for and against measuring progress, and provide three approaches that could be used if we choose to measure progress. I suggest adopting the third of these approaches (a set of separate societal and environmental accounts), and provide a conceptual framework and potential list of indicators that could be applied.

### Against Measuring

There are two reasons why we might consider *not* measuring progress towards degrowth. The first of these is that the current state of global ecological overshoot was at least partially caused by our focus on, and attempt to maximise, a narrow set of economic indicators. It is arguable whether economic growth would have become such a high priority goal had indicators such as GDP not been invented. We have placed GDP on a pedestal, and largely ignored other ways of making decisions, particularly more qualitative approaches. This might make us wary of promoting new indicators, even if they represent a significant improvement on GDP, because of their potential to be misinterpreted or misused.

The second reason is that it may turn out to be impossible to measure what the degrowth movement is trying to achieve. Many of the characteristics of degrowth that are listed in the declaration from the Paris conference — items such as conviviality, sense of community, self-reflection, balance, creativity, flexibility, diversity, and good citizenship — are of a qualitative and subjective nature and do not lend themselves easily to measurement. There are other characteristics of degrowth from the declaration that are simpler to measure, such as reduced consumption of resources, an increase in free time, equity, and individual and collective health, but there is the danger that because these things are simpler to measure, we might focus too much attention on them. We may end up measuring, and therefore managing, what is easy, instead of what is important.

### In Favour of Measuring

However, I would argue that while the above are important concerns, we can address them by choosing indicators carefully, and by keeping indicators in their rightful

place as one tool in the decision-making process. Furthermore, I would argue that the arguments against measurement are heavily outweighed by the arguments in favour of it.

The first of these arguments may be summed up in the popular phrase, “You can’t manage what you don’t measure.” The call for degrowth in wealthy nations has largely arisen because environmental indicators such as the ecological footprint show that levels of resource use and waste production are too high globally. Measurement was necessary to demonstrate the need for degrowth, and is now necessary to determine whether we are achieving it. Reliable indicators give us the tools to determine whether we are making progress towards a more sustainable society, or are heading in the wrong direction — potentially being led astray by political rhetoric and greenwash.

The second reason is that “What gets measured tends to get done”, and what is not measured tends to get ignored (by policymakers at least). At the moment, what is measured is GDP, and what is ignored is the environment and issues of social equity. If we want to shift the agenda away from economic growth and towards economic degrowth, then creating and promoting indicators that measure what we mean by degrowth would be a very effective way of doing this. As Dana Meadows writes:

Indicators arise from values (we measure what we care about), and they create values (we care about what we measure)... [C]hanging indicators can be one of the most powerful and at the same time one of the easiest ways of making system changes — it does not require firing people, ripping up physical infrastructures, inventing new technologies, or enforcing new regulations. It only requires delivering new information to new places. (Meadows 1998, pp. viii, 5)

### Defining Degrowth

For the reasons given above, I would argue that it is very important that we measure progress towards degrowth. However, in order to be able to do it is first necessary to have a clear definition of what degrowth means. I use the definition from the Paris declaration:

We define degrowth as a voluntary transition towards a just, participatory, and ecologically sustainable society... The objectives of degrowth are to meet basic human needs and ensure a high quality of life, while reducing the ecological impact of the global economy to a sustainable level, equitably distributed between nations... Once right-sizing has been achieved through the process of degrowth, the aim should be to maintain a “steady state economy” with a relatively stable, mildly fluctuating level of consumption. (<http://www.degrowth.eu/v1/index.php?id=56>)

One of the main messages of the declaration is that degrowth is a *process* (or transition), and that the end goal of this transition is a steady state economy. The key challenge of degrowth is how to reduce global resource use and waste production to a sustainable level during this transition, while maintaining (or even enhancing) the well-being of the planet’s citizens. With this in mind, I discuss three approaches that could be taken to measure progress in the degrowth transition at the national level.

### Approach 1: Continue with GDP

The first approach would be to continue using GDP. Since rising GDP is the standard measure of economic growth, declining GDP could be interpreted as an indicator of degrowth, and stable GDP an indicator of the steady state. GDP is strongly correlated with the use of many natural resources (energy in particular), but not correlated with quality of life measures such as happiness beyond a basic level of income (around \$20,000 a year according to Layard 2005). Given these relationships, a potential target for a degrowth transition in wealthy countries could be to reduce GDP by a certain amount each year (say 2%), until it reaches this basic income level.

While straightforward, there are a number of problems with this approach. GDP has been widely criticised as an indicator of progress because it does not distinguish between the costs and benefits of economic growth, or its quantity and quality. These are critical distinctions for degrowth. While the rate of change of GDP may be a good proxy for the rate of change of resource use, it says nothing about whether the actual level of resource use is ecologically sustainable, or whether the transition is socially sustainable.

### Approach 2: Adjust GDP

The second approach would be to use a corrected version of GDP, such as the Index of Sustainable Economic Welfare (ISEW) or the Genuine Progress Indicator (GPI). These indicators use the same money-based accounting framework as the GDP, but add in the value of household and volunteer work (missing from GDP), and subtract off the cost of problems like crime, pollution, and family breakdown (which are counted as positives in the GDP). This approach is a vast improvement on GDP, because it separates costs and benefits, and quantity and quality to some extent. However, since all activities are translated into monetary terms it assumes a certain substitutability between them. Furthermore, these indicators still do not tell us whether the level of economic activity is environmentally sustainable, or how it contributes to well-being.

### Approach 3: Environmental and Societal Accounts

For this, we need explicit environmental and societal accounts, which is the third approach I would like to discuss, and the one I would propose using to measure progress in the degrowth transition. I suggest that any set of degrowth indicators should satisfy the following seven criteria:

1. **The indicators should be chosen and organised based on a unifying conceptual framework.** A unifying framework is necessary to ensure that a comprehensive set of indicators is chosen. The framework should acknowledge that the economy is a subsystem of the environment, and its scope should include the full range of relations between natural resources and human well-being. Herman Daly's "Ends–Means Continuum" (Daly 1977) provides such a framework, and Dana Meadows proposed using it as the basis of an information system for sustainable development indicators (Meadows 1998). The framework organises items in a hierarchy from *ultimate means* (the natural resources that sustain life and all economic transactions) to *intermediate means* (the factories,

machines, and skilled labour that transform natural resources into products and services) to *intermediate ends* (the goals that the economy is expected to deliver) to *ultimate ends* (those goals that are desired only for themselves, and are not the means to achieve any other end).

2. **The indicators should be divided into two separate accounts — environment and society — and these should not be mixed.** A number of sustainability indices have been proposed, such as the Environmental Performance Index (Esty et al. 2008) and the Sustainable Society Index (van de Kerk & Manuel 2008), which include a variety of environmental and social indicators that are *added* together to form a single index. Like the corrected GDP measures, these indices make the implicit assumption that environmental and social goals are substitutable for one another, which they are not: more society does not compensate for less environment, or vice versa. Each of these goals must be achieved on its own terms, and therefore measured on its own terms (and in its own units).
3. **The environmental indicators should monitor the major stocks and flows in the economy–environment system.** The three major stocks are the size of the human population, the stock of built capital, and the stock of natural capital. The three major flows are the flow of input materials from the environment to the economy, the flow of output emissions back to the environment, and the flow of energy.
4. **The environmental indicators should show how the stock and flow variables are changing over time, and the position of each flow variable in relation to a sustainability threshold.** The main environmental objective of degrowth is to reduce the level of material and energy flows to within ecological limits (the degrowth transition), and then stabilise it there (a steady state economy). To determine whether this is happening, it is necessary to measure rates of change in the indicators over a sufficiently long time period (~5–10 years).
5. **The societal indicators should monitor both personal and social well-being, and how these are changing over time.** A combination of subjective and objective indicators that measure human capital and social capital will probably be necessary to accomplish this. These should be chosen based on the stated goals of the degrowth movement, which include high quality of life, individual and collective health, the fulfilment of basic needs for all, an increase in free time, equity, and sense of community (<http://www.degrowth.eu/v1/index.php?id=56>).
6. **All indicators should have targets.** In order to determine whether degrowth is happening, and whether we have reached the goal of a steady state economy, indicators with targets are required. As Dana Meadows puts it, “An environmental indicator becomes a sustainability indicator (or unsustainability indicator) with the addition of *time*, *limit*, or *target*” (Meadows 1998, p. 12). Unfortunately, the vast majority of “sustainability indicators” that exist at the moment lack clear targets. The general objective for a set of degrowth indicators should be to maximise the indicators of well-being in the societal accounts, while minimising the indicators of resource use in the environmental accounts. Specific targets for the environmental indicators should be chosen based on ecological

criteria, while targets for the societal indicators should probably be chosen using a participatory process.

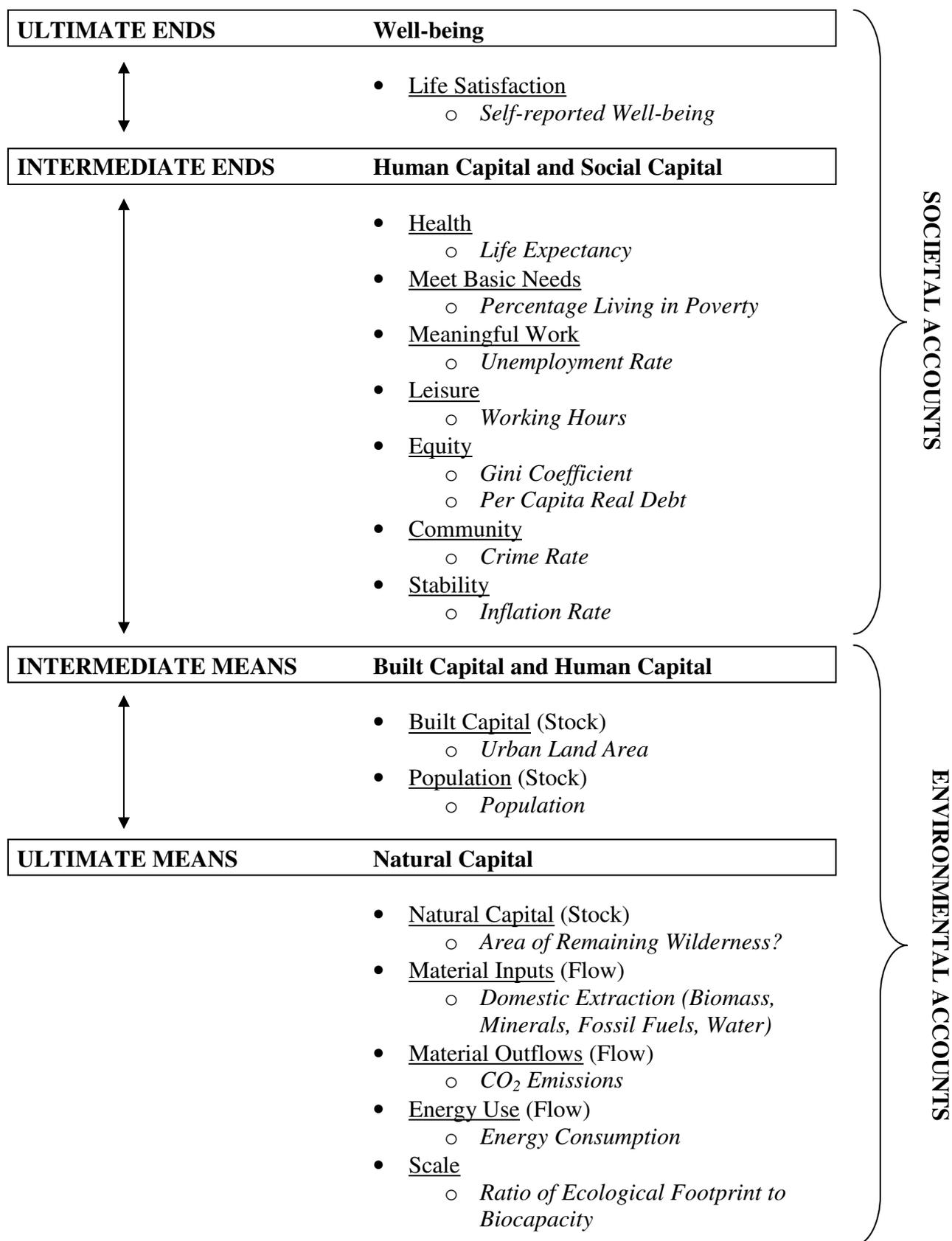
- 7. The indicators should be easy to communicate to policy makers and the public.** In order to be useful the set of indicators needs to be comprehensive, but in order to be effective it must also be simple to understand. For use as a communications tool it may be helpful to create an index from the set of accounts that allows countries to be ranked. However, if this is done, care must be taken not to add together elements that are not substitutable for one another (such as indicators of environment and society). One aggregation approach that may prove useful is to take the *ratio* between social and environmental indicators. This ratio is a measure of the efficiency with which means are translated into ends, and is the approach taken by the Happy Planet Index (Abdallah et al. 2009).

### Implementation

In Figure 1, I present a set of indicators that satisfy the above criteria. I do not claim that this is the definitive set of indicators for degrowth, particularly with respect to the societal accounts, but I am hoping it provides us with a starting point that we can refine further. The set contains a list of idealised indicators (what we would like to be able to measure), and then a proxy for each of these (the best we can do at the moment). Some of the idealised indicators, such as energy use, are relatively easy to measure. Others, such as the stock of built capital, are much more challenging.

### Research Questions

There is a variety of important research questions that remain to be answered with respect to indicators of degrowth and the steady state. In my opinion, the four main areas where further research is required are: (1) determining the sustainability thresholds for resource use indicators; (2) accounting for trade in these indicators; (3) choosing an appropriate set of societal indicators; and (4) developing the means to measure these. I am hoping that this workshop will allow us to make some progress in these areas.



**Figure 1:** A potential set of indicators to measure progress in the degrowth transition to a steady state economy. The indicators are divided into two sets of accounts (social and environmental) and are classified according to Daly’s End–Means Continuum and the Four Capitals Framework. Each set of accounts consists of a list of idealised indicators (underlined), and the best proxy currently available to measure these (*italics*).

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