

Towards Sustainable Futures

The Role of Evaluation

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4 Understanding and addressing sustainability in evaluation

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Introduction

In order to tackle sustainability in evaluations, we need to better understand what we mean by it. To sustain, to be sustainable and sustainability are ordinary words in the English language, and they can mean many things, from highly positive to very negative. In their use in evaluation, they have focused on aspects of sustainability that are specific to the profession and to the political and societal context in which that profession operates.

Overall, sustainability in relation to development of societies and economies has been used in three different ways. These continue to co-exist and raise difficulties in application and in use of sustainability terminology in evaluations. The economic/financial version of sustainability was the first, introduced in its full glory in the 1960s, and continues to be a strong focus of the neoliberal economic paradigm.¹ The social version of sustainability, focusing on equity and equality issues, as well as governance, justice, public services and social innovation, gradually gained traction and has aimed to integrate economic and social sustainability. Environmental sustainability became influential after the Earth Summit in Rio de Janeiro in 1992, but its integration into social and economic sustainability concerns occurred relatively late, in the Sustainable Development Goals of Agenda 2030, adopted by the UN member states in 2015.

These shifts in perspective and meaning will be explored, as well as the extent to which they are included in evaluation theory and practice. Not all aspects of sustainability should or need to be covered in each and every evaluation, but at least we can strive for consistency and coherence, and use analytical search tools to help us shape the sustainability perspective in evaluations. The chapter ends with some practical recommendations.

A first exploration of the concept of sustainability

We use the verb to sustain and the noun sustainability in many ways in ordinary language. A decent singer should for example be able to ‘sustain’ a note for at

least ten seconds, but hopefully for more than 20 seconds. On the other hand, one could also sustain an injury, which means you have an injury that will take time to heal. One can sustain a discussion, one's family or a charity. In general, sustaining means maintaining or prolonging but also to withstand pressure or provocation. We also can imagine issues we definitely want to be unsustainable, like slavery, imperialism, colonialism and inequity and inequality, but that does not mean we have a clear perspective on how we would like to see the opposite of these concepts to be sustained. First, we would need to get there! According to the Merriam-Webster online dictionary, to sustain can mean 'to provide what is needed for (something or someone) to exist, continue, etc.', or 'to hold up the weight of (something)' and 'to deal with or experience (something bad or unpleasant)'. This confirms that although positive meanings are dominant, negative meanings are also recognised. While we know these negative connotations, we tend to phrase them in different ways. For example, in socio-economic science, the existence of so-called poverty traps has been researched extensively, at both country and household levels. This is seen as a set of self-reinforcing mechanisms, where the poor start poor and remain poor, due to vicious feedback loops (Kraay & McKenzie 2014). While this could be phrased in terms of sustaining poverty (in the negative sense of sustaining), it is not discussed as such in the literature – the term 'sustain' does not emerge in any of its variations in Kraay and McKenzie's overview of the evidence regarding poverty traps. A second example of negative feedback loops is climate change. The world is inexorably on its way to a global temperature increase of more than 2 degrees Celsius. This is the kind of 'sustainable growth' that many economists would like to see for GDPs and that social scientists would like to see for local communities, social institutions, services and equity and equality issues. However, it is not the language used for our road to a climate catastrophe. Terms used are widespread, rapid, and intensifying change, relentless advance – all carrying the same meaning as 'sustainable growth', but in the wrong direction, towards increasing temperatures, sea level rise and extreme weather events.

There is thus a huge tendency to adopt teleological definitions of sustainability: these are situations that humanity would like to see, that we would aim for. The problem with teleological definitions is that they overlook the sustainability of what we do not aim for, or what we want to prevent (like climate change). In politics and in society there is nothing wrong with teleological definitions, as we need to strive for a better future, but in science, and I suggest in evaluation as well, we need to be clear on what we mean when we use a concept like sustainability.

Lastly, the timing aspect plays an important role. Sustaining a note should not last longer than when all air is expelled from the lungs. Sustaining economic, social and environmental development has a much longer time perspective and may even strive for a balance that could be maintained beyond our dreams. The current progress towards climate change, on the other hand, is not 'sustainable'

in the longer run, however sustainable the process is right now. If humanity would stop the emission of greenhouse gasses, Earth has feedback loops in its atmosphere and oceans that will absorb these gasses over time (estimates go beyond 35,000 years for 80% of CO₂ to be re-absorbed in soil and ocean floors). However, for us living right now, this is not sufficient solace, and it will not prevent a climate catastrophe that could eliminate human civilisation.

Sustainability is thus context, time and space defined, and it has both a scientific side, focusing on barriers to change, systems behaviour and on complex feedback loops and processes, and a political (teleological in nature) side, focusing on a vision for the future, in which moral and ethical perspectives are included. Let us explore how this has been used so far, and how evaluations have incorporated a sustainability perspective.

Three main perspectives on sustainability

Sustainability of economic growth

After the Second World War, economic recovery was the main aim of public policies. Internationally, this was first expressed through the Bretton Woods institutions (International Monetary Fund and the World Bank, constituted during the war in 1944) and in 1961 through the Organisation for Economic Co-operation and Development (OECD), founded to stimulate economic progress and world trade. While Keynesian economics was dominant after the Second World War, with fiscal and monetary politics actively influencing and supporting economic and social progress, gradually a neoliberal, free market perspective, as advocated by Chicago University Economist Milton Friedman, gained ascendancy. Its first clarion call for international co-operation came in the publication in 1960 of *The Stages of Economic Growth* by Walter Rostow. It presented the aim of economic policy as unending and unlimited growth, from a ‘take-off’ phase to the eventual achievement of a mass consumption society. Social and environmental problems were thought to be best tackled through market mechanisms rather than through government policies and public budgets (see for a further discussion of public goods and costs Van den Berg (2021)).

While sustainability was not a key concept in neoliberal thinking, it was clear that economic growth should be ‘sustained’ at all costs. Sustainability was not seen as a goal in itself but as a continuation, and hopefully acceleration, of growth. In order to achieve this, interventions and policies would need to be financially and economically sustainable; that is, the benefits achieved by interventions would need to continue and hopefully grow after the end of the intervention. The final goal would be societal and economic growth, expressed in Gross Domestic Product and in mass consumerism. Markets would reign supreme, free of government interference, and bring happiness to all. Evaluators were asked to focus on ‘whether achievements are sustainable in the longer run’

(OECD/DAC 1991: IX 36), and the answer was to be found in economic and financial criteria.

Criticism of the neoliberal paradigm has pointed to many problems with this model. First, while the economic plane would ‘take off’, no safe landing was foreseen in the theory (Raworth 2017), confirming that in this paradigm economic growth would need to be ‘sustained’ forever, if necessary to the detriment of other aspects of societies and economies (Rist 2014; Hickel 2017). Sustainability in the neoliberal paradigm is expressed in growth of the Gross Domestic Product (GDP). The media continue to report on GDP growth or decline in jubilant tones or as indications of impending doom. Politicians contribute to this perspective without shame or nuance. Economists feed the beast by studying political manifestos and proclaiming whether they would lead to GDP growth or not. Especially the sustainability of humanity’s interactions with the environment (use of non-renewable resources, deterioration of ecosystem services, climate change and loss of biodiversity, and last but not least the corona pandemic) is not to be found in GDP calculations. While many reports and experts have asked attention for this (Stiglitz et al. 2009; Bregman 2017; Stiglitz 2020), the use of GDP as measurement of economic growth keeps the concept of sustainability as continued and strengthened economic growth alive.

Second, the neoliberal paradigm in its popular forms, as used by politicians, the media and lobbyists, is not scientific, as it is not falsifiable, as philosopher Lewis Gordon has noted (Gordon 2021: 58). Many have tried to demonstrate and convince neoliberalists that the application of their theories in public policies was time and again proven wrong, without any effect on the adherents of neoliberalism (see e.g. Hickel 2017, and Metcalf 2017). George Monbiot raised the question of why the left had not come up with a worldview that could have provided a political alternative to neoliberal policies (Monbiot 2016). As we shall see, two alternative worldviews gained ascendancy, without yet replacing neoliberalism in the centre of political power.

Social and economic sustainable development

The second perspective on sustainability emerged on the world stage in the 1995 World Summit for Social Development in Copenhagen, where ‘a new consensus’ was reached ‘on the need to put people at the centre of development’.² This was a result of discussions regarding structural adjustment as advocated by the IMF and World Bank in the eighties and early nineties of the past century, and the increasing evidence that structural adjustment programmes led to social harms, especially on the health situation of women and children. UNICEF spearheaded a movement in the eighties to introduce ‘structural adjustment with a human face’ (Jolly 1991). More proof of the human consequences of economic growth

initiatives emerged in the eighties with the infamous Narmada dam project in India, which quickly gathered international attention and led to social and environmental safeguards for dam projects throughout the world (see for a historical overview of resettlement issues I-L Aronsson & Hassnain (2022)). Furthermore, UNDP launched its Human Development Report with the Human Development Index in 1990, presenting the human perspective in development for all countries in the world.³ The Human Development Index was supposed to take over from GDP as the main measurement of development of societies, but while influential, it could not replace GDP in the public's eye.

The neoliberal economic paradigm continued to reign supreme in economic and trade policies throughout the world. The increased attention for social development was relegated to social, health and educational policies and especially focused on interventions in these policies that would improve services and ensure better results of these policies. In these policies and especially in the interventions aiming to improve and strengthen social outcomes, sustainability as concept focused on a balanced economic and social development. Funding, policies and interventions would recognise both economic and social perspectives and strive for win-win solutions. Many of the efforts in the following decennia, including the ones focused on the Millennium Development Goals, took shape as interventions, and these were evaluated on social and economic achievements. This led to a deepening of evaluation perspectives on sustainability in the internationally accepted Glossary of Evaluation (OECD/DAC 2002), where sustainability was defined as continuation of benefits and 'the probability of continued long-term benefits', as well as the 'resilience to risk of the net benefit flows over time' (OECD/DAC 2002, p. 36). The sustainability emphasis was thus very much on interventions and their longer-term impact on society and the economy.

While this expanded the scope of evaluative evidence, it did not solve the issue of how sustainability of the achievements of interventions would ensure social and economic development. This question was first raised in the 'Assessing Aid' publication of the World Bank (1998), where the need for adequate policies and an enabling environment was clearly spelt out for micro-level interventions to make a difference at the macro level, and thus be sustainable in the longer run. On the economic side, researchers aimed to show the contribution (or lack thereof) of interventions to the macro-economic development of countries. This became known as the micro-macro paradox: successful micro-level interventions did not seem to have an influence on the macro level in their countries. If there was GDP growth, it could often not be linked to aid efforts. The discussion amongst economists went on for many years and only came to a conclusion in 2010 when UN-Wider published a review of existing studies (Arndt et al. 2010), proving the existence of a small but measurable impact of micro-level aid on macro-level economic measurements. This seemed to provide an economic justification to sustainability conclusions of evaluators at the intervention level.

Sustainable development of the social, economic and environmental domains

While the social perspective on economic development did not replace but co-existed with the neoliberal economic growth paradigm, a gradual incorporation of social needs can be seen in international agreements. In the Millennium Development Goals from 2000, for example, the first six goals are focused on the social side of development.⁴ While the goals were social in nature, the way to reach them differed per paradigm. The believers in the integration of social and economic development would search for win-win solutions, but the believers in the neoliberal paradigm believed that the means to achieve social development would be through economic growth as expressed in GDP growth, in line with ‘trickle down’ expectations. The full integration of social goals in the development agenda came with the Sustainable Development Goals in 2015. By that time, the full integration was no longer of just the social and economic domains, but of the environmental domain as well. The environmental perspective was thus the third one that came on board, with all three domains on an equal footing.

A long history exists of concerns for the environment. Historians Bonneuil and Fressoz have traced warnings of scientists against environmental degradation caused by the Industrial Revolution in the early 19th century. They stress that the link between capitalist production and environmental exploitation was well understood scientifically, but ignored politically (Bonneuil & Fressoz 2017). Industrial and later neoliberal perspectives waived ecological degradation and over-exploitation of nature aside as to be expected side effects of the path towards fulfilment of human needs, to be solved through technological innovation.

While concern over ecological degradation gradually grew, it came to the global limelight in 1972. The first report ‘The Limits of Growth of the Club of Rome’ highlighted five major trends of global concern: accelerating industrialisation, rapid population growth, widespread malnutrition, depletion of non-renewable resources, and a deteriorating environment (Meadows et al. 1972, p. 21). When especially the depletion of non-renewable resources turned out to be less urgent than shown in the models of the Club of Rome, the global concerns it raised were waived aside by followers of the neoliberal paradigm. It took until 1987 for the United Nations to raise overuse of natural resources as a global concern in the ‘Our Common Future’ report. This produced one of the first definitions of sustainable development: ‘Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Our Common Future 1987: para 27). While this report had a better follow-up than that of the Club of Rome, it took until 1992 for the UN to convene the Earth Summit of Rio de Janeiro, which produced the aspirational Agenda 21 and the major multilateral agreements on environment and development: climate change and biodiversity.

While it was good that environmental agreements would coordinate and promote action by signatory states to the agreements, the years between 1992 and 2015 were initially characterised by treating the environment as something separate from economic and social development: a third perspective on sustainability that was not integrated with the other two domains. Evaluation played a small role in bringing the reality of the connections between the three domains to light – in 2006 the Evaluation Office of the Global Environment Facility (GEF) published *The Role of Local Benefits in Global Environmental Programs*, which concluded that in many areas in which the GEF is active, local and global benefits are strongly interlinked, and these linkages were essential to ensure environmental gains (GEFEO 2006, pp. 5–6). This confirmed in development practice what had already been presented in science in the Millennium Ecosystem Assessment (MEA 2005). Science delivered the main body of evidence that the social, economic and environmental domains are intricately linked and that any effort of humanity in the direction of global sustainability would have to take these links and their potential trade-offs into account (Scharlemann et al. 2016; ISC 2017).

In September 2015, with the adoption of the Sustainable Development Goals in Agenda 2030 (UN 2015), the full integration of the social, economic and environmental domains was finally achieved. The interaction between the three domains was identified as essential for the survival of humanity, and thus the sustainability of human life on this planet. To achieve this, ordinary action and change would not be sufficient: Agenda 2030 asks us to transform our world and to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path. The Sustainable Development Goals are announced as integrated and indivisible, balancing the three dimensions of sustainable development: the economic, social and environmental (UN 2015: preamble). Having noted this, and put considerable emphasis on this, the issue is not solved. Agenda 2030 does not define sustainability, nor what sustainable development means, nor how this could be effectuated except that what is needed to achieve is (again undefined) transformational change. Furthermore, the final goal is identified as a balance between the social, economic and environmental domains. This balance is supposed to be dynamic, adaptive and resilient. Tall orders in just a few words, especially when these words are not defined. A rich literature on transformational change and what it means emerged after 2015; on sustainability less so.

Issues and problems with the three main concepts

We have thus looked at the historical origins of three different sustainability perspectives and have seen that each makes sense within paradigmatic frameworks that continue to exist next to each other. The first framework focuses on unlimited growth through increased GDP in a neoliberal perspective that is still very dominant in economic and financial policies and quite resonant with the general

public. Evaluators tend to only work in the margins of this – with the evaluation offices of the multilateral banks often pointing to sustainability problems that emerge in this paradigm, like overuse of natural resources, social exploitation and environmental degradation.

The second paradigm framework aims to integrate a social- and needs-oriented perspective in social and economic policies, as expressed in UN efforts to put human development rather than economic development central in global efforts, with the Millennium Development Goals as the clarion call for the world community. Many evaluations from international organisations, bilateral donors and partner countries have looked at the issue of trade-offs between social and economic development. Environmental concerns often only appear as an afterthought, just like the 7th environmental goal in the Millennium Goals was added as an afterthought. Seven goals were formulated and ready to go, and one member of the select group editing the Goals remarked that it would be good to include an environmental goal as well.⁵

The full integration of environmental concerns and ultimate sustainability of the future of humanity on planet Earth was achieved in Agenda 2030 and the Sustainable Development Goals. This paradigm fully recognises the limits of growth, planetary boundaries, as well as the global environmental crises such as climate change, biodiversity loss, desertification, pollution, plastic waste and ecosystem degradation at a global scale, from acidification of the ocean to melting of glaciers and ice cover in the Arctic and Antarctic regions, to clean air, water and fertile soils. The problem with this paradigm may be that it may induce some fatalism, as humanity would need transformational change to solve all of these problems. This has led to a strong discussion in the evaluation community on how evaluation can support transformational change (Van den Berg et al. 2019, 2021; Promoting etc. 2022, amongst others).

The three perspectives on sustainability are presented in Table 3.1, including the final goals they aim for, and the problems and issues related to each

Table 3.1 – The three main concepts of sustainability

<i>Focus</i>	<i>Intermediate Aim</i>	<i>Final Goal</i>	<i>Problem/Issues</i>
Sustainability of Development	To achieve ‘take-off’	Unbounded economic growth and global consumers’ paradise	Overuse of resources, ‘tragedy of the commons’
Sustainability of Interventions	Continuation of benefits after end of intervention	Economic growth and social improvements	Micro-macro paradox
Sustainability of Humankind	Balance between social, economic and environmental domains	Adaptive and resilient dynamic balance between the three domains	Not achievable without transformational change

Source: Author’s own, developed for an IFAD webinar in December 2021

perspective. While many evaluators and evaluations continue to work on the neoliberal perspective and the social and economic development perspective as expressed in interventions at country or community level, the challenge for solving the global sustainability crises lies with the third perspective, which this chapter will further explore.

Focus on global sustainability

While the DAC criteria and much of the discussion on sustainability in the international evaluation community tend to focus on interventions and how they generate sustainable benefits, the world increasingly focuses on the sustainability crises of our times, as mentioned earlier. These crises have been named and addressed in many international negotiations, from the Sustainable Development Goals to the Paris Agreement and more recently the Glasgow Climate Pact. In evaluation circles, global sustainability issues have been discussed intensively in a growing number of publications in the past five years (Julnes 2019; Feinstein 2019, Patton 2020; Uitto et al. 2017, 2021a, 2021b). In recent years, the evaluation profession has seen increased attention for the role of evaluation to support transformational change needed to shift us towards a sustainable future, through initiatives and books (TCLP (2021), *Blue Marble Evaluation* – Patton 2020, IDEAS publications on transformational change – Van den Berg et al. 2019, 2021) and articles in journals (Brousselle & McDavid 2020; Stame 2022; Uitto 2021b; Williams et al. 2021).

For research and science, the International Panel for Climate Change (IPCC 2014) has functioned as a gateway to the world of politics through their trans-disciplinary scenarios. Research coordinated by the International Science Council (ISC 2017) and the synthesis work of the Sustainability Research Programme of the University of Sussex and IDS (Scharlemann et al. 2016) has gathered scientific evidence on the linkages of the Sustainable Development Goals. While this all serves to better understand global sustainability issues, the ground-breaking work of the Stockholm resilience institute (Steffen et al. 2015) provided a framework that gives a direct and intuitive grasp of why our future is not sustainable if humanity continues as it currently does: the concept of planetary limits and boundaries and whether these are in danger of being breached by humanity. There are several areas where planetary limits have already been breached and where limits are within reach.

While we will not go into detail on the boundaries and how they are measured, two important conclusions can be drawn which are relevant to global sustainability. The first is that biodiversity-related issues look much more pressing than climate change-related issues. Three areas are important for biodiversity: biosphere integrity, land-system change and biochemical flows. In all three, humanity has crossed the planetary boundary. For one, land-system change, there is ‘increasing risk’, and the other two are in zones of ‘high risk’. In comparison, the climate change-related areas (including land-system change and ocean acidification) have not yet reached the high-risk zone. This is not how it is perceived

by the public and by the efforts of governments and the United Nations. Climate change is by far perceived as the most urgent issue to address. The reason which leads me to the second conclusion: the process of climate change is to a large extent unstoppable. The train has left the station; there is no turning back, even if half of the train is still in the station. The IPCC scenarios present huge risks over time: rising sea levels (leading to a mass migration of about 40% of the population of Earth to escape flooding); mass extinction of life in the oceans due to acidification, extreme weather events, rising temperatures leading to health threats; potential pandemics to follow on COVID-19 and so on. Increasing numbers of people on Earth have experienced disrupting climate events, and others increasingly see it on their television screens and are gradually becoming more and more concerned about the future. Support for political action and for global initiatives to tackle climate change is increasing, while not yet sufficient to shift the power balance in many governments. Examples are the call in 2022 for a non-proliferation treaty on fossil fuels (see <https://fossilfuel treaty.org/>) and the global youth strike on 23 September 2022 (<https://fridaysforfuture.org/>). While these advocate for concrete action, their ideas and proposals are not fully integrated in the political debates about the future; they have not yet led to political parties and movements that have incorporated these perspectives fully in their agendas and are aiming to be represented in Parliaments and governments. Green parties often have partial perspectives; it is not within the scope of this chapter to discuss this comprehensively.

The other global sustainability crises (apart from the climate crisis) are not really registering in the public mind (see also Brousselle & McDavid 2020). Biodiversity loss, where we are heading to the 6th mass extinction of species, this time caused by humanity rather than a meteor, is not yet concrete for most of the public. The resulting catastrophe for ecosystem services, health, food, etc. is not yet fully spelt out. There is no IPCC-like global clearing house for science and knowledge about biodiversity loss. There is no comparable political circus as in the recent COP26 where politicians claim that the world will be saved. While biodiversity loss is already huge, we do not yet see the mass extinction itself, and we are less clear about how it would be caused and what we could do to stop it, or whether it needs to be stopped.

Other global sustainability crises are similarly underreported or not yet fully clear as far as consequences are concerned. Plastic waste pollution is an example. While most people will have heard about the Pacific gyre of plastic waste with a surface area as large as France, the consequences of all this plastic in the ocean, in fish, in our food and thus in our bodies are not fully established yet, let alone whether that is a similar process like climate change that needs to be stopped as soon as possible. People may believe that we can clean up the planet in 20 years. Erosion of soils and degradation of ecosystems are taking place gradually over time, but again it is not so clear whether these are irreversible processes and whether to take action now or develop solutions for later.

What is clear is that all of these global problems are connected to how our environment is sustaining humanity. The sustainability crisis can be translated as human overuse of resources. The global footprint of humanity is calculated by the Global Footprint Network and published annually in the form of Earth Overshoot Day, when humanity's ecological footprint has used up the annual amount of ecological resources that Earth is able to generate in a year. Earth Overshoot Day fell on 28 July 2022 – the expectation is that it will in the coming years happen earlier, until the trend is reversed.⁶ Clearly continuing to use more resources than available is going to lead to a catastrophe in the longer run. Human life on planet Earth is at the moment not sustainable.

Implications for evaluation of sustainability

The three main paradigms for evaluating sustainability have led to an evaluation practice that is fragmented, incoherent and inconsistent, or worse: indifferent. While each may make sense in their own right, it means that evaluative evidence on sustainability potentially contradicts other evaluative evidence on sustainability and may speak to us with 'forked tongue', as the popular expression goes. An evaluation in the neoliberal paradigm can conclude that the world is heading towards a sustainable future, as GDP growth is assured with the measures as proposed in the program or policy that was evaluated. In this perspective, climate change and social sustainability crises would be waved aside to be solved in the future through technology development and trickling down of wealth. Similarly, evaluations of social and economic development could conclude that programs and policies are sustainable, as they lead to both social justice and economic development that is sustainable. This may overlook that the achieved sustainability could be undermined on the environmental side, for example, if the area where the intervention is located may be one of the first to be claimed by a rising sea.

The integrated and global social, economic and environmental paradigm may conclude that it represents the global sustainability challenge best but will also recognise that while interventions show the way to go, the world is still heading in the wrong direction and becoming more unsustainable for humanity by the minute.

Critics may claim that all three paradigms of (un)sustainability are insufficiently defined and identified, as the future is uncertain and evaluations cannot study all aspects of sustainability within one evaluation, without turning this into an exercise that is too expensive, expansive and time consuming. These are valid points, and they need to be considered.

Evaluation does not always include all criteria in its study of an intervention. Many evaluations are undertaken from an accountability perspective, mainly focusing on issues of efficiency and effectiveness and implementation. These need to continue; they usually contain disclaimers that learning or outcome-related issues like impact, relevance, coherence and sustainability have not been

reviewed. Where sustainability is included in the evaluation, its report should include a clear identification of what exactly has been reviewed. If sustainability has been looked at from a financial/economic growth perspective, the evaluation should include a statement that it has not looked at social and environmental sustainability. If sustainability questions have looked at social and economic sustainability, a statement should be included that the evaluation has not looked at environmental sustainability, which may undermine any achievements in sustainability noted. Evaluations looking at social, economic and environmental sustainability in an integrated way should also include limitations and a disclaimer, as there is always a choice to be made which systems are included (the most relevant, hopefully) and whether we have sufficient insight and knowledge to judge how systems interact and could transform towards an adaptive, resilient balance.

While not all evaluations can or should do this, sustainability evaluations focusing on how to reach for an adaptive and resilient balance between the social, economic and environmental domains should become a large and well-financed section of the evaluation profession. If environmental sustainability, integrated with social and economic sustainability, is absolutely necessary to keep humanity afloat in future, this should be the main focus of transformational change, policies, interventions and a growing number of evaluations. Furthermore, we should not care whether the intervention is local, national, regional or global – all must be sustainable in the longer run if they are to succeed.

Everything is gLocal: the global is reflected in the local, and the local in the global: there is no solving one without the other. If a local community achieves a balance between the social, economic and environmental domains in all aspects, it will still be the victim of climate change if no such balance is achieved globally. If the global balance is within reach as production and value chains and energy use have shifted towards sustainability, this will be undermined if local communities continue to deplete groundwater resources, use trees in the area for firewood, and freely let their waste flow downriver, including plastics and chemicals, and turn their once pristine environment into a breeding ground for new zoonotic diseases. This is not just an issue of global issues identifying what should be done locally but also of balanced local practices inspiring global change, and everything in between – provinces, nations, ecoregions, continents and oceans.

It is clear that going through these three worldviews, from neoliberalist free market fundamentalism to socio-economic justice to a sustainable balance of the social, economic and environmental domains, the latter reflects the most comprehensive approach to the emerging problems and crises of our times. As usual with new perspectives, this has not yet been fully translated into political power. Governments tend to continue to focus on economic growth as the panacea for everything, despite increasing evidence that this is not correct, and that social injustice and environmental problems are becoming worse and are

threatening to become unmanageable in the future. Governments, the private sector and civil society have in many cases paid lip service to tackling global problems, while not changing actual practices. This is especially true of the Global North, a term often used for the richest countries in the world. While the vision of a sustainable future is expressed and aspired to in Agenda 2030 and the Sustainable Development Goals, it has not yet been transformed into a coherent and actionable political movement. We cannot continue to have politics as usual and will need to enter a phase of politics unusual. This is particularly relevant in view of the unmistakable success of the political agenda of far-right and populist movements, usually based on resentment and opposition to any worldview that would take away what they consider their rightful way of life.

For a reasonable integration of the full range of sustainability concerns in evaluation, we need to look at the systems nature of the sustainability challenge and the need for widespread, comprehensive and actionable insight in the transformational change needed to move us from an unsustainable trajectory to a sustainable one. The need for transformational change is widely recognised, from Agenda 2030 to the Glasgow Climate Pact, to Chinese, USA, and EU initiatives and policy statements, as well as in many countries in the South. If evaluation aims to support and strengthen transformational initiatives through its delivery of evaluative evidence, it cannot leave the key issue of our future, sustainability, out of the equation, or continue to treat it in the fragmented way as happened so far.

Systems, complexity and transformational change

The focus on interventions in international development efforts and in public policies has to some extent obscured a systems perspective in evaluation approaches and tools and methods. In early incarnations of evaluation methodology, through for example cost-benefit analysis or household surveys, systems aspects were included in the toolbox of evaluators and practitioners. Stame (2022) warns against simplification, where interventions are called simple and systems complex. She argues that program evaluations have sometimes exhibited complexity, whereas systems evaluations tend to overlook that not all systems are complex.

A systems perspective was evident in the discussion of the economic micro-macro paradox, where the question was raised whether successful interventions at the micro level led to change at the macro level, for example in a proven contribution to GDP growth. While final calculations established a definite contribution (Arndt et al. 2010), a new micro-macro paradox was revealed on climate action, where successful interventions for mitigation were shown not to lead to success in fighting climate change (Van den Berg & Cando-Noordhuizen 2017). Furthermore, evaluating the environment in connection to humans is a

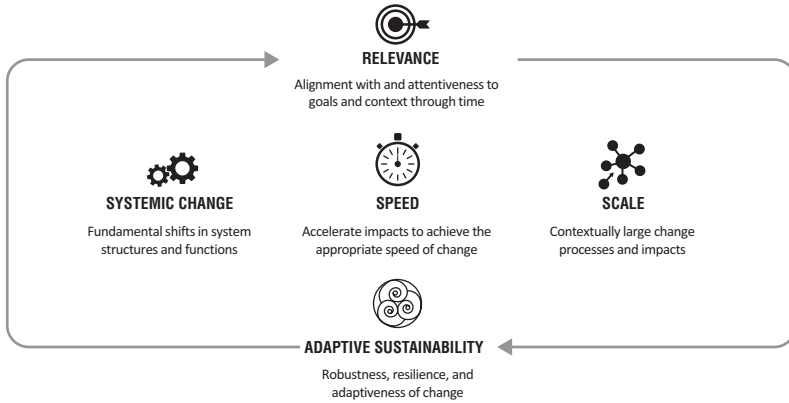


Figure 4.1 Five dimensions of transformational change.

Source: TCLP 2021

challenge in its own right (Rowe 2014; Uitto & Batra 2022), as environmental and social systems have different time perspectives and do not fully overlap in space and scale.

The dimensions of transformational change, as developed in the Transformational Change Learning Partnership of the Climate Investment Funds are at the moment the most sophisticated example of how evaluation can approach, support and strengthen transformational change, as presented in Figure 4.1.

The social sciences in general continue to focus on social and economic sustainability and tend to not include the interaction with environmental and natural systems. However, inclusion of environmental sustainability through multi- and transdisciplinary work is increasing in academia (Lewis & Maslin 2018) and is reflected in the Sustainable Development Goals and the multi-silo approach of many if not all of the SDGs. Much of this was building on the ground-breaking work of the Millennium Ecosystem Assessment (MEA 2005), which presented the global threat of ecosystem degradations.

Where applicable, complexity science may support our understanding of systems. It has identified many characteristics of complex systems that can be observed in human and natural systems:

- non-linear behaviour (the butterfly effect, or the importance of initial conditions)
- iterative feedback loops that keep a system in a certain state or transform it in another system
- the emergence of new characteristics (order out of chaos, or chaos out of order)
- transformational change or destruction if tipping points have been reached

Complex science tools and methods have only been introduced in evaluation in the past two decades and are not yet widely understood or accepted in evaluation practice, though an increase in theoretical understanding and use of a wide variety of analytical tools in evaluation practice is certainly worthwhile (Forss et al. 2011; Bamberger et al. 2016; Morell 2021). While evaluation gathers more findings regarding systems and transformational change, politicians, practitioners and a wide variety of actors are exploring transformational change in practice and are waiting for the evaluation profession to catch up with what is happening.

Understanding how to influence systems to transform themselves

In general, it should be stated that while interventions may influence what happens in systems, it is the dynamic of actors and relationships in systems that cause these systems to change and/or transform. This sometimes poses a cognitive problem, used as we are to think of causal links from action to output, outcome and final impact. Systems tend to behave in unexpected ways. Nokia dominated the global mobile phone market in the early 2000s and expected fully that this would continue. The challenge posed by smartphones, for example through Apple, which presented its iPhone in 2007, was not considered a danger to Nokia's global domination. In a few years, the smartphone market took shape and transformed the mobile phone market to a smartphone market, and Nokia almost went bankrupt and had to sell its mobile phone division to survive. In market changes the reason why the chain from action to final outcome breaks is clear: the consumer is wilful and has a mind of their own, and decides to buy another kind of product.

Systems can to some extent be rigorously observed and their behaviour calculated. While our models of causality tend to come from mechanical physics (especially the laws of motion and force: give a kick to a ball and it starts moving), systems causality tends to compare better to the thermodynamic laws of chemistry. These laws do not describe what individual atoms in a gas are doing, where they are or what happens when they collide, as this is considered to be impossible to track and to trace for each atom in the gas, but they for example describe how the gas as a system behaves when compressed, as far as temperature is concerned (it becomes hotter). The thermodynamic laws are as well established as the laws of quantum physics (which have taken over from classical mechanical physics). Macro-economics has long aimed for similar laws in economics but has encountered challenges on the way.

However, rigorously observing human systems and calculating their behaviour enters into a new level of complexity. Humans influence each other, and their interactions tend to be characterised by feedback loops that often seem paradoxical. Organisational studies have identified at least four different feedback

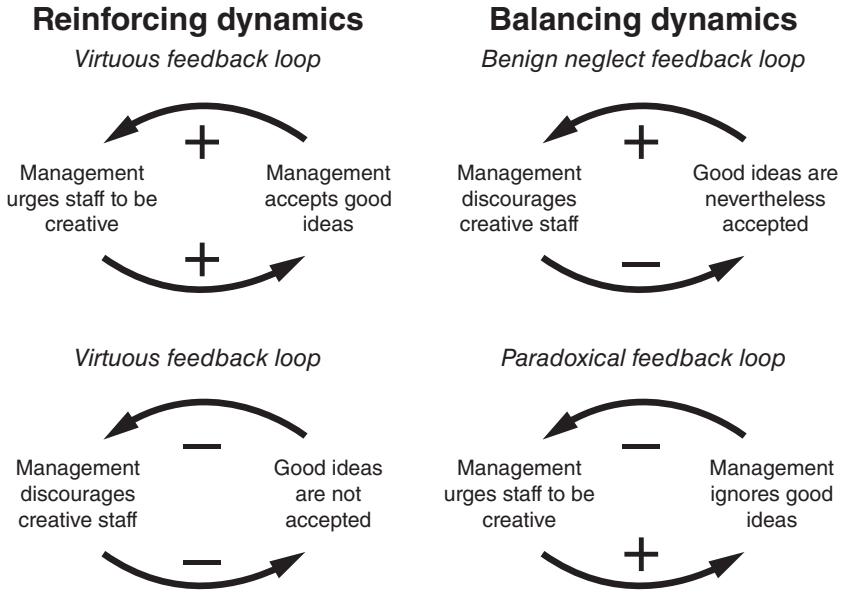


Figure 4.2 Feedback loops in systems.

Source: Author's own, inspired by Pradies et al. 2021.

loops that are also known in nature and in physical systems, but more complex in human systems (see Figure 4.2):

- virtuous feedback loops, where interactions reinforce each other and may lead to transformational change
- vicious feedback loops, where interactions lead to a breakdown of the organisation
- two varieties of balancing feedback loops, where interaction takes place but does not lead to transformational change. Instead, the system (organisation) may remain at an attractor point

While these dynamics are known and have been subject of research and study (Pradies et al. 2021), they are often difficult to observe and need adaptive management to ensure change in the required direction.

Evaluation approach to transformational change towards sustainability

It is clear that global sustainability is a systems issue. It is the combined systems of climate that endanger a stable climate in the coming decennia. It is the system

of land use and habitat for all life that threatens a collapse of living species. It is the system of production and processing of waste that gradually poisons the planet and humanity. Evaluations of interventions and their influence on these systems need to explore what is happening and what should happen through a theory of change approach, as advocated by Juha I. Uitto and Batra (2022). However, this does not tackle how the gap is bridged between interventions and changes at the system level.

My suggestion is to make a distinction between a theory of action that describes what happens in the intervention, as well as its outcomes, and a theory of change for the changes that the intervention aims to influence at the system level, as formulated by Morell (2021).⁷ This enables the evaluator to make a distinction between what is directly linked to the intervention and the autonomous processes at the system level that hopefully are influenced in the right direction.

The Independent Evaluation Office of the Global Environment Facility developed an integrated and generic theory of change for the GEF, leading to the stylised scheme of Figure 4.3. In the block on the left side, one can recognise elements of interventions, which would be mixed to achieve optimum results and outputs. Through involving more actors beyond the original intervention, through broader adoption and behavioural change, the GEF aims to catalyse change at the system level, by achieving stress reduction, which in its turn would lead to an improved environmental status. While no details are given (and details would be very different for different focal areas of the GEF), the right side presents changes in systems. The left side thus could be seen as a theory of action (here indicated as ‘areas of contribution’), and the right side as theory of change (here named ‘progress towards impact’). The value of this generic model of how the GEF catalyses impact is well established. The generic theory of change is still valid for evaluations up until the end of 2021 and continues to be used in the format adopted in 2014.⁸

Recommendations for evaluation practice

While an increasing number of handbooks (see e.g. Nikolaidis et al. 2022), discussions of approaches and principles regarding transformational change have been published, and are discussed in international forums and many virtual meetings, it cannot be denied that sustainability as an issue is on the one hand presented as crucial and key to the future of humanity on this planet, and on the other hand insufficiently defined, identified in vague terms and often unclear concepts. It is good to note that sustainability should be understood as the adaptive and resilient balance between the social, economic and environmental domains, but a complex and integrated (holistic) reality poses a major challenge to include sustainability in transformational change and in evaluation efforts to see what works, how, why and for whom. Some practical recommendations are needed to ensure that evaluators can navigate the unruly waters, high winds and hidden

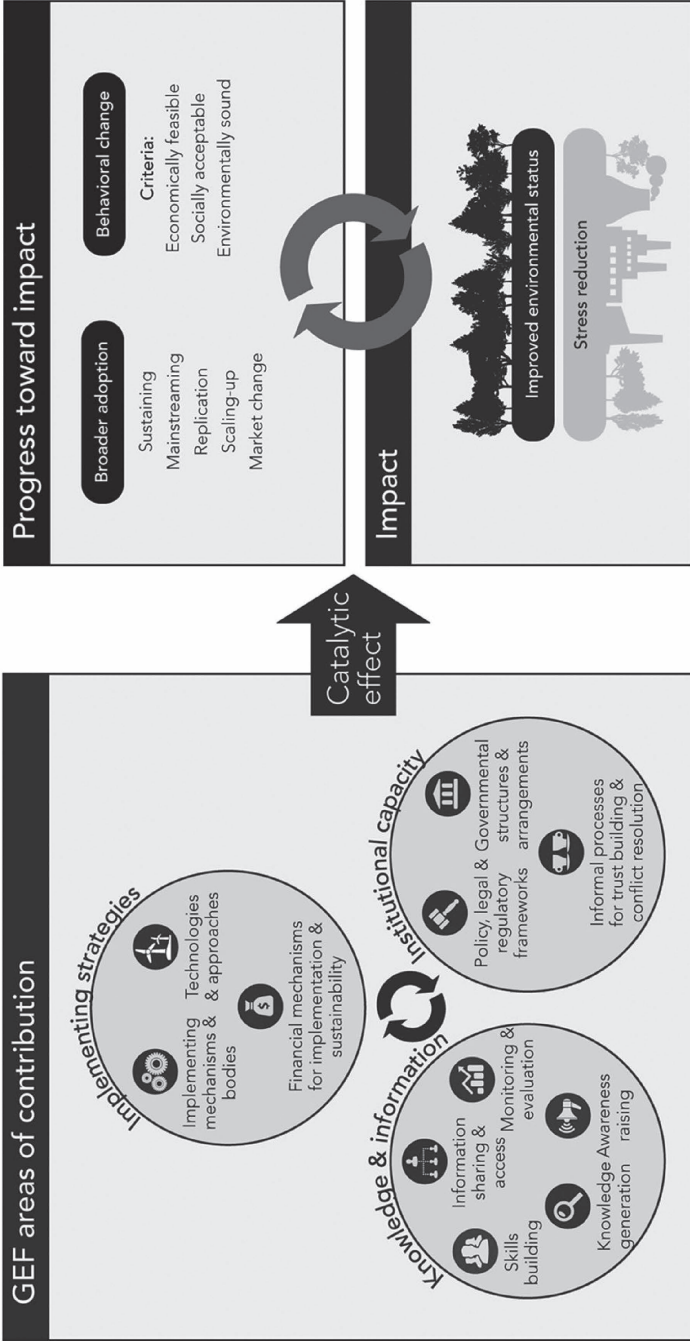


Figure 4.3 Generic theory of change of the GEF.
 Source: GEF Independent Evaluation Office (GEF IEO 2014, p. 14)

rocks in the shallows to safely deliver an evaluation report that is relevant and offers recommendations for the journey ahead.

Step 1: Disclaimer if sustainability limitations need to be recognised

The first step is to decide to what extent the evaluation would assess the sustainability of its evaluand. If not, for example, because it is meant to be a summative, accountability and learning-oriented evaluation that focuses on efficiency and effectiveness of an intervention, this is fine, but a disclaimer should be included in its report that the evaluation did not look at sustainability. Its conclusions regarding effectiveness should be read with this in mind – any claims of effectiveness should not be read as a claim to sustainability, as this may be affected by many factors. If the evaluation would look at sustainability, but in a restricted manner, looking at only economic and financial sustainability, or only at institutional sustainability, or only at social or environmental sustainability, an appropriate disclaimer should be added to its final report.

To be more precise, the disclaimer in the first case would read: ‘This evaluation has looked at economic sustainability only; any positive evidence of sustainability may be undermined by a lack of sustainability in the social and/or environmental domains’. The second case would read: ‘This evaluation has looked at social and economic sustainability only; any positive evidence of sustainability may be undermined by a lack of sustainability in the environmental domain’.

Finally, looking at the future sustainability of an intervention, policy, or transformational change is always based on assumptions regarding achievements of the intervention or policy in changing contexts, or the key systems that need to be transformed in order to achieve an adaptive and resilient balance between social, economic and environmental systems. All evaluations that are not looking at sustainability, or are looking at sustainability in limited ways, could potentially stop here and develop according to evaluation norms and standards as established by networks, institutions and/or professional associations. These potential decisions on limitations are illustrated in Figure 4.4, which is the first part of a decision tree on designing an evaluation with regard to sustainability.

Step 2: Tackling barriers only or including transformational change?

Many categories of interventions are possible to influence transformational change, as shown in Figure 4.5, and some of them may just focus on a key barrier to change and aim to remove this. Barriers to transformational change have been identified in the energy sector by the Evaluation Cooperation Group (ECG 2011) of the multilateral banks and the GEF, with further development by Christine Wörten (updated in 2021), and have been tackled beyond energy in Van den Berg et al. (2019) in several chapters, and in the work of TCLP (2021), amongst others.

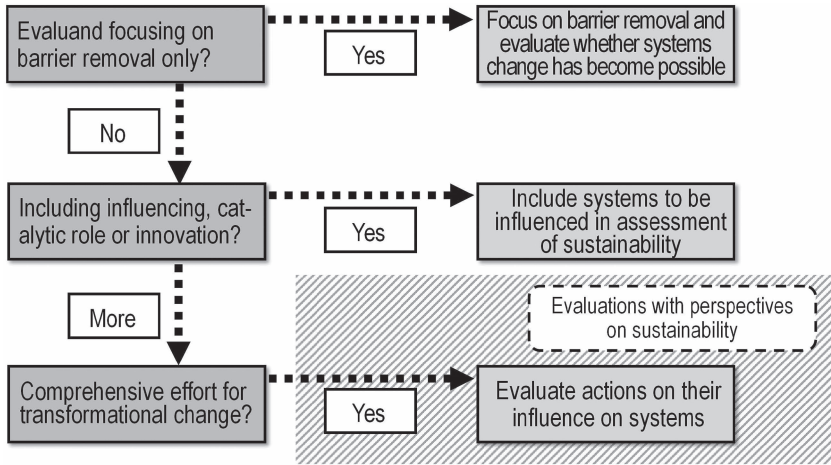


Figure 4.4 Decision tree leading to disclaimers.

Source: Author: design René de Winter

Barriers to change range from removal of blocking legislation, policies, business models, and social regulation at various levels and in various institutional settings, to overcoming feedback loops in systems that return these systems to behaviour that transformational change aimed to move to a new (and more sustainable) state. What we need to recognise is that the first group of barrier action, focusing on changes in regulation, policies or institutional models can usually be tackled through technical assistance interventions that do not themselves aim for transformational change. They just aim for changes in policies or regulations. In general, these are guided by any log frame or input/output models or theories of action or theories of change that are best practice in the organisation(s), countries or institutions that implement such an intervention. While sustainability may play an important role in the motivation for change and in the technical details of the change, there is no transformational change (yet) to be evaluated.

When an intervention aims to influence systems to change in the direction of a sustainable future, a distinction between the actions undertaken and the changes we need to see is important. This enables the evaluation to shift the focus on sustainability assessment from the sustainability of the intervention to the sustainability of the transformational change, and whether systems have made progress towards a sustainable balance between the three domains. The intervention can be viewed as a ladder that one needs to climb to get to the next level, or to a transformed system. Once that level is reached, the ladder can be dropped and is no longer necessary. In other words: we could not care less whether the intervention is sustainable. If it disappears without a trace, no problem!

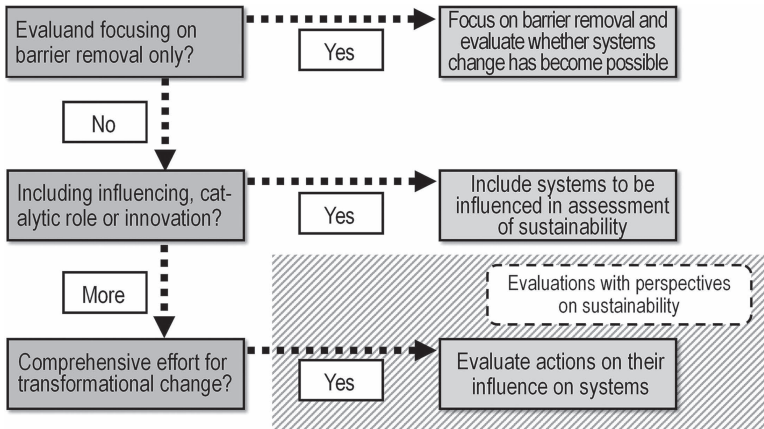


Figure 4.5 Decision tree on scope of transformational effort.

Source: Author: design René de Winter

For example, if pilot projects introduce new technology in a national energy market, the aim is for these new technologies to be taken up by suppliers and consumers on that market, and if this transforms the market towards renewable energies, the pilot projects have succeeded in initiating, influencing and enabling transformational change, but the projects themselves are not followed up and will disappear. The pilot projects can be described in theories of action. What is happening at the system level, in the energy market, in governmental regulation, infrastructure and technology investments, communication and advertising, market share of specific products and so on can better be caught in a theory of change of the energy market.

The decision to be taken in step 2 is whether to include transformational change and a theory of change regarding future sustainability in evaluation design, or whether a ‘regular’ evaluation of an intervention removing barriers or catalysing change is sufficient. Some barrier removals are simple and straightforward: removing subsidies from fossil fuels and unsustainable use of natural resources, changing import/export duties for specific products, removing intellectual property rights from technologies that are essential for transformation, so that these become affordable in lower-income countries, and so on. For an evaluand that aims for transformational change towards sustainability, step 3 needs to be followed.

Step 3: Identify relevant systems and access knowledge about these

Transformational change towards sustainability tends to focus on key systems that need to transform. Some of these may be focused on a few systems: for

example, transformational change towards sustainable energy markets. If solar panels are being introduced in a country that has not yet seen these capturing a substantial share of the energy market, this may focus on a few systems that need to be changed: import issues, choice of specific products to be put on the national market, technical support, local regulations, consumer knowledge, financial investments and so on. If a country would aim to reduce its carbon footprint, this could range through a large number of complex systems, like agriculture, forestry, energy, housing, infrastructure, trade, food security, social justice and so on. For the theory of change at system level, the evaluation will need to identify causal mechanisms in relevant systems and how they change over time. Usually, this is through a wide variety of power laws ($x = yz$) rather than through linear models. A good example of complexity in transformational change of an energy market can be found in Morell (2021). To aim for good understanding of systems, the habits of a system thinker can be used, developed as a heuristic tool by Magro and Van den Berg (2021).

Existing social, economic and scientific knowledge and expertise needs to be explored and used, as shown in Figure 4.6. Designing an evaluation should not involve original research or require deep knowledge of systems in the evaluation team itself. If we take the energy market as an example, the International Energy Agency (IEA) and the International Renewable Energy Agency (IRENA) are excellent starting points. These sources should be explored and used as much as possible; while a lot is still unknown or unclear, there are many insights into how systems operate, why they are unsustainable, and what would fix them. National and local issues tend to be relatively well known and researched, and social and

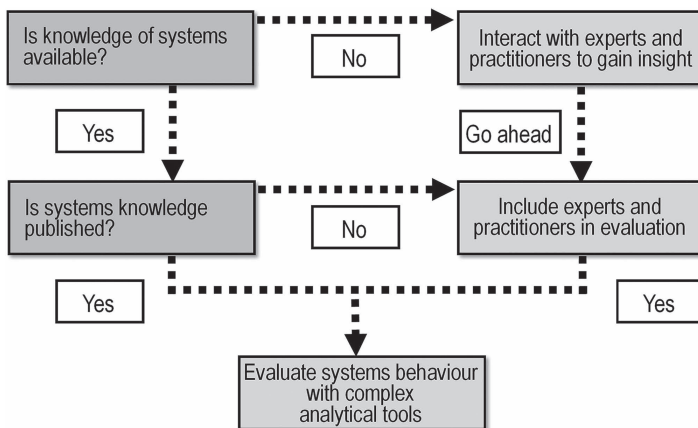


Figure 4.6 Decision tree on teams and tools.

Source: Author: design René de Winter

environmental challenges tend to be included in this. Many organisations, governments and local communities, as well as industries and companies, tend to report on their carbon footprint or on sustainability issues. Evaluators should use this growing pool of literature and resources and look for relevant experts and practitioners to include in their evaluations.

Evaluations should not hesitate to move into the future beyond the often-included considerations of potential future risks and challenges. Systems processes and interaction between systems can and are modelled by science, and scenarios are built to rigorously express the most likely developments and potential transformations, as the trans-disciplinary scenarios of the IPCC have demonstrated. Many global institutions, like IEA and IRENA, also produce such scenarios. Evaluators need to include these in their evaluations and assess whether the evaluand has influenced systems in a more sustainable direction. Models predicting the future need to be considered carefully and be transparent and humble to invite insight, as pointed out by Saltelli et al. (2020).

Scientific approaches towards the future are sometimes gathered under titles such as ‘futurists’, ‘futurology’, ‘horizon scanners’ or similar. Not all scientific approaches that model the future are to be found under these titles or categories. The Association of Professional Futurists for example has about 500 members. Most of the sciences currently recognise transdisciplinary efforts to model and understand future possibilities, without identifying themselves as futurists or futurologists.

Step 4: Implementing the evaluation

Implementing an evaluation of transformational change towards sustainability can be a daunting exercise. Evaluation teams will need to take the conceptual approaches and principles of the Transformational Change Learning Partnership (TCLP 2021) and Blue Marble Evaluation (Patton 2020) into account, as well as practical suggestions in for example Chaplowe et al. (2022).⁹ Two key points have emerged in evaluative evidence so far: interventions designed for transformational change are significantly more effective (identified as relevance in the TCLP dimensions – see Williams et al. (2021: 93–94)); and barriers against transformational change need to be tackled, as they sometimes are relatively easy to remove, and if they remain, they will block transformational change.

The growing literature regarding sustainability and transformational change offers much practical advice and should be studied, followed and improved, and if an evaluation contributes to better understanding of the way transformation leads to a sustainable future, evaluators should publish!

Lastly, evaluative work can play an important role in supporting a transformational process through ongoing evaluative analysis of what is happening in systems and how this influences the process towards transformational change. It shows that M&E or MEL (Monitoring, Evaluation and Learning) efforts during

a systems-oriented initiative can provide crucial feedback that helps keep the initiative on track towards lasting systems changes towards comprehensive sustainability.

The final sustainability question

The final question is whether the transformed systems together will ensure a sustainable future for humanity on this planet. Sustainability is a neutral term: it just means continuation. That continuation will not be static; it will be dynamic, as the human and natural systems are all dynamic, even if they ‘stay where they are’. A river is highly dynamic in the way water flows but also very static in that many rarely change course (although now more often due to human intervention). When a river changes course, it tends to settle in a new route towards the sea. The definition of sustainability that many evaluators and scientists now embrace is that sustainability is a dynamic, adaptive and resilient balance of the social, economic and environmental domains. This definition is firmly placed in the third paradigm of sustainability, as discussed in this chapter. Evaluations on global sustainability issues need to carry this definition as a flag and signal their intent to judge sustainability on these aspects.

The discussion about evaluation criteria for sustainability should not confuse us. The criterion for sustainability as revised by the DAC continues to be focused on interventions and thus misses out on the sustainability of systems. No doubt the two earlier paradigms (unbound economic growth and socio-economic development) will continue to use their own definitions of sustainability. Rather than to see the concept of sustainability as problematic, as Williams et al. (2021, p. 95) suggest, the meaning of the term in the appropriate paradigm needs to be explained in evaluations, as well as how the sustainability of interventions and systems is judged.

At the moment humanity and the planet are continuing on towards catastrophic climate change and biodiversity loss, mixed with social and economic inequity, a sudden pandemic, unpredictable weather patterns and the threat of a Third World War. The direction and speed with which Earth and humanity are moving at the moment may look ‘sustainable’ in the negative sense, but it is towards disaster, not sustainable in the longer run, as it will end in global catastrophe. While often this is stated in terms like ‘we should not kill planet Earth: it is the only spaceship we have’, we should fully recognise that planet Earth will survive, without doubt. It is humanity that is in danger. We are not so much killing the planet, as killing the environment in which we can live. Life will continue on Earth: ‘(T)he planet is not human, nor does it belong to humans. No human culture, despite its inventiveness, can kill life on this planet’ (Margulis 1998, p. 120), and ‘we cannot put an end to nature; we can only pose a threat to ourselves’ (Ibidem: 128).

Lastly, let me again stress that we need to recognise that there is no sustainable solution that is permanent. Sustainability is the adaptive, resilient balance

between the social, economic and environmental domains on our planet. It will be dynamic: the interaction between social, economic and natural systems is always present, highly complex and overall unpredictable in its consequences, always requiring a watchful eye. Once a problem seems to take over, humanity may be able to plan and act for a new balance and take action. This may take different forms and will certainly continue to evolve and develop, but the balance must be there; otherwise, we will not survive.

Notes

- 1 Paradigm is used to denote a coherent and consistent worldview on how societies and economies should be ordered and strengthened. This derives from various efforts to translate the scientific paradigm concept introduced by Thomas Kuhn in his *The Structure of Scientific Revolutions* (1962) for the natural sciences into the social sciences. See <https://en.wikipedia.org/wiki/Paradigm>.
- 2 Statement on the UN website for the conference <https://tinyurl.com/2p8t393m>.
- 3 <http://hdr.undp.org/en>.
- 4 See www.un.org/millenniumgoals/.
- 5 Revealed by one of the participants in the drafting process in a Wilton Park event on 12–14 December 2016. According to Wilton Park reporting protocols, the name of this participant is not mentioned. Environment was added as new #7, thus moving partnership to #8.
- 6 See overshootday.org/about-earth-overshoot-day.
- 7 See also Laviania Tyrrels blog of 2019: *Theory of change and theory of action: What's the difference and why does it matter?* <https://tinyurl.com/yckv2sna>.
- 8 Disclosure: I was Director of the GEF Evaluation Office from 2004 to 2014 and thus involved in the development and finalisation of the generic theory of change.
- 9 Without following their unfortunate throwback to the original definition of sustainability in the report of the Brundtland Commission in 1987 – so much has happened since to better define sustainability. To be read for their practical and pragmatic advice on evaluation for transformational change towards sustainability.

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