



Footprint Evaluation

Thought experiments

Thinking through how to embed environmental concerns into evaluation.

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www.betterevaluation.org/footprint_evaluation

About Footprint Evaluation

The Footprint Evaluation Initiative is an international collaboration to support evaluators and evaluation managers to consider environmental sustainability in all evaluations, even when this is not a stated goal of the intervention.

Footprint evaluation approaches focus on the **'footprint'** that human systems make on natural systems. This requires attention to the nexus of human and natural systems and addressing effects across both systems.

It is grounded in the premise that all evaluations should include consideration of environmental sustainability, even when this is not a stated goal of the intervention. This is so that decision-making can take into account the potential and actual impacts of planned interventions (projects, programs, policies) on the environment.

Summary

The Footprint Evaluation Initiative aims to ensure that all evaluations consider environmental sustainability, regardless of whether this is an explicit objective of the project, policy or program being evaluated. This report describes four **'thought experiments'** undertaken as part of this project.

The thought experiments explored whether it is relevant, feasible and useful to consider environmental sustainability in evaluation, how this might be done, what challenges and issues it raises, and what is needed to address these.

This report aims to document and share what we learned during this process, provide concrete examples of how environmental sustainability might be considered in an evaluation, and share details of our thought experiment process that others might find helpful.

Thought experiment process

Thought experiments can be used for thinking through hypothetical scenarios in detail. The four Footprint Evaluation thought experiments involved revisiting a past, real-life evaluation and walking through how this could have been done differently to incorporate considerations of environmental sustainability.

The thought experiments discussed here involved four very different completed evaluations: a small, local community garden, funded as part of a national community strengthening program; a redevelopment of a sub-national community corrections program as part of a larger strategy to reduce re-offending; a ten-year retrospective impact evaluation of a multi-site community development program (funded through an international child-sponsorship program which supported community development activities in the child's village); and a national unconditional cash grant, child support program.

The process involved reviewing each evaluation in a small group of experienced evaluators and evaluation managers, including one person with deep familiarity with the evaluation and another with experience in undertaking evaluations that address human and natural systems. Through discussion, we identified some potential points of nexus between human and natural systems, ways in which there might have been important implications for environmental sustainability, and explored how data on these might have been collected or accessed. We provide more information below about the process.

Feasibility and utility of considering environmental sustainability

Each thought experiment provided some evidence that it would have been relevant, feasible and useful to have considered environmental sustainability in the evaluation.

While many evaluations that consider environmental sustainability focus on negative consequences for the environment, for two evaluations, it was possible to identify additional benefits (either positive environmental impacts or reduced negative ones), drawing on research and evaluation evidence from similar initiatives. Community gardens have positive impacts in increasing vegetation cover with carbon sequestration function, reducing water run-off and heat reflection from paved surfaces, and encouraging people to engage with and value nature, providing mental health benefits. Evidence of these had been gathered during the evaluation despite the report focusing on impacts on human systems. Through a reduction in re-offending, the community corrections program aimed to avoid the construction of additional prisons. This would have avoided significant negative environmental impacts that result from the construction and operation of prisons, in addition to reducing the harmful impacts of imprisonment on people and economic costs (which were the focus of the evaluation report).

For the other two evaluations, the child support grant and the community development program, we were able to identify several elements that would almost certainly have had implications in terms of environmental sustainability. The evaluations had not gathered the necessary information to estimate the magnitude of these effects, although methods are available to do so. However, the potential value of considering environmental impacts was clear, as these could have enhanced and supported social benefits or undermined them.

Equity and environmental sustainability

The cases for the thought experiments were chosen for their variation across sectors and scale, and happened to be similar in that all the interventions had objectives relating to equity. The community garden was funded through an initiative which focused on communities at risk of social exclusion. The community development program included equity-focused objectives, including equitable access to education. The child support grant was intended to provide social protection for children in the poorest 30% of households. As part of a larger strategy to reduce re-offending, the community corrections redevelopment did have clear equity implications despite not having explicit equity objectives. Its aims of reducing imprisonment and re-offending would have reduced harm for people convicted of offences and for victims of crime, and their families, who are disproportionately from disadvantaged and marginalised groups.

While the thought experiments did not directly address equity issues in consideration of environmental sustainability, other evidence points to the many ways equity and environmental sustainability are intertwined (for example, the 2014 IPCC report on Sustainable Development and Equity; the 2022 IPCC Summary for Policymakers). For example, the consequences of environmental harm, such as pollution and climate change or losing access to traditional territories, disproportionately affect people who are marginalised and disadvantaged. And attention to inclusive governance that prioritises equity and justice in adaptation planning and implementation leads to more effective and sustainable adaptation outcomes.

Further work is needed beyond these thought experiments to document and further develop ways that evaluation can address both equity and environmental sustainability.

Key elements of incorporating environmental sustainability into evaluation

Through conducting these thought experiments, several key elements became apparent. These speak to evaluators and managers and are a work-in-progress that **will continue to be reviewed and revised**.

1. Go to the place (physically if possible, or virtually or vicariously)

The thought experiments showed the value of, where it is possible, visiting the place of an intervention (or some of the sites if there are several). This allows evaluators to observe the settings of the natural and human systems and identify and talk with relevant people. Ideally, site visits during the evaluation design or early in the evaluation can reveal significant insights about the nexus points and coupling of human and natural systems and help identify the various interests that the evaluation needs to consider and engage where possible. Going to the place is a technical and social undertaking providing opportunities to identify the reach and character of the intervention, access local and traditional knowledge, and understand how the intervention affects human and non-human populations and contributes to refining the relevant temporal and spatial scales.

2. Broaden the theory of change to include couplings between human and natural systems

Theories of change often include only the intended impacts, especially impacts on human systems such as improved health and well-being of communities. To address environmental sustainability, theories of change also need to include important positive or negative impacts on natural systems, whether or not these are intended, by focusing on nexus points between human and natural systems.

3. Identify those potentially affected by changes to human and natural systems (including people and other living creatures)

This expands the consideration of stakeholders to include representatives of interests who might affect the success of the intervention and those potentially impacted by the intervention. Natural system interests should also be included, for example, those concerned with extraction for commercial or other human uses, conservation, traditional such as ceremonial, healing and medicinal uses, contaminants and emissions such as plastics and chemicals.

4. Consider expanding the spatial and temporal framing for the evaluation

An evaluation is often based on inappropriately tight boundaries in terms of time and space. An evaluation that includes consideration of natural systems is likely to require an expansion of these boundaries. For example, considering sites downstream or downwind of a project site, basing boundaries on ecosystems rather than human management structures. Temporal boundaries may require expansion to consider the intergenerational effects of pollutants or changes in water flows on humans and other importantly affected species and things. What is essential is that those involved in the evaluation make informed, deliberate decisions about what is included or excluded from consideration.

5. Apply system thinking to think about natural systems and their couplings with human systems

Systems thinking can include specific systems concepts and tools such as feedback loops, tipping points, thresholds, and fractals. Most importantly, it involves the conscious use of systems thinking and simulation models as an incomplete heuristic of the systems in the real world rather than a comprehensive algorithm or mechanical model.

6. Draw on multiple sources of expertise and evidence

Evaluations that consider environmental sustainability need to draw on diverse evidence beyond that usually gathered, including evidence from biophysical sciences, local and citizen science, and traditional and Indigenous knowledge. The thought experiments showed the need for expertise in accessing and making sense of existing evidence from previous research and evaluation, existing data from monitoring systems, and primary data that could be collected during an evaluation.

7. Focus on the big issues

Given the wide range of potential consequences for natural systems and the challenge of covering these appropriately within limited resources, it is important to focus on potentially significant consequences. It is particularly important to avoid focusing simply on consequences that can be readily measured or are funder priorities rather than developing adequately accurate information on issues with greater significance.

Challenges and issues to investigate further

One of the aims of these thought experiments was to better understand what factors might hinder or help consideration of environmental impacts and sustainability. The thought experiments raised several challenges and questions to be further explored.

1. How to ensure environmental impacts are included in the scope of an evaluation

Evaluations are usually framed around a Terms of Reference, which sets out its scope and high-level questions – and these rarely specify that environmental sustainability should be included.

- ▶ How might evaluation commissioners include environmental sustainability when developing Terms of Reference, including addressing resistance?
- ▶ How might evaluators respond to Terms of Reference which don't explicitly refer to environmental sustainability or impacts on natural systems?

2. Barriers to 'going to the place'

Previous evaluations have shown the importance of going to the place when addressing environmental sustainability. Going to the place is also important to understand the meaning of the intervention from the perspectives of affected people and communities. However, it is not always possible to go to the place, especially for interventions implemented at multiple locations or across a region or country.

- ▶ How do we 'visit the place' when there are restrictions on travel (including restrictions related to pandemics or epidemics, violent conflicts, natural disasters), insufficient funding, or consideration of the environmental effects of travel to a dispersed intervention not located in a single place?

- ▶ How to incorporate adaptive management into evaluation designs to enable the evaluation to adjust to emerging knowledge about ‘the place’.

3. Bringing appropriate evidence and understanding to bear

For some aspects of an evaluation, such as collecting or making sense of data, technical or local knowledge and expertise will be required to understand the actual or potential impacts on natural systems fully.

- ▶ How can appropriate knowledge and expertise be identified, engaged, and effectively integrated, especially given paradigm and discipline differences in conceptual frameworks and understanding, power differences, and resource constraints for individual evaluations?
- ▶ Are there changes needed to worldview, mindset and understanding of key concepts so those involved in the evaluation can make sense of information about natural systems?

4. Synthesis of evidence into overall judgements

For many evaluations, it will be important to be able to synthesise the likely overall consequences for natural systems. This is more difficult if consequences vary across places or domains – for example, positive in some aspects (or at some places) but negative in others.

- ▶ How can the different consequences for natural systems be synthesised?
- ▶ How can evidence in terms of consequences for both human and natural systems be appropriately synthesised?

5. Monitoring systems and evaluation for adaptive management

The thought experiments were all discrete evaluations designed to inform long timelines for decisions. Further work is needed to consider how monitoring systems and evaluation to support adaptive management can include consideration of environmental sustainability, given the need for much more nimble systems of gathering, analysing, reporting and supporting the use of evidence.

- ▶ How can program and organisational monitoring systems include consideration of environmental sustainability, support and encourage more timely adaptive management?
- ▶ How can evaluation be intended to support adaptive management?

What is needed so that all evaluations adequately address environmental sustainability?

In addition to changes in individual evaluation and monitoring systems, systemic changes are needed to overcome hindering factors and amplify helping factors.

The following list has been developed through reflection and discussion about the thought experiments. It proposes some general approaches and some specific activities for future work.

Most of these relate to strategies for strengthening individual and organisational capacity. This list will also be further developed and prioritised through future phases of the Footprint Evaluation Initiative.

Possible approach

Some potential specific examples

1. Templates and guidance

- ▶ Generic Key Evaluation Questions that include consideration of natural systems
- ▶ Guidance for the synthesis of evidence about natural system impacts and synthesis across criteria
- ▶ Checklists of possible types of impacts on natural systems (e.g. biodiversity loss, air pollution, water pollution etc.)

2. Professional development activities and resources

- ▶ Workshops for evaluators and evaluation commissioners, and managers around particular methods and concepts, as well as worldview and mindset
- ▶ Training material that can be used in mainstream evaluation courses and programs
- ▶ Self-paced learning material for evaluation competencies that include sustainability

3. Examples of evaluation policies and procedures

- ▶ Examples of evaluation policies and procedures (e.g. Terms of Reference) that require consideration of environmental sustainability

4. Examples of evaluations that have addressed human and natural systems

- ▶ Annotated examples of evaluations that have addressed environmental sustainability, including identifying the methods and processes used

5. Information about relevant evaluation methods and processes

- ▶ Description and links to more information about methods and processes that can be used to include consideration of environmental sustainability (through BetterEvaluation knowledge platform)

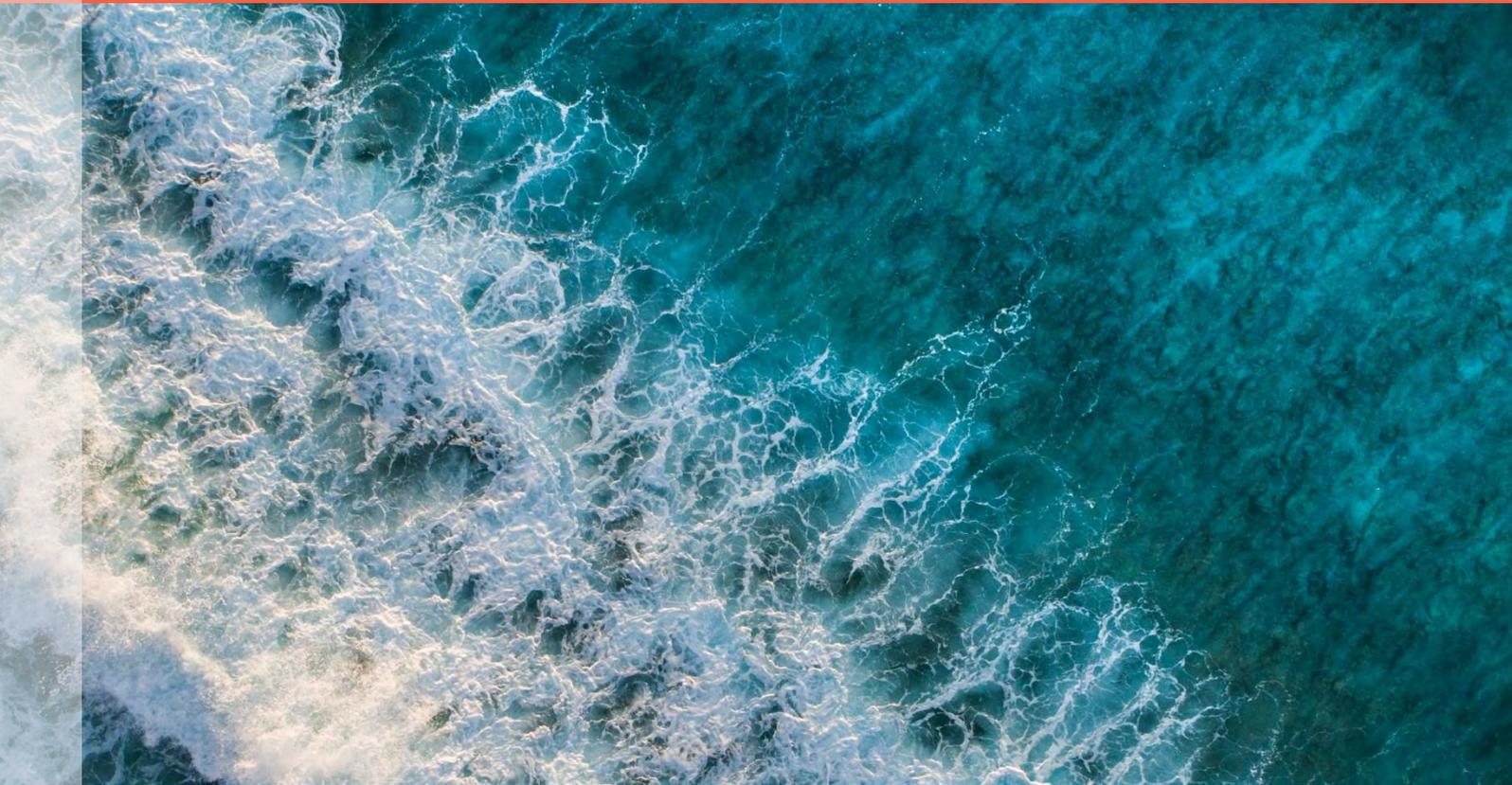
6. Reference material

- ▶ Resources providing evidence (and summaries of evidence) about the importance and urgency of better management of natural system impacts
- ▶ Resources summarising rationale for why it is legitimate to include consideration of environmental impact – including the scale of environmental damage, ethics about validity in evaluation, analysis of existing evaluative criteria (especially OECD-DAC), micro-macro paradox
- ▶ A library of contextualised examples to support reasonable projections of likely impacts

7. Networks of practice

- ▶ Sharing information about existing related initiatives and networks
- ▶ Supporting a network of practice around this issue
- ▶ Collaborating with other initiatives and networks addressing shared or similar goals

Summary	1
Thought experiment process	1
Feasibility and utility of considering environmental sustainability	1
Equity and environmental sustainability	2
Key elements of incorporating environmental sustainability into evaluation	3
Challenges and issues to investigate further	4
What is needed so that all evaluations adequately address environmental sustainability?	5
Introduction	8
What is the Footprint Evaluation Initiative?	9
Why do all evaluations need to consider environmental sustainability?	9
Activities in Phase 1 of the Footprint Evaluation Initiative	10
The thought experiment process	11
Four thought experiments	13
Overview of the cases	14
Case 1: Community garden project	16
Case 2: Redeveloping Community Corrections	22
Case 3: Retrospective Impact Evaluation Save the Children’s Sponsorship Programming in Woliso Impact Area, Ethiopia (2002 – 2010)	26
Case 4: Child Support Grant Impact Assessment	29
Reflections and learnings	33
Key elements of incorporating environmental sustainability into evaluations	34
Questions and challenges arising from the thought experiments	39
What is needed so all evaluations adequately address environmental sustainability?	42
Conclusion	44
Final thoughts	45
Appendix	47



Introduction

What is the Footprint Evaluation Initiative?

The Footprint Evaluation Initiative is an international collaboration to support evaluators and evaluation managers to consider environmental sustainability in all evaluations, even when this is not a stated goal of the intervention. This is needed so that decision-making can take into account the potential and actual impacts of planned interventions (projects, programs, policies) on both the environment and the people that the intervention is intended to benefit.

Improving evaluations to include consideration of environmental sustainability will require a combination of **supply** (more people who can do this), **demand** (more people asking for this in evaluations) and **enabling environments** (setting up systems to provide incentives, opportunities and capacities to do this).

Why do all evaluations need to consider environmental sustainability?

The world is faced with numerous environmental crises with the potential for global catastrophe, including climate change, pollution, loss of biodiversity, ocean warming and acidification, and deforestation. To avoid, mitigate and address these crises, decision-making must be informed by evaluations that take into account the potential and actual environmental consequences of planned interventions.

However, most evaluations fail to consider environmental sustainability¹. This is so even for evaluations operating within frameworks such as the OECD-DAC evaluation criteria (developed by the Organisation for Economic Co-operation and Development's Development Assistance Committee), which includes 'significant environmental impacts' in the scope of impact evaluation, and even in countries which have made global environmental commitments.

When environmental sustainability is addressed, it is often through specialist environmental evaluations which focus on narrow technical questions rather than using evaluation concepts, processes and methods to answer evaluative questions in ways that can support improved decision-making. These evaluative efforts are also conducted from environmental perspectives, which, in a mirror to non-environmental evaluations, often diminish the importance of effects in human systems and strongly prioritise effects in natural systems.

¹ See recent stocktakings of sustainability readiness conducted by the UN Evaluation Group (UNEG) – (Todd, 2020), and the Canadian Evaluation Society (CES) (Rowe & DeLancey, 2021)

Activities in Phase 1 of the Footprint Evaluation Initiative

In Phase 1 of the Footprint Evaluation Project, the Global Evaluation Initiative supported a co-creation and research project framed around three learning questions:

1. How can an evaluation effectively address natural systems/environmental sustainability even when the environment is not the focus of the evaluation? (considering what might be done by evaluators, evaluation managers and commissioners, and others)
2. What hinders or helps this? What are particular challenges and opportunities?
3. What is needed so all evaluations adequately address environmental sustainability? What are systemic approaches to overcoming hindering factors and amplifying helping factors?

The learning questions were sequenced to draw on practical experience from individual evaluations to build knowledge about how evaluations can address the nexus between natural and human systems. Identifying what makes it easier or more challenging to do this informs learning about what practical tools and other measures might assist the evaluation field in considering environmental impacts in all evaluations.

Phase 1 had four components:

- ▶ **Thought experiments** on four cases exploring what might have been done in completed evaluations
- ▶ **Case studies** which included actual analysis for evidence in a particular evaluation
- ▶ **Knowledge creation and curation**
- ▶ **Community engagement and dialogue** through:

a Thought Partner Panel of invited individuals who are providing advice and feedback to the Footprint Core Team,

a wider Footprint Evaluation Community of invited and self-selected Footprint enthusiasts from the wider evaluation, natural sciences and sustainability communities who are interested in learning from and contributing to the Footprint project, and

engagement in public webinars and presentations.

The Footprint Evaluation Initiative is trialling a model for evaluation capacity development that involves collaboratively working and reflecting on innovative practices to support inductive and abductive knowledge-building approaches. The intention is to build new knowledge through mutual learning and iterative action and reflection, and curating existing relevant materials. Rather than following a linear process of building knowledge (or producing a guide) and then training people to follow a procedure, the Footprint Evaluation Initiative is intended to support peer learning for adaptation and translation to new settings. The Footprint Evaluation Initiative is intended to model learning and adaptation across organisational and disciplinary silos and produce practical knowledge products and a network of people to use them.

The Footprint Evaluation Initiative complements and draws on other cross-cutting initiatives, movements, and knowledges in evaluation that address related issues, including:

Blue Marble Evaluation, which focuses on evaluating global systems change initiatives

Transforming Evaluation, which looks at a range of ways evaluation needs to be transformed to support the transformations needed to reach the United Nations Sustainable Development Goals

Environmental Social and Governance Indicators such as in impact investing

Ecological Footprint approaches – for example, carbon footprints estimating greenhouse gas emissions from actions; life cycle analysis estimating the total material inputs required to produce and deliver a product or service; circular and restorative economies and many more analytical approaches from multiple disciplines

Traditional and local knowledge and knowledge processes that are often founded on worldviews that are more inclusive of human and natural systems and inform decision-making processes that are more protective and seek gains in both types of systems

The thought experiment process

The Footprint Evaluation thought experiments were designed as a low risk ‘do not harm’ exploration of how environmental sustainability might be considered in real-life evaluations. They also explored how evaluators with a human systems background and little experience with natural systems might learn to consider environmental sustainability. Unlike some ‘thought experiments’ which involve purely hypothetical situations, these cases drew on real cases of completed evaluations.

We have found the ‘thought experiment’ process to be a valuable process for developing and sharing knowledge about how to address environmental sustainability in evaluations. In this work, it was used as a research process. It can also be used in workshops, supporting knowledge translation and identifying new issues, challenges, tools and principles. Therefore, we have provided details of the process to encourage others to try it out.

Details of process in these four thought experiments

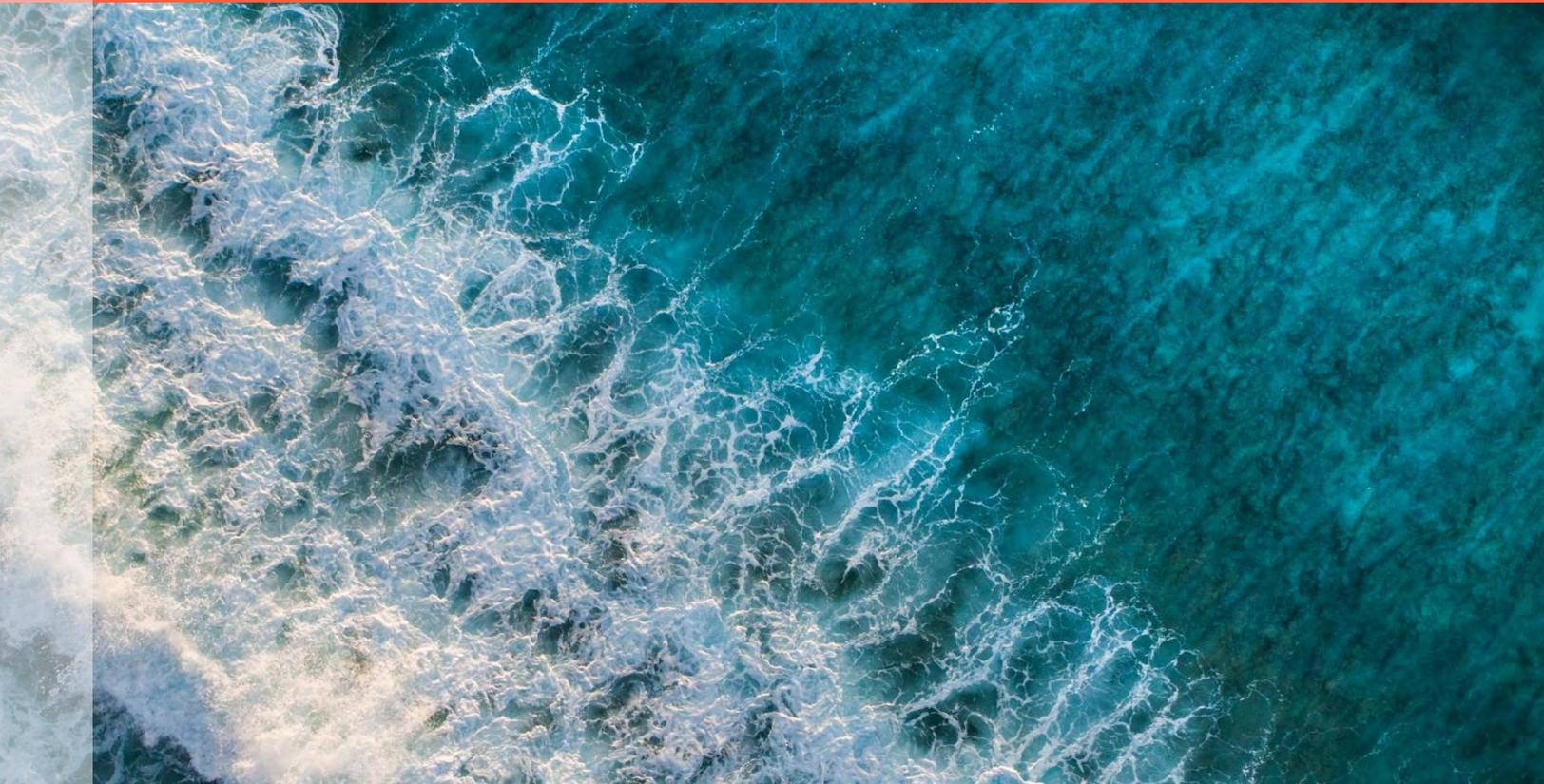
Three members of the team (Jane Davidson, Patricia Rogers, and Dugan Fraser) identified one or more evaluations they had been involved in and knew well. Andy Rowe acted as a ‘boundary spanner’, drawing on his previous experience with evaluations that have addressed impacts on natural systems to identify some potential ways these might have been included. A schedule was developed to discuss these evaluations in turn in virtual meetings. Before the meeting, the ‘case owner’ circulated relevant materials, especially the evaluation report, to the team to brief them.

In the session, the case owner and the ‘boundary spanner’ discussed the case, exploring potential impacts and whether or not it might have been feasible and useful to address these. Other participants were largely in a ‘fishbowl’ observing the interaction and asking clarification questions. Initially, session notes were taken, but these were replaced by recording the sessions (with the permission of all involved) and then drafting notes from the transcript.

After all the cases had been reviewed, the case owners analysed their case using a template (see Appendix A). The different evaluations were discussed in a synthesis meeting, and lessons were drawn across the cases. The [BetterEvaluation Rainbow Framework](http://www.betterevaluation.org/rainbow_framework)² was used to identify specific methods and processes that might have been used. The ‘[Here, There and Everywhere](http://www.gamestorming.com/here-there-everywhere)’³ framework was partially used to identify issues from the case and how they might be applied elsewhere.

² www.betterevaluation.org/rainbow_framework

³ www.gamestorming.com/here-there-everywhere



Four thought experiments

Overview of the cases

The four selected cases involved different sectors, different evaluation purposes and different scales of intervention and evaluation. In all cases, the evaluations focused on human systems' implications and had not considered natural systems implications. Each evaluation was one that a participant in the thought experiments had worked on and knew well.

The following provides a brief overview of the completed evaluation and results from the thought experiments.

▶ **Gilles Plains Community Garden, Stronger Families and Communities Strategy**

This project was one of more than 800 projects funded under a national community and family capacity strengthening program. The evaluation was conducted as part of the evaluation of the national program. It was intended to identify what could be learned from a successful project to inform subsequent project selection, design and implementation. The project was located at a specific site in an Australian capital city. The evaluation was conducted during implementation and primarily involved a single evaluator.

An evaluation that considered environmental sustainability would have identified additional benefits produced by the project in terms of positive impacts on the natural systems.

▶ **Redevelopment of Community Corrections**

This evaluation was for a major criminal justice program, part of a larger initiative to reduce re-offending. The evaluation was primarily undertaken to report to the central finance agency about the impact of this investment. The project itself was located across an Australian State. The evaluation was conducted during implementation and involved a small evaluation team.

In addition to the social benefits of reducing imprisonment and re-offending, an evaluation that considered environmental sustainability would have identified substantial additional benefits produced by the project. This includes avoiding the likely negative environmental impacts of building and operating additional prisons (to accommodate rising numbers of offenders and prisoners).

▶ **Retrospective Impact Evaluation of Save the Children's Sponsorship Programming in Woliso Impact Area, Ethiopia**

This case looked at a retrospective impact evaluation of 8 years of community development programs. The initial evaluation was undertaken ten years after the completion of activities. It was conducted to inform sponsorship programming design and implementation in current and future locations and

communicate to current and potential donors the impact and value of sponsorship. It was undertaken in a specific rural region in Ethiopia, across several administrative districts, by a small evaluation team.

The thought experiment identified several environmental impacts that could have been considered during the evaluation but were not included. The use of concrete block construction for new community schools, for improved durability over mudbrick constructions, would have produced greenhouse gas emissions; there may have been positive or negative environmental impacts from installing various kinds of water supply and sanitation facilities.

▶ **South Africa Child Support Grant**

This case looked at an impact evaluation of a nationwide unconditional cash transfer program. The evaluation was undertaken to add to the evidence base for the impact of child support grants and cash transfer programs. The evaluation drew on national-level data and data from a sample of districts involving a large evaluation team.

Given the potential variability of environmental impacts from the programs, depending on how cash transfers were spent, it was difficult for the thought experiment to estimate the likely outcome from an evaluation that considered environmental sustainability.

Case 1: Community garden project

Summary

This case focused on an evaluation of a small project at a single site, which was part of a program of 800 projects funded under a national community and family capacity strengthening program. Even though the project included activities directly involving natural systems, the initial evaluation did not directly address natural system impacts. Instead, it focused only on impacts related to human systems and activities that contributed to these. The thought experiment focused on identifying possible significant environmental impacts from the Community Garden.

Some relevant data was available as part of project documentation or had gathered during two site visits during the evaluation. This data showed evidence of positive environmental impacts from the project.

If these positive impacts had been included in the initial evaluation, it would have added to the overall identified benefits and provided additional guidance to other projects.

The intervention

The Community Garden was one of more than 800 projects funded under the Australian Stronger Families and Communities Strategy to strengthen community or family capacity. The definition of capacity used did not include reference to natural capital:

“Capacity, at a community level, refers to the potential for action arising out of the interplay between human capital (levels of skills, knowledge and health status), social and institutional capital (leadership, motivation, networks) and economic capital (local services, infrastructure and resources).” (Evaluation report)

The community garden was implemented in a culturally diverse suburb of Adelaide in South Australia that has traditionally been economically disadvantaged.

**A footprint
evaluation approach
would have identified
additional benefits of
the project**

The garden was built on a small area of land (40 square metres) that was previously an asphalt car park. It was centrally placed within a collection of services known as the Gilles Plains Community Campus.

The garden had six different sections, each providing a focal point for various activities:

- ▶ **an Indigenous section reflecting the cultural heritage of the local Kaurna indigenous people and the original biodiversity** – for example, using reeds for traditional basket weaving with young mothers
- ▶ **a herb garden** – for example, used by schoolchildren to grow various Italian herbs for cooking classes
- ▶ **a vegetable patch and fruit trees** – for example, sharing watermelon among school children
- ▶ **a sensory garden containing fragrant and scented plants** – for example, used by participants in a domestic violence support group
- ▶ **community artworks area and a meeting area/performance space** – both under development at the time of the evaluation

The project developed both physical and community capacity. Tangible physical assets included the physical infrastructure of the gardens; less tangible but equally important were the development of individual skills and knowledge and the developing social capital of networks and trust.



The site of the community garden at project inception (Photo supplied by project team)

The original evaluation

The initial evaluation was focused on understanding factors contributing to the success of this particular project and how these might be applied in other projects.

“The Gilles Plains Community Garden, a project that received funding under the Strategy, provides insights into how this capacity can be developed, and then used for a series of activities. These insights are relevant to a broad range of capacity building projects, not just to community gardens. In this project, some of the capacity was very tangible – the physical infrastructure of the garden- but some was less tangible but equally important – the human capital of skills and knowledge; and the developing social capital of networks and trust. ...

A garden provides a useful metaphor for other capacity-building projects. Successful gardens and projects require thorough preparation and durable infrastructure. Once the initial construction has been completed, it creates opportunities for a range of new activities and involvements.” (Report summary)

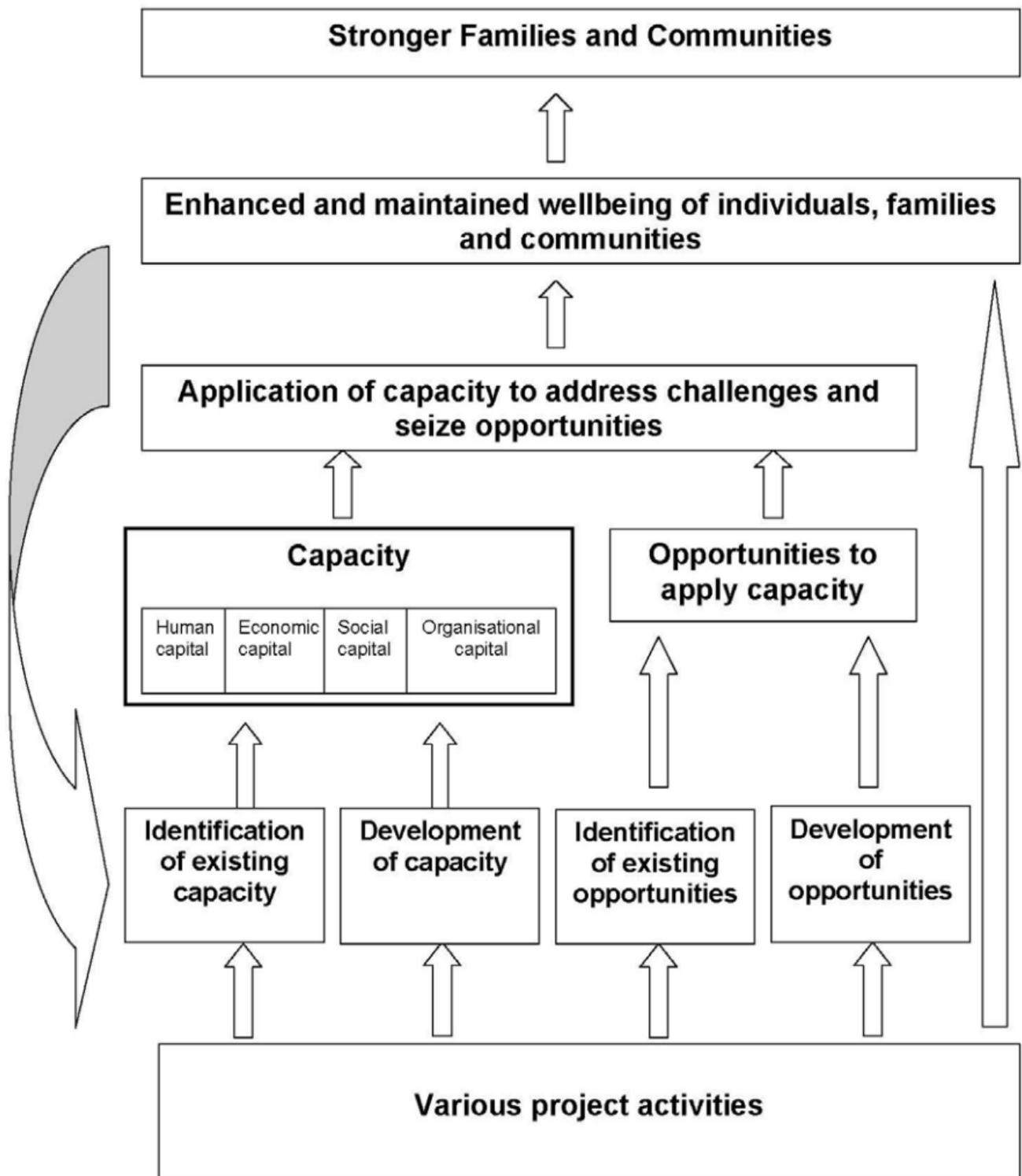
The evaluation included a visit by one member of the evaluation team to the site on two successive days to conduct individual and group interviews and take photographs of the site and various activities.

The evaluation report included a review of existing research and evaluation on community gardening, especially in Australia. It summarised the identified environmental, health, psychological, social and economic benefits.



The established community garden (photo supplied by project team)

Figure 1: Project logic for the Gilles Plains community garden project



The report included the following summary of environmental benefits:

“Research has found that a significant proportion of land in the average city lies vacant and unused because of population and residential shifts due to de-industrialisation, irregular, undeveloped or small land size and changing perceptions of desirable housing (Schukoske, 2000). Community gardens can directly contribute to improving the urban environment because they ‘bring derelict land into productive use, regreen streetscapes and increase wildlife habitat’ (Grayson & Campbell, 2000, p. 2). They also help to promote awareness of organic gardening and permaculture principles that aim to encourage sustainable use of the environment (Crabtree, 1999).” (Evaluation Report, p. 8).

The report identified two environmental benefits from the project:

- ▶ **Improved attractiveness** of the physical environment
- ▶ **Increased awareness** of water conservation, waste management, organic gardening, and composting

However, the focus of the evaluation was not the specific project but the larger concept of strengthening community capacity. The evaluation was done as a case study in the national evaluation of the Strategy, intended to document and learn from a particularly successful project. It focused primarily on refining a theory of change about strengthening community capacity that could be applied to other projects and the whole initiative. Community capacity was primarily addressed in social and human capital; natural capital was not considered.

The thought experiment evaluation

The thought experiment identified several positive impacts of the community garden on natural systems. Some of these impacts would have come through project activities (e.g. planting more insect attracting plants), and some would have been achieved through later outcomes - increased capacity of individuals and the community.

Removing a paved car park and replacing it with the community garden would have reduced water run-off and increased biodiversity, especially for Indigenous plants and insects. It may also have reduced water run-off and water pollution from oil spills from parked cars (if this change had consolidated parking into one area rather than two).

Broader ripple effects might have been produced through the activities undertaken in the garden. These activities sought to increase people's appreciation of and engagement with nature – whether for recreational activity, cultural activities as part of supporting Indigenous people to reconnect to the land, or supporting well-being through nature-based activity – and potential engagement in gardening and nature-based activities in the future. In this way, the project could have contributed to individual practice change and a shift in social norms regarding the environment. Considerably more investigation would have been needed to understand whether the level of engagement in the garden might have been long enough or significant enough to make a lasting difference to individuals and the community.

Of course, community gardens do not necessarily have positive environmental impacts. Gardening can produce harmful effects through fertilisers, pesticides, and herbicides that decrease biodiversity, especially by killing insects and replacing remnant bushland with gardens. Much depends on how the gardening is done and where it has been sited. In this example, the garden replaced a paved car park, and the choice of gardening methods was environmentally friendly.

Learnings from the thought experiment evaluation

- ▶ The theory of change needed to be revised to identify potential environmental impacts.
- ▶ These potential environmental impacts could have come directly from the activities undertaken or as a result of achieving intermediate outcomes or impacts.
- ▶ Evidence from evaluations of similar interventions could have identified potential impacts which could have potentially been empirically investigated as part of the case study. Or addressing environmental effects in this case study might have led other case studies to do so.

More information on the case

Read the [Evaluation Report](#)⁴

⁴ <https://www.communitygarden.org.au/2009/09/gillies-plains-community-garden>

Case 2: Redeveloping Community Corrections

This case was deliberately chosen as a thought experiment to test the usefulness of a footprint perspective because the program seemed to have little or no relevance to natural systems. The evaluation addressed the impact and likely impact of a funding initiative intended to divert those convicted of offences from custodial sentences to community corrections orders. This program was part of a larger strategy aimed at reducing re-offending, which was seen to positively affect human systems by reducing the harm from crime and imprisonment and reducing the need to build additional prisons (a cost-saving). Since the people who are imprisoned are disproportionately from Indigenous and other marginalised groups, the program would have had positive equity effects if successful.

Had the evaluation also considered the likely avoidance or reduction in negative environmental impacts from prison construction and operation (through evidence from other research and evaluation), the evaluation would have identified additional environmental and financial benefits from the intervention's success in diverting offenders and reducing re-offending. **If these positive impacts had been included in the initial evaluation, it would have added to the overall identified benefits.**

The intervention

The Redevelopment of Community Correctional Services (CCS) was a significant feature of the Victorian Government's Reducing Re-offending Strategy. The strategy was initiated in 2001 and designed to guide correctional policy and practice over the next decade and strengthen Community Correctional Services' capacity to manage offenders and reduce the number of prison beds. A key indicator of success was an increase in substitution from prison to community-based correctional services with an anticipated reduction of 350 prison beds over the four years of implementation.

A footprint evaluation approach would have identified environmental and financial benefits related to reduced prison construction and operation

The intended longer-term outcome was a reduction in re-offending. Given the higher rate of involvement in the criminal justice system by Indigenous and other marginalised groups, this would have equity implications in terms of reduced negative impacts for people convicted of crimes and victims and their families.

Activities that were undertaken as part of the redevelopment related to four goal areas which were described as follows:

- ▶ **Assess offender suitability for a community sentence** – conduct presentence reports
- ▶ **Enforce court-ordered sanctions** – monitor police arrest, monitor attendance at community work, conduct personal and home visits, and test for drug and alcohol use
- ▶ **Protect the community** – assess risks, conduct personal supervision, monitor arrest records, restrict travel outside designated areas
- ▶ **Assist the offenders to change** – refer to activities designed to reduce their long-term return to crime, including education/vocation activities, drug/alcohol treatment, cognitive skills program, violent offender program, sex offender program, counselling

The original evaluation

The purpose of the evaluation was to provide accountability for the additional funding, demonstrate the value of the investment and motivate the achievement of intended objectives.

The evaluation concluded that the redevelopment of the CCS had effectively diverted offenders from prison and contributed to reductions in re-offending; however, high staff turnover meant the quality of service delivery, and hence results, might not be sustained.

Sources of information about outcomes were:

- ▶ Review of relevant research and policy documents
- ▶ Interviews with senior managers and head office staff; magistrates; members of the adult parole board; staff employed in three specialist areas;
- ▶ Site visits to 7 different locations, including interviews with 100 staff and 17 people convicted of offending
- ▶ Re-analysis of data on prison intake and community corrections orders

The evaluation focused on the impacts on people, including those imprisoned and their families and victims of crime, who are disproportionately from Indigenous* and

other marginalised groups⁵. While the strategy aimed to reduce imprisonment, there was a risk of ‘net-widening’ where more people have some form of engagement (including community corrections, remand or imprisonment).

The thought experiment evaluation

In this case, significant environmental impacts were not likely to come from the implementation activities but from the likely environmental impact of achieving one of the ultimate intended impacts – a reduction in prison beds needed, which had been identified in the program’s theory of change. Achieving this would have removed or reduced the need to build new prisons and avoided the negative environmental impacts of building new prisons. These can include increased emissions due to high use of concrete, use of plastics due to procurement policies, pollution due to ineffective waste management, increased paved surfaces, and increased use of car transport by staff and visitors (given their usual location away from public transport options).

The thought experiment evaluation drew on evidence from other evaluations to predict that achieving the intended reduction in prison beds and reducing the need to build new prisons would have led to a decreased level of negative environmental impacts. The counterfactual of this – increased demand for prison beds and hence prisons – would have led to greater negative environmental impacts. In the thought experiment, a key informant in the research team provided this evidence from other studies. This evidence would need to be formally sought, reviewed, and cited in a formal evaluation.

If these potential impacts had been achieved, it would have increased the identified benefits of CCS redevelopment and improved its cost-benefit ratio.

One of the potential consequences of higher rates of imprisonment of Indigenous⁶ people is to restrict the capacity of communities with important historical and cultural knowledges of the land to be part of the conversation about how to move forward in the face of climate change. Reduced imprisonment of people from Indigenous and marginalised backgrounds could strengthen these communities and lead to a flow on of positive environmental impacts.

Learnings from the thought experiment evaluation

- ▶ The theory of change needed to be revised to identify potential environmental impacts.

⁵ For example <https://www.aboriginaljustice.vic.gov.au/the-agreement/aboriginal-over-representation-in-the-justice-system/underlying-causes-of-aboriginal>

⁶ We acknowledge that the collective term “Indigenous” is not necessarily used by all First People.

- ▶ The significant environmental impacts would have come from one of the intended impacts of the program.
- ▶ Given the evidence from other research and evaluation, it would have been possible to estimate likely environmental impacts from achieving program goals. These could have been included in the evaluation before actual impacts were evident.

More information on the case

Read the [Evaluation Report](#)⁷

Read the [Department of Corrections Environment and Climate Change Policy](#)⁸

⁷ https://files.corrections.vic.gov.au/2021-06/evaluation_redevelopment_community_correctional_services_final_report.pdf

⁸ <https://www.justice.vic.gov.au/about-the-department/environment-and-climate-change-policy>

Case 3: Retrospective Impact Evaluation Save the Children's Sponsorship Programming in Woliso Impact Area, Ethiopia (2002 – 2010)

Summary

This case was a challenging retrospective impact evaluation conducted ten years after an 8-year intervention had ended and in a context of significant gaps in data availability. There would have been limited scope to gather additional data during the evaluation, but some questions could have been added to key informant interviews and document reviews.

The thought experiment identified several environmental impacts that could have been considered during the evaluation but were not included. One of these was the environmental impact of Save the Children's decision to use concrete block construction for new community schools instead of the mudbrick constructions they had been using at the outset, which was susceptible to deterioration due to moisture and termites. Although the concrete block construction improved durability, this would have been at the expense of the emission costs of concrete building materials.

An evaluation that considered environmental sustainability would also have been able to identify positive or negative impacts from installing various kinds of water supply and sanitation facilities.

The intervention

Save the Children's child sponsorship-funded multifaceted rural community development effort in rural Woliso, Ethiopia (2002-2010) sought to build community capacity to effect long-lasting change designed to benefit children, their families, and communities. The initiative invested in basic education (40%), non-programmatic support (20%), school health and nutrition (17%), early childhood care and development (10%), adolescent development (9%), and other initiatives, e.g. HIV/AIDS, food security, institutional development (4%).

A footprint evaluation approach might have identified positive or negative impacts, but these were considered unlikely to have been large scale

The original evaluation

The evaluation was designed to support sponsorship programming and marketing - that is, to inform programming decisions and communicate to donors about sponsorship impact and value. Evidence of impacts was drawn from:

- ▶ Organisational documents and records
- ▶ Interviews with staff and leadership
- ▶ Site visits involving stakeholder interviews, observation, and photographs

Rubrics were developed to produce ratings of installation quality and durability and the impacts in several program areas and outcome areas, drawing on a diverse range of mixed-method evidence. Value for investment was assessed using a cost-benefit analysis framework.

The thought experiment evaluation

The thought experiment focused on the environmental impacts of providing and improving infrastructure such as school buildings and water supplies. The challenges associated with considering the impact on natural systems across multiple locations and different types of impacts and the potential implications of including environmental sustainability in the Value for Investment analysis were also explored.

Learnings from the thought experiment evaluation

- ▶ **Zooming in and out** Looking at a large program such as this one, it can seem too big and difficult to answer a broad environmental sustainability question. One way to make this more manageable is by zooming right into a particular location and understanding what is happening there. We may do this for a few locations. Then, we zoom back and understand the bigger picture and see patterns that may replicate at that larger scale. Approaching the thought experiment in this way helped the team examine some examples of tangible environmental impact, even when the program's large scale and variety of intervention types meant that gaining a complete picture of the program's impact on natural systems was unattainable.
- ▶ **Addressing natural systems in Key Evaluation Questions** It was evident in the discussions that natural systems elements can, and should, be incorporated into several KEQs. For example,

KEQs related to core programming could include the consideration of sustainability and footprints of water systems, latrines, and schools

KEQs related to outcomes and impacts should consider natural system impacts in addition to impacts on children, families, and communities (human systems)

Value for investment KEQs and analyses should incorporate any natural system impacts that seem large enough to warrant it

KEQs related to sustainability ought to expand the focus to natural systems when considering what made the biggest difference in how well core programming lasted and outcomes and impacts were sustained.

- ▶ **Expanding theories of change** – Theories of change aren't complete pictures. While an intervention's existing theory of change can be a helpful starting point, these are not adequate to unpack where there are intersections between human and natural systems. This is because most programs' theories of change draw boundaries related to human systems, not natural systems. This includes boundaries of time and space, discussed below.
- ▶ **Where we draw boundaries in time** – Switching school building construction materials from mud and wood to concrete sought to create a long-term fix to the short-term issue of wooden buildings deteriorating due to termite infection. This did indeed create a long-term solution from a human systems perspective. Concrete is more durable and lasts many years longer than wooden structures. However, broadening the scope of the evaluation to include natural systems requires expanding this temporal boundary to include the full life cycle of the new material. Concrete will eventually crumble, and the deterioration of this material affects the natural systems. It's important to think about some of the longer-term consequences of decisions that might fix something now but have ripple effects that spill over into a different timeframe and have implications for natural systems later on. Time boundaries can also be expanded to include the environmental impacts of producing and transporting materials, such as concrete.
- ▶ **Where we draw boundaries in space** – The spatial boundaries used in the initial evaluation were the administrative boundaries of the small community serviced by the intervention. Community members of this area were seen as the primary stakeholders. However, when incorporating a natural systems perspective, it became clear that the spatial boundaries should be expanded to include the water catchment, and affected stakeholders would therefore include neighbouring communities who also drew on this water catchment.

More information on the case

- Read the [evaluation report](#)⁹

⁹ <https://resourcecentre.savethechildren.net/publishers/real-evaluation?embed=>

Case 4: Child Support Grant Impact Assessment

This large impact evaluation was intended to add to the global evidence base about cash grants. It used a snapshot survey and propensity score matching to identify impacts.

An evaluation that considered environmental sustainability could have identified potential environmental impacts from behaviour changes, but these might have been positive or negative, depending on the specific changes. For example (drawing on examples from other research and evaluation), changes in food consumption could be positive if this reduced over-fishing but negative if it led to an increase in packaged food which was not sustainably produced and involved additional transport. Given the scale of the intervention (whole country) and the likely variation in environmental impacts, it was difficult to retrospectively estimate the likely environmental impacts without detailed information on changes in purchasing, consumption and other behaviour. Considerable work would have been needed to identify and synthesise evidence about potential impacts and expand data gathering to address these, including some longitudinal data collection.

Given the evaluation scale and the likely variations in the behaviour changes produced, it was difficult to use the strategy of projecting impacts from existing research and evaluation evidence to predict likely environmental aspects.

The intervention

The South African Child Support Grant was an unconditional cash transfer program reaching over 10 million South African Children per month in 2012. The CSG was an important instrument of social protection in South Africa that aimed to target and provide benefits for children in the poorest 30% of households.

Footprint evaluation could have identified positive or negative environmental impacts related to behaviour change, but this would have needed considerable effort

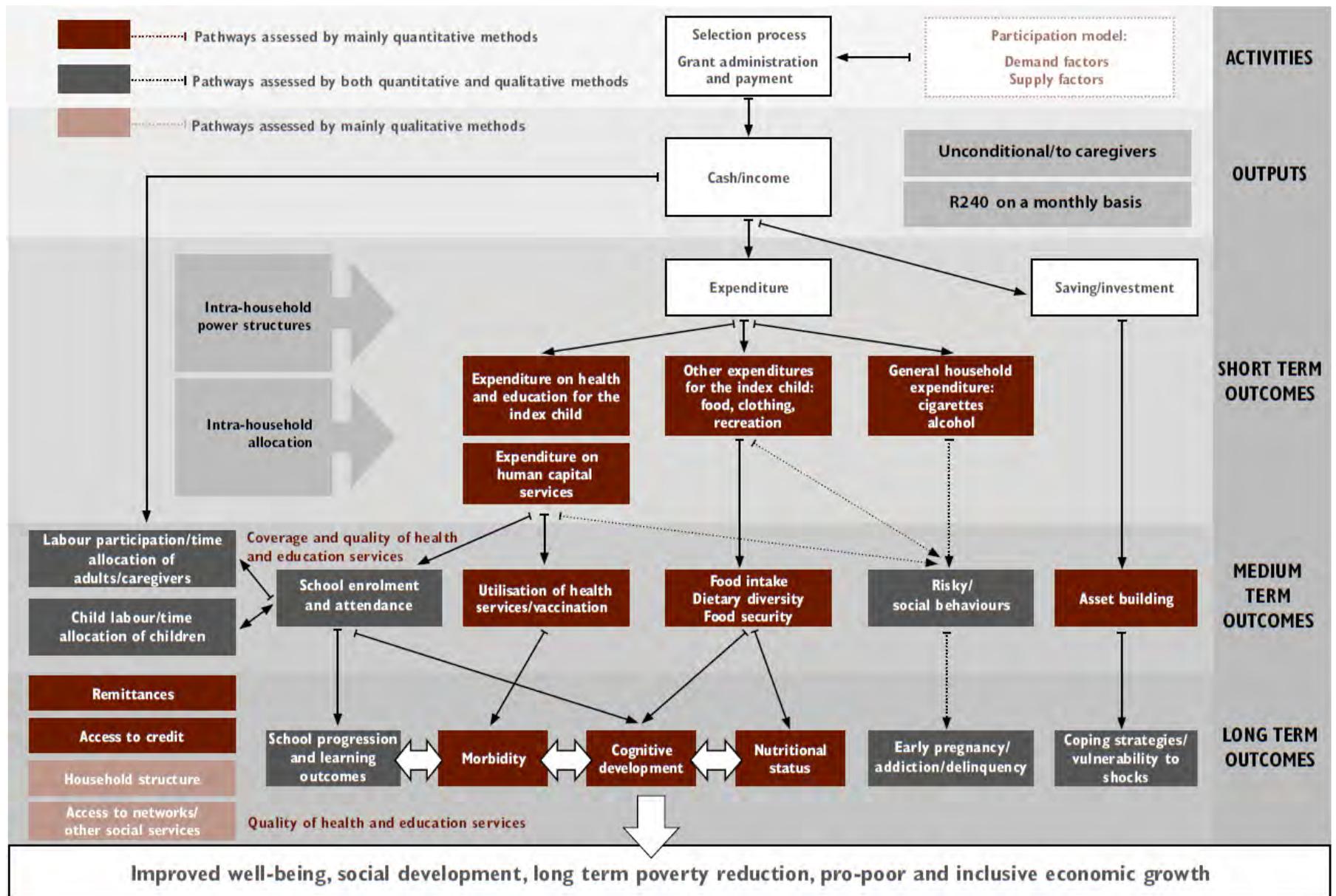
The original evaluation

The evaluation gathered a variety of data relating to several identified pathways from the cash grant.

Data were primarily collected through:

- ▶ A household survey of families with a child or adolescent – asking questions about household characteristics, child’s schooling, recent child illness,
- ▶ Data about children’s weight monitoring and vaccination from their ‘Road to Health’ card
- ▶ Tests of children’s mathematics and reading skills
- ▶ Surveys of children about their time allocation, including time spent studying, assisting with household chores, and working for a family business or pay outside the household
- ▶ Surveys of adolescents about their time allocation and engagement in various risky behaviours

The theory of change for the intervention was shown as follows:



(Source: Evaluation report)

The thought experiment evaluation

One of the important causal pathways relates to improved nutrition through increased expenditure on food. From other research and evaluation, it is clear that these could have positive or negative environmental impacts. For example, a review identified several cases where cash grants had led to increased demand and over-fishing or increased deforestation (Gilliland and others, 2018); cash grants could potentially reduce negative impacts on biodiversity from overharvesting. For example, other potential pathways might relate to reduced deforestation from efficient fuel stoves and alternative building materials.

Given the range of causal pathways and the fact that these could vary considerably in different contexts, it was not possible to identify a body of evidence that could have confidently been used to estimate likely environmental impacts from the cash grant. It would also not have been feasible to add more data collection to the design, given its emphasis on generating evidence that would be considered robust in terms of effect size and statistical significance.

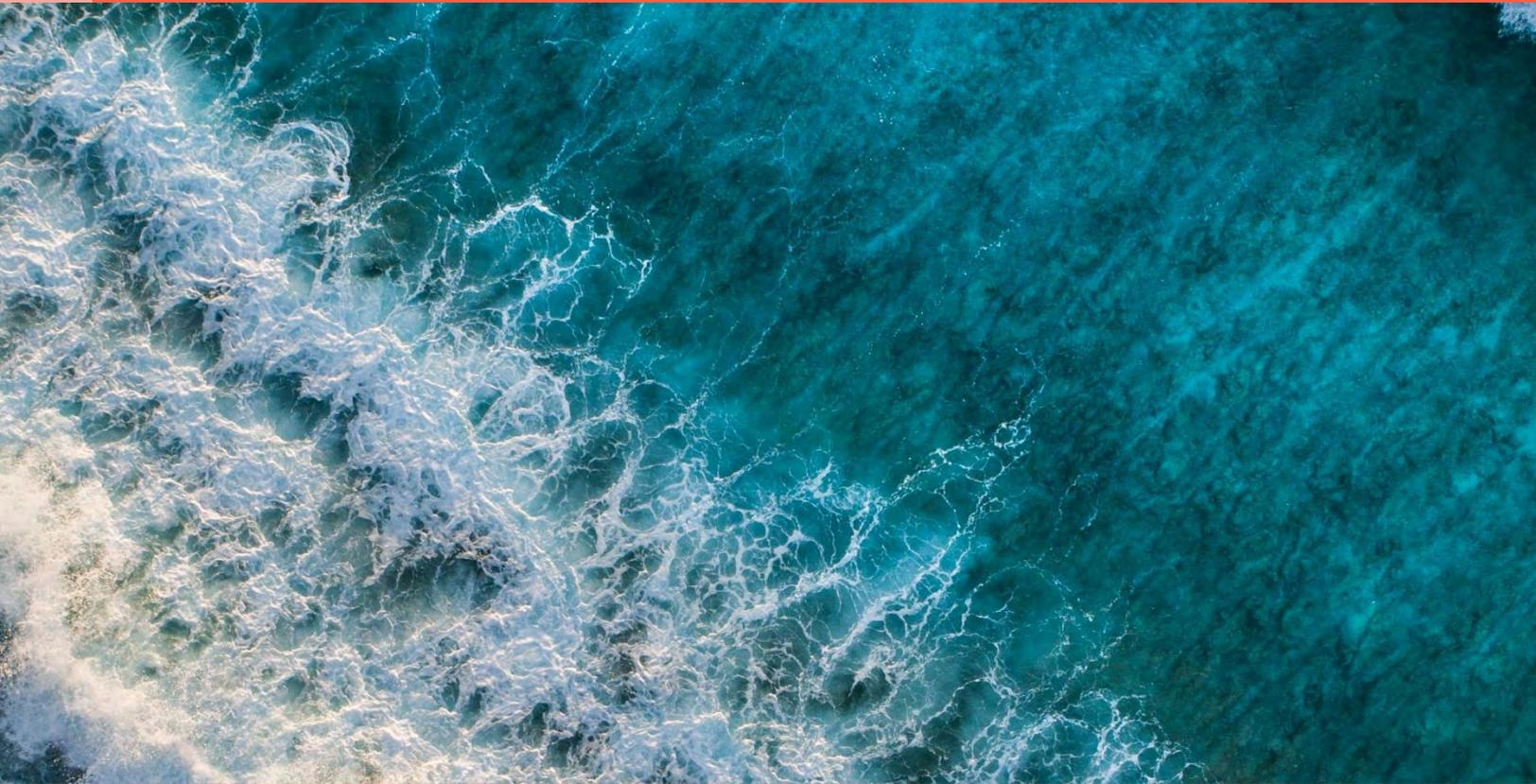
Learnings from the footprint evaluation

- ▶ Where effects are likely to vary, theories of change and evidence that take account of context are needed – both primary data from the evaluation and evidence from other research, evaluation and reviews.
- ▶ The environmental consequences could have been significant in either undermining or supporting the equity intentions of the intervention.

More information on the case

Read the [evaluation report](#)¹⁰

¹⁰ <https://www.unicef.org/southafrica/media/1116/file/ZAF-South-African-child-support-grant-impact-assessment-2012.pdf>



Reflections and learnings

Key elements of incorporating environmental sustainability into evaluations

This work-in-progress brings together what we have learnt from the thought experiments about ways of addressing impacts on the natural systems in an evaluation where this is not a stated goal of the intervention.

1. **Go to the place** (physically if possible, or virtually or vicariously).
2. **Broaden the theory of change** to include impacts on the natural systems.
3. **Identify those potentially impacted by changes** to human and natural systems (including people and other living creatures).
4. **Consider expanding the spatial and temporal framing** for the evaluation.
5. **Focus on the big issues.**
6. **Draw on multiple sources of expertise and evidence** about natural systems.
7. **Apply system concepts** to think about natural systems and their intersections with human systems.

1. Go to the place (physically if possible, or virtually or vicariously)

The thought experiments showed the value of, where it is possible, visiting the place of an intervention (or some of the sites if there are several). This allows evaluators to observe the settings of the natural and human systems and identify and talk with relevant people. Ideally, site visits during the evaluation design or early in the evaluation can reveal significant insights about the nexus points and coupling of human and natural systems and help identify the various interests that the evaluation needs to consider and engage where possible. Going to the place is a technical and social undertaking providing opportunities to identify the reach and character of the intervention, access local and traditional knowledge, and understand how the intervention affects human and non-human populations and contributes to refining the relevant temporal and spatial scales.

In these thought experiments, physically going to the sites was not an option. However, site visits remain an important part of the process and have been beneficial for other evaluations that have addressed impacts on natural systems.

For the thought experiments, two of the cases (community garden and child sponsorship) included site visits. The reports included photographs of specific sites, which helped identify potential environmental impacts.

While the community garden was implemented at one specific site, the other three were interventions in a region, a state or a country, where there were multiple places where the intervention was implemented. Multiple intervention sites present an ongoing challenge in operationalising this principle, which has been based on experience in more site-specific evaluations.

2. Broaden the theory of change to include impacts on natural systems.

Theories of change often include only the intended impacts, especially impacts on human systems such as improved health and well-being of communities. To address environmental sustainability, theories of change also need to include important positive or negative impacts on natural systems, whether or not these are intended, by focusing on nexus points between human and natural systems.

This involves considering how the human systems in a theory of change could impact natural systems. It might consider how inputs, processes, outcomes and impacts could affect natural systems. It can also consider the different ways that natural and human systems are coupled and entangled, affecting each other.

For example, in the child sponsorship evaluation, programme activities to replace existing mudbrick school buildings with concrete block buildings would have produced negative environmental impacts in terms of the emissions produced through concrete manufacture and transport. Concrete buildings were a response to termite damage to mudbrick buildings. Other alternatives (e.g. termite management processes) may have been explored if natural system impacts had been considered.

The thought experiments encouraged the identification of potential consequences for natural systems that should have been included but were not.

3. Identify those potentially impacted by changes to human and natural systems (including people and other living creatures)

Most evaluations include a process of identifying stakeholders and intended beneficiaries. It's important also to include people who might be affected by positive or negative environmental impacts and who, because they may not be strongly connected with the intervention being evaluated, may not have a voice when evaluations focus purely on human systems. Going to the place could assist in identifying these groups.

This expands the consideration of stakeholders to include representatives of interests who might affect the success of the intervention and those potentially impacted by the intervention. Natural system interests should also be included, for example, those concerned with extraction for commercial or other human uses, conservation, traditional such as ceremonial, healing and medicinal uses, contaminants and emissions such as plastics and chemicals.

For example, the Reducing Reoffending evaluation focused on impacts on people convicted of offences, their families, and victims of crime. An evaluation that considered environmental sustainability would also include people affected by the construction of additional prisons and the prison's footprint on the local place and more widely.

Evaluation that considers environmental sustainability also goes beyond only considering affected people. It also considers impacts on natural systems, including specific animals and plants and broader ecosystems and biodiversity.

Previous research and evaluation evidence can identify potential impacts on natural systems that an evaluation could investigate - and their precursors where these impacts are unlikely to be evident during the time period. In the Reducing Reoffending evaluation, the most significant likely environmental impact would have come from avoiding building new prisons, which generally have negative environmental impacts during construction and operation.

4. Consider expanding the spatial and temporal framing for the evaluation

Boundaries also need to be considered in terms of time and space. This can involve expanding temporal boundaries to consider long-term consequences like “the fix that fails”, ripple effects, and spillover effects where long-term impacts are not evident during the life of an evaluation. This could include, for example, the intergenerational effects of pollutants or changes in water flow on humans and other importantly affected species and things.

It can also involve deliberately looking for boundaries of natural systems rather than defaulting to geopolitical or administrative boundaries. For example, human systems might operate within the administrative boundaries of a local town, but impacts on natural systems might span these – For instance, considering sites downstream or downwind of a project site, basing boundaries on ecosystems rather than human management structures.

What is essential is that those involved in the evaluation make informed, deliberate decisions about what is included or excluded from consideration.

5. Apply system thinking to think about natural systems and their couplings with human systems

Systems thinking can include specific systems concepts and tools such as feedback loops, tipping points, thresholds, and fractals. Most importantly, it involves the conscious use of systems thinking and simulation models as an incomplete heuristic of the systems in the real world rather than a comprehensive algorithm or mechanical model.

Especially for interventions across multiple sites, this is likely to require going to a specific location (or several) to understand the environmental impacts in an example that contains the details of the larger picture and then zooming back to an overview.

The child sponsorship case included several case studies of specific locations, which were particularly useful for the footprint evaluation and could have been more so if it had been possible to include additional data collection.

6. Draw on multiple sources of expertise and evidence

Evaluations that consider environmental sustainability need to draw on diverse evidence beyond that usually gathered, including evidence from biophysical sciences, local and citizen science, and traditional and Indigenous knowledge. The thought experiments showed the need for expertise in accessing and making sense of existing evidence from previous research and evaluation, existing data from monitoring systems, and primary data that could be collected during an evaluation.

In these thought experiments, we had access to the expertise of a specialist who could identify relevant evidence and examples from which to generalise. This “boundary spanning” function can provide valuable connections to natural systems and knowledge sources that will aid the evaluation address sustainability.

7. Focus on the big issues

Given the wide range of potential consequences for natural systems and the challenge of covering these appropriately within limited resources, it is important to focus on potentially significant consequences. It is particularly important to avoid focusing simply on consequences that can be readily measured or are funder priorities rather than developing adequately accurate information on issues with greater significance.

The use of rubrics is one way to systematically and transparently bring together different types of evidence in relation to different criteria. Other methods include expert panels to provide credible assessments where precise measurements are not possible.

In the child sponsorship program, a footprint evaluation would address both the environmental implications of replacing mudbrick school buildings with concrete block buildings and the social implications (since the mudbrick buildings had not been durable in climatic conditions).

Questions and challenges arising from the thought experiments

Debriefing the thought experiments raised additional questions to be explored further. Some relate to factors that might help or hinder evaluations considering environmental sustainability.

1. **How to ensure environmental impacts are included in the scope of an evaluation**
2. **Barriers to ‘going to the place’**
3. **Bringing appropriate evidence and understanding to bear**
4. **Synthesis of evidence into overall judgements**
5. **Monitoring systems**

1. How to ensure environmental impacts are included in the scope of an evaluation

Evaluations are usually framed around a Terms of Reference, which sets out its scope and high-level questions – and these rarely specify that environmental sustainability should be included. There might be ‘push-back’ from evaluation commissioners and program managers, especially if they view evaluation as primarily intended to provide accountability in terms of compliance with agreed processes and achievement of intended results.

- ▶ How might evaluation commissioners include environmental sustainability when developing Terms of Reference, including addressing resistance?
- ▶ How might evaluators respond to Terms of Reference which don’t explicitly refer to environmental sustainability or impacts on natural systems?

2. Barriers to ‘visiting the place’

Although previous evaluations that have considered environmental sustainability have shown the importance of visiting the place, this is not always possible, especially for interventions implemented at multiple sites or across a region or country. Site visits are often included in evaluation designs, but these often focus on meeting some stakeholders and undertaking interviews – evaluators might need additional expertise to observe connections with natural systems.

- ▶ How do we ‘visit the place’ when there are restrictions on travel (including restrictions related to pandemics or epidemics, violent conflicts, natural disasters), insufficient funding, or consideration of the environmental effects of travel to a dispersed intervention not located in a single place?
- ▶ How to incorporate adaptive management into evaluation designs to enable the evaluation to adjust to emerging knowledge about ‘the place’.

3. Bringing appropriate evidence and understanding to bear

In our thought experiments, we could draw on the expertise of someone with experience evaluating impacts on natural systems but also did not engage in the actual process of gathering and making sense of data. For some aspects, advanced technical expertise and local expertise will be required to collect and make sense of data about actual or potential impacts on natural systems. When working across disciplinary boundaries, there are likely to be differences in paradigms and understanding of key concepts and differences in terminology, which might take time to work through.

- ▶ How can appropriate knowledge and expertise be identified, engaged, and effectively integrated, especially given paradigm and discipline differences in conceptual frameworks and understanding, power differences, and resource constraints for individual evaluations?
- ▶ Are there changes needed to worldview, mindset and understanding of key concepts so those involved in the evaluation can make sense of information about natural systems?

4. Synthesis of evidence into overall judgements

In two cases, it was possible to produce a synthesis of the likely overall impact on natural systems. It would be more difficult if impacts varied across sites or domains – for example, positive in some aspects (or at some sites) but negative in others.

- ▶ How can the different consequences for natural systems be synthesised?
- ▶ How can evidence in terms of consequences for both human and natural systems be appropriately synthesised?

5. Monitoring systems and evaluation for adaptive management

The thought experiments were all discrete evaluations designed to inform long timelines for decisions. Further work is needed to consider how monitoring systems and evaluation to support adaptive management can include consideration of environmental sustainability, given the need for much more

nimble systems of gathering, analysing, reporting and supporting the use of evidence.

- ▶ How can program and organisational monitoring systems include consideration of environmental sustainability, support and encourage more timely adaptive management?
- ▶ How can evaluation be intended to support adaptive management?

What is needed so all evaluations adequately address environmental sustainability?

What are systemic approaches to overcoming hindering factors and amplifying helping factors?

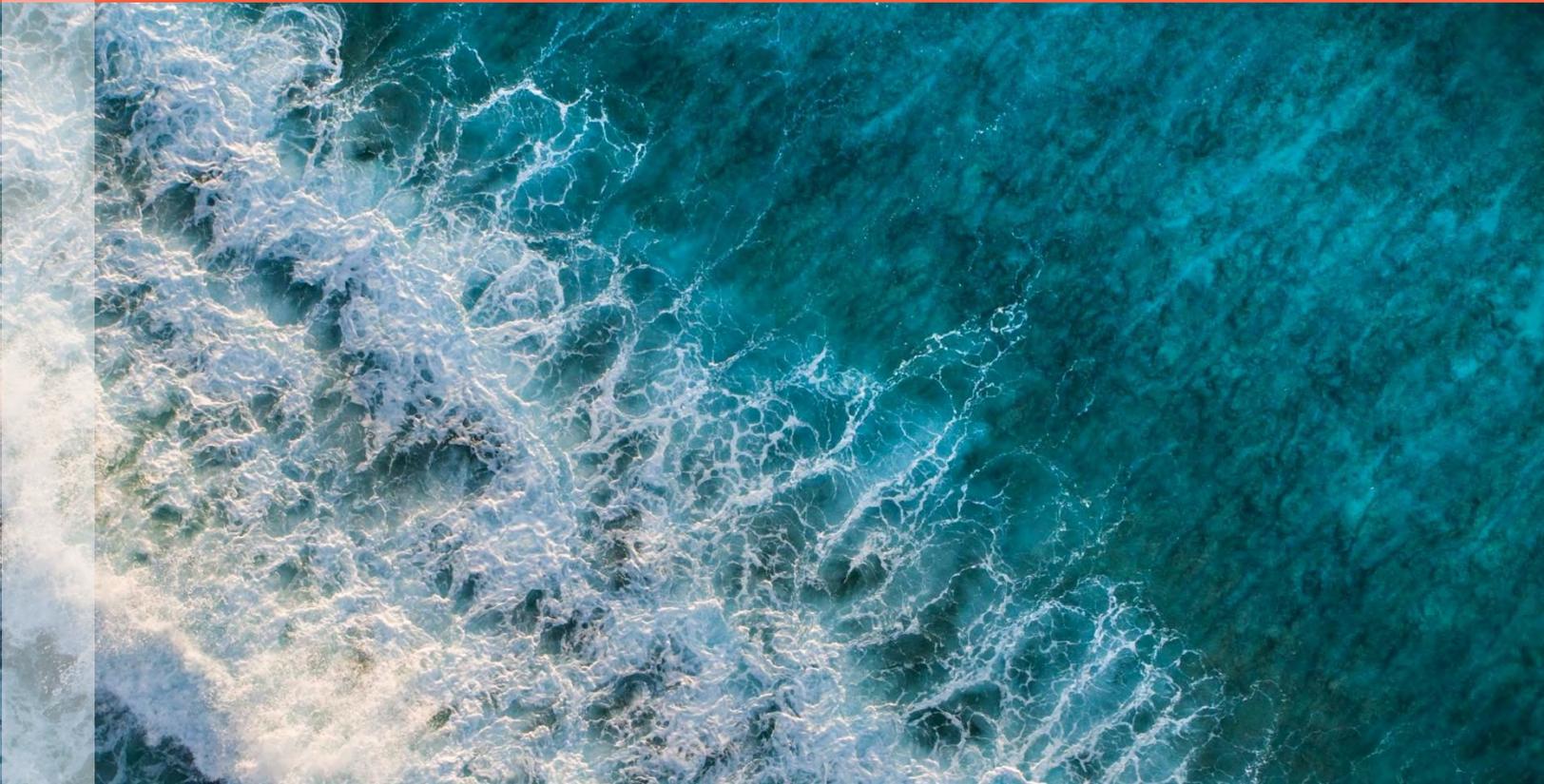
Addressing environmental sustainability in all evaluations will require more than engaging some additional technical expertise to add to evaluation teams. It will require additional training and support for all evaluators to develop some understanding of the issues involved and at least a capacity to work effectively with technical experts. There may well be useful lessons to be drawn from strategies used to mainstream consideration of gender and equity in evaluations.

The following table brings together some potential ways of supporting individual evaluators and evaluation managers and supporting organisational and network changes.

The following list has been developed through reflecting on the thought experiments and on discussions about these cases. It proposes some general approaches and some specific activities for future work. This list will also be further developed and prioritised.

Possible approach	Some potential specific examples
1. Templates and guidance	<ul style="list-style-type: none">▶ Generic Key Evaluation Questions that include consideration of natural systems▶ Guidance for the synthesis of evidence about natural system impacts and synthesis across criteria▶ Checklists of possible types of impacts on natural systems (e.g. biodiversity loss, air pollution, water pollution etc.)

2. Professional development activities and resources	<ul style="list-style-type: none"> ▶ Workshops for evaluators and evaluation commissioners, and managers around particular methods and concepts, as well as worldview and mindset ▶ Training material that can be used in mainstream evaluation courses and programs ▶ Self-paced learning material for evaluation competencies that include sustainability
3. Examples of evaluation policies and procedures	<ul style="list-style-type: none"> ▶ Examples of evaluation policies and procedures (e.g. Terms of Reference) that require consideration of environmental sustainability
4. Examples of evaluations that have addressed human and natural systems	<ul style="list-style-type: none"> ▶ Annotated examples of evaluations that have addressed environmental sustainability, including identifying the methods and processes used
5. Information about relevant evaluation methods and processes	<ul style="list-style-type: none"> ▶ Description and links to more information about methods and processes that can be used to include consideration of environmental sustainability (through BetterEvaluation knowledge platform)
6. Reference material	<ul style="list-style-type: none"> ▶ Resources providing evidence (and summaries of evidence) about the importance and urgency of better management of natural system impacts ▶ Resources summarising rationale for why it is legitimate to include consideration of environmental impact – including the scale of environmental damage, ethics about validity in evaluation, analysis of existing evaluative criteria (especially OECD-DAC), micro-macro paradox ▶ A library of contextualised examples to support reasonable projections of likely impacts
7. Networks of practice	<ul style="list-style-type: none"> ▶ Sharing information about existing related initiatives and networks ▶ Supporting a network of practice around this issue ▶ Collaborating with other initiatives and networks addressing shared or similar goals



Conclusion

Final thoughts

These thought experiments allowed us to think through how completed evaluations might have included consideration of environmental sustainability and whether this would have been useful. There were potentially important consequences for natural systems that would have been relevant in all cases.

Challenges and questions remain about how to do this in evaluations and how to change evaluation systems and infrastructure to support it.

Please join the efforts to learn how to do this so that evaluations can consider environmental sustainability and contribute to better decisions and actions. We'd love to hear your thoughts and experiences with thought experiments or real evaluations.

You can find out more about the Footprint Evaluation initiative here:
www.betterevaluation.org/footprint

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Appendix

Appendix A: Recording and Analysis Template

The following information was documented for each case by the case owner after the analysis session, then the different analyses were compared for similarities and differences.

Footprint Evaluation Exemplar Record

This exemplar provides an example of an evaluation that was undertaken. Use this template to describe how the evaluation was done then, and how it could have been done differently by incorporating a Footprint Evaluation approach.

Focus	Guiding questions	Discussion notes
1. Evaluation details:	What was the intervention being evaluated? When was the evaluation undertaken and reported on? Who commissioned the evaluation? Who did the evaluation? What were the purposes of the evaluation?	
2. Outcomes of interest	What were the sources for identifying intended outcomes and impacts? How (if at all) were potential unintended outcomes and impacts identified?	
3. Issues that arose during the review of the evaluation process	What issues came up during the Footprint Review?	
4. How we would go about do that evaluation using the Footprint approach	What would be done differently to take account of what we have learnt about Footprint evaluation?	
5. How could the evaluation team be able to do this?	What are the implications from the example of how to strengthen capacity of evaluation teams to do footprint evaluation?	

Footprint Evaluation Thought Experiments

Learn more about
Footprint Evaluation at:
www.betterevaluation.org/footprint

