



## Reconceptualising sustainability assessment



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### ABSTRACT

Sustainability assessment as an *ex ante* tool for directing decision-making towards sustainability has emerged in a diverse range of forms across the world over the past decade or so. This broad practice of sustainability assessment embraces a wide and continually evolving range of processes, making the field potentially conceptually confusing and difficult to navigate. In recognition of this, there have been numerous attempts to develop conceptual frameworks to make sense of the diversity of practice. Through a process of literature review and reflection upon practice, this paper builds on earlier work, including our own, to develop a new descriptive conceptual framework for sustainability assessment. The conceptual framework distinguishes two dimensions of sustainability assessment, each with several sub-dimensions: sustainability concept (with sub-dimensions of underpinning sustainability discourse and representation of sustainability) and decision-making context (with sub-dimensions of subject of assessment, decision-question and responsible party). Drawing upon further literature, several examples of different approaches are then identified for each sub-dimension, demonstrating the range of approaches evident within current and emerging global practice. Within the 'sustainability concept' dimension, the first sub-dimension calls for critical reflection upon what the normative goal of the sustainability assessment is, while the second refers to how the concept of sustainability is represented in the decision-making process through the use of indicators. Although these two sub-dimensions are closely related their distinction is a key feature of the conceptual framework. The second dimension describes the practical context of a sustainability assessment. The proposed new conceptual framework enables a particular body of practice to be located within the broader field, as we demonstrate by categorising five examples of sustainability assessment according to the framework. We believe this framework has value to both researchers and practitioners, as a structure to guide sustainability assessment research and analysis and as the basis for comparing bodies of sustainability assessment practice within the range of possibilities defined by the contours of the framework. The framework encourages reflective practice, particularly in relation to how the concept of sustainability is understood and embedded within the process, and what the practice might deliver. This new conceptual framework is presented as a relatively simple road map and guide as sustainability assessment theorising and practice enters its second decade.

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### 1. Introduction

Over the past decade, sustainability assessment has emerged in many different forms across the world (Bond et al., 2012), with the variety being evident in the recently published book *Sustainability*

*appraisal: a sourcebook and reference guide to international experience* (Dalal-Clayton and Sadler, 2014). The term 'sustainability assessment' can be used to refer to processes that are *ex post* evaluative techniques as well as those that are forward-looking *ex ante* processes that aim to predict the potential effects of an activity prior to its implementation. There is also variety in terminology used to refer to *ex ante* sustainability assessment processes, including sustainability appraisal (particularly in England), integrated assessment, integrated sustainability assessment, and sustainability impact assessment (Pope et al., 2004). The point has not yet been reached at which there is universal consensus as to what any of these terms mean, much less a commonly understood process for conducting them.

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One form of sustainability assessment is an emerging field within the impact assessment tradition, where impact assessment is defined as “the process of identifying the future consequences of a current or proposed action” (IAIA, 2009, p1) and the subject of the assessment is typically a proposed new policy, plan or project. This raises the question of how sustainability assessment can be meaningfully distinguished from other forms of impact assessment and other environmental governance processes, particularly environmental impact assessment (EIA) and strategic environmental assessment (SEA), especially as it has been pointed out that “the common cause shared by all environmental assessment and management tools [is] that of sustainability, even though many did not start out with that as the underlying purpose” (Sheate, 2009, p19). But on the other hand many applications of sustainability assessment do not arise from impact assessment tradition at all, but instead are posited as processes for “exploring sustainable solutions to persistent problems” (Videira et al., 2010, p448). In these cases, the sustainability assessment process can be the means by which a policy problem is structured and alternative strategies to address these problems are developed and evaluated.

A number of authors have sought to address this potentially confusing situation by proposing what they consider sustainability assessment *should* be, and defining points of difference from other related processes. In this vein, Sala et al. (2013) and again in Sala et al. (2015), distinguish between ‘integrated assessment’ and ‘sustainability assessment’, while Weaver and Rotmans (2006) propose an ideal process they call ‘integrated sustainability assessment’ (ISA), which they distinguish from ‘sustainability impact assessment’. In contrast with some of these and other authors, we take a descriptive rather than a prescriptive approach to sustainability assessment, embracing a range of sustainability assessment practice. We align ourselves with the definition of sustainability assessment as any process that aims to direct decision-making towards sustainability (Bond et al., 2011, derived from Hacking and Guthrie, 2008). This definition is sufficiently broad to encompass a vast range of decision-making from choices of individuals in everyday life through to projects, plans, programmes or policies more familiarly addressed in the field of impact assessment. For the purposes of this paper, however, we are specifically concerned with *ex ante* forms of sustainability assessment, and we consider that the defining feature of sustainability assessment compared with other forms of impact assessment is that some attempt is made to engage with the concept of sustainability in all its complexity (Pope, 2006).

This broad view of sustainability assessment brings with it some additional challenges for both researchers and practitioners, not the least of which is how to make sense of the range of applications, processes and practices that now proliferate. A failure to recognise the diversity of practice and to understand how a particular sustainability assessment process fits into the spectrum risks inappropriate assumptions being made or general conclusions about sustainability assessment being drawn that are actually only valid for very specific and restricted examples. For this reason a number of descriptive conceptual frameworks have been proposed over the last ten years or so that enable the various forms of sustainability assessment to be mapped or categorised in relation to one another. Having contributed some of these conceptual frameworks ourselves (Pope et al., 2004; Hugé et al., 2013), we are all too aware of the need to periodically review and if necessary update them in the face of the rapid growth and diversification of sustainability assessment since some of them were published.

The aim of this paper, therefore, is to review existing conceptualisations of sustainability assessment, and in doing so to propose a new descriptive conceptual framework for sustainability assessment based on a synthesis of current understanding. By ‘conceptual framework’, we mean “a network, or ‘a plane’ of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena” (Jabareen, 2009, p51), or more simply a map to help navigate complexity. Consequently we seek to describe, not to prescribe, in keeping with our view that *ex ante* sustainability assessment is

a broad field that can encompass many processes and practices. Conceptual frameworks are of value to both researchers and practitioners, as they offer a structure to guide research and analysis and provide the basis for positioning, comparing and reflecting upon one body of practice within the range of possibilities defined by the contours of the framework.<sup>1</sup>

## 2. Our approach

To achieve the aim of this paper we considered the following questions:

1. What dimensions should a comprehensive descriptive conceptual framework for sustainability assessment include?
2. In the context of these dimensions, how well do existing conceptual frameworks perform as a map to sustainability assessment practice?
3. What are some of the different approaches that can be discerned from current sustainability assessment practice within each sub-dimension?

Answering these questions leads to a conceptualisation structured around dimensions (and sub-dimensions) of sustainability assessment, illustrated with examples from practice within each dimension. By dimensions, we mean the major aspects (*cf.* Franks et al., 2013) that comprise any sustainability assessment process, whether explicitly or implicitly. Our methodological approach is based on review of literature drawn predominantly from books and peer-reviewed journals, using search terms reflecting the terminology discussed in the previous section. The review focuses on literature that helped us to answer these questions and as such does not represent an exhaustive coverage of the vast and exponentially growing body of sustainability assessment literature (Bond et al., 2012).

As the first step, a search was undertaken to identify literature that specifically has as its aim to contribute to the conceptual development of sustainability assessment as a form of *ex ante* impact assessment. Firstly, there is a body of literature that primarily seeks to describe and navigate the field of sustainability assessment, and in some cases to also define what might constitute best practice (Hacking and Guthrie, 2008; Hugé et al., 2013; Pope et al., 2004; Weaver and Rotmans, 2006). This work is therefore similar in intent to this paper with its focus on description rather than prescription. Then there is literature briefly mentioned in the previous section that is more prescriptive, and seeks to define the features of certain forms of sustainability assessment that are posited to be superior to other forms (e.g. Sala et al., 2013; Videira et al., 2010; Sala et al., 2015).

There is a third (and partly overlapping) body of work, which has as its primary purpose to identify the various dimensions that need to be considered and presenting these as a multi-dimensional framework. While these contributions have both descriptive and prescriptive elements and do tend to have a strong normative component (e.g. Sala et al., 2013 offers a framework as well as a normative definition of sustainability assessment), their identification of the dimensions of sustainability assessment make them useful in addressing our first question above. We commence in Section 3 by reviewing these frameworks to identify the potential dimensions of a comprehensive conceptual framework for sustainability assessment (Question 1). In Section 4 we turn our attention to existing descriptive conceptual frameworks and review these against the identified dimensions and in light of recent thinking on sustainability assessment where applicable (Question 2). Through this process we refine the dimensions we consider relevant to our conceptual framework (Question 1). In Section 5 we draw upon other literature sources and case examples to identify some examples of different approaches from practice within each of the identified

<sup>1</sup> An early version of this work is presented in Pope, J., Bond, A., & Morrison-Saunders, A. (2015). Chapter 2: A conceptual framework for sustainability assessment. In A., Morrison-Saunders, J., Pope & A., Bond (Eds.), *Handbook of Sustainability Assessment*: Edward Elgar.

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