



Towards sustainability assessment follow-up



Angus Morrison-Saunders^{a,b,*}, Jenny Pope^{b,c,d}, Alan Bond^{b,e}, Francois Retief^b

^a Murdoch University, Australia

^b North-West University, South Africa

^c Integral Sustainability, Australia

^d Curtin University, Australia

^e University of East Anglia, United Kingdom

ARTICLE INFO

Article history:

Received 31 August 2013

Received in revised form 27 November 2013

Accepted 3 December 2013

Available online 21 December 2013

Keywords:

EIA follow-up

Sustainability assessment

Integrated assessment strategic environmental

assessment

Trade-offs

Adaptive follow-up

ABSTRACT

This paper conceptualises what sustainability assessment follow-up might entail for three models of sustainability assessment: EIA-driven integrated assessment, objectives-led integrated assessment and the contribution to sustainability model. The first two are characterised by proponent monitoring and evaluation of individual impacts and indicators while the latter takes a holistic view based around focused sustainability criteria relevant to the context. The implications of three sustainability challenges on follow-up are also examined: contested time horizons and value changes, trade-offs, and interdisciplinarity. We conclude that in order to meet these challenges some form of adaptive follow-up is necessary and that the contribution to sustainability approach is the best approach.

© 2013 Elsevier Inc. All rights reserved.

1. Introduction

The theory and practice of impact assessment for sustainability, also known as sustainability assessment, is now well established. Bond et al. (2012) demonstrated exponential growth in the publication of papers with the phrase 'sustainability assessment' in their title over the last decade, finding around 150 such papers published in the year 2011 alone. So far though, the emphasis in the literature on sustainability assessment has been on the pre-approval decision phases of new development proposals, and specifically how sustainability concepts and principles are reflected in the development and assessment of these proposals. In this paper we turn our attention to the post-approval stages and consider how the sustainability outcomes of implemented proposals might be monitored and managed, through processes that have come to be known collectively as 'follow-up' (Arts and Morrison-Saunders, 2004).

Our aim is to consider how the theory and practice of impact assessment follow-up might apply to sustainability assessment, and therefore to shed some light on what might be termed sustainability assessment follow-up. Being a conceptual paper, our methodology is based predominantly on literature review and personal reflection, although where possible we draw upon examples from practice in published sources.

We commence by engaging with previously established conceptual models of sustainability assessment and consider how we believe follow-up might usefully be accomplished for each of these. We then address some challenges associated with sustainability and therefore sustainability assessment follow-up, which we consider are over and above those that could apply to any form of impact assessment follow-up (see Wallgren et al., 2011 for a consideration of some typical follow-up issues which are not specific to sustainability). We note that an early attempt at conceptualising follow-up for sustainability assurance (Arts and Morrison-Saunders, 2004) touched on some of these challenges (and some others); here though, we derive our focus specifically from the recent sustainability assessment literature. In the final section, our conclusions point to possible ways forward for research and practice with sustainability assessment follow-up.

2. The two core concepts: sustainability assessment and follow-up

In this section we briefly review the two core concepts with which we are concerned in this paper, namely sustainability assessment and follow-up, and we identify and critically review the conceptual frameworks that form the basis of our analysis.

2.1. Sustainability assessment

In recognition of the diversity and evolving nature of sustainability assessment practice, we define sustainability assessment broadly as any process that has as its aim to direct decision-making towards

* Corresponding author at: Environmental and Conservation Sciences, Murdoch University, Australia.

E-mail addresses: a.morrison-saunders@murdoch.edu.au (A. Morrison-Saunders), jenny@integral-sustainability.net (J. Pope), alan.bond@uea.ac.uk (A. Bond), francois.retief@nwu.ac.za (F. Retief).

sustainability (Bond and Morrison-Saunders, 2011, derived from Hacking and Guthrie, 2008). Given assertions that all forms of impact assessment inherently have as their goal to contribute to sustainable development (e.g., Cashmore et al., 2007; Feldmann et al., 2001), this potentially makes it difficult to demarcate between what is sustainability assessment and what is not for the purpose of our exploration of follow-up. To clarify, we define a sustainability assessment process as explicitly incorporating a clear articulation of the concept of sustainability, at the minimum including environmental, social and economic dimensions. For example, we would therefore consider that many forms of strategic environmental assessment (SEA), such as that conducted under the European Union Directive (European Parliament and the Council of the European Union, 2001) are forms of sustainability assessment, while biophysically-oriented environmental impact assessment (EIA) or social impact assessment (SIA), to give just a couple of examples, are not, even though they may certainly contribute positively to some dimensions of the sustainability agenda.

We also recognise that sustainability, or sustainable development (we use the terms interchangeably), is a normative and ambiguous concept (Bond and Morrison-Saunders, 2011; Bond et al., 2013). Nevertheless, broadly different conceptualisations of sustainability have been distinguished in the impact assessment literature and we draw upon previously published models of sustainability assessment that reflect these different conceptualisations. Specifically we draw upon the models posed by Pope et al. (2004) nearly ten years ago to structure our reflections. Drawing upon a review of literature at the time, three conceptual models of sustainability assessment were described:

- EIA-driven integrated assessment, which aims to minimise negative environmental, social and economic (ESE) impacts within acceptable limits;
- Objectives-led integrated assessment, which aims to maximise positive ESE outcomes; and
- Assessment for sustainability, which aims to determine whether or not a proposal is sustainable.

We find these models to be a useful starting point for distinguishing different approaches to follow-up for sustainability, though recognising that thinking has evolved, particularly with respect to the third model. The first two models assume a simplistic and reductionist 'triple bottom line' or ESE (environmental, social and economic) understanding of sustainability which can readily be identified in practice, while the third, as posed in the original paper embodied a more integrated and holistic conceptualisation with no practical examples at the time of conceptualisation (in Pope et al., 2004). The challenge of determining what might be and what might not be sustainable was acknowledged.

We suggest that the more recent conceptualisation of sustainability assessment as a process of evaluating the 'contribution to sustainability' of a proposal, as has been applied in some Canadian practice (e.g., Joint Review Panel for the Mackenzie Gas Project, 2009) and which is aligned with the work of Gibson (2006), reflects a more practical and realistic alternative to the assessment for sustainability model. While both models take as their starting point an integrated, holistic understanding of sustainability that recognises that human welfare is intrinsically dependent on natural capital and do not take a reductionist, triple bottom line approach (Gibson et al., 2005), the difference is that the contribution to sustainability model asks not whether a proposal is or isn't sustainable, but whether it is sustainable *enough*. Thus the conceptual models to be assessed in this paper are:

- EIA-driven integrated assessment;
- Objectives-led integrated assessment; and
- Contribution to sustainability.

EIA-driven integrated assessment arguably remains the dominant form of sustainability assessment in practice, and can be utilised at both project and plan levels. Objectives-led integrated assessment is typified by the English sustainability appraisal approach applied to

land use plans, while the contribution to sustainability model is typified by certain examples of project assessment from Canadian practice.

What each means in practice for follow-up must be defined for each decision context, as will be illustrated later.

2.2. Impact assessment follow-up

It is not our intention to duplicate or repeat the already well-established practices and literature on impact assessment follow-up (see, for example, Arts, 2004; Marshall et al., 2005). We recognise that impact assessment follow-up has been conceptually framed at three separate tiers (see, for example, Arts and Morrison-Saunders, 2004) at the development activity level, impact assessment system level and impact assessment concept level. Notwithstanding that an effective follow-up framework requires all three tiers (see also Sadler, 2004), our focus in this paper is principally on sustainability follow-up at the development activity level. Such development could range from projects through to plans and other strategic-level activities. We adopt the definition of follow-up employed in the International Association for Impact Assessment best practice guidance (Marshall et al., 2005; Morrison-Saunders et al., 2007) comprising monitoring, analysis/interpretation, management and communication of post-approval decision development activity.

3. Follow-up for sustainability assessment

In this section we consider how the follow-up activities appropriate to the level of development activities might be conducted in the context of each of the three models of sustainability assessment presented in Section 2.1. To do this, we elaborate a little on each model, providing examples to highlight their distinguishing features that are of relevance to follow-up activities. We consider both the 'what' of follow-up in each case (what exactly is being monitored, analysed/interpreted, managed and communicated) and the 'who' (where responsibilities lie and which stakeholders might be involved). Descriptions of the models will refer to illustrative examples drawn from practice across the world. We acknowledge that objectives-led integrated assessment and the contribution to sustainability model in particular have some contextual differences due to their application to plans and projects respectively and we have taken this into account in our descriptions that follow.

3.1. EIA-driven integrated assessment

The *EIA-driven integrated assessment* model of sustainability assessment is an extension of traditional project-based environmental impact assessment, and aims to minimise the negative environmental, social and economic impacts of development and ensure that they remain within acceptable limits. It is applied in jurisdictions in which the definition of environment in the relevant EIA legislation is sufficiently broad to encompass the three dimensions of sustainability, for example South Africa (Morrison-Saunders and Retief, 2012), or when a biophysically-oriented EIA process has been supplemented by social and economic impact assessment as in the case of the Gorgon Gas Development in Western Australia (Pope et al., 2005). The approach is often also applied to evaluating a range of available alternatives, for example sites for industrial facilities, to identify the most acceptable from a sustainability perspective (Morrison-Saunders and Pope, 2013a,b).

The process of EIA-driven integrated assessment is fundamentally baseline-driven, whereby impacts are compared with the status quo prior to the development (Pope et al., 2004). Ideally, acceptable limits for impacts in relation to the baseline would be defined for each relevant environmental, social and economic factor in legally-binding approval conditions that focus on outcomes rather than on the outputs of processes designed to deliver the outcomes. Follow-up activities for this model of sustainability assessment

Download English Version:

<https://daneshyari.com/en/article/1052729>

Download Persian Version:

<https://daneshyari.com/article/1052729>

[Daneshyari.com](https://daneshyari.com)