

Taking account of governance: The challenge for land-use planning models

Desmond McNeill^{a,*}, Marcel Bursztyn^b, Nina Novira^c, Seema Purushothaman^d, René Verburg^e, Saulo Rodrigues-Filho^b

^a SUM (Senter for Utvikling og Miljø), University of Oslo, Norway

^b Center for Sustainable Development, University of Brasilia, Brazil

^c Department of Geography, Gadjah Mada University, Indonesia

^d ATREE (Ashoka Trust for Research in Ecology and the Environment), Bangalore, India

^e LEI (Landbouw-Economisch Instituut), Wageningen, The Netherlands

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ABSTRACT

It is widely recognised that weak governance is a major constraint in planning for sustainable development, especially in the South. Sophisticated models that have been developed for assessing the likely effect of selected policies on land-use, and on sustainable development more generally, increasingly acknowledge this; but they do not include methods for taking this into account, in quantitative terms – which is what is necessary if such models are to be applied in practice. This paper begins by identifying the limitations of standard models in this respect, and then suggests a possible way to respond to the problem. We propose the use of what we call ‘policy-specific governance indicators’, that is, indicators not of general government performance across the board, but rather of the actual performance of particular policies – or, if necessary, suitable proxies derived from similar policies. By reference to a case study from Brazil concerning controls on deforestation, we show how this can be done in practice, and built in to the planning model. And by reference to studies from Indonesia and India we explore how one might address still more challenging cases that may arise.

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Introduction

In recent years, increasingly sophisticated models have been developed for assessing the likely effect of selected policies on land-use, and on sustainable development more generally (e.g. [Dellas and Pattberg, 2011](#); [Dellas et al., 2011](#); [Mulder, 2001](#); [PBL \(2010\)](#)). These models offer the promise of providing rather accurate estimates of impacts on a variety of different factors: economic and social as well as environmental. They are usually quite demanding in terms of quantitative data, and perhaps also of the analytical skills required to make use of them. But an even greater problem, we suggest, is that they fail to take account of the fact that, especially in developing countries, policies that exist on paper are often implemented only partially if at all, owing to what may be described as ‘governance’ or ‘institutional’ factors.¹ In designing policies for sustainable development, the importance of the

governance dimension is often either under-estimated or ignored altogether. No matter how good a plan may be – with regard to the data, analysis and recommended policies – the practical outcome for people and the environment will depend entirely on the willingness and ability of key actors to implement the policies that are recommended. (While government has a crucial responsibility, the role of the people – whether in providing information or participating in implementation – will also be very important). Governance failure may be due to weak political will, strong resistance, or lack of financial or other resources. And it is not easy to distinguish between these factors; for example, a lack of financial resources may be used as an excuse for a government not to implement a law or regulation which it knows is unpopular. The overall outcome, however, is the same: a policy instrument is only weakly applied, so that the effect that might be anticipated is only partially realised, if at all.

Researchers have, in recent years, paid increasing recognition to the need to take account of the institutional dimension in planning models ([Acheson, 2006](#); [Andersson and Ostrom, 2008](#); [Dellas and Pattberg, 2011](#); [Dellas et al., 2011](#)); but it is clear that this is in

* Corresponding author.

E-mail addresses: desmond.mcneill@sum.uio.no (D. McNeill), marcel@unb.br (M. Bursztyn), ninoxmania@yahoo.com (N. Novira), seemap@atree.org (S. Purushothaman), Rene.Verburg@wur.nl (R. Verburg), saulofilhocds@gmail.com (S. Rodrigues-Filho).

¹ The term ‘governance’ encompasses more than merely ‘institutions’, and this paper is concerned with this broader agenda. The term ‘governance’ will therefore

generally be used, except when referring to other studies which explicitly adopt the term ‘institutions’.

practice a challenging task. Today, we have available a range of sophisticated models for forecasting the impact of policies in an ideal world. But such forecasts are of little value since the world is far from ideal; the actual effect of policies often falls far short of what is expected – because of weak governance. In this paper, based on a major international comparative research project, we propose a new approach for taking account of this in modelling exercises, which, we suggest, can go some way to meeting the challenge.

In planning for sustainable development it is common to view the exercise as seeking to optimise the outcome across a combination of three dimensions, the economic, the social and the environmental: trading off one against another (Kates et al., 2001). The governance dimension, we suggest, should be seen as cutting across these three ‘standard’ dimensions of sustainable development. But it differs from them in important respects; most notably that it is not possible to trade off one or more of the other three against the governance dimension (Lemos & Agrawal, 2006). Rather, the latter acts as a constraint on the others: a sort of filter through which all policies must pass in order to bring about the desired outcome, and which has the effect of ‘dampening’ their impact.

In this paper, we explore how it may be possible to assess the quantitative extent of this ‘dampening effect’, albeit in approximate terms, enabling a planner to amend the forecast impact of a proposed policy to take account of the real-life governance constraints. Thus, for example, two alternative outcomes may be compared: one based on the assumption that policies are fully and effectively implemented, the other on the assumption that governance is, say, only 50% effective. Although this makes sense in principle, it still raises difficult questions, which we shall discuss: How do you measure governance effectiveness? And what precisely does it mean for governance to be only 50% effective? Using case study examples from Brazil, Indonesia and India, we explore how this method might be applied in practice.

In either case, it is necessary to ‘measure’ the effectiveness of governance: an extremely challenging task. The solution that we propose is to develop what we call ‘*policy-specific governance indicators*’, that is, indicators not of general government performance across the board (all sectors, ministries and types of policy and policy instrument), but rather indicators of the actual performance of particular policies – or, if necessary, suitable proxies derived from similar policies. (We consider also an intermediate alternative, of ‘instrument-specific indicators’).

The remainder of this paper falls into three parts, followed by a conclusion. First, we demonstrate the nature and extent of the methodological challenge of taking account of the governance dimension. Next, we exemplify the approach that we are suggesting by reference to a case study from Brazil. Here, relatively good data are available for assessing, in quantitative terms, the implications of the governance constraint. The ‘dampening effect’ of imperfect governance is built in at the beginning of the modelling process, so that alternative scenarios are based on assumptions of either weak or strong governance. We then consider the Indonesia and India cases, where the data are much weaker. In these cases, for reasons discussed later in the paper, we build in the ‘dampening effect’ of the governance constraint at the end of the process, applying a sort of sensitivity analysis to the model. The former approach is to be preferred, but insufficient understanding of the governance setting combined with data limitations may make it impossible to achieve in many cases.

The limitations of standard approaches

The impact assessments developed in the LUPIS project, as also in numerous other studies, have a design as depicted in Fig. 1.



Fig. 1. Typical design of an impact assessment.

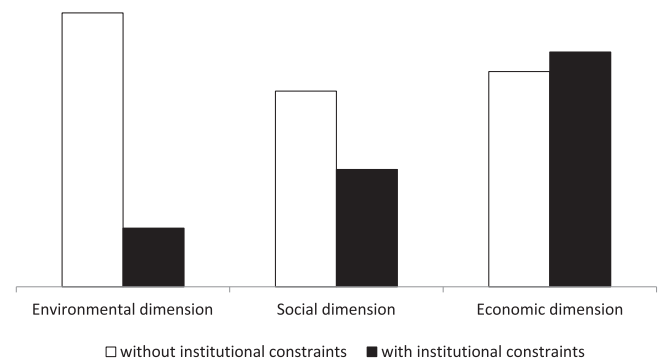


Fig. 2. The hypothetical outcome of an impact assessment of a proposed policy. Each bar is an indicator of performance – environmental, social and economic – assuming either ‘strong governance’ or ‘weak governance’ (white bars, without institutional constraints, black bars with institutional constraints).

An array of models calculates indicator responses (impacts) on a variety of scenarios or policy options. If institutional (governance) aspects are included, these may be expressed as constraints, either at the start (1) or at the end (2) of the process.

The indicators and (sub) models used vary, and the assessments therefore involve integration between a variety of different disciplines. Governance aspects, however, are very difficult to assess in such impact studies. Intuitively we assume that with governance weakness the effectiveness of the policies assessed will be less than the impacts forecast by the model, as exemplified in Fig. 2. In this hypothetical case, the effects of a proposed policy, as expressed by indicators of performance – environmental, social and economic – are assumed to be different with ‘weak governance’ than with ‘strong governance’. (In this example, which may indeed be quite common, the inclusion of institutional constraints results in the environmental and social impacts being reduced while the economic impact is increased).

A major challenge in using such a methodology is how to determine the difference in the impacts of indicators ‘with’ and ‘without’ governance constraints. This is the challenge that is inevitably encountered when dealing with qualitative data; in order to assess such differences in governance performance one should have information not only concerning the level of ‘corruption’ and other governance aspects, but have it expressed in quantitative terms. Such information is, in practice, hard to collect, and parameterisation is very difficult.

As the issue of governance has been increasingly addressed by researchers, attempts have been made to draw on numerous efforts that have been made, by political scientists and others, to ‘measure’ it. It is clear, however, that such indicators have major shortcomings, which become very evident if one attempts to use them for modelling purposes. An extremely comprehensive overview of such indicators was recently undertaken by the SEAMLESS project (System for Environmental and Agricultural Modelling: Linking European Science and Society), a major study funded by the European Union.² By reference to the literature, the authors convincingly demonstrate that “there is a lack of methods

² Further details are contained in the full report: SEAMLESS report D2.4.2: “Approach towards an operational tool to apply institutional analysis for the assessment of policy feasibility within SEAMLESS-IF”.

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