Impact Pathways Analysis: A Framework for Enhanced Sustainable Land Management Project Design

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Contents

1. Introduction

The success or failure of sustainable land management (SLM) projects depends to a large degree on good project design. Good project design is key to getting funding from the Global Environment Facility (GEF) and other donors, but is also key to achieving the desired project outcomes and impacts. A fundamental part of good project design is the identification of the impact pathways through which the intended project interventions should achieve the desired impacts. Together with proper problem diagnosis, impact pathways are the key to determining what interventions are needed, when and where to achieve the envisioned results. Yet, GEF projects proposals typically do not include an analysis of impact pathways, often leading to a lack of coherence between interventions and desired impacts (Niemeijer & Moran 2006) as well as poor results (Fuijsaka 2008). As is clear from, for example, Douthwaite et al. (2007) such weaknesses are not unique to GEF-funded projects. In other words, there is a clear need to strengthen project design with the aid of impact pathways analysis.

In an earlier report (Niemeijer 2009), it was shown how impact pathway analysis can help identify weaknesses in project design and a method was proposed to for building a generic impact pathways model for sustainable land management projects. The proposed approach was successfully tested on two existing GEF-funded projects.

The present report focuses on further development of the impact pathways analysis framework and on providing guidance to its application in project design and evaluation.

2. Introduction to the impact pathways analysis framework

The impact pathways framework is based on a number of observations:

1. Sustainable land management is desired, but land managers (farmers, herders, foresters and other land users) are facing numerous constraints preventing them from managing their land (fully) sustainably.

2. The constraints faced by land managers operate on multiple levels. There are local constraints, but also constraints at provincial, national or even supra-national level. For example, national policy can be constrained at the local level. Similarly, providing payment for environmental services can be impossible due to financial constraints at the national level.

3. While there are constraints at multiple levels these can be described in very similar terms, namely in terms of knowledge, financial, institutional capacity and policy constraints. Policy constraints are unusal in that policy is mainly determined at national level yet has its primary impact at local level.

4. Removing the above-mentioned constraints is the key to achieving sustainable land management. All SLM interventions can be described in terms of the constraints they are aiming to remove.

5. It is imperative that a comprehensive problem diagnosis is done to identify key

constraints in order to ensure that interventions do indeed relieve or remove the constraints.

6. An impact pathway can be described in terms of a hierarchy of constraints, where, in order to achieve impact, constraints at higher spatial levels (e.g. national level) may need to be removed to achieve results at lower levels (sub-national and local) or visa versa, constraints at lower levels can impede interventions at higher spatial levels.

7. It is possible to link a generic hierarchical impact pathway with a generic logframe or a results based management (RBM) framework.

Based on the above observations a generic constraints-reducing impact pathways model was developed that provides an abstract representation of the spatial hierarchy of constraints and its key drivers and stakeholders. As can be seen in Figure 1, the model shows the impact pathways leading from the supra-national level down to the local level. At each level one or more drivers/stakeholders are identified with their associated constraints. At the supra-national level these are planning and policy making institutions and platforms. At the national level these are planning and policy making institutions, national R&D institutions, and national forestry, fishing, water and agricultural services. The latter typically have representatives also at the sub-national level. At the local level there are the rural, urban and industrial land users and there is the component of human well-being, which, while not a stakeholder, can form a major driver in and of itself.

Sustainable land management is located at the bottom of the model as this is where the impact pathways eventually lead. Land use practices and behavior are what in the end impacts the land. A distinction is made between those practices and behaviors that reduce pressure on the land (e.g. reduction of livestock), those that improve the state (e.g. cleaning up pollution) and those that mitigate the impact of bad practices or behavior (e.g. use of mineral fertilizer to compensate for continued over-cultivation). Finally, the condition of the land has an impact on human-wellbeing in the form or reduced dust storms, better drinking water, higher yields, etc.

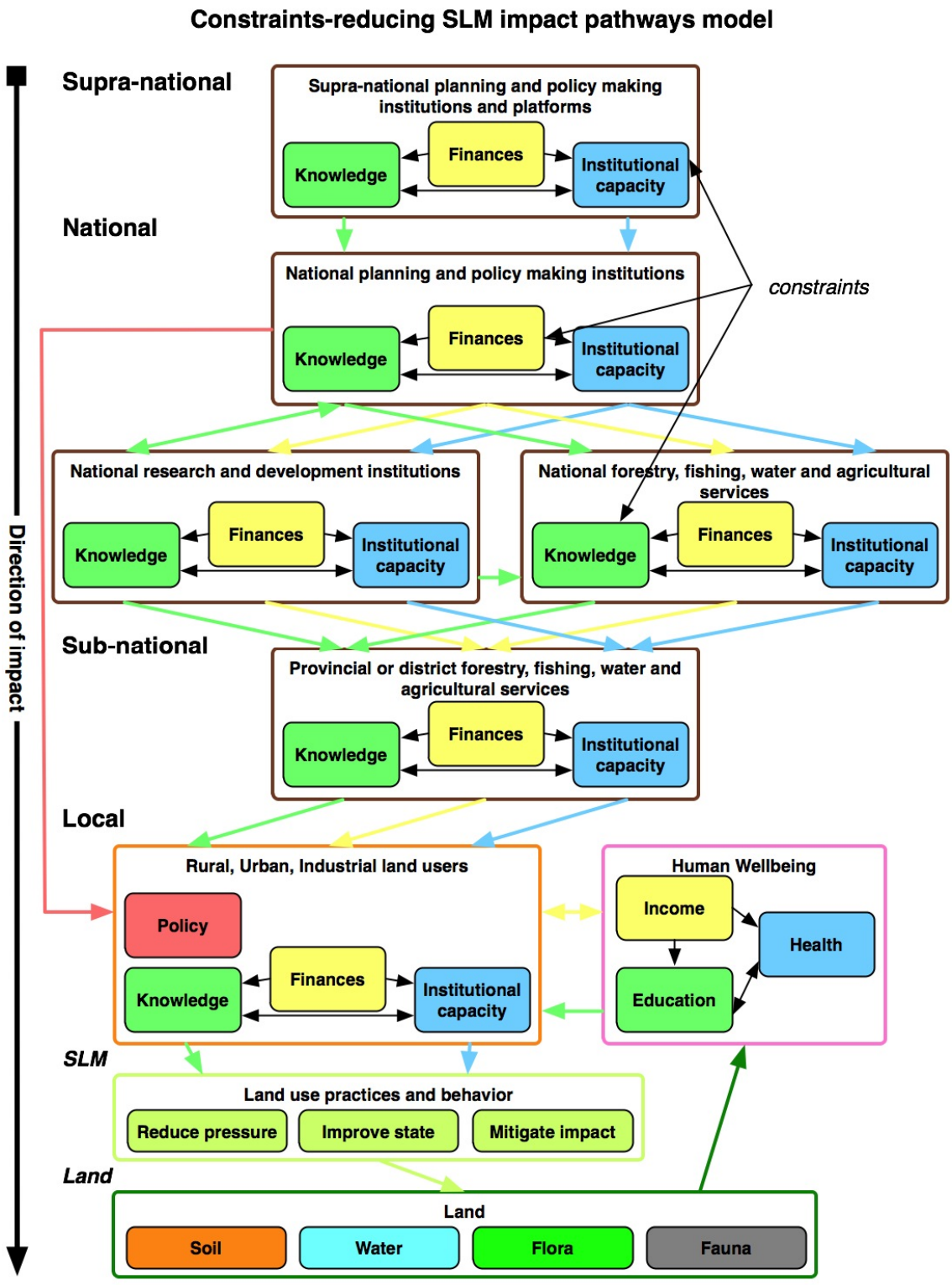

Figure 1. Generic constraints-reducing sustainable land management impact pathways model

Reading the generic SLM impact pathways model is quite straight forward. For example, a constraint in institutional capacity at a sub-national forestry service may be caused by constraints in finances or knowledge in that institution, but these in turn may also be caused by constraints at the national level. To lift the constraints at sub-national level it may therefore be necessary to first lift constraints at national level. Conversely,

reducing knowledge constraints in national R&D institutions may be ineffective if sub-national institutions do not have the institutional capacity to absorb knowledge transferred from the national level. The weakest aspect of many projects is the insufficient attention given to financial constraints at the lower levels. R&D and training on new SLM knowledge is of little use if for example, sub-national staff does not have the financial means to buy fuel for vehicles for the extension workers to go out into the field and share with land users.

The constraints-reducing SLM impact pathways model can be linked to the RBM framework. While our focus here is on the link to the RBM framework, it is noted that the model can also belinked to a logframe. The generic SLM results-based management model shown in Figure 2 provides both a generic RBM framework and a direct bridge to the constraints-reducing SLM impact pathways model. It consists of 5 major components. The first is the strategies, either focused on prevention and control or on rehabilitation of already degraded land. The second consists of problem diagnosis and identification of related outputs and intermediate outcomes. The third consists of outputs and intermediate outcomes focused on lifting constraints at sub-national to supra-national levels. The fourth focuses on outputs focused on removing constraints at the local land user level that lead to the primary outcome. The fifth focuses on impacts and intermediate impacts.

The generic SLM RBM model links up with the SLM impact pathways model in several ways. It shares a focus on identifying and addressing key constraints. Both categorize constraints in terms of knowledge, financial, institutional and policy barriers. They are also both based on the same spatial hierarchy. While the proposed generic RBM model is certainly not the only possible model it is generic enough to be applicable to all SLM projects, some of which may be engaging in generating outputs in all 10 output areas, while others might focus on one or two output components only. Aside from being generic and thus allowing easy comparison across different projects it has the benefit of linking directly with the constraints reducing SLM impact pathways model which gives a strong conceptual backing to the project design.

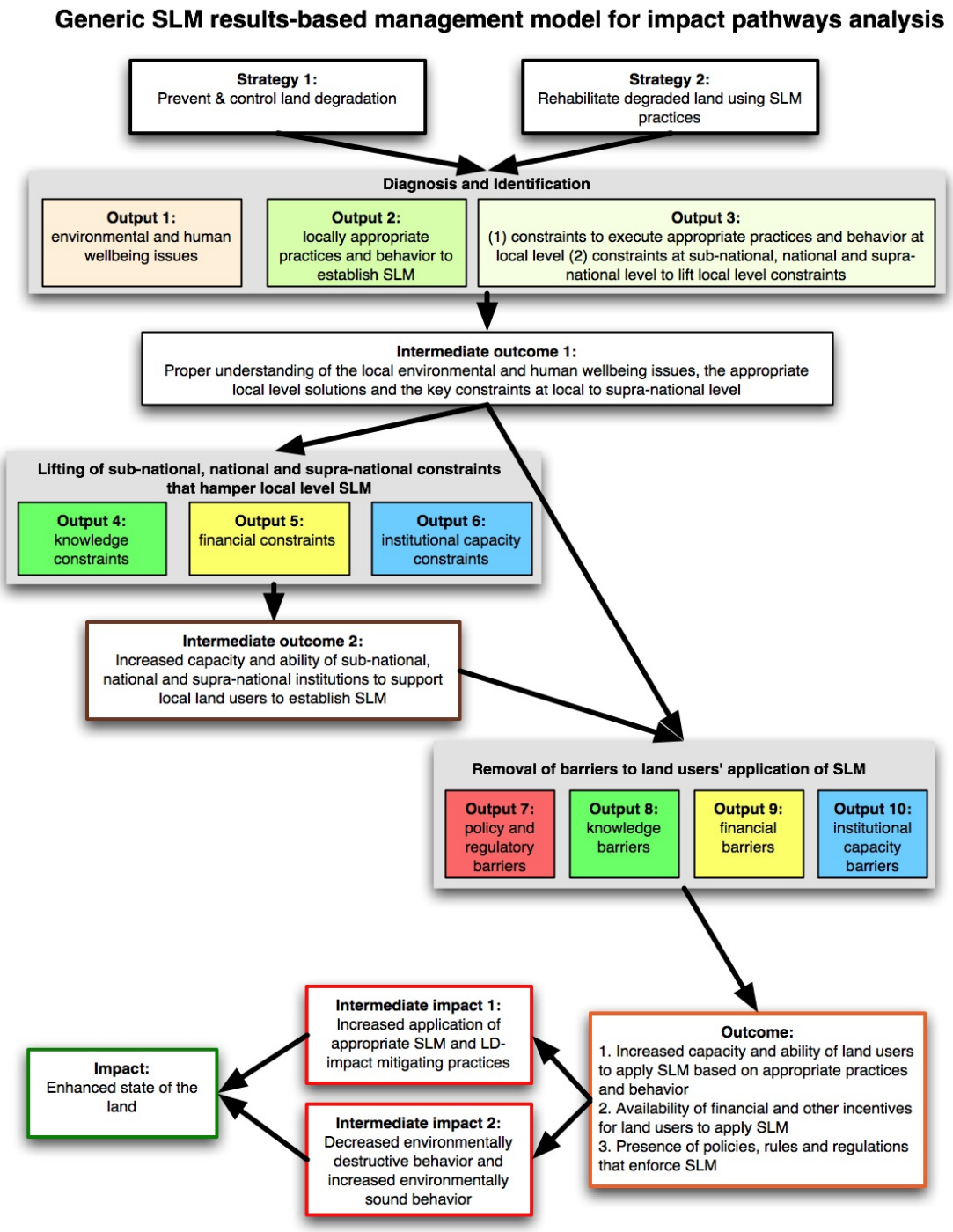

Figure 2. Generic SLM results-based management model for impact pathways analysis

3. Using the impact pathways analysis framework to strengthen project design

The application of the impact pathways analysis framework consists of a number of steps that to some degree run parallel to the Generic SLM RBM model presented in Figure 2. Throughout these steps both the Generic SLM RBM model and the SLM impact pathways model serve as points of reference.

Step 1. Identify the key environmental sustainability and human wellbeing issues

in the project area. In this step it is important to look at what is known about the environmental conditions in the area and the land degradation issues observed. Similarly, information needs to be collected on the social, economic and health situation of the different population groups. In addition to this "objective" information a dialogue with stakeholders will be necessary to identify what they see as the most important environmental and human wellbeing issues that could be addressed with sustainable land management practices and behavior.

Step 2. Determine what the locally appropriate land use practices and behavior would be to achieve sustainable land management. Just as in step 1, a combination is required of objective information on land use practices and of subjective stakeholder assessment of what the appropriate solutions are to address the issues identified in step 1. Cross-reference with best practices from other areas may be useful too, but need to be screened based on environmental and socio-economic conditions in the project area and should also be reviewed by stakeholders.

Step 3. Identify the constraints that are preventing local land users to execute the appropriate behavior and perform these appropriate practices. This step will rely heavily on input from stakeholders. As in the other steps it will be important to include local land users as key stakeholders. The local level elements of the impact pathways model can serve as a kind of checklist in which one by one possible constraints are considered and either marked as requiring action or marked as not present.

Step 4. Identify constraints at sub-national and higher levels that need to be addressed to be able to deal with the local level constraints. This is a crucial and complex task that should involve stakeholders without forgetting the fact that most stakeholders are unlikely to have a full picture of where the real bottlenecks are. Local land users may be able to identify issues at sub-national level, but these in turn may be caused by problems at national or even supra-national levels. Additionally, stakeholders are likely to be interested in either downplaying issues in their own institutions or instead exaggerate them in order to claim project funds. A good and thorough literature analysis and independent expert consultation may be key too. The impact pathways model can help identify possible bottlenecks and can serve as a checklist to be sure all possible constraints are considered and either determined to be absent or requiring action.

Step 5. Identify the desired outputs at the supra-national to local level. These desired outputs need to be defined in terms of reduced constraints to sustainable land management in the key areas of knowledge, finance, institutional capacity and policy. In some areas no outputs may be required if during steps 3 and 4 it was determined that in those cases no serious constraints are currently present.

Step 6. Select project activities for each of the desired outputs. In this step experience from other projects and in other areas may help determine what the most effective activities are to achieve the desired outcomes. Because for all projects outputs in step 5 are identified in terms of the main constraints of knowledge, finance, institutional capacity and policy, knowledge management across projects becomes much easier.

Step 7. Develop of an intervention logic. Based on the previous six steps an intervention logic should be developed that clearly argues how the observed

environmental and human wellbeing issues can be addressed with the proposed appropriate practices and behavior and how the project activities contribute to alleviating the bottleneck constraints at various spatial levels that prevent land users from practicing fully sustainable land management. Such an intervention logic provides at once the raison-d'être for the project and at the same time highlights how the project will achieve the desired impacts. The intervention logic should also indicate within what time frame and at which spatial scales impacts can be expected. This can be plotted on a timeline, which in turn can provide key check points to track project progress (including progress towards impacts that will not be achieved before the end of the project). Ideally, the intervention logic should be presented in terms of this time line, a project specific version of the constraints-reducing SLM impact pathways model and in writing.

Step 8. Revisit steps 1 through 7 during initial phase of the project. Irrespective of how well steps 1 through 7 were carried out during project development there is always less time and less money available during project development than during project execution. Therefore, it is important to revisit each of the steps and validate the conclusions and decisions made during proposal development and make any necessary adjustments.

Step 9. Project evaluation. Anytime a project is evaluated internally or externally the impact pathways and intervention logic can be used to determine the degree to which the project is on track, the likely hood of achieving future impacts and the degree to which remaining constraints are likely to hamper sustainable land management.

4. Conclusions

The impact pathways analysis framework can help to identify weaknesses in existing projects and to evaluate project proposals, but even more than that, it is a tool to help improve project design, enhance the likelihood of obtaining funding as well as the likelihood of achieving desired impacts. It helps to identify the key constraints to sustainable land management and helps to focus efforts on those key constraints, (which may vary from area to area and from country to country) and thereby save valuable funds and maximize return on investments. It can also serve as a tool to standardize project proposal development, enhance comparability across projects and enhance knowledge management.

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