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Testing Relationship in an Impact Pathway Model of Intervention for Agroforestry

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Abstract

Many development projects fail to produce intended outcomes. A major reason for this is that project interventions are often expected to trigger a series of events, which ultimately leads to impacts. Weak links in this causal chain can cause failure. To reduce this risk, it has become common practice among project managers to develop 'impact pathways', which make all causal linkages explicit, help anticipate problems and allow strengthening project design.

So far, impact pathways are rarely used after a project has started, with project evaluation focusing on comparing baseline with end line data. We propose using impact pathways to guide adaptive management of development projects. This can be achieved by treating the impact pathway as a collection of hypotheses about causal relationships between system components, which can be tested by targeted research. By evaluating causal linkages during project implementation, likely points of failure can be anticipated and possibly eliminated, allowing adaptive project management.

This rationale was applied to an ongoing agroforestry project in Nepal, which aims to enable farmers to introduce new tree species into their farms. The project's impact pathway was elucidated based on field observations, focus group discussions and participatory modelling sessions with project staff. Findings where synthesized into a conceptual impact pathway model that explicitly spelled out all cause-effect relationships that were needed for the project to be successful. A questionnaire was then designed with the specific aim of testing selected linkages in the model. Based on a survey of 40 farm household, confidence intervals for the strengths of the associations between elements of the impact model were estimated.

Many linkages, e.g. between training and tree introduction, or between increased crop production and more food for household consumption, were found to be strong. Other expectations of the impact pathway, however, could not be confirmed, e.g. a link between a high number of trees on a farm and high timber sales. Overall, results revealed an impact pathway that was most robust but contained some weak links that jeopardised the success of parts of the project. Impact pathway validation helped identify these weaknesses, providing valuable feedback to project managers.

Keywords: Agroforestry, evaluation, food security, impact pathway

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