LEARNING ORIENTED EVALUATION OF RECONSTRUCTION PROJECTS

Cassidy Johnson[1], Gonzalo Lizarralde[2] and Colin Davidson[*]

IF Research Group, Faculté de l'Aménagement, Université de Montréal

Abstract

Scholars and practitioners agree that major improvements are required in the performance of reconstruction projects. However, how should one evaluate the performance of a reconstruction project? And, how can these evaluations be used to affect change in future projects?

NGOs and funding bodies have widely adopted the logical framework approach (LFA) as a method for evaluating the performance of international development projects; however for learning-oriented evaluation, the LFA has major limitations, even if it has proven its utility for internal 'audit' evaluations. (It allows the funding bodies and NGOs to establish the inputs, activities, outputs and results of a project, and to account for how money was spent and what was achieved).

However, in learning-oriented evaluation, the goal is to develop a holistic understanding of the project's impacts, including both the expected and unexpected outcomes, for the purpose of gaining insight on how to improve the next project. As it exists now, the LFA is not particularly suited to this type of evaluation, but no other method is commonly practiced.

This paper proposes a method for learning-oriented evaluation particularly adapted for reconstruction projects. It looks at how these evaluations are used by international development agencies, such as the Canadian International Development Agency (CIDA), to develop a body of knowledge that can be used by their partners to improve future project performance.

Keywords: Evaluation, learning organisation, logical framework approach, performance

[1] email: cassidyjohnson@hotmail.com
[2] email: gonzalo.lizarralde@umontreal.ca
[*] Corresponding author: IF Research Group, Faculté de l'Aménagement, Université de Montréal P.O. Box 6128, Montréal, QC. H3C 3J7, Canada. email: dav0528@attglobal.net

INTRODUCTION

In order to improve reconstruction projects we need to look back at past experiences, not just at what they produced in terms of outputs, but at the processes that created them. We also need a systematic way to share this information among participants in the project and – most importantly - across projects. Examination of practice may occur at different levels during and after the project, such as pre-project feasibility and risk analysis, in-project monitoring and post project evaluation. Ultimately, evaluation must also take into account many perspectives—the beneficiaries, the larger community, the organisation responsible for putting up the project and the donor body, among others.

It has generally been agreed upon by most organisations involved in reconstruction that the logical framework approach (LFA) is a useful way to evaluate the performance of projects. However, the LFA as it is does not permit emphasizing the influence of the environment on the outcomes of the project. Furthermore, it has a tendency to draw attention mostly to expected outcomes of the project and to ignore the unexpected or unintended outcomes. This means that a project may be seen as successful, whereas it could, in reality, have been deficient in several areas.

Large organisations, such as donor bodies, have the capacity to gather information from evaluations and performance reports from the many projects with the various organisations in which they are involved. Donor bodies, such as the World Bank, the Organisation for Economic Cooperation and Development (OECD) and the Canadian International Development Agency (CIDA) make major efforts to act in this way as learning organisations that collect and distribute information on how to improve practice. However, reconstruction projects still do not achieve a desirable level of performance leading academics and practitioners to agree that improvements are needed in this feedback of learning.

This paper builds on the work presented in an article at the 2002 i-Rec conference in Montreal (Lizarralde, 2002). The approach presented in the earlier paper is now taken a step forward in order to refine the model of evaluation and in order to put the problem of project evaluation in the context of learning organisations.

PROJECT EVALUATION

As presented in the first paper (Lizarralde, 2002), a large number of approaches exist to evaluate projects. However not all the approaches are useful to evaluate reconstruction projects and particularly to evaluate the process through which projects are conducted.

Making a synthesis of the extensive list of evaluation methods (ranging from those which are used for the regular building industry to those which are used in the international development fields) is out of the scope of this paper. Instead of presenting the different approaches commonly used and justifying the selection of

one of those, here we derive a method that applies specifically to reconstruction projects. Readers will note that in building up this method, some components from existing approaches were used and many others were *adapted* rather than adopted. At the same time, the review of the pertinent knowledge and background found in the literature is made explicit.

As outlined by Lizarralde (2002, pp. 3) it is important to clarify the type of evaluation this research is concerned with.

a. It is conducted when the project is finished and it is not conducted by the institution(s) that created it. This type of evaluation is commonly referred to as “ex-post evaluation” (Zaouali, 1994; OECD, 1992).

b. The research method required here is not necessarily a management tool. This approach might therefore be different from the one used in self-performance evaluation methods which, in the case of development agencies, seeks to improve in-house management practices through a participatory and empowerment approach (as suggested by OECD, 1992; ILO, 1996)

c. It concerns the evaluation of reconstruction *projects*, not the evaluation of reconstruction *programs*. According to Davidson (1998), a project is “a unique operation that has a start, a finish and a limited duration and a defined objective”. In comparison to projects, programs are defined here as long-term initiatives with broader objectives and less clear boundaries over time. As defined by the International Labour Office (ILO), a program is composed by several projects that are linked to the achievement of higher common objectives (ILO, 1996, pp. 26).

d. It is not an evaluation of an institution. Even though this method of evaluation examines the role of the organizations, management evaluation or auditing (as defined by OECD, 1992) is outside the scope of this study of evaluation methods.

Refining the method of evaluation

It is well known that one of the main challenges when developing an evaluation method is to define what to evaluate, and how to evaluate it. Regarding the definition of “what to evaluate” it is important that the evaluation method defines the priorities that need to be assessed (Zaouali, 1994). This implies defining the type of evaluation that is needed and the type of information that the evaluator is looking for. This aspect is particularly difficult in construction projects, because the evaluator could be tempted to consider that evaluating the project is equivalent to evaluating the product or service that the project developed (or attempted to develop). If so, the question to be answered would be: Was the product or serviced offered ‘good’? We note that it is not satisfactory to only evaluate the product; the process is equally

important to determine the performance of the project – including the relationship between the cost-benefit of the product and the effectiveness of the process that yielded it.

In order to evaluate the process, Lizarralde (2002) defines ten main questions to be asked in the evaluation of reconstruction projects. These questions are illustrated with a hypothetical example to demonstrate that evaluating the product or service says very little about the performance of the project at large.

“This hypothetical example is based on the evaluation of an imaginary project that attempted to improve the quality of the water that people drink. Responding to the (hypothetical) fact that people use containers that pollute the water put in them, the project attempted to produce and donate ceramic cups to improve the quality of water consumed by the users. Even if a large quantity of cups was produced (let’s say 1,000), and the product was considered of “high performance” (according to certain indicators of the cups’ performance, tested in the donor’s industry), aspects related to the process, not to the product itself affected the performance of the project” (Lizarralde, 2002, pp. 3).

The aspect and the question to be considered are shown with a hypothetical example below for each of the levels in which the process variables need to be measured:

1. ***Efficiency****: were the local and external resources optimized?*
   To produce the 1,000 cups, materials and human resources (the inputs) for the production of 1,200 cups were used. In this case the resources were not optimised.
2. ***Results****: were the targeted outputs attained?*
   Even though 1,000 cups were produced, the targeted production was 2,000 cups. In this case, only half of the targeted production was achieved.
3. ***Timing****: were the outputs available at the right time?*
   Users did need a cup but the cups were offered too late when they had already produced their own improvised cups that pollute the water. Timing failed.
4. ***The quality of the product****: is the product good in the environment in which it is going to be used?*
   When considered of “high performance”, the cups were tested in a different environment. In the new environment, the particular use people make of cups makes them extremely fragile. In this case the quality of the product was not well adapted to the “new environment”.
5. ***Pertinence****: were the outputs available to the right people?*
   The cups were offered to a certain group of users who do not drink in cups but prefer to use glasses; while the users that really needed the cups did not receive the cups offered.
6. ***Acceptability****: did the local community use the outputs/ services offered?*

Nobody really used the 1,000 cups. The users acquired the cups but in reality, due to certain cultural reasons, users did not use the new cups but continued using their old cups. In this case users did not accept the project.

7. ***Strategy****: did the outputs that were offered correspond to the needs of the population?*
   Users already had ceramic cups at home, and therefore the new cups were not necessary. It was not a good idea to produce cups in the first place. It would have been better to produce, for example, water tanks to replace the non-appropriate tanks that people use and that also pollute the water.
8. ***Scope****: how much of the real needs was covered? Is that percentage satisfactory?*
   The project attempted to produce 1,000 cups and in fact, 1,000 cups were produced. However, 100,000 people drink from containers that pollute the water. In this case only one percent of the users improve the quality of water consumed. In another example of the same difficulty, 1,000 cups were produced but only 400 were needed.
9. ***Impacts/objectives****: did the project reduce the vulnerabilities of the population?*
   Using a proper cup does not improve the quality of water anyhow because the water comes already polluted.
10. ***External aspects****: how did the environment affect the results of the project?*
    The media, in order to attack the project for political reasons, gave negative advertising to the use of the new cups arguing that they modify the nutrients water normally provides. This caused the users that needed and acquired the cups to end up breaking them to be sure they were not used.

These questions and the corresponding examples point out the crucial aspects of what to evaluate, that is to say, elements in both the process and the product. However, the initial question remains, how do we use this information to develop a method for evaluation?

Edward Suchman (1967) argues that “inherent in evaluation is the process of assigning value to some objective and then determining the degree of success in attaining this valued objective.” (pp. 28). Suchman adds, quoting Riecken: “evaluation [is] the measurement of desirable and undesirable consequences of an action that has been taken in order to forward some goal that we value” (pp. 28). These two statements imply that evaluation requires (i) questioning the objective and (ii) determining the consequences of its implementation. Zaouali (1994) demonstrates that these two particular aspects have been reconsidered in the evaluation of international development projects in recent years.

In fact, a refined tool of evaluation, the LFA, has been developed by international agencies to deal with this aspect. The United States Agency for International Development (USAID) first developed the LFA in 1969. Since then, it has been adopted by most donor agencies as the most commonly used evaluation method in

international development projects including, for example, CIDA and OECD.

Taking advantage of the progress in results-based management, the LFA is used as a tool to overcome the difficulties found in project evaluation, such as drawing cause-effect relationships between different stages of the project. The stages into which a project is subdivided have received different names and interpretations. However, as a constant, the LFA considers at least four or five stages placed in a time-sequence of cause-effect:

In the first stage, which is usually called *inputs*, the resources, and/or the activities that exploit the resources are considered. The second stage, which is usually called *outputs*, includes the results of those activities; it involves describing the products and services delivered, taking into account the consumption of resources. In the third stage, intermediate *results* are explained. Those results correspond to the immediate effects of the products and services offered; their effects can be measured as the transfer of technology—this stage is usually called *results* or outcomes. In the fourth stage, the long-term effects are explained. This usually corresponds to the final goal of the project. In some cases, an intermediate stage can be considered to distinguish between the medium-term objectives and the long-term effects or *impacts*.

However, this approach represented some limitations. As can be expected, the relationship between causes and effects within the project scope might be altered by elements of the context. To solve this limitation, recent revisions of the LFA have included other aspects such as (i) risks and enablers (CIDA, 1997) and (ii) internal and external factors (Aubry, 1994, see figure 1). In both cases, these aspects permit highlighting elements of the context that might influence the performance of the project.

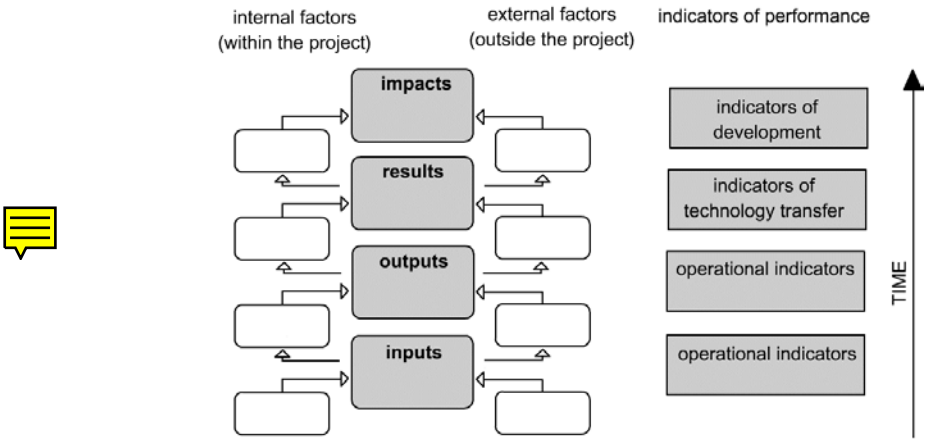

Figure 1. Aubry's LFA, with only one space for medium-term and long-term impacts (Aubry, 1994).

Similarly, later versions of the LFA have also included “important assumptions” which are defined as “conditions which could affect the progress or success of the project but over which the project manager has no control” (Wiggins and Shields, 1995). The assumptions, which are much like Aubry’s internal and external factors, are usually determined by the expectations of the project manager or the evaluator. In the case, for example, of an agriculture-development project, the project manager might assume that if there is an increase in the distribution of fertilizers (an output of the project), peasants will use the fertilizers as required (the assumption) and thus there will be an increase in yield per hectare (the effect). If that effect happens, and the market demand is stable (another assumption), it will lead to an increase in agriculture productivity (goal or impact). If the influence of religious values affects the use of fertilizers and peasants do not use them as required, the effect might not happen. In this case, an external influence (over which the system has little control) affects the performance of the project. Likewise, if the effect happens, but the demand for agricultural products decreases, the final goal (impact) might not be attained.

THE PROBLEM OF UNEXPECTED OUTCOMES

The LFA, as suggested by Aubrey (1994) and CIDA (1997) illustrates clearly the cause-effect relationships that can be expected and therefore tracked down through indicators of performance. However, unexpected effects and unforeseen results – that obviously are not previously described as indicators - are not easily represented in the model. This limitation of the LFA has been discussed by researchers such as Gasper (2000) who proposes the need to incorporate unexpected variables of the sequence of the process into the system of evaluation.

Due to the lack of coordination for unexpected variables, the LFA is known as a convergent model; that is to say, a model that emphasizes finding planned and desired objectives. Obviously, this approach is not good enough if the evaluation requires considering unexpected effects of both internal decision-making and the influence of the environment (which is certainly the case when evaluating reconstruction projects). A different model is used to cope with this kind of situation: the divergent model. According to Brinkerhoff and Tuthill (1987), in the divergent model – also known as “evaluation without objectives” – the causes (or outputs) are tracked down to relate them with non-preconceived effects. They argue that evaluation methods should ideally consider both a convergent and a divergent model simultaneously.

Since the divergent approach is commonly neglected or omitted in the LFA yet there is a clear indication of the importance of unexpected outputs in the performance of the project (certainly representing a crucial variable for the hypothesis of this study) a different layer needs to be added to the LFA to give space to them. Finally, it is important to remember that those unexpected effects (results) can be both positive and negative.

THE MODEL OF EVALUATION

The model of evaluation proposed here (Figure 2) is derived from Aubry's (1994) LFA. However, some significant changes have been proposed. As suggested here, the process of the project, ranging from inputs to impacts, is subdivided into two main areas: the area of direct influence of the project 'system' (shaded grey box) and the area in which the project is exposed to the general environment (larger white box). The inputs and outputs are considered in the first area whereas the results and impacts are considered to lie outside the scope of direct control of the project system. This approach responds to the belief that once the outputs are offered to beneficiaries, the multi-organization responsible for the project (that is to say, the project 'team') has little or no control over them. If changes are required within the area that is under the responsibility of the multi-organization (grey box), the multi-organization can control and keep monitoring the performance of outputs and (i) produce changes in the outputs being offered, (ii) deliver new outputs or (iii) stop the delivery of certain of them. However, the multi-organization cannot change the way people react to products and services in the second area (larger white box) and has very little scope for changing the environment favourably other than through the outputs offered.

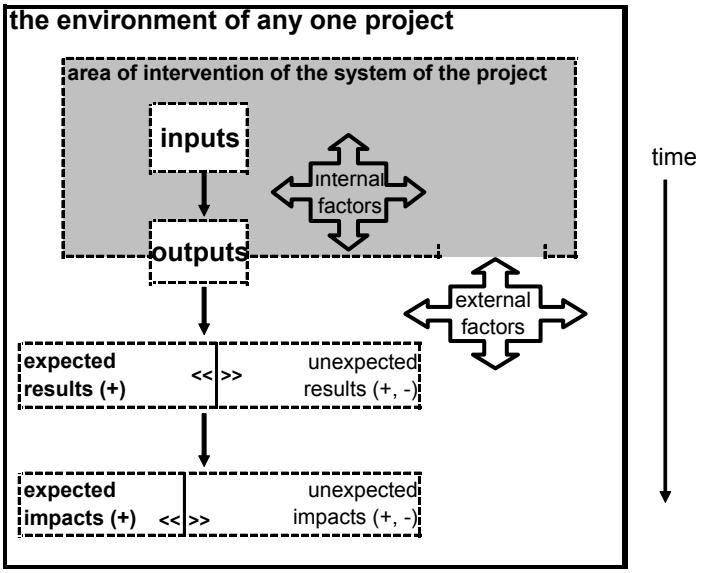

Figure 2 Proposed model of evaluation that accounts for unexpected results and impacts[3]

[3] Alternative versions of the LFA give a different meaning to inputs. Some of them relate the inputs to the raw resources used in the project while others relate the inputs to the activities developed in the use of those resources. To solve this, some organizations have used inputs in two different cells, identifying both resources and activities. However, the model of evaluation proposed here does not include resources, but emphasizes activities instead. This decision is based on the fact that in the evaluation of a project (seen as a process) we are deeply concerned with evaluating the performance

In order to incorporate the divergent approach in the model (and then in reality), and to register, in a clear manner, the effects of the project that cannot be forecast, two spaces have been added: one for unexpected results and one for unexpected impacts.

To summarize, the changes we have applied to the LFA have a powerful influence on the way projects are analyzed, because they highlight fundamental facts for the analysis of reconstruction projects, namely:

- That the system is exposed to external factors. Those influencing factors might have positive or negative impacts (they can be risks or opportunities) and the only thing the multi-organization can do towards them is to acknowledge the risks and be prepared for them, and take advantage of the opportunities.

- That the results and impacts can be greatly affected by external factors over which the multi-organization has little or no control.

- That the evaluator needs to be ready to register not only the expected results and impacts (as proposed by the assumptions made before the project), but also unexpected effects.

INTERNATIONAL AGENCIES AS LEARNING ORGANISATIONS

Construction projects are usually made by temporary multi-organisations (Davidson, 1988) that dissipate once the project is finished. After one project is done, participants usually change partners to work on a new project. This means that accumulating expertise among all the participants is very difficult.

Reconstruction projects, on the other hand, are funded – at least in part – by international agencies (such as the World Bank, CIDA, and OECD, among others) who are interested in evaluating their funded projects both for *accountability* purposes, that is, proof to the donor organisation that money has been spent efficiently and in the best manner possible, and for *learning*, that is to learn from past projects so as to improve future projects (Gasper 2000; Wallace 1997). These international agencies are in a unique position because they are common participants in many temporary multi-organisations. They are involved with a range

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in the development of *processes* and not evaluating the resources as such. In this type of evaluation, we are not interested in assessing the performance of – for example - bricks, but in the performance of the process of finding, selecting, transporting and assembling the bricks. In other words, in this model we do not evaluate the budget allocated to the project (a resource), but the capacity of the multi-organization to obtain the required sources for the project (a characteristic of the activity of finding money). Obviously, this delicate distinction has a fundamental effect on the evaluation of projects if they are to be evaluated in terms of a logical sequence of activities and decision-making.

of projects within various sectors throughout the world and they work with numerous organisations and partners both simultaneously and over time.

Through evaluations, these donor bodies have the capacity to learn from the various reconstruction projects and build a body of knowledge (Figure 3). This knowledge can then be conveyed to their partners or funded organisations that have the chance to put the lessons into use for the next project. In addition, these lessons can modify the donor body's policies for development projects.

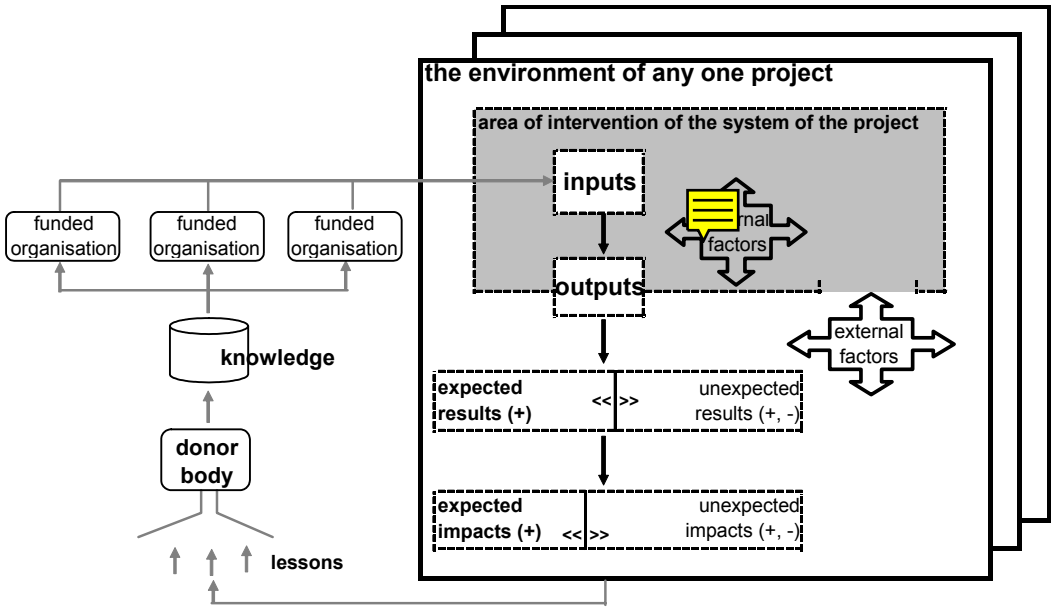

Figure 3: Lessons-learned through evaluations by the donor body are transferred back to the funded organisation by a feedback loop.

HOW A LEARNING ORGANISATION WORKS: CIDA CASE STUDY

Over the last ten years many large agencies such as ODA, OECD, World Bank and WHO have made significant changes to their policies regarding performance review, results-based management and evaluation in order to improve efficiency and effectiveness. CIDA, the Canadian International Development Agency, is one example of these agencies whose objective is to act as a funnel of information for their funded organisations and partners.

In order for an agency such as CIDA to act as a learning organisation for knowledge transfer there must be: *mechanisms for learning* (tools for management and sharing of information built into the organisation) and a *mentality for learning* (an attitude for learning and a willingness to share information prevalent throughout the organisation).

At CIDA, knowledge is accumulated at several levels of the organisation. The project managers at the Canadian Partnership Branch are responsible for gathering information from NGOs working in the field. The Performance Review Branch conducts its own larger-scale evaluations and is responsible for developing methodologies for evaluation and disseminating the lessons from and to all levels of the organisation. The Knowledge Management Secretariat, which reports directly to the president's office, is responsible for creating and encouraging a culture of knowledge sharing within the agency.

Information is disseminated at CIDA using both formal and informal means. Informally, findings are shared with colleagues during seminars and brown-bag lunches; projects that are particularly successful are presented to groups within the organisation so that information about them is shared and transferred to projects in other areas. More formally, the Agency also organises workshops to educate staff on knowledge transfer systems. Periodically the Performance Review Branch publishes newsletters outlining learning about various processes, such as water management, sustainable development or policy dialogue. This information is also compiled into an intranet database, "e-lessons," that is available to CIDA staff and its partners.

As depicted in Figure 4, CIDA acts as a hub of information, collecting it through evaluations and performance reports and distributing it through both formal and informal means to its partners on a particular project.

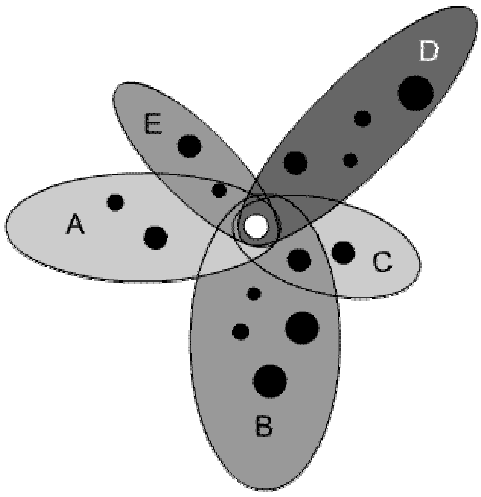

Figure 4: The donor body (middle dot) acts as a hub for information flow among the temporary multi-organisation (project 'team') transferring knowledge from project A to projects B, C, D and E and to their members (other black dots).

DISCUSSION

The amelioration of reconstruction projects is a complex task that involves realistic evaluation coupled with effective transfer of information through learning organisations. Through an examination and a refinement of the methods in both evaluation and information sharing it is possible that improvements can be made to the performance of reconstruction projects. The following points summarize the contributions of our research:

- The LFA has been used by many international agencies, such as United Nations, World Bank, CIDA and OECD for many years now, however it has certain limitations:
- It does not define the area of influence of the project system and it does not sufficiently consider the environment. Nor does not take into account the impact of the environment both on the system itself and on the products (outputs) of the system and its possibly influential factors[CD8].
- It does not emphasise the importance of learning from the unexpected outcomes – both positive and negative.
- In the building industry, collective lessons are usually lost because the projects (of limited duration) are made by temporary multi-organisations that dissolve when the project is over. This is not to say that individuals and firms within the projects' temporary multi-organization do not learn but that they do not, or are not able to, share knowledge across projects because the make-up of the temporary multi-organization for the next project is probably completely different.
- In contrast with the general building industry, most reconstruction projects have a different structure that seems to overcome this problem: there is a central donor body that is a key participant which is common to many temporary multi-organisations and can pass on information that is collected from the various participants to the participants of the next similar project.
- CIDA, for example – like other international agencies – has the potential (and the constant challenge) to act as a funnel to collect lessons learned and to transform them into knowledge applicable in future projects.
- Optimizing this rare opportunity in the building industry (of having a body to collect and transform lessons into better practices) seems to be beneficial for improving the performance of projects in theory, but in practice projects continue to under perform. Furthermore, it appears that organisations, such as governments in continuously disaster prone countries, could have the ability to act as learning organisations and channels of information as well; however they do not seem to take advantage of this opportunity.

These points outline in what ways (i) the evaluation of reconstruction projects and (ii) the feedback loop of central learning organisations are key features that can have a great impact on optimizing our development resources and improving post-disaster reconstruction.

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