International Development Projects by Non-Governmental Organizations: an evaluation of the need for specific project management and appraisal tools

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Abstract

International Development (ID) projects are pivotal in the field of international aid, but their actual impact is difficult to assess and often questioned. Focusing on non-governmental organizations (NGOs), in this paper we analyse two aspects related to the impact of ID projects. The first concerns the characteristics of ID projects. We reviewed the literature to define the distinctive features of these projects. Second, we analyse the state of the art of project management processes and tools for ID projects. In particular, we verify the differences between standard project management methodologies (i.e. PMBOK® Guide, IPMA) and the methodologies specifically developed for NGOs (i.e. PM4NGOs and PM4DEV). The results suggest the need for specific managerial approaches and tools for ID projects. In particular, we show that standard project management methodologies could be complemented by specific tools (e.g. the Logical Framework) in order to increase the likelihood that high social impact is the outcome of the project.

Introduction

International Development (ID) projects are recognized as pillars of international aid to

developing countries (Diallo and Thuillier, 2004, 2005; Roodman, 2006). Whereas

emergency projects provide immediate assistance to populations afflicted by wars or

natural disasters, ID projects usually take place in more stable contexts, with the aim of

improving living standards, education, or health. For these reasons, ID projects are less

visible to society, but they generally yield more sustainable and longer-lasting results.

For this reason, they are attracting increasing funds and human capital (Diallo and

Thuillier, 2005; OECD, 2012, 2013). The current global economic and financial crises

have created political incentives for donor governments to limit increases in their

development budgets (Vanheukelom et al., 2012); however, new flows of funding

originate from emerging countries, like the so-called BRICS and the richer Arabian

countries (Zimmermann and Smith, 2011).

Despite their importance, a recent study by McKinsey and Devex (Lovegrove et al.,

2011) confirms that ID projects are often inefficient or ineffective. A similar finding is

reported by Ika et al. (2012).

This has prompted a call for better management, accounting and impact assessment

systems for Non-Governmental Organizations (NGOs) (e.g., Ebrahim, 2003a, b) in

order to enhance their "social impact" (Becker and Vanclay, 2003). For instance,

Vanclay (2003) argues that managerial efforts should be made so that each phase of the

project includes elements of "social impact assessment", defined as *"the processes of*

analysing, monitoring and managing the intended and unintended social consequences,

both positive and negative, of planned interventions (policies, programs, plans,

projects) and any social change processes invoked by those interventions".

In this paper we analyse two aspects related to the social impact of ID projects.

The first concerns the characteristics of ID projects. The extant literature (Diallo and

Thuillier, 2005; Khang and Moe, 2008; Youker, 2003) underlines that ID projects have

specific characteristics that should be considered so as to ensure that a project has high

social impact.

We thus analyse the characteristics of ID projects that define the context and boundaries

of the applicability of project management tools and methodologies, and we discuss

whether these characteristics require specific project management and appraisal tools.

Second, we evaluate the project management processes and tools developed specifically

for ID projects that many authors argue have not received the necessary attention in the

literature (Ika et al., 2012; Khang and Moe, 2008).

Specific processes and tools to manage ID projects have been developed in order to

establish a connection between social impact assessment and project management

(Newcomer et al., 2013). They are incorporated into the project planning, monitoring

and appraisal processes throughout the entire lifecycle (George, 2001).

These specific tools, such as project cycle management (PCM) and the logical

framework (LF), have been developed to help governmental agencies manage ID

projects in pursuit of the long term objectives identified while keeping their social

impact high. However, the usefulness of such tools has been often questioned (Couillard

et al., 2009).

Accordingly, the second aim of this paper is to determine the state of the art in terms of

project management processes and tools for ID projects. In particular, we verify the

differences between standard project management methodologies (i.e. *PMBOK*® *Guide, IPMA*) and others specifically developed for NGOs (i.e. PM4NGOs and PM4DEV). This study contributes to the extant literature in several ways. Firstly, identification of the characteristics of ID projects can suggest on what researchers and practitioners could focus in order to create new tools or improve the existing ones. Second, comparison among the available methodologies can be useful for Project Managers working on development projects and for organizations administering training courses on this subject. Furthermore, since the features identified are not exclusive to ID projects, this analysis can be beneficial also for Project Managers working for private companies in Corporate Social Responsibility and Community Relations functions. Finally the results can be helpful for Project Managers dealing with complex projects with characteristics similar to those of ID projects (e.g. a high number of stakeholders). The paper is organized as follows. First, we introduce the main literature on ID projects, and we detail our research objectives. Then, we describe the methodology used for the research. Finally, we present the results and discuss them.

Literature Review and Research Objectives

According to the literature, only limited insights have been provided on the extent to which project appraisal and management standards are adopted by companies and other organizations (Ahlemann et al., 2009), especially those that do not operate in project-based industries. In fact, the focus has been mainly on industries such as engineering and construction, information technology, and project manufacturing (e.g. aerospace). This is a gap that researchers and practitioners are trying to fill and which, over time, has led to the definition of specific project management standards adapted to specific contexts (Besner and Hobbs, 2008). In fact, despite the universal nature of project management methodologies, different industries exhibit different approaches to project

management. One of the less explored sectors is the non-profit sector, and we found little research on how NGOs approach project management for international development (ID) projects.

NGOs and ID projects

NGOs[1] are private, non-profit organizations, independent from governments and their policies. They operate with the purpose of improving the living conditions of poor populations (Vakil, 1997). Today, NGOs have an important and increasing role in reaching the poorest populations and providing them with effective help – sometimes with the endorsement of governments (Koch et al., 2009). The growing importance of NGOs is mainly related to three factors: the success of some NGOs (Brown and Kalegaonkar, 2002); the limited ability of governments to act as helping agents (Hyden, 1998; Lindberg et al., 1998); and the involvement of private citizens (Putnam et al., 1994; Woolcock, 1998). Furthermore, NGOs often play the role of intermediaries between governments and populations, fostering voluntary involvement in their projects and programs.

When NGOs deal with ID projects, some specific characteristics relative to their special objectives and contexts must be considered (Diallo and Thuillier, 2005; Khang and Moe, 2008; Youker, 2003). Ika et al. (Ika et al., 2012) highlight that, in ID projects, one size does not fit all, which is why standard project management approaches often fail. In particular, it is important to distinguish between *hard projects* (e.g. construction) and *soft projects* (e.g. projects to improve social conditions). This distinction is not new to the literature, even if there are different interpretations of its meaning. Crawford and

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[1] The term "non-governmental organization" was introduced in 1950, by the 288 (X) Resolution of the United Nations Economic and Social Council, to refer to organizations that have no governmental affiliation.

Pollack (2004) identified a set of parameters useful for identifying the differences

between the two approaches (Table 1).

Table 1 - The distinction between hard and soft projects. Source: (Crawford and Pollack, 2004)

Hard projects	Parameter	Soft projects
Goals clearly defined	**Goal clarity**	Goals/objectives highly ambiguous defined
Physical artifact	**Goal tangibility**	Abstract concept
Only quantitative	**Success measures**	Only qualitative
Not subject to external influences	**Project Permeability**	Highly subject to external influences
Refinement of single solution	**Number of solution options**	Exploration of many alternative solutions
Expert practitioner, no stakeholder participation	**Participation and practitioner role**	Facilitative practitioner, high stakeholder involvement
Values technical performance and efficiency, manages by monitoring and control	**Stakeholder expectations**	Values relationships, culture and meaning, manages by negotiation and discussion

Generally speaking, ID projects are never purely "hard", because there are always some

ambiguities in the statement of their goals, and their stakeholders always have an

important role. Some of these ID projects (e.g. construction) have tangible outputs and

goals that are more clearly defined, while others (e.g. those that seek to improve social

conditions) tend to be more "soft." Clearly, some degree of quantification is always

possible even in the case of soft projects (e.g. the hours of training provided to

beneficiaries, increases or decreases in rates of health or income), but the success of a

soft project is not limited to fulfilment of such quantitative objectives.

NGOs and ID projects, as noted, have characteristics that differentiate them from other

organizations and other projects. In particular, these characteristics may complicate

evaluation of the project (ex-ante and ex-post) and the way in which it is managed. It is

therefore essential to understand the characteristics of ID projects and to evaluate

whether the available project management methodologies and tools are suited to those

characteristics. Given the lack of a comprehensive framework in this regard, we

formulate the first research question of our study as follows: **do the characteristics of ID projects require specific project management and appraisal tools?**

ID Projects and Managing Tools

Given the specificities of ID projects, some specific tools have been developed to manage them and to assess their impact on beneficiaries (Mosley, 2001). First, in 1970, Baum introduced the project cycle management (PCM) concept into ID projects (Baum, 1970). The project cycle breaks down a project into phases that connect the beginning of the project to the end. Therefore, PCM involves managing projects end-to-end and adopting different approaches and tools for different parts of the project.

PCM is a framework rather than a tool. Various tools have been developed within PCM (Biggs and Smith, 2003), the most common of them being the Logical Framework (LF). This tool is now in widespread use, and it is often considered a stand-alone tool (Couillard et al., 2009). LF was developed in 1969 by Fry Associates and Practical Concepts, Inc., for the United States Agency for International Development (USAID) (Solem, 1987). In its original form, LF is a 4-by-4 matrix crossing a project's goals, purpose, inputs, and outputs with its sources of verification and assumptions. The objective of LF is to provide a succinct picture of a project, which can be shared among the stakeholders and support the design, planning, management, and communication of the project (Coleman, 1987; Gasper, 1997).

As reported by Landoni and Corti (2011), PCM and LF are adopted by some of the most important governmental agencies involved in ID projects (e.g. JICA, AusAID, EU). However, among its major shortcomings, the literature deems LF to have unclear terminology, unclear links between levels, and a lack of stakeholder involvement (Couillard et al., 2009; Crawford and Bryce, 2003). These limitations have led to

several reformulations of PCM and LF, and there are still some indications that further improvements are needed (e.g. Couillard et al., 2009; Gasper, 2000).

Moreover, a lack of integration with other project management standards is cited as a major problem, because PCM and LF – which are more high-level and strategic – are not substitutes for traditional project management tools (e.g. Work Breakdown Structure; the Gantt diagram) supporting a project's operational management. Several studies (e.g. Golini et al., 2013; Ika et al., 2010; Landoni and Corti, 2011) have found that ID projects make frequent use of such tools as WBS or the Gantt Chart. Moreover, the same studies provide evidence of a positive correlation between project management tools and the achievement of superior performance, in terms of both the attainment of goals and the long term impact of projects.

However, there is a lack of contributions in the literature on how specific and strategic tools for impact assessment - such as LF - should be used and integrated with traditional project management ones.

Therefore, in this paper, we analyse whether there are differences among specific methodologies (i.e. those developed by PM4NGO and PM4DEV) and standard bodies of knowledge. Thus, our second research question is: **are there specific processes and tools in the methodologies to manage and appraise ID projects compared with the processes and tools present in the standard guidelines?**

Finally, at the end of the results section, we analyse the connections between RQ1 and RQ2; that is, we discuss how the characteristics of ID projects are related to differences between the specific methodologies and the standard ones.

Methodology and Data

To provide an answer to the first research question, we performed a systematic literature review (e.g., Tranfield et al., 2003) to characterize NGOs and ID projects. In so doing,

we focused our analysis on project management and international development journals in order to identify only the characteristics of relevance to project management. We started from a list of characteristics and then classified them into specific categories. Thereafter, we kept only those that were mentioned by two or more sources.

In regard to the second research question, we used the method employed by Hermano et al. (2013) to compare the two main guidelines developed for NGOs (PMDPro1 and PM4DEV)[2] with the most recent edition of the *PMBOK® Guide – Fifth Edition* (2013), which was developed by the Project Management Institute and is one of the most widely used project management standards.

We also considered the IPMA Competence Baseline Version 3.0, but only at the process level, not at the tools level. Since the IPMA is a competence-based guide, we could only investigate whether the technical competences required to manage a particular project management process were included in the guide. Moreover, at the end of the paper we discuss the implications and differences of following a methodology rather than a competence-based approach.

Our analyses of the guidelines moved through the following two steps.

First, we compared the methodologies developed by PM4NGO (that is, PMDPro1) and PM4DEV with the *PMBOK® Guide*.

The elements of the comparison included the following:

- Project cycle: phases and structure

- Project management processes

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[2] PMDPro1 and PM4DEV guidelines are briefly described in the Appendix 1

- Tools (with a qualitative indication of the level of detail provided for each tool), considering both standard project management tools (e.g. the Gantt chart) and specific tools for ID projects (e.g. logical framework)

Finally, we analysed how the guidelines specific to NGOs address the unique characteristics of ID projects.

Results

The characteristics of international development projects (RQ1)

The most relevant characteristics of ID projects were grouped into five categories, and they are reported in Table 2. Other characteristics have been identified by the literature, but they are less common. Some of the characteristics that were identified but not included in the table because they are less common are: *issues with contracts, issues related to risk identification and evaluation* (Kwak and Dixon, 2008) and *the need for integrated management of functions* (Muriithi and Crawford, 2003).

Table 2 - The characteristics of ID projects

	Characteristic	Supporting literature	Evidence in "hard" projects	Evidence in "soft" projects
1	Lack of a defined and/or powerful customer	(Ahsan and Gunawan, 2010), (Ika, 2012; Moe and Pathranarakul, 2006)	In crowded areas, it can be difficult to determine the actual users of a certain structure.	The target beneficiaries (the poor or minorities) may find it difficult to make their voices heard
2	High number of stakeholders	(Youker, 1999), (Saad et al., 2002), (Diallo and Thuillier, 2005), (Steinfort, 2010), (Zhai et al., 2009)	Presence of many stakeholders (including local workforce and suppliers), to be managed accordingly.	Lower number of stakeholders, but higher possibility of conflicting interests.
3	Difficult, complex and risky environment	(Youker, 1999), (Diallo and Thuillier, 2004), (Khang and Moe, 2008), (McCarthy and Zakrajšek, 2007), (Ika et al., 2012; Zhai et al., 2009)	Higher costs and risks due to natural disasters and inclement weather.	Higher risks due to political and social instability.

4	Resource scarcity	(Youker, 1999), (Quartey Jnr, 1996), (Muriithi and Crawford, 2003)	Budget constraints are one of the main causes of project elimination or downsizing	Lack of skilled resources or high turnover can pose issues for implementation.
5	Difficulty in using project management techniques in the context of other cultures	(Ahsan and Gunawan, 2010), (Muriithi and Crawford, 2003), (Crawford and Bryce, 2003), (Chan and Raymond, 2003) (Ika et al., 2012)	Stakeholders are different not only in terms of culture, but also on the level of instruction. Where corruption is problematic, tools that can foster transparency are not well accepted.	Important to take into account different levels of instruction and religious orientations.
6	Presence of intangible project outputs, which can be difficult to define and measure	(Khang and Moe, 2008), (Steinfort, 2010), (Ahsan and Gunawan, 2010; Ika et al., 2012)	The project has well-defined immediate objectives, but a connection with the long term objectives can be difficult to define.	Project results can be difficult to measure.

The literature is rather dispersed, meaning that no single article cites all ID project characteristics, and not all of the articles mention the same characteristics. As can be seen from the table, these characteristics may be present in projects of different types. For example, the lack of a defined and/or powerful customer and the high number of stakeholders is a problem that is common among public projects (Khang and Moe, 2008), and a difficult and risky environment can also be found in off-shore projects or mega-projects (Zhai et al., 2009*)*. However, ID projects usually show all of these characteristics at the same time, which makes them unique.

A more detailed description of each characteristic is provided in what follows, together with discussion of their impact on the management and appraisal of ID projects.

The lack of a defined and/or powerful customer

Whilst donors are usually considered as stakeholders (and not as customers), in ID projects the target "customer" or beneficiary is usually a community in a developing country. In fact, beneficiaries are those who should benefit from the outcome of the project, and it is for them that the solution has been designed (Diallo and Thuillier, 2005). However, the boundaries of this community are not always clearly defined,

especially in heavily populated areas. Moreover, the community benefits from the project's output, but its members generally do not fund the project (Ahsan and Gunawan, 2010) and do not have the technical competence or the ability to self-determine the project's goals. Consequently, the beneficiaries are in a weak position, and they may play the role of influencers rather than "customers." This situation makes ID projects similar to public projects (Khang and Moe, 2008). In these projects, customers have less power in terms of supervision and direction, so that the project is more subject to pressures exerted by other stakeholders, with the risk of project "scope creep" (deviation from the intended, original scope of the project) and impact reduction. Moreover, it may be very difficult to obtain feedback from the beneficiaries in the post-project impact assessment.

As important and powerful stakeholders, the donors can monitor the project and ensure that their expectations are met (Ika, 2012); however, donors may be dispersed (in the case of small donations), or they may have reduced insight into the outcome of the project.

A high number of stakeholders

Another important characteristic is the high number of stakeholders. Many stakeholders can usually be identified in ID projects. The main types are reported in Table 3. An additional source of complexity consists in the relationships among the different stakeholders, which may be strong or weak, direct or mediated, and frequent or scarce. Figure 1 shows an example of stakeholders and their mutual relationships in an ID project (stakeholder map).

Table 3 – The types of stakeholders involved in an ID Project

	Description	Role/Interest
Project manager	The manager in charge of the project.	Manages the project, achieves objectives, meets stakeholders' interests.

NGO	The NGO implements the project.	Manages the portfolio of projects, stakeholders, fundraising.
Donors	Single or multiple companies, institutions, organizations or individuals providing the money to support the project.	Provide relief and help to the beneficiaries, gain a positive reputation in their community. May be in charge of verifying that the goals have been fulfilled.
Organizations implementing projects in the same area	Other organizations in the same area (e.g., NGOs, governmental agencies) can carry out other projects with possible common bottlenecks or other constraints.	Prioritize their own projects.
Multilateral agencies	International agencies that monitor the progress of the project.	Supervision.
Local government and institutions	The government and institutions in the area where the project is delivered.	Supervise, prioritize projects, align project objectives with governmental objectives, provide help to the population, gain a positive public image, attract additional aid.
Beneficiaries	The recipients of the project.	Align project objectives with their needs, attract additional aid.
Local population	The rest of the population; even if it does not directly benefit from the project, it can affect the project.	Competes to receive aid, can create obstacles or facilitate the project, generates positive or negative public opinion.
Local implementing partners	Local companies/NGOs (e.g., suppliers, contract workers) that participate in the project.	Earn money, participate in several projects.

Figure 1 – An example of a stakeholder map highlighting mutual relationships. The dark boxes identify key stakeholders. Solid arrows represent regular communication between the parties involved and the dotted arrows represent likely communication between parties. Adapted from Ahsan and Gunawan (2010)

Firstly, the presence of a wide array of stakeholders makes the ex-ante impact

assessment more difficult, because the project's outcomes must be assessed for every

stakeholder category, taking possible interactions between these categories into account.

Each stakeholder will have a different perspective on the project's success, depending

on its needs and how well these needs are satisfied by the project (Zhai et al., 2009).

Next, it is necessary to involve stakeholders in the project; in fact, a lack of involvement

and communication may lead to an inaccurate definition of the project's objectives and

thus to failure in achieving them. This consideration highlights the importance of

stakeholder management in development projects. The local community is one of the

most critical and difficult stakeholders to be managed. Transferring knowledge to a

target population is a priority in each phase of the project. Moreover, involvement of the

local community helps in identifying the characteristics of the environment and of the

context where the project will be implemented in terms of tacit knowledge (e.g. political

or cultural factors), which is important for a project's success (Saad et al., 2002;

Steinfort, 2010).

A difficult, complex and risky environment

The difficulties caused by an ID project's environment constitute a third, crucial

characteristic. It is possible to identify various categories of these environmental factors.

First, there are *natural factors* (territory, climate, risk of natural disaster) (Kwak and

Dixon, 2008). These factors can make ID projects, and in particular projects with

"harder" characteristics, more difficult and risky.

Second, there are *political and institutional factors*. Local governments often

experience shortages of resources and may have difficulties in supplying all the

information and resources that were promised at the time when a project was planned and approved. Corruption is normally an endemic problem, so that monitoring and ensuring transparency may be difficult. Moreover, administrative bureaucracies are often very intricate and frequently cause delays in projects (Ika, 2012; Youker, 2003). Third, there are *social factors*, such as workforce availability, social instability and the presence of conflicting interests among different communities. These factors may cause problems in finding the proper resources when a project needs them, with the consequence of disruptions and delays. Finally, there are *technological factors*. Finding local suppliers may be difficult, and the technology must frequently be adapted to local resources (Kwak and Dixon, 2008).

Given this multitude of factors, it would be helpful for project managers to have a shared risk database in which to gather information in the form of checklists, cases, examples or statistics about the risks that they may encounter in their projects. However, to the best of our knowledge, a database of this type for project managers working in ID projects is not yet available and represents a possible area for future research.

Resource scarcity

The next characteristic is resource scarcity. NGOs often have limited and inflexible budgets, and they often rely on volunteer work for their projects. Moreover, in the areas where projects are undertaken, there may be a lack of skilled resources, technology and infrastructure (Youker, 1999, 2003). Finally, there is the ethical issue related to the fact that the largest share of the money received should be used to provide help to the beneficiaries and not be dispersed among administrative or other non-value-adding activities. Therefore, the planning phase is critical for identifying the most efficient and effective way to implement a project through the optimal allocation of tasks and

responsibilities while avoiding issues that can cause an ineffectual dispersion of funds (Muriithi and Crawford, 2003). Additionally, in the execution phase, it is essential to monitor a project and take corrective actions.

Cultural differences

Another characteristic of ID projects is the involvement of different countries in the same project (e.g. donor countries and receiver countries). In these cases, differences between values and cultures can create considerable cross-cultural problems. The most frequent differences relate to culture, religion, language, managerial processes and knowledge (Kwak and Dixon, 2008).

A project manager must be aware of the difficulties that may arise from these differences. Firstly, in the appraisal phase, different perspectives and cultures should be taken into account. What is considered "good" in one country may not be so in another. Secondly, the project manager must be aware that the imposition of project management methodologies in places where such tools may be unknown or uncommon can be problematic. As noted by the extant literature (Chan and Raymond, 2003), cultural differences are a major source of conflict among parties, and they may raise additional challenges in the development of a project. Although there are some studies on the cultural traits of countries that may affect managerial processes (e.g. Flynn and Saladin, 2006; Hofstede and Hofstede, 1991), it is still difficult for a project manager to understand all the culture-related problems in advance of a project, and personal experience is most often the main source of this type of information. It could be beneficial to include these types of risks and problems in the above-mentioned database.

Intangible outputs

Finally, the presence of intangible outputs may create additional difficulties, especially when measuring the extent and the impact of the achieved results. The objectives of

development projects generally concern the alleviation of poverty, the improvement of standards of living, and the protection of basic human rights. The humanitarian and social objectives are usually much less tangible, visible, and measurable, especially in the short term (Youker, 2003). Soft projects are especially characterized by this type of intangible objective. As a consequence, they are exposed to a higher risk of "scope creep" (i.e. the undesired or untracked changes to a project's original scope which can lead to higher cost and time expenditures) under the pressure of stakeholders' interests, without being able to keep track of it (Crawford and Pollack, 2004). However, projects with hard characteristics also have this kind of problem when considering the longer-term outcomes. For instance, tracking the construction of a school in terms of time-cost-quality performance is relatively easy, but improvement in the level of a community's education and social development is much more difficult to measure. It requires specific types of measurement, which are sometimes carried out even years after a project has been completed, to ensure that its impact is fully evaluated. In particular, qualitative methods, such as life-stories or narratives, should be employed as valuable means with which to demonstrate the intangible outputs of ID projects (Crawford and Pollack, 2004; Patton, 1990).

The Difference Between ID Project Methodologies and Standard Project Management Methodologies (RQ2)

In this section, we present the results of the comparison of methodologies, which considered the following elements as introduced in the methodology section above:

- Project cycle
- Project management processes

- Tools

Project cycle

The "life cycle" of a project consists of "phases that connect the beginning of a project with its end to provide better management control through appropriate links to the ongoing operation of performing organizations" (PMI, 2004, 2008). In the context of ID projects, as Biggs and Smith (2003 p. 1743) observe, a project cycle consists of a number of progressive phases "that lead from identification of needs and objectives, through planning and implementation of activities to address these needs and objectives, to assessment of the outcomes."

Project life cycles appear to be very similar when we consider their phases (Table 4).

Table 4 – Comparison of life cycles

PMBOK	
PMDPro1	

PM4DEV
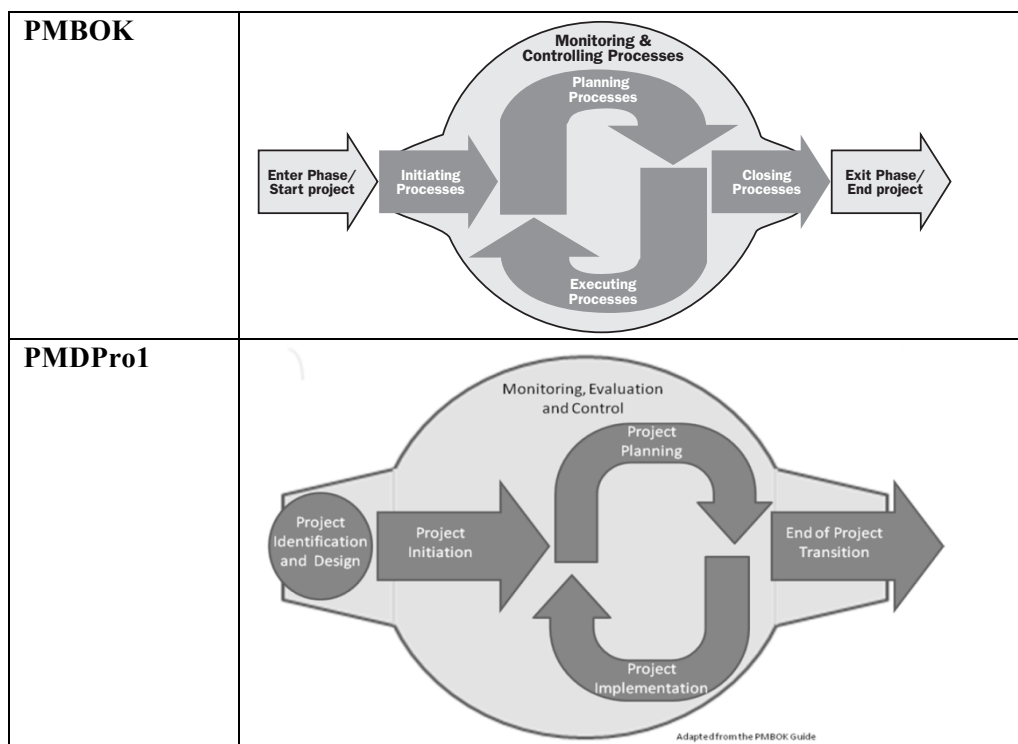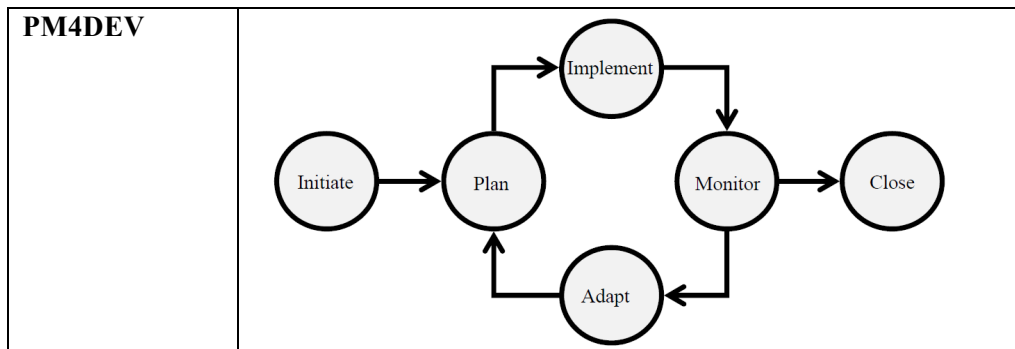
We can observe that PMDPro1 refers to the final phase as an *end of project transition* in order to highlight the importance not only of delivering the project, but also of passing it on to the final users. This phase is of such importance in the guide that there is a specific supporting tool for it: the transition planning matrix, displayed in Appendix 2. Moreover, PMDPro1 also splits the initiation phase into two. First, there is the *project identification and design* phase. The aim of this phase is to define the scope and objectives of a project, identify the stakeholders, and develop the project's charter. During this phase, it is necessary to acquire working knowledge of the project environment, as well as to identify and analyse the key problems that afflict the prospective beneficiaries. It is important to acquire a deep understanding of the situation that includes the perspectives of all of the stakeholders, whose interests may sometimes be unclear. Facilitating discussion among the stakeholders can be very beneficial in addressing this issue. This phase is considered to be of crucial importance. Consequently, a set of tools is proposed to support project managers (e.g., vulnerability matrices, mind mapping, affinity diagrams, gap assessment, group discussion, workshops, and problem-tree analysis).

After *project identification and design,* it is possible to proceed with the *project set up* phase in which the specific objectives and the project charter are agreed upon.

By contrast, PM4DEV introduces the *adapt* phase between *monitor* and *plan*. Every set of project management guidelines (including PMBOK and PMDPro1) states that it is important to review a plan over time, according to the information provided by the monitoring systems. But PM4DEV pays particular attention to the fact that ID projects are subject to many changes during their execution, and that an adaptive project management style is often needed.

Project management processes

Project management is not a set of tools, but rather a set of processes that are supported by specific tools. These processes can run in parallel or in sequence during a project. Understanding project management as a set of processes is fundamental for keeping a project under control, because processes are characterized by responsibilities, inputs, planned activities and measurable outputs. The central role of the project management processes is acknowledged by the three guides that we are analysing, and it is used as a reference to organize the concepts. Table 5 sets out the project management processes described by the various guides. We also analyse the IPMA Competence Baseline Version 3.0, which focuses on the competences necessary to manage a particular process.

Table 5 - The processes included in the guidelines

	PMBOK	PMDPro1	PM4DEV	IPMA**
Project Scope Management	Yes	Yes	Yes	Yes(1.10)
Project Time Management	Yes	Yes	Yes	Yes (1.11)
Project Cost Management	Yes	Yes	Yes	Yes (1.13)
Project Risk Management	Yes	Yes	Yes	Yes (1.04)
Project Human Resource Management	Yes	Yes	Yes	Yes (1.62)
Project Stakeholders Management	Yes*	Yes	Yes	Yes (1.02)
Process Integration Management	Yes	-	-	Yes (1.01)
Project Quality Management	Yes	-	Yes	Yes (1.05)
Project Communication/Information Management	Yes	-	Yes	Yes (1.18)
Project Procurement/Supply chain/Contract/ Management	Yes	Yes	Yes	Yes (1.14)
Project Justification Management	-	Yes	-	-

First, it will be seen that IPMA has a very good coverage of all the project management disciplines. However, because it is competence-based, we could not compare it directly with the other guides. We therefore shifted our focus to the PMBOK, PMDPro1 and PM4DEV. As shown in Table 5, the *project scope*, *time*, *cost*, *stakeholders, human resource* and *risk management* processes are all mentioned by the three guidelines, and given similar meanings. On the other hand, specific guidelines (PMDPro1 and PM4DEV) do not consider *project integration*, and PMDPro1 mentions *quality management* very briefly.

Moreover, the methodologies seem quite similar in terms of processes, and we could not find evidence of a different approach to project impact assessment and management. Therefore, we moved to the tools described in the guidelines.

Tools

Table 6 summarizes the results regarding the tools. In general, all of the tools included in the *PMBOK*® *Guide* are also presented in the other two guides. However, some of the tools have descriptions that are much shorter than those in the *PMBOK*® *Guide*, while the *PMBOK*® *Guide* does not include logical framework and trees analyses (problem tree, objective tree and alternative tree).

Table 6 - A comparison of the levels of description of the tools (high - in depth description, medium - presentation of the tool, no references to the tool)

	PMBOK	PMDPro1	PM4DEV
Project Charter	high	high	medium
WBS	high	medium	high
Critical Path Method / Network diagram	high	high	high
Gantt Diagram	low	high	high
Earned Value Management System	high	medium	high
Risk Analysis	high	high	high

Logical Framework	-	high	medium
Stakeholders Map and Matrix	high	high	medium
Problem tree, Objective tree, Alternative tree	-	high	-

Project charter. The *PMBOK ® Guide* and PMDPro1 provide accurate descriptions of the project charter, which identifies the specific and long-term objectives of the project and gives the authorization to start the project. Moreover, PMDPro1 states that the project charter is also useful for communicating the aims of a project to stakeholders. The guide emphasises that the project charter should be considered to be a *living document* that is updated whenever there is a major change in a project. PM4DEV, provides a relatively succinct description of this tool.

WBS. All three of the guides clearly define the characteristics of a WBS, which is used to identify all the required activities and represent the work needed to achieve the project's objectives. This tool supports the identification and organization of the project into work packages. PMDPro1 provides a brief description of the WBS, while the other two guides are more complete in terms of the guidelines to be followed to build a proper WBS.

Critical Path Method / Network diagram. This tool is used to represent the relationships among the activities and to identify the critical path. It supports project scheduling and time management. With regard to these techniques, the *PMBOK ® Guide* is the most complete, although PM4DEV is quite detailed as well, explaining, for example, all of the precedence typologies (e.g. end-to-end, start-to-finish). PMDPro1 furnishes a less detailed overview of these tools.

Gantt Diagram. Another important tool for managing project time, and one of the first to be introduced into project management, is the Gantt Chart. In this case, the *PMBOK*

® *Guide* does not provide many details, whereas the other guides show how this tool can be used, not only as a planning tool, but also in the controlling phase.

Earned Value Management System. The earned value management system is the basic instrument for monitoring the progress of a project in terms of both time and money. In this case, the guidelines of the *PMBOK ® Guide* and PM4DEV give accurate descriptions of all the performance indicators. PMDPro1 only furnishes an overview of the methodology, without providing any reference to the specific time and cost performance indicators. However, PMDPro1 provides a different approach to project control that is directly related to the logical framework structure. This approach is supported by the *project monitoring and evaluation matrix* (Figure 2).

Figure 2 – The Project Monitoring and Evaluation matrix. Source: PMDPro1

Hierarchy	Indicators	Definition of Key Terms	Information Needed	Sources of Data	Methods of Data Collection	Who Collects	Frequency of Collection	Users
Goal								
Outcomes								
Outputs								
Activities								
Inputs*								

Risk Analysis. This analysis enables project managers to classify and quantify the possible risks (with positive or negative outcomes) that may occur during the life of a project. As mentioned in the process description above, the *PMBOK ® Guide* provides very accurate descriptions of the qualitative and quantitative techniques for risk analysis. The other two guides show only the classic probability-impact matrix, although they provide several explanations of how to perform effective risk management (e.g., keeping issue and risk logs).

Logical Framework. Logical framework is certainly the most widely used technique in ID project management. As a consequence, two guides – PM4DEV and PMDPro1 – include this tool.

Figure 3 and 4 – Logical framework (PM4DEV on the left, PMDPro1 on the right)
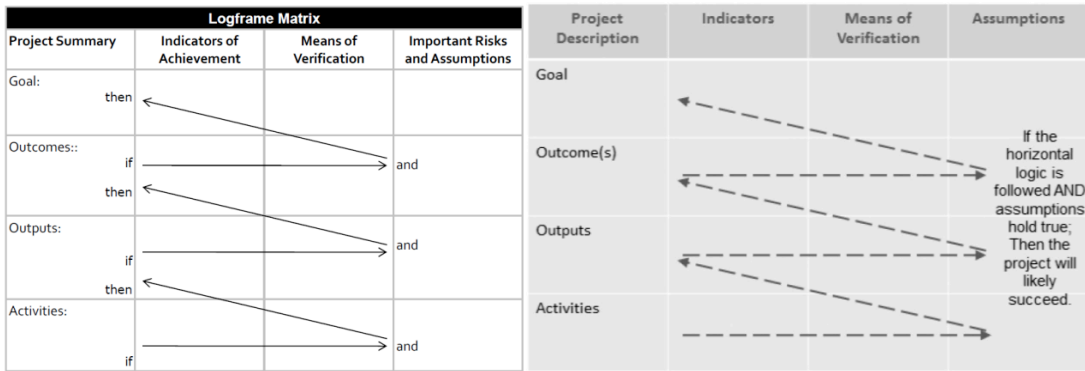
Both guides advocate the use of this tool to identify the logic behind a project, which should therefore be implemented in the project's planning, monitoring and evaluating phases. Owing to its importance, the monitoring system is defined by identifying specific indicators and how they must be collected. The structure is very standard and similar for both the guidelines.

Notably, PMDPro1 mentions the fact that LF can be adapted to the specific needs of a project. Interestingly, neither PMDPro1 nor PM4DEV take into account the criticisms that have been made of this instrument (e.g. Couillard et al., 2009; Smith, 2000).

Problem tree, Objective tree, Alternative tree. The problem tree, objective tree, and alternative tree are introduced by PMDPro1 and are meant to be used together. The problem tree is a cause-effect map illustrating a project's main problems and their causes. The objective tree identifies potential actions to address problems that have been identified. *"In its simplest form, the objectives tree is a mirror image of the problem tree – where each statement in the problem tree is transformed into a positive objective*

statement. While the problem tree displays cause and effect relationships, the objective tree shows the 'means-to-end' relationships" (PMDPro1, 2012). From this analysis, it is possible to build an alternative tree, which is a map similar to the objective tree that goes from the actions that have been undertaken in a project to its final objectives. Of course, there is an overlap between the main problems that have been identified in the objective tree and the main effects that are reported here. This map also shows what is inside and what is outside the scope of a project.

Stakeholder map and matrix. The *stakeholder analysis matrix* is a tool gathering all the information regarding the analysis that has been performed to identify the characteristics of a project's actors. The three guides frequently overlap in this respect, presenting both the matrix and the map (Appendix 3.a and Appendix 3.b). PM4DEV also proposes a different possible map (Appendix 3.c).

Considering the characteristics identified above, it is not clear how best to determine whether these characteristics are addressed by the specific methodologies (i.e. PMDPro1 and PM4DEV). However, we deduced from the literature that these characteristics make the adoption of specific tools (i.e., LF and trees) useful. Moreover, a tool like the stakeholder matrix is of great importance given the high number of stakeholders with blurred roles involved; however, it is still uncertain how all of these tools should be adopted according to their specific characteristics.

Although some studies (e.g., Lovegrove et al., 2011) provide evidence that several ID projects are ineffective and fail to reach their objectives, our study finds that both the standard and the specific tools can be of help in addressing the characteristics shown in Table 7. As can be seen in Table 7, for each characteristic, there are at least two tools that can support project managers. Therefore, rather than a lack of tools, the difficulties

encountered by project managers seem to concern the integrated and proper use of these tools. The following statement by the PMDPro1 guide is of great significance:

"Notice that the major categories of work in the WBS are consistent with the contents of the project logical framework. However, the WBS will include a level of comprehensiveness and detail that is often absent from the logical framework. There might be additional categories of work included in the WBS that were not included in the logical framework. The WBS is also intended to provide the level of specific detail that is often missing in the logical framework." (PMDPro1, 2012).

This statement shows that an important tool like the logical framework is not easily integrated with other tools. This evidence, in addition to the criticisms made in the past, leaves space for further research.

Table 7 – The relationship between characteristics and tools

	Presence of a weak customer	Stakeholder management	Difficult environment	Resource scarcity	Difficulty in using project management techniques in the context of other cultures	Presence of intangible project outputs, difficult to define and measure
Project Charter	Helps in adhering to the original goals and avoiding "scope creep" during the evolution of a project	Useful for communicating and reaching agreement on project objectives and long term goals			Useful for communicating and reaching agreement on project objectives and long term goals	Useful for communicating and reaching agreement on project objectives and long term goals
WBS		Simple tool, easily understood by the different stakeholders		Can help in identifying necessary activities.	Simple tool, easily understood by different people	
Critical Path Method				Can help in making a project faster and more efficient		
Gantt Diagram		Simple tool, easily understood by different stakeholders			Simple tool, easily understood by different people	
Earned Value Management System			Helps keep a project under control in terms of time and costs	Helps control and correct project performance		
Risk Analysis			Fundamental for analysing and managing risks	Facilitates risk anticipation and avoidance		
Logical Framework		Helps define a project's scope and objectives			Can be understood by different cultures	Helps identify sources of verification
Stakeholders Analysis Matrix		Manages multiple stakeholders			Particularly helpful when stakeholders have different cultures and approaches	
Problem tree, Objective tree, Alternative tree	Provides a broader view of problems	Clarifies issues that are raised by a project and its position		Helps define the perimeters of a project		Helps identify and define a project's objectives

Conclusions

International development (ID) projects are pivotal in the field of international aid, but they have received limited attention in terms of project impact assessment and management approaches.

Focusing on NGOs, this work has on one hand summarized the extant literature on the characteristics of ID projects, and on the other, analysed the two methodologies most widely used to manage ID projects in NGOs (PMDPro1 and PM4DEV), comparing them with standard methodologies (PMI and IPMA).

In regard to the first objective, we have highlighted that ID projects have a number of characteristics that distinguish them from other projects, in both management and impact assessment. We have summarized these characteristics in the six categories described in Table 2. In particular, we have highlighted that the involvement of different cultures and stakeholders and the absence of easily verifiable objectives pose substantial challenges to the correct management and appraisal of these projects. We believe that careful consideration of these characteristics by project manager can help them better pursue the social impact of the ID projects.

In regard to the second objective, we have shown that ID-project methodologies and standard methodologies share many aspects but also exhibit some differences. From our analysis, the *PMBOK ® Guide* is, as expected, complete in terms of the methodologies and the quantity of tools that it describes. However, because it is a general project management guide, it lacks some specific tools (e.g. logical framework) and references to the context of ID projects. PM4DEV is also quite complete, and it includes tools that have been designed for ID projects. The guide also contains and discusses several references and characteristics of ID projects. Finally, PMDPro1 appears to be *lighter* in terms of the number and depth of descriptions of tools and processes, probably because

it also requires certification from another project management institution. However, following Hermano et al. (2013), we also note that it makes very important and specific points with regard to project life cycle phases, processes and tools, and it contains many references to the particular conditions that are encountered in the management of ID projects.

We can thus conclude that, for a complete understanding of all of the tools required to evaluate and manage an ID project correctly, PM4DEV, PMDPro1 and the *PMBOK*® *Guide* are complementary to each other. Therefore, a promising area of development is the integration of the different contributions so as to develop a more effective and adequate ID project management methodology, which is the key condition for the effective monitoring and appraisal of such interventions.

These results appear to be valid not only for the various methodologies examined but also for the methodologies that have been developed by governmental organizations, as described, for example, in Landoni and Corti (2011). However, further analyses are required to understand the extent to which these specific tools are able to satisfy the needs of ID projects.

The results of this study confirm that, given their characteristics, both standard and specific project management tools and methodologies should be adopted by project managers of ID projects. We also observe that many of the day-to-day challenges faced by ID projects (e.g. difficult contexts, cultural clashes, long-term and implicit objectives, multiple stakeholders) correspond to the new challenges of business projects. Because of these similarities, our results may be considered important not only for project managers working on development projects, but also for those operating in complex business environments.

Acknowledgments

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Appendix 1: Methodologies developed specifically for ID projects

PMDPro

PMDPro1 is a guideline developed by PM4NGOs, an organization devoted to training and disseminating project management knowledge among NGOs. This initiative was established in 2007 with the goal of promoting a standard of project management in the developing sector. Many organizations support PM4NGOs, in particular the Project Management Institute's Educational Foundation (PMIEF), which encourages the spread of project management knowledge with the objective of improving economic, educational and social conditions.
PM4NGOs has published two guidelines called PMDPro and PMDPro1, and it offers a certification program divided into three levels.
In our analysis, we considered only levels 1 and 2, as level 3 is still under development.

PM4DEV

PM4DEV is an organization involved not only in training activities but also in consulting. Based on the experience of project managers who have worked in international organizations for development, the main objective of PM4DEV is to serve the fundamental needs of the community involved in the developing projects, offering them the tools and processes required to plan, execute, monitor and control their projects in a consistent and reliable manner. In our analysis, we only considered the fundamentals of project management and mastering project management, because they are standard courses, while adaptive project management is tailored to a specific organization's needs.

Appendix 2 – Transition planning matrix (source: PMD Pro guide)

Component	Key Questions	Guiding Principles	Challenges
1. Plan for transition from earliest stages of ID and Design	✓ What type of transition is envisioned? ✓ What is the timeline and what are benchmarks?	➢ Ongoing project review and revision ➢ Transparency; especially funding	❖ Balancing firm commitments with flexibility ❖ Allowing adequate time to develop capacity
2. Develop partnerships and local linkages	✓ Selecting the right partners? ✓ What do partners bring?	➢ Diversity: may need other project inputs ➢ Clear and common goals	❖ Aligning needs and objectives of diverse stakeholders ❖ Supporting local partners without dependencies
3. Build local organizational and human capacity	✓ What capacities are needed? ✓ What capacities exist?	➢ Build on existing capacity if possible ➢ Create environments to support capacities	❖ Designing monitoring to track capacity building ❖ Providing incentives and retaining experienced staff
4. Mobilize local and external resources	✓ What inputs are needed to maintain services? ✓ Can benefits be sustained without ongoing inputs?	➢ Procure resources locally where possible ➢ Increasingly bring external resources under local control	❖ Difficulty finding adequate or available local resources ❖ Other funders not 'buying-in' to original objectives
5. Stagger phase out of various activities	✓ What are key project elements? ✓ Which elements are dependent on others?	➢ Flexibility; staggering sequence may change upon implementation	❖ Sufficient time allowed in the project cycle to start seeing the intended impact and outcomes
6. Allow roles and relationships to evolve after transition	✓ What types of ongoing support (advice, mentoring, Technical Assistance, etc.)? ✓ How will ongoing support be funded?	➢ Prevent slippage of project's intended results by including in extended, expanded or redesigned project	❖ Availability of funding for ongoing support ❖ Availability of staff who can focus sufficient time and energy on ongoing support

Appendix 3.a – Stakeholder analysis matrix. (Source: PMDPro1)

Stakeholder and basic characteristics	Interests and how they are affected by the problem	Capacity and motivation to bring about change	Possible actions to address stakeholder interests
Fishing families 20,000 families, low-income earners, small-scale family businesses, organized into informal cooperatives. Women actively involved in fish processing	Maintain and improve the means of livelihood Pollution is affecting volume and quality of catch Family health is suffering, particularly children and mothers'	Keen interest in pollution-control measures Limited political influence, given weak organizational structure	Support capacity to organize and lobby Implement pollution Identify and develop alternative income sources
Textile Industry Medium-scale industrial operation, poorly regulated and no unions. Well connected with ruling party. Poor environmental record	Maintain/increase profits Some concern about public image Concern about costs of environmental regulations enforced	Have financial and technical resources to employ new cleaner technologies Limited current motivation to change	Raise their awareness of social and environmental impact Mobilize political pressure to influence industry behavior Strengthen and enforce environmental laws

Appendix 3.b – Stakeholder map. (Source: PMBOK® Guide)
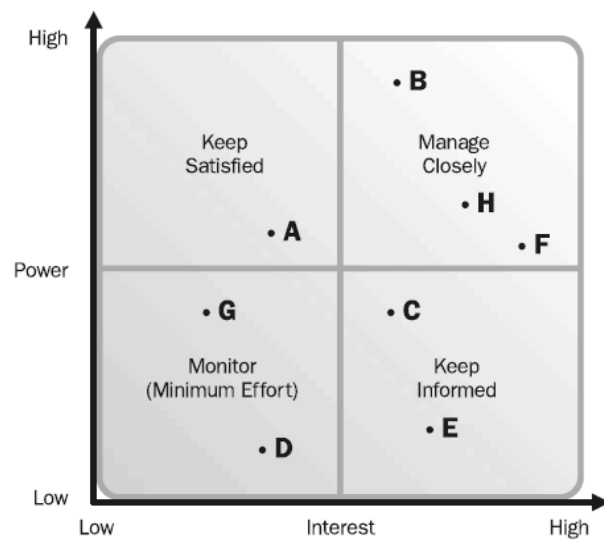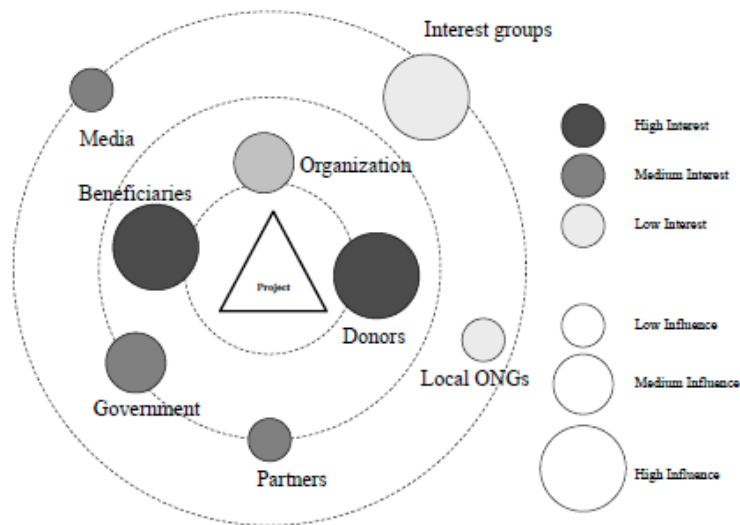

Appendix 3.c – Stakeholder map. (Source: PM4DEV)

Figure 32 Stakeholder Map