The Project Stakeholder Management and Engagement Strategy Spectrum: An Empirical Exploration

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Project stakeholders are now universally acknowledged as a prime critical success factor on every complex project. Consequently, and especially for projects key decision-makers, a profound knowledge of practical strategies and measures which can be applied to effectively and efficiently manage and engage their stakeholders, both primary and secondary, is essential. Doing so can reduce threats, in particular severe and existential ones, to their projects on the one hand while helping the projects benefit significantly from the sustained support, encouragement and goodwill of their stakeholders on the other.

The experience with large projects in the construction and civil infrastructure development field shows that in general much ignorance currently still prevails about how stakeholders should be managed and engaged appropriately. The numerous observed and often avoidable conflicts which arise and linger on over time between projects and their stakeholders and the frequent and surprising lack of proactive stakeholder management and engagement still witnessed on many projects is clearly indicative of this knowledge deficiency in practitioner circles. This deficiency appears to have been rarely addressed systematically and in-depth in the project stakeholder literature.

Through an analysis of extensive available documentation collected from diverse sources in the public domain on over fifty on-going and completed high-profile construction and civil infrastructure development projects across the globe, as well as on some selected projects in other fields, the authors have explored a broad spectrum of stakeholder management and engagement strategies applied in practice. In particular, the authors have focused their attention on innovative and effective strategies designed to maximize benefit for the projects and their stakeholders and to thus ensure attainment of a 'win-win' situation for them both. Through their research, the authors hope to motivate and assist key project decision-makers to significantly improve the quality of their interaction with their stakeholders through pursuit of sound and tested strategies which serve the interests of their projects while simultaneously ensuring that the legitimate interests of their stakeholders are duly taken into consideration.

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Introductory Comments

In their 2014 UMD project management symposium paper *A Governance Framework for Managing and Engaging Project Stakeholders* the authors proposed and discussed four pillars – i.e., the institutional, instrumental, technical and educational – on which they argued that professional management and engagement of project stakeholders by organizations can rest. For analytical clarity the authors reserved the term 'management' for the project's

dealings with its primary stakeholders and 'engagement' for its dealings with its secondary stakeholders – a distinction which is normally not applied in the project stakeholder literature. Both (primary) stakeholder management and (secondary) stakeholder engagement lie at the end of a complex process which commences with project contextualization in stakeholder perspective followed by stakeholder identification and a thorough stakeholder analysis, and finally culminating in design and execution of effective and efficient management and engagement strategies intended to influence stakeholders in favor of the project.

This paper's objectives are two-fold: First, to propose a practical strategy framework which can assist projects in managing their primary stakeholders and especially in engaging their secondary stakeholders more effectively. Since secondary stakeholders lie outside the project's formal control the task of engaging them is usually more difficult for the project to undertake than managing its primary stakeholders and this paper hopefully will contribute towards reducing some of the ignorance and uncertainty that still prevails among many project practitioners in this regard. Second, this paper seeks to acquaint readers with selected examples of good stakeholder management and engagement used on projects across the globe mainly in the field of Construction and Civil Infrastructure (CCID) as well as in other selected fields. CCID-projects were considered a logical choice for analytical focus because projects falling under this broad category, which include transportation, dams, energy, mining, building and industrial facility construction and development and many other important schemes of considerable economic significance, typically have complex stakeholder patterns which allow much space for application of creative stakeholder management and engagement. For this exploratory research several projects were reviewed using research journal articles and information freely available in the public domain and, additionally, interviews were conducted with several project practitioners. Numerous good examples of management and engagement came to light through this research but space constraints here restrict the discussion to just a handful of them. The examples selected for inclusion in this paper are inspirational and intended to show project owners, planners and executors how projects may benefit immensely from good stakeholder management and engagement practices, without excessively burdening the projects, financially or otherwise. It is hoped that this will not only educate them about the breadth and diversity of good stakeholder practices, but also encourage them to apply such practices where feasible and apply their minds creatively to develop and implement good practices on their own projects.

Well-designed and smoothly executed stakeholder management and engagement strategies fulfill two fundamental overriding objectives: to reduce, eliminate and especially to prevent actual and potential opposition (and the consequent danger this entails) to the project from its stakeholders, and at the same time, to enable the project to benefit as much as possible from its stakeholders through utilization of their goodwill, knowledge, experience, show of support, and all other forms of practical assistance that they are able and willing to apply for the project. Both stakeholder opposition and predisposition towards projects are not static; they can and usually do change with the passage of time and project circumstances. Stakeholders initially favoring a project may become opposed towards it and vice versa. Once opposition to the project emerges and consolidates itself, reducing or overcoming it may be costly, frustrating and challenging. If the project has effective stakeholder management and engagement strategies in place from the onset, serious opposition to it is less likely to evolve. Hence, it is important for projects to give careful thought and consideration to management and engagement of its stakeholders as early as possible, preferably even prior to the project's formal initiation and especially as the project subsequently advances into its planning phase and detailed information about the stakeholders, especially the secondary ones, becomes

available through the stakeholder analysis process, its management and engagement strategies must become more focused, inclusive and refined.

Big, complex CCID projects typically have a very large and heterogeneous community of stakeholders, especially secondary ones, with diverse interests, goals, roles and responsibilities, experiences, needs, wants, ambitions, apprehensions, mindsets, level of power and influence, and so forth. It is usually not possible to effectively manage or engage stakeholders with a single one-size-fits-all or even with a handful of off-the-shelf management or engagement strategies applied across the board. Just as all projects are unique in their context, so too are their stakeholders and to influence them to support a project often a bundle of innovative strategies, some focusing on individual stakeholders, others on specific groups of stakeholders, may be needed.

Project Primary Stakeholders: The Management Imperative

According to Cleland/Ireland, all primary stakeholders share one basic common feature, namely, they all have a contractual obligation and/or legal responsibility towards the project. In large and complex CCID especially, many entities, from individuals to large organizations, typically fall under this stakeholder category. They include, inter alia, the project owner or sponsor, steering committee, the project manager and team, senior executives, functional and resource managers, consultants, external financers, legal advisers, partners, contractors and subcontractors, vendors, and participating government agencies. All have their respective interests, roles and responsibilities in the project as well as shared and entity-specific motivation and concerns about the project, and develop their respective expectations and perceptions about it over time. Primary stakeholder involvement in the project is usually voluntary and through it these stakeholders seek to maximize their net gain which they may assess in monetary terms and/or also in terms of other considerations they may deem important, for instance, reputational, experiential, networking, capacity-building and so forth. For projects undertaken by public agencies and not-for-profit organizations, developmental or social considerations and objectives eclipse interest in commercial gains. Regardless of organizational or sectoral context, project success hinges mainly on the ability, willingness and determination of all its primary stakeholders to fulfill their agreed commitments to the project in a responsible, timely and professional manner and to collaborate closely in their common fundamental pursuit, namely, achievement of the project goal. Primary stakeholders normally are not expected to display adversity to the project per se (like some secondary stakeholders may do) but sometimes, for instance, when a realization sinks in that they have overestimated their net gain or underestimated the level of effort required or expected from them, demotivation and loss of interest in the project can result. Consequently, their performance or quality of work may decrease. Such situations obviously can be quite detrimental for the project. Disenchanted or disgruntled primary stakeholders are, moreover, more amenable to initiating or fueling conflicts on the project which if unaddressed or mismanaged can linger on or escalate into crises situations, resulting in cost and schedule overruns and potentially even endangering the project's existence or goal. Hence, the onus rests mainly with the project to prevent such situations from arising in the first place or to deal with them promptly and effectively in the event that they do arise. The best way to do so is to ensure that all its primary stakeholders' interests are comprehensively safeguarded over the project life-cycle and their motivation and concern, and expectations and perceptions - which collectively influence their attitude and, crucially in turn, their behavior towards the project - are carefully and continuously monitored and systematically addressed. This is where the project's stakeholder management strategies must focus on.

A now sizeable body of literature provides ample guidance on how primary stakeholders on CCID-projects, as well as on other types of projects, can be 'managed' effectively in practice. Well-formulated project plans also provide many useful insights in this regard. Both the authors' research and their personal experience indicate that stakeholder management strategies in practice basically revolve largely around information and communication, motivation, conflict prevention and management, monitoring and controlling, leadership, trust and relationship-building, situational adaptability, and facilitation within the project's given constraint framework, in addition to other considerations. Too comprehensive to present and discuss in detail in this paper, some major management highlights worthy of mention here include ensuring effective and continuous communication among all primary stakeholders to ensure good performance and coordination of their respective work tasks and activities, and to keep key stakeholders closely informed about project progress and developments and to retain their interest in the project throughout the project life-cycle. Information and communication appears to be a universal and is probably the most cost-effective stakeholder management strategy. Ensuring awareness, understanding and acceptance among stakeholders of the project goal, objectives and purpose, and clarifying their respective project roles, responsibilities and commitments (and ensuring that these commitments are fulfilled) are critical to avoid conflicts and misunderstandings. With the advent of globalization and consequent increasing cultural diversity encountered in CCID project environments, knowledge of the often widely different cultural backgrounds stakeholders bring along with them to the project is assuming greater relevance for avoiding preventable issues and conflicts and helping projects reap the benefits which cultural diversity brings with it. The importance of providing project human resources with a safe, clean and comfortable work environment, performance incentives and access to counselling and mentoring to keep them motivated and focused on their tasks is also widely acknowledged and accepted. Clear project scope delineation and early elucidation of requirements and specifications, thorough project planning, realistic cost and time estimates, a robust monitoring and controlling system, and emphasis on maintaining a high standard of professionalism and ethics throughout the project are also important considerations as are clear formulation of contracts, the selection of competent and experienced project managers and staff, consultants, contractors, sub-contractors and vendors, and creation of a strong and fair dispute and grievance settlement mechanism in order to ensure a smooth project workflow. And so forth.

Project Secondary Stakeholders: The Engagement Challenge

The project's secondary stakeholders, i.e. those entities which according to Cleland/Ireland do not have a contractual and/or legal obligation towards the project but which are affected, or who believe they are affected by it nonetheless, are the focus of the project's engagement strategies. On large and complex CCID projects the number of entities in question may be very large – numerically many times greater than the primary stakeholders. Typically they include local communities (and sometimes the general public), civic, professional, political and religious organizations and associations, advocacy groups, the media, academia, and government agencies not involved in the project. Broader notions extend the stakeholder definition over and above the many directly and indirectly affected individuals and organizations to include the non-human and inanimate entities, notably the natural environment, fauna and flora, and even places, objects and structures of major historical, archeological and cultural significance. Predictably the range of secondary stakeholder interests, motivation and concern, expectations and perceptions, may be commensurately large and engaging these stakeholders who, unlike the primary stakeholders, lie outside the project's formal control and to some extent are involved in it involuntarily can be, and frequently usually is, comparatively immensely more challenging and risky.

Attempting to engage and satisfy all project secondary stakeholders is a desirable undertaking but in practice is off course extremely difficult, if not downright impossible, to achieve within the project constraint framework. Projects may not be unwilling or unable to effectively engage all their secondary stakeholders due to non-recognition, disinterest or non-commitment, cost and time limitations, insufficient trained human resources, information and knowledge deficiencies, lack of experience and creativity, or non-existent or inadequate engagement policies, processes and tools. A more pragmatic engagement approach often adopted by projects is to prioritize and focus engagement by taking into consideration stakeholder power, influence and interest differentials. The larger the stakeholder's power, influence and interest, the more intense is the project's engagement with it, and vice versa. Though seemingly logical, it ignores the fact that good and ethically sound stakeholder engagement must also seek to ensure that all or at least as many secondary stakeholders as possible, especially those who are affected by it negatively and significantly and over a comparatively long period of time – whereby 'affected' can manifest itself multi-dimensionally, such as, in the economic, financial, emotional, health and quality of life spheres - should experience preferably a 'net gain' or at least no 'net loss' from their involvement, whether desired or undesired, in the project. Such type of engagement is also very beneficial for the project because it may significantly reduce or even eliminate serious (including existential) risks and very negative consequences to it which could ensue from hostile actions initiated by non- or improperly engaged secondary stakeholders. Such actions, which are the expression of the stakeholder psychological attribute behavior, were discussed by the authors with numerous examples from across the globe in their 2017 UMD project management symposium paper *Adversarial Project Stakeholders. Influencing Projects With Options*.

Project Stakeholder Engagement: The Criticality of Influencing Stakeholder Behavior

An engagement framework for secondary stakeholders which apparently commands much interest in the literature and in practice is being widely applied on projects divides strategies into five broad categories arranged in ascending order of engagement intensity: Information and Communication, Consultation, Incentives, Participation or Involvement, and Partnership or Empowerment. This somewhat resembles the management strategies used on the primary stakeholders. Each engagement category offers considerable space and numerous possibilities for creatively engaging project stakeholders. In practice projects tend to use a combination of these strategies whereby examples of partnership or empowerment appear to be relatively few and far in between. The five category framework evidently account for most of the stakeholder engagement observed on complex projects but it has two shortcomings: first, it excellently covers individuals, organizations - and even countries (which also can be stakeholders on certain schemes as the authors argued in their paper *Stakeholders and Transnational Projects* which was presented at the 2016 UMD project management symposium) – but it cannot be connected to non-human or inanimate entities such as the natural environment, fauna and flora, and cultural assets, which all fall under the broader notion of the term stakeholder and which often to some extent or the other are adversely, sometimes severely, affected by CCID-projects in particular. These projects usually are expected – and now are almost universally required – to ensure that their negative impacts on the latter are at least minimized. This implies a form of 'special engagement' for these stakeholders which does not fit in any of the five above-mentioned strategy categories. Some examples of this engagement type are included in the next section.

Based on their research the authors propose here an alternative engagement strategy framework which is consistent with the five strategy category framework above in the sense that it also aims to influence stakeholder behavior but which is more focused and systematic and hence possibly more efficacious. In their 2017 UMD project management symposium paper *Understanding Project Stakeholder Psychology. The Path to Effective Stakeholder Management and Engagement* the authors argued that influencing stakeholder behavior is critical for projects because by excercising the options available to them stakeholders can directly impact projects in the positive or negative sense. Stakeholder behavior is normally (but not always) a reflection of the attitude they develop towards the project and which results from juxtaposition of their motivation and concern, as well as expectation and perception. Behavior is dynamic; sometimes it changes significantly even over brief time periods to reflect changes in stakeholder motivation and concern, expectation and perception. To understand stakeholder behavior it is hence very important for projects throughout their life-cycles to continuously, thoroughly and carefully monitor and assess these four attributes. Stakeholder behavior towards projects can be categorized as supportive, adversarial or indifferent. Supportive and adversarial behavior can be further subcategorized into passive behavior (i.e. stakeholders will not exercise their options for or against the project) and active behavior (i.e. stakeholders will exercise their options for or against the project provided circumstances permit them to do so). Activeness is measured on an intensity scale which ranges from marginally active on its lower end to very active on its higher end. It is reasonable to conjecture that stakeholders who form attitudes that are more strongly supportive of or opposed to the project will adopt active rather than passive behavior towards it and, moreover, their activeness will be located higher up on the intensity scale than other stakeholders who feel less strongly about the project. Engagement strategies used by the project hence must first and foremost focus on influencing secondary stakeholder behaviors by constantly attempting to steer or keep them in favor of the project and in doing so reduce or eliminate the risks to it.

In Table 1 the authors suggest desirable stakeholder management and engagement strategies for projects along with their respective goals for the three stakeholder behavioral categories: supportive, indifferent, and adversarial. These strategies can be universally applied in all project categories, CCID and otherwise, irrespective of project location. While the strategies in principal apply to both primary and secondary stakeholders, they are more applicable for the secondary stakeholders because their observed behavior on CCID and other large and complex projects often spans the whole behavioral spectrum from highly supportive to extremely adversarial, is more volatile over time, and the risks they pose for projects may be higher than those posed by the primary stakeholders who as voluntary participants in projects are seeking to attain net gains from them, are moreover contractually and legally obligated to fulfill their commitments to the projects and who can be assumed to confine themselves for the most part to the (active) supportive category. Improperly managed or neglected primary stakeholders may, off course, sometimes drift in to the indifferent and, on occasions, even into the adversarial behavioral categories which can spell considerable trouble for the projects.

Table 1: Engagement Strategies & Goals by Stakeholder Behavioral Category

Behavioral Category	Stakeholder Management / Engagement Strategies & Their Goals
Supportive	1. **Retention**: To retain the interest of supportive stakeholders, especially the active and influential ones, in the project over time.

	2. **Enhancement**: To enhance the number of active supportive stakeholders and the intensity of their support for the project.
	3. **Discouragement**: To discourage actively supportive stakeholders, especially powerful or influential ones, from transforming into passively supportive, indifferent, or adversarial stakeholders.
	4. **Conversion**: To convert passive supportive stakeholders, especially those wielding considerable actual or potential power and influence, into active supportive stakeholders.
	5. **Mobilization**: To mobilize supportive stakeholders to form a unified and visible front in support of the project.
	6. **Utilization**: To solicit and incorporate supportive stakeholders' ideas, suggestions and other inputs for the benefit of the project.
	7. **Persuasion**: To persuade powerful or influential active and passive supportive stakeholders to exercise their power and influence in support of the project.
	8. **Appeasement**: To address both the general and specific concerns of supportive stakeholders to the maximum feasible extent.
Indifferent	1. **Prevention**: To prevent indifferent stakeholders, especially those possessing considerable actual or potential power or influence, from transforming into adversarial stakeholders over time.
	2. **Conversion**: To convert indifferent stakeholders, especially actually or potentially powerful or influential ones, into supportive stakeholders over time.
Adversarial	1. **Prevention**: To prevent passive adversarial stakeholders, especially powerful or influential ones, from transforming into actively adversarial stakeholders.
	2. **Negotiation**: To influence passive and especially active adversarial stakeholders to support the project by encouraging supportive stakeholders to enter into dialogue with them.
	3. **Division**: To create and promote discord among adversarial stakeholders to prevent them from joining forces against the project (keeping ethical considerations in mind).
	4. **Awareness**: To convince adversarial stakeholders that they stand to benefit, not lose, from the project.

	5. **Incentivization**: To provide incentives to adversarial stakeholders in exchange for a reduction or elimination of their opposition to the project.

<div align="center">Source: Developed by the authors</div>

Every identified strategy thus has one basic goal which it seeks to accomplish. Strategies are executed through one or more specific 'Strategy Implementation Measures' (SIMs) and it is these SIMs which interface directly or indirectly with the secondary stakeholders and determine the behavior they adopt towards the project. SIMs are generally context-sensitive; what works well in one project environment may not work well or not work at all in another. Hence, the project can and must promptly modify or redesign them as and when they are shown to be ineffective or are demonstrably less effective (and efficient) than envisaged. Failure or delayed rectification of non- or underperforming SIMs and their substitution with alternative, more effective (and efficient) SIMs not only constitutes a waste of project resources with little or nothing to show by way of return but would, moreover, make the project engagement system appear inept and, in the worst case, may actually aggravate rather than pacify its stakeholders. Hence, SIMs must be carefully chosen and as effective (and efficient) as possible. This necessitates a thorough and careful analysis using high-quality available information about the stakeholders, in particular and as already mentioned above, their motivation and concern, and expectations and perceptions. SIMs effectiveness can be assessed by using quantitative or qualitative Performance Indicators (PIs) and pre-specified targets. By comparing the achieved results with the target values the SIMs engagement effectiveness can be determined accurately. This requires continuous monitoring of SIMs throughout the project life-cycle. This simple relationship which exists between strategies and their associated SIMs, PIs and targets can be elucidated by a simple example: Suppose the project decides to execute its retention strategy for its active (secondary) supportive stakeholders by disseminating information to them about the project's monthly activities through a printed and circulated special newsletter (i.e., the SIM) and to which it expects to receive at least one hundred written and oral appreciative comments per month (i.e. the target). The PI indicates however that while initially the number of comments received by the project office exceeded one hundred, thus surpassing the target, the number has progressively declined over the passing months to the extent that they number less than forty in the previous month. This means that the SIMs effectiveness is dropping over time and consideration be given to substitute this SIM with an alternative one if the target level of appreciative comments is to be maintained.

Secondary Stakeholder Engagement in Practice: Good Practices From Across the Globe

Scores of good examples of project stakeholder engagement were discovered when researching for this paper. Due to the space constraint only a few were selected for presentation in this section. To avoid conveying the impression that stakeholder engagement is purely a voluntary service performed by CCID-projects (as well as by projects in other fields), it may be noted that engagement is sometimes also a legal, policy or procedural requirement on which grant of approval for projects hinges.

All entities falling in the category of secondary stakeholders (and primary stakeholders too), from individuals to organizations, have motivation (i.e. needs, wants) and/or concern in relation to the projects affecting them. Based on their motivation and concern they develop expectations and perceptions through which they then form attitudes and adopt behavior which is supportive, indifferent or adversarial towards the projects. To tilt stakeholder behavior towards the supportive category – which, after all, is the fundamental goal of sensible stakeholder engagement - projects must endeavor to simultaneously maximize stakeholder motiva-

tion, mitigate or where possible eliminate stakeholder concern, and ensure that positive stakeholder expectations and perceptions prevail over time. Projects apparently are consciously attempting to do so. Incentives, especially economic ones, are a particularly effective means. To address the stakeholder crucial motivation factor 'employment and income generation' many of the CCID-projects reviewed by the authors emphasized their job creation effect, notably during the construction phase, numbering in some cases hundreds, in other cases thousands of newly-created jobs in various skill categories. In economically depressed areas marked by chronically high unemployment and deprivation project-driven job creation is especially important, even when it is mostly temporary, exceptions being when jobs of longer duration are created when projects subsequently enter their operational phase after completion. Besides jobs, some of the CCID-projects reviewed highlighted the business opportunities they provided local businesses desirous of supplying them items, inputs and services of any type available and required by the projects. By prioritizing their procurement from local sources, CCID-projects can contribute, sometimes significantly, to the development of the local economy, earning them much stakeholder goodwill and support in the process. Completed CCID-projects often have the consequential effect of attracting further investment into their localities which in turn result in fresh job creation and business generation opportunities. Some CCID-projects reviewed, such as shopping malls, museums, and theme parks, also pointed out the improvement in the quality of life for residents and outsiders they offered on completion which in turn rendered the localities more desirable places to live in and boosting property values and rental incomes.

Virtually all projects reviewed apparently had robust systems in place to communicate general and specific information about the project to all or groups of secondary stakeholders. This was done, for example, through project websites and/or a combination of numerous other information mediums such as newsletters, press releases, public information events, media interviews, dedicated phone lines and so forth. Communicating information directly from and about the project is a very important engagement measure as it may help address misgivings or apprehensions stakeholders have about projects instead of them having to rely on other non-project sources.

Dirt and dust, noise, vibrations, traffic hazards and diversions, and reduced pedestrian access to homes and businesses constitute some of the main general concerns secondary stakeholders have about large building construction projects in particular. Consequently, many such projects have implemented various 'mitigation measures' to reduce or eliminate the adverse impacts their construction activity on local residents and businesses. Oftentimes such measures are a pre-requisite for obtaining construction permission from local public administration and their adherence is carefully monitored by public officials. A case in point is the 360 Residences project in San Jose, California. Specific engagement measures identified in the project's construction impact mitigation plan included, inter alia, erecting signage and covered walkways and protected pathways at and around the construction site, introducing a vibration monitoring program to ensure that vibration ceiling levels were not exceeded and affected local residents were warned in advance about pile driving activity schedules, making acoustic barriers around pile driving equipment and muffling all construction equipment, using water trucks and street sweepers to prevent dust from exceeding pre-specified ceiling levels, and using dust bags and filters for power tools. Other notable engagement measures included coordinating with the nearby California Opera to minimize any adverse impacts of construction work on the Opera's performances, and offering monthly project progress updates as well as the opportunity for stakeholders to provide their feedback about the project through a project website.

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In recent years the off-site fabrication of building components and their shipping and rapid assemblage at construction sites is attracting considerable interest and popularity. By adopting this approach large structures which normally take months to complete can be erected in a few weeks or even in days. This is a highly effective engagement measure because it drastically reduces the period of inconvenience for local residents who normally would be compelled to endure the nuisance caused by months of building and other construction activity undertaken in close proximity of their homes and workplaces. Several examples come from China: in Changsha in China's Hunan province just 19 days were required to erect a 57-story office building, a time-lapse of which is available on YouTube.

The lack of consultation on projects is often cited empirically as constituting a main reason for generating secondary stakeholder discontent with and opposition to projects. An interesting example where excellent consultation greatly facilitated an initially controversial project comes from the New Zealand town of Kaikoura. Located on the east coast of New Zealand's southern island the town, a popular tourist destination, historically has been prone to flooding with consequent often considerable damage to residential and commercial property. A proposed and seemingly effective solution to this problem was the construction of a flood wall but this scheme was not regarded enthusiastically by the town's local population. To gain the support of the town's residents, the project team adopted a listen-and-learn approach and incorporated their concerns and suggestions especially into the project's design and its execution phase. The result of this engagement was a wall design which not only was effective in keeping floodwater away and protecting Kaikoura against several different flooding risks, but which was also aesthetic and artistic in appearance and in harmony with the localities natural beauty. When residents saw a visualization of the design, their general mood swung in the wall's favor and other initially skeptical stakeholders soon opted to follow suit. To minimize the project's impact on tourism, construction was undertaken over a six week period during the off season and the wall's concrete panels were pre-cast off-site and their size reduced for easy transportation.

Incentives can be a powerful engagement force which if chosen wisely can swing secondary stakeholders in favor of projects. Incentives can manifest themselves in financial, material and other forms. Examples witnessed on projects include the donation of school books, computer and medical equipment, food supplies, provision of student scholarships, and even creation of parks and playgrounds for local residents. Sometimes cash itself may suffice as an incentive: the British Government is currently offering 2.5 million pounds per year to a local community which would be willing to host an underground nuclear waste storage facility project.

Many examples of successful stakeholder involvement and participation in projects come from social development and natural resource development schemes in developing countries which are financed, directly undertaken or assisted by regional and international development banks and/or development organizations. Stakeholders – who are also known as 'beneficiaries' – in such projects, which, inter alia, typically include health, education, gender and minorities empowerment, poverty alleviation, provision of access to clean drinking water and basic sanitation, and forestry and water resource management – are increasingly being given the opportunity to participate or involve themselves in projects which significantly affect them. This participation can occur during different project phases and at different points in time, namely, before project initiation, during the project life-cycle and/or after project completion. Direct stakeholder involvement is viewed as not only offering projects a higher chance of successfully achieving their goals but also, and perhaps more importantly, guaranteeing the sustainability of project results and outcomes which is increasingly being ack-

nowledged as constituting the yardstick of success in such projects. Modes of stakeholder participation or involvement which are being increasingly applied include participatory need assessment, participatory project design and planning, participatory execution, and participatory monitoring and appraisal. The participation intensity is variable and may be higher on some projects, lessor in others. Several organizations have developed sophisticated 'stakeholder engagement toolkits' detailing the types, processes and tools of stakeholder participation in projects. Some toolkits encompass dozens of specific stakeholder engagement measures. Participation by secondary stakeholders in projects is also the subject of a growing body of research and several published case studies which show that higher levels of stakeholder participation go hand in hand with higher project effectiveness and sustainability. Irrespective of its manifestation, participation gives stakeholders a sense of ownership of, responsibility for and identification with the projects which will ultimately affect them and their lives, often profoundly over an extended period of time.

An interesting example of high-level stakeholder participation in the context of renewable energy projects comes from the German state of Brandenburg where a proposed scheme to construct a wind park on farmland outside the small town of Schlalach-Muehlenfliess initially encountered opposition from the local population. A working group created by local residents, *Wind Power in Schlalach,* took up the responsibility for negotiating with prospective wind power companies. The group came up with the idea of a 'pooled space model' under which the annual lease income for the wind park would be put in a common fund and distributed among the 100 or so small land owners proportionately in relation to the size of their land leased out to the chosen wind power company Enercon. Through this arrangement each land owner was guaranteed an annual income of about 3,000 Euros from the fund. Local community participation led to selection of the wind park's turbine model. To attract the support of other stakeholders, a citizen's foundation was created which received a small share of the income generated by the wind park and which was allocated for youth programs and road repairs. In addition, the community was to benefit from the taxes generated by the wind park. Wind Power in Schlalach even came up with the idea to purchase shares in Enercon in future, which would make it a co-owner of the company and guaranteeing it additional income in future.

An excellent example of project stakeholder engagement was demonstrated by Petro-Canada. Now defunct, this Canadian energy corporation was rated highly for its fair, ethical and professional approach in its dealings with its secondary stakeholders in all its projects and operations inside and outside Canada. Its concise and succinctly formulated one-page document *Stakeholder and Community Engagement Policy*, approved by Petro-Canada's CEO, spelled out the corporation's approach emphasizing, inter alia, the importance of information sharing and consultation with its stakeholders as well as listening to them and understanding their needs, concerns and expectations, building trust and respectful relationships as well pursuing collaboration with them for mutual benefit, demonstrating social and cultural sensitivity, and incorporating stakeholder suggestions and seeking to develop solutions with them jointly. Three examples selected from the many posted on Petro-Canada's website show how the corporation implemented its 'win-win' policy in practice:

Example 1: In 2005 Petro-Canada signed production-sharing contracts for three exploration blocks off-shore from the Caribbean Islands of Trinidad & Tobago. The local fishing community was identified as a key secondary stakeholder and major part of the local economy. To engage these stakeholders several measures were adopted. A prominent one was safety at sea training courses for local fishermen covering basic boat and engine maintenance, use of safety equipment and survival techniques, and the donation of radar reflectors for local

fishing boats and GPS hand-held units to course participants. To ensure that drilling and fishing activities could take place simultaneously and to compensate local fisherman for their non-access to the 500 meter safety zone around the drilling rig, Petro-Canada installed twelve 'fish aggregating devices' to attract fish and create a fishing ground, and provided a chart with the GPS coordinates of the fish aggregating devices along with laminated cards for use in fishing boats. Furthermore, to reduce the possibility of interaction between Petro-Canada vessels and local fishing boats and their fishing gear a defined route for the corporation's vessels approaching the exploration site off Tobago was approved.

Example 2: In 1995 Petro-Canada sought to expand its lubricants facility at Mississauga in Ontario province. The proposed project was opposed by many residents concerned at the potential noise, odor, safety and adverse environmental repercussions. Drawing on its experience at another of its facilities, Petro-Canada set up a Public Liaison Committee, consisting of elected public officials, community representatives, public health experts, the Ministry of Environment, and officials from the Petro-Canada lubricants facility, to communicate between the facility and local community. A technical subcommittee was created consisting of local residents with experience in industry with a view to review technical issues prior to a discussion about them in the public liaison committee. Additional measures included air monitoring programs to measure and report facility emissions, and technical measures to ensure that emissions remain within acceptable levels. Independent consultants were tasked with reporting on air quality upwind and downwind of the facility on a quarterly basis. The overall result was that an open and effective dialogue between Petro-Canada, the community and elected public officials took place through the Public Liaison Committee and communication improved considerably to the extent that there was a marked decrease in the number of complaints received by Petro-Canada from local residents and each complaint received was reviewed and responded to.

Example 3: For its Fort Hills Mine project in Fort McMurray, Canada, Petro-Canada made 180 'regulatory conditions and commitments' to the inhabitants of the mine area. Quite diverse in scope, these included local participation in the reclamation planning and design process, provision of funding for a First Nation daycare facility, collaboration with the local school industry for funding diverse events and other educational support measures for First Nation students, promoting student employability skills, development of a community/youth camp and hiring of camp services, provision of funding of First Nation elder committees, distancing the mine behind the 100-year high water mark, creating a visual buffer of vegetation between the Athabasca river and the mining operations for aesthetic effect, minimizing disruption to marine and wildlife, fish relocation and other bio-conservation measures.

As a stakeholder the natural environment has since decades been a major source of controversy especially in relation to CCID-projects. With the advent of environmentally or eco-friendly 'green technology' in recent years, several coal-fired power plant projects in planning, execution or operation across the globe have opted to voluntarily incorporate this still nascent, evolving technology into their technical design, despite the considerable incurred additional cost plus other uncertainties which accompanies it, in order to reduce their chemical emissions (and consequent contribution to global warming and environmental damage). In the building construction context, the concept of 'green building' as an eco-friendly alternative to conventional building has likewise garnered increasing attention and interest culminating in the construction or renovation of numerous large structures inside and outside the United States which fall in this category.

Interesting technical design features incorporated into projects can sometimes serve the purpose of effectively 'engaging' animal stakeholders. Many highways, for instance, were constructed with 'wildlife crossings' to enable animals to safely cross them, thereby reducing the likelihood of road accidents and consequent human and animal mortality and injury. These crossings include underpass tunnels, viaducts and overpasses (mainly for large or herd-type animals), canopy bridges (for monkeys and squirrels), tunnels and culverts (for small mammals such as otters, hedgehogs and badgers), and amphibian tunnels (for frogs and other amphibians). To facilitate mobility of marine life, amphibian tunnels and fish ladders or fishways have been installed at many dams and other man-made obstructions constructed on rivers and waterways across the world to enable fish to bypass the barriers.

CCID-projects often are undertaken at places with important historical, archeological or cultural significance, raising serious concern at the possibility of the projects causing damage to sites and structures deemed protection-worthy. In some cases it has been possible to save famous structures – which can be considered as stakeholders in the broader sense – simply by dismantling and relocating them to safe places located outside the project area, and then subsequently reassembling them. A famous case in point is the relocation in the late 1960s of the pharaonic Abu Simbel Temples in Egypt from their original site, which was submerged by water after construction of the Aswan High Dam, to a site located above the dam water level. Because of road or highway construction projects the relocation measure has on many occasions has been extended to cemeteries as well as the habitats of rare animals, insects and trees. Oftentimes re- or translocation is a measure required by law.

On occasions projects have applied successful stakeholder engagement measures which apparently revolved around deference shown by the projects towards their secondary stakeholders. Three interesting, simple and cost-effective examples from Pakistan were shared with one of this paper's co-authors by his graduate students based on their personal past work experiences. In one example, a large national engineering public-sector company was tasked with executing projects in the remote hilly Kohistan region in northern Pakistan. Being outsiders the team initially encountered skepticism and distrust from the deeply conservative local population. By modifying their behavior for the duration of their stay in the area – for instance, by wearing local-style clothing, not shaving, communicating through translators in the local language Pashto, and not wandering around during prayer time - the team was able to bridge the gap and complete their work successfully without resistance or interference from the locals. In the second example, a hunter with extensive knowledge of the area and its terrain was interfering with a conservation project of the World Wildlife Fund in a forested region of northern Pakistan. As an engagement measure the World Wildlife Fund hired the hunter for their project leading him not only to cease his own hunting but, given his acquaintanceship and influence with other local hunters in the area, to encourage them to roll back their own hunting activities. In the third example, a peace-keeping military contingent was dispatched from Pakistan to a West African country ravaged by civil strife. To gain the confidence, goodwill and respect of the distrustful local population, the contingent came up with the idea to clean up a local cemetery thinking that such an unconventional gesture would be regarded with much appreciation by the locals. This turned out exactly to be the case and the contingent subsequently encountered less problems dealing with the local population than contingents from other countries.

Concluding Remarks

The authors' research reveals that projects are applying numerous and diverse measures as part of their strategies for effectively managing and engaging their primary and secondary

stakeholders on large and complex projects, especially in CCID. As the chosen examples show, project stakeholder management and engagement offers enormous space for creative, interesting and effective solutions within the cost, time and other constraints under which projects operate. Both projects and their stakeholders can benefit immensely from such management and engagement which is ethically desirable and which, if pursued by projects systematically, whole-heartedly and professionally, and is sustained over time, can bring about attainment of the best possible overall solution – namely, a 'win-win' situation - for both sides. It is a field of tremendous practical significance for projects which undoubtedly could still benefit from more extensive and in-depth research in future.

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