



An Implementation Framework for a Benefits Sharing Mechanism for the Hydropower Sector in Pakistan

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An Implementation Framework for a Benefits Sharing Mechanism
for the Hydropower Sector in Pakistan

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Abstract

This thesis explores how a royalty-based or non-monetary benefits sharing mechanism (BSM) could be implemented in the hydropower sector in Pakistan and what implementation framework would be required to make it both feasible in the local context and socially beneficial. The establishment of BSMs worldwide in a variety of sectors (e.g. mining, hydropower and forestry) have had varying success, with developing countries often facing greater difficulties in implementing them effectively, due to a lack of capacity in local public institutions as well as a general sense of distrust towards the government and project developers from local communities.

Royalty-based or non-monetary BSMs were introduced with the aim of redistributing the monetary and non-monetary benefits (e.g. local employment) equally and fairly within the locally affected communities, not only to offset the negative impacts caused but with the aim to create long-term sustainable solutions.

The focus of this thesis was to explore how a BSM could be established and implemented in Pakistan, Gilgit-Baltistan (an administrative territory in northern Pakistan), where the Gilgit-Baltistan Hydropower Policy 2017 established a first outline of a potential Pakistani BSM. The methodology used for this thesis was a combination of desktop review of the proposed Gilgit Baltistan Hydropower Policy 2017, a thorough literature review of existing BSMs implemented worldwide and a site visit to Gilgit Baltistan in July 2017 to gain a better understanding of the local dynamics and the potential stakeholders. The desktop review identified key gaps within the proposed policy and drew out lessons learned and best practices from BSM examples found worldwide.

This enabled the author to suggest changes to the proposed BSM framework to align it with the key factors of success identified in the literature.

The results from the research demonstrated that a BSM could be implemented in the Paksitani hydropower sector by applying concrete changes to the BSM framework outlined in the Gilgit Baltistan Hydropower Policy 2017 to align it with the four key enablers highlighted by Lillehammer, San Martin & Dhillion (2011, p. 15): “1) policies and regulatory framework; 2) stakeholder engagement and community participation; 3) partnership formation; and 4) institutions and capacity building”. The research also found that the implementation of non-monetary/non-legislative agreements would be an important complement to the legislative royalty based BSM currently proposed to help create non-monetary localised benefits without much reliance on the federal government.

Dedication

To my parents, you have both taught me to work hard, believe in myself, be persistent in attaining my goals and provided unconditional support for as long as I can remember. Without you both, I would not be where I am today.

To my siblings, especially my sister Laura, we have shared so many ups and downs but through it all we have been there for each other. Thank you for always cheering me on, listening when I need a friend and lifting my spirits through your unique sense of humour.

To Tristan, I owe you so much, from building me a desk to bringing me tea on cold Sunday afternoons when I was working on my thesis; your love, understanding and patience throughout this research journey have been unparalleled. You inspire me to be the best version of myself every day and for that I am eternally grateful.

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Chapter I

Introduction

Nearly 20 years ago, the World Commission on Dams (WCD) (2000) published a report laying out a new framework that provided “guidelines that should enable stakeholders at all levels to seek and attain the most appropriate means of exploiting and protecting water and energy resources” (pg.2). The report aimed to improve the status quo of dam development as it was recognised that business as usual would not be able to continue.

Two decades later, the situation on the ground has seen some improvements but the implementation of the framework seeking to increase local participation in decision making power is far from complete. Local populations or individuals affected by the construction of hydropower projects often continue to find it difficult to take advantage of any direct or indirect benefits created by projects, largely due to a lack communication, engagement with local stakeholders and/or an insufficient benefits sharing mechanism (BSM) being put in place (Bazin, Skinner, & Koundouno, 2011).

While there has been some progress globally towards creating effective BSMs and increasing community participation through stakeholder engagement activities or the establishment of grievance mechanisms included as part of the Environment and Social Impact Assessment (ESIA) process and mitigation measures, many populations affected by hydropower projects are still failing to obtain benefits, particularly those in developing countries.

The aim of a BSM should be to provide locally affected people with an effective and systematic way to take full advantage of hydropower investments (Wang, 2012) and to create a “virtuous circle between the welfare of people and the ecosystems they live in” (CGIAR, 2014, p. 2). To implement real benefits sharing, a genuinely participatory approach coupled with a formalised mechanism needs to be established. To be successful, the BSM must be created for the specific local context and its environment. It should also be considered ‘live’ and participatory throughout its implementation and be continuously monitored and improved to adapt to local requirements (CGIAR, 2014a).

Depending on the type of BSM to be established, a variety of factors must be considered, including government policies, the national legal and regulatory framework, project company’s existing corporate social responsibility strategies and the capacity of local communities to receive funds and/or participate in required negotiations (Wang, 2012). A BSM should also consider the decision-making process as a whole and clearly identify the potential risks and adverse impacts on local populations. The ultimate aim should be to make the community the key stakeholder in the design and implementation process and thus enabling them to “shape the development of water and energy resources” (WCD, 2000, p. 2).

A general difference seen in BSMs worldwide is that some are based on legislative / regulatory frameworks and some are not. Nepal has a good example of a BSM rooted in a legislative / regulatory framework. Nepal passed the Electricity Act 1992 as a way of collecting royalties for redistribution and then introduced the Hydropower Policy 2001 to further detail how the royalty system would work. By contrast, a BSM that is not dependant on legislation generally focuses less on the

redistribution of funds generated but rather on the development of agreements around land use, water supplies and relevant ecosystems, considering both downstream and upstream community needs (CGIAR, 2014).

To determine which type of BSM works best for any given context, various factors need to be considered. Lillehammer, San Martin and Dhillion (2011) summarized the recurrent four main success factors highlighted in all literature reviewed, naming them the four key enablers: “1) policies and regulatory framework; 2) stakeholder engagement and community participation; 3) partnership formation; and 4) institutions and capacity building” (p.15). These will be discussed more in-depth throughout the thesis; however, they are all crucial for the creation of a successful BSM. Research conducted by CGIAR (2014), particularly on non-legislative BSMs, highlights that projects are generally more environmentally and socially sustainable when local communities have been at the forefront of the design and implementation of such mechanisms. An important part of local engagement must be the capacity building aspects, as it ensures full participation and equal partnership of local communities vis à vis their counterparts.

In Pakistan, there are currently no legislative or non-legislative BSMs established within the existing hydropower sector. The only structure that is in place are project-specific Corporate Social Responsibility (CSR) programs, which vary in success and implementation. However, as Pakistan is a signatory of the Nagoya Protocol on *Access to Generic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization*, there is a requirement for the country to establish mechanisms that share the benefits of generic resources, such as water.

A first step towards doing this is currently being outlined by the administrative territory of Gilgit Baltistan located in the north of Pakistan (Figure 1), where the local government is exploring the possibility of using the Water Use Charges (WUC) payments to form the basis for a royalty-based BSM. This could be then applied to future hydropower projects in the area.

The WUC in Pakistan were raised in 2015 to 0.435 rupees per kWh (Kiani, 2015) and are a form of royalty payment that hydropower projects must pay to their respective provinces / administrative territories in which their project is located. The novelty aspect of the proposed BSM is that the royalty-based system not only considers a payment to the province / administrative territory but also to the relevant districts (the legislation does not make specific reference to local communities).



Figure 1. Location of Gilgit-Baltistan. Map showing the location of the administrative territory of Gilgit-Baltistan in Pakistan. Source: <http://www.mappk.com/wp-content/uploads/2015/04/Location-Map-of-Gilgit-Baltistan.jpg>

In theory, the royalties received from the WUC require provinces “to spend an unspecified amount of the charges on improving living conditions of communities where the project is to be situated” (Kiani, 2015, p.1); however, in practice this does not happen. The main reason for this is a lack of willingness, no legal framework and the local communities not knowing their rights and having no power to defend them. This proposed BSM could represent a real shift in the hydropower sector in Pakistan and more importantly lead an empowerment of local communities.

Research Significance and Objectives

Understanding how a royalty-based or a non-monetary BSM, or a combination of both, could be implemented in the hydropower sector in Pakistan, that will be both financially and socially feasible, is the underlying aim of this thesis. The purpose of the proposed BSM would be to change the current status quo, to actually stimulating sustainable change and fostering social acceptance for projects (Cowell, Bristow, & Munday, 2012). A well-defined and functioning BSM could bring about a meaningful shift between affected communities and projects / project developers by going beyond merely offering resettlement compensation and “one off” CSR programs.

The Gilgit-Baltistan Hydropower Policy 2017 is a first step towards the establishment and potential implementation of a successful BSM in Pakistan. It states that:

there shall be deliberate effort by the sponsors and its contractors to develop social, health, and educational projects in the project area as part of their Corporate Social Responsibility and Community Welfare Development Programs. The Government of Gilgit-Baltistan (GoGB) shall spend at least 7.5 % of Water

Use Charges earned from projects in the area/districts where they are located (Gilgit-Baltistan Hydropower Policy, 2017, p.16).

Particularly this last sentence is an unprecedented commitment to providing monetary benefits to locally affected areas that has the potential to change the relationship between locally affected people and hydropower projects in Pakistan. This policy is currently in its infancy but the proposed idea could serve as the starting point to open up the discussion about implementing a BSM in the wider Pakistani hydropower sector.

This thesis research determined what kind of implementation framework would be required for such a BSM and whether Gilgit Baltistan could benefit from having additional benefits sharing mechanisms, not only the proposed royalty based one. The research should benefit project developers, consultants and funding institutions involved in developing and implementing hydropower projects in Pakistan. It could be used in combination with the ESIA process as a tool to implement the proposed mitigation measures for the locally identified communities.

The research objectives were:

- To propose a framework of how to implement the outlined BSM and highlight the changes that would be required to enable its success;
- To examine whether a combination of monetary and non-monetary benefits sharing mechanisms could be appropriate for the local context;
- To propose a local entity that could act as a vehicle to manage BSM funds and non-monetary benefits, which can ideally later be adapted from Gilgit-Baltistan to a nationwide approach; and
- To suggest additions to the currently proposed BSM outlined in the Gilgit-Baltistan Hydropower Policy 2017 to make it community-focused and participatory.

Background

Investments in energy projects have steadily increased over the last two decades. With rising energy demands worldwide, it is estimated that around \$9 trillion will be invested in renewable energy projects in the coming years (Beckers et al., 2013). According to the World Energy Council (2016), there has been a significant increase in hydropower developments globally, with the total installed capacity increasing by 39% between 2005 and 2015. However, as the WCD (2000) states “there is nothing new about dams: for thousands of years people have been building them to manage flood waters and supply water for drinking, irrigation and, more recently, industry” (pg.2).

Hydropower, despite decades of existence, continues to be viewed as a controversial sector for investment due to issues such as resettlement of communities, flooding of large areas of land, and significant changes to river ecosystems (World Bank, 2017). Notwithstanding its potential for adverse social and environmental impacts, hydropower is the world’s largest source of renewable energy, accounting for almost one-fifth of the world’s global electricity generation (World Bank, 2017). These benefits need to be continuously weighed up against the damage that can be done to the environmental and social aspects of any given local context (WCD, 2000).

Investment pipelines are growing globally as the need to meet infrastructure demands, particularly in developing countries, is becoming an important item on governments’ agendas. In Pakistan, the China-Pakistan Economic Corridor (CPEC) will be investing around US\$46 billion in the coming decade to upgrade Pakistan’s infrastructure. CPEC foresees enhancements to upgrade the energy sector (including the

development of hydropower projects) and transportation systems (China Pakistan Economic Corridor, 2017).

Chinese investment is becoming an increasingly global factor (Figure 2), with a recent UNDP China report (2015) stating that in 2014, “Chinese enterprises made outward direct investments totalling US\$123.1 billion across all industries, up by 14.2% from the previous year” (p. 7).

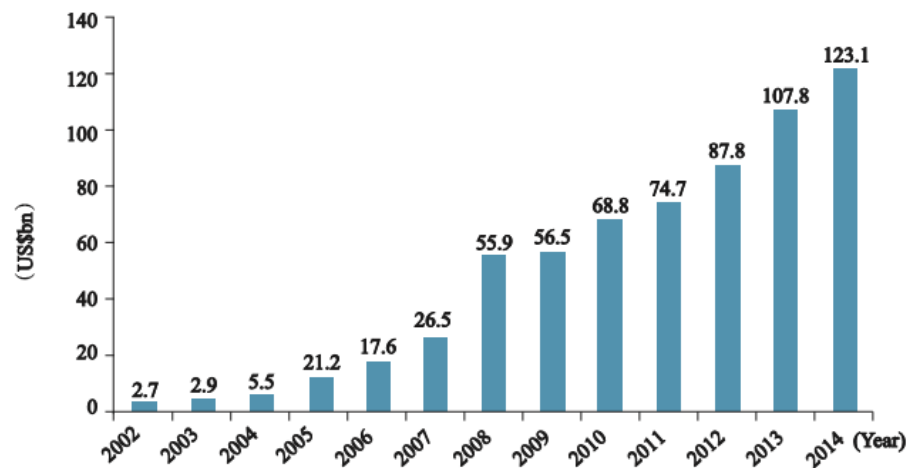


Figure 2. Chinese overseas direct investment (ODI) from 2002 to 2014 (UNDP China, 2015).

Sadly, this also comes with a significant risk, as Chinese companies still must make more efforts to comply with environmental, community, labour and information disclosure requirements (UNDP China, 2015). In recent years, various global Chinese investments had to be stopped or suspended due to non-compliances with environmental and social requirements. This included the Myitsone dam in Myanmar and the Río Blanco Copper mine in Peru (Zhen, 2016). Even developing nations, “are now paying attention not only to the economic benefits of investment that create economic growth,

employment opportunities and better infrastructure, but are increasingly considering the impact on the environment and society” (Zhen, 2016, p. 1).

Pakistan, as the host country of different kinds of Chinese investment (including hydropower), must be vigilant of what environmental and social impacts Chinese investments are having on the local communities to ensure that permanent and irreversible damages are not being caused. It also falls to the host country to put in place legislation or local agreements to ensure benefits for local communities, so that all investors coming into the country are required to consider how their project will concretely benefit the locally community, rather than seeing it as a nice to have add on.

Pakistan’s Power Sector

In addition to CPEC, the Pakistan government developed the Vision 2025 programme, which identifies access to electricity as a key need for its population (particularly the poor) and the sustainable growth of the country. As Khan (2016) points out, “under the Vision 2025 programme, Pakistan wishes to increase access to electricity from 67% of the population to 90%” (p. 1). However, the country’s increased dependence on imported oil rather than the use of indigenous resources is making the achievement of this goal financially impossible (Khan, 2016). Additionally, the increasing international pressure to reduce carbon emissions, is making Pakistan focus more of its resources on developing renewable energy.

The United Kingdom’s Department for International Trade (2015) estimated that in 2015 Pakistan will have a 10,000 MW power shortage, which will continue to have implications for both urban and rural areas in the country. Since then the power sector in

Pakistan has tried to become more efficient and meet the growing needs of its population by moving the whole power sector as Poindexter (2016) states, “away from imported fuels, replacing them with indigenous resources like hydropower and coal to focus on arranging additional megawatts to bridge the demand-supply gap through these resources” (p.1). Two problems have continuously held the country back from achieving this goal: firstly, the shortage of power generation which has resulted in increased load shedding and high system losses that have affected system performance, and secondly, the lack of efficiency which resulted in poor financial performance and high consumer prices (Ratnayake & Pakhtunkhwa Energy Development Organisation, 2016). The impacts of load shedding and the high system losses can be felt particularly in urban centres where power cuts are frequent and generators are generally required as a back-up for houses and businesses to continue functioning during a power outage. The high consumer prices for unreliable energy throughout the country are also a sign that there is an increasing need to find a more sustainable solution.

Dam construction therefore became a key part in achieving Pakistan’s energy goal, as dams, built in sparsely populated regions with limited displacement and damage to biodiversity, seemingly provided the optimal solution with the minimal amount of negative impacts (Khan, 2016).

Hydropower in Pakistan

Hydropower was recognized by the Pakistani government and international investors as one of the potential solutions to this growing energy problem as the estimated total of hydropower resource in Pakistan is about 50,000 MW of which only

6,481 MW (13%) are currently in use (World Energy Council, 2017). There is still nearly 44,000MW of untapped installed capacity in the Pakistani hydropower sector, which is likely to be explored over the coming decades (World Energy Council, 2017). Hydropower development currently occurs in only a few select provinces and territories; however, if the government could provide the right enabling environment, there is no reason that the hydropower sector could not be extended into other areas of Pakistan (e.g. Gilgit-Baltistan).

Around 17,000 MW (34% of the potential resource) of additional hydro capacity is planned for construction in the next ten years (World Energy Council, 2016). Low-cost and environment-friendly electricity being supplied to the national grid increased by 5.7% from 2015 to 2016 (Express Tribune, 2017), although specific numbers for hydropower were not provided. Thus, Pakistan is taking its energy problem increasingly seriously and is looking for ways to finance projects to help them tackle it.

Small-Scale Hydropower Projects

The potential for the exploitation of hydropower is not just found in large-scale hydropower projects, but also in small-scale ones. Large-scale hydro is often associated with more adverse environmental and social impacts and takes significantly longer to construct. Thus, small-scale hydropower projects, particularly in areas that remain unexplored to date such as Gilgit Baltistan, could provide a good alternative to begin a widescale energy transformation.

The Alternative Energy Development Board (2017) in Pakistan states that “small hydropower is considered as one of the most lucrative options for the generation of electricity, with only a total of 128 MW currently in operation” (p.1).

Table 1 shows the potential for small-scale hydro in Pakistan.

Table 1. Small hydropower in Pakistan to be developed.

Area	No. of Potential Sites	Potential Range (MW)	Total Potential (MW)	Remarks
Khyber Pakhtunkhwa	125	0.2 to 32 MW	750	Small / Micro based on Natural Falls / Flow
Punjab	300	0.2 to 40 MW	560	Canals
Gilgit – Baltistan	200	0.1 to 38 MW	1300	Natural Falls
Sindh	150	5 to 40 MW	120	Canal Falls
Azad Jammu & Kashmir	40	0.2 to 40 MW	280	Natural Falls
Total			3100	

Source: Alternative Energy Development Board (2017), Pakistan

Even in the small hydro sector, Gilgit-Baltistan shows great unexplored hydropower potential (see bold figures in Table 1). Thus, the development of a BSM to ensure the redistribution of WUC is an important aspect to be considered prior to the exploitation of the potential hydropower within Gilgit-Baltistan.

Considering that the footprint of small scale hydro projects is generally smaller in size, stakeholder engagement and capacity building can be more focused and various efforts can be made to engage the local populations. Therefore, a small-scale hydropower project could present an ideal pilot to test the functionality of the proposed BSM in the design and implementation phase and provide lessons learned.

Nagoya Protocol

Pakistan's wish to develop hydropower (whether large or small) as an alternative to fossil fuels comes with a variety of issues to consider and requirements to adhere to. The signature and ratification of the Nagoya Protocol on *Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization* signed by Pakistan in 2016, obliges the country to find mechanisms (monetary and non-monetary) that adequately share the benefits from resources such as water. The protocol clearly states that "domestic-level benefit-sharing measures are to provide fair and equitable sharing of benefits arising from the utilization of generic resources. Sharing is subject to mutually agreed terms. Benefits may be monetary or non-monetary such as royalties and the sharing of research results" (Nagoya Protocol, 2016, p.1).

The development of such mechanisms is often not considered when developing projects in Pakistan. It is important that the requirements of the Nagoya Protocol are fully integrated when developing hydropower projects in Pakistan and included as part of the BSM or agreement to be established with the local community as part of the project implementation. The Nagoya Protocol outlines a variety of monetary and non-monetary benefits that can be implemented, these will be discussed in more detail later. These should all be discussed with the community during the planning and design stage of the project to determine which is the most appropriate for the local context.

Foreign Investment in the Pakistani Hydropower Sector

Increasingly, foreign private investors, particularly Chinese and Korean developers, are coming to Pakistan to develop hydropower and other infrastructure

projects. CPEC is providing a vehicle for increased funding in the hydropower sector in Pakistan, further increasing Pakistan's energy potential. IFIs are also increasingly investing in the country's hydropower sector to help the government meet its energy needs. As Noeske (2016) states, "the IFC is supporting significant investments in low-cost and renewable energy generation in Pakistan aimed at benefiting over 12 million people by funding several hydropower projects in the Jelhum-Poonch River Basin in Kashmir" (p. 1). The idea behind this funding is to reduce the severe power deficiency, resulting in load shedding, which is causing great economic and developmental stresses for Pakistan (Noeske, 2016).

The main difference between the IFIs and private investors is that obligation to implement environmental and social safeguards mandated by the IFIs often leads to lesser impacts on the local community and increased benefits for them. The IFIs require the development of a more detailed Environment and Social Impact Assessment (ESIA), as opposed to the government required Environmental Impact Assessment (EIA). The ESIA assesses all potential environmental and social impacts and then systematically addresses them through the development and implementation of management plans. A key part of an ESIA is the need for consultation with local stakeholders and the development of a Stakeholder Engagement Plan (SEP). This ensures that local stakeholders have been identified, consulted and that their thoughts and concerns are systematically integrated into the proposed environmental and social mitigation measures.

While projects of multilateral banks generally have better mitigated environmental and social measures, real, long-term benefits are often lacking, as there is no requirement or guidelines for the implementation of a BSM. Therefore, having a

framework or potential agreement that can be implemented as part of the wider application of the environmental and social management plans, would also benefit multilateral projects to ensure that the benefits from their projects are more far reaching and sustainable. In the future, the development and implementation of a participatory and community driven BSM should form a part of the national legislation or loan documentation. Making the BSM a tool that must be developed and implemented alongside the EIA / ESIA and Environmental and Social Action Plan (ESAP) would reinforce its importance and oblige private developers, sponsors and governments to think more thoroughly about how to mitigate their impacts and what positive changes can be brought to local communities. Aligning the BSM with the mitigation measures outlined in the ESIA or actions proposed in the ESAP could prove an effective way of implementing systematic and sustainable change.

Benefits Sharing Mechanisms

Increasing investment in the hydropower sector, particularly from IFIs, has seen a need to go beyond meeting the basic environmental and social requirements (e.g., following the national EIA process in Pakistan), which merely seek to mitigate and/or redress the severe potential harms caused to the local communities (Cowell, Bristow, & Munday, 2015) and are often not very effectively implemented. The most important way to benefit communities, and ensure that they are left off better than before, is to make robust stakeholder engagement a priority throughout the project cycle. Making stakeholder engagement a core element of any project, enables continuous dialogue with

communities and facilitates project developers to target their community investment programs more precisely.

The ESIA process that generally takes place prior to the approval of these projects, especially those financed by IFIs, always has to include a consultation chapter and a SEP. These should form the basis of any engagement conducted as part of the BSM. The consultation chapter will provide important insight into the needs and demands of local communities while the SEP outlines the stakeholders identified, what engagement will be needed and the frequency of it. Integrating this process as part of the BSM will enable it to be more participatory and informed by locally affected stakeholders.

Through the implementation of a well-functioning BSM, communities can actively participate in the project and benefit from a share in the monetary and non-monetary benefits being generated and use it towards activities that further their community's development and improve the lives of its residents.

Definition of Benefits Sharing

There has been much debate around what constitutes benefits sharing. An initial definition was provided by Fields (2009) "A framework to maximize and distribute benefits across stakeholders, consistent with the principles of sustainability" (p. 37). This has been further discussed by Lillehammer, San Martin & Dhillion (2011), who outlined the element of spatial and temporal scales, expanding the definition to "a framework to maximize and distribute benefits across stakeholders, through relevant spatial and

temporal scales by use of various mechanisms, and consistent with the principles of sustainability” (p. 15).

The addition of spatial and temporal scales is an important one. The spatial aspect is crucial because a project’s BSM should define whether benefits will stem from the project itself or rather from shared water and/or the basin around it, as this would change where the money is generated from and/or how it is distributed. The temporal factor is important because benefits should be considered in the short, medium and long terms, all of which should factor into the creation of a successful and sustainable BSM system.

Considering specifically the source of the benefits (shared water and/or basin) raises the question whether or not a BSM should be made up of a variety of different elements, including monetary and non-monetary benefits. If the benefits are derived from the basin, then the development of a participatory basin management plan should be considered that can provide monetary benefits to local communities in exchange for conservation and maintenance of the basin. A participatory basin management plan can serve as a means to protect and enhance the benefits provided by the water body and shape the decisions on land-use planning. Similar plans are already being developed in Pakistan and other developing nations but they often lack the benefits sharing element and more importantly the correct implementation. This would also benefit the fact that as Wang (2012) point out that “the compensation based approach applied by projects (when there is resettlement) generally does not cover the indirectly affected downstream and upstream communities” (p. 2). Thus, a basin wide compensation approach or a BSM that includes a variety of elements to cater to all concerned would be more appropriate.

BSMs are an established part of project implementation in the mining sector and have increasingly been used in the energy sector (particularly in hydropower) in the last two decades. According to Wang (2012), benefits sharing has moved from mitigation and compensation of negative impacts (e.g., resettlement of affected communities) to the development of mechanisms that foster equitable outcomes and engage directly with local communities. Figure 3 outlines the evolving practice in the treatment of dam-affected communities from the 1980s to today.

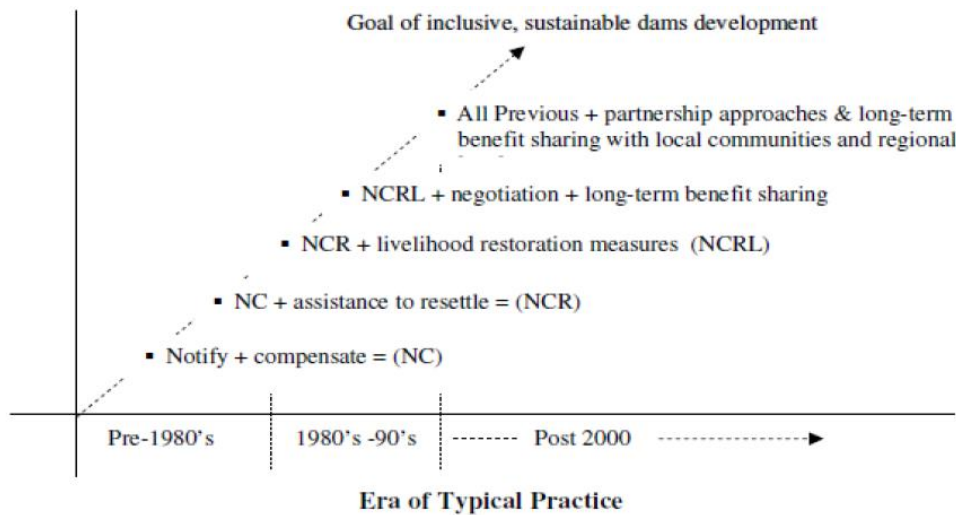


Figure 3. Evolving practice in the treatment of dam-affected communities (International Institute for Environment and Development (IIED), 2009).

Figure 3 clearly shows that projects have come a long way from providing notice and compensation (and in certain cases no compensation) to implementing livelihood restoration plans and proving wider community benefits. The ultimate goal of sustainable dam development has however not yet been reached. One of the main issues, as the IFC (2015) highlights is that there is “no blueprint that can be used to determine what equitable sharing looks like” (p. 19).

Large-scale dam projects are notorious for local communities often bear the brunt of project related economic and social losses (WCD, 2000). However, as cities and towns grow, dam projects are unlikely to slow down due to increasing pressure to provide more (and preferably clean) energy around the globe, especially in developing countries. The primary beneficiaries of the electricity generated from hydropower projects are often the urban dwellers who live a considerable distance from the project itself, while the local communities, who often do not benefit from the electricity generated, must bear the burden of the negative impacts (Mott MacDonald & World Bank, 2009).

The competition of urban electricity needs versus large scale negative rural impacts is a continuous challenge for many developing country governments. It is no longer enough to just compensate local communities for their hardship and the loss of livelihoods resulting from having to relocate once or multiple times for generations, rather, these communities need to be brought to the forefront of the hydropower development (Skinner, 2015). This means that projects need to be designed with their neighbouring communities in mind. It is important that the BSM development starts at the planning stage of the project, ideally during the prefeasibility and feasibility study stages (Wang, 2012).

According to Skinner (2015), “large hydropower dams will become more socially accepted if part of their revenue is shared directly with the local people affected by the projects” (p. 1). This is echoed by both research and field practitioners who have worked on benefits sharing initiatives. Many benefits sharing initiatives exist throughout the world, using a multitude of mechanisms and with varying degrees of success. There is a debate as to what constitutes the most important challenge or series of challenges in

implementing a successful BSM. According to Skinner (2015) it is “governance — ensuring that revenue distribution is clearly and directly linked to the costs of dams in affected communities” (pg.1). This is supported by Wang (2012) but he adds the importance of local institutional capacity and the need for early stakeholder engagement as key factors that define the success of a BSM.

Finally, there is the factor of traditional knowledge to consider in BSMs as Joshi & Chelliah (2013) point out “it is important to re-invent benefits accruing out of traditional/indigenous knowledge systems with a view of achieving equity that accommodates the rationalities of traditional knowledge” (p. 63). All these factors need to be adequately considered and addressed in an integral manner, as their collective implementation ultimately defines the success of a BSM.

BSMs come in many forms but a central concern for all is that often times they are not designed to directly support affected communities but rather they disperse funding into development projects across the country (Skinner, 2015). The introduction of a BSM is meant to “neutralise harm and controversy and to pursue sustainable development” (Skinner, 2015, p. 3); however, as various studies have pointed out (Bazin, Skinner & Koundouno 2011; Shrestha et al., 2016; Skinner, 2015), the revenue redistribution, particularly when it is paid directly into the national treasury, is frequently absorbed and not correctly redistributed. There is also the concern as raised by Joshi & Chelliah (2013) that “benefits sharing models based on the economic model of incentivisation are inherently flawed by not taking into consideration cultural, ethical and long-term views that are central to the traditional knowledge system” (p. 63). This is particularly true in

developing countries where affected populations often follow values and systems based on different worldviews and timeframes than those of the developers and the projects.

Benefits Sharing in Pakistan

Pakistan currently has no formalised BSMs, which is often why benefits to affected households, villages and project affected districts are limited and social unrest is common. Some Pakistani hydropower projects, particularly those financed by IFIs, do have corporate social responsibility and local employment initiatives, which provide local communities with ad-hoc support and economic benefit. However, most of these initiatives are temporary in nature and often do not offset the difficulties faced by the local communities due to relocation and/or ongoing construction. Projects often do not consider the traditional knowledge of communities around them in the implementation of their benefits sharing schemes. For example, biodiversity programs, which can impact the local populations and their livelihoods, are often developed and implemented in isolation and not in dialogue with the local population.

Social unrest in the hydropower sector in Pakistan is particularly common in relation to land acquisition, which, in the case of the Dasu hydropower project in northern Pakistan, led to heavy protest and obstruction of works in 2016 as community members challenged the amount of compensation provided for their land (Khan, 2016). A locally affected community member was recorded as saying:

after the construction of the dam my family will be homeless and without work. I challenge the government that, instead of giving us this amount of money, they should buy us the same amount of land in the nearest cities such as Abbottabad, Masehra or Batgram (ibid, p. 2).

These statements are sadly not uncommon and similar experiences are recorded all over the country. While a BSM would be distinct from any land acquisition compensation process, its correct implementation would not only help improve long-term relationships between the project and its affected communities but would also provide tangible monetary and non-monetary benefits that could enable local villagers to regain their livelihoods or be compensated for restoration and conservation of the basin.

Moreover, it would help redress the tensions between upstream and downstream communities and help rebalance any compensation and/or livelihood restoration discrepancies. However, the changes that occur due to a project (e.g. changes in fish population or environmental flow), also impact both populations and their livelihoods. By ensuring that the project provides funds or benefits beyond compensation for land and livelihoods, communities upstream and downstream could end up being better off than before.

Another reason for widespread opposition from local communities is that dams are generally located in far off areas in the northern parts of Khyberpakthunwa and Gilgit-Baltistan (Maluka, 2017), where communities are not given adequate information and are displaced without the government or the project developers providing them with compensation for their losses (ibid). This situation is not uncommon in Pakistan, particularly if the projects are funded by the national government and not by IFIs, whose more stringent environmental and social safeguarding standards require extensive stakeholder engagement with local communities. Lastly, there are also many social tensions created due expectations not being fulfilled by projects. False expectations in the local communities, particularly regarding employment opportunities, supply of electricity

and infrastructure improvements, can create discontent when not transparently and appropriately managed.

The lack of compensation or the perceived lack of information often stems from the fact that the information provided is unclear, or that when communities are asked to register to receive compensation, the channels of communication used are not accessible to them, only provided in written form (illiteracy remains high in rural Pakistan), not in the local language (while Urdu is the official language in Pakistan, most rural populations only speak their local dialects). Further, local politicians or key leaders are often sent to discuss on behalf of the local population. This leads in many cases to a situation where communities are unclear of what their potential benefits are, where to register for them or corruption meaning that not everyone receives the same benefits.

Once the project starts construction and community members are forced to leave their land, it is legally too late for them to request compensation as the administrative system adheres to strict rules and deadlines which cannot be amended. The only way generally for communities to register complaints against the price established by the Revenue Department is to start a lengthy court process, which in Pakistan can take years to resolve. One major difference between nationally funded projects and internationally funded projects is that non-title holders (people occupying a piece of land and/or are using the land for livelihood activities under customary law but that do not possess a legal land title) are not entitled to compensation under the Pakistani Land Acquisition Act (1984). This also needs to be considered when developing the BSM, as non-title holders need to be integrated and consulted as part of the process.

In Pakistan, where there is a vast amount of untapped hydro resources and continuous social unrest caused by existing hydropower projects, it is particularly important to think about how to implement a viable BSM to sustainably benefit communities. The territory of Gilgit-Baltistan could be used as a pilot to test whether the existing WUC could be levied to develop a BSM as proposed within the Gilgit-Baltistan Hydropower Policy 2017 and could be used either as a standalone BSM or combined with other agreements for benefits sharing.

Research Questions, Hypotheses and Specific Aims

The main research aim of this thesis was to analyse the proposed BSM outlined in the Gilgit-Baltistan Hydropower Policy 2017 and to identify a suitable implementation framework. The primary research questions addressed were therefore:

Is it possible to introduce a financially viable and socially accepted BSM for projects in the hydropower sector in Pakistan?

What implementation framework would be required for this BSM to be successful in the Pakistani context?

My primary hypothesis was that the WUC that are levied on hydropower project developers in Pakistan could be used to create a BSM and benefit local communities. My secondary hypothesis was that my proposed implementation framework, that is aligned with the four key enablers identified as part of the literature review, could serve as a basis for the BSM outlined in the Gilgit-Baltistan Hydropower Policy 2017 to be more community focused.

Specific Aims

To test these hypotheses, I addressed these specific aims:

1. Conducted a comprehensive literature review to determine whether royalty-based BSMs or non-monetary benefits sharing agreements implemented in the hydropower sector worldwide have brought benefits to their respective local communities;
2. Analysed and identified the main factors underlying successful royalty-based and non-monetary BSMs to propose changes to the Gilgit-Baltistan BSM currently being developed to make it more inclusive and community focused;
3. Analysed the existing local governance structure to identify how monetary and non-monetary benefits should be managed at the community level and what kind of vehicle would be needed to successfully implement this, initially at a local level and later nationwide.

Chapter II

Methods

To address Specific Aim #1, a thorough literature review was conducted of 14 studies and papers, available publicly, written about real life examples of different types of BSMs implemented in developing and non-developing countries. The literature review determined what differentiates successful benefits sharing mechanisms and what key factors need to be considered to make both financial and non-financial benefits sharing mechanisms participatory and inclusive of local affected communities.

To address Specific Aim #2, a framework was developed based on Lillehammer, San Martin & Dhillon's (2011) four key enablers, and changes were proposed to the Gilgit Baltistan Hydropower Policy 2017 BSM to align it with these four principles. The aim of the proposed changes was the facilitation of greater inclusion and empowerment of local communities in the design and decision-making process of the BSM. In addition to a desktop review, I conducted a site visit to the area in July 2017 (see Appendix for details) to gain a better understanding of the local dynamics and the potential stakeholders.

To address Specific Aim #3, the local political structure of Pakistan was examined to identify a vehicle or a form of agreement that could be put in place at the community level to manage the funds and non-monetary benefits that would result from the implementation of BSMs. Changes were proposed to existing structures to ensure that the new entity or agreement established is set up in a successful and effective way.

Chapter III

Results

The evaluation of 14 studies on BSM schemes worldwide (Bazin, Skinner, & Koundouno, 2011; CGIAR., 2014; Dahal & Maskey, 2012; Haas, Tung, & Institute for Energy Studies, 2007; International Finance Corporation, 2015; Lillehammer, San Martin, & Dhillion, 2011; Maluka, 2017; Mott MacDonald & World Bank, 2009; Joshi & Chelliah; 2013; Shrestha et al. 2016; Skinner, 2011; Skinner, 2015; Wang, 2012; WCD, 2000), revealed a variety of useful lessons learned which fed into the of the proposed BSM for Pakistan.

Bazin, Skinner and Koundouno (2011) highlighted that benefits sharing provides positive benefits for all stakeholders involved in hydropower projects, including project affected people, governments, dam operators and investors. The benefits range from providing a:

stronger voice in decisions and giving the opportunity to be first among project beneficiaries, not last to achieving greater social inclusiveness and balance social, economic and environmental factors in planning, design, implementation and operation of dam projects to reducing the risk by cooperation in catchment management and implementing environment mitigation measures as prescribed by law, and reputational risk (Bazin, Skinner & Koundouno, 2011).

However, research conducted by Bazin, Skinner and Koundouno, 2011 of six dams in West Africa found that there are limited examples of positive outcomes from benefits sharing mechanisms.

Lillehammer, San Martin and Dhillion (2011) highlight in their research the following four key enablers: “1) policies and regulatory framework; 2) stakeholder

engagement and community participation; 3) partnership formation, and 4) institutions and capacity building” (p. 15). Wang (2012) echoes the importance of assessing the “adequacy of institutional arrangements and capacity at the local level as a key for designing and implementing a benefit sharing program” (p. 8).

Bazin, Skinner and Koundouno (2011) highlight that national and traditional rules around resource management are often contradictory or inadequately enforced. This becomes obvious when land use changes due to dam projects highlight the fact that local agreements centred around “rights of access and use over the territory’s different resources: water, pasture, forest products, farmland” (p. 12) have become obsolete. Once the local context has changed and land use is no longer what it used to be prior to the dam’s construction, the same resource governing rules can no longer apply. The rules being outdated can create tensions among local communities and tribes, as traditional rules are often still applied to settle conflict as the modern court systems are not considered a viable option (Bazin, Skinner & Koundouno, 2011).

Joshi and Chelliah (2013) highlight the need for the incorporation and consideration of traditional knowledge and making it an integral part to the BSM. This is particularly important when designing non-monetary benefit agreements which can include for example watershed management, such as in the case of Angostura HPP in Costa Rica, where a comprehensive watershed management plan provided “local communities with economic and social benefits through an improved use of natural resources and the generation of local employment” (Wang, 2012, p. 16).

Finally, the need for a mix of monetary and non-monetary benefits mechanisms is highlighted by CGIAR (2014) and states that benefits sharing mechanisms should be

considered ‘live’, be fair and equitable with adequate information provided to all stakeholders, and go beyond the regulatory framework and payment for ecosystem services (PES). Ideally it should be a custom designed approach to really meet the local requirements.

Policies and Regulatory Framework

Skinner (2015) states that BSMs “are best set out by governments in legislation and supporting regulations; benefits at the local level should then be negotiated and agreed with local communities” (p. 1). This emphasis on the need for a clear policy and regulatory framework is echoed in various case studies reviewed (Bazin, Skinner, & Koundouno, 2011; Haas, Tung & Institute for Energy Studies, 2007; Maluka, 2017), as it represents one of the key factors for the success of a BSM. To date only Norway has done this successfully.

Norway is highlighted in the literature as successfully having put in place a royalty-based schemes that has benefitted communities affected by hydropower projects throughout the country. Municipalities in Norway receive the following royalty benefits from the hydropower projects in their area (Wang, 2012):

- Tax on profit: 28%, of which 20.75% goes to the state, 2.5% to county, and 4.75% to the municipalities
- Property tax: 0.7% of the market value of the power installations
- Resource tax: NKr 0.013 per KWh, of which NKr 0.011 goes to the municipalities and NKr 0.002 goes to the county

- Fees: licensees pay up to 10% of electricity generation to local authorities.
- Equity sharing: Municipalities have an equity share in the hydropower project and receive benefits in the form of dividends.

Norway is a good example of a very mature royalty system in a country that obtains nearly 100% of its electricity from hydropower. Norway managed to have little displacement of people in its hydropower development (Wang, 2012), which is a unique situation for a country to be in. In the context of Pakistan, where illegal encroachers and land-grabbing is common, this is however unlikely to be the case. Norway clearly demonstrates a highly effective implementation of their BSM, which is mainly due to the country's policies and regulatory framework and the capacity of the local government. The Norwegian example of BSM implementation can serve as a best practice model for the Pakistani BSM; however, it is unlikely that without substantial change, Pakistan's public institutions will be able to implement the same sophisticated system in the near future.

Nepal is an example of a developing country that has legislated a BSM in its hydropower development, albeit with mixed results. Nepal passed the Electricity Act 1992, which enables the government "to collect royalties from hydropower generation plants in Nepal based on the installed capacity of the hydropower plant and the annual generation of electricity" (Shrestha, Lord, Mukherji, Kiran, Yadav & Rai, 2016, pg. 9). Nepal also has the Hydropower Policy 2001, which further details a royalty system that states that "50% of the payments feed the national treasury, 38% form a regional share

that benefits multiple districts around the dam and 12% go directly to the dam's district development committee" (Skinner, 2015, pg. 3).

According to Shrestha et al. (2016), most local stakeholders still do not perceive the royalty-based BSM as being transparent, with little to no information being given to local communities and districts with regards to the amounts being paid and/or received. Thus, despite a conceptually well thought out policy framework, the implementation of the BSM clearly needs to be improved and requires greater transparency to gain trust and support from local communities and stakeholders.

As will be discussed in more detail later, the administrative territory of Gilgit-Baltistan in Pakistan passed the Gilgit-Baltistan Hydropower Policy (2017), which proposes that "at least 7.5% of WUC revenue from any hydropower project must be spent in the area/districts where the project is located" (p.16). This is the first BSM-related legislation in the country, but to date no concrete steps have been taken to implement this policy, which on the one hand demonstrates a lack of overall commitment to its implementation, but also a potential lack of capacity and/or knowledge of how to implement it.

While national policy frameworks, particularly in relation to royalty programs, are extremely important, they are not the only solution that should be considered. CSR strategies also play a vital role as a benefits sharing tool that can be used during project design, construction and implementation (Wang, 2012). CSR strategies can provide a form of framework for benefits sharing, that is often easier to implement than complex national legislation. The CSR strategy is something that each company has control over and can therefore choose to develop and implement collaboratively with the community.

It is important that as part of the formalisation of a BSM in Pakistan, CSR strategies are not seen as an ‘add on’ but a mandatory tool to be developed by companies to facilitate immediate benefits sharing for locally affected communities.

Stakeholder Engagement and Community Participation

Stakeholder engagement and community participation are most frequently mentioned as key enablers in implementing a successful BSM. Over the past two decades stakeholder engagement has evolved significantly, with governments and private sector companies engaging with communities more meaningfully and earlier in the process to ensure that they have their buy-in for the project to go ahead. A lack of buy-in from the community can lead to negative impacts or if expectations are raised and not fulfilled, projects can find themselves surrounded (figuratively and literally) by neighbouring communities.

The recognition that the local communities are key stakeholders and that there is a need for meaningful consultation to occur at each stage of the project (from inception to operation) has certainly been one of the biggest successes for the implementation of infrastructure projects in the 20th and 21st century. A two-way stakeholder engagement process can foster a situation where local stakeholders are actually taken into account by participating and making decisions for their own benefit rather than simply being on the side-lines of the process and merely being informed of what will happen.

The IFC (2012) attributes better relationships with neighbouring communities and more successful longer-term outcomes to companies hiring and training community liaison officers, translating important information into local languages and taking

grievances seriously. As Wang (2012) highlights there is a variety of stakeholder groups who must be considered when developing a BSM, including:

- directly and indirectly affected people
- displaced and host communities
- downstream and upstream communities
- local government and central government
- indigenous peoples
- project proponents
- developers
- operators
- Non-governmental organisations (NGOs)

All these stakeholders should be characterised by potential interest and level of influence, as this defines the type and frequency of engagement that is to be included in the SEP. For the establishment of a successful BSM, Singh (n.d.) points out that there are four key recommendations when conducting stakeholder engagement:

- there is no prescribed number of consultations
- consultations should be held with everyone
- local language and knowledge need to be used by the trained individuals conducting the consultations
- clients should manage their stakeholder engagement in such a way that it does not raise unrealistic expectations

The WCD (2000) states that their research confirmed that better results are achieved if that consultations and surveys are in the presence of civil society groups as it increases

confidence of disadvantaged groups to speak up for their needs. Wang (2012) adds that it is critical to engage local communities and interest groups early in the project cycle in designing benefits sharing programs (Figure 4).

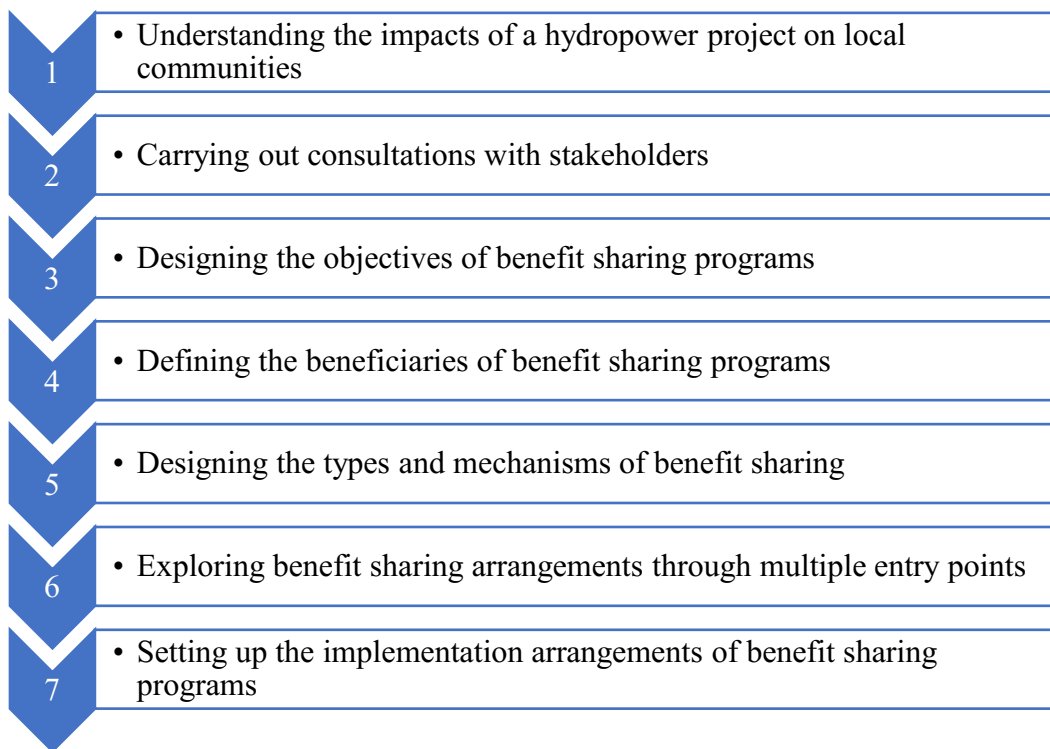


Figure 4. Steps in designing a BSM (Wang 2012).

Consultations for a BSM should also be done in various rounds to provide the affected community members with the opportunity to provide their feedback and opinion on the suitability of what is being proposed. However, it is important to ensure that the information provided is clearly understood by community members and that adequate support to participate is being given (e.g. through capacity building or hiring an NGO to support them). There should also be transparency regarding the funds or the non-monetary benefits that will or can be provided, as this is a main point of frustration for local communities when it comes to BSM (Shrestha et al., 2016).

Partnership Formation

Another key element to the success of a BSM is the formation of partnerships with the right kind of stakeholder partners. The project needs to seek partnerships with the local government, community members, women, youth and a potential local implementation agency, all of whom play a role in the execution of the BSM. The IFC (2012) provides a good project example of such partnership formation: a working group made up of company staff, consultants, community representatives, the Indigenous Minorities Peoples Council and civil society representatives. The working group was established to provide guidance and feedback (IFC, 2012).

This model of a working group could be considered in the context of a Pakistani BSM and be used to not only provide meaningful participation but ensure continuous transparency in the process. This would also ensure greater local involvement as well as a sentiment of ownership, which is a key element of success in the implementation of such systems. When setting up such a working group it is important to ensure that participating community members are provided with capacity building and negotiation skills required to become an equal partner in the discussion, as otherwise they are unable to effectively participate and a permanent power imbalance is created.

Bazin, Skinner and Koundouno (2011) second this idea of creating a council and/or committee to oversee certain aspects of benefits sharing. Their research highlights an example from Burkina Faso, where a local conflict situation led to the creation of the Local Water Committee for the Upper Comoe (CLE), which consisted of local authorities, affected people, government representatives, customary and religious

authorities and civil society organisations. This committee now successfully addresses local grievances in relation to water usage (ibid).

Having multiple actors, including the local government and the community on such a committee, presents an interesting opportunity to improve local development as well as provide a more fair and egalitarian approach to benefits sharing. However, all committee members must have the same amount of voice to avoid an imbalance of power or elite capture.

Institutions and Capacity Building

Institutions and capacity building are crucial, particularly in an area/context where a BSM has not yet been implemented, such as Pakistan. The local Pakistani government institutions are often perceived by the public as being inefficient and lacking in capacity and integrity. A study conducted for the Asian Development Bank stated that to move from legislation to implementation requires capacity building tools to be put in place to “facilitate a smooth national rollout of the mechanisms, in parallel with preparation of the legal instruments” (Haas, Tung & Institute for Energy Studies, 2007, p. 7).

For the implementation of a new BSM in Pakistan, capacity building is essential, as institutions in Gilgit-Baltistan are not yet in a position to implement this type of new framework. Capacity building for the local government would need to be conducted by trained professionals or the local administration would need to recruit experienced professionals, who have previously been involved in the implementation of similar systems (this could be a challenge). Implementing capacity building would also require a budgetary commitment from the local administration or would need to be considered as

part of the set-up costs for the BSM. If it is to be part of the setup costs then accurate documentation is required to avoid issues of corruption. All capacity building activities must be clearly advertised to ensure that a fair and competitive bidding and selection process has taken place.

Capacity building is not only required at the government or implementation level but more importantly also at the local community. The community, particularly the people affected by the project, require capacity building to enable them to participate as equals in all benefits sharing discussions. They must be given the same tools as the project or government counterparts, otherwise the BSM will be imposed rather than participatory. The capacity building to be undertaken must focus on providing the community with information regarding:

- the benefits sharing process and its purpose
- their rights in the benefits sharing process
- their influence and decision-making power in the process
- the support and tools available to them throughout the benefits sharing process

The capacity building is best undertaken by an independent third party such as an NGO or a consultant not affiliated with any of the other stakeholders to avoid a conflict of interest, in transparency and/or corruption of the process.

Chapter IV

Discussion

Based on the results from the analysis undertaken of BSMs globally, various changes to the current royalty scheme proposed in Gilgit-Baltistan can be recommended. These additions and changes are recommended with a view to make the currently proposed BSM more community focused, participatory and effective. It is also looking to influence the BSM while it is still in its infancy and has not yet been implemented, so that it can still be adapted and changed to better suit the local context and the needs of the affected populations.

Proposed Changes to the Gilgit Baltistan BSM

The proposed additions and changes consider the four key enablers identified by Lillehammer, San Martin and Dhillion (2011) that were echoed by the remaining desktop research undertaken to identify the success factors for the implementation of BSMs. In addition, a fifth element can be considered a key part of the success of a BSM. Therefore, the final five key enablers are:

1. Policy framework (clearly defined legislation or agreements with the local community)
2. Stakeholder engagement
3. Partnership formation
4. Institution and capacity building
5. Transparency and agreement

Potential additions and changes as well as expected results for each enabler are outlined in Table 2.

Table 2. Proposed additions and changes to the Gilgit-Baltistan Hydropower Policy 2017 and expected results.

No.	Proposed Addition / Change	Expected results
Policy framework		
1	Clear rules and guidelines must be outlined, including how the resources from the WUC are funnelled from the Gilgit-Baltistan Water and Power Department to the district, tehsil (a collective of villages and/or a city) and community level. This should include clear timeframes, penalties for non-compliance and a dedicated, local entity in charge to ensure accountability. The process should also outline how the community will be informed of the amount of WUC overall available and the division of the charges amongst all parties concerned.	By outlining clear rules and guidelines, the BSM becomes a process that is easily followed and verifiable. Without a clear structure and policy framework it is likely that no action will be taken by the government, the resources from the WUC will remain in the Water and Power Department and nothing will reach the community beneficiaries. The community being involved in the process is important, as this enables transparency and openness between all parties. It also creates accountability for the project and government stakeholders and reduces the possibility of corruption.
2	The provincial government must identify which entity within the district government and the tehsil are to manage the resources from the WUC. Separately to this, the community must be consulted and given the necessary tools to decide by whom (e.g. the village elders, a committee) and how funds will be managed at their level. These details need to be included in an annex to the Gilgit-Baltistan Hydropower Policy 2017 and be approved by the provincial authorities.	By clearly identifying entities in charge of the resources from the WUC, it defines roles, creates accountability and a possibility to track the funding that has been received and how it has been spent. At the community level an inclusive approach is important, so that the community is integrated in the decision-making process. It is important that all identified entities can be later be audited to examine if commitments made were appropriately upheld by all entities. It also helps to identify potential bottlenecks or issue penalties in case of non-compliance.
Stakeholder engagement		
3	A consultative stakeholder mapping exercise needs to be undertaken for Gilgit-Baltistan. This mapping exercise must include all affected	By working interactively with the local community and identifying all stakeholders, it is possible to create a clear engagement strategy and define

	people and local communities to ensure that all relevant stakeholders at the community level are included. The stakeholder map should clearly indicate all relevant parties likely to be involved in the implementation of the BSM. This includes the project developer, the Water and Power Department, the Finance Department, the district government, the local community, the Water and Power Development Authority (WAPDA) and the National Electric Power Regulatory Authority (NEPRA). The community should understand who is included in the stakeholder map and their place in it.	interactions between all. It is also possible to identify any potential threats and/or opportunities that certain stakeholders represent. The community being systematically integrated into the BSM process (inception to implementation) fosters trust and ensures that the community is able to define its role. This stakeholder map should be reviewed on an annual basis by the community, the project developer and the local government to confirm that all stakeholders are still relevant and to add any additional ones if necessary.
4	A stakeholder engagement strategy should be developed based on the stakeholders identified in the mapping exercise and the consultative process with the local community. The stakeholder engagement strategy should consider the influence of the stakeholders, their interests and potential threats. The frequency of the engagement and the channel of engagement should also be identified. The community should play an active role in defining how the project and the local authorities should engage them in the benefits sharing process, as transparency and engagement are crucial factors in the success of a BSM.	By developing a clearly defined stakeholder engagement strategy and integrating the local community in its development, all stakeholders are considered and their involvement is clearly defined. The establishment of a clear line of communication with different stakeholders is important as this creates transparency and trust, which in turn benefits the BSM as people perceive it to be open and participatory. Lack of engagement with stakeholders, particularly key ones, can lead to feelings of distrust and isolation and the potential desire to become an obstacle in the implementation of a BSM. The definition and inclusion of the community as a key stakeholder is particularly important.
Partnership formation		
5	A list of potential partnerships that could benefit the implementation of the BSM (this could be provincial, national or international) should be included in an annex to the Gilgit-Baltistan Hydropower Policy. The local community should also identify and be given access to partnerships in form of independent consultants or	A clearly defined list of partners, who have been selected jointly by the community and the other BSM stakeholders, would benefit the implementation of the BSM, particularly during its initial stages. Partnerships with entities in countries who have previously implemented BSMs could also be useful for lessons

	NGOs who can assist them in fully exercising their role in the development and implementation of the BSM.	learned and assistance in effective implementation. At the local level, having communities choose an independent partner will enable them to be an equal partner in the discussions surrounding the development and implementation of the BSM and therefore help make the initial set-up process more consultative and fair.
Institutions and capacity building		
6	It is important to define the type of capacity building required for all stakeholders involved in the BSM. Each stakeholder group should be consulted on what capacity building they want or could benefit from. Particularly the community should be extensively consulted on this matter and provided with independent, third party support to ensure that they are able to access all required capacity building to be well informed and able to participate as an equal party in all the negotiations surrounding the BSM.	By clearly defining the different capacity building needs for each stakeholder group and consulting with them, all stakeholders will be given the necessary tools to effectively develop and implement the BSM. Lack of capacity is often a cause for inaction and/or failure to implement, particularly in developing countries. The BSM is a new concept and process, which requires skills beyond the current status quo, therefore providing the necessary training and facilitating skills acquisition is key for its success. The local community is particularly vulnerable as their lack of understanding could mean they end up not being an equal partner and therefore feel taken advantage of. This can be addressed by providing effective capacity building through an independent, third party organisation.
7	The capacity building needs to include: clearly defined timelines, a participants list, a budget, an entity responsible for distribution the funds / non-monetary benefits and a penalty for non-compliance. The budget for capacity building, if the local administration is unable to fund it, could be included in the set-up costs for the BSM.	By clearly defining all the mentioned elements and defining where budget will come from, it is possible to complete the capacity on time and for the right people. It is important to have accountability as well as penalties to avoid the implementation being delayed or undertaken incorrectly.
Transparency and agreements		
8	Audits and progress supervision need to be undertaken for all relevant stakeholders and information	By undertaking audits and progress reports, transparency and accountability are created, enabling entities involved

	regarding the resources received and how the funds were spent needs to be made publicly available.	in the process and stakeholders to gain trust in the process and develop a desire to participate in a positive outcome.
9	Consultative agreements with communities, particularly for non-financial benefits, should also be included and foreseen in the Gilgit-Baltistan Hydropower Policy 2017. These agreements should be made either directly with the project or with the local government. The agreements should be made in consultation with the community. Agreements at this level could include: • “modifying project design and operation • watershed management • associated infrastructure and public service investment • employment creation” (Wang, 2012, pg.19)	Consultative agreements with communities are often easier to achieve and faster to implement. Thus, they are an important as part of the BSM process, as they enable more immediate benefits than a royalty scheme that is linked to a legal framework. Agreements can help define and provide benefits early in the project cycle (e.g. via a corporate social responsibility strategy) and help establish a trusting and cooperative relationship with the local community.

The proposed additions and changes outlined in Table 2 should be incorporated into an annex that is attached to the Gilgit-Baltistan Hydropower Policy 2017. The annex should act as a roadmap and an action plan, that clearly outlines how the proposed BSM will be implemented. In addition, it should ensure that all the following issues are clearly addressed:

- Define the monetary and non-monetary benefits communities can be entitled to and the consultations that need to be held to establish these
- Define how the money from the WUC will be funnelled between entities and how transparency will be ensured
- Define how non-monetary benefits will be handled and who will be responsible for their implementation

- Define which administrative entities (provincial, district, tehsil, community) will participate in the BSM
- Define how the community will be integrated in the process
- Define how stakeholder engagement will be conducted and how the process will be made participatory
- Define what capacity building is foreseen to ensure all stakeholders can participate as equal partners in the development and implementation of the BSM

The development of such an annex which clearly outlines how the key elements for a successful BSM will be implemented is crucial, as the Gilgit-Baltistan Hydropower Policy 2017 does not contain an implementation framework for the proposed BSM. By clearly defining the different steps, the provincial government and all other stakeholders will be able to act on them and implement the proposed BSM successfully.

Changes to the Existing Policy Framework and Legislation

The policy framework and legislation in the case of Gilgit-Baltistan needs to be examined more closely as it represents the foundation for the implementation of the BSM. Therefore, an analysis of the local Pakistani government structure has been undertaken below to identify where changes are required and what existing entities could fulfil the purpose of being the link between the community and the government entity that receives and disburses the WUC.

Wang (2012) suggests it is also important to analyse which possible agreements can be established outside the fixed political framework, as monetary benefits are

generally only disbursed during the operation of the project, which means that the community will not have any benefits during construction, despite having already been impacted.

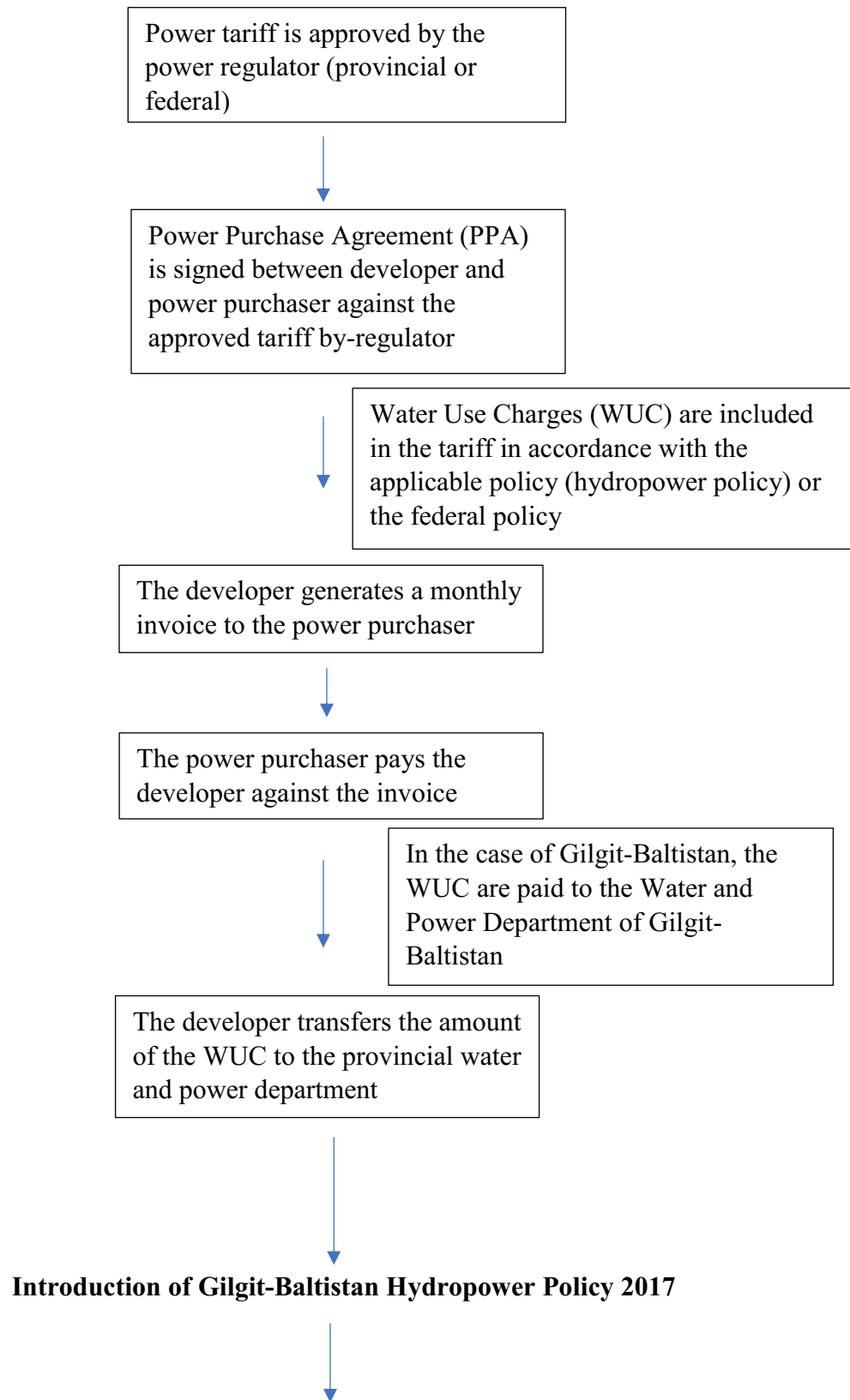
Pakistan's Local Governance Structure

Pakistan's government is divided into three basic levels: federal, provincial and local. The most relevant tier for this research is the local one, as it is in charge of funnelling money to local areas, making its role within the new BSM system very important. The current flow of WUC in provinces and territories all over Pakistan ends at the provincial level as there is currently no mechanism or policy established that transfers these benefits to the local level.

While it is possible that some money is currently funnelled from the provincial level to the local districts and/or even tehsils, there was no evidence found in publicly available documentation that this is the case.

Water Use Charge Flow

The current process of tariff approvals and subsequent WUC that are being paid in provinces where there are active hydropower projects is shown in Figure 5.



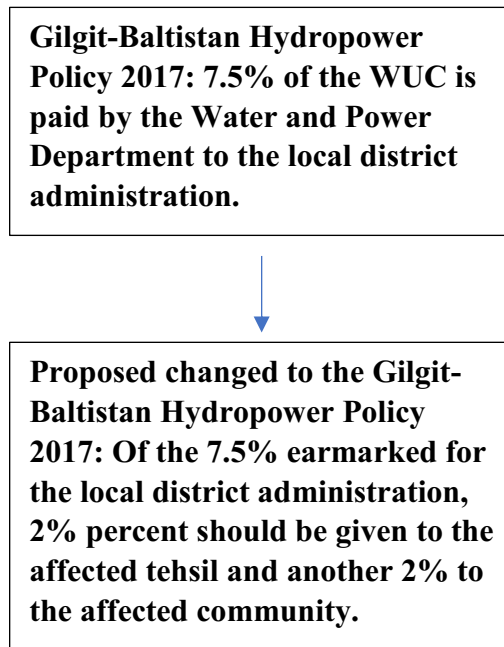


Figure 5. **Current flow of the water use charges in Pakistan, and suggested modifications.** The last two boxes with the text in bold, show the additions that would be introduced as a result of the BSM outlined in the Gilgit-Baltistan Hydropower Policy 2017.

Currently the money is transferred between the power purchaser and the hydropower developer and the WUC is subsequently paid to the relevant ministry. In the case of Gilgit-Baltistan, this is the Water and Power Department. Once the Gilgit-Baltistan Hydropower Policy 2017 is enforced, two additional layers (marked with bold text in Figure 5) would need to be added for the WUC to reach the respective districts, tehsils and communities.

The first layer earmarks 7.5% of WUC to be paid by the Water and Power Department to the local district and a second layer (which is an addition proposed in this thesis) designates WUC to be paid from the district administration to the locally affected tehsils and communities (Figure 5). These two additional layers of benefits sharing represent an important step forward with regards to real benefits sharing in the

hydropower sector in Pakistan. Of the 7.5% of WUC to be spent within the district/area outlined in the existing policy, a suggested 2% percent should be given in the affected tehsil and another 2% to the affected community. The precise amounts that will be distributed amongst all stakeholders should be transparently discussed and disclosed.

Including a percentage of the WUC to be distributed to the affected tehsil and the local community in the legislative framework makes redistribution an enforceable and a legally required action that must be followed by the local government and the project developer. In addition, as the implementation of this new BSM framework will not be without its challenges and will likely only generate benefits once projects are in operation, it is important to complement the proposed BSM with bi-lateral agreements or robust CSR strategies to enable more immediate benefits for local communities.

Challenges in the Local Governance Structure

Adding the necessary layers of local governance to successfully administer the BSM to be implemented does not come without its challenges. As Ahmad (2014) points out, in Pakistan “elected governments do not prioritise the establishment of local bodies due to fear of losing their political power brokerage, administrative control and financial independence for development work at the constituency level” (p. 1). This means that local institutions tend to be weak with limited budgetary resources. Communities also have their challenges whether it be a lack of capacity or a need to avoid ‘elite capture’ when conducting consultations.

General Ayub Khan’s military government was the first to change the political landscape at the local level by introducing local governments that were comprised of a

hierarchical system with four tiers, the lowest one being the union councils (Ahmad, 2014). In the 1970s, union councils began to be given more political autonomy by being made responsible for development and maintenance of public infrastructure such as roads, schools, health facilities, parks and lighting of public ways (Ahmad, 2014).

This system was later changed by the Local Government Ordinance (LGO), introduced in 2001, which established a three-tiered local governance structure consisting of the District, Tehsil and Union Councils (Bhutto, 2014) as well as Citizen Community Boards (CCBs), whose aim it was to facilitate local communities to produce their own development plans according to their local needs (Shah, 2011). The last change to the local governmental structure came in 2010, when the national assembly passed the Eighteenth Amendment of the Pakistani Constitution, which led to a significant shift in power being transferred from the federal to the local level and thus empowering local provinces. This could be beneficial for the implementation of provincial BSMs, but if the model is then to be transferred to a national level, it will likely lead to varying results based on the effectiveness and capacity of the different provinces.

Challenges Faced for Local Empowerment in Pakistan

Community empowerment in Pakistan is not a new concept and has been addressed over the decades; however, providing local communities with the tools to building viable institutions for ensuring efficient and effective delivery of public services at a local level has not come without its challenges (Chaudhry, 2009). All administrative levels (union, tehsil, town and district), with the exception of the village / community level, demonstrated rapid development and changes under the LGO of 2001. This

included the development of specific policies as well as legislation and training being implemented (Webster & Larsen, 2006). These changes imposed a vast amount of pressure on the newly empowered local entities, and people such as the District Coordination Officer (DCO), working at the district level, experienced an increase of 2,000 to 40,000 subordinates overnight (ibid).

This increase in responsibility led to very inefficient and slow processes, which had implications on the village / community levels by causing bottlenecks that are still seen in Pakistan today. The organization of finances also came with significant challenges as funds were allocated at all administrative levels with annual and supplementary budgets being established according to a “bottom up planning system laid out in the LGO 2001” (Webster & Larsen, 2006, p. 10).

However, the biggest challenge remained in how to bring community- and village-level participation into the equation. Citizen Community Boards (CCBs) were set up with the aim of “energizing the community for development and improvement of service delivery” at a local level (Chaudhry, 2009, p. 132). CCBs were set up to contribute to local project implementation and management, but unlike NGOs they were registered with the local government (the Community Development Office) under a specific law that had been designed for this purpose (Chaudhry, 2009). Looking at CCBs in light of the BSM, they could provide a useful, local vehicle to manage the money received from the WUC as well as serve as a platform for consultations, decision making and a legal entity for non-monetary agreements. CCBs could be a ‘one stop shop’ for the community to provide them the opportunity to become an equal partner in the benefits sharing process.

Citizen Community Boards

CCBs were originally established as a voluntary and non-profit association made up of 25 non-elected, motivated and proactive citizens. (Khan & Anjum, 2013). CCBs raised around 20% of the funds needed for projects through their own efforts, while the remaining 80% were provided by the local government, who was obliged to set aside 25% of their funding for CCBs (Shah, 2011).

Various studies (Shan, 2011; Khan & Anjum, 2013; Kurosaki, 2007) show that sadly not all CCBs were as active and successful as expected. In an empirical study conducted by Kurosaki (2007), the success of CCBs was found to be based on two elements: having established rules (e.g., some form of legislative framework), and good leadership from local people (the presence of NGOs is highlighted as a positive influence). Particularly in rural areas in Pakistan where literacy rates are lower and poverty is higher, fulfilling both of these elements can be difficult. The community opinion of CCBs is not highlighted in any of the studies examined, making it difficult to know how communities themselves felt about CCBs and whether they were truly participatory entities.

While CCBs are currently no longer active in Pakistan, their function or something similar to them could be revived with the aim of fulfilling a new and specific purpose related to benefits sharing for communities affected by hydro power projects.

Proposed Changes for the Revival of CCBs

The successful implementation of any benefits sharing (including non-monetary) and the execution of the Gilgit-Baltistan Hydropower Policy 2017 depends largely on the correct management of the WUC and the integration of the local community (through consultations and partnerships). The inactive CCBs could be re-branded to facilitate equal and effective platforms in the benefits sharing process by establishing a new community entity called Benefits Sharing Committees (BSCs). Prior to this, extensive consultations should be undertaken with communities all over Pakistan to determine whether or not this entity would be beneficial for them to become an equal partner in this process. Table 3 below outlines proposed changes required to make the new BSCs effective entities. These should be discussed with local communities to determine whether they are appropriate.

One of the most important changes being introduced in Table 3 is the inclusion of female and youth board members in the proposed BSC structures. The inclusion of a member that is under 25 years of age is important to accurately represent the ideas and aspirations of the young people within the community. According to Index Mundi, around 52.5% Pakistan's population is under 25 years old, with around 22% being between the ages of 14 and 24. Giving young member of the community a voice in future investments is vital, as they are the emerging generation and therefore the most likely to experience the impact of the investment. Therefore, young people should be included in the decision-making process to provide them the opportunity to design and shape their own future.

Table 3. Transforming citizen community boards (CCBs) to benefits sharing committees (BSCs).

No.	Original CCBs	Proposed new BSCs
1	A minimum of 25 people were needed to form a group and register a CCB with the local government. Participation of the affected population under the CCBs was restricted.	The entire locally affected community / population must be registered as a BSC with the local district.
2	People participated on a non-elected and voluntary basis.	The BSC must have an elected board of 10 people. The board members are elected by all BSC members and have a three-year term each (this can be adapted if needed and members can be replaced due to misconduct or non-performance). Each member of the board receives a stipend for their time, the amount of which is known by all members and agreed with the wider community.
3	As participation was non-elective and voluntary, there were no quotas for gender and/or youth participation.	Of the 10 people elected board members, a minimum of two must be female (preferably of different ages) and at least one person below the age of 25.
4	Some of the CCBs had charters while others did not.	Each committee must set up a charter for the BSC, which is approved by all board and BSC members.
5	There was no formal consultation process as part of the CCBs and set-up appeared to be generally rather ad-hoc.	The BSC must hold annual consultations with the members of the BSC to better understand their concerns and desires. These can then be translated into tangible projects depending on the funding available. The consultations must be documented and shared once a year with the district administration. Ongoing consultation and the respective outcomes should also form the basis of other benefits sharing agreements that are established (e.g. watershed management).
6	CCBs are self-organised, meaning that there are no defined structures for meetings and no requirement to publish meeting minutes. There was no dedicated person to answer questions.	The BSC must hold monthly meetings and make the meeting minutes publicly available. They must also have a dedicated person community liaison officer to take queries and answer questions.

7	The list of projects was discussed only with the members of the CCB, not the entire affected population. Thus, it is possible that the affected population was unaware of what projects are being submitted for approval to the government.	The BSC must propose a list of projects to be discussed with all BSC members. The list of projects that is prepared for submission to the district administration needs to have been voted on by all BSC members and approved by all board members of the BSC.
8	The timelines for project proposals and implementation for CCB projects was not clearly defined, hence many CCB projects were either not implemented or held up by bureaucratic processes.	Precise timeframes for project proposals, approval and implementation must be proposed and adhered to. The district can withhold funds if the BSC has not fulfilled their promises and legal action can be taken by the BSC if the district is not fulfilling their obligations.
9	A progress report was submitted to the government; however, there does not appear to be consequences for not completing such a report.	A progress report of the funds spent and the projects implemented must be prepared annually and shared with all BSCs members and the district administration. Penalties need to be put in place for mishandling of funds.
10	No audits of CCBs and/or CCB projects are conducted.	In the first year of operation a bi-annual audit is undertaken by the district administration of all BSCs, which reviews the performance of all board members and the committee as a whole. In all subsequent years, annual audits are undertaken. The audit results are shared with the community members of the BSCs.

The importance of integrating women into leadership, particularly at the community level, has been extensively researched. Young (2016) stated in a CNN article “women typically invest a higher proportion of their earnings in their families and communities than men” (p.1). Therefore women’s participation in the decision making around the distribution of funds or non-monetary benefits is likely to be more community orientated and egalitarian. Women, due to their roles as caregivers and homemakers, have

a detailed understanding of the needs of all community members and are able to pinpoint priority areas for investment.

Given that ultimately the aim of a BSM is to maximise the benefits for affected local communities, women should be given a seat at the table, so that they can ensure benefits are used to improve aspects such as maternal and child health, nutrition and education. The integration of women in leadership, especially in remote and rural communities in Pakistan, might prove culturally challenging but it is important that this step is not missed out as it is likely that having no female representations will not lead to the same equal distribution of benefits. Projects should find ways for women to contribute and have a say, including conducting women only consultations, hiring a female community liaison officer, hosting information sessions for women and inviting anonymous feedback where women are enabled to participate (e.g. place a suggestion box in the local school or health center).

The establishment of new BSCs, if they are deemed the right entity by the local communities, could prove a viable vehicle to receive money and manage funds from the WUC but it could also be the start of local platforms that effectively represent their communities and are equipped with the right partnerships and knowledge to negotiate and act as equal partners in negotiations with project developers and local governments. Good leadership that represents the interests of all BSCs members is key. To guarantee that leaders take their position seriously and feel appreciated, some basic compensation, good capacity building and oversight must be provided. The selection of board members is an important step in ensuring the success of the BSM, as each member must represent the

interest of all community members rather than only those of the elite or their respective family / tribe.

Establishing defined rules and regulations for each BSC, which can be adapted to suit the local context, are vital in managing the framework in which the BSC is to exist. Finally, putting in place audits, progress reports and public consultations is important as they ensure full BSC member participation as well as making the work of the BSC and its committee members visible, thus helping to ensure that accountability for all elected committee members is maintained.

Beyond the establishment of BSCs, it is important that agreements are developed and put into place that benefit the local community from the early stages of the project. The BSC is merely the vehicle that manages projects and funds but the decisions of how the wider community should benefit from hydro projects and the benefits generated should always be decided in a collaborative and participatory environment.

A study conducted by the International Rescue Committee and the University of Peshawar (2016) on gender priorities in community implemented health projects, demonstrated that when priorities and planning activities were undertaken separately (largely for cultural and religious reasons) “that men and women demonstrated clear and specific differences....while some common threads run across all communities in terms of needs relating to water, sanitation hygiene and environmental health”. These types of cultural barriers and differences in priorities must also be considered when identifying, developing and executing benefit agreements and projects for the community. Gender specific consultations and separate planning processes that are then combined into one priority list, as was done in the health project examined by the International Rescue

Committee and the University of Peshawar (2016), is a good approach that could also be applied in the realm of benefits sharing, particularly with regards to non-monetary benefits.

Non-Legislative Agreements

Good governance is clearly a key factor underlying the successful implementation of BSMs, particularly ones embedded in a legislative framework, like the one proposed. Legislative based BSMs are however only one potential option that can be considered for sharing benefits. Particularly in the Pakistani context, where many obstacles will need to be overcome for the successful implementation of a BSM, non-legislative and non-monetary options should be examined. In the case of Peru for example, the Ministry of Andes introduced a reward for an ecosystem services scheme designed to allow communities downstream to continue to benefit from water related ecosystem services, while ensuring that part of the benefits are transferred back to the people who maintain the ecosystem upstream (CGIAR, 2014).

In Pakistan the suggested legislative BSM option is linked to the operation of the project, which means that communities will experience all negative impacts for years before receiving any benefits. To ensure that benefits sharing starts right from the outset of the project, it is important that the project prioritises non-monetary benefits such as job creation, watershed management, habitat conservation, aquatic life restoration, local infrastructure development (e.g. schools, roads), scholarships for education and training opportunities for community members.

All these options should be discussed in an open two-way dialogue with the community and be defined and written down as part of the company's corporate social responsibility strategy or as a mutual agreement between the project and the locally affected community. It is important that these discussions also agree on budgets and timeframes to avoid raising false expectations and frustrations. The most important element when implementing these non-legislative options is community integration and consultations, as otherwise projects have less buy in and are likely to be less sustainable.

The WCD (2000) highlights the fact that lack of decision making by local communities and insufficient public participation were one of the single most important factors leading to the failure of dam projects worldwide. The IFC (2012) suggests that an effective way to encourage local participation is to set up a working committee that works alongside the project. A study conducted by Baldwin and Twyford (2007) that examined public participation and decision making in dams projects worldwide, stated that "consultative committees and working groups help build mutual trust and respect, promote open dialogue and the exchange of ideas, and generate shared understanding, joint gathering and analysis of data, cooperation, and collaboration" (pg.13).

In the context of Pakistan, like in other countries with similar social and cultural contexts, this would also enable projects to have separate consultations with men and women or establish women only committees for projects, so that gender differential priorities can be aligned and adequately considered. It is important that all agreements, projects and interventions are monitored on a regular basis by the project company and priorities of the community as well as those of men and women be updated at least on an annual basis to ensure that benefits are aligned with the current reality on the ground.

BSM Gilgit-Balistan

To better understand the local conditions of Gilgit-Baltistan and appreciate the challenges that the implementation of the proposed BSM could face, a site visit was conducted by the author in July 2017 (see Box 1 for details regarding stakeholders met and activities undertaken).

Box 1: Site visit Gilgit-Baltistan

The author found that the local dynamics and political context of Gilgit-Baltistan, present a unique challenge with regards to the implementation of the proposed BSM. Through informal discussions with a variety of stakeholders (e.g. government officials, NGO workers, local residents), it became clear that one of the biggest challenges will be to ensure that the financial benefits provided by the proposed BSM are actually passed from the government to the community, as there is no precedent for this and the administrative links to make this happen currently do not exist.

NGOs play an important role within the society of Gilgit-Baltistan and occupy a large presence. Their existence among rural and poor populations means that they are well placed to fulfil the role of facilitator in the early stages of the BSM implementation and provide capacity building to local community members. Many local residents live in remote areas and are impoverished, therefore they are very keen to receive benefits from projects that are likely to cause adverse impacts; however, local communities are often not set up to receive and/or manage funds adequately. The integration of the local community in the BSM process would therefore require systematic capacity building to make it fully sustainable and effective, as currently communities do not feel consulted or integrated into government processes and decision making.

The thesis has outlined the additions and changes that need to be made to the Gilgit-Baltistan Hydropower Policy 2017 and the creation of new BSCs to ensure an effective implementation of a benefits sharing mechanism in the administrative territory. However, due to Gilgit-Baltistan's complex local governance situation and their lack of

presence in the federal government, it is likely that the implementation of the Gilgit-Baltistan Hydropower Policy 2017 will not be immediate. Therefore, the thesis has suggested that not only this legislative BSMs be considered but also non-legislative and non-monetary ones to enable communities to benefit throughout the whole project cycle. It is important that these types of agreements are made directly with the community and in a consultative manner to be effective and long term sustainable.

It would be important that BSCs are legislated as part of the new Gilgit-Baltistan Hydropower Policy 2017 to allow an effective local structure to be formed. In the absence of these local structures, the BSM in Gilgit-Baltistan should initially emphasise the establishment of agreements between the project company and the local community to ensure that benefits are received as soon as projects are initiated.

The role of capacity building is often fulfilled by NGOs, which are widespread throughout Pakistan, especially in the northern areas of Pakistan. In Gilgit-Baltistan, the void that was left by the often insufficient public apparatus was filled by numerous NGOs (Mir, 2009). NGOs focused in the right way, could have a positive impact on the implementation of the BSM, particularly in the realm of capacity building. NGO can help communities understand their rights and enable them to negotiate as an equal partner, particularly when signing bi-lateral agreements between communities and projects for the reception of benefits (monetary or non-monetary).

Kurosaki's (2007) study on CCBs shows a positive correlation between the presence of NGOs and the number of CCBs established in a specific area. This means that linking up the right NGOs with the newly established BSCs and locally affected communities could boost the positive impact and strengthen local capacity. Furthermore,

Khan & Anjum (2013) found that local NGOs played an important role in raising awareness and launching management programs in the region of Muzaffarabad, which suggests that the same could be replicated in Gilgit-Baltistan.

Research Limitations

My research was limited to BSM programs in the hydropower sector, and therefore did not address any other sectors, although general reference has been made to other sectors to support the overall argument. Further, the focus of this thesis was limited to the administrative territory of Gilgit-Baltistan and is therefore was not an in-depth country analysis of Pakistan. Only a limited number of case studies on royalty schemes in the hydropower sector were included as part of the research, as there were not many found to be publicly available.

A site visit was conducted to Gilgit-Baltistan; however, due to the lack of availability of public data and the limitations placed on foreign researchers, the visit did not provide extensive material to be included in the research other than a better personal understanding of the area and its local context. Lastly, my inability to speak and read Urdu meant that all of my research was based on English publications, which have been written by both Pakistanis and non-Pakistanis. This meant that the research did not delve into as much of the local context as potentially possible as it is likely that grassroots level publications are written in the local language.

It was expected that the analysis of BSMs in the hydrosector in developed and developing countries would generate certain key factors of success, which in turn could be used to propose additions and changes to the future implementation of the Gilgit-

Baltistan BSM, which is currently only in policy form. Developing a successfully implementable BSM framework for Gilgit-Baltistan could provide the basis for a framework for a nationwide BSM model. However, considering the political context, it does not appear that this will happen imminently. Therefore, alternatives and complementary mechanisms should be considered. Since all benefits sharing generally hinges on the successful integration of the local community, consultation and continuous engagement with local stakeholders is key.

‘Business as usual’ projections indicate that if hydropower projects in Pakistan do not establish formalised BSMs and do not consider the implementation of alternative benefits agreements with the local community, then social unrest and opposition will continue, leading to potentially violent outbreaks which could lead to costly project delays and reputational damages for companies. It could also impact foreign investment in the hydropower sector, as foreign investors could be deterred by the potential for reputational damage. Most importantly however, it is likely to lead to a degradation of the quality of life of locally affected community members and a greater spread of poverty and frustration among populations in project affected areas. The implementation of a nationwide BSM and non-monetary / non-legislative agreements could present a viable ‘win-win’ situation for communities as well as project developers, sponsors and investors and thus ensure that hydropower projects are sustainable in the long run.

Future studies should be undertaken to determine how this research could be extended to the national level in Pakistan and whether the locally defined elements are applicable in other provinces and, more importantly, at the national level. It would also be beneficial if these studies were conducted by a native speaker of Urdu.

Conclusions

The Gilgit-Baltistan Hydropower Policy 2017, which outlines the establishment of a legislative BSM, represents a major step forward in the hydropower sector in Pakistan. Applying the changes to the Gilgit-Baltistan Hydropower Policy 2017 outlined in Table 2, it would enable a successful and inclusive implementation, likely leading to a positive change in the country's hydropower sector by bettering and transforming the quality of life for thousands of community members. Communities that experience constant struggles and greater amounts of poverty due to local hydropower projects, could finally benefit from a systematic BSM and receive a fair share of the monetary revenue, which would in turn enable them to invest these funds in beneficial local development.

The research conducted in this thesis concluded that the option of a BSM in Gilgit-Baltistan appears feasible but challenging. This is mainly because local institutions are weak, there are currently no local entities to receive and manage funds at the community level and government institutions are perceived to be corrupt by the local population. Thus, a large amount of capacity building for local governments as well as awareness raising to inform local communities of this new initiative will be needed. Defining how the money will be distributed and effectively funnelled from one administrative level to another is important and making sure that those handling the money are able to do so successfully is crucial for the success of a BSM (Figure 5). This type of capacity building can be provided by a qualified local NGO and/or ad-hoc support from trained consultants.

The research showed that a legislative BSM cannot be the sole solution in Gilgit-Baltistan, as it is still in its infancy and therefore it must be accompanied by other local agreements. These agreements should focus not only on monetary benefits but rather non-monetary benefits in the form of training, job creation, habitat restoration and others, which the company is able to start immediately.

The current policy only outlines the ring fencing of money for the district and thus represents merely a first step in the right direction. The thesis focused on providing practical additions to the policy that will need to be updated to establish a viable framework for the BSM. The thesis has outlined how the missing community level will need to be added and has provided a ‘step by step guide’ of what factors will need to be considered to implement the proposed BSM successfully. It also demonstrates that community participation is key and particularly for complementary non-legislative agreements must be considered as the priority. It must be avoided that projects raise false expectations and/or implement measures that not consulted with the community and therefore lack their buy in. An important aspect to consider is the integration of women and the need for separate consultations and female to ensure that benefits are divided equal amongst society members.

The thesis uses Lillehammer, San Martin and Dhillion’s (2011) four key enablers: “1) policies and regulatory framework; 2) stakeholder engagement and community participation; 3) partnership formation; and 4) institutions and capacity building” as its basis and has adapted them to the local context (p.15). It also examines the fact that non-legislative agreements need to be implemented to complement a legislatively based

framework as the two side by side can cover the entire project cycle and serve different community needs.

The transformation of CCBs into BSCs could serve as a community level entity for the management of funds as well as a platform for negotiations and stakeholder engagement (Table 3). The presence of such an entity if necessary, as without the buy in from communities and their ability to negotiate like equals, it is unlikely that any BSM will succeed whether legislative or not. Communities must take centre stage and projects need to provide them with the tools and the capacity building elements to do so. This is the only way the hydropower sector in Pakistan will become truly participatory sustainable.

Creating strict rules of governance, stakeholder engagement and monitoring will ensure that community members are adequately heard and possibilities of corruption and misuse of the funds are minimised. Local committees, ideally made up of men and women, where this is not possible separate committees will need to be established, will enable the creation of participatory and inclusive development strategy for the local area that will maximise the available benefits.

To conclude, while the successful implementation of a legislative BSM, initially at the level of Gilgit-Baltistan, should be pursued, the hydropower sector in Pakistan would also benefit from the implementation of non-monetary / non-legislative agreements with the local community. For Gilgit-Baltistan specifically, a BSM and complementary agreements could present an important stream of revenue and non-monetary localised benefits that could vastly improve local development without much reliance on the federal government. Once the legislative BSM and its complementary

agreements have been successfully piloted in Gilgit-Baltistan, ideally through a small-scale hydropower project during the design and implementation phase, it could be adapted based on the lessons learned and exported to other provinces where the hydropower sector is already active, eventually leading to the establishment of a nationwide model. Here lessons learned from non-legislative agreements in other provinces could also be taken into account to ensure that only the best examples are being replicated.

Appendix

Gilgit-Baltistan Site Visit July 2017

I organized a site visit to Gilgit-Baltistan in July 2017 to gain a better personal understanding and appreciation of the local dynamics and the potential challenges that could be faced when implementing the proposed BSM. It should be noted that due to the restrictions placed on foreign researches in Gilgit-Baltistan and the sensitivity / confidentiality of the subject at hand, no formal interviews or surveys were conducted. Stakeholders did not share information in an official capacity but rather assisted the author in understanding how to foster buy-in for the proposed BSM and explain the current local conditions.

Stakeholders

The author met with a variety of stakeholders who work for the following institutions:

- Water and Power Department of Gilgit Baltistan
- Aga Khan Rural Support Programme
- Chief Minister's Office Gilgit Baltistan
- Women Social Enterprise (WSE) (initiative of the Aga Khan Development Network)
- Local residents of Gilgit Baltistan
- Hydropower Experts and Developers from other regions in Pakistan

Each stakeholder encountered during the site visit, represents a different level of power / influence, interest and vulnerability. The conversations with stakeholders enabled

a deeper understanding of their unique position and their potential contribution to the design and development of a future BSM. Table 4 outlines where the different stakeholders that were encountered during the visit fall within the influence vs. importance spectrum.

Table 4. Stakeholder dimensions of BSM development in Gilgit-Baltistan.

Influence \ Importance	High / Medium	Low / Not known
	High / Medium	Low / Not known
High / Medium	• Government • Project developer / sponsor • Regulator • Funding organisations • Local community (when projects are conducted to IFC standards)	
Low / Not known	• Local community (when projects are conducted to national standards) • NGO	

Lessons Learned

The unique political status and the geographic location of Gilgit-Baltistan make it a challenging context to implement a BSM but at the same time could represent a very good piloting opportunity. The following lessons learned resulted from the site visit:

- The importance of consulting with a variety of stakeholders to better understand their points of view and the perceived opportunities and challenges that exist around the implementation of a BSM
- Considering the level of influence and importance of the stakeholders identified helps to ensure that the right methods and frequency of engagement are utilised throughout the BSM process
- The community should be at the centre of the implementation of the BSM; however, they are not likely to be the most influential stakeholder. Therefore, support and assistance to make their voice heard and their opinions integrated must be offered
- Bringing stakeholders together and finding a win-win scenario for everyone is an important task that should underlie the designing and planning of a BSM.

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