



**THE ROLE OF WATER GOVERNANCE IN HYDROPOWER PROJECT, A
CASE STUDY OF MANGDECHHU HYDROELECTRIC PROJECT AT
TEONGSA, BHUTAN**

Mr. Sangay Tashi

ABSTRACT

This paper employs water governance to study the decision making process of hydropower development in Bhutan. The Royal Government of Bhutan's ambition to achieve "economic self-reliance" by the year 2020 has accelerated the construction of hydropower in various river basins. With such ambitious move by the government without proper consent of the people, contradicts with the unique development policy-Gross National Happiness (GNH).

This paper uses the ongoing Mangdechhu Hydroelectric Project development at Trongsa as a case study to examine decision making process in water governance. To understand the dynamism, twenty five key informants from various organizations including Mangdechhu Hydroelectric Project authority were extensively interviewed. Besides, two participatory focus group discussions in village of Samcholing and kungarabten were held understand people's perspective. Further, this paper draws data from official reports, articles and related news papers.

Using the concept of water governance, this paper argues that there is lack of water governance in Mangdechhu Hydroelectric Project; instead, the concept of "water government" is followed. The decision making process is of traditional nature, a top -down approach. The other interesting phenomenon observed is the notion of "national interest" from both community as well as government has overshadowed the new approach of decision making- the bottom-up or grassroots. This analysis help us to understand how people and government corresponds to call for greater national interest; leaving a section of affected society unhappy for years to come in GNH driven society.

However there is strong indication from the government - working towards the supply of water governance in the country. Therefore, in conclusion, a paradigm shift from water government - from a state centric "command and control" to more decentralized- integrated demand driven water governance is necessary for sustainable mega hydropower development in the country as general and Mangdechhu in particular .

*(KEY WORDS: WATER GOVERNANCE, HYDROPOWER, EQUITY AND SUSTAINABILITY,
DECISION -MAKING PROCESS)*

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Mr. Sangay Tashi
Master of Arts in International Development Studies
Faculty of Political Science, Chulalongkorn
University, Bangkok, Thailand

I. Introduction

However clean and renewable it may be, without water governance; hydropower development may not serve the purpose of sustainable development, instead may lead to tragedy. The Royal Government of Bhutan's ambition to attain economic self reliance by the year 2020 has accelerated development projects, particularly hydropower projects. Bhutan is small landlocked Buddhist country with a total area of 46,500 sq.km housing over 700,000 people, sharing its boundary with two Asian power blocks: Tibet-china in the north and India in the south.

Bhutan started its planned five years economic development programs in 1961, with government of India's assistance (GoI). A precautionary step was taken to balance the development or to pressure to modernize (Hodge, H.N.1992). From 1970s, Bhutan pursued new development paradigm known as Gross National Happiness, founded by the 4th king of Bhutan. This paradigm shift from mainstream development was to suit fragile, small mountainous kingdom, a kingdom blessed with abundant rich natural resources particularly fresh water. There are over 20 major rivers flowing from north to south cutting deep mountains presenting perfect place for hydropower generation.

Bhutan has an estimated potential over 30,000 MW and equivalent to 120 TWh mean annual energy generation. So far 23,760 MW has been studied and identified technically feasible in four major river basins: *Amochu* basin, Wangchhu basin, Punatshnagchhu basin and Manas basin. Manas basin is the biggest basin with four major sub-basins: Mangdechhu basin, Chamkharchhu basin, Kurichhu basin and Drangmechhu basin. Currently, there are 28 (micro,

small, medium, large and mega) hydropower plants already being built in various location of the river basins.

Mangdechhu Hydroelectric Project one among ten mega projects planed under the initiative to develop 10,000 MW in Bhutan within year 2020; and various high levels bilateral agreements have been signed between Bhutan and India. Among ten, three mega projects namely Punatshangchhu I, Punatshnagchhu II, and Mangdechhu are in various stages of construction face, and a detail project report study for others are being carried out.

The researcher focuses on decision making process by employing water governance to study Mangdechhu Hydroelectric Project. Using 'water governance' approach, this paper analysis the actors influence over decisions making process. Taking the ongoing 770 MW Mangduechhu Hydroelectric Project at Trongsa in Bhutan as a case study to present micro-analysis to understand the bigger picture of decision making process in hydropower development.

Water governance can be understood as the interaction of political, social, economic and management system (Bakker, 2006). Bakker (2006) differentiates "water management" and "governance". Management refers to the operational approaches we adopt and the models, principles and information we use to make those decisions, governance refers to how we make decisions and who gets to decide accordingly.

According to 2008 constitution of Bhutan, all the natural resources within the jurisdictions of sate belong to state; and state has the full authority over the resources. Excessive sate visible hand on every common pool resources undermines customary practices, thus, inching towards "the tragedy of commons" (Hardin, 1968). As suggested by Roger & Hall (2003) that "decentralization" in "integrated water resource management" is the important components for sector reform to achieve "effective water governance". Simply one system fit all - serves no purposes, to be more effective, improvements in water governance systems is obligatory (Moriarty et al., 2004). In Mangdechhu Hydroelectric Project, water governance is not visible, in the sense; grassroots stakeholders' representation in decision making process not so positive.

In today's world, in fact, bottom –up demand driven approach is more practical rather than supply based governance (Young & Young, 2009) because, grassroots people have long term experience; situational knowledge and understanding of the place. For this reason, it helps to minimize negative consequences on resource and maximize human happiness (UNDP, 2007).

According to Cleaver (2007) current writing on governance and particularly water governance tends to be gender blind. Apparently, water governance in Bhutan is very wooly, and lacks strong institutions where important stakeholder like community in hydropower development is invisible. Therefore, admittedly, gender issue cannot be determined in real sense, but fairly concluded that gender is not a big issue in Bhutan from the cultural practices.

The researcher put forward the assumption that good water governance is the basis of achieving socially equitable and ecologically sustainable hydropower project in Bhutan. Additionally, inclusive stakeholders participation throughout the project stages is crucial, especially when country is going through rapid transformation; economically¹ as well as politically².

In this paper, the researcher begins with research methodology, followed by an overview of Bhutan's economic development policy and hydropower development. Then the researcher focuses on discussion and analysis on the existing institutional arrangements and stakeholders decision making process through the prism of water governance in Mangdechu Hydroelectric Project.

Therefore, in conclusion, the new concept of water governance can be a value addition to Gross National Happiness development. On the whole, a paradigm shift from state centric "command and control" water government to more decentralize- integrated water governance necessary in Mangdechhu Hydroelectric Project and other numerous mega hydropower projects to be built in a small country.

II. Research Method

To understand the dynamism of decision making process in the ongoing Mangdechhu Hydroelectric Project at Trongsa; this paper draws data from government reports, related laws and detail project report (DPR)³ and field notes, interview transcripts gather from over twenty five key informants from various organizations who were extensively interviewed. In addition, two participatory discussions engaging eight to ten villagers in villages of Samcholing and kungarabten were conducted in the project affected communities.

¹ Green and self reliant economy, economic development policy 2010

² From absolute monarchy to democratic constitutional monarchy from 2008

³ Detail Project Report of the Mangdechhu prepared by NHPC only available in project office*

The in-depth interview was conducted under four categories: state, non state, civil society and community from 1st June to 26th June 2013. To get more in-depth understanding and perspective on decision making, further relevant central government, district government and local government officials were interviewed.

I spent around twelve days in the various project construction areas, project offices and district offices not only interviewing but also observing and interacting with as many people as possible. My official position⁴ has helped in getting access to the officials and report(s); also people were willing to share their opinion with a hope that researcher might help to bring changes in future projects. In addition, I had opportunity to interact with affected people during my field study.

On the one hand, during my field study, it was the second parliamentary election campaign period, therefore I had to seek written and verbal permission during the course of my field study. On the other hand, the offices and officials were busy in attending meetings; the financial year in Bhutan closes in the month of June every year. These incidences made the researcher chase the right people and wait for very long hours, indicating the system of organization and working atmosphere in the country.

III. Bhutan's Economic Development Policy

Bhutan's economic development policy is guided by the philosophy of Gross National Happiness. This alternative development paradigm was propounded by the 4th King of Bhutan in the early 1970s, focusing on human happiness. The new development paradigm or GNH is based on four pillars: (1) Sustainable equitable social-economic development, (2) Conservation of the environment, (3) Preservation and promotion of culture heritage and (4) Promotion of good governance (Thinley, J. 2005). GNH is a policy intervention aimed at increasing economic growth and social well being of people without compromising the environment and traditions (Planning Commission. 1999). For instance, the Guidelines for Preparation of the Eleventh Five Year Plan (2013-2018) circulated by Gross National Happiness Commission⁵ outlines Self

⁴ District Cultural Officer for 7 years in two districts (Zhemgang and currently working in Samdrupjongkhar)

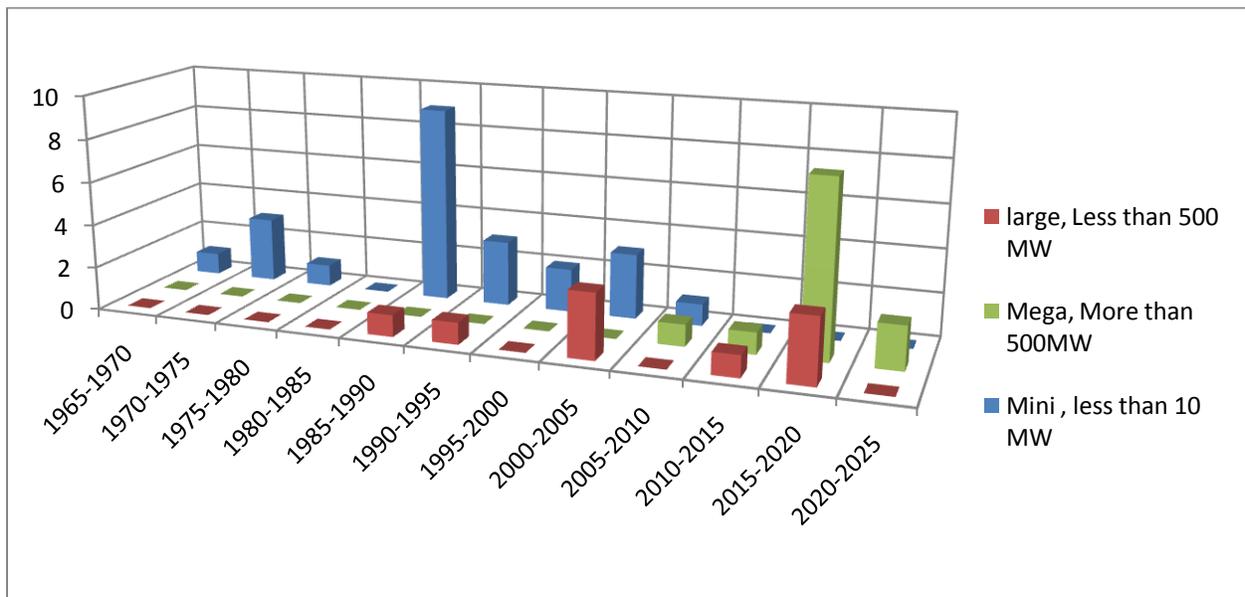
⁵ Gross National Happiness Commission is responsible for national planning

Reliance and Inclusive Green Socio-Economic Development without compromising the core values of GNH.

In addition, Bhutan Economic Development Policy 2010, and Bhutan Sustainable Hydropower Development policy 2008, highlights the development of sustainable hydropower to become self-reliant country by the year 2020. Hydropower is the biggest source of revenue for Bhutan and has relatively comparative advantage, thus it is natural choice and opportunity for Bhutan to invest. The Director General of Department of Hydropower and Power system (DHPS) said

“...our decision to build the 10 hydropower projects totaling to more than 10000 MW by 2020 is to maximize the benefits from the conducive situation we have at present, i.e., the excellent Indo-Bhutan friendship that we have, the electricity demand in India growing manifold and the win-win implementation modalities that have been agreed between the two countries with India agreeing to fully render all required assistance to implement the projects. What more conducive atmosphere could exist than this for development of hydropower which leads to win-win venture to both the countries?” (Interviewed on 19 June, 2103)

Figure 1: Chronological trend of hydropower development in Bhutan



Source: Statistical Yearbook of Bhutan 2012

This phrases like ‘blue gold’ or ‘moving gold’ for rivers in Bhutan is popular because it has become largest income generator for the country. For instance, in the year 2012, Bhutan’s earning from selling electricity was Ngultrum⁶ 10 billion (*MoEA, 2012*) In other words, hydropower make up to 45% of country total revenue, roughly 20% of gross domestic product (GDP) is from Hydropower. We should not undermine the intrinsic value of the rivers, reflecting from the past and considering future implications. Trapping all the rivers for hydropower generation may not be best options. So far, no detail studies have done on impact of damming rivers in Bhutan, but increase symptoms of seasonal variation, erratic rains are ominous- has direct correlation to dam construction per se. The figure 1 represents the chronological trend of hydropower development from 1970 to till 2025. One can understand the cumulative social and environment impact on the community over the years without having proper water governance.

Table 1. Section of budget summary for the FY 2012-2103

Nu. In millions

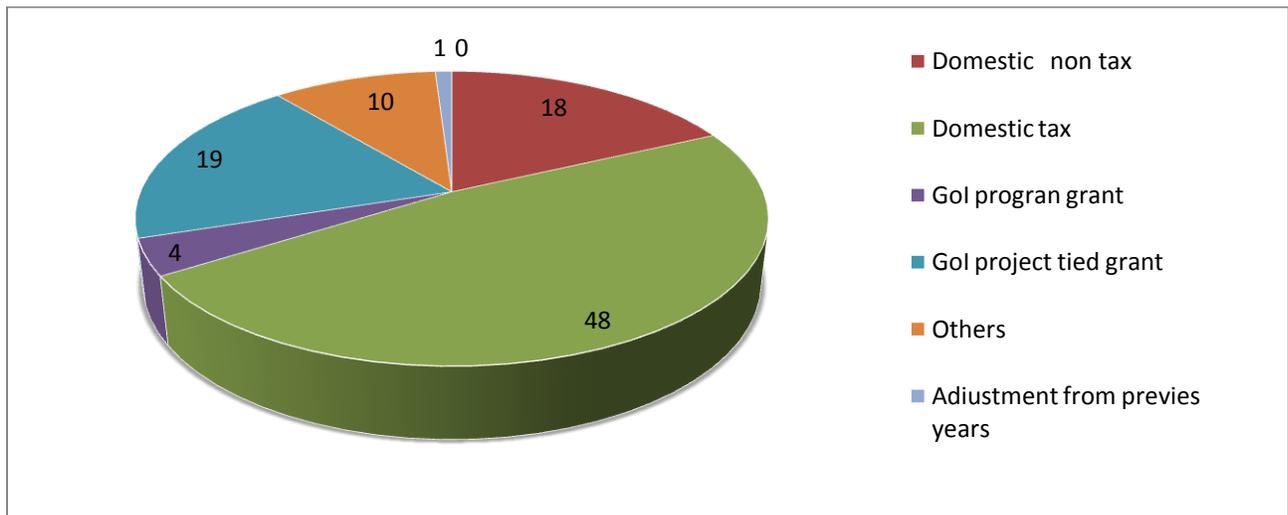
Resources	Estimate	% of total
Total Resources	31,891.042	100
I. Domestic revenue	21,157.457	66
1. Tax	15,282.381 48	48
2. Non-Tax	5,875.076 18	18
II. Other Receipts	42.344 0	0
III, Total Grant	10,691.241	34
1. Total Government of India (GoI)	7,504.326	24
2. Total others	3,186.915	10
IV. Program Grants	2,075.725	7
1. GoI	1,400.000	4
2. Others	675.725	2
V. Project-tied Grants	8,615.516	27
1. GoI (includes SDP Nu.1,173.280 m)	6,104.326	19
2. Others	2,511.190	8

Source: National Budget, financial year (FY) 2012-2103

⁶ Ngultrum (Nu) Bhutanese currency paged equal to Rupee (Rs) Indian currency

As shown in table 1; Bhutan’s economic development is fully depended on financial support from donor countries; amongst all, India tops the list. From total, 24 % of total estimated budget for FY 2012-2013 is contributed by GoI, in various forms: program grant and project tied grant- mostly in hydropower projects and aids usually comes with conditionalities, GoI aids are no exception, if not more than other international aids.

Figure 2. The percentage composition of budget for the FY 2012-2013



IV. Hydro Power Development in Bhutan

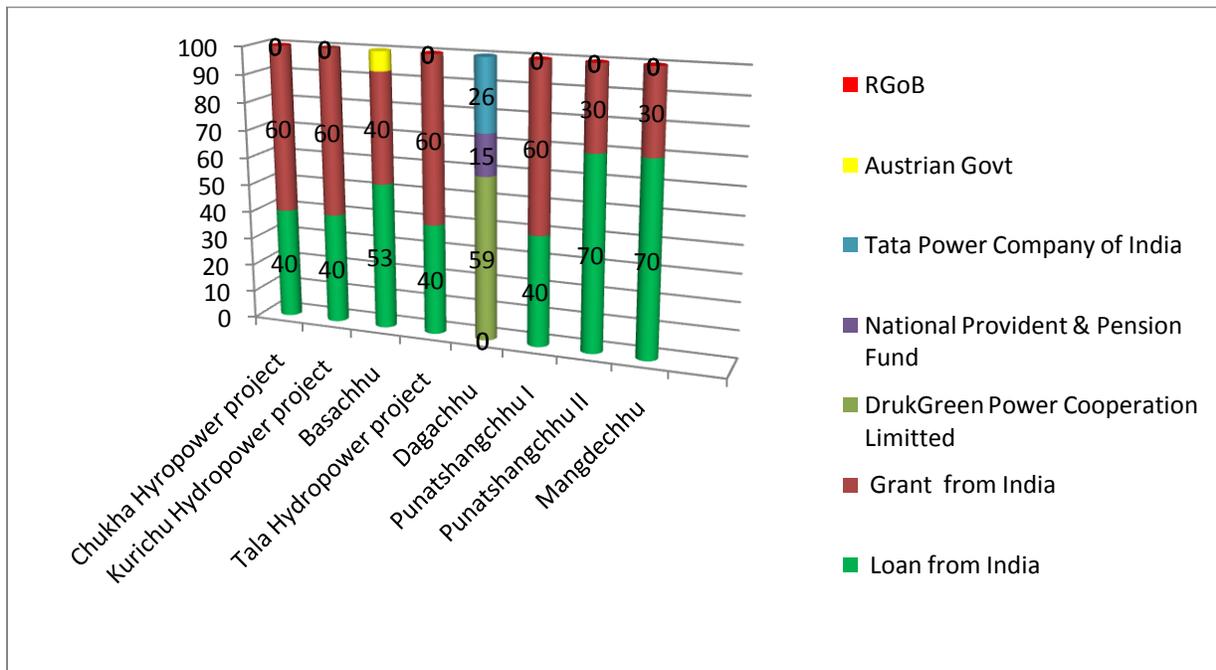
The history of hydropower Bhutan begins with commissioning of *Jungshina* mini hydropower plant on the *Samtenlingchhu*, Thimphu in 1967, thereby, replacing the diesel generators. The Chukha Hydle Project (360MW) built under bilateral agreement funded by the Government of India, 60% grant and 40% loan. Successfully commissioned in 1986, was major accomplishment for Bhutan and to India, which marked the birth of subsequent projects.

Realizing the potential of hydropower production, government came up with Bhutan Sustainable Hydropower Development Policy 2008, focusing on harnessing maximum benefit with minimum impact, in order to attain ‘economic self-reliance’ and “energy security”. The ongoing Mangdechhu Hydroelectric Project is one among 10 mega hydropower projects which is planned to build within year 2020, to achieve the vision of self reliant country by the year 2020.

Although, there are mineral deposits in the country but due to unfavorable geographical condition; the recovery has become very difficult and expensive. In addition, the global move to “green and clean energy” has given leverage and legitimacy to concentrate on hydropower development. That is to say, hydropower development has become much easier with less justification to offer in Bhutan. In brief, government and people view hydropower as an important source of revenue generation and to get out from cycle of poverty, even someone has to bear the cost.

Apparently, India is only one country that has major ecological footprints in Bhutan’s hydropower sector. All most all the hydropower projects are being funded India and built by Indian companies. Chellaney (2011) argues that it is Indian government’s effort to keep its foothold in the last neighbor after losing all South Asian neighbor to the Chinese control both economically and politically. Mangdechhu Hydroelectric Project is fully funded by government of India under bilateral agreement, 70 percent loan and 30 percent grant. The figure 2 present the change in funding modalities starting from Chukha hydropower to current project i.e., Mangdechhu hydropower project in chronological order.

Figure 3, Funding sources and modalities for hydropower projects in Bhutan



However, the common feature are, firstly, the project management structure remains all most the same in all the projects – Managing Director (Indian); Joint Managing Director (Bhutanese); Director Finance (Indian); Director Technical (Indian) (MHPA,2013). Secondly, the same Indian public and private companies i.e., National Hydroelectric Power Corporation (NHPC), Water and Power Consultancy Services Ltd and M/s Jaiprakash Associates Ltd, M/s Gammon India Ltd, M/s Marti India Ltd, M/s kalpataru Power Transmission Ltd and Hindustan Construction Company Ltd are seen taking up the one or the other construction work.

The potential risk portrayed here is that RGoB's excessive emphasis on 'hydropower economy' is risky. Similar analogy can be drawn to Petro-Dollar of Middle East to "Hydro-Rupee" for Bhutan. Moreover, the internal and external factors such as political, economic, and ecology must be seriously considered, because the deal of buying and selling fairly depends on the political situations in both countries. Otherwise, there is a danger of 'scraping deals' due to (un)avoidable political circumstances endangering the security of small country.

In contrast, Biswas (2012) praise as a successful model between Bhutan and India in hydropower development which other SAARC member countries should follow. Strikingly, the recent unilateral withdrawal of subsidy on LPG, kerosene (*kuensel*, July 2, 2013) of from Bhutan by India is obvious precursor to the electricity deal, where power of decision lies in the hands of Indian government. In the similar stance to Biswas, the Chief Engineer in DHPS who was engaged in Mangdechhu project said

"...our decision to built hydropower projects [Mangdechhu] is to take advantages of conducive condition i.e. India has huge energy market and Bhutan has enormous potential to generate hydroelectric coupled with special bilateral relationship between India-Bhutan and presence of political stability in Bhutan, development of hydropower is natural choice for Bhutan." (Interviewed on 19 June, 2103)

To put it differently, it is clear that opponent of large dam are "not against the dam construction" but only objecting the ways and pace at which the dams are being built which results in "conflict" over sharing "scarce resource" (Percival, V., & Homer-Dixon, T. 1998) or otherwise driven by a political and economic motives (Chellaney, B., 2009,2011; Dalby, 2009,126).

In conclusion, unless a better institutional mechanism established in harnessing water for hydropower generation, the resource will rather becomes "curse" inviting conflicts and confrontations among the end users (Swain, 2011).

4.1. Institutional Arrangements

Institutions plays major and important role in achieving good governance, be it water or any other resources. Without proper institutions, allocation of resources to the people in a fair and just way will be very daunting task. Institutions can be both formal and non-formal. Formal describes the state lead bureaucratic hierarchal systems and non- formal can be understood as market /network lead, private, or NGOs based.

The institutionalizing hydropower corporations (Chukha, Kurichhu and Basochhu) which functioned independently under one single body, i.e. Drunk Green Power Corporation (DGPC) in 2008, and the restructuring of erstwhile department of power into Department of Energy- responsible for policy and planning for all aspect of energy and power, Bhutan Power Corporation- responsible for transmission and distributions and Bhutan Energy Regulation- responsible for regulating the electricity industry - a continuous preemptive measure to resolve some of the emerging institutional problems.

On the legislative side, enacting laws such as Water Act of Bhutan, 2011; Economic policy of Bhutan, 2011; Sustainable Hydropower Development Policy, 2008; Foreign Direct Investment Policy 1997 (revised, 2010; (Draft) Renewable Energy Policy, 2012; apart from The Bhutan Forest Act 1969; and The National Forestry Policy 1974, is a sign of adaptive response to the changing needs of the country.

Although there numbers of NGOs and CSOs, observation from my field study and other reports, there are no active NGOs and CSOs involved in MHPA. Royal Society for Protection of Nature (RSPN) has occasionally engaged itself and currently did research on biodiversity in project area. Other than that, only formal institutional are seen actively engaged in the project.

4.2 Water Governance

Life would not be possible without water, but water without governance means heading towards the "tragedy of commons" (Hardin, 1968). Thus, water governance is necessary for sustainability of living being. Water governance can be understood as the interaction of political, social, economic and management system (Bakker, 2006). Bakker (2006) also differentiates "water management" and "Governance". Management refers to the operational approaches we adopt and also the models, principles and information we use to make those decisions, governance refers to how we make decisions and who gets to decide.

In Bhutan, water governance is new paradigm; but water government is being practice throughout the country, which equally implies to Trongsa dzongkhag. For instance, rural drinking water is under Ministry of Health and Ministry of Work and Human Settlement, through municipality looks after urban water, irrigation water is under the Ministry of Agriculture and Forest, and Ministry of Economic Affairs looks after water for hydropower. It has been very difficult to synchronize among the agencies with individual set objectives.

To harmonize and introduce water governance system, the water Act was enacted in 2011, however, the act itself became the bone of contention and already government has recommended for amendment in the coming parliament sessions. On the contrary, the Dzongkhag administration of Trongsa has started to enforce water, making matters worse for the project as well as to the communities. The Mangdechhu Hydroelectric Authority was established in 2010, to manage the construction of the project. The Chief Personal and Administrative officer, MHPA office in Trongsa reluctantly told me

"...the new water is hampering our work, because as per the act, we have to seek approval and get consent from the community. In some area, communities are not will to share water with us...our heavy machines needs constant supply of for various purposes..." (Interviewed on 8th June, 2013)

The water Shed Management Division, under Ministry of Agriculture and Forest, Thimphu has completed identification of various catchment areas in 10th five plans and in coming 11th five plan, they have proposed for water shed management committee, subcommittee

throughout the country, but have no plan to initiate river basin organization. Forest Ranger from Water shed Management Division, who was involved in survey of Mangdechhu Hydropower project said

“ river basin organization is not applicable for bhutan because of the scale, instead we are planning to have water shed committee in geogs, dzongkhags and national level”

(Interviewed on 19th June 2013)

While when we were discussing the topic of water governance, he said

“...as far as I am concern, there is no such thing as water governance in Bhutan. Informally there are may exist in the parts of the country, but I am sure there is no water governance as such in mangduechhu. I think there are rooms for creating one which will be a model for the projects which are in pipeline” (Interviewed on 19th June 2013)

In conclusion, community and even people working in the water related sector, water governance is a new topic and they are not sure about. Of course, one model fit all will definitely not going to work, instead hybrid model is possible which can benefit all the society.

4.3. Stakeholder Decision Making

A stakeholder can be understood as a single or multi-party (people or organization) directly or indirectly involve “common pool resource” water (Steins and Edwards 1998). In single stakeholder, decision making process is mostly taken by the government; centralized state dominated by bureaucratic elites, a top-down approach. However in multi-party stakeholder, the decision making process is democratic, involving all relevant stakeholders; community, NGOs, Private and individuals, in short a decentralized bottom-up approach to governance.

Under the leadership of 4th king, a series of reforms in governance has been carried out starting from 1980, decentralization of power from central government to Dzongkhag, and to the Gewog level was initiated in line with GNH policy. The development committee known as

Dzongkhag Tshogdu (DT)⁷ was established in 1981 and Geowg Tshogde (GT)⁸ in 1991, for Dzongkhag and Gewog respectively. The Local Government Act of Bhutan, 2009; is an attempt to continue the decentralization process and devolution of power and authority to DT and GT to exercise in decision making.

There are positive signs that Bhutan is moving away from conventional forms of governance, which usually is dominated by bureaucratic elites 'top-down supply-driven approaches (ADB, 2010). Realizing bottom-up demand driven approach is more practical because of long term experience, situation knowledge and understanding of various local people, thereby helps to minimize negative consequences on resource and maximize human happiness (UNDP, 2007).

On the contrary, Watson, Deming and Trefny (2009) argue that reallocating responsibility among a range of public, private and civic groups has become problematic because the water bureaucracy will lose some of its accountability and legitimacy. There is also concern that decentralized decision could have a negative impact on poor (e.g. Cleaver et al, 2006).

In case of Bhutan, there is no literature suggesting exclusion of stakeholder in the decision making process. From the various media reports and reports have revealed that only high levels and bilateral stakeholder meetings are conducted concerning the Mangdechhu Hydroelectric Projects. Mangdechhu project was not routed through both the local development forums- Dzongkhag Tshogdue and Geowg Tshongde respectively.

Although there is considerable impact to their lives and community by the project activities, people still consider national interest more important than an individual interest, Pema one affected villager said

“...impact from the project on our lives is visible that I don't have to detail; dust, noise and other social disintegrations, however, we were informed that this project is national project with so much money at stake... maybe this is the gratitude we have to shown to our country by helping project to move on instead... (Interviewed on 5th June 2013)

⁷ District council

⁸ Block council

During my first focus group discussion in Samcholing village, participants almost finished their discussion time making complain about the negative impact of project on their community life, how authorities convinced them to give the land for project with promise to make their lives much better with so many offers which are yet to materialize. Later, one participant said

“... I am not against the building of project but I am not happy with the way they took my land and compensation they give us. Sometime I wonder why we are not informed at the very early stage, in the final stage we are informed with no choices. (Interviewed on 12th June 2013)

GNHC is responsible to oversee overall developmental activities of Bhutan. GNHC acts as umbrella organization to for all the development activities in the country. In the case of hydropower development, it is outside the purview of GNHC. The chief planning officer; perspective planning division, GNHC, justified:

“Hydropower Projects are long term development investments and are usually planned outside the scope of the normal five development plans. GNHC is a key agency in the inception of such projects in collaboration with the Ministry of Economic Affairs”.

(Interviewed on June 18, 2013)

However, he asserted his position and clarified that GNHC is not totally out of the scene, but closely working with , for instance in Mangdechhu Hydroelectric Project,

“In the construction phase, GNHC does not have any direct role other than monitoring the impacts at a national level. However, we may, intervene if we feel that we can add value to the project or feel that there is any digression from the set norms and policies”

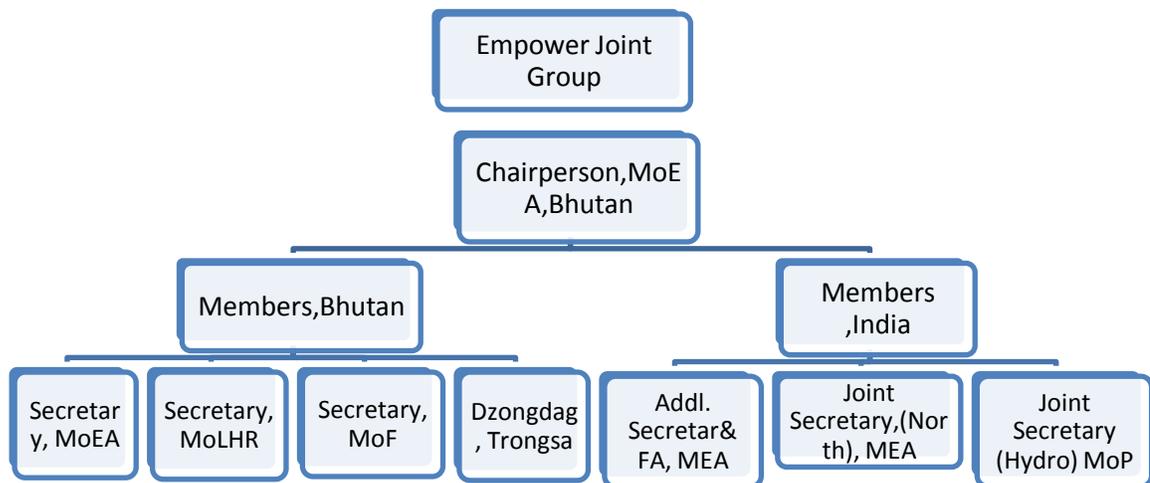
(Interviewed on June 18, 2013)

To decide and overlook hydropower development in Bhutan, Empower Joint Group (EJG) has been set up, which functions as the apex Bhutan-India body in deciding hydropower development in Bhutan and Mangdechhu Hydroelectric Project was also discussed recommended to the government for approval(see figure) To achieve socially just and ecologically sustainable

hydropower, involvement of relevant is necessary, however the study show, there is an indication that some relevant stake holder has not been taken into board. For instance, Director General of Department of Culture expressed his concerns:

“So far no project(s) especially hydropower has involved Department of culture in decision making process either regarding the cultural concern or any other matters. As far as I am concern, they should (any big developmental project(s)) involve Department of culture. As you are aware that Bhutan is known for unique culture and traditions and department of culture is responsible for preservation unique culture and tradition. Mangduechhu hydropower project has not consulted our department and they should be responsible if anything goes wrong regarding tradition and culture in that area...”
(Interviewed on 14th June 2013)

Figure 4: Composition of Empower Joint Group of Mangdechhu Hydroelectric Project.



In addition NGOs express their concern of not including them in the decision making or otherwise governance. Royal Society for Protection of Nature, the Executive Director, Lham Dorji (Ph.D) said

“...I do not remember at any point of time RSPN was actually engaged in policy making process regarding hydropower projects. As a capacity of NGO, it will be beneficial for all the parties (people and the government) if we are engaged in such important ventures” (Interviewed on 14th June 2013)

While the Chief Personal and Administrative Officer of Mangdechhu Hydroelectric Project Authority office at Trongsa said

“Our office has always welcome NGOS and CSOs for their engagement with us and to give us constructive criticism, whereby we can improve our system for the benefit of the country and the people”. (Interviewed on 8th June, 2013)

While there are conflicting views on participation from the various government organizations in Mangdechhu Hydroelectric Project; implying serious flaws within the policy and Policy implementation. The villagers in the communities feel that they are not genuinely included; they are being pushed and pulled in times of project needs their services, for example water, land and other even labor etc. To some extent, their accusation is could be observed in my field study.

On one hand, government has stressed too much importance on GNH and decentralization of power to the local government and ultimately to the people. But on other hand, especially for the hydropower development, a centralized decentralization is being practices, which in fact is contradictory to the principal of GNH. By and large, this case study confirms – most policy are enacted to suit the hydropower development, decision making is centralized and stake holders are restricted to only hydropower related sectors/ organization; thus creating a situation to eliminate hypothetical resistance in the decision making process.

V. Conclusion

Bhutan’s economic development is guided by the overarching policy of Gross National Happiness. More importantly, country’s aspiration to achieve economic self reliance by the year 2020 has push developmental activities to the limit, especially in hydropower sector. With

numerous mega hydropower projects being build in the country trapping common pool resources, the governance has become an issue. From the case study of Mangdechhu Hydroelectric Power at Trongsa portrays lack of water governance instead water government frame work is followed. One system fit all may not work, however water governance is a better option for sustainable development and human happiness, as governance is.

The system of water government followed in the MHPA, literally denies affected community desire to express their wish. Coupled by national interest and GNH policy indirectly limits the expression of local interest. However, national interest should not necessarily serve the interest of the locality. Of late, there is a clear indication from the community demanding water governance over water government – a genuine decentralization, despite size and nature of development activities. Therefore, policy makers have to seriously re-evaluate the policies and create a space where community will be fairly represented in all the stages of project construction.

There are also series of miscommunication and misinformation between authority and affected community as observed. Which is attributes to lack of policy implementation for the benefit to the people partly due not having water governance. According to budget composition, the style of management should be review and more Bhutanese should be given opportunity to run the project management. Such move will not only long term national human resource capacity but also reduce the overall cost of the project.

This research proposes that 'good water governance' emphasizing importance to community's stake holding in the project(s) which will be the key to achieve equitable and sustainable development in the long run. Although hydropower is and will be engine for Bhutan's economic growth, but more study on social and environment has to be done by Bhutanese experts, so that more local knowledge could be incorporated with minimum language barrier and would have similar perspectives .

Therefore, a holistic approach to water governance otherwise endogenous water governance will result in socially equitable and ecologically sustainable hydropower project. The work presented here has profound implication for future studies of water governance in hydropower projects and may one day help to solve the problem of socially un-just and ecologically un-sustainable hydropower development.

(Word Counts: 5333)

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