

# India-Bhutan Hydropower Projects: Cooperation and Concerns

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### **Executive Summary**

In spite of being among the water rich countries in the world, parts of Bhutan are expected to face water scarcity by 2030. India has assisted Bhutan in development of its hydropower projects. The first such cooperation between the two countries took place in 1961. Since then, a number of Indian hydropower companies have been active in Bhutan.

In recent times, there have been growing concerns among a section of Bhutanese against India's involvement in the hydropower projects, alleging the country of growing hydro-debts in Bhutan. Indian hydropower companies are also being accused of engaging in allied sectors in Bhutan and not providing sufficient employment opportunities to the Bhutanese.

This year marks 50 years of diplomatic ties between India and Bhutan. Politically, Bhutan is India's closest South Asian neighbour of India. The two South Asian neighbours generally enjoy warm and cordial relations. Bhutan has supported India's position at the regional and global levels.

This paper examines India-Bhutan bilateral engagements in the context of the hydropower sector and the need for both sides to address the concerns arising from India's involvement in this sector.

#### Introduction

Bhutan is among the water rich countries in the world. It has four major river basins – Amo Chu, Wang Chu, Punatsang Chu and Drangme Chu. In addition, it has small river basins such as Jaldakha, Aiechhu, Nyera Amari, Jomori and Merak-Sakteng. Bhutan receives around 70,576 million cubic metres of water every year.<sup>1</sup> As a result, the per capita availability of water in the country is more than 100,000 cubic metres.<sup>2</sup> However, this high per capita availability of water at the national level is in stark contrast to the growing local scarcity<sup>3</sup> in parts of Bhutan. This scarcity is due to the following:

1. Available water and its annual supply are unevenly distributed. Some of the regions receive large quantity of water while others have a limited supply.

<sup>&</sup>lt;sup>1</sup> Asian Development Bank, 'Water Securing Bhutan's Future'. 2016. https://www.adb.org/sites/default/files/ publication/190540/water-bhutan-future.pdf. Accessed on 2 April 2018, p 75.

<sup>&</sup>lt;sup>2</sup> Royal Government of Bhutan, National Environment Commission, 'Bhutan Water Vision and Bhutan Water Policy', 2014. http://www.nec.gov.bt/nec1/wp-content/uploads/2014/04/Bhutan-Water-Policy-Eng.pdf. Accessed on 2 April 2018.

<sup>&</sup>lt;sup>3</sup> Ibid, p 12.

- 2. The phenomenon of climate change impacts Bhutan's water resources.<sup>4</sup> In its study, carried out in 2016, the National Environment Commission found that some of the districts of the country such as Thimphu, Haa and Zhemgang may experience water shortage by 2030.<sup>5</sup> Furthermore, the study confirmed that, due to impact of climate change, several important water sources in the country have started to dry up.<sup>6</sup>
- 3. Besides the decline in water availability, the country also suffers from the lack of water supply infrastructure. It is difficult to provide regular water supply to the people scattered in the different parts of the mountainous country.<sup>7</sup> Water supply is also related to the quality of water people consumes. It is estimated that more than 20 per cent of the Bhutan's population do not have access to safe drinking water.<sup>8</sup>

Despite these supply-related problems, Bhutan remains a water abundant country. This makes hydropower sector an important contributor to its economy. Bhutan has a capacity to generate about 30,000 megawatts of hydroelectricity every year. Out of this, only about 1,616 megawatts are currently being generated.<sup>9</sup> Even at this rate, the export of hydropower energy generates around 40 per cent of the Bhutan's revenue. This sector's contribution to the country's gross domestic product (GDP) is about 25 per cent.<sup>10</sup>

However, Bhutan is not able to harness hydropower energy on its own dues to the lack of finances and technology. For both, it depends on India. As a result, a number of Indian hydropower companies operate in Bhutan. Unlike in the past, in recent years, there has been growing disenchantment among a section of Bhutanese population against India's hydropower engagements in Bhutan. This paper discusses India's contribution in developing a viable hydropower sector in Bhutan, and examines the growing local concerns against such projects.

## India's Engagement in Bhutan's Hydropower Sector

In 1961, India and Bhutan signed one of their first hydropower cooperation pacts. It was to harness hydroelectricity from the transboundary river, Jaldhaka.<sup>11</sup> Completed in 1966, the

<sup>&</sup>lt;sup>4</sup> Climate change affects the water cycle. This will increase the rate of evaporation. An increase in evaporation may dry out some areas while other may experience excessive precipitation.

<sup>&</sup>lt;sup>5</sup> Royal Government of Bhutan, National Environment Commission, 'National Integrated Water Resources Management Plan 2016'. http://www.nec.gov.bt/nec1/wp-content/uploads/2016/03/Draft-Final-NIWRMP.pdf. Accessed on 21 May 2018, p 33.

<sup>6</sup> Ibid.

<sup>&</sup>lt;sup>7</sup> Ibid.

<sup>&</sup>lt;sup>8</sup> Royal Government of Bhutan, National Environment Commission, 'Bhutan Water Vision and Bhutan Water Policy' op cit, p 11.

<sup>&</sup>lt;sup>9</sup> Asian Development Bank 'Water Securing Bhutan's Future', op. cit, p 66.

<sup>&</sup>lt;sup>10</sup> 'India Bhutan hydropower cooperation fraying at the edges', Shripad Dhrmadhikary, thethirdpole.net, 4 October 2016. https://www.thethirdpole.net/2016/10/04/india-bhutan-hydropower-cooperation-frayingat-the-edges/. Accessed on 28 March 2018.

<sup>&</sup>lt;sup>11</sup> After its origin in the Indian state of Sikkim, Jaldhaka flows in India, Bhutan and Bangladesh.

total capacity of the plant was around 18,000 kilowatts. According to the 1961 pact, Bhutan would receive the free supply of 250 kilowatts electricity.<sup>12</sup>

In 1974, India and Bhutan signed an agreement on Chukha hydropower project. This was the first mega power project fully funded by the Indian government with a 60 per cent grant and a 40 per cent loan. The interest rate on loan was five per cent payable over a period of 15 years. The capacity of this hydropower project was 336 megawatts.<sup>13</sup> This project was fully commissioned in 1988.

In 2006, 40 years after the Jaldhaka project became functional, India and Bhutan signed a comprehensive agreement in the hydropower sector. An additional protocol to the 2006 agreement was signed in March 2009. Under the additional protocol, India agreed to assist Bhutan in developing a minimum of 10,000 megawatt of hydropower by 2020. India also agreed to import surplus amount of electricity from those hydro projects.<sup>14</sup> Earlier, the projected capacity was 5,000 megawatts. This estimate was doubled after the visit by then-Indian Prime Minister, Dr Manmohan Singh, to Thimphu in 2008. The objective behind the agreement was to make Bhutan a self-sufficient country in electric generation and to help the country reduce its trade deficit with India.<sup>15</sup>

The format of the 2006 hydropower agreement is similar to the 1,020 megawatt Tala hydropower project agreement between the two countries. The Tala hydroelectric project is the largest functional hydropower project in Bhutan. Work on this project began in 1998 and it was commissioned in 2008. India's assistance for Tala came in the form of 60 per cent grant and 40 per cent loan, with an interest rate of nine per cent per annum.<sup>16</sup> Indian companies Bharat Heavy Electrical Limited of India, Hindustan Construction Company, Larsen and Tubro and Jaiprakash Industries participated in the Tala contract.<sup>17</sup>

Following the 2006 agreement and an additional protocol to it, the construction of several other hydropower projects started in Bhutan with assistance from the Indian government. Under the terms of the agreement between the two countries, all these hydropower projects would be handed over to the Bhutanese company, Druk Green, two years after their completion date.<sup>18</sup> Some of the important on-going bilateral hydropower projects are as follow:

<sup>&</sup>lt;sup>12</sup> 'Understanding India-Bhutan Relations' Shubham Ghosh, One India, 18 June 2014. https://www.oneindia.com/feature/understanding-india-bhutan-relations-1467521.html. Accessed on 27 March 2018.

<sup>&</sup>lt;sup>13</sup> 'Bhutan-India Hydropower Relations' Royal Bhutanese Embassy New Delhi. http://www.mfa.gov.bt/ rbedelhi/?page\_id=28. Accessed on 16 June 2018.

<sup>&</sup>lt;sup>14</sup> Ministry of External Affairs, Government of India, 'India-Bhutan Relations'. http://www.mea.gov.in/ Portal/ForeignRelation/Bilateral\_Brief\_Jan\_2018.pdf. Accessed on 27 March 2018.

<sup>&</sup>lt;sup>15</sup> 'More than Doklam Issue, Bhutan worries about hydropower deficits', Lamsang Tenzing, *The Indian Express*, 26 July 2018. http://indianexpress.com/article/opinion/more-than-the-doklam-issue-bhutan-worried-about-hydropower-deficits-4768598/. Accessed on 27 July 2017.

<sup>&</sup>lt;sup>16</sup> 'Tala Hydroelectric Project'. https://www.power-technology.com/projects/tala/. Accessed on 20 April 2018.

<sup>&</sup>lt;sup>17</sup> Ibid.

<sup>&</sup>lt;sup>18</sup> Druk Green 'Projects' https://www.drukgreen.bt/index.php/projects-updates/6-projects. Accessed on 21 May 2018.

**Punatsangchu-I**: This is 1,200-megawatt run-of-the-river project located on the left bank of the Punatsangchu river in Wangdue Phodrang Dzongkhag district in the Western parts of Bhutan. It is estimated that, once completed, the project is likely to generate around 5,700 million units of electricity every year. Its construction was started in 2008 and is expected to be completed by June 2019. The revised estimate of this project is around ₹9,375.58 crore (S\$1. 875 billion). The loan-grant ratio for this project is 60:40.<sup>19</sup>

**Punatsangchu-II**: It is also a run-of-the river project in Wangdue Phodrang Dzongkhag district. It is expected to produce around 4,357 million units of electricity every year. Its construction started in 2010 and is likely to be completed in the financial year 2018-19. The revised estimate for this project is ₹7,290.62 crore (S\$1.4470 billion). The loan-grant ratio is 70:30.<sup>20</sup>

Mangdechhu: It is a 720-megawatt run-of-the-river hydroelectricity project. The estimated electricity generation from this project is around 2,925.25 million units every year. This project is expected to be completed by December 2018. The revised estimate of this project is ₹4,020.63 crore (S\$80.5 million) which was revised further to ₹4672.38 crore (S\$90.4. million). The loan-grant ratio is 70:30.<sup>21</sup>

Besides these run-of-the-river projects, India and Bhutan are also cooperating in reservoir projects<sup>22</sup> such as Sunkosh and Kuri-Gongri. The former has the capacity to generate about 4,060 megawatts of hydroelectricity. Works began on Sunkosh in 2011 and it is expected to be completed in 2020. Kuri-Gongri has a capacity to produce around 1,800 megawatts of hydroelectricity. Its construction started in 2012 and is expected to be completed in 2020.<sup>23</sup>

There are also projects under construction through the joint-venture model. Such projects are Kholongchhu, Chamkharchhu-I, Wangchhu and Bunakha Reservoir.<sup>24</sup> The foundation stone of the run-of-the-river project, Kholongchhu, in Trashiyangtse district of Bhutan, was laid during the visit of Indian Prime Minister Narendra Modi in 2014. The joint venture partners for this hydro projects as are Druk Green Power Corporation of Bhutan and Satluj Jal Vidyut Nigam Ltd from India.<sup>25</sup>

In February 2018, India's Foreign Secretary, Vijay Gokhale, while reporting on the status India-assisted on-going hydropower projects in Bhutan to the Parliamentary Committee on External Affairs (2018-19), stated:

"Bhutan has traditionally been the largest recipient of our [India] financial assistance for obvious strategic reasons that the Committee is familiar with. By

<sup>&</sup>lt;sup>19</sup> Committee on External Affairs (2017-18) Sixteenth Lok Sabha, Ministry of External Affairs, Demand for Grants (2018-19) Twenty First Report, *Lok Sabha Secretariat*. http://164.100.47.193/lsscommittee/External %20Affairs/16\_External\_Affairs\_21.pdf. Accessed on 22 March 2018, p 70-71.

<sup>20</sup> Ibid.

<sup>&</sup>lt;sup>21</sup> Ibid.

<sup>&</sup>lt;sup>22</sup> Unlike the run-of-the river projects, reservoir store large quantity of waters. Run-of-the-river projects have pondage to store limited amount of waters.

<sup>&</sup>lt;sup>23</sup> Druk Green 'Projects', op cit.

<sup>&</sup>lt;sup>24</sup> Ibid.

<sup>&</sup>lt;sup>25</sup> Kholongchhu Hydro Energy Limited. https://www.khepbhutan.com/. Accessed on 12 June 2018.

June 2018, we will finish disbursing our commitment of ₹5,000 crore [S\$1 billion] for Bhutan's Eleventh Five Year Plan from 2013 to 2018. Indeed, we have already disbursed 80 per cent of the funds exactly according to our implementation plan. About ₹4,080 crore [S\$80 million] has been disbursed. We expect to disburse the rest within the next financial year. Spending on the hydropower projects has temporarily slowed because in two of the three projects, Punatsangchu-I and Punatsangchu-II, we have faced some geological surprises recently. There has been a slippage of river bank on one project which we did not anticipate when studies were made. We are trying to resolve this with the help of technical experts, including technical experts from abroad. In Punatsangchu-II, the surge gallery has had some problems from which we evacuate water."<sup>26</sup>

#### **Concerns over India-assisted Hydropower Projects in Bhutan**

Although India-assisted hydropower projects bring economic benefits to Bhutan, a section of population has raised some concerns over these projects.

Firstly, the Bhutanese complain that India buys cheap electricity from the hydroelectric projects in Bhutan. For example, in 2017, the tariff rate on the import of hydroelectricity from the Tala hydroelectric project by India was 1.80 Bhutanese Ngultrum (BTN) [S\$ 0.03] per unit. This was much below the domestic market price in India which was around ₹7 to ₹8 (around 15 to 16 Singapore cents) per unit.<sup>27</sup> In July 2017, Bhutan proposed a tariff hike from the Chukha hydropower project. The last hike was made in 2014 when the tariff rate was raised from BTN 2 per unit (S\$0.04) to BTN 2.25 (S\$0.045) per unit. The proposal to raise the tariff was accepted, in principle, by India.<sup>28</sup>

Second, the guidelines issued by the Indian Cross Border Trade of Electricity (CBTE) in December 2016 are seen as unfavourable to Bhutan. Clause 5.2 .1 of the guidelines states, "Considering that electricity trade shall be involving issues of strategic, national and economic importance, participating entities (Participating Entity(ies)) complying with following conditions shall be eligible to participate in cross border trade of electricity after obtaining one-time approval from the Designated Authority:

a. Import of electricity by Indian entities from Generation projects located outside India and owned or funded by [the] Government of India or by Indian Public Sector Units or by private companies with 51 per cent or more Indian entity (entities) ownership;

<sup>&</sup>lt;sup>26</sup> Committee on External Affairs (2017-18) Sixteenth Lok Sabha, Ministry of External Affairs, Demand for Grants (2018-19) Twenty First Report, *Lok Sabha Secretariat*, op cit., p 73.

<sup>&</sup>lt;sup>27</sup> "More than Doklam Issue, Bhutan is worried about hydropower deficits", *The Indian Express*, 26 July 2018. op cit.

<sup>&</sup>lt;sup>28</sup> "Bhutan to supply hydropower to Bangladesh via India", *Outlook*, 2 July 2017. https://www.outlook india.com/newsscroll/bhutan-to-supply-hydropower-to-bangladesh-via-india/1090541. Accessed on 19 June 2018.

- Import of electricity by Indian entities from projects having 100 per cent equity by Indian entity and/or the Government/Government-owned or controlled company(ies) of [a] neighbouring country.
- c. Import of electricity by Indian entities from licenced traders of neighbouring countries having more than 51 per cent Indian entity(ies) ownership, from the sources as indicated in para 5.2.1 (a) and 5.2.1(b) above.
- d. Export of electricity by distribution licensees/Public Sector Undertakings (PSUs), if surplus capacity is available and certified by the concerned distribution licensee or the PSU as the case may be."<sup>29</sup>

Clause (a) of the guidelines is contrary to the Bhutan's Sustainable Hydropower Development Policy of 2008 which calls for a minimum 51 per cent shareholding by the Bhutan government in any projects involving another other country.<sup>30</sup> In 2015-16, several amendments were made to the 2008 Hydropower Development Policy after a report by an Ad-hoc Committee on Hydropower Development Policy and Programmes.<sup>31</sup> The 2016 guidelines in the CBTE, therefore, created confusion and apprehensions on the future of hydropower arrangements between India and Bhutan. In July 2017, in an effort to clarify the provisions of the CBTE guidelines, a Bhutanese delegation met Indian officials in New Delhi. During the meeting, the Indian officials gave the assurance that the guidelines would not apply to or impact the government-to-government projects between India and Bhutan. For non-government projects, as the Indian officials assured the Bhutanese delegation, there is a provision for a case-by-case clearance in the guidelines.<sup>32</sup>

Third, there are concerns in Bhutan on the delay in the completion of the hydropower projects. The loan granted by India to Bhutan increases by 10 per cent<sup>33</sup> every year which adds to the debt for the country.<sup>34</sup> Dasho Karma Ura, President of the Centre for Bhutan Studies and Gross National Happiness Research, stated, "It is important that hydropower, which is [a] key issue for the Bhutanese people also be looked at more quickly...public opinion in Bhutan was beginning to question the viability of the debt incurred by the projects."<sup>35</sup>

<sup>&</sup>lt;sup>29</sup> Ministry of Power, Government of India, "Guidelines on Cross Border Trade of Electricity", https:// powermin.nic.in/sites/default/files/webform/notices/Guidelines\_for\_Cross\_Boarder\_Trade.pdf. Accessed on 27 March 2018.

<sup>&</sup>lt;sup>30</sup> Ministry of Economic Affairs, "Bhutan Sustainable Hydropower Development Policy, 2008", http://www. moea.gov.bt/wp-content/uploads/2017/07/Hydropower-Policy.pdf. Accessed on 17 October 2018.

<sup>&</sup>lt;sup>31</sup> See "Report to the 16<sup>th</sup> Session of the National Council on Hydropower Development Policy and Programmes by Ad hoc Committee, 2015", http://www.nationalcouncil.bt/assets/uploads/files/Hydro%20 Report%20as%20on%20Nov%2026%202015-%20Final%20for%20deliberation%202.pdf. Accessed on 17 October 2018.

<sup>&</sup>lt;sup>32</sup> "Bhutan to supply hydropower to Bangladesh via India", *Outlook*, 2 July 2017, op cit.

<sup>&</sup>lt;sup>33</sup> At some places, it is mentioned that the rate is nine per cent. See 'Tala Hydroelectric Project'. https://www. power-technology.com/projects/tala/, op cit.

<sup>&</sup>lt;sup>34</sup> Hydropower debt, Delays biggest challenge in ties with India, say Bhutan officials', Suhasini Haider, 6 September 2017, *The Hindu*, http://www.thehindu.com/news/national/hydropower-debt-delays-biggestchallenge-in-ties-with-india-say-bhutan-officials/article19630701.ece. Accessed on 2 April 2018.

<sup>&</sup>lt;sup>35</sup> Ibid.

Finally, with the implementation of the Goods and Services Tax in India in 2017, its exports to Bhutan are cheaper than the imports from Bhutan.<sup>36</sup> This will have an impact on Bhutan's trade deficit with India.

These concerns call for an in-depth study of the India-Bhutan hydro projects. Unfortunately, only few such studies have been made. One of these, "A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan", was prepared by the New Delhi-based Vasudha Foundation in 2016.

According to the report, the first major challenge faced by the Bhutanese is hydropower project-related debts. Citing the findings of the Annual Report of the Royal Monetary Authority of Bhutan, the report stated, "As of June 2014, Indian Rupee debt constituted 64 per cent of Bhutan's total debt and hydropower loans accounted for 83.4 per cent of the total Rupee loan. The actual interest payments on Rupee-denominated hydropower debt amounted to ₹1.4 billion (S\$28 million) in 2014 and accrued interest on the three ongoing hydropower projects (Punatsangchhu-I, Punatsangchhu-II and Mangdechhu) amounted to almost ₹3.6 billion (S\$70 million)."<sup>37</sup> This has increased in subsequent years. For example, in the Financial Years 2016-17, the country had "₹118.77 billion (S\$23.35 billion) of outstanding Indian Rupees loans. Of the total Rupee debt, 94.11 per cent were outstanding public debt on hydropower projects while 5.89 percent represented debt taken to finance BOP [Balance of Payments] transactions with India (the Government of India line of credit)".<sup>38</sup> It is being maintained that the three ongoing projects – Mangedchhu and Punatsangchhu I and II would put Bhutan under about ₹12,300 crore rupees (S\$2.4 4 billion) of debt. This accounts for 77 per cent of the country's total debt, and is about 87 per cent of its GDP.39

Second, with an increase in engagements of the Indian private companies in the hydropower sector, and the initiation of the joint venture projects, the Bhutanese feel that they are turned into second-class participants in these initiatives. There is only a marginal participation of the Bhutanese private sector in their hydropower sector. Normally, they act as small sub-contractors in civil works such as supplying boulders and sands. According to the Bhutan Chamber of Commerce & Industry (BCCI), the Bhutanese private sector has not reaped the benefits of hydropower development in the country. The BCCI has pushed for a greater role to local companies in hydropower construction. In 2013, the BCCI argued for the transfer of those works to the Bhutanese companies which they could do instead of inviting the Indian companies to do them.<sup>40</sup>

<sup>&</sup>lt;sup>36</sup> "More than Doklam Issue, Bhutan worries about hydropower deficits", *The Indian Express*, op. cit.

<sup>&</sup>lt;sup>37</sup> Vasudha Foundation, 'A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan', Vasudha Foundation, January 2016. http://www.vasudha-foundation.org/wp-content/uploads/Final-Bhutan-Report\_30th-Mar-2016.pdf. Accessed on 28 March 2018, p 28.

<sup>&</sup>lt;sup>38</sup> "Royal Monetary Authority of Bhutan, Government of Bhutan, Annual Report 2016-17" https://www.rma. org.bt/RMA%20Publication/Annual%20Report/annual%20report%20%202016-2017.pdf. Accessed on 28 March 2018.

<sup>&</sup>lt;sup>39</sup> "Hydropower debt, Delays biggest challenge in ties with India, say Bhutan officials", 6 September 2017, op cit.

<sup>&</sup>lt;sup>40</sup> Vasudha Foundation, 'A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan', op. cit, p 27.

Third, apart from the hydropower projects, there is also a concern over the emergence of an auxiliary Indian economy in Bhutan. The massive influence of Indian hydropower companies and their participation in the accompanying sectors are being questioned by the Bhutanese. For example, Larsen & Tubro, Gammon India and Hindustan Construction Companies have also set up stone crushing industries, besides their contract in the Punatsangchhu hydropower project.<sup>41</sup>

Fourth, one of the gravest challenges posed by any hydropower development projects is to the region's ecology. In Bhutan, the Department of Forest and Park Services looks after the ecology of the country. As a norm, any hydropower project has to clear the Environmental Impact Assessment (EIA) test before construction works can start. In Bhutan, the EIA was not carried out for projects whose construction began before 2000. Therefore, the environmental impact on such hydropower projects as Chhukha, Kurichhu and Tala was not conducted. The project authorities for Punatsangchhu-I, Punatsangchhu-II and Mangdechhu conducted the EIA but the report has not been made public. This raises many eyebrows over the environmental feasibility of such hydropower projects.<sup>42</sup>

Fifth, like all hydropower projects across the world, they also have an impact on the local community in Bhutan. People from the project-affected areas have claimed that their consent was not sought for such hydropower projects as Tala, Punatsangchhu-I, Punatsangchhu-II and Mangdechhu although the district authorities shared information about these projects with them. During the information sharing session, the adverse impact of these projects was not discussed with the people. Under the Land Act of 2007 by the Bhutan government, whenever land is acquired by the authorities to develop hydropower project, the land holder has the choice of opting for either land or money as compensation.<sup>43</sup> The replacement land should be of equal quality as the land taken by the government for project development. However, in many cases, the villagers were given barren land as compensation against their agricultural land.<sup>44</sup>

Sixth, the hydropower projects have also affected the natural flow of water in ponds and/or spring water. Most of the sources have been diverted to channelise the reservoir or tunnel for run-of-the-river multipurpose projects. The construction of Mangdechhu I has also disrupted waters supply through pipelines to the people.<sup>45</sup> Bhutan does not have a proper resettlement and rehabilitation policy for the people affected by the hydropower projects. Under the Hydropower Policy of 2008, the project authorities have to set aside a minimum one per cent of the project cost for the resettlement and rehabilitation of affected people. In most cases, there is misuse due to the absence of a monitoring body.<sup>46</sup>

<sup>&</sup>lt;sup>41</sup> 'The Rupee Crunch and India-Bhutan Economic Engagement' *IDSA*, Medha Bisht, 16 July 2012. https://idsa.in/issuebrief/TheRupeeCrunchandIndiaBhutanEconomicEngagement\_MedhaBisht\_160712. Accessed on 3 April 2018.

<sup>&</sup>lt;sup>42</sup> Vasudha Foundation, 'A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan', op. cit., p 31.

<sup>&</sup>lt;sup>43</sup> Ibid, 37

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>&</sup>lt;sup>46</sup> Ibid, 38-39.

Seventh, according to the Vasudha Foundation report, the hydropower projects have not provided enough employment opportunities to the Bhutanese. According to a release by the Indian Embassy in Bhutan in 2015, "There are about 60,000 Indian nationals living in Bhutan, employed mostly in the hydro-electric power and construction industry. In addition, between 8,000 and 10,000 daily workers enter and exit Bhutan every day in [the] border towns."<sup>47</sup> The rate of unemployment in Bhutan was 2.1 per cent in 2013 and 2.9 in 2014.<sup>48</sup> At many project sites and after the start of their operations, some of the locals allege that they have not been provided with the necessary training to take up jobs in the sector.<sup>49</sup> On the contrary, the Royal Monetary Authority Report of 2016-17 says that the hydropower sector has contributed to generating direct and indirect employment opportunities for the Bhutanese. The report states, "As of June 2017, there are 3,950 (851 are key officials and staff) employees in PHP I (Punatsangchu Project -I), 6,942 (857 key officials and staff) in PHP II (Punatsangchu Project -II), and 4,857 (509 key officials and staff) in MHP (Mangdechhu Project). There are about 1,687 employees under DGPC (Druk Green Power Corporation), mainly for operation and maintenance of generating hydro plants, and about 2,500 under Bhutan Power Corporation for the construction and maintenance of electricity transmission line in Bhutan."50

## Conclusion

Bhutan is a close partner of India. The latter's grants and loans to develop the hydropower sector are crucial to Bhutan's economy. However, in recent years, with changes in India's policy on constructing hydropower projects in the neighbourhood, the grant amounts to Bhutan have decreased. There is a prevailing undercurrent in Bhutan that India is exploring and exploiting Bhutan's water sector for its own benefit. This is part of the reason why Bhutan has refused to sign the concession agreement for the joint venture projects.<sup>51</sup>

With growing China's military build-up in Bhutanese territory near the Indian border, it is extremely important for India to have a friendly Bhutan. In 2017<sup>52</sup> and even earlier during India-China military stand-off in Bhutanese territory, Bhutan had extended its support to India. To maintain a similar rapport with Bhutan, it is necessary for India to continue to provide concessionary grants to the country. The primacy of politics and strategic significance over economic profit are essential to ensuring India's long-term strategic interest in Bhutan.

Finally, there is a need to change perceptions in India about the strategic significance of its small neighbours. To the majority of Indians, Bhutan remains an inconsequential country.

<sup>&</sup>lt;sup>47</sup> Ibid, p 40.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>&</sup>lt;sup>50</sup> Royal Monetary Authority of Bhutan, Government of Bhutan 'Annual Report 2016-17', op cit., p 50.

<sup>&</sup>lt;sup>51</sup> "More than Doklam Issue, Bhutan worries about hydropower deficits", *The Indian Express*, op cit.

<sup>&</sup>lt;sup>52</sup> From June 2017 to 27 August 2017, there was a military stand-off between India and China at Doklam/Doko-La/ Donglong. The territory is about 89 square kilometres in length at the tri-junction of India, China and Bhutan. On 28 August 2017, the two countries agreed to expedite disengagement of border personnel from the face-off site at Dokolam. Ministry of External Affairs, Government of India 'Press Statement on Doklam disengagement understanding'. http://www.mea.gov.in/press-releases.htm?dtl/ 28893/. Press\_Statement\_on\_Doklam\_disengagement\_understanding. Accessed on 21 May 2018.

This fact can be substantiated by looking at the priorities of India's foreign and South Asia policy. Even for researchers on South Asia, Bhutan is not an important country. One recent evidence of this was the absence of coverage of the September 2018 elections in Bhutan by most of the Indian television channels, newspapers and even think tanks focussing primarily on South Asia.<sup>53</sup> There is a need to change attitudes and overcome such perceptions. A first step in this direction would be to understand Bhutan from the Bhutanese's perspectives instead of relying on self-sketched perceptions of Bhutan. The tiny Himalayan kingdom is important to India, and Indians need to recognise that.

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<sup>&</sup>lt;sup>53</sup> See Ranjan, Amit, "Power Shift in Bhutan and its implications for India", ISAS Insights No 516, 25 September 2018. https://www.isas.nus.edu.sg/wp-content/uploads/2018/09/ISAS-Insights-No.-516-Power-Shift-in-Bhutan-and-its-Implication-for-India.pdf. Accessed on 17 October 2018.

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