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# Land-use conflicts and social capital: the question of infrastructure projects in rural development

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## Abstract

Interpersonal and inter-groups relationships based on social capital are a very critical and variable factor and could be a cause of cooperation or conflict among different actors. Conflicts related to land-use, especially infrastructure projects, happen in different forms over the world depending upon their intensity and have severe impacts on affected people in different ways regarding their position and their social inclusion. The article deals with the conflicts arising among different actors due to Diamer Bhasha Dam project in Pakistan. In order to assess these conflicts, we use different sources of data, mainly national and regional dailies, as well as interviews with experts and stakeholders. We examine different conflicts between affected people and governing bodies and also among different groups of local affected people over land and property rights. We show that a part of them is linked with the structure of social capital, be there a lack of communication between groups of bonding links within groups of people. The article further goes into compensation, resettlement and livelihood issues, poor planning, corruption and mismanagement of governing bodies and their impact on affected people. Finally, it provides policy measures and recommendations in the form of capacity building of affected people in different areas, more developmental projects in local area and public participation in different project activities.

**JEL Classification** R11 · R12 · R14

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## 1 Introduction

Infrastructure projects often bring conflicts between different actors, due to land-use changes which are complicated in nature in several ways. They impact the different actors socially, economically and in some cases lead to strong protestations, violence, and even to the death of some local actors. Those conflicts are rarely resolved and just settled by public policy, mainly through its enforcement (Yusran et al. 2017). They vary in types and expressions and are mainly based on violation of livelihood, land acquisition and property rights and ignorance of population needs and wills. Informal settings and lack of legal rights further sparks the conflicts (Lombard 2016). Moreover, historical settlements and inequalities among the local people on the basis of these settlements make land acquisition and compensation issues more complicated not only between local people and Government but also among the local population (Sabir et al. 2017).

Dam construction is known as a major cause of infrastructure conflict (Magsi and Torre 2015; Moran 2004; Bui et al. 2013). Land acquisition, displacement and resettlement, livelihood and compensations are core issues during dam construction projects, causing negative social impacts, tensions and conflicts (Oppio et al. 2015; Sun 2013; Williams and Porter 2006). Around the world several people are displaced (Scudder 2005; World Commission on Dams 2000), which led to landlessness, unemployment and social disorder (Brown et al. 2009). Compensation issues are significant as they fail to uphold the living standard of local people mainly due to late or lower compensation (Magsi and Torre 2014; Awasthi 2014; Li et al. 2015), high resettlement cost and different expectations and demands of local people. Land-use planning decisions have potential of generating conflicts due to negative impacts on environment and community (Kaya and Erol 2016).

The studies show that proper compensations of the damages caused depend upon local people's awareness to use this amount properly, as there are significant chances of losing that compensation amount in different ways (Sabir et al. 2017). Employment opportunities for local people and lack of resettlement plans are an important issue to consider during construction of infrastructure projects. It is always hard to keep the original profession which in combination with inappropriate employment opportunities by ignoring actual needs of people lead to poor living standard. (Moran 2004). Landlessness, delayed and out of culture resettlement and in some cases migration of affected people to developed areas create tensions and conflicts among society and likely to raise crime rate.

Given the importance of the factors discussed so far in infrastructure projects, the importance of social capital cannot be ignored. On the one hand, personal linkages of local people, relations between various social groups, local and religious values and norms come into play when economic and social benefits are at stake due to such projects. On the other hand, lack of proper management of these issues and involvement of local population while planning the project could result into violent conflicts. Moreover, most of the times, rural and tribal areas are selected for such projects where historical settlements become a big source of conflict among different groups based on these settlements.

Pakistan is a water stressed country with continuously diminishing availability of water for irrigation. Under such circumstances government is focusing on dam and water reservoir projects and launched big projects during the last 15 years. *Diamer Bhasha* dam project is one of the steps taken by the Government which could prove a great milestone for the economy in bringing and retaining water in the country. But along with its benefits, there are some heavy social and economic costs to local society. The goal of this article is to examine the loopholes in different phases/activities of the project of *Diamer Bhasha* Dam and the interactions and conflicts among different stakeholders.

The research is mainly based on the study of national and regional dailies and experts and stakeholders on-field interviews. It includes different project activities, their impacts on the society, relationships among different stakeholders and conflicts between them. Our investigations allow us to go deep into the root causes of these conflicts by highlighting the poor planning and governance related to resettlement, livelihood opportunities, Government's provisions and mistrust of locals due to ignoring them in the project activities. We also enter into the various manifestations of weakness or very localized character of social capital and their impact on the delated setting of the infrastructure.

The structure of the article includes description of case study and area profile and discussion about the main local conflicts in the second part of the article. Part 3 includes methodology of collection of data (also highlighted in the Annex) mainly based on daily press releases and on-field interviews. Part 4 presents the results and highlights the current issues related to the project and the main conflicts between different actors, be there local stakeholders or public authorities. Finally, the article provides policy measures and recommendations in the form of capacity building of affected people in different areas, more developmental projects in local area and public participation in different project activities.

## 2 Case study and area profile of *Diamer Bhasha* Dam project

This section describes the situation of *Diamer Bhasha* Dam in two parts. The first part provides the information related to local area, economic activities in the region and social and demographic characteristics of people. The second part gives the main plan and objectives of the project and estimated benefits by the government, and highlights the current issues related to the project and the main conflicts between different actors.

### 2.1 Area profile

*Diamer Bhasha* Dam is located on the boundary of two different provinces *Gilgit Baltistan* (GB) and *Khyber Pakhtunkhwa* (KPK). *Diamer* is a district in *Gilgit Baltistan*, and *Bhasha* is a village of district *Kohistan* in *Khyber Pakhtunkhwa*. Total stated area of *Khyber Pakhtunkhwa* is 74,521 km<sup>2</sup> with about 17 million populations. District *Kohistan* contains area of 7492 Km<sup>2</sup> and population of the district

according to 1998 census is 472,570 (Pakistan Bureau of Statistics 2016). This province gives diverse climates for different activities like tourism and has strong potential for agriculture (Comprehensive Development Strategy KPK 2010).

*Gilgit Baltistan* is also called northern areas of *Pakistan* which is connected to *China* to east, Indian Administered *Jammu and Kashmir* to south west, *Afghanistan* to north and *Khyber Pakhtunkhwa* to west. Total area of *Gilgit Baltistan* is 72,971 km<sup>2</sup> with population approximately 1000,000 (GOGB 2010). *Diamer* is a district of *Gilgit Baltistan* with 0.2 million of estimated population and has an area of 10,936 km<sup>2</sup>. *Chilas* is the capital of this district (Ali 2013 August 16) (Fig. 1).

Most of the project activities are located in the *Diamer* district of *Gilgit Baltistan*, including most of the land acquisition and displacement of local population. *Bhasha* village in *Khyber Pakhtunkhwa* is contributing small portion of land but no household is going to be affected in that village. Total number of households in the area includes 12,039 in which directly affected households are 4228 dispersed in 32 villages in the form of different ethnic groups, with different occupations, local traditions and values (Table 1). Moreover, the affected households and villages are located in a tough mountainous area with great difficulty to access especially in rainy season due to landslides and road blockage.

## 2.2 Case study description

The feasibility study of *Diamer Bhasha Dam* was started in the year 2001. “Water and Power Development Authority (WAPDA),” Pakistan, is the main agency carrying out this project (Dawn, April 27, 2006). The location of the dam is proposed about 40 km downstream of *Chilas* and 315 km upstream of *Tarbela* dam on the *Indus River*. It is roller compacted concrete dam with maximum height of 272 m,

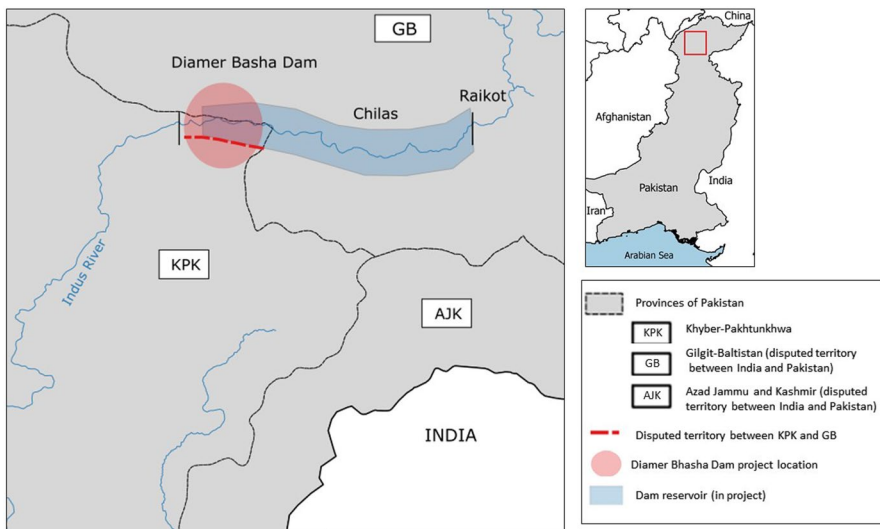


Fig. 1 Location of *Diamer Bhasha* dam Project

**Table 1** Occupational status of local actors

Occupation of local actors	% share of occupational status
Agriculture/farming	33.5
Unskilled workers (construction mostly)	10.5
Skilled workers	16.6
Government service	19
Business	15.1
Private employment (in enterprises, e.g., agriculture)	4.7
Security forces	0.6

WAPDA Survey, 2007–2008

located in such a way that its left bank and left power house are in *Khyber Pakhtunkhwa* and right abutment and right power house are in *Gilgit Baltistan*. The project is covering an area of 110 km and reservoir will extend 100 km upstream of the dam (GOP 2013). The estimated cost of the project is US \$ 13.684 Billion approved in July 2012 and its expected donor agencies include Asian Development Bank (ADB) and World Bank (WB). The construction of the project has not started yet as project is as its land acquisition stage.

The project on its completion has significant benefits in electricity generation and irrigation water storage. It will generate the 4500 MW of electricity which can cover the gap between demand and supply of electricity in Pakistan in a substantial way and be a source of US \$ 2.216 Billion revenue generation. It will store considerable quantity of water with live storage of 6.4 MAF (Million Acre Feet) annual surface water worth of US \$.63 billion. Among other benefits, the dam will increase the life of *Tarbela Dam* by approximately 35 years, increasing annual electricity generation by 1111 GWh worth of US \$ 118.3 million. Regarding employment, the project will create opportunities during construction and many skilled and unskilled workers will be preferred for employment. It will create indirectly the capacity of employment in agriculture, industry and commercial sectors (GOP 2013). Many developmental schemes are also included in the project like upgradation of hospitals in *Gilgit* and construction of schools in other districts of the region (The Express Tribune, December 26, 2010).

In spite of the importance and benefits of the project related to electricity generation, irrigation water and employment, there are some heavy costs to pay in the form of displacement of local people and their other socioeconomic losses. Thirty-two villages including 4228 households are going to be displaced due to this project, affecting seriously the livelihood and ultimately living standard of affected people. It will submerge about 2660 acres of agricultural land (GOP 2014).

Given these major changes, there were many oppositions among different actors over construction of the project, which varied from tensions to violent conflicts. These different conflicts had various expressions: people took legal action against Government, roads were blocked to intensify the protests and even in some cases,

people threatened the contractors to bulldoze the structures in project area and project work was stopped for 1 year (Pamir Times, October 22, 2015; Mir, June 14, 2012). Moreover, there had been death of three affected people and several injured when security forces opened fire on protesters while protesting for compensations (GB Tribune, February 19, 2010; Mir, June 14, 2012).

The conflicts were not just restricted to local affected people of *Diamer* district but also extended between GB and KPK. The territorial conflict between KPK and GB is over a 7 km long territory which connects *Bhasha* village with *Chilas*. According to local leaders of *Diamer* district, this disputed territory historically belongs to *Diamer* district and it was under their control, used as common pastures. Conflict started after the announcement of project when people from *Bhasha* village claimed that territory, as according to current official map of Pakistan, the area belongs to KPK. This territorial dispute caused the death of eight people and several injured when both sides clashed over this conflict (Dawn, May 06, 2016; Muhammad, December 28, 2013). The major reason of the conflict is compensation from disputed land and share of royalty between KPK and GB, if land will be entitled to KPK.

### 3 Data and methodology

The article deals with conflicts among the local population and also between local population and Government in *Gilgit Baltistan*, and does not take into consideration institutional territory disputes. It examines and analyzes the different factors related to the construction of *Diamer Bhasha* dam, and the conflicts among different actors due to this project and impacts on affected people.

We describe conflict as tension which can transform into a declared confrontation through engagement of one or more parties (Torre et al. 2014). Tensions are defined as an opposition without engagement of declared clash, which turns into conflicts after engagement of one or more actors. This engagement is defined by the implementation of a credible threat (Schelling 1960), which in our case may take different forms like legal actions, mediatization (bringing the issue to the attention of the media, press, radio, television, etc.), bringing the matter to the attention of the public authorities, protestations, assault or verbal confrontation, putting up signs (signs forbidding access, fences and gates, etc.).

Several land-use conflicts and their impacts on affected population and infrastructure projects were studied in the literature in order to assess about the very nature of infrastructure conflicts. Further, some random field interviews were carried out with local affected people in the project area to know about the conflicts among different stakeholders and the socioeconomic situation of the local population. The field interviews and literature helped to identify prominent factors causing conflicts and their impacts on affected population and project. The most cited factors include living standard, compensation amounts, awareness to use compensation amounts, resettlement plan, and impact on livelihood/employment, capacity building programs, information dissemination and public participation



in the project, corruption and mismanagement in project activities and land conflicts between affected people and Governing body.

In order to analyze the conflicts in the area and their impacts on affected population and project, both primary and secondary sources of information were used, as recommended by Rucht and Neidhardt (1999) and Torre et al. (2014).

Different national and regional dailies and the other available literatures published by public or private organizations were selected as main source of information. These kinds of secondary sources were frequently used by the researchers (see Torre et al. 2014; Awakul and Ogunlana 2002; Mahato and Ogunlana 2011; Mann and Jeanneaux 2009; Ali and Nasir 2010) in order to cross-check the information from different sources and to carry out better analyses (McCarthy et al. 1996; Deininger and Castagnini 2006). Among the dailies/newspaper journals, four national and three regional dailies were accessed online for the period of 2006 to 2016. About 289 articles were studied in order to collect information. Each article was saved by using variables including name of journal, article's title, date of publication and short summary of issue/issues described by the article. Initially selected list of issues from literature and random field interviews were searched in the articles with key word "*Bhasha* dam," which led to some selected issues. These selected issues and percentage number of articles addressing them, separately in national and regional dailies (with respect to total number of articles discussing these issues), are given in Table 2. Each issue mentioned in the table is drawn from the analysis of national and regional dailies which is the main source of information in results and discussion. However, information from interviews and some additional materials is also used in the results and discussion.

Each article usually described one main issue or conflict; however, when an article described two or three issues, it was separated in various items, all reported in the table. National dailies were found in English language but regional dailies were in Urdu language. After reading the articles from regional dailies, their summary was translated into English in order to properly analyze the information on specific issue from national and regional daily point of view.

**Table 2** Percentage number of articles discussing different issues. *Source:* Authors' calculation

Issues in dailies	% Number of articles appeared in national dailies	% Number of articles appeared in regional dailies
Impact on living standard	52	48
Resettlement plan	86	14
Impact on livelihood/employment	43	57
Public participation	76	24
Corruption/mismanagement in compensation	40	60
Land management conflicts (land measurement, land category decision and land rights due to historical settlements of local people)	61	39

For the purpose of primary data collection, we also interviewed experts and stakeholders of different backgrounds (see Table 3). About 61 detailed interviews were conducted on issues selected through national and regional dailies.

These experts and stakeholders were interviewed during stay in the project area (*Chilas* and other valleys), in *Islamabad* the capital of Pakistan, and *Lahore*.

Moreover, Government organizations, mainly Water and Power Development Authority (WAPDA), publish literature related to project's financial information, brochures and developmental portfolio time to time in order to show updates on project activities. These activities consist of main features, benefits and developmental plans of the project, its geographic information and financial requirements including main donors. This literature also contained the information regarding economic activities in the project area, number of villages and households and ethnic groups gathered through survey conducted by WAPDA in the project area. Research conducted by private researchers on *Diamer Bhasha* Dam and NGO reports were also considered as source of additional information in this article.

Finally, main results of our study are based on two sources: the study of press articles and an additional information from interviews. The interviews allow to fill the information gaps, provided the fact that a few articles point the main issues but do not develop them in details, which is permitted by the results of our interviews and other documents as well.

## 4 Results and discussion

The study of the oppositions and conflicts based on interviews and National and regional dailies brought important information regarding *Diamer Bhasha* Dam construction project. It highlighted the fact that various expressions of conflicts have been observed during different phases of the project, including different protest demonstrations, road blockage in order to intensify the protests, legal actions against Government, to threaten the contractors and to bulldoze the structure in the project area and worst of all death of some affected people for land compensations

**Table 3** List of interviewees. *Source:* The authors

Background of the interviewee(s)	Number of interviewee(s)
Water and power development authority (main Government agency to carry out this project)	10
Planning commission (Government Organization)	7
Private consultants for <i>Bhasha</i> Dam and other related projects	9
District administration and police	6
Diamer poverty alleviation program (NGO)	5
Local leaders/representatives	10
Legal advisors	5
Journalists and social workers	9

(GB Tribune, February 19, 2010; Mir, June 14, 2012). But most of all, the analysis of press releases revealed that the project left negative impacts on affected population and sometimes generated several conflicts among different actors, related to the main items identified in Sect. 3.

According to our study most of the articles discussed the impact of the project on living standard of area as positive; however, few articles focused on living standard of local people due to this project and described it negatively. Most of the other issues were connected to living standard of local people and the project in one or the other way like ineffective resettlement plans, negative impact in livelihood of affected people, lack of their participation in project activities, corruption and mismanagement related to compensations and conflicts related to land. These conflicts were related to mainly measurements of land, manipulation of land category and historical settlements of local tribes and land rights on this basis.

Our study discusses issues mentioned on national and regional dailies in Table 4, which were having negative impacts on local people and project. We will describe them now, according to the main items of the table. The information presented here includes also the results from our interviews, which stress the behaviors and reactions of local actors in a much more detailed manner.

#### 4.1 Land management conflicts

Big infrastructures are always engaged with conflicts related to land, which are of different types and vary in nature. In such kind of projects, in developing countries, most of the communities lack legal rights (Lombard 2016; Anaifo 2015; Flood 1997) and informal settings lead to conflicts due to political favoritism and mismanagement (Zhu and Simarmata 2015; Admasu 2015). Political alliances among different stakeholders to gain control of land resources cause conflicts (Campbell et al. 2000). Moreover, most of the tenure reforms fail to protect land rights under informal settings (Rigon 2016). Different types of conflicts are also embedded in structural and historical inequalities affecting unfairly specific groups (Marx 2016).

**Table 4** Percentage number of issues discussed negatively in national and regional dailies. *Source:* Authors' calculation

Issues in dailies (discussed negatively)	Number of articles (in national dailies)	Number of articles (in regional dailies)
Land management conflicts (land measurement, land category decision and land rights due to historical settlements of local people)	19 (25%)	12 (16%)
Worse impact on living standard	2 (7%)	0 (0%)
Ineffective resettlement plan	13 (36%)	5 (14%)
Negative impact on livelihood	4 (11%)	12 (34%)
Lack of public participation	8 (22%)	7 (19%)
Corruption and mismanagement in compensations	13 (20%)	25 (38%)
Total	59	61

Land acquisition and land compensation is a complex process and significant source of tensions and conflicts among different stakeholders. Land compensation issues can take many dimensions like little or lower compensation (Awasthi 2014; Li et al. 2015), political favoritism for selected people (Magsi and Torre 2012), use of police force against the protestors (Swain and Chee 2004) and threatening the people to hold the protests by withholding the social benefits (Huber and Joshi 2015). It is often noticed that people hesitate to take legal action in such kind of violent atmosphere (Mc Michael 2016).

Total land required for the *Diamer Bhasha* Dam project is 37,419 acres, which include both private and public land. Government is contributing 19,062 acres, while 18,357 acres have to be acquired from two provinces, *Gilgit Baltistan* and *Khyber Pakhtunkhwa*. So far 7936 acres of land are acquired from *Gilgit Baltistan* and 162 acres from *Khyber Pakhtunkhwa* (GOP 2014). Our study revealed that land management was the major source of tensions and conflicts locally. It included conflicts related to land rate compensations, land measurements, land category decisions and conflicts over land rights due to historical settlements of different groups in local area. Conflicts due to land rate compensations are analyzed from interviews, while rest of the conflicts are explained in the light of both national and regional dailies and from interviews.

There had been severe conflict over land compensation in the form of protest demonstrations and attack on Government building in 2010, which caused the death of three people and several people were injured when police opened fire on protesters. Government negotiated and increased the compensation rates after this incident and no conflict was seen after these negotiations. However, most of the local people were not satisfied with this compensation amount and according to representatives of local people, compensation rates were accepted with a fear of further clash with Government. Compensation amount seemed according to market rate but insufficient for resettlement. Moreover, some people benefit from increase in land rates as they possess land near project site (Hommel, Boelens, and Maat 2016). Land rates in the area also started increasing after project activity but compensation amount was already fixed.

The project is located in a tribal area, where there was no land record previously. All the land transactions were verbal and any conflict over land was handled by local leaders. The Government agents first time prepared the land record in order to estimate the compensation amount. There were a lot of irregularities in land measurements. Issues of wrong measurements like less land measurement, allotment of more land to favored persons or by taking money under the table were seen. The land record of Government agents (*Patwaris*) had limited accessibility and reliability, having chances of corruption. Official procedures in the present land administration system are too complicated which leads to delay in court decisions (Ali and Nasir 2010). However, in case of irregularities in land measurements, people took legal action against Government.

Another conflict between Government and affected people was on the basis of manipulation of land category. Three land categories including cultivated, cultivable and barren land were decided to provide compensation. But local people claimed that their cultivable lands were considered as barren in order to reduce the

compensation rate. This conflict was significant in an area called *Kino Das*, which is site selected for model village. Due to this dispute people took legal action and Government could not acquire land and start construction of model village yet.

Conflicts over compensation and land acquisition were not just limited to Government and affected people but also extended to different groups in local population. These groups are divided by different religious and social values, caste system and other local tradition based upon historical settlements. They are usually divided into two major groups. People who first time arrived and settled in this area are distinguished as original settlers, also called "Owners." They claim all lands and natural resources which consist of pastures, barren lands, forests, non-timber forests and water (termed as "common lands"). Government accepts their local law and decided to provide compensation for this kind of public land/common land which is required for the project. However, there are other people who arrived and settled in this area later, which are distinguished as late comers, also called "non-owners." They cannot claim the above-mentioned common lands, however they can purchase the land for their residential or business purpose.

When Government decided to provide compensation to owners for common lands, non-owners claimed their share which according to customary law they were not eligible to, as they had no right over common lands. This situation led to conflict between owners and non-owners and was worse in an area called *Thak Das* which is also a site for model village. Due to this conflict, Government could not acquire land for model village and construction is not started yet. This conflict is also affecting the project as non-owners protested against Government for favoring the specific tribes (owners), threatened the contractor and project work was stopped for almost one year.

## 4.2 Living standard

It is commonly assessed that in case of infrastructure projects like dams, living standard of affected people is a very sensitive issue which depends upon planning of many other project activities. In most of the cases, affected population suffer from poverty and worse living standard (Moran 2004; Swain and Chee 2004). Geographical and social changes due to such large projects make it difficult for affected people to maintain their original living standard (Sun 2013; Moran 2004) and lead toward household dependencies, poverty and bribes (Magsi and Torre 2012). As many other infrastructure projects, *Diamer Bhasha* Dam project was claimed to bring economic prosperity and to improve the socioeconomic status of the region. However, some articles issued from national dailies discussed the negative impacts on living standard of affected people and claimed that people under this situation may not be able to maintain same living standard. It was interesting to notice that we did not find any article concerned with this question in selected regional dailies, as if it was a hidden question, which was impossible to address to local population.

Information from interviews highlighted the worse impacts of project on living standard of affected population by bringing conflicts due to poor governance and mismanagement among different stakeholders on the basis of ethnicity, less land

compensation or no compensations to non-owners for common lands. Loss of livelihood opportunities, compensation due to lack of business and land transaction skills and loss of living place due to poor resettlement plan are also significant worse impacts on living standard of local population. In addition, it also focused on the specific group of “non-owners,” who was going to be affected more than others due to lack of their legal right on common lands and their ethnic inferiority in the area. In more general terms, in our case study, living standard of local people was depending upon several other project activities, effectiveness of which determines the fate of local people. Such activities include resettlement plan, livelihood opportunities, participation of local people and elements of corruption and mismanagement in these project activities.

### 4.3 Ineffective resettlement plan

In every infrastructure project resettlement of affected people is one of the critical steps, whose effectiveness is strongly linked with standard of living of affected people. Several people are displaced around the world, suffering from landlessness due to such kind of projects like dams (Scudder 2005; World Commission on Dams 2000). Sometimes, land transaction by affected people in areas other than their origin becomes inevitable due to ineffective resettlement plans of Government or for the purpose of permanent settlement to more developed areas in quest of better education for their children and more developed opportunities. This migration and settlement may not always end appropriately due to lack of their awareness to new areas and property dealings. In the case of *Diamer Bhasha* Dam, it was claimed by the Government that resettlement plan was according to Asian Development Bank's safeguard policies, which included construction of three model villages, *Thak Das*, *Harpan Das* and *Kino Das*. A residential plot of one Kanal was supposed to be provided free of cost to each affected household and genuine demands of local people were under consideration.

This issue appeared to be very sensitive regarding our investigations, because of ineffective resettlement plan, which opened opportunity for fraud and protestations. Given the press releases and our own interviews onsite, it appeared that several problems were found in Government's resettlement plan. First, residential plot of one Kanal might not be sufficient for large families, and the design of model villages was not according to culture of local people. Second, government had to conduct another survey in the local affected area, due to miscalculation of number of affected people which appeared more than originally calculated. This also left a question mark over sufficiency of residential plots for all families. Moreover, there was a delay in construction of model villages, as land devoted for construction of model villages is disputed.

As discussed in land management conflicts the disputes causing the delay in resettlement were of two types, be there related to land category manipulation or to conflict between owners and non-owners due to historical settlement. There was also a gap between compensation payment and land provision for resettlement, as compensation was being paid early while land for resettlement is delayed due to

the disputes. Moreover, some people, especially non-owners who got compensation early, tried to migrate to other areas mainly because of delayed resettlement, common land right deprivation, ethnic inferiority and in search of areas with more developmental opportunities. As a result, many people among them lost compensation amount in land transactions due to lack of awareness and in the hands of fraud property dealers. There had been more protest demonstrations over residential plot for resettlement and compensation from common lands from non-owners who lost compensation in land transactions in other areas.

#### 4.4 Negative impact on livelihood

Livelihood opportunities are important related to infrastructure projects and several studies discussed the worst consequences of these kinds of issues (Qian 2015; Hui et al. 2013). Such projects bring unemployment and also increase the social disorder among the affected communities (Brown et al. 2009). They leave fewer chances of long-term employment and skill development, as economic opportunities first increases but could not sustain after construction (Huber and Joshi 2015; Moran 2004). Another question about job opportunities is that whether affected people need skilled or unskilled job or not, because with cash compensation, on the one hand people, could waste money in luxurious lives as sudden wealth through monetary compensations makes affected people reluctant to seek jobs (Qian 2015). On the other hand, they could try to invest in business which is highly dependent upon their awareness to invest as most of the people could not keep their original profession (Sun 2013; Swain and Chee 2004). Kaya and Erol (2016) stated that there is need to focus on local people's exact interests to resolve conflicts rather than on symbolic benefit.

In the case of *Diamer Bhasha* dam project, Government claimed several employment opportunities in the project area for better livelihood of local people. In this regard, it established capacity building institutes for the purpose of skill development of affected people, which could be helpful during and even after construction of the project. The project was also likely to improve tourism in the area, which could also bring employment opportunities. In more general terms, development of the area was supposed to create several different types of jobs for local people.

But information from interviews revealed that Government's capacity building programs in order to provide employment opportunities suffered from several deficiencies. Skill development through capacity building programs was to cover lower category jobs, probably during construction only. Although these skills could have positive impacts even after construction, local people needed training and guidance in business investment, because a large part of people with cash compensation in hand would not prefer lower category jobs and were likely to waste money in luxurious lives or in business. As a matter of fact, some of the people who were so far compensated lost money in business investment, due to lack of awareness. Regional dailies highlighted another source of tensions and conflicts which was due to status and the attached rights of affected or non-affected people. Affected people preferred some of the employment opportunities especially related to public sector, which

of course cannot be granted to everyone and subject to competition among only affected people. Considering non-affected people eligible to apply for those jobs was a serious source of tension among affected people and was taken as an element of favoritism and mismanagement.

#### 4.5 Lack of public participation

Proper awareness of the project among all stakeholders and their participation in all project activities is of great importance (Mc Michael 2016; Patel 2016). A lack of involvement may lead to mistrust over Government, loss of economic opportunities and conflicts (Li et al. 2015; Mann and Jeanneaux 2009; Diduck et al. 2013; Slee et al. 2014; Magsi and Torre 2012; Vignon and Lecomte 2004). Several studies emphasized on participation of all stakeholders including *Manwan dam in China*, *Lesotho Highlands Water Project in Southern Africa* (Tilt et al. 2009) and *Pak Mun Dam in Thailand* (Awakul and Ogunlana 2002). It is often considered as a conflict resolution mechanism (Lombard and Rakodi 2016), including accommodation of interest, inclusion of veto players and fairness of process proved positive influence for different cases in Germany (Drazkiewicz et al. 2015). Moreover, resource redistribution and territorial rights on the basis of water by participating in decision making are also brought to light (Hoogester et al. 2016). In short, taking all the stakeholders in decision-making process right from the start of the project is supposed to minimize land-use conflicts (Huber and Joshi 2015; Magsi and Torre 2015).

A national consensus for *Diamer Bhasha Dam* was reported in the Journals, according to which all the provinces voted in favor of the project. Moreover, at local level, the project was introduced to all stakeholders in the form of seminars, workshops and cadastral surveys. Local people, especially notables from the region, participated in different project activities, including land compensation decisions. However, public participation in the project area was questionable in some dimensions, like participation in all project activities and participation of all stakeholders. Local people, especially poor or uneducated ones, were ignored in participation in several important project activities, which was one of the major reasons of tensions and conflicts in this area. Such project activities included mainly measurement of land, land category decisions, land rights decision on the basis of historical settlements of different groups of local people and land compensations. The subsequent conflicts were in the form of legal actions in the court, threatening the contractors and also death of some people while protesting for land compensations. Non-owners were part of affected people who, according to local law were not allowed to take part in decision making which created serious conflicts not only between owners and non-owners but also with Government over compensation from common lands.

#### 4.6 Corruption and mismanagement in compensations

Corruption and mismanagement are some of the basic elements of conflicts in big infrastructures and lead to worse consequences. Different studies discussed the corruption and mismanagement in different project activities (Awasthi 2014; Swain and



Chee 2004) which led to opposition to the project, mistrust in Government, tensions and conflicts (Magsi and Torre 2012; Mann and Jeanneaux 2009; Slee et al. 2014).

Although Government ordered to carry out different project activities in a transparent and unbiased way some issues were identified in National and regional dailies in our case, including corruption, mismanagement and favoritism related to different project activities. To be more precise, the articles reported corruption and mismanagement in land record preparation and different compensations for same quality of land. During land measurements, there have been corruption/mismanagement in the form of allotment of more land to politically favored persons or by taking money under the table. According to interviews, some of the Government agents misguided the local people by showing more land rates hence in order to show them more compensation, which created tensions among local people on payment of original compensation rates or according to some stakeholders even less than original compensation rates. This conflict has gone to legal actions in the court. In some cases, before the announcement of the project activity, some of the land in project area was purchased by people who were politicians and worked for Government and then sold it back to Government on higher prices, when project was announced and land acquisition started.

In case of common lands, some powerful people tried to register common lands under their names. Another source of conflict was Government's favoritism to owners in case of compensation from common lands, where non-owners could not even take part in decision making. Moreover, corruption and favoritism were also observed in case of some of the employment opportunities in local area, where non-affected people were being preferred for jobs reserved for affected people. Finally, diversion of developmental funds toward non-affected areas was also a source of tensions among different stakeholders. As the project area was least developed and as a step to improve the living standard of local people, different developmental projects were assigned in the form of schools, hospitals etc. It had been noted, in this case, that some of the developmental projects were diverted toward other non-affected areas.

## 5 Conclusion and recommendations

Infrastructure projects bring conflicts in various forms, not only between governing bodies and affected people but also among the affected population due to competition over territorial and other resources, mainly on the basis of historical settlements and inequalities among different groups of people. *Diamer Bhasha* Dam project is not an exception. It is subject to several conflicts, expressed in different forms from time to time, like protest demonstration, legal action in court, road blockage, threatening to damage the property and clash between protesters and security forces. Such tensions and conflicts are results of mismanagement and corruption, poor planning in different project phases like livelihood, resettlement and land management in the form of land measurement, land category manipulation and historical settlements of locals and inequalities among them. They are also related to social capital issues, be there linked to its weakness or to the intra-social network effect.

The main conflict started from land compensation, which caused death of few people and injured several during clash between security forces and local people, which was settled by increasing the compensation to some extent by Government and with fear of further bloody clash by local people. Other conflicts, like land measurement and land category manipulation, were mainly due to poor planning, wrong land measurements and corruption of Government agents involved in land measurements. Another big conflict was based on historical settlements and inequalities between owners and non-owners, which originated from territorial rights of common lands and compensations from them. Corruption, biasness and favoritism were also observed in the form of allotment of extra land to some powerful people and by taking money under the table during land measurements and also when some people tried to register common lands under their names.

The impact of social capital relations (Adler and Kwon 2002; Dubos 2017) is huge at that level, for two reasons. On the one hand, a part of those conflicts is related to the fact that there is a weakness of social capital at the level of the studied area, in terms of a lack of social ties and links between the various actors of the conflict. They barely exchanged, the local population was scarcely involved, and the relations between compensated people and public authorities were scared. All these issues raise a high level of conflict and prevent the possibility to jointly elaborate collaborative solutions at the local level. On the other hand, the so-called bonding relation (e.g., internal to a network) were strongly functioning, especially inside the groups of the owners and the non-owners. Each community appeared to stuck in its own behaviors and ways of thinking, in such a manner that the conflict arose because of the increasing mobilization and opposition of the two groups of stakeholders.

For the moment, the project is still blockaded, and the conflicts and damages were already high. To address these issues, we claim that transparency should be required in land acquisition processes right from the start of the project. Proper information dissemination about the project activities and participation of local people, media and NGOs must be encouraged in order to ensure transparency and avoid corruption and mismanagement in conflicts like land measurements and land category decisions. Credible information about historical rights between owners and non-owners is required for the eligibility for compensation on common lands. All these issues require participation of all stakeholders, especially non-owners, in decision making. In addition, political efforts are also required to satisfy all stakeholders by sharing compensations.

Another major issue related to project planning was resettlement of affected people, which seemed ineffective as land for construction of model villages was disputed and had not been acquired completely. Moreover, some people were likely to sale the property in model villages which was allotted to them and resettle according to their culture in local area, or to buy property and in some cases move to developed areas for the purpose of better economic and educational opportunities for their children. Most of these people lost compensation amount in business investment and also in buying property in other areas in the hands of fraud property dealers, due to their lack of awareness or experience. It appears then that local people are highly in need of capacity building in business and land transactions.

Capacity building plans arranged by Government to adjust local people in different employment programs were devoted to lower category jobs which local people might not prefer. They also prefer public sector jobs which are of course limited and cannot be granted to everyone. Government must ensure merit and local people should be preferred for these jobs. Although there are some developmental projects approved for local area but Government should enhance and speed up these developmental schemes like schools, hospitals and other infrastructures in order to attract some of the affected people who decided to migrate to other areas and lost compensation amount.

All these factors point the fact that a need for a better use of social capital is required at the local level. In particular, a higher capacity building of local people is needed in common negotiations for land resources and other economic opportunities, so that people can understand the project, express their opinion and defend their rights. In this regard, the role of NGOs could be highlighted for capacity building of local people. Further participation of local people, NGOs and media in project activities and public debate could make the land acquisition process transparent, protect the rights of local people regarding resettlement and employment and ensure the proper compensations especially developmental compensations in local area.

There is a need for enhancing the capabilities of local people, by proper means of education, in the sense of Sen's works (1999), providing them more individualistic foundations in order to make them free to choose from a range of action possibilities offered by their environment and to increase the level of social justice (Nussbaum 2000). But most of all, empowerment approaches are required (Lincoln et al. 2002), in order to help these populations (be there individuals or groups of people) to improve their own competences and capabilities, and to increase their social integration, particularly through experience-based learning. It is expected that on this basis, they could take part to the process at his different stages, and be able to be informed, involved and collaborate actively in the setting of the new development plans.

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## Annex 1: Methodology of interviews

Before interviewing experts and stakeholders in the project area, affected people mainly from two different groups (Owners/Original Settlers and Non-owners/late-comers) were interviewed. Information was obtained about their socioeconomic conditions, the effects of the project on them, and the conflicts among themselves and with the Government.

Major open questions were then asked to experts and stakeholders which led to further questions and open discussion.

1. Will the project have good impact on living standard of locals (yes) or not (no)?

2. Do you think that the amount of compensation paid by the Government for affected people's land is enough (yes) or not (no)? What are the reasons for your view?
3. Do you think that the current form of compensation paid by Government is fine (cash + land) or would you suggest any other form of compensation? What are the reasons for your view?
4. Is the Government resettlement plan effective (yes) or ineffective (no)? What is your opinion?
5. Will the project have bad impacts (yes) or good impacts (no) on employment of locals? What are the effects of this project on the livelihoods of the affected people?
6. Do you think that the project will have positive impact on education status of local area (yes) or not (no)?
7. What is your view about the Government's capacity building programs for employment of the affected people at the project site? Are they affective (yes) or not effective (no)?
8. Was the public encouraged to participate properly in project activities (yes) or not (no)?
9. Do you think that the local people have ability to take legal action against Government (yes) or not (no)?
10. Do you think that the provision of compensation involved mismanagement/ corruption on the part of actors/agencies involved in different project-related activities (yes) or not (no)?
11. Is there any cultural difference between locals and Government agents (yes) or not (no). What impact will this project have on local culture?
12. Do conflicts exist between Government and local people (yes) or not (no)? If yes then what kind of conflicts exists among them?
  - a. Why do people have problems/conflicts with the Government over the measurement of their land, on the basis of which Government allotted compensation? Why does this conflict exist?
  - b. Why does the land category manipulation conflict exist? What is your opinion about this conflict?
  - c. What is the nature of the conflict between the two major groups (Owners/ Original Settlers and Non-owners/latecomers) and the Government? How would you propose to solve these conflicts between the Government and affected people?

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