

River culture and water issue: an overview of Sapta-Koshi high dam project of Nepal

**Dr. Som Prasad
Khatiwada**

khatiwadasom@yahoo.co.in

Abstract:

Koshi, Gandaki and Karnali are main three big rivers of Nepal flowing from east, middle and western part of Nepal. Each river has its own history, culture and tradition, which is alike with most of other ancient river civilizations. Among them Koshi is the biggest river and its culture is known as the oldest one in Nepal. Varahakshetra, Chatara, Pindeswara and Ramdhuni of Nepal and Simheswor and Tarasthan of Bihar India are the centre of pilgrims and civilization in Koshi River basin. Because of its destructive nature, we cannot find the archaeological remains of old civilization at Sapta Koshi valley. However, Kichakbadh, Rajabirat Kshetra and Bideha are some of the famous centers of civilization near Koshi basin. This river is said the Kausiki Mata in ancient Samskrit texts. According to the Pauranic text of Hindus, it is originated from the sweat of Parvati and she is known as Parvati in religious aspect.

Because of its destructive nature, people were always afraid from its flood and therefore, people planned to make dams in Koshi River from long ago. In this process Saptakoshi high dam project was prepared from the side of India at British India period. The main center of making this dam was in Nepal and more benefit goes to the Indian side from this project. Therefore, Koshi high dam project is in conflict between these countries. However, we can make a plan of a high dam based on equal benefit for the people of both countries and we can fulfill the necessities of the people of this region. This is one of the best ways of using unused resources and controlling harm from the flood of Koshi River.

Key words: barrage, dam, bank, canal

Introduction

Nepal is a small mountainous country having more than 6000 big and small rivers. Most of them are originating from high mountains and rest of others begins from the slope of Mahabharata and Churiya range. Koshi is the biggest, Gandaki is the deepest and Karnali is the longest rivers of Nepal. These three rivers have seven major confluences each and hence they are called Saptakoshi, Saptagandaki and Saptakarnali. The country is divided in three parts from the basis of these three rivers. Among them, Saptakoshi flows from eastern Nepal.

Arun River, the main branch of Saptakoshi originates from 7000 meters high altitude in Tibet and flows towards south. Different branches of Saptakoshi are originated from different mountains with different names and they are flowing towards southeast, southwest and direct south. After reaching near Triveni, Arun and Sunkoshi and latter on Tamor join each other and flow downward to the south with the name Saptakoshi. The water east from Goshainkunda of central Nepal and to the west of Kanchangunjha of eastern Nepal collects to this river covering a large area of high mountains and hills. Out of its main seven branches, Arun and Bhotekoshi are originated from Tibet. Hence, Arun River enters Nepal from Kimathanka pass or boarder and the Bhotekoshi River enters Nepal from Tatopani pass. Latter on the Saptakoshi River enters towards India Bihar from Bhimnagar. Therefore, the water shed area for Koshi River is very big. It covers 60420 square kilometer in three countries. Out of this area, Nepal bears 27883, Inida 11410 and Tibet bears 21127 square kilometer. Therefore, it is an international river. After reaching it in Ganga River, it flows up Bangladesh and falls down in Indian Ocean.

Koshi falls in Ganga river from Kurshila of Inida, Bihar. The length of this river is 729 kilometer from Tibet to India Bihar. It is 254 kilometer long from Koshi Barrage to Kursila in India and 68 kilometer from Triveni to Koshi Barrage in Nepal. Inside Nepal, the length of different branches is different. The capacity of producing hydro-electricity is 22500-mw in this river. Varahakshetra, Chatara, Mainamain, Bishnupaduka, Manakamana, Ramdhuni and Pindeswara are some of the famous religious centers of Kausiki region. Some important religious sites are there in Bihar India also at the bank of Kausiki River.

Name

In religious point of view, all of the rivers of Nepal are believed as the representatives of goddesses. Hence, Saptakoshi is known as the daughter of the sage Kausik. The water or the river is pronounced with the letter KU in Tibetan language. Therefore, the river originated from Tibet is called Koshi. The Kirati people of eastern Nepal (Pandey; 2043: 83) accepted the same name of this river. The letter Chu is also pronounced for the name of the rivers in Tibetan. Therefore, The Arun is called Fung-Chu in Tibet. Milanchi, Kangchu and Pochu are other Tibetan names of rivers which mix to the Koshi River. The rivers are considered as the goddesses and mothers in Nepal. Therefore, Saptakoshi is said Kausaki Mata also.

Origin

Different branches of Koshi River are originated from different locations. Most of them are originated from high mountains, hills, glaciers and lakes. The main branches, centre of origin and the length is given below in the table.

SN	Name	Origin	Length (km)	Area (Sq km)

1	Tamor	Janak Mount.	198	5800
2	Arun	Tibet	152	4800
3	Dudhkoshi	Mahalangur Mount	113	4100
4	Likjhu	Rolwaling Mount.	23	800
5	Tamakoshi	Tibet	90	2600
6	Sunkoshi	Tibet	256	14100
7	Indravati	Lamgtang Mount.	68	1200

Source: Pandey, Geography of Nepal, 2043

The main sources of river water of Nepal are high snowy mountains, glaciers, lakes, ponds and the slopes of the hills. The rivers originated from snowy mountains bear continuous water flow whole the year. However, other kinds of river, which are originated from the slopes of the hills, do not bear much water like the others. The water flow becomes less in dry seasons in such rivers. Hence, most of the branches of Koshi river are originated from the snowy mountains and they bear lots of water whole the year. According to the table given above most of the branches of Saptakoshi River are originated from high snowy mountains. Among them Tamor, Dudhkoshi, Likhu and Indravati rivers are originated from Janak, Everest, Mahalangur and Lamtang mountain (Ibid).

Arun is a main branch of Koshi River. It is originated from Tibet. This river was in existence before the origin of the Himalayas. The deepest river valley of the world is Arun Valley, which is 420 meter high from the sea level. Tamor is the eastern branch of Saptakoshi River, whereas Indravati flows from the west. Tamor is said Dukhagni Barahi in Samskrit literature. Arun is the biggest branch of Saptakoshi river in which a glacier called Barun mixes to the north of Khandabari and it flows toward south. It is said Shivaduti Mahaprava in Samskrit language. In the same way, Dudhkoshi is known as a river of Mt Everest. The shortest branch of Saptakoshi River is Likhu, which is originated from Rolwaling Mountain.

Tamakoshi is also originated from Tibet. The western branch of Saptakoshi is Indravati, which is originated from Lamgtang Mountain. Besides this, many more small rivers also mix each other in different branches of Saptakoshi river.

Koshi Culture

The Koshi culture is related with the Kiratis and the Hindus. The Himavatkhandanda

Puranas of the Hindus has given a beautiful description on Koshi culture. According to this text the name Koshi is originated from the name of the sage Kausik. River Koshi is also known as Kausiki Mata. According to a religious view, Koshi River was originated from the sweat of mother Parvati. She is said Koshi in the sense that she was originated from her shell. Culturally, different names are given for different branches of this river. Mahaprabha Shivaduti, Dukhagni Barahi, Shubhasraba Durga, Swetibahibi, Papagni Narayani, Bhadramati Chandi and Barada Chamunda are the name of Arun, Tamor, Sunkoshi, Indrayani, Tamakoshi, Dudhkoshi and Barun River. Beside its seven branches Koka is the most religious stream which mixes into Saptakoshi river near Varakshetra. According to a Pauranic story Koka was the name of Swadha, the daughter of Moon. She became the river from the curse of her father the moon. This rivulet is originated from Siddhasharm and it flows toward southwest and mixes with Saptakoshi river near Barahakshetra. Different Hindu Puranas praise this river as a holy river and its historicity is connected with Varahakshetra.

The Koshi basin is known as Kirata land from the long historical period. Therefore, we can find the culture of Kirata people in this land. There are different historical and religious centers around this area. Among them Varahakshetra is the most important centre. Mahabharata (3.84.58), Brahmapurana (119.1-140), Skandapurana Himavatkhanda (Chapter 34 and 35) and Varahapurana (140.1-100) are main literatures that are related with the religious value of Kokakhola and Varahakshetra. Some legends popular in this area are also related with Koshi river. According to a legend, there was a hill near Koshi river which was very popular in its magic character. The legend says, the name of the hill was Belka, which used to be seen at the nighttime and nobody could see it at the day. A beautiful settlement with the facilities of drinking water and electricity could be seen there at night. However, such facilities used to remain unseen at the daytime.

Culturally, Saptakoshi River is very important. It is one of the most important river with cultural aspect of Nepal. The culture of Kirati people and other minor ethnic groups also is related with this river. Eastern Tharus, Dhimals, Santhals, Bantars, Meches, Kishans, Rajvamshis and Musharas culture are developed in different localities of this region. There are many more religious and historical places in this locality. In the same way ancient Mithila, Matsyadesa, Pragjyotish, Pundrabardhana, Ilam and Morang were situated in this location. Vijayapur, Chaudandi, Illam and Chainpur also were there in this region. Therefore, Koshi basin was rich with ancient culture and history. Saptakoshi is itself a sacred river and there are different cultural and religious sites in it's' bank. Varahakshetra, Chatara, Ramdhuni and other pilgrim centers are also there at the bank of Saptakoshi river. Many more aspects of Nepali culture are co-related with this river. Different kind of sacraments from birth to the death event is related with river culture of eastern Nepal and Bihar as a part of Koshi culture.

Saptakoshi river begins from the highest peak the Mt. Everest and it makes the lowest river valley. Therefore, this river is very important in this region. Koshi is know the sorrow of Bihar due to its carry and deposit effort of large amount of sand and gravel per year. Such

kind of rivers is rare in the world and it is compared with the Whang- ho river of China. It fills the large area of fertile land with sand and sweeps hundreds of villages per year from the flood. It changes its roots in the low land and flows with strong current in hilly region. That is why it is hard to manage the means of transportation in this river. The life is always in danger in the water of this river. It has changed root towards 71.5 miles west in 214 years from 1736 to 1950 AD (Pandey; 1992:7). At present, its bank is banded in Terai region of India and Nepal; however, it often breaks its bank and destroys the settlements. Therefore, many people believe that it is impossible to tie up its bank and control its water from its destruction.

The water flow of Koshi River is twenty five to thirty cubic second as usual. However, it reaches up to 250 thousand cubic second water flows in rainy season (Ibid). The main feature of the flood is that it comes at the last stage of rainy season. Big flood is recorded at 1963, 68, 71, 74, 78, 80, 84, 87, 91, 93, 98, 2002 and 2004 AD. At the last, the bank of Koshi River was broken in 2009 and some of the villages of Nepal were swept away from its flood. The destruction in India was bigger and hundreds of villages of Bihar India were flown from its flood.

Koshi Project

The main aspect of Koshi project is Saptakoshi High Dam Project, which is under the construction of DPR. It is a big project with its long-term effect. Therefore, deep study on its effect should be done before implementing it. The main location of Koshi project lies inside the territory of Nepal. Thus, the interest Nepalese people is important for this project. Hence, Nepal itself cannot afford the fund to implement it and the benefit of this project is also very limited with respect its expenses. Therefore, India is getting interest to implement the Saptakoshi High Dam Project.

The issue of Koshi River is very old. People were afraid from the destruction of this river and they used to make different kind of plans of protection from its harm. According to a literary source, a big dam and a canal was made in Koshi River near Chatara to control the harm of flood and to provide the facility of irrigation in ancient period (Khatiwada; 2067:28). Therefore, this place was called Lohargala in Pauranic texts. In the same way, both banks of this river were banded in different locations from Chatara to Ganga. Among them, Virbandh (Vir Dam) was famous in medieval period. It was a plan of Vireswara the minister of Harisimha Dev the Karnata king of Simroungadh. According to a historical evidence, he made this dam in about 1295 AD. This was the eastern boarder of Simraungarh or Mithila in early medieval period. Perhaps this band was done in the western bank of the Koshi river. The canal system for irrigation was also managed from the dam. To the east of Koshi river Nashiruddin Bugada used to rule in medieval period. Perhaps he was the king of Pundravardhana.

According to a historical source, King Laxman of Gauda Desha made Vira dam. However, we do not have more evidences about this name. This dam was made from Phattepur of Nepal to Supaul of Bihar. Supaul is near about 40 kilometers east from Koshi

River now. The height of this dam was 20 to 30 feet and the length was 50 miles (Pandey, 1972: 13). The dam was made of sand and soil. According to a legend popular in local people long ago, the Koshi River was a beautiful girl. The legend says, some demons were attracted from the beauty and they proposed to get marry with them. Then, the Koshi said that she had made a plan to get married with a person who could make a dam in the bank from Chatara to Ganga River within a night. Then, they started to make a dam in Koshi River. It was possible to complete this job within a night. Therefore, The Koshi River praised Lord Shiva to protect her from the demon. Lord Shiva also made a plan to assist Koshi River and he became a cock. Then, he crowed as a cock in the middle of the night. The demon also heard the sound of the cock ant they thought that the night was gone over and they ran away towards the hill area. Then, Kausaki became safe from the demon, the legend says.

According to a historical source, the western bank of Koshi River was banned at the time of Harisimha Deva of Simroungarh. His kingdom was destroyed at the same time and he was driven up to the hill. The people residing at the side of Koshi River were suffered a lot from the river and the rulers used to make plan to make the dam in this river. However, when it was banned at a place it used to break or harm in other place. Therefore, the people residing near its bank were always afraid with its destruction. Koshi River used to sweep away thousands of villages of Bihar India each year. Therefore, people used to make different kind of plans to control the flood of this river.

The first person who studied the possibility of flood control in Koshi River was W.E. English. He did a field survey of this river in 1893 AD and made a report. His report was based on the detail study of its harm and the possibility of it's control. In conclusion, he said that it is better to leave the river in original form rather than to control it in the way. If we try to make a band in a place, then it destructs to the other parts. In the same way, nobody can totally control the flood of the river. We have to bear a great destruction from its flood in a place in the case of trying to control it in other center. Hence, he concluded that human being does not have the capacity of controlling this river.

In 1896 AD, a meeting was organized in Calcutta of India to discuss about the way of controlling the harm of Koshi River. The meeting concluded on making a river band in the western part of Koshi River. However, this plan was not implemented due to the lack of proper budget. Regular meetings and discussions were done for the reduction of its harm and in 1936 AD; the government of Bihar organized a meeting to discuss the harm of the flood in the presence of Rajendra Prasad. The following views were given at the meeting.

1. It is better not to make dams and bands in Koshi river to control the flood, because it breaks its bank and sweeps the villages in a place when controlling it in other side.
2. Dr. Rajendra Prasad suggested to make a big pond and to control the flood, which could help to extent the facility of irrigation also.
3. The third view was related with making a big dam in Belka hill from where hydro-

electricity could be produced and the water could be used in irrigation.

The suggestions and the views given in the meeting were very useful, however its implementation process was risky and hard. A big budget was also needed to implement this plan. Therefore, the government of India did not implement the earlier planning. Latter on regular meetings, discussions and surveys were done to find out the way of controlling the flood of Koshi River. In 1941, Kalad English the director general of the Central Irrigation Research Center of India suggested the following points to control the flood of Koshi River.

- i. Make a dam in Triyuga and Balan rivers of Nepal and
- ii. Plantation and preservation of the forest in Koshi basin to control flood

According to his view, preservation of forest in Koshi basin of Nepal could control the landslide and the flood. This process could become useful to reduce the flow of sweeping sand in Koshi River. The river used to change its' root after collecting and hoarding a large amount of sand in its bank. It was the main cause of its destruction also. Therefore, English was concentrated to control the collection of the sand in this river. In 1945 AD, Lord Bebal of British India government did a air survey of Koshi river. Latter on the process of studying the flood of this river was gone ahead.

Saptakoshi High Dam Project

Now the water issue in Nepal is in climax. It is related with both Nepal and India. There are more than 6000 big and small rivers in Nepal, which originate from mountains, which flow down towards India. Latter on all of them reach in Ganga River. Therefore, the work related on river in Nepal affects India and the water issue of Nepal is related with India. The floods coming from Nepal affects the people of India also. Some of the rivers flowing from Nepal are originated from Tibet. However, there is not any dispute about the water with Nepal and China. In this context, some of the treaties are done between India and Nepal for the settlement the issue of river and water.

Saptakoshi is more harmful than other two big rivers of Nepal for India. Therefore, India has got a keen interest to control its harm of the flood. It has made a plan to control the flood of this river, which is called Saptakoshi High Dam Project. A committee formed in the leadership of A. N. Khosala in 1946 did the survey of Koshi River and it prepared this project report. Khosala was the central chair of water and energy commission of India. This committee prepared two kind of planning namely Varahakshetra Dam Planning and Chatara Dam Planning.

- 1) The first plan of Khosala committee was Varahakshetra Dam Planning which includes
 - i. Making a dam of 783 feet high in Varahakshetra and collection of 6.9 million acre water
 - ii. Production of hydro-electricity and management of water transportation there
 - iii. Reduction of the flood harm and keeping fishes in the pond

iv. Irrigation of more than 3000 square mile land in Nepal and India

In 1947 AD, British India Government organized a meeting in Nirmali of Bihar and declared the same plan. However, this planning was ambitious and it was slightly changed and floored in the same meeting. A dam with 288 meter high was planned to make to the south of Varahakshetra. The plan was related on the facility of irrigating 1.2 million hector of land and production of 3300-megawatt hydroelectricity from there. However, the temple of Varahakshetra could totally be reached under water of the dam and it could cause the public revolt. Therefore, a slight change was done in the plan and the same dam was planned to construct at Sunakhambi 1.6 KM north of Varahakshetra. BN Sharma and Naramardan Thapa were the participants of that survey from Nepalese side. They were the engineers of Chandra cannel. However, they did not participate in making the plan. In the same way, Varahakshetra Dam Project was related with the benefit more for India than Nepal. Therefore, the government of Nepal did not keep interest for the implementation of this project. The same Varahakshetra Dam planning is known as Saptakoshi high dam project today.

India has proposed to make a dam and a canal at Chatara as a part of Saptakoshi high dam project. The plan was related to irrigate 3.84 million acre of land and the budget was estimated 1770 million Rupees for this project. However, India did not implement this project, because it was big and ambitious. With high cost, level the implementation process of the project was also challenging. The quantity of the electricity that was proposed to produce there was more than the demand that period. In the same way, the land of Siwalik hill was very weak and there was a great risk of breaking the dam. In such a situation, it could destruct more life and property than the imagination. The planning did not say anything on the management of the sand collected around the dam. Therefore, it was impossible to implement at this period.

One of the supplementary parts of Saptakoshi high dam project was Koshi Barrage planning. This planning was implemented in 1955 AD. According to the plan, a barrage was going to be made, where there was a plan of making 3770 feet long dam in Nepal India boarder area. That was proposed to construct between Bhimnagar and Hanumannagar. The city Birpur was established in India in the process of establishing offices of Koshi barrage. The stones, sand and gravel was managed from the side of Nepal in constructing this barrage. The river banks were banned in the both sides and two cannels were made to the east and west of barrage. Hence, the eastern canal was for India and the western canal was made to irrigate the land of Nepal. There was a plan of producing 20-megawatt electricity from the canal.

Construction of Koshi barrage was started from 1958 and it was completed in 1962 AD. To make a barrage the riverbanks were banned in both sides. The eastern and western banks of Koshi River were banned 132 and 141 Kilometer respectively. All together, the length of the banks was 273 kilometer. The job of making dam was completed in 1957 AD. The breath of the dam was 6.80 meter. All together 5 VDCs of Nepal and 386 villages of

Bihar India remained inside the dam. 12.5 million Hector land and 0.8 million people remained inside the dam and they bear the high risk of the flood in Koshi river.

Koshi barrage planning was a part of Sapta Koshi high dam project. Signature was done in the treaty of Koshi barrage by both countries in 1950. The government of Nepal signed there without studying the effect of the project. It is said that this treaty was done for 199 years, which has long-term effect. In the beginning, Nepal did not think about the effect of the treaty. Latter on Nepalese side realized that the treaty was based on the benefit of India not Nepal. Therefore, the government of Nepal got criticism from the people. The people suggested the government to make correction in the treaty. The government of India is also positive to correct the treaty, but the process of correction is not started. Now, DPR of Saptakoshi high dam project is not made and local people are disturbing for the work. It is a long term effect of Koshi agreement. However, no one is ready to take responsibility in reviewing Koshi agreement.

The government of Nepal distributed the certificates of land registration to the affected people of Koshi agreement and Koshi barrage project. However, the response of Indian government is not positive. In the same way Koshi Tappu wild life reserve is established near the barrage by the government. Hence, India is not feeling good to this step of Nepal. As a part of Sapta Koshi high dam project Chatara canal was established. The work was started in 1962 and the work of construction was completed in 1972. Latter the government of Government of China assisted to make it concreted canal. All together 8.5-million hector land of Sunsari and Morang district is cultivated from this canal. The Koshi agreement is done with the signature of Mahavir Shamsar from Nepalese side and Guljarilal Nanda from the government of India. This agreement was signed in April 25, 1954 (Baisakh 12, 2011 BS).

Saptakoshi high dam project was not possible to be implemented at that period. Therefore, this was a long term project to be implemented in future. However, Koshi agreement was done; Koshi barrage and Chatara canal were constructed as the part of this high dam project. At first Nepal had accepted the proposal of India on the construction of Saptakoshi high dam Near Varahakshetra in 1949. Then, Koshi agreement was done in 1950. Nobody thought about the report of Khosala commission and Saptakoshi high dam project for the long time. Latter on the water commission of India again prepared a DPR for Saptakoshi High Dam Project in 1981 AD, when the date of Koshi barrage was going to be expired. The main spot to make Saptakoshi high dam lies in Nepal. Therefore, agreement and interest of Nepal is compulsory to be addressed for this project. However, Nepal thinks that it is getting more loss than the benefit from river agreement with India. Nepal is interested to implement Karnali Chishapani project in the place of Saptakoshi high dam project. Irrigation is in high priority in the plan of India. However, Nepal is facing the crises of electricity and it intends to prioritize the production of electricity.

Possible effects of Saptakoshi high dam project

In the case of implementing Saptakoshi high dam project, Nepal will face different difficulties and calamities. Nepal does not have to much land to irrigate from its canal. In the same way, it will drown most of the fertile land of riverbank in Nepal. The electricity that is produced from this project cannot be consumed in Nepal and India cannot fulfill its demand from such product. The unit cost of electricity becomes very expensive. Therefore, Nepal has to bear more loss than its benefit and Nepal is in the view of implementing Karnali Chisapani Project. In the case of implementing Koshi high dam project Nepal is interested to implement Sunkoshi diversion project. While implementing Saptakoshi high dam project, 76 VDC's 301 villages of different 9 districts will be drown in the water. Dhankuta, Udayapur, Samkhuwasabha, Bhojpur, Khotang, Tehrathum, Panchthar and Okhaldhunga districts will be affected from the dam. Most of the fertile land of riverbank in these districts will go inside the water. Different vegetations, bridges, villages and cultural aspects will go inside the dam water. Therefore, we have to calculate the loss and benefit from the project at first.

The government of India says that one should bear a great risk to gain great benefit from big projects. However, there is a great loss and small benefit to the Nepalese side from this project. If 3000mw electricity is produced from this projects Nepal will become free from power crisis for some time. So that such projects should be implemented with positive discussion and analysis about the loss and benefit. We should calculate the social, cultural and ecological destruction and we should try to reduce such loss. Mutual understanding and proper discussion about the loss and benefit for both the countries should be calculated at first and such projects should be implemented.

Alternate way of Saptakoshi High dam project is Sunkoshi diversion plan. This plan was made in 1985 from the government of Nepal. According to this plan, the water of Sunkoshi River will be sent down towards Kamala River from a 16.6-kilometer underground tunnel. This tunnel will be made from Kurule of Udayapur district and the water of Sunkoshi River will be sent towards Kamala River. Production of 1600 mw hydropower and management of irrigation in 175 thousand hector of land in Siraha, Sarlahi, Rautahat and Dhanusa district. In the case of implementing Saptakoshi high dam project Kurule will be covered with the water. Therefore, Kamala diversion project has a plan to make 239-meter high dam in Saptakoshi River. In this way both Nepal and India are in the favor of implementing their own projects. Saptakoshi high dam project is in the favor of India and Kamala diversion project is more beneficial to the Nepalese side. Therefore, both these countries want to implement their own projects.

Saptakoshi high dam project was made from India side where as Kamala diversion project was made from Nepalese side. However, both of these countries tried to implement their own projects. In this regards the Koshi River is the concern of both Nepal and India, because the land of dam side is located in Nepal. In the same way, the dam made in this river can affect India directly. Therefore, the joint efforts of these two countries are necessary to implement the river project in Nepal. In 1991, both countries realized the reality and they

were agreeing to form a joint committee for DPR survey. Based on this agreement an office of Koshi high dam project was established in Biratnagar in 2004 AD. Thereafter, the member of the team started the job of survey to make the DPR of Saptakoshi high dam project. Staff of both countries is working in the same office jointly. However, in the field, local people are disturbing to complete DPR survey work. Many more defense committees are made to stop survey and DPR making process. They think that Nepal has not got proper benefit from most of river agreements. In the same way in the case of making DPR, the government of Nepal can easily become agree in the agreement. Therefore, the local people suggest completing cultural, social and environmental study of this project. However, the team of DPR is trying to study the physical and natural aspects of Saptakoshi.

According to the people representing different action committees, Nepal is unable to get proper benefit from Koshi, Tanakpur and Sarada river agreement. According to their thought Nepal cannot get more benefit at this time also. Therefore, the work of making DPR and doing survey is totally stopped. The purpose of forming action committee is to make pressure to the government of both countries to study on solving problem and the management of compensation for dismissed people from implementing the project. Either the government of Nepal or Indian government has to take the responsibility to provide compensation to the effected and affected people from this project. However, both the sides are unable to convince the local people on the usefulness of Saptakoshi high dam project. We can use the water of proposed dam in rearing the fishes, management of water transportation, irrigation of the large area of land and production of hydro-electricity. They are some positive aspects of Saptakoshi high dam project for Nepal. The government of Nepal should convince to the people to support in the work and it should provide them compensation for the affected people. Nepal should convince the government of India to provide it the greater facilities from this project. The government of India should become ready to hear the voice of Nepal. It remains better to make DPR and implement the project than to disturb its work. Both the countries can get more benefit from this process. However, we need to work for equal benefit from this project.

When the issue of Saptakoshi high dam project was in the crisis, the high court of India has made an order to the government to join different rivers each-other. Some rivers of Nepal are also included in the river-joining project of India. They are as follows.

- i. Sarada, Yamuna, Rajasthan and Sawarwati joints
- ii. Ganga Ghaghra joints
- iii. Koshi Mechi joints
- iv. Koshi Ghagra joints and
- v. Gandak Ganga joints.

The Saptakoshi high dam projects help to the rivers joining projects of India and India is

willing to implement this project with high priority. However, local people are against the implementation of this project, because the role and responsibility for providing compensation to the affected and effected people is not clear in the project. Either the government of Nepal or India should take the responsibility to provide compensation to the effected people. If this project is implemented based on the benefit of these both countries, it will become a good project. In the same way, if it is implemented without calculating the benefit for both countries, it remains a permanent problem for the both countries.

Bibliography

- Basam AL (1959 AD). *The wonder that was India: A survey of the culture of Indian sub-continent before the coming of the Muslim*, New York : Groove Press.
- Devacharya BSM. (2064). *Introduction of Nimbark Darshan*, Prachin Haridwar: RKBSAP.
- Dutta Shrastri RN. (ed. 2046 BS). *Mahabharat part 1-6*, Gorakhapur: Gita Press. Hamilton, FB (1997 AD). *An account of the kingdom of Nepal*, New Delhi: Asian Education Centre.
- Khatiwada SP and Kamala Dahal. (2067 BS.). *The Cultural Tourism of Nepal*, Kathmandu: MK Publishers and Distributors.
- Khatiwada SP. (2067 BS). *Cultural Heritage of Varahakshetra*; Chatara: Shree RKBSA Pratisthan.
- Kshetry G and SP Khatiwada (2054 BS). *Hindu Samaj ra Dharma*, Biratnagar: Shiva Prakashan.
- Pandey RK (2043 BS). *Geography of Nepal*, Lalitpur: Centre for Altitude Geography.
- Regmi, DR (2007 AD). *Medieval Nepal vol 3*, New Delhi: Rupa and Co.
- Sharma NP (2064 BS). *Devghatko Samskritik Adhyayan*, Kathmandu: CNAS.
- Yogi, Naraharinath (ed.), (2013 BS). *Skanda Purana Himavat Khanda*, Kashi: Yoga Pracharini Samit.



ISSN: 2348 9510

International Journal Of Core Engineering & Management(IJCEM)
Volume 1, Issue 3, June 2014