

# Fact Finding Report on the Tapovan-Rishiganga Disaster

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Fact Finding Team- Adv.PC Tiwari, Adv.Anupradha singh,  
Adv.Snigdha Tiwari, Adv. Gopal ram , Kiran Arya, neeta  
Tanta, PB Sashaankh and Pratik Kumar

Drafted by- PB Sashaankh & pratik Kumar

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## INTRODUCTION



Figure 1: Photo Of The Tapovan-Vishnugad Barrage After The Disaster

On February 7, 2021, the residents of Raini village in Chamoli district of Uttarakhand witnessed a calamity of epic proportions, which caused massive damage to life and property. The outburst broke through the Rishi Ganga dam causing severe harm to the nearby settlements and the local population. A fact finding team of HRLN visited the disaster site on 15.2.2020 and spoke to family of the victims, local activists, villagers, the administration involved in relief work including the District Magistrate and the employees of the National Thermal Plant Corporation.

The state of Uttarakhand has a vast amount of rivers and natural rapids. This makes it an ideal place for the production of hydroelectricity. Exactly because of the abundance of these resources, multiple corporations have been exploiting these resources and the local population for incessant developmental projects. Currently, The Alaknanda river has six hydroelectric dams in operation, eight dams are under construction and twenty three dam projects are waiting for approval or have already been approved. According to a report by the Council on Energy, Environment and Water (CEEW)<sup>1</sup>, over 85% of districts in Uttarakhand are hot spots of extreme floods and associated weather events, including glacial outbursts. Chamoli, where the outburst took place is one of the most vulnerable districts to extreme floods. The frequency of extreme flood events and flood

<sup>1</sup> [https://www.ceew.in/sites/default/files/CEEW\\_Climate\\_Change\\_A\\_Risk\\_Assessment.pdf](https://www.ceew.in/sites/default/files/CEEW_Climate_Change_A_Risk_Assessment.pdf)

related events has increased four-fold since the 1970s. According to reports by the UN Intergovernmental Panel on Climate Change, decrease in mountain slope stability is often a precursor to incidents such as these<sup>2</sup>. The study by CEEW also highlights that climate change, which is induced by developmental projects materially affect the biodiversity of climactic zones and harms the local population.

The disaster that took place in Chamoli occurred due to a break in a glacier. This break occurred at the Nanda Ghunti mountain located in the Nanda Devi National Park. At 5600m, a crack had formed at the side of the mountain. The crack was captured on 2<sup>nd</sup> February through satellite imaging, five days before the disaster took place<sup>3</sup>.



Figure 2: (Image taken from- <https://news.sky.com/story/uttarakhand-dam-disaster-what-caused-indias-deadly-flood-12214731>)

Scientists, through the use of satellite imagery have stated that the crack was first visible since 1<sup>st</sup> January 2020.

<sup>2</sup> Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

<sup>3</sup> <https://news.sky.com/story/uttarakhand-dam-disaster-what-caused-indias-deadly-flood-12214731>



Figure 3: (Image taken from - <https://news.sky.com/story/uttarakhand-dam-disaster-what-caused-indias-deadly-flood-12214731> shows the breakage of the glacier

This break is what caused a massive block of rock and ice to fall onto the valley on 7<sup>th</sup> February. The block is estimated to be over two million cubic meters in size and it fell nearly two kilometres before hitting the valley floor. The block followed the path created by an avalanche in 2016 and then hit the Rishiganga power project. The disaster also severely damaged another hydropower project located in Dhauliganga river, adjacent to Tapovan village. The flood carried with it tons of mud which trapped multiple workers in a tunnel inside the project site. A total of 204 workers have been deemed missing, out of which more than 50 people have been confirmed dead. These numbers are only reflective of the registered employees and not wage workers, and it is estimated that far more people are missing, or are dead. According to the data collected by the fact finding team, the flood took twenty - thirty minutes to reach the site of the dam, which would have been sufficient time to save multiple lives, if there were proper early warning systems installed. On the day of the incident, no early warning activated at the site of the glacier and the dam. There were no proper escape routes constructed at the dam sites as a pre-emptive measure to mitigate the loss of human life caused by a potential disaster. The workers were also not equipped with proper gear,

and were only given boots and helmets. Even after the disaster had occurred, proper and sufficient machinery was not deployed, with only one JCB trying to clear out the debris and mud in one of the spots where the workers were stuck. If proper machinery in sufficient quantities would have been deployed, multiple lives could have been saved.



Figure 4: Aftermath of the floods on the dilapidated tapovan-vishnugad barrage

## **HISTORY & BACKGROUND**

**The description of facts mentioned in the relevant paragraphs below were narrated by activist Atul Sati from Joshimath who has been working with affected communities for the past 2 decades.**

The tragic incident that occurred in the Chamoli district of Uttarakhand might seem like a simple natural disaster at first but on closer inspection it is a tale of state callousness, corporate apathy

and human greed. There is a long and detailed history of protests by local villagers and affected peoples against the construction of big hydro-electric power projects in the ecologically fragile regions of the Himalayas.

In 1963-64 the Vishnuprayag Pariyojana was sanctioned and for decades the plant was operated by the Uttar Pradesh government but after years of protests and due to declining usefulness of the power project, it got shut. In 1996, Jay Prakash Ventures Ltd. got the license to start operations from the UP Government. JPVL modified the plans for the existing project and a tunnel was sought to be built in the 'Haathi Pahad' in order to change the direction of the river towards Joshimath. The tunnel's constructions involved the use of explosives and blasting techniques due to which the town of Joshimath, Chaingaon (just above the tunnel) village and other nearby locations started feeling impacts. Chaingaon especially due to its proximity to the site felt disastrous impacts such as the quality of the crops and cattle started deteriorating due to the construction and degrading quality of water.

The town was known for its fruits like Malta and Milk, all of which degraded in quality. In 1999-2000 the area saw big protests and opposition against the construction of the tunnel and the projects where numerous people participated. But soon the prominent leaders of the protests came to an agreement and cut out a deal with the authorities from JVPL and withdrew the protests. However in 2001-02, some villagers continued the protests and soon an agreement was reached with JVPL that there will be less and 'controlled' blasting and the company promised 'development' where they would build children parks, hospitals for the locals from Chaingaon. But these promises only came when the project and the tunnel construction was almost complete. Following this the Chaingaon residents who were the most adversely affected fought against the forest diversion for the projects and then for the judicious use of the compensatory afforestation fund.

In 2002-03, Uttarakhand's first CM gave licenses to numerous project proponents and private enterprises for hydro-electric projects. These included the Tapovan-Vishnugad project for which the MoU was signed in 2002 with NTPC. The Tapovan-Vishnugad Hydropower Plant is a 520 MW run-of-the-river hydroelectric project that is being still being constructed on the Dhauliganga River.

Wapcos Ltd. a company specializing in environmental impact assessments opened its offices in Joshimath in 2003. Local Joshimath residents and activists were alerted by this team of geologists. Reminded by the deterioration of Chaingaoon due to a similar project – the activists alerted the general public about the possible dangers of the project. Soon after when the NTPC offices opened in 2004 a public hearing was announced in August 2004. But, because of rainfall and poor road conditions the newspaper circulation was not proper due to which most of the affected population did not know about the public hearing that was about to happen. But still various civil society members and activists attended the public hearing.

In the public hearing it was revealed that the project proponents failed to satisfactorily answer most of the questions raised about Joshimath's rainfall reception and ground water levels. Following this most of the attendees protested against the public hearing and asked for it to be cancelled but NTPC officials refused to comply. To protest against the construction of the project the Joshimath Bachao Sangharsh Samiti was formed which carried out several campaigns and demonstrations against the projects for years which proved to be quite effective. The project was to be inaugurated in 2005 where the Chief Minister was also to attend but due to threats of opposition and demonstrations, the event was soon cancelled by the NTPC authorities.

Amidst continuing non-violent protests the inauguration happened in February 2005. The biggest concern raised by the protestors was regarding the construction of the tunnel which could damage Joshimath's water resources. This also resulted in the protestors challenging the environmental clearance granted to the project in 2006 in the National Environmental Appellate Authority which

did not entertain the petition due to a technical delay. But in December 2009 the protests on ground were reignited because of the tunnel drilling that was being carried out by the TBM machines. A boulder fell on the machine due to which a hole was created and water at the rate of 600litres/second started pouring out (a few years later the water depletion rate reached 200litres/second). This resulted in further drying up of reservoirs and lakes near the tunnel site. This spurred the creation of Pankhand Sangharsh Samiti with three central demands of meeting Joshimath's water needs for the next 50 years, insurance for houses that might suffer damages from the construction of the project and the creation of a high powered committee to monitor the project.

In 2010, the first demand pertaining to availability of water was agreed and 16 crores compensation is being given by NTPC. In 2010, the Rishiganga power project which was a much smaller 13MW project was proposed. This project also received opposition from local villagers from Raini but soon the village headmen subsumed the protests on the promise of employment and other amenities. However some villagers continued to protest, one individual in particular Mr. Sangram Singh filed a case in the National Green Tribunal in 2019. The case was against the use of explosives in the river flood plain at the Nanda Devi National Park, Joshi Math, Chamoli, Uttarakhand. But the NGT simply forwarded the complaint to the District Magistrate in Chamoli and the Director of Nanda Devi National Park for taking appropriate action.

In 2013 the Rishiganga project was ready but due to an accident in August 2013 the founder of the project Rakesh Mehra died during an inspection due to a boulder falling on him after. Due to this soon the family owners of the project went bankrupt and in 2018 the Kundan group bought the project. In 2016 the coffer dams (a smaller, weaker dam to hold the water while constructing the barrage) made by the proponents got washed away as well. In 2020, the project started its operations. The Rishiganga project was also constructed in the Nanda Devi Biosphere Reserve area where most forms of human activity are considered harmful towards the flora and fauna. This

contradiction is best revealed in the EIA report for the project which states that there are no unique biodiversity features present in the region and hence will not be adversely impacted by the project. Various other dams and power projects in the area such as the Lata Tapovan project also faced opposition at the public hearings. In 2013 after the Uttarakhand Kedarnath catastrophe the Supreme Court and the Chopra committee shut down these projects. But soon the projects were restarted after being shut for a year and a half due to immense lobbying (as the project was funded by the World Bank).

Keeping in mind the two decade long history of on ground protest and struggle against these hydropower projects by the local project affected populations clearly shows that the 7<sup>th</sup> February disaster was not an isolated incident. The people had long suspected that if such a “natural calamity” were to occur the project proponents had no safeguards in place to deal with it.

## **PAST LITIGATION**



Figure 5: Photo of Raini Village after the disaster. Image taken from-<https://zeenews.india.com/hindi/zeenews/national/avalanche-near-a-power-project-at-raini-village-in-tapovan-area-of-chamoli/843690>

Due to weakening of the EIA framework in India which dilutes the process of public consultation further, the views and opinions of the project affected persons were not given due consideration

even in the present disaster in the Chamoli district. Locals had approached the Uttarakhand High Court in 2019 with a PIL (Kundan Singh against the Rishi Ganga Power Plant which was the most severely hit hydropower project in the February 7<sup>th</sup> disaster. The PIL had highlighted the alleged unfair and hazardous practices that were adopted by the project proponents of the Rishi Ganga hydropower project which involved dangerous use of stone crushing and loud explosives. The project which was in the vicinity of the Nanda Devi Biosphere Reserve posed great risk to the wildlife species and habitats that had been preserved for decades and the 2019 PIL had recounted the various risks associated with the construction of these “development” projects in such sensitive and fragile eco-systems. The PIL was filed by local villagers from the Raini village and the central concern that was shared was with regards to the villagers’ access to the forests which had been hampered due to the operations of these hydro power projects. The High Court had stayed the blasting in the project area. And the Court had also directed the district magistrate of Chamoli and the state pollution control board to constitute a joint team to inspect the Rishi Ganga Hydroelectric Project site in the district in question.

Another case, Gram Pradhan & Residents of Tapovan v. State of Uttarakhand (O.A. No. 61/2019) is currently pending in the National Green Tribunal where the central issue for consideration was the steps taken for remedial actions for violation of environmental norms in the course of construction of the barrage by NTPC. The tribunal had considered the report of the State Pollution control boards dated 07.12.2019 and it was found that muck disposal was causing damage to the river in the area. An expert committee was formulated and on behalf of the committee an action taken report was formulated where the recommendations and actions suggested were to be carried out by NTPC according to the NGT order dated 18.06.2020. Another issue raised was the loss to inhabitants in the course of construction of the NTPC barrage in 2005 for which the land of the people was taken but no employment was given but this issue has not been dealt with as of now by the Tribunal.

The National Green Tribunal invoked the polluter's pay principle and ordered the Alaknanda Hydro Power Co. Ltd. to pay Rs. 9 crore as compensation to people affected by Uttarakhand floods in 2013 because the dam constructed by the company contributed to the flooding experienced by the residents in the region. The judgment (*Srinagar Bandh Aapda Sangharsh Samiti & Anr. v. Alaknanda Hydropower Co. Ltd. & Ors.* O.A. No. 3/2014) was an instance of the NGT exercising its power to fix liability and hold private companies responsible for the environmental damage they contribute to. The judgment shifted the monetary responsibility for rectifying ecological damage from the government to private actors which were responsible for causing damage. Alaknanda was the first case where a private company was held responsible for damage precipitated by a natural disaster and the "act of God" defence to shun liability for damage caused by companies was now weakened. The company's decision to open the dam gates resulted in a massive flow of water suddenly sweeping the muck dumped on the river and carried it to the villages which were already flooded.

As per Section 7.1 of the *Policy for development of hydro power in Uttarakhand through Projects of Capacity 100 MW and larger* proposed by the Uttarakhand government for such large projects 12% of the electricity generated shall be made available free of cost to the state during the entire life of the project and this free power shall be an addition to the amounts received at the time of allotment. Under section 10.1 (b) of *Salient Features of the Hydro Power Policy 2008* the dispensation accorded under Hydro Policy of 1998 regarding 12% free power to the host state government will be supplemented by an additional 1% in accordance with subsection. This additional 1% would be given to the state as part of the local area development fund and be administered by a specialized committee. Up until now states like Manipur, Himachal Pradesh, Kerala and Arunachal Pradesh contain provisions pertaining to local area development fund and the constitution of committees to implement their formation (as required under the salient features of the National Hydro Policy 2008) but the policies in Uttarakhand do not mention the formation of these committees or

collection of such funds from hydro-electric projects. The big hydro power projects are rarely made with the people's interests in mind but instead only create profits for big corporations. The locals lose their lands, forests and livelihoods and when a disaster like this happens, often their lives too.

### **RAVI CHOPRA COMMITTEE REPORT**

The Report "Assessment of Environmental Degradation and Impact of Hydroelectric Projects During The June 2013 Disaster in Uttarakhand" dated April 2014 was formulated by the Ravi Chopra committee, which was appointed by the Union Ministry of Environment and Forests on the direction of the Supreme Court vide order dated August 13<sup>th</sup> 2013. The report at the onset acknowledges that state governments have only pursued economic growth and industrialization, at the cost of the Uttarakhand Mountains, biodiversity and local people. Uttarakhand has the highest hydropower potential, after Arunachal Pradesh in the Himalayan States, however is also extremely ecologically fragile. It has a variety of natural resources and its mountains are fragile. The report states that the state is extremely prone to strong earth quakes and frequent landslides, flash floods and forest fires. As of 2014, the government had ambitions to set up 450 Hydro Electric Projects to harness 27039 MW of power.

The report highlights a direct nexus between the 2013 floods and the role of HEPs. Minimal water releases of hydroelectric projects lead to the loss of integrity of a river in the non-monsoon months. This has led to a loss of aquatic biota and diversity. The fragmentation of rivers through the construction of dams also leads to a loss of integrity of a river. This leads to increased impacts of natural disasters such as floods. Multiple committees through their studies have shown that slope instabilities caused by the construction of HEPs directly lead to natural disasters such as landslides. Construction of underground tunnels for HEPs have also caused the drying of several water bodies affecting the local population's agricultural yield and their livelihoods. The rock blasting for construction also causes landslides, underground fractures, fissures and disruption of water flows.

The demand for power projects and the exploitation of the rivers In Uttarakhand is a major concern for catastrophes. Multiple projects exist along the same river with very little distance between two projects. The cumulative impacts of such multiple projects can cause structural failures during disasters and accentuate any disaster that may occur. HEPs also have a direct impact on glaciers. Uttarakhand has a total of 968 glaciers that cover 2698km<sup>2</sup>. These glaciers act as natural water reservoirs and enhance the flow of the river. A large area above 2500m in Uttarakhand is occupied by glaciogenic sediments which are extremely fragile in nature, and are prone to be starters of natural disasters including floods, avalanches etc. Damaging and disturbing these sediments can cause huge climactic disasters, and the construction of HEPs directly cause harm to these sediments.

The Committee recommended that HEPs must not be constructed in regions near 2200m-2500m. The report concluded by stating that the exploitation of Himalayas has been carried out to such a massive extent that the fragility of the mountains has been immensely disturbed. This direct exploitation for developmental projects like the HEPs have caused irreversible damage, and accentuated natural disasters and hence can not justify the cost benefit ratio. The damage already done is far greater than any gain we can imagine, and that the constant exploitation is one of the main reasons as to why the frequency and intensity of natural disasters is also increasing. The report finally concluded to drop 23 Projects. Among these projects was also the project site at Vishnugad, which remained closed for a year but it started functioning again.

## VICTIMS' STORIES



Figure 6: Family members of the worker trapped in debris at Tapovan Vishnugad

Uday Raj Bharti- Foreman at the plant site

Uday Raj Bharti was working on the barrage side was being awaited by his elder brothers Vijay Babu and Pankaj Kumar. They had arrived in Tapovan seven days ago 2 days after the tragedy had struck from Mirzapur, Uttar Pradesh. They expressed to us their dissatisfaction regarding the rescue operations and stated that it was only 3-4 days ago that drilling in the tunnel had started. Had it started a few days earlier, many people could have been saved and helped escape death. Mr. Kumar also told us that for months his brother had not gotten his salary from NTPC and was being constantly overworked (as is evident from even being called in to work on a non-working day). They also informed us that they are not being allowed to come near the tunnel site and are only provided false and vague promises when they demand a progress report about the operations. They had been living in the NTPC provided quarters which earlier belonged to their brother.

Deepak - Nandprayag (Brother of a missing worker)

The details about Deepak's brother have not been found by the rescue teams. Deepak had reached the disaster site on the same day. He explained that there were four interconnected tunnels directly affected by the disaster. The rescue team saved twelve people from the first tunnel, however there were no efforts made to help the people stuck in the second tunnel. Only after four days did the government finally deploy machinery to dig the second tunnel. The machinery deployed was also sub-par and not enough in quantity. Only 1 JCB had been deployed to clear out such a massive area of mud and rubble. If proper machinery was deployed at the right time, multiple lives could have been saved. The government throughout the process has been extremely unresponsive. Kundan filed multiple complaints through the CM helpline number, but received no response or acknowledgement. The malwa ( Debris and Mud) had risen to a height of 30 feet, it required immediate action from the rescue team and the use of advanced machinery, none of which was done.

Deepak has been constantly protesting on site requesting the rescue team to start the cleaning process. The rescue team has done nothing to clean out huge puddles of malwa directly above the tunnels for nine days or more, where multiple people are trapped. Deepak's brother, the missing worker has a wife, two daughters and a son. Six Lakh Rupees is nowhere near enough to secure a decent living for the families of the deceased he says.

A group of victim's families from Ludhiana included Deepak Purohit, Naib, Jagdish, Santosh Singh and others. Sateshwar Purohit was a worker deployed at the plant with the HCC Company and had not been paid his salary for more than 5 months. Deepak who was a regular visitor at his brother-in-law's house informed us that they were only given a helmet and shoes without any safety kit before going for work in the tunnel. Till then they informed us that there had been no talks of compensation and after 9 days of the disaster only 1 JCB dumper had been deployed at the site. They exclaimed that advanced machines were needed to ensure quick rescue operations. Naib who was an eyewitness and also a worker at the site informed us that he had managed to

escape from the site minutes before the incoming debris took the lives and trapped his associates. He informed us that there was no alarm horn rung at the site and most workers in the tunnel and at the barrage did not realize what was happening. Moreover there were no ladders or ropes to help the workers stuck at the site escape to safety. Because of the presence of one temporary ladder two or three workers did manage to escape. Mr. Naib also told us that there were no ready plans to deal with such a situation. The families informed us that they company had arranged for them a place to stay near the site and also arranged for food and other amenities but stressed that their only concern then was to find their loved ones who had gone missing in the tragedy. They also argued that the total number of workers would have been higher than 206 (which was the official figure). The families stressed on how ineffective and unresponsive Uttarakhand government provided helpline numbers were.

A.K. Rahmul - Malda, West Bengal

A.K. Rahmul told us that his brother Anish Shiekh worked on the transmission channel of the Rishiganga power project near the village Raini. He had been working there for the past one year and his brothers had filed a missing person FIR in the local police station. The two brothers also informed us that they had incessantly requested the local rescue operators to carry on the work a bit quicker but that day itself had been informed that the rescue operations near the Rishiganga project were drawing to an end. They had spoken to the incharge of Kundal Group Mr. Kamal Dev Chauhan and he had requested them to visit their office in Delhi to talk about compensation.

Mukesh Divan - Saharanpur

Mukesh Divan wishes for the safe return of 5 of his known ones, including his younger brother Praveen Divan, driver Ajay Saini, two welders and a helper. The persons were here in Tapovan on a contractual basis in order to fit machinery inside the tunnel of the plant. All five personnel got trapped inside the tunnel when the debris hit the Tapovan-Vishnugad plant. Mr. Divan informed

us that he had in fact spoken to his brother in the morning at 9:30 AM on the day of the disaster when his associates had informed him that they had to work inside the tunnel and were going in for the same. All 5 people had their names listed in the 206 missing persons list provided by the NTPC authorities. Mr. Divan has been asked to wait and remain hopeful for the safe rescue of his close aides by the local authorities. He also informed us that he was satisfied with the rescue operations that were being carried out in the area and had recently been informed by the NTPC authorities that a new smaller drilling machine was being brought to remove the debris and clear out the way. He believed that his associates were indeed alive and once the debris was cleared they would be rescued.

Mitul Sharma - Patna

Mitul Sharma was waiting for his brother-in-law Manish Kumar who was an engineer at Om Metal a NTPC Subsidiary. His brother-in-law used to work on the barrage site and according to Mr. Sharma the only option left with this brother-in-law was to seek refuge inside the tunnel along with others after they saw the incoming debris. He had arrived in Chamoli 9 days earlier, a day after the tragedy struck. He mentioned that if the system had worked better and faster there would have been a greater chance of extracting the people stuck alive, rather than dead. There had been some form of mismanagement in the rescue operations due to which the quality of the operations was not up to the mark. Mr. Sharma expressed his frustrations with the pace at which the rescue operations were proceeding and said just recovering dead bodies cannot be termed as a 'rescue operation'. Further Mr. Sharma said that it was NTPC's responsibility to ensure the existence of working safety procedures to help the workers inside the tunnel escape in case a tragedy happens. The tunnel had no temporary ladders or ropes to help workers escape. There was also no alarm to alert the workers about the incoming debris. Mr Sharma had further allayed his concerns about the inadequacy of the rescue efforts to various authorities on his second day at the site itself. He said that from the 7<sup>th</sup> February to 10<sup>th</sup> February the operations were very slow and lethargic and

the entire focus was on the tunnel. He cited that there was a clear lack of leadership for the operations. Manish's father in law Arbind Kumar while emotionally narrating his son-in law's absence expressed to us his hopelessness about the prospects of seeing Manish's dead body. For nearly a week he's been travelling to the NTPC plant in the morning and is forced to return by the evening with no encouraging signs. He exclaimed that there were only two mud digging JCBs in operation at the site and the rescue operations were extremely slow. There was no one to hear or address their concerns and the government was extremely callous in dealing with the disaster. The government is waiting for the victims' families to go back and had no plans of helping the families get compensation. Mr. Sharma's waiting for answers. "Bhagwan bhi nahi sun raha hai, aadmi bhi nahi sun raha hai."

Subhas - Welder in Om Metal

Subhas is an employee of Om Metal, who is a contractor for NTPC. Subhas' brother who was present at the NTPC site from Siwan, Bihar informed us that Subhas had talked to his daughter before leaving for the site for duty. Even though the day the incident occurred it was Sunday which is usually a holiday for the workers, his brother informed us that NTPC had asked the workers to come in at work for a few hours. He informed us that he was waiting to see his brother's body one last time and also expressed that the rescue operations were proceeding very slowly. If the operations had shown some form of urgency especially during the first few days a number of people could have been saved.

Mritunjay Kumar - Patna

Mritunjay Kumar was Manish's elder brother and clearly says that NTPC had no safety norms or plans to deal with such a situation if it was to arise. They had only provided the workers with helmets and nothing else. There was no early warning system through which the workers could be alerted about the incoming debris and flash floods. There were also no temporary ladders, if there

had been around 50-100 people could have been saved. There was no planning for such an event if anything happens. “They have killed our kids.” Mr Kumar informed us that if NTPC was asking people to work in a tunnel why was there no exit route? Even after 9 days all the work by the rescue operations were focussed on the tunnel. The dam site was not being paid any attention as NTPC was planning to bury the body there and soon resume construction of the plant.

Suresh Yadav’s brother Gautam used to work in Dam No. 3 as a welder. He had got the job about 2 months back. Suresh complained of the slow pace of the rescue operations and also said that the required machinery to clear out debris was not available and the personnel weren’t trained enough to carry out the tasks as quick as one would have hoped for.

Subhash Yadav’s cousin brother also informed us that his brother was a welder at the site. He was working on the ‘Safety’ section of the barrage being built and was welding a new gate that was being constructed. He said that the media was carrying out a massive cover-up operation and was not highlighting the absolute callousness in planning and providing safety norms by NTPC. Mostly all rescue operations were either very slow or were centrally focussed on drilling and removing the debris from the tunnel. Almost no operations were focussing on digging up debris near the barrage where a lot of the workers had been working and unfortunately had died. Mr Yadav also exclaimed that they were not being provided with any form of information regarding the progress of the operations and were only given vague promises.

Mukesh Koswal - Member from the Bahujan Samaj Party, resident of Tapovan village

Mukesh Koswal informed us that even though rescue work was being done by local district and state level authorities, the central issue was the tremendous amount of delays in instructions being given by the higher authorities. The entire region was confused and troubled first by the disaster and then the continued callous handling of the disaster by the authorities. Mr. Koswal in clear terms blamed the disaster on the corporations running the projects and refused to believe that

these were only natural disasters. Mr. Kotwal also reminded us of how the projects were constructing by using explosives and blasting techniques due to which most of the nearby villages suffered adverse impacts. He also stressed that further worse disasters were to come if urgent actions were not taken in order to alleviate the declining ecosystem.

Villagers from the Raini village who lost members of their community due to the disaster also expressed their grief. Prem Singh lost his mother in the disaster. She had gone near the river to tend the cattle along with Mr. Singh's wife and son. His mother, Amarta Devi was swept away by the incoming debris from the Rishiganga power project on the day of the disaster but his wife and son had managed to escape and come back safely. He informed us that he and his fellow villagers had tried to find his mother but due to the swamp that was now formed near the site it was not possible for them to further carry out any rescue operations. There was no real assistance provided to the villagers in locating their missing loved ones from the authorities. Around five people were missing from Raini and nearby villages. Another villager Bharat Singh informed us that there was a sense of dread and fear amongst the villagers after the disaster and they wanted to relocate the village to a safer location.

Kundan Rana - Raini Village

Kundan Rana saw the floods at the base of the mountain and had started screaming and whistling to warn the people directly in the course of the floods. His efforts yielded to some people running away to safety, however most died. There was no alarm that was played by the project proponent on the day of the disaster. This alone could have saved countless lives. Kundan further expressed that wage workers weren't being counted in the total fatality toll, only registered company employees. This would mean that the number of people estimated to be injured or missing are far greater than what the reports suggest.

When the project had started near Raini Village, Kundan had protested against the blasting of hills and the construction of the project. To scare him and the other local villagers who had joined him in protest, the project proponent deployed goons to silence them. He further stated that the government also started deploying the police and filed FIRs to silence the protesters. Two FIRs were filed on him, One on his wife and twelve others on the people of Raini.

He then also filed a case in the High Court against the construction of this project, which got disposed off. There was an instance on 11/08/ 2016 where a tunnel, complimentary to the construction of the dam collapsed. This lead to a stall in the project due to which the first project proponent went bankrupt, and Kundan Group bought the rights and title for this project in 2018. The project, during the administration of the first and second project proponent, did not conduct any public consultation process nor was any notice circulated. The proponents also snatched away land from the village simply refused to pay the villagers. The government completely sided with the corporations, and did not help the local population in any manner.

In 2018, there was another construction started by the proponent to aid this project, which was again protested by the locals, however they were paid no heed. The government and the project proponents had promised employment to the people of Raini, however they did not do that as well. They only employed 3-4 people and shunned the rest. Kundan hopes that the project proponents and the government stop their incessant developmental projects, and think about the destruction they're causing to the nature, which is essential to their well-being.



Figure 7: the debris filled barrage where about 135 bodies of slain workers are trapped

## KEY FINDINGS

1. Lack of safety norms: Most of the 100-200 victims that perished in the floods could have been saved if there was an early warning system in place. While the official NTPC position has been that incoming splurge of debris and water merely took 30 seconds to 1 minute to reach the Tapovan-Vishnugad plant, victims' families, local villagers and activists tell a different story. Most testimonies and other evidences reveal that the NTPC authorities had more than 20-25 minutes to act and rescue the workers working inside the tunnel and the barrage. Importantly there were no temporary ladders or ropes available for workers trapped inside the tunnel to escape from. There was no emergency action plan or training provided to the management and personnel to deal with such a situation if it was to arise. Even before the disaster, the workers were only given helmets and boots, no safety kit was provided. During the floods, when the debris went inside the tunnel, multiple people got stuck because the exit points to the tunnels were kept closed, which is contrary to safety norms. If the gates were open the tunnel would have been a safe refuge for the workers to seek protection in. There is also the issue of significant environmental damage as the water in the nearby rivers and tributaries has become polluted from the debris. Most importantly there was no planning, training, or availability of safety measures at the

Tapovan-Vishnugad hydropower plant. There have been two major disasters in the course of the flood – firstly the glacier burst and secondly the lax handling of the disaster. There was no coordination between the rescue operators and the private project proponents. The tunnel maps were only provided on 9<sup>th</sup> February, multiple days after the disaster had occurred. There was no sense of urgency displayed by the state in dealing with the disaster.



Figure 8: A board by the safety department present right next to the disaster site (Translates to: "Your wife and kids are awaiting your return")

2. Gross mismanagement of rescue operations: The rescue operations that were carried out by various state forces (Army, ITBP, NTPC authorities) proceeded at glacial pace. There was no sense of urgency in dealing with the disaster and rescuing the trapped workers in the tunnel and barrage areas. The tunnel maps were only provided to the rescue operators on 9<sup>th</sup> February by the NTPC. There was very limited machinery being used to dig the debris and clear out the tunnel. Most of the attention was only being given to the tunnel and other areas where multiple people were stuck was completely ignored. There was no coordination between the rescue operators and the private project proponents.



Figure 9: Only one JCB deployed to dig up one of the affected areas

3. Poorly planned projects: The Rishiganga and Tapovan-Vishnugad hydropower projects had faced severe opposition for years by local villagers and environmental activists. The findings from the Ravi Chopra committee showed that hydropower projects of such a huge magnitude should never be built at such a high altitude. The National Centre for Himalayan Glaciology was proposed to be created in 2008 and a 550 crore plan for setting up the Centre was also drawn up, however in 2015-16 the government withdrew these plans. If resources had been allocated into developing a robust system of monitoring the glaciers, the plants could have been better prepared to deal with such a disaster.

Local activists informed us that there have been various anti-dam organizations and protests over the years in Uttarakhand. These demonstrations however were not absolutely against development. The upper Himalayan regions need development, however the nature of the developmental projects can not simply mimic the plans for urban spaces. The protests were only against big dams, their claim was to strengthen the already existing

16,000 smaller dams. The common discourse of “development” propounded by corporations has to be scrutinized thoroughly. Developmental projects should exist with the purpose of helping and empowering the local communities, rather than only benefit existing corporations and urban spaces. Subaltern expressions of developmental needs must not be distorted into statist agenda.

The most imperative question to be asked is who benefits the most from this limitless expansion of projects. When the natural resources and assets of a region are destroyed, rendering the lives of the local populations in complete chaos, how can that be labelled as development? The cycle of constructing hydropower projects in Uttarakhand has been repeated numerous times. First the project proponent makes big promises of ‘development’ including assurance of employment and amenities. In public hearings thereafter, when the locals raise concerns their demands are bureaucratically recorded and no heed is paid to them. The project proponent then goes back on their claim of employment on the basis of arbitrary standards of “qualification”. The states then bulldoze their will on the local populations, and The same pattern continues causing destruction and devastation. The disaster on 7<sup>th</sup> February was not only a natural disaster but also an incident riddled with corporate negligence. It is hard to imagine that a 520 MW hydropower project only had about 200 workers on the site at the time the disaster struck. The list of workers provided at the disaster relief information centre contains only 206 names which only includes employees and other contractual workers. There is no data on wage workers, which bars their families from getting compensation and legal remedies.