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REPORT 2020



THE TEAM

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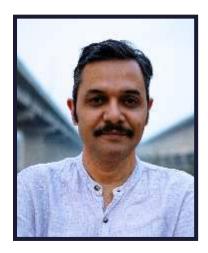
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PREFACE

Rural India feeds the nation, it drives the economy and decides who will rule the country. Two out of every three Indians live in rural India yet, rural India does not get its say in the way the country will function and run.

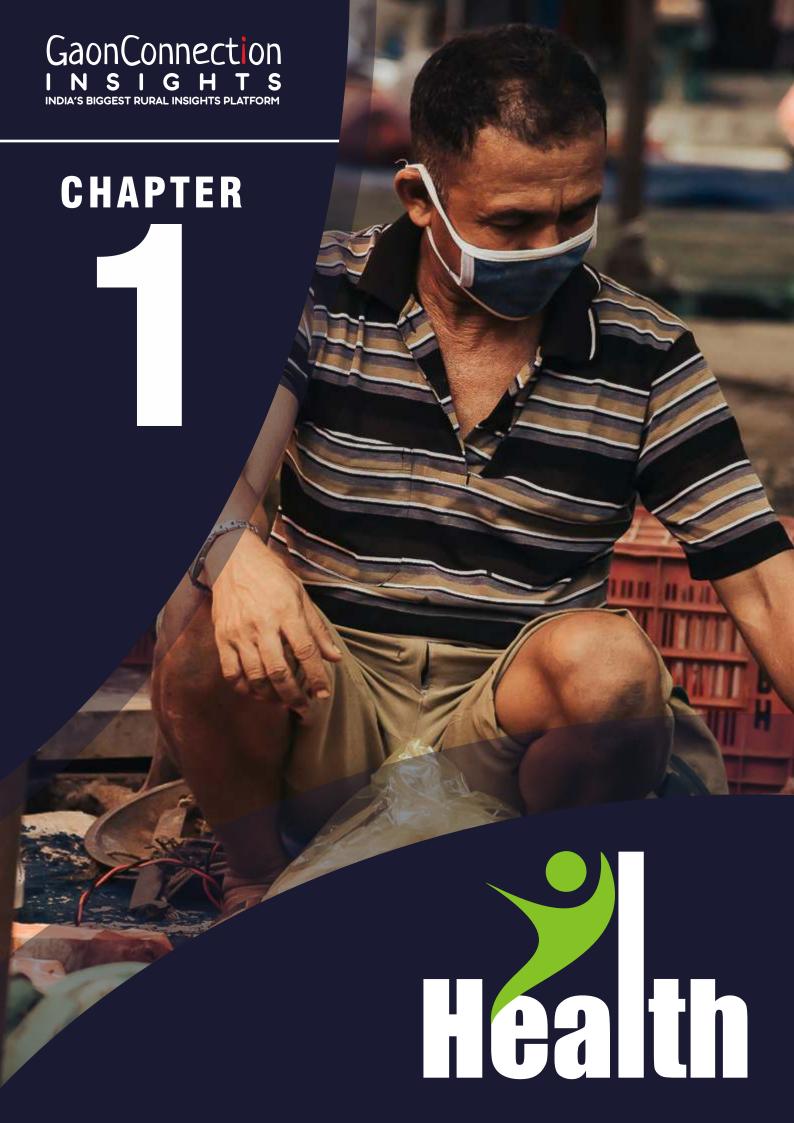
Gaon Connection combines the strength of its ground presence in 314 districts across 25 states and 5 union territories with the reach of digital footprints, which is creating tangible results. We are happy to take this effort to the next level with the launch of the annual rural report.

We are confident that this report, The State of Rural India: Report 2020, would help the state and national level authorities see the rural landscape with a wider spectrum and help in planning and implementation of suitable solutions.

Do read more insights at www.ruraldata.in

Neelesh Misra

Founder
Gaon Connection
Gaon Connection Insights





The COVID-19 pandemic threw the health systems of the country completely off kelter. It restricted access and availability of healthcare particularly in rural areas where hospitals are located at distances from the villages. Various immunisation schedules, emergency treatment of other diseases, access to hospitals, maternal and mental healthcare were curtailed to a significant extent. The large number of migrant workers returning home added additional strain on rural healthcare.

As of December 27, 2020, India has recorded 10.2 million cases of COVID-19, 9.76 million recoveries, and 147,622 deaths.

Overworked healthcare personnel organised strikes and protests to draw attention to their various grievances. In Chhattisgarh, for instance, contractual employees of the National Health Mission (NHM) went on strike in September to demand that their service be regularized.

On December 11, a million doctors went on a strike to protest against a new government rule that would allow practitioners of Ayurveda to conduct surgical procedures, as they believed that this would lead to increased risks and would downplay the medical profession.

NATIONAL FAMILY HEALTH SURVEY - 5

The first phase findings of the National Family Health Survey-5 (NFHS-5) conducted in 2019-20 were released on December 12 by the Union Ministry of Health and Family Welfare.

According to this survey, India's population is stabilizing since the total fertility rate (TFR) (number of children who would be born per woman) has become an average of 2.1 in most of the states surveyed. Sikkim recorded the lowest TFR of 1.1 in 2019-20 as compared to 1.2 in 2015-16, while Bihar that had the highest TFR in 2019-20 of 3 still marked a decline from 3.4 in 2015-16.

In 17 states, family planning using modern contraceptives has increased, along with an improvement in menstrual hygiene. The infant mortality rate (IMR) (number of deaths of infants under 1 year of age per 1000 live births in a given year) has decreased in 18 states and union territories, while the neonatal mortality rate (NMR) (number of deaths of infants under 28 days of age per 1000 live births in a given year) also reduced in 15 states and union territories.

For instance, Kerala reported the lowest NMR of 3.4 in 2019-20 as compared to 4.4 in 2015-16, Sikkim showed an NMR of 5 in 2019-20 as compared to 20.8 in 2015-16, while Bihar had the highest NMR of

34.5 in 2019-20 but also reduced from 36.7 in 2015-16. Similarly, Kerala had the lowest IMR of 4.4 as compared to 5.6 in 2015-16 while Bihar had the highest IMR of 46.8 as compared to 48.1 in 2015-16. However, 16 states recorded an increase in malnutrition in children under five years of age. For instance, the percentage of children with low weight for their height increased from 20.8 in 2015-16 to 22.9 in 2019-20 in Bihar, and from 13.7 to 17.4 in Himachal Pradesh. It must be noted that the data of this phase of the survey was recorded before the COVID-19 pandemic.

REPRODUCTIVE HEALTH

The lockdown in India due to the COVID-19 pandemic affected access to reproductive services despite the government declaring RMNCAH+N (Reproductive, Maternal, Newborn, Child, Adolescent Health Plus Nutrition) services as essential during the lockdown. Due to lack of access and availability of these services, an estimate by the Foundation for Reproductive Health Services, India (FRISHI) suggested that nearly 26 million couples will not be able to access contraceptives in India, which could lead to 2.3 million unintended pregnancies and 800,000 unsafe abortions.

Medical workers also reported an increase in stillbirths as rural health services were hard-pressed due to pandemic services. Nutrition units like the *anganwadi* centres which provide health checkups, medicines, child and maternal healthcare and counselling, and food rations were also shut down for months and only reopened on an irregular basis in July. Additionally, access to menstrual products such as sanitary pads was also hit in the initial months of the lockdown.

IMPACT ON NUTRITION

According to a study published by the Global Health Science Journal in July 2020, the COVID-19 pandemic is likely to contribute to a food shock that will increase the chances of malnourished and underweight children in India by 4 million. *Anganwadis* and mid-day meal provisions were also closed down due to lockdown restrictions where previously the mid-day meal scheme served 9.17 crore children across the country.

Additionally, while the government increased the funding allocation to mid-day meals after the lockdown, Save the Children Foundation's assessment in 15 states found that 40 per cent of eligible children had not received these meals. The government also encouraged the establishment of nutrition gardens that grow nutrient-rich fruits and vegetables and under the Integrated Child Development Services (ICDS), these gardens were set up in districts like Kandhamal in Odisha and in parts of Udaipur district in Rajasthan.

COVID-19 AND MENTAL HEALTH

As a result of the COVID-19 pandemic, mental health of people has been impacted. According to a study conducted by the Suicide Prevention India Foundation (SPIF), over 70 per cent of therapists who took part in the study said that there was in increase in the number of people who expressed suicide ideation or a death wish, and nearly two-thirds of therapists said that the number of people who had done self-harm had risen. This was particularly true for those in rural areas who also faced issues of access to therapy and support.

Another report on Accidental Death and Suicides in India 2019 released by the National Crime Records Bureau (NCRB) this year showed that daily wage earners were the largest professional group that died by suicide in 2019 wherein every fourth death by suicide was by a daily wage earner. Among 1,39,123 people who died by suicide in 2019, two-thirds of them earned less than Rs. 278 per day.

COVID-19 AND IMPACT ON OTHER DISEASES

The efforts to contain and combat the COVID-19 pandemic have caused hospitals to divert their resources to deal with COVID-19 patients leading to reduced access for non-COVID patients with other

communicable and non-communicable diseases. After the lockdown was announced, many cancer patients were forced to live outside AIIMS Delhi. Additionally, other diseases like tuberculosis (TB) which leads to the deaths of 1,200 people every day in India are also estimated to face a setback with an additional 5.1 lakh cases of TB and 1.5 lakhs due to arise in the next five years.

There have also been accounts of patients with other diseases being turned away from public hospitals and private facilities, with many of them facing a struggle to travel to the hospitals that were located at least 50 kilometres away. Patients with leprosy, reported in 2018 to be nearly three million across the country, recounted that they faced difficulties accessing doctors and medicines which are otherwise made available to them by the government.

HEALTH OF SANITATION WORKERS

There are five million sanitation workers in India who clean sewers, public toilets and garbage. They form the foundation of the waste management system of the country but often work without safety gear and protection despite regularly having contact with toxic gases and human waste, putting them at risk of several diseases.

During the lockdown period, for instance, 6500 contract workers were employed in Mumbai without any protective gear while in New Delhi, sanitation workers were given the task of disinfecting the outer part of houses of known COVID-19 patients without any arrangements made for masks or gloves. In some cases, however, efforts were made by the government in Maharashtra to provide sanitation workers with personal protective equipment (PPE), and self-help groups in Telangana were asked to make masks for these workers. In Tamil Nadu, a community kitchen called Amma Canteens also provided free meals to sanitation workers.

DISEASE OUTBREAK IN ELURU, ANDHRA PRADESH

In Eluru town in the West Godavari district in Andhra Pradesh, approximately 550 people fell sick and one person died in early December 2020 due to an undiagnosed illness. The All India Institute of Medical Sciences (AIIMS) collected 10 blood samples from the affected people and found traces of heavy metals lead and nickel in them, indicating the presence of this content in drinking water and/or milk. The patients reported symptoms of vomiting, headaches, seizures, anxiety, nausea. No new cases were recorded as of December 12, 2020.

The COVID-19 pandemic affected health and healthcare directly and indirectly across India in significant ways. Loss of income, no access to health centres, interrupted prenatal care and immunisations... These put enormous strain on the population, the healthcare workers, public health sanitation workers, etc. more so amongst the rural and marginalised demographics.

Gaon Connection reports on the year of the pandemic, where midwives, frontline healthcare workers, ASHA workers and the ordinary citizen struggled with keeping good health, providing and accessing healthcare.







Parveen, 28, a resident of Lucknow in Uttar Pradesh, was two-and-a-half months pregnant when due to complications she had to undergo an abortion. When she reached the nearest community health centre after a nine-km bicycle ride, the doctors refused to attend to her because they were on 'coronaduty'. She was, forced to visit a private nursing home and pay Rs 4,500 for the procedure.

Three-month-pregnant Shivani Singh, from Lucknow, walked 2 kms for her pre-natal check-up and vaccination only to be turned away at the community health centre because the check-ups had been suspended during the lockdown. They neither examined her, nor administered the anti-tetanus injection that was due.

Due to the lockdown, millions of women like Parveen and Shivani were unable to go for the pre-natal check-ups. The institutional deliveries in the government hospitals had also decreased. Infants who were being delivered in private hospitals, are not getting vaccinated.

While the Union health ministry directed that pre-natal check-ups and vaccination of pregnant women would take place at primary and community health centres, *Gaon Connection* found that they were largely ignored in Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, Madhya Pradesh and Rajasthan.

Jan Swasthya Abhiyan, an organisation advocating public health, said that since March alone, more than 2.5 lakh pregnant women have not been provided pre-natal examination in Rajasthan alone, while four lakh children were deprived of vaccination.

In Bihar, the state health committee wrote to the government about severe malnutrition and death among children, and urged the government to streamline and strengthen maternal health services during the coronavirus lockdown in the state.

According to Yogesh, the superintendent of the community health centre at Itaunja, Lucknow, "Earlier, 700-800 patients visited us daily whereas only 40-50 are coming now. Delivery cases are going on continuously. From April 1 to April 17, 105 deliveries have taken place in the hospital."

Naresh Kumar Thakral, the mission director at the National Health Mission, Rajasthan, said that the labour rooms at the district hospitals and the special mother and child hospitals were functioning and that the primary and community health centres were undertaking necessary check-up and vaccinations.

According to Pradhan Mantri Safal Matritva Abhiyan website, about 44,000 women die every year due to pregnancy-related complications whereas 6.6 lakh children die within 28 days of birth.

To prevent these deaths, the prime minister had launched the Pradhan Mantri Surakshit Matritva Abhiyan in 2016. But the campaign is on hold which is preventing pre-natal check-ups, and vaccination among pregnant women and children.

The Universal Immunization Programme (UIP) for vaccination of children and women in India is considered to be the largest public health initiative in the world. The programme provides health services to three crore pregnant women and 2.67 crore newborns annually. Each year, over 90 lakh sessions are undertaken and the Indian government provides 12 essential vaccinations against diphtheria, pertussis, tetanus, polio and measles, free of cost.

TROUBLED FUTURE

Neelmani, who works at the Piramal Foundation, a grassroots health institution in Bihar and Jharkhand, said: "All the pre-natal check-ups are suspended due to the lockdown. The babies being delivered at home or in a private hospital are not getting vaccinated for BCG (TB vaccine at birth), which is to be taken immediately after birth. The impact will not be immediate, but there may be difficulties for these children and mothers in the coming time."

He added: "In Bihar, pre-natal check-ups and institutional deliveries have now gone down by about 50 per cent. Fifty per cent of women are anaemic so their state may deteriorate in the absence of regular check-ups. The Village Health Nutrition Day (VHND), which was observed every month in the village, is also completely ignored. The condition of community and primary health centres is bad. According to the government, these tests are going on, but, in reality, they aren't."

In a letter issued by the Bihar State Health Committee on April 17, the pre-natal check-up facility has declined by 50 per cent and institutional deliveries by 48 per cent. Prenatal care for pregnant women is essential because only 30.3 per cent of Indian women consume iron and folic acid tablets for 100 days or more. Due to this, 50.3 per cent of pregnant women and 58.4 per cent of children are anaemic. These deficiencies are the main reason behind maternal mortality rate and infant mortality rate at birth.

Rahul Kumar, the district magistrate of Purnia district, Bihar, said: "These facilities were temporarily withheld to prevent the infection of COVID-19 for a few days in the beginning, but have recently been resumed. But, women are still fearing coming to the hospital. We now have an ambulance at every primary health centre so that women do not have any difficulty in coming to the hospital during the lockdown."

As per the district magistrate, 2,511 deliveries have happened between March 25 to April 7 in the Purnia district, which he admitted were lower than the usual.

A survey of 30 tribal villages was conducted by the 'Jan Swasthya Abhiyan' during the lockdown in Pratapgarh district of Rajasthan in which 150 pregnant women could not have prenatal check-ups, and about 250 children were not vaccinated.

An ANM working in a remote village in Uttar Pradesh's Pratapgarh district, said on the condition of anonymity: "Vaccination and checkups are still not happening at the community health centre as well or at the primary health centre. These pregnant women are at risk due to coronavirus, so no risk is being taken. There are 15 pregnant women in our area who need to be checked up."

She added: "We are at a distance of 25 kilometres from the primary health centre and the district hospital. There is no mode of transportation now and the ambulance will not take pregnant women for check-ups."

In Bhopal, Savita Sharma, an ASHA worker said: "In our area, two deliveries have taken place at home within the last three days as the ambulance did not come to take them to the hospital. We are not aware of anything about the pregnant women's health status due to the lack of prenatal check-ups," she said.

"With no check-up, we are unable to monitor their blood pressure, sugar or hemoglobin level. In the absence of check-ups, we don't know anything about possible high risk cases or the condition of the child inside," said Kusum Singh, an ASHA worker from Atesuva village in Uttar Pradesh.

Uttar Pradesh is second in the country in terms of maternal mortality rate — there are 258 deaths for every one lakh women. The state ranks first in the entire country in infant mortality rate. If the country-wide infant death stands at 32 infants for every thousand, in Uttar Pradesh, the number of infant deaths per thousand is 64.







Sumitra Rabidas, an octogenarian, and a *dai* (traditional midwife) lives in Rabidas Pally, in West Bengal's Cooch Behar. She is the last in her family to have practised the profession. Her mother was a *dai* too. "I was very young when I started accompanying my mother to learn the basics of midwifery. I was married off when I was around 14 years of age. A year later, my mother helped me deliver my first child," she said. Sumitra became a *dai* herself.

Two or three generations ago, women gave birth at home with the help of *dais*. Doctors and nurses were scarce. People relied on the *dais*, whose only equipment was their skilled hands, a blade, and some mustard oil.

"I don't really have a count of how many women I assisted. People wouldn't pay more than three rupees in those days," Sumitra recollected. "They gave us sarees, pulses, and sometimes if a boy was born, we would get sweets and fruits. We never complained because we felt we were born to do the job," she added.

Rukmini Rabidas' mother and grandmother, from Cooch Behar's Dewanhat village, were also *dais*. The 65-year-old learned the skills from them before she turned 11. Rukmini, who can neither read nor write has moved with the time. She now also offers pre and post-maternity massage and she assists mothers choose the right diet, do some 'pregnancy workouts', and lends a lot of emotional support to them.

"I remember getting paid just one rupee along with some vegetables, rice and sometimes a saree.

When I was pregnant, my maternal grandmother and mother assisted me in home birth. I decided to continue their legacy for as long as I live and today the same skill is feeding our family," said Rukmini dai.

Rukmini believes a woman's body is wired to deliver babies without any medical intervention. They never used any instrument to cut the mother during labour. "Fifteen days before the delivery date, I would educate the mother about the pain and asked them not to panic," said Rukmini. "Birth was performed on the floor. We placed sacks and old bedsheets, an old pillow under the woman's back, and laid her down. We used a muslin cloth to hold the head of the baby and pull it out gently," she explained.

Prasenjit K Roy, obstetrician, gynaecologist and IVF specialist based out of Siliguri, said *dais* could be of help in rural areas if they are medically trained and do not engage in unhygienic practices. "But, I strongly believe institutional births should be made compulsory for all women because it is the safest. *Dais* or midwives are required in areas where access to medical care and doctors are far from reach," he said.

2020-INTERNATIONAL YEAR OF THE NURSE AND THE MIDWIFE

Recognising the vital role played by nurses and midwives in healthcare services, the World Health Assembly has designated 2020 as the International Year of the Nurse and the Midwife.

A World Health Organization(WHO) research shows that midwives could avert over 83 per cent of all maternal and newborn deaths. That's why the emphasis is on the need of nine million more nurses and midwives if it is to achieve universal health coverage by 2030.

In 2018, at a conference led by WHO in New Delhi, the Indian government had announced plans to introduce a national midwifery training programme. But, there is a lot of confusion over the concept of midwifery in India as it is merged with nursing and is not an individual degree.

CV Kannaki Uthraraj, obstetrician and gynaecologist specialised in infertility treatment, who works at Thamarai Fertility and Women Health Centre, Coimbatore, said that having midwives as a part of maternal care largely depends on the kind of training they receive. "In western countries, midwives are highly trained and they are as good as doctors. They understand when a mother needs an expert's intervention. We don't have such an excellent facility in India," said Uthraraj.

OF BIRTH CENTRES AND DOULAS

Doulas are women who assist pregnant women and their families during labour and after childbirth. They offer continuous physical and emotional support; the right exercises during pregnancy that help the mothers keep calm.

Trained doula and hypnobirthing practitioner, Ruth Malik, founder of Birth India, a non-profit, has 14 years of experience supporting women to make informed choices in pregnancy and childbirth. "Ninety five to 98 per cent of women can give birth naturally without any medical intervention. Sadly, in India not even 50 per cent of women are giving birth naturally," said Malik.

The more educated the state is, the more institutional the deliveries. In Tamil Nadu, home birth is illegal and if it is performed, a birth certificate is not issued by any institution.

Sangheetha Parthasarathy, Chennai-based strategy consultant-turned-birth doula had a home birth and water birth for both her daughters when she was in the UK. "The Indian medical curriculum has not changed in a hundred years so we are training the doctors with very outdated protocols. We have lost the personalisation of birth amidst the standardisation and hierarchy in the birth room. This has led to a high rate of intervention and cesarean cases," said Parthasarathy.

Uthraraj is of the opinion that home birth has a lot of risks. "There are some institutions practicing births in a resort kind of set up, without immediate medical support like an operating theatre, intensive care unit, blood bank, and anaesthetist. They are putting women at risk," she said.

Priyanka Idicula, director of Birth Village, a natural birthing centre in Kochi Kerala, and managing trustee for Birth for Change, a non-profit, is a certified professional midwife and Lamaze certified childbirth educator. Idicula said even experienced midwives are not valued in India and are not licensed to work independently. "As per the rules of the International Confederation of Midwives, there has to be one midwife for every woman in labor. Where are we in India? We generally have one doctor for a thousand patients. This is why I feel we need to be scaling up our midwives to patient ratio," said Idicula.

A TREMENDOUS SPIKE IN C-SECTION

Since 2008-09, India's caesarean-section births in both public and private hospitals have doubled. India has registered a jump of over 300 per cent in C-section deliveries at public hospitals, and 400 per cent in private hospitals in the last decade. According to data collected by the Union Ministry of Health and Family Welfare under the Health Management Information System (HMIS), over 14 per cent of the total births in 2018-19 took place through a C-section.

According to the National Family Health Survey (2015-2016), Telangana had the highest rate of caesarean birth, with 74.9 per cent in the private sector and 40.3 per cent in the public sector. As per WHO, cesarean-section should not exceed 10-15 per cent in any state or a country. This led the Telangana government to implement a midwifery course in October 2017 in the district of Karimnagar.







When the labourers returned to Uttar Pradesh's Atesua village from Mumbai, it was 48-year-old Kusum Singh, who ensured they were quarantined at a government school outside the village. For the next fourteen days, Kusum monitored their health keeping an eye out for colds, coughs and fevers. Kusum is one of the million foot soldiers who keep tabs on people coming into the village from outside states, how many of them have been tested for the corona virus and how many have not.

In the early days of the pandemic, ASHA (Accredited Social Health Activist) workers like Kusum surveyed every household and identified sick people. They maintained lists of outsiders and followed up with those who were quarantined. They also painted slogans on the walls, sang songs and delivered medicines to those confined to their homes in the pandemic.

As per the National Rural Health Mission (NRHM) data, the total number of ASHA workers in the country, until September 2018, was about 10.3 lakh.

About 40 kms away from Lucknow at Bakshi Ka Talab, Kusum's day begins at 5 am. After her chores at home, she steps out at 9 am.

She is often to be found with a mask covering her face instructing a family on the physical distancing norms of COVID-19. "Always keep your mouth and nose covered with a cloth. Do not get out of the house unless absolutely necessary. Wash your hands repeatedly with soap. Keep a distance of two to three hands from each other," she explains.

ASHA workers are waging a war against the novel coronavirus that is keeping millions of people safe. They form the first line of defence of the Indian health system at the grassroots level.

Yogesh Singh, Superintendent, Community Health Centre, Itaunja, said: "They have always been a strong link in the health department. At present, their responsibility has increased manifold. The good thing is that even in this environment of fear, their enthusiasm has not diminished. They are working far beyond their assigned level of duties."

Nirmala Sitharaman, the finance minister, announced Rs 1.70 lakh crore, including Rs 50 lakh insurance cover, from medical staff to ASHA workers and *safai karamcharis* who are working high risk jobs.

The Health Ministry has directed all states to provide financial incentives to ASHA workers for undertaking COVID-19-related activities. The ministry has also asked states to ensure that ASHA workers are supplied with adequate protective gear.

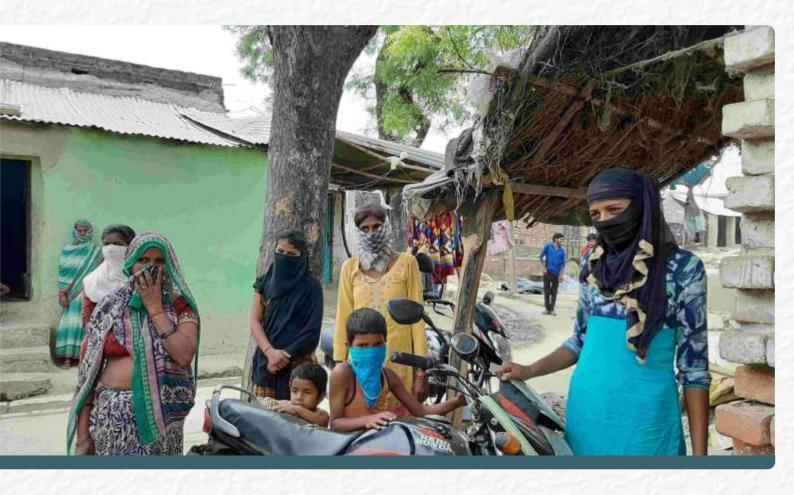
ASHA Sanginis are called Sahiya didi in Jharkhand. "Recently, we were issued medicines from the

hospital that the we distribute to those who need them," said Sahiya didi Bhasha Sharma, 40, a resident of Jodisa village in Jamshedpur, Jharkhand. Eighteen Sahiya Didis work under her.

The National Rural Health Mission (NRHM) created the post of the ASHA worker in 2005 to look after rural women and children. Depending on the population, there are 1,000 to 2,500 ASHA workers in each district.

Savita Sharma who lives in Eint Khedi village, Bhopal, monitors 14 ASHAs. "At the moment, our ASHAs are promoting physical distancing. They also ensure that no one goes hungry. They write slogans on the walls too," she said.

Besides being frontline soldiers of the health department kin the times of the pandemic, ASHAs also promote immunisation, sanitation, counsel adolescent girls, care for pregnant women, look out for malnourished and severely malnourished children, etc.







Wenty-eight-year-old Martin Kaipeng used to work as a captain in a restaurant in Chennai's suburbs. After the COVID-19 induced lockdown, the proprietor was unable to pay him. Kaipeng, originally from Santang Para No 2 village in Amarpur district of South Tripura, around 3,000 kilometers (km) from Chennai, boarded a Shramik train along with his pregnant sister on May 25, and reached Agartala on the May 29.

To understand the impact of the COVID-19 lockdown on the rural population of the country, *Gaon Connection* conducted the first-of-its-kind national survey, across 23 states and three union territories. This included the rural population of five northeastern states — Tripura, Assam, Manipur, Sikkim and Arunachal Pradesh.

KEY SURVEY FINDINGS OF GAON CONNECTION SURVEY FROM THE NORTHEAST

- •In Assam, 87 per cent of rural households went without required medical treatment during the lockdown.
- •In Assam, 80 per cent of rural respondents did not get work under MGNREGA.
- •In Arunachal Pradesh, around 41 per cent of rural respondents went without eating the whole day 'several times' during the lockdown.
- •In Tripura, 60 per cent of women worked hard to arrange water for their families.
- •In Arunachal Pradesh, only 35 per cent of households reported receiving money from the government during the pandemic.

ACCESS TO HEALTHCARE

Soon after the pandemic hit the country, a large workforce of doctors and health workers, both at the primary and community levels, got "busy" in COVID-19 duties. This shifted focus and ignored the healthcare of millions of those needing other medical attention. Pregnancy, inoculation schedules and pre and post natal check ups suffered. According to the *Gaon Connection* survey, around half (45 per cent) of pregnant women in Assam missed out on pre-delivery checks and vaccination during the lockdown.

The survey also tried to ascertain the level of difficulty encountered by rural households in obtaining medicines or seeking medical help during the lockdown. In Assam, nine out of ten households, (87 per cent) went without required medical treatment during the lockdown. This is followed by Arunachal Pradesh at 66 per cent) and Tripura (58 per cent).

NO WORK

"After I came back, I did not get any work in my village and so had to collect bamboo. If you saw our living conditions, you would cry," 28-year-old Kaipeng rued.

Talking about the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA), Kaipeng claimed not many people got work under it.

Of the households surveyed in Tripura, 73 per cent reported that household members did not get work under MGNREGA during the lockdown. In Arunachal Pradesh, this number was 71 per cent. And, 80 per cent of rural respondents in Assam did not get work under the scheme.

The survey revealed that around 41 per cent of rural respondents in Arunachal Pradesh went without eating the whole day, several times during the lockdown, followed by Assam at 34 per cent.

Besides, the rural population largely dependent on the public distribution system (PDS) for foodgrains during such distressing times, suffered too. The survey revealed only a little over half of ration cardowning households in Assam received wheat or rice from the government during the lockdown.

Amid the pandemic, people spent less on basic items such as atta (flour), dal (pulses) and chawal (rice). In Tripura, 53 per cent of the rural respondents spent less on these during the lockdown, while 44 per cent spent less on biscuits, snacks and sweets during the lockdown. In Arunachal Pradesh, 40 per cent spent less on basic food during the lockdown, while 53 per cent spent less on biscuits, snacks and sweets.

FINANCIAL DISTRESS AND DEBT

As incomes dropped, in Assam, 82 per cent of respondents reported that during the lockdown, making ends meet was 'extremely' or 'quite' difficult. This is followed by Arunachal Pradesh at 68 per cent.

Consequently, the debt burden went up too as most economic activities came to a standstill and people had no earning. This forced rural families to borrow money. In Assam, 31 per cent borrowed money/took a loan, 16 per cent sold or mortgaged land or jewellery, and 11 per cent sold a prized possession. In Tripura, 13 per cent borrowed money/took a loan, 15 per cent sold or mortgaged land or jewellery, and 20 per cent sold a prized possession.

To help the poor tide over the COVID-19 crisis, the government on March 26 announced an ex-gratia payment of Rs 500 to be credited to women Jan Dhan account holders for the next three months, beginning April.

Jamini Das, who hails from Taxi Ali village, Sivasagar district, Assam, was not even aware of the scheme. "I have not received this money. Is the money given at home?" Das asked *Gaon Connection*.

The survey revealed 74 per cent of rural households in Assam reported the government credited money in the bank account of a household member during the lockdown. This is followed by Tripura (61 per cent). Interestingly, only 35 per cent of households in Arunachal Pradesh reported receiving the money.

The government also promised to provide relief to farmers affected due to the lockdown. The Centre said it would transfer the first instalment of Rs 2,000 each of the 86.9 million beneficiaries under the PM Kisan scheme in the first week of April.

Jugal Das, a farmer, who hails from Boniabari village in Sivasagar district, Assam, claimed he had not received any financial assistance. "Many so-called farmers who do not even know a thing about farming have received assistance. But I have not received any money," said Das.

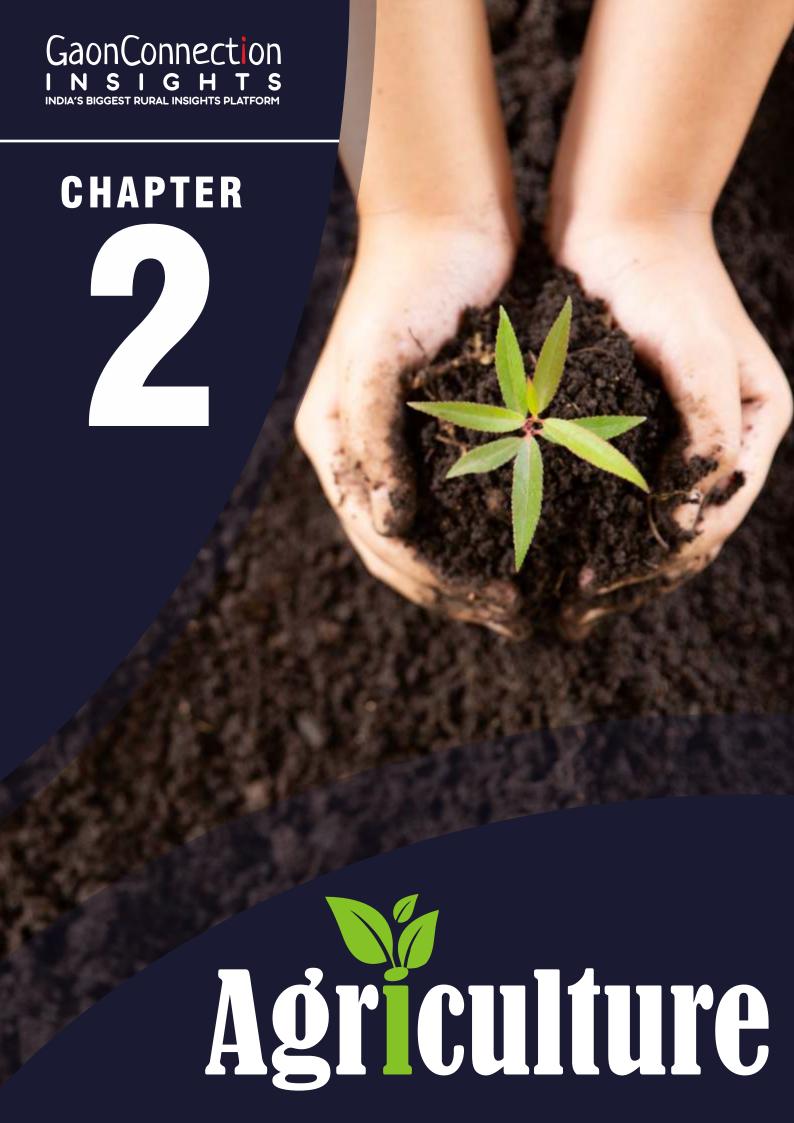
WATER WOES

The COVID-19 pandemic has added to the water woes of millions of rural women. Women, being the primary providers of water for their families, suffered the direct burden of managing additional water needed to wash hands regularly to prevent the spread of the virus. Twenty-six-year-old Monika Kaipeng, Martin's sister, also from Santang Para No 2 village, has to trek 300 metres for water every day. "It becomes difficult to fetch water as the route is hilly. We have to trek seven to eight times every day for water. If a guest comes home, we have to work even harder," she said.

When Kaipeng returned to his village, he was quarantined for 14 days. "We were to get Rs 200 a day and stay in a quarantine centre. We did not get anything. We stayed in a small shed near the field," he said. His two meals a day were brought to him by family.

Like Kaipeng, many migrant workers from the northeastern states stranded across the country reached their villages after braving heat and hunger. Even though there are fewer jobs in their villages and just feeding the family is a huge challenge, most pledge to not return to the cities. Kaipeng is collecting money to open a small general store in his village. He is hopeful of a new beginning.

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The agriculture sector employs 263.1 million people in India, according to the 2011 Census and the COVID-19 pandemic had a significant impact on the sector in 2020. The biggest event was the passing of three agri-laws in September by the central government that had huge repercussions and the protests against the laws by farmers, mostly from the states of Punjab and Haryana are still on in the capital of Delhi.

FARM LAWS

In September, three farm laws were passed by the central government. These include the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020; the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020; and the Essential Commodities (Amendment) Act, 2020.

These three laws collectively allow farmers to produce crops based on a contract with corporate investors on a remuneration that is mutually agreed upon as well as allowing them to sell their produce in multiple ways. But the farmers feared that these laws would take away their autonomy over their land and promote contract farming by placing the land in the hands of private owners. The farmers fear that the laws would lead to the corporatisation of agriculture. This fear has led to protests, in Delhi particularly from farmer unions across the country. The protesting farmers are demanding a withdrawal of the three laws.

Gaon Connection conducted two important rural surveys this year that captured the impact of COVID-19 on the agriculture sector, and also the perceptions of the Indian farmer towards the three new agri laws. The first Gaon Connection nationwide survey was on the 'Impact of COVID-19 on Rural India'; and the second survey was titled 'The Indian Farmer's Perception of the New Agri Laws'. Findings of both the surveys are available at www.ruraldata.in

FARMER SUICIDES

According to the National Crime Records Bureau (NCRB) data on accidental deaths and suicides published in 2020, there was a marginal decrease in farmer deaths by suicide in 2019. There were 10,357 deaths in 2018 while in 2019, there were 10,281 farmers death by suicide. Out of these, 5957 were farmers and 4324 were agricultural labourers. Further, 5563 were male farmers while 394 were female

Overall, the suicide rate in the farming sector accounted for 7.4 per cent of the total deaths by suicide in 2019. As compared to the 2015 NCRB data that published reasons behind farmers' suicides, the 2020 data omitted these classifications. According to the central government, many states had not provided data for the causes of these suicides, which is why that section was not published.

PESTICIDES MANAGEMENT BILL (PMB) 2020

The Pesticides Management Bill was introduced in the Rajya Sabha on March 23, 2020. According to this bill, the manufacture and export of pesticides that are not registered for use in India would not be

allowed even if they are valid in other countries. The Bill was received with some reservation as there were fears that it would have an adverse impact on Indian agriculture and livelihoods of farmers.

According to Bharat Krishak Samaj, a farmers' forum, this bill does not reflect the government's emphasis on doubling the incomes of farmers by 2022. As opposed to demands by domestic industries to promote their products and to increase agricultural exports, this bill is expected to damage exports and increase imports instead. For instance, according to the president of the farmers' forum, a pesticide used in cotton farming costs Rs. 3500 when developed by a domestic company but Rs. 10,000 when sold by a multinational company.

IMPACT OF COVID-19

Due to the lockdown restrictions imposed in the country as a result of the COVID-19 pandemic, the agriculture sector was also affected despite the fact that the government had exempted agriculture and allied activities from the lockdown. Because of transportation restrictions, delivery of agricultural goods to mandis (state-regulated markets) significantly reduced.

According to the *Gaon Connection* nationwide survey, conducted between May and July with 25,300 respondents in 179 districts across 20 states and three Union Territories, 42 per cent of farmers were not able to sow their crops on time, 41 per cent were not able to harvest them on time, and 55 per cent were not able to sell their produce on time. Farmers also faced issues taking their produce to the mandis and obtaining a fair rate for their produce.

This was also the case for dairy farmers, 56 per cent of whom faced difficulties in delivering to the market and 53 per cent had difficulty finding customers which forced them to sell their cattle.

According to data collected in two rounds by an organisation called IDInsight in collaboration with Development Data lab through phone surveys with over 4500 households in rural areas across six states, the procurement of the *rabi* (winter) harvest of crops at the *mandis* reduced over time. For instance, as compared to 2019, the market arrival of crops like paddy, onions, and wheat decreased by 6.5 per cent, 61.6 per cent, and 38.4 per cent respectively.

The survey further attributes this decrease to government procurement policies, storage and direct consumption by farmers. In August, however, the survey found a 7 per cent increase in planned land cultivation for the *kharif* (summer and monsoon) season as compared to 2019 but this is once again attributed to atypical factors like the return of migrant labourers to their villages and working in farms, subsistence farming and farmers' efforts to overcome losses.

Additionally, unemployment rates reduced from 70 percent in May to 40 per cent in July, but still remained higher than the unemployment rate in March right before the lockdown.

As part of the COVID-19 economic package, the government announced support of Rs. 1.63 lakh crore to agriculture and allied sectors that was aimed to strengthen infrastructure and logistics. Schemes were also announced for allied activities such as food and vegetables, beekeeping, micro food enterprises, cattle vaccination and dairy sector. Additional credit support of Rs. 30,000 crores (on top of Rs. 90,000 crores given through the normal route) for farmers through the National Bank for Agriculture and Rural Development (NABARD) was also announced, along with the provision of Kisan Credit Cards (KCC) to avail concessional loans.

WATER RELATEDISSUES

The agriculture sector accounts for 78 per cent of the total water used in the country, most of which is used for irrigation. As a result, efficient water supply and its sustainable use is necessary for the growth of the agriculture sector, particularly due to the vulnerability of several regions in India to water related crises brought about by climate change as well as increasing demand and unsustainable management.

In 2020, moreover, the effects of ecological disasters such as floods and cyclones have also led to crop failures in various parts of the country such as Andhra Pradesh, Assam, Bihar, Odisha. Floods in Bihar this year, for instance, damaged 7.54 hectares of agricultural land. In Andhra Pradesh, similarly, there was a loss of Rs. 2770 crores to agriculture and horticultural crops, affecting livelihoods of farmers.

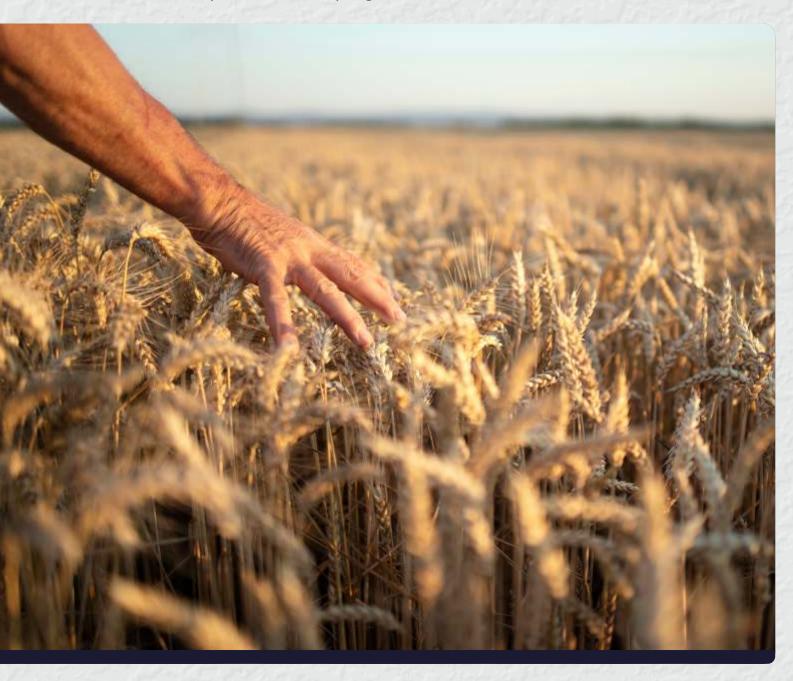
ORGANIC FARMING

According to the Union Ministry of Agriculture and Farmers' Welfare, about 2.78 million hectares of farmland was under organic cultivation as of March 2020, which forms two per cent of the 140.1 million hectares of the net sown area in India. Sikkim is the only state that has become fully organic so far, while Madhya Pradesh, Rajasthan and Maharashtra that account for the largest area under organic farming only have 4.9 per cent, 2 per cent, and 1.6 per cent of their net sown area under organic cultivation respectively.

Additionally, while at least 20 states have policies or schemes in place on organic farming, there is still a low coverage of organic farming in several of these states such as Kerala and Karnataka that only account for 2.7 per cent and 1.1 per cent respectively. For the year 2020-21, support and certification have been initiated for farmers undertaking organic farming.

The country fought unprecedented battles on several fronts in 2020, with the major threat coming from the COVID 19 pandemic that threw everyone off their stride. In the midst of all that the Central government passed three agri bills that were later made into laws and caused an uproar in the farming community, especially in Punjab and Haryana. Besides, an unexpected assault came from swarms of locusts that destroyed vast swathes of agricultural land giving rise to fears of starvation.

Gaon Connection investigated the crises in the agrarian world and presents here some of the watershed events of the year in the country's agriculture sector







t was all quiet at the Shambhu border between Haryana and Punjab. Tents and tractor trolleys of farmers loomed in the dark at 4 am on the morning of November 26. In one corner stood a banner with the images of Bhagat Singh, Baba Saheb Ambedkar and Shaheed Udham Singh. The Shambhu border has been the site of farmers' protest for two months.

A few farmers sat around in groups talking quietly. The *Gaon Connection* team joined them to find out more about the agitation. "How can we accept that instead of following the recommendation of the Swaminathan report, we were served the three agricultural laws," Ram Singh, who farms on 40 acres of land in Punjab, demanded to know. "These laws are a conspiracy to ruin our mandis. Look what happened in Bihar when they did away with the mandis. We will not allow the same to happen in Punjab," he said.

Ram Singh and his companions were not convinced by Prime Minister Narendra Singh Modi's assurances that neither the mandi nor the minimum support price (MSP) systems would come to any harm. "Terrible darkness will befall the farmers with these laws," Ram Singh warned.

Farmers from Punjab and Haryana have been the most vocal in their protests against the three agrilaws. They pointed out that the laws had several loopholes and said the central government had let them down.

The peace and quiet shattered at 9.30 am, on November 27, when the thousands of farmers camping there, surged ahead on their way to the national capital Delhi. The Haryana Police blocked a part of the highway on the Punjab side with barricades. Soon, the tractor trolleys and trucks coming from Punjab began queuing up. Despite heavy police cover and the paramilitary forces deployed by the Haryana government, farmers pushed aside the barricades and moved on.

There were farmers' trolleys and tractors as far as one could see on the Patiala-Ambala highway. They bore farmers from several remote districts, including Kartarpur, bordering Pakistan. Many of the farmers had already travelled nearly 300 kilometres to reach Patiala. The tractors were filled with provisions, diesel, generators and firewood. It was obvious the farmers had come prepared to stay away from home for several months.

At Khanauri, another border point between Punjab and Haryana, that connects Sangrur and Jind districts, more than 5,000 tractor-trolleys had gathered.

"Punjab and Haryana have the highest procurement at MSP as our mandis are strong. We sold paddy this time for one thousand eight hundred and sixty eight rupees a quintal, when farmers in Bihar and UP got just about a thousand rupees," said Gurdaspur resident Raminder Singh of Jamhuri Kisan Sabha. "People from Bihar come to Punjab to sell paddy. So, we do not want the existing system to end," he added.

Many farmers also feared that the agri laws had thrown open doors to corporates. "If private companies enter agriculture, farmers will not be able to compete with them. The land belonging to the farmers will sooner or later be occupied by them. Everything in the country is, as it is, going into private hands," rued Ranjit Singh, a farmer from Kalanaur, Haryana about 250 kms from the state capital, Chandigarh.

"Modiji is the prime minister of the country and we are its farmers," Happy Singh, a farmer from Kalanaur of Dera Baba Nanak, told *Gaon Connection*. "We are going to talk to him. Do we not even have the right to talk? We are unarmed and empty-handed, what is there to fear us," he asked. Gurunam Singh Barnala said that the prime minister had "awakened the sleeping farmer of Punjab by introducing the agricultural laws".

At the Khanauri border, several toll booths were being used to serve langar. Hordes of farmers from Sangrur, Mansa and Patiala, led by the Bhartiya Kisan Union from Ugrahan, gathered on the Haryana side. The protestors ranged from eight-year-old children to 80-year-old men and women.

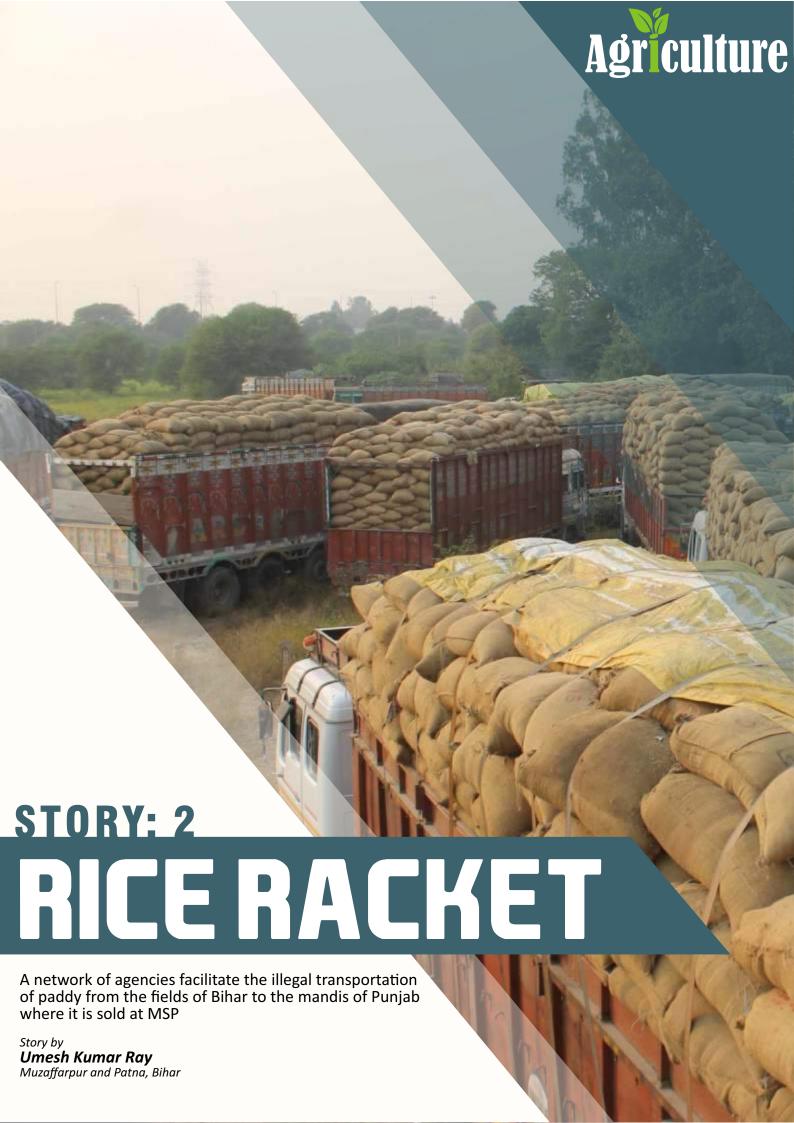
Two kilometres short of the Khanauri border, tractor trolleys lined up on both sides of the road. "So far about 5,000 trolleys have arrived here, and more are expected," a Punjab police constable stationed there told *Gaon Connection*.

That very evening at Karnal, the farmers had been forcibly stopped by the administration. But, despite that, they crossed over into Panipat where the police had dug up the road. But the farmers filled up the trenches and proceeded to Sonipat, where again they faced huge boulders outside the Rajiv Gandhi Education Campus. Here, the protestors were hosed down with water cannons. Many farmers accused the authorities of snatching away the keys to their vehicles.

At the Singhu border, between Haryana and Delhi, pitched battles broke out between protestors who breached the first round of barriers and the police who lathi-charged, tear-gassed and used water cannons on them. Things calmed down when farmer leaders, including Yogendra Yadav of Samyukt Kisan Morcha, Sardar VM Singh, the convener of the All India Kisan Coordination Struggle Committee, and Gurnam Singh Chadhuni, of Kisan Union, Chadhuni, arrived.

The protestors were informed by the police that they could proceed to Delhi, and protest peacefully at the Nirankari Maidan in Burari, north Delhi. However, the farmers who were at the Singhu border chose to continue to camp at the Singhu border, where they still are.







Anil Shah (name changed) is a farmer from Vaishali district who grows around 10 quintals of paddy annually. He is an *aadhatiya* (commission agent) too, who buys about 1,000 quintals of paddy at a lower price from other farmers in Bihar and earns a profit by selling it at a higher price over 1,300 kilometres away in a mandi in Punjab.

"We have contact with agents in Punjab who sell paddy sent from Bihar to the Punjab government at the MSP [minimum support price]. They take a commission per quintal," said Shah. He buys the paddy from small and marginal farmers (owning less than five acre land) who are invariably in desperate need of money, and once he has collected a sizable quantity of paddy, he contacts transporters from Punjab who bring other goods into Bihar. They take the paddy back on their return journey. "This way I save on one way transportation cost," said Shah. He never accompanies the consignment of the paddy, he said, to avoid arrest in the event of a raid or if the paddy was seized.

There are hundreds of *aadhatiyas* like Shah, who buy paddy from farmers at a low price in Bihar and send it off to Punjab and Haryana where their contacts take commission and sell it at a good price. In the process, middlemen make money, while the farmers and the exchequer suffer losses.

The Punjab Police had seized a large number of paddy-laden trucks that were smuggling paddy allegedly from Bihar and Uttar Pradesh into the state to sell at the government notified minimum support price. The MSP of paddy (Rs 1,888 per quintal from Grade A paddy, and Rs 1868 per quintal for other paddy) is usually more than the rate in the open market (at present ranging from Rs 800-900 a quintal to Rs 1,200 a quintal), and states like Punjab lift the entire paddy on MSP, whereas this system is non-existent or extremely weak in Bihar.

"Ninety per cent of farmers in Bihar do not get MSP. They have to sell their foodgrains to middlemen. The government should open and closely monitor mandis, and ensure that the farmers get a fair price," Upendra Sharma, the head of the Vaishali Area Small Farmers Association told Gaon Connection.

THE NETWORK

There is a well established network that helps paddy travel from the fields of Bihar to the mandis of Punjab. Shah explained how it worked. "If I buy paddy at one thousand two hundred rupees a quintal from the farmer in Bihar, [the price may vary depending on the market price], I add two hundred and fifty rupees per quintal to it, and further sell to the agent," he said.

Thereafter, he pays the transporter Rs 200,000 to carry 1,000 quintals of the paddy consignment to Punjab where his agent receives it. "The agent usually charges a commission of six to seven rupees for each quintal of paddy. After deducting the expenses of transport and commission, I get a net profit of 40 to 50 rupees per quintal. So, if I send 1,000 quintals of paddy to Punjab, I earn net forty to fifty thousand rupees," explained Shah.

The agent in Punjab sells the paddy sent by Shah at a mandi at the MSP of Rs 1,868 per quintal, or to some other agency, and after deducting his commission, the agent transfers the remaining money to Shah's account.

But, the Bihar government officials dismiss such allegations of paddy smuggling. "While it may be possible that basmati paddy is being sent to Punjab or Haryana because of low prices here, regular paddy is not. If that had to be sent to Punjab, the transportation expenses would be very high," said Vikas Kumar Bariyar, special officer of the Cooperative Department of Bihar.

HIGH PRODUCTION, LOW PROCUREMENT

Of the total 7.946 million hectare cultivated area in Bihar, 3.2 million hectares (over 40 per cent) are under rice cultivation. The state produces about eight million tonnes of paddy annually. Of this, the government procurement of paddy is very little. In the year 2019-2020, two million tonnes of paddy were procured, while the target was to procure three million tonnes.

For sale of paddy, farmers in Bihar have to register themselves online with the co-operative department, but data reveals that there is poor procurement in the state through this government agency.

Arvind Kumar is a farmer of Baniya village in Muzaffarpur district of Bihar. He has been farming for the last three decades, but has been able to sell foodgrains to the government only twice or thrice till date. "My experience of selling to the government has been very bad," he said.

"Our livelihood depends on farming. We have to pay cash to the labourers working in the fields. In such a situation, if the government delays procurement and payment, how will we arrange money for wages and sowing of the next crop," he asked.



Fourteen years ago, in 2006, Bihar did away with the mandi system by abolishing the Agricultural Produce Market Committee Act with the aim of liberating the farmers, but for many like Kumar, it has left them at the mercy of middlemen who are extracting the profit that should in all fairness belong to the farmers.

PROBLEM WITH PACS

In Bihar, the Primary Agricultural Credit Society (PCAS) is a panchayat and village level unit that extends rural credit to farmers and also provides marketing assistance to help them sell their product at good price. There are 8,463 PACS in Bihar. Apart from PACS there are 500 vyapar mandals that also procure paddy.

People at the PACS said that they too worked under considerable constraints. "We get loan money of only 25 per cent of the purchase target. The co-operative bank gives us the loan, which comes into the PACS bank accounts. After purchasing paddy from farmers, we send money to their accounts. It takes between two to three weeks," Sanjay Kumar, who operates PACS in Mokama, in Patna district, explained.

"Most of the time the PACS run out of money. We take the grain from the farmers, but cannot not pay them immediately. The process of getting the money from the government is also very complicated and time consuming," he pointed out. Already the farmers are complaining about procurement delay this season.

Meanwhile, somewhere in Bihar, another truck is being loaded with paddy and seen off to Punjab where it will be sold at a mandi at MSP. Another middleman will rejoice at the profit he made. And another farmer will go back to sowing his next crop, despairing and resigned to his fate.





Jarnail Singh from Kabirganj in Pilibhit district in Uttar Pradesh has just returned from Paliya Mandi, a dejected man. The 50-year-old was unable to sell his 250 quintals of 'good quality' paddy. "I had taken a trolley of paddy to the mandi, but no trader bought it even though I was willing to sell it at a much lower price than the government's minimum support price (MSP) of one thousand eight hundred and eighty eight rupees per quintal," said Singh. Even then, there were no takers, he said despondently.

Despite repeated assurances by the central government that it would safeguard the minimum support price (MSP) for the farmers, and that it would not be adversely impacted by the new agri laws, the story on the ground is unfolding rather differently.

Farmers like Singh are finding it almost impossible to sell their produce at the MSP. They are desperate to sell because they have no godown to store their unsold paddy in and they need money to sow the next crop of potatoes or wheat. "The bank loan has to be repaid, the workers need their payment..." the distraught farmer trailed off. They find themselves holding unsold paddy, hard pressed for money and vulnerable to exploitation by middlemen to whom they are forced to sell their paddy at a throwaway price.

While the agri acts had also assured the farmers that they could directly sell their produce at the mandis, that is also not happening. "The government procurement centres invariably find fault with the quality of the paddy if brought to them directly by the farmers. But, when we sell the same farha (bad grain) to the traders at throwaway prices, it miraculously becomes all right," Jarnail Singh complained.

In his tweet on October 11, Sudhanshu Pandey, secretary, department of food and public distribution, India, tweeted that while last year, 17.7 lakh metric tonnes were procured by the government, as of October, this year the quantity has risen to 26.3 lakh metric tonnes in the same time period. In Uttar Pradesh alone the procurement this year as of October 8, is 4,423 metric tonnes while last year it was only 92 metric tonnes.

GROWING PROBLEMS

"I have sold off my paddy crop for one thousand rupees because I had to sow potatoes and did not have enough money with me to hold on to paddy and at the same time begin sowing the next crop. When and how the government purchase will happen, no one knows," Mewalal, a farmer in Lakhimpur said, resigned. Even in districts where government procurement has begun, the farmer is compelled to sell paddy at as low as Rs 1,000-1,200 in the open market.

"Needing money at home, I had to sell my own paddy at one thousand and seventy rupees," said Virendra Vishwakarma, from Tandpur village in Suratganj block of Barabanki District who has been procuring paddy, wheat and mustard at the local level and selling it to the wholesalers for the last several years. "The farmer can't wait further, so he is selling at whatever price he is getting," he added

Farmers incur a lot of expenses at this time of the year and in order to meet them, they are selling paddy to private traders for a lot less than the government stipulated rates.

Clearly, the farmers are a worried lot. "There is no demand for paddy in the mandi," pointed out Gurchanan Singh of Lakhrawan village under Gola Tehsil in Lakhimpur district.

"The government has declared the MSP, so it must also arrange to buy paddy at that rate. The farmer needs money now to sow wheat, mustard and potato. There are only banners at the procurement centres assuring farmers of good days; but the millers are doing as they please. The government has failed the farmers," said the farmer who has 15 acres of paddy, of which he has harvested and sold only half.

ALL IS WELL, SAYS THE GOVERNMENT

"The rate for ordinary paddy has been set at one thousand eight hundred and sixty-eight rupees a quintal and for grade-A paddy the rate is fixed at one thousand eight hundred and eighty-eight rupees per quintal. Besides, there will be four thousand procurement centres where the paddy will be procured at the MSP," Manish Chauhan, Commissioner, Department of Food and Logistics in Uttar Pradesh, said in a press statement.

According to the Uttar Pradesh government, 11 agencies including the UP State Food and Essential Commodities Corporation, the Pradeshik Cooperative Federation, public sector undertakings, Mandi Parishad and Food Corporation of India shall procure the paddy through registered cooperative societies, farmer growers groups, multi state cooperative societies, etc. The central government has directed that the procurement goes as per the new agri laws. Anyone who has a PAN card can buy the grains.

As per the data released by the Union ministry of consumer affairs, food and public distribution on October 4, 573,339 tonnes of paddy has been procured in the current *Kharif* season 2020-21 as of October 3. The ministry said procurement was made at MSP and it has benefitted 41,084 farmers. After the uproar over the matter of MSP in the new agri bills, the central government had assured the continued procurement of food grains from the farmer at the MSP. However as per reports from several districts in Uttar Pradesh, between September to the first week of October, these promises have not come to fruition.

It is the same in other states too. Mandis in Haryana are crowded with farmers who have unloaded their produce and have been waiting for several days to sell it. Farmers in Madhya Pradesh are also finding it difficult to find buyers. In Satna, Madhya Pradesh, the mandis are closed and the millers are paying only between Rs 1,300 and Rs 1,400 per quintal for good paddy.

SHARECROPPERS' WOES

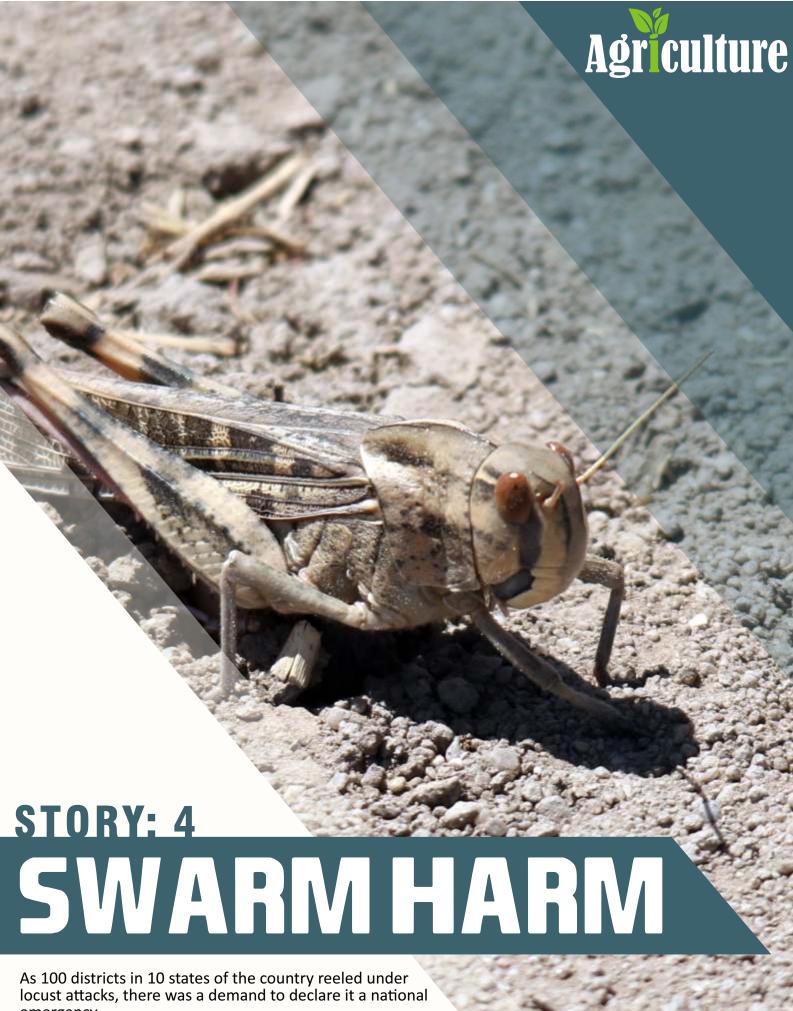
It is mandatory for a farmer who wants to sell paddy at a government procurement centre to register. Only the farmer who has the land rights, bank passbook and an Aadhaar card will be able to carry out the sale.

A sharecropper or *bataidar*, therefore, cannot sell his paddy at a government procurement centre. Harun Ali of Nidanpur village in Shahjahanpur, in Uttar Pradesh, a *bataidar* had sown paddy on about 16 acres of leased land. Although he has harvested his crop, it has failed to fetch him a good price. "The position of paddy is very bad," rued Harun, "The difference of a hundred rupees or so is acceptable but the Katna Mandi has opened at the rate of one thousand and one hundred and ten rupees per quintal. That is more than seven hundred rupees per quintal difference," he calculated, adding if he sold at this rate, after paying off the land owner, a bataidar like him would have no money left for meeting other expenses.

(with inputs from Mohit Shukla from Lakhimpur and Pilibhit, Virendra Singh from Barabanki, Sachin Tulsa Tripathi from Satna, Ram Ji Mishra from Shahjahanpur and Sumit from Unnao)

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emergency

Story by **Arvind Shukla**



At a time when the country is grappling with the coronavirus disease (COVID-19), more than 100 districts, across 10 states of the country including Rajasthan, Madhya Pradesh, Uttar Pradesh, Gujarat, Bihar, Chhattisgarh, are reeling under locust attack. In Uttar Pradesh, several districts such as Jhansi and Mahoba were affected, and the locust swarms reaching Delhi and Gurugram made national headlines.

The United Nations' Food and Agriculture Organization (FAO) declared an alert while many political parties and farmers' organisations in India demanded that the locust attack be declared a national calamity.

Recently, Union agriculture and farmers' welfare minister Narendra Singh Tomar admitted that the ongoing locust attack is the strongest in 26 years and assured the central government was working with the states to control it. According to him drones and helicopters were being used.

Pesticides were sprayed to control the swarms in the affected areas like Jodhpur and Jaisalmer in Rajasthan, from helicopters from June 30. India became the first country in the world where drones were being used for the purpose.

But, all this may be too little, too late.

During the lockdown, the government had assured the people that India had enough grains to last another year. Ration at free and partial rates was also announced for the poor, as the food godowns of the country are well stocked. But, the situation could change in the wake of severe locust attacks happening not just in India, but also in Pakistan and several other countries in Africa, such as Kenya or Somalia.

According to the locust status update released by FAO on July 3, "In southwest Asia, many of the spring-bred swarms migrated to the Indo-Pakistan border before the monsoon rains so some swarms continued east to northern states and a few groups reached Nepal. These swarms will return to Rajasthan with the start of the monsoon in the coming days to join other swarms still arriving from Iran and Pakistan, which is expected to be supplemented by swarms from the Horn of Africa in about mid-July. Early breeding has already occurred along the Indo-Pakistan border where substantial hatching and band formation will take place in July that will cause the first-generation summer swarms to form in mid-August."

The fresh locust attacks are expected when farmlands in the country are covered with a variety of kharif (rainy season) crops such as paddy, moong, urad, cotton, and soybean. However, on July 8, Tomar allayed fears and tweeted, "Even during the lockdown,

the agriculture sector has emerged stronger than ever before. The rabi (winter) crop yield has been 152 metric tonnes this time, higher than 144 metric tonnes from the last year. The sowing of kharif crop has increased by 88%, this time 432.97 lakh hectares area has been cultivated as against 230.03 lakh hectares last year."

But locust plague issue is getting politically charged up. Rashtriya Loktantrik Party, an ally in the Narendra Modi-led NDA government, launched an agitation on social media seeking the declaration of locust plague as a national calamity and to compensate farmers for their losses. Rajasthan's Nagaur's member of parliament Hanuman Beniwal appealed to the people to join the movement. Several leaders and farmers' organisations from Rajasthan put forth the same demand.

Farmers also demanded compensation by uploading photos and videos of locust attacks from their fields on social media.

LOCUST PLAGUE AND GLOBAL HUNGER

India faced such severe attacks for the first time in 26 years, Pakistan in 27 years, the East African country of Kenya in 70 years and Somalia after 25 years. There are claims that climate change led to a 'favourable weather' (humid due to incessant rains) for the breeding of locusts. If locust swarms are not controlled before breeding, their population may explode further by 20 to 400 times, and the crisis may spiral out control.

A locust swarm can have up to 40 million locusts, which means a swarm of locusts can devour food adequate for 35,000 people. A locust swarm also has a wide coverage spreading across several kilometers.

In many East African countries, including Kenya, swarms of hungry locusts rapidly devoured crops and vegetation and led to a food security crisis. There were fears that this may lead to starvation and hunger in many countries like Kenya, Uganda, and Somalia already facing food scarcity and economic crises.

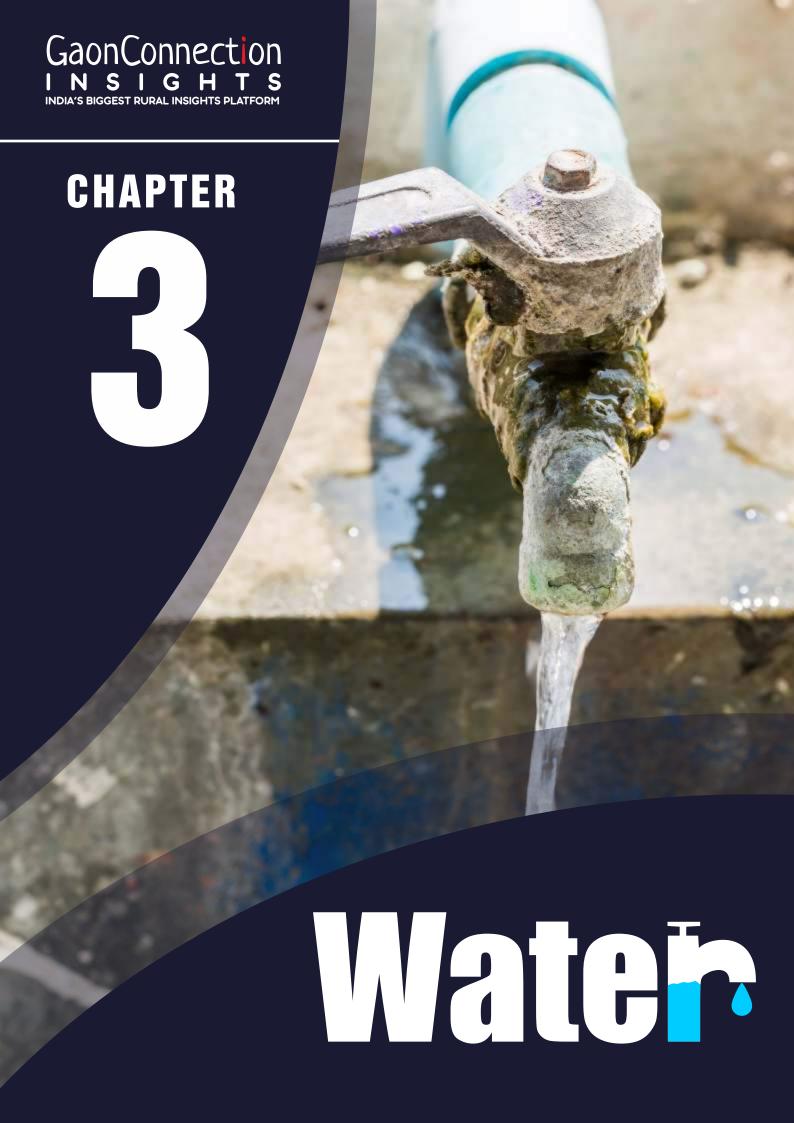
The locust crisis in Pakistan and Somalia were already declared as a national calamity.

INTERNATIONAL COOPERATION AND INTEGRATED EFFORT

Locusts lay eggs in the desert. The area near the Pakistan border, where locust breeding is most robust, adjoins India. It is therefore vital to curb their rebreeding and upsurge in Pakistan. As per the Associated Press of Pakistan, the joint teams of the Pakistan ministry of food security, provincial agriculture departments, and the army are engaged in eradicating the swarms in 32 districts of the country. In Pakistan, the national locust control centre is leading the effort.

Apart from Pakistan, the locust upsurge also needs to be controlled in Iran for India's benefit. For this, India has already sent over 25 metric tonnes of Malathion, a pesticide, to Iran for locust control.







n 2020, water, potable water and access to it proved to be a challenge. More so in rural areas where sourcing extra water for frequent sanitisation and hand-washing requirements, as mandated to safeguard oneself against the COVID-19 pandemic, was a serious issue. There was also an increase in water-related crimes such as illegal and unauthorised groundwater extraction.

Storms, contamination and pollution adversely affected livelihoods of fisherfolk due to depleting fish in the water bodies. There were, however, various efforts made to provide water access to rural populations as well as to clean up rivers. Significantly, this year, the Draft National Water Policy 2020 was also discussed.

DRAFT NATIONAL WATER POLICY 2020

A drafting committee was set up in November 2019 to revise the National Water Policy (NWP) of 2012 to address the challenges in the water sector. This policy is expected to focus on the management and conservation of water resources through Public-Private Partnership and to work on the implementation of ongoing programmes.

According to stakeholders, the National Water Policy of 2020 would be different from the previous policies due to its emphasis on the efficacy of water use along the lines of efficient use of energy and the creation of a national water law, which was absent in the previous policies as was the involvement of stakeholders in the form of Public-Private Partnership.

ACCESS TO WATER

In India, nearly 600 million people face high to extreme water stress, with 94 million living without a source of clean water. The lack of water facilities results in the need to use public or community toilets and water sources which would make it nearly impossible to contain the spread of COVID-19 from common water sources, highlighted by WaterAid, a non-profit, that said that this has contributed to the increased probability of being exposed to the virus.

The pandemic also saw rural women having to make multiple trips a day to fetch extra water for frequent sanitisation requirements. In the summer of 2020, a first-of-its-kind national survey on the impact of COVID-19 pandemic on rural India, conducted by *Gaon Connection*, across 23 states and three union territories (over 25,000 respondents) in the country, found that in 38 per cent rural respondent households, women had to travel extra to meet the additional water needs of the family.

Women in rural India are often the primary providers of water for their families. For over years, these women have been burdened with fetching water. This coupled with the lockdown during peak summer monsoon of April and May put a direct burden on rural women.

Another survey conducted in April 2020 of 5,162 households across 12 states by the International Food Policy Research Institute (IFPRI) and published in July 2020 revealed that 47 per cent rural women have been spending more time and effort to fetch water for their families and livestock.

To provide potable tap water to rural households, the Union Jal Shakti Ministry announced the Jal Jeevan Mission (JJM) in August 2019. On December 16, 2020, the ministry said around 27.8 million households have been provided tap water connections under this mission, with over 60 million rural households now getting tap water. It added that eighteen districts across the country have provided tap connections to all households, and it aims to provide adequate potable water on a long-term and regular basis to every rural household in the country by 2024.

Overall, according to the Union Ministry of Rural Development, about 137,787 water conservation structures were created under the Garib Kalyan Rojgar Abhiyaan (GKRA) by the month of October 2020 in 116 districts in the states of Bihar, Jharkhand, Odisha, Madhya Pradesh, Rajasthan, and Uttar Pradesh.

CONTAMINATED DRINKING WATER

The Hindon river, a tributary of Yamuna, has affected millions of people living along its banks due to its contamination by hazardous toxins. Under the directions of the National Green Tribunal (NGT), Uttar Pradesh started a project to clean the Hindon river in November 2020 using a bio-remedial method that would act on harmful microbes and compounds.

This June also marked six years since the government started the Rs. 20,000 crore Namami Gange programme to clean the river Ganga. According to the latest data provided by the Central Pollution Control Board (CPCB), however, a significant portion of the river is still unfit with no marked improvement.

Since the lockdown however, environment scientists claimed that the water quality in several parts of the Ganga and Yamuna rivers have seen a significant improvement due to the absence of industrial activity.

WATER-RELATED CRIMES

The 'Crimes in India 2019' report released in September 2020 by the National Crime Records Bureau stated that offences under the Air and Water (Prevention and Control of Pollution) Acts increased by 841.18 per cent, from 17 offences in 2018 to 160 in 2019, with 14 pending cases from last year also being reported.

In 2020, the National Green Tribunal (NGT) marked unauthorised groundwater extraction for commercial purposes a criminal offence, directing the state pollution control boards to stop such extraction. Activists also filed a complaint in October 2020, claiming over-exploitation of the Yamuna riverbed by mining companies who they alleged were sponsored by the Haryana government. According to them, these mining activities paid no attention to the adverse impact on the river's biodiversity, groundwater table, farmlands and the dependent village populations. There were 193 river-mining related deaths in India in 2020.

DEPLETING FISH

According to the Marine Fish Landings Report 2019 published this year by the Central Marine Fisheries Research Institute (CMFRI), fish catch from the western coast of India has also declined due to increasing water pollution, global warming, and a decrease in the population of phytoplankton. An estimated 2.01 lakh tonnes of fish were caught in 2019 as compared to 2.95 lakh tonnes in 2018, marking a 32 per cent decrease. This, according to the report, was the lowest annual catch in Maharashtra in 45 years.

Goa, Kerala, and Gujarat also showed a decline of 44.4 per cent, 15.4 per cent, and 4 per cent respectively. Overall on a national scale, however, there was a marginal increase of fish catch by 2.1 per cent due to increased fish landings on the eastern coast.

INDIAN WETLANDS

Under the Ramsar convention, an international treaty for the conservation and sustainability of wetlands, India has 41 recognised Ramsar sites as of December 2020. This year, 12 wetlands were added to this list and Bihar got its first Ramsar site. However, according to a report published in March 2020 by the South Asia Network on Dams, Rivers and People (SANDRP), the fate of these wetlands has not seen a significant improvement despite being tagged as a Ramsar site.

Reasons for these, include pollution, siltation, construction of dams without adequate impact assessment, deforestation, reduction of aquatic life due to dams and pollution, invasive species due to commercial fishing, encroachments, and climate change impacts.

Gaon Connection presents a selection of its reports on rivers, their restoration, ruin and how the year 2020 has treated its water resources.





ari Singh Thakur, who is 40 years old, and his wife Rukmani, who is 30, are from Balood village in Dantewada district, about 340 kilometres (km) from Chhattisgarh capital Raipur. They pack a meal of rice and dal before they set out for their workplace, about three km from their home. They have MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) job cards and have been allotted work that is backbreaking, yet satisfying.

They create gabions (a wire cage filled with boulders), contour trenches (that run perpendicular to the flow of water) and check dams (small dams across channels to reduce velocity of water flow). They work from 9 am to 5 pm, restoring rivulets under the chief minister's flagship Narwa Vikas Yojana.

Thousands of villagers across Chhattisgarh are involved in a unique scheme of the state government to revive local rivulets that feed the main rivers of the state. Approximately 33,000 rivulets or narwas feed the rivers in Chhattisgarh. Most of them have dwindled or completely disappeared.

The Narwa Vikas Yojana launched in April 2019 is a state-wide initiative to restore rivulets and ensure important rivers in Chhattisgarh do not run dry. This is expected to help conserve water in the forests, besides arrest soil erosion and recharge the ground water table. The state has 44 per cent of forest cover.

The scheme also provides livelihood to the local people through MGNREGA and CAMPA (Compensatory Afforestation Fund Management and Planning Authority) and workers earn between Rs 192 (MGNREGA) and Rs 299 (CAMPA) a day. So far, 37,827 have benefited under CAMPA. Under MGNREGA, some 9,000 workers have received wages in the year 2020-21.

"While some of the rivulets have been identified by the forest department, others have been identified by the zilla panchayat," Chhattisgarh MGNREGA commissioner Qaiser Mohammad told *Gaon Connection*. "We undertook the narwa work as we already create water harvesting structures under MGNREGA," he added.

Till date, 1,955 streams have been mapped, selected and their detailed project report developed under the Narwa Vikas Yojana. Since April 2019, about 800 rivulets in the state have been revived. By 2023-2024, about 8,821 streams will be treated, Sreenivasa Rao, additional principal chief conservator of forests and CEO CAMPA, Chhattisgarh, told *Gaon Connection*.

The estimated budget under CAMPA for narwa revival for 2019-20 stood at Rs 160 crore and for 2020-2021 it is Rs 210 crore. The total estimated budget under CAMPA is Rs 2,418 crore from 2019 to 2024.

SAVING RIVULETS

Five rivers — Ganga, Godavari, Narmada, Mahanadi and Brahmani — receive water from the state. And so, the narwa programme has the potential to influence the health of these five important rivers. Under the Narwa Vikas Yojana, gabions, contour trenches and check dams are constructed to rejuvenate dying rivulets. In revenue areas, the panchayat and rural development department is carrying out rivulet rejuvenation work with the help of MGNREGA funds, while the forest department is doing the work inside forest areas with the help of CAMPA.

The forest department will work on all streams originating from forests in the next four years. By 2023-24, 8,821 streams covering 3.5 million hectares will be covered.

Most rivers flowing through Chhattisgarh originate from catchment areas in the forests. "In due course of time, we have lost many rivulets. We are protecting the rivulets by adopting the ridge to valley approach," Sreenivasa Rao, additional principal chief conservator of forests and CEO CAMPA, Chhattisgarh explained.

The project also helps in achieving in-situ water as well as soil conservation. The aim is to make some of the streams all-weather streams. "Revival work is carried out after the monsoon. Inside forests, we can visit only after the rains stop. Most forestry operations start in October," Rao told *Gaon Connection*.

Chhattisgarh principal chief conservator of forests Rakesh Chaturvedi said 1.2 million soil and water conservation structures have to be built across Chhattisgarh in the year 2020-2021. Before the monsoon this year, 0.75 million structures were constructed; work will resume post monsoon. Both MGNREGA job card holders and non-card holders have worked. Later, they will be given responsibility to look after the structures.

INCOME SOURCE

Divisional forest officer (DFO) of Gariyaband Mayank Agrawal said restoration work has been carried out on five streams in his division — the streams join Sukha and Pairi rivers before meeting the Mahanadi — and the results are encouraging. "We are treating the ridge areas so that we do not have to work downstream. The initiative started last year but it is a continuous process and will also be carried on in 2021 as well," the DFO added.

Agrawal hoped that soil erosion could be stopped through the rivulet rejuvenation project. "We are arresting silt at the initial place so that it will not get deposited in the beds of rivulets. Structures like loose boulder check dams, trenches, contour trenches, gabions and silt chambers are being constructed. We are trying to arrest water at its source and the idea is to slow down the water speed to check erosion," he added.

Kaliram Kamar, from Naginbahara village that is in the forest area in Gariyaband, said some work was carried out during the COVID-19 lockdown. "We built check dams and other structures. Forest officials explained the job to us. Streams like Tara Jhar and Khair Pani have water now. Earlier, they had dried out. We use the water for cultivation," he said.

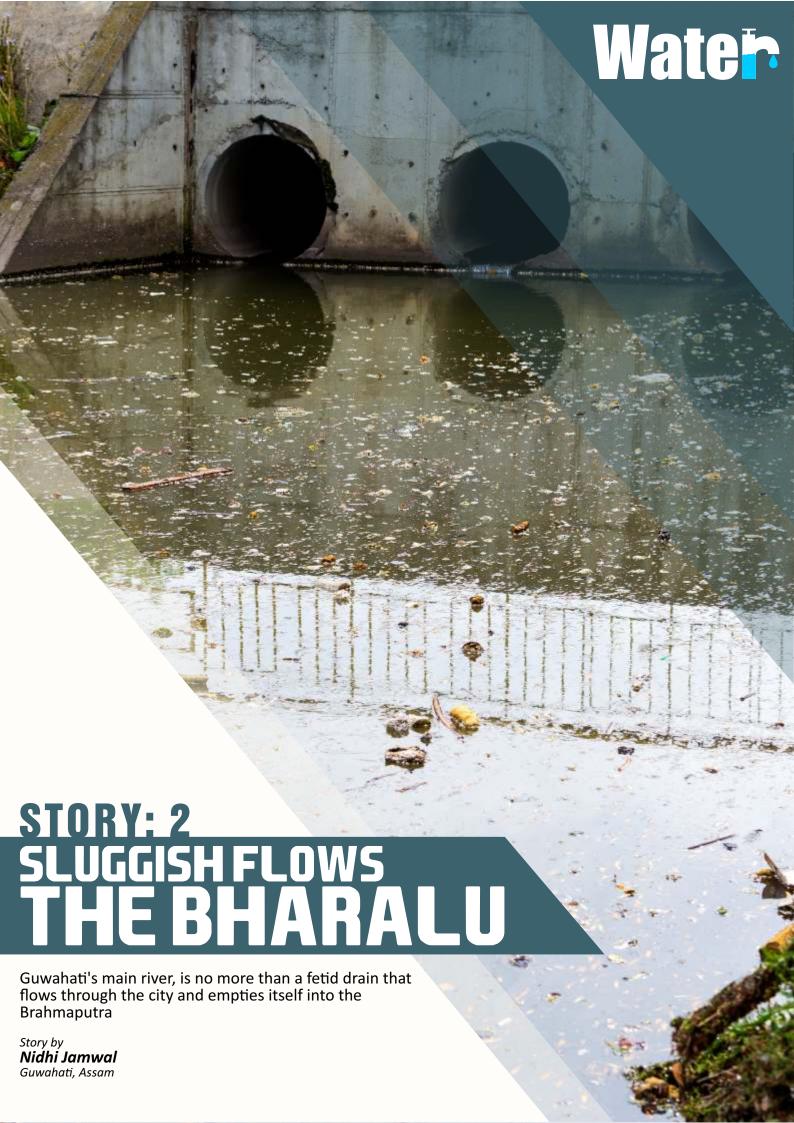
The results of the rejuvenation are visible in her division, said Satovisha Samajder, Divisional Forest Officer of Balod district. The Kharun river's head stream — Devarani Jethani — flows through 4,009 hectares of forest and it was 'treated' with 382 loose boulder check dams as well as gabions, anicut, percolation tanks and dykes.

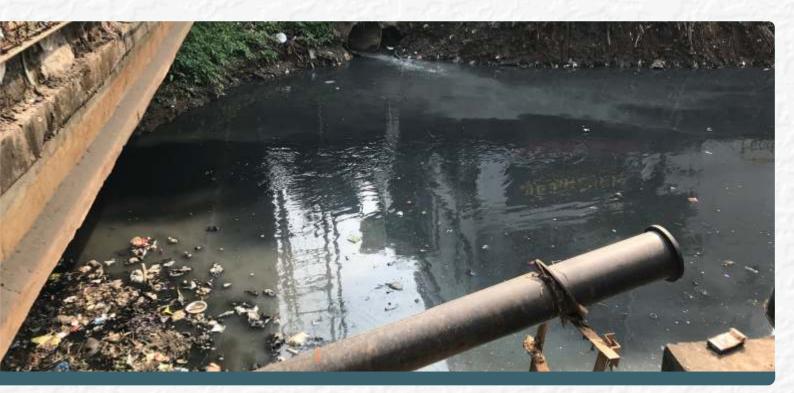
"The Kharun river treatment was completed before March 2020. The river flows to Durg and people can see that it is filled with water. This year, the Tandula river running through Balod district and Durg is also being treated," she said.

Pradeep Sharma, Bilaspur-based hydrologist, and adviser to the Chhattisgarh chief minister, said rivulets join rivers such as the Godavari, an important tributary of which is the Indravati river in Bastar. These rivulets run for two to 11 km. "The state provides water to the Ganga basin, the Mahanadi basin and the Indravati basin. The narwa programme aims at resource restoration in the villages. The primary goal is to recharge the aquifers by helping rain water seep through and recharge the groundwater."

Conserving water sources in forests will also increase soil moisture and ensure good vegetation cover thus arresting drought. Preventing desertification is one of the goals under climate change.

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n the 1970s, our house was next to the Bharalu river. The river water was clean and we played in it and fished. During festivals, people from the neighbouring villages would come to catch fish, too," reminisced Kalyan Das, professor and director-in-charge of Guwahati-based OKD Institute of Social Change and Development, an autonomous research institute of ICSSR (Indian Council of Social Science Research) and Government of Assam.

But by 1985, Bharalu river turned into a drain, which now carries polluted water and untreated sewage of the city, he added.

With an estimated population of about 1.7 million, Guwahati, that is part of the Indian government's Smart Cities Mission, neither has sewerage, nor any municipal sewage treatment plant.

Only 30 per cent of the city's population is covered by piped water supply system at a consumption level of around 70 litres per capita per day. The rest depends on groundwater accessed through individual bore wells or delivered by private operators in tankers.

"Guwahati is selected as a Smart City and there are plans to set up municipal sewage treatment plants. But, at present, there is no such facility," Biswajit Pegu, deputy commissioner of Kamrup Metropolitan district told Gaon Connection. "Bahini-Bharalu river carries the main load of untreated sewage of the city," he added.

"There is no municipal sewage treatment plant anywhere in Assam," said Y Suryanarayana, chairperson of Assam Pollution Control Board. "Residential and commercial complexes have their own underground septic tanks whose regular cleaning is the responsibility of Guwahati Municipal Corporation. There is no centralised sewage collection and treatment system," he added.

"It is unfortunate that Guwahati is releasing most of its stormwater, which carries sewage and pollutants, not only into the Brahmaputra, but also into Deepor beel, an important wetland," said Partha Jyoti Das, head of Water, Climate and Hazard division of Aaranyak, a Guwahati-based scientific and industrial research organisation.

RIVER OR DRAIN?

Bahini-Bharalu river, a small tributary of the Brahmaputra, flows down from the foothills of Khasi hills in Meghalaya. The river passes through heavily congested areas of the city. It is a natural drainage channel of Guwahati, which has turned into a fetid drain.

Meanwhile, another stretch of the Bharalu river, the Basistha, branches out towards the Borsola beel, from where it flows further down and meets Deepor beel. Deepor beel is the largest wetland in the state, and it sustains various aquatic species, including fishes, and migratory birds. In November 2002, it was declared a protected Ramsar site (under the Ramsar Convention on Wetlands, 1971) and is also an important bird sanctuary.

A December 2013 report of the Assam Pollution Control Board reads: "The Bharalu carries a large portion of the city's municipal and other wastes and also serves as the natural drainage for storm water runoff. The wastewater from households, commercial/business establishments, and small to medium industries within the city flows directly into the Bharalu River through the system of mutually interconnected drains. The degradation caused by domestic and commercial wastes poses a serious threat especially for the inhabitants of Guwahati and finally the downstream receptor, the Brahmaputra."

"There are 330 drains in Guwahati city that carry stormwater, often mixed with untreated sewage, and empty it into the local beels or Bahini-Bharalu river. Eventually, it all flows into the Brahmaputra. We regularly clean and desilt these 330 drains," Debeswar Malakar, commissioner of Guwahati Municipal Corporation told *Gaon Connection*.

Sector experts point out the present generation of sewage in the city is about 70 million litres daily (mld), and it is expected to increase to around 280 mld by 2025.

BHARALU ONE OF THE MOST POLLUTED RIVERS IN INDIA

The Central Pollution Control Board (CPCB), which monitors and identifies polluted river stretches in the country, has identified Bharalu river of Guwahati as one of the most polluted rivers in the country. The CPCB has included Bharalu river in 'priority 1' category of polluted river stretches, as it recorded BOD level of 52 mg/l in the river and the main source of pollution was identified as Guwahati's sewage. It must be noted that a BOD of 3 mg/l is desirable.

Taking cognisance of the 45 critically polluted stretches across the country (as compiled by the CPCB), including Bharalu river of Guwahati, in September 2018, the National Green Tribunal (NGT), ordered preparation of action plans that need to include the source control of domestic and industrial pollution, channelisation and disposal of treated domestic sewage, river basin management and periodic checking of groundwater quality.

An action plan to clean and rejuvenate Bharalu river is ready. And, it promises a pollution-free Bharalu within a year by March 31, 2021.

"As per our estimate, 39 drains empty into Bahini-Bharalu river, of which 17 are major drains. In accordance with the NGT order, we have prepared an action plan, which was forwarded to the CPCB and has been approved," informed the official of Assam Pollution Control Board.

"Our action plan proposes three decentralised sewage treatment plants for the drains emptying into Bharalu," said Suryanarayana. Action plans have been prepared for all the 44 polluted rivers identified in Assam by the CPCB.

DPRS NOTWITHSTANDING BHARALUSTILL POLLUTED

Almost a decade back, the Union Ministry of Environment, Forest and Climate Change, through the Assam Pollution Control Board, engaged Indian Institute of Technology Guwahati (IITG) to prepare detailed project reports to revive Bharalu and Kolong rivers in Assam. The institute spent two years researching on Bharalu and Kolong rivers and prepared a detailed plan. But, the ministry did not accept it. Among other things, this report of IITG recommended physically securing Bharalu river along with a buffer zone on both banks, restoration of flow of Bahini, stopping rock quarries and hill cuttings in hill catchment, installing decentralised wastewater treatment systems, etc.

In 2013, for the preparation of DPR for conservation of Bharalu and Kolong river, there was a joint venture between the US-based The Louis Berger Group and New Delhi-based DHI (India) Water & Environment Pvt Ltd. In December 2013, these agencies prepared a detailed project report for conservation of Bharalu and Kolong under the City Sanitation Plan initiative and held public consultations.



PROJECTS IN THE PIPELINE

The Government of India has approved a Rs 1,178.75 crore Guwahati Sewerage Project in zone-I of the city assisted by the Japan International Cooperation Agency (JICA). In February 2015, JICA signed an official development assistance loan agreement with the Indian government for this sewerage project.

The project aims to provide reliable sewerage services by carrying out the construction of sewerage facilities and an extensive network of sewers in South and East Guwahati. The JICA is providing Rs 1001.28 crore funding and the state's share is Rs 177.47 crore. The duration of the project is seven years.

The project includes laying of trunk sewer length of 201 kilometre (km), lateral sewer of 501 km and 101,058 house connections. There is proposal to set up 187 mld capacity sewage treatment plant based on activated sludge process.

Already five years of the total seven years project duration are over and little progress has been made. Will Bharalu river be clean by March 2021?







On November 8, when Sonu Kumar Chaudhary, a young police constable from Agra, Uttar Pradesh, was chasing a sand-laden tractor-trolley on his motorcycle, he was run over allegedly by a vehicle transporting illegally-mined sand.

The very same day, 26-year-old G Moses, a television journalist in Tamil Nadu, investigating illegal sand mining, was hacked to death.

Chaudhary and Moses are just two of the many victims of the sand mafia — an unholy nexus of contractors, politicians, trade union leaders, panchayat (local officials) and revenue officials, and corrupt policemen.

As per the latest data compiled by South Asia Network on Dams, Rivers and People (SANDRP), a network working on issues related to rivers, between January 2019 and November 2020, 193 people have died due to illegal river sand mining incidents/accidents in India.

"We have scanned news reports from various states to compile this data on deaths due to illegal sand mining in the country. But 193 deaths since last January is a conservative estimate as not all such deaths get reported," Bhim Singh Rawat, associate coordinator of SANDRP told *Gaon Connection*.

The Union environment ministry submitted a report before the Rajya Sabha this year that there were 4.16 lakh cases of illegal mining recorded between 2013 and 2017. Maharashtra, Uttar Pradesh, Madhya Pradesh and Karnataka accounted for the most number of cases.

Illegal sand mining — extraction of sand from riverbeds, lakes and reservoirs and agricultural fields — is taking a toll on both the environment and human lives. This sand is often used in manufacturing and construction activities.

Illegal sand mining is one of the causes for environmental degradation. "Over the years, India's rivers and riparian ecology have been badly affected by unrestricted sand mining," said Lara Jesani, advocate, Bombay High Court and National Green Tribunal (NGT). "Sand mining damages the ecosystem of rivers and the safety of bridges, weakens riverbeds, destroys natural habitats of organisms living on riverbeds, affects fish breeding and migration, and increases saline water in the rivers," she added.

PAN-INDIA PROBLEM. GLOBAL CONCERN

Sand mining is a pan-India problem. "I don't see any river which is free from sand mining. The plight of interstate rivers is the worst — they are mined on both borders," said Rawat.

As per the United Nations Environment Programme (UNEP), the global demand for sand and gravel

stands between 40 billion and 50 billion tonnes annually, and its scarcity is an emerging global crisis. The demand for sand is only expected to rise. And high demand and limited supply is leading to sand wars and killings.

According to the Sand Mining Framework, 2018, there is a shortage of sand in the country. It estimated that the demand for sand in India is around 700 million tonnes (in 2017) and it is increasing at the rate of six-seven per cent annually.

"Sand will always be in demand. If you don't work constantly on sand mining, it won't stop. It is civil society that has to step up because only that has the potential to bring some change," said Durga Shakti Nagpal, an Indian Administrative Officer. Nagpal is a former sub-divisional magistrate of Gautam Buddha Nagar, Uttar Pradesh. She has seized 100 trucks and JCBs involved in mining, and registered 90 First Information Reports, and recovered royalty worth Rs 80 crore.

HOW SAND MINING KILLS RIVERS

"When extraction is done rampantly without any norms or standards, a river starts changing its course, and, as a result, the floodplains go deeper and deeper and there are greater chances of floods," said Nagpal.

Andhra Pradesh-based conservationist Satyanarayana Bolishetty agreed. "Sand is an important organ of the river. When it rains, water is retained in the sand. And the river draws this water when there is no rain. Sand helps in groundwater recharge," he said.

A recent study by the World Wide Fund for Nature (WWF) shows mining is responsible for a 90 per cent drop in sediment levels in major Asian rivers, including the Ganges, Brahmaputra, Meghna, Mekong and Yangtze. This has resulted in shrinking of the delta regions of these rivers, leaving local people extremely vulnerable to floods, land loss, contaminated drinking water and crop damage.

Stripping rivers of their sand causes water tables to drop — a serious concern in India, where millions already face severe water shortage.

Mines and Mineral (Development and Regulation) Act, 1957 of India regulates the mining activities in the country. Despite a set of guidelines to curb the practice, illegal and unsustainable sand mining has continued, spurring the Indian government to take another step toward enforcing rules.

As per the National Green Tribunal (NGT), permission (or environment clearance) for mining of sand and minerals in an area is granted by state governments. In some cases, the Centre issues the clearance.

Most entities in mining have an environment clearance but they don't comply with all the conditions they are asked to, Vikrant Tongad, environmentalist based in Greater Noida, and founder Social Action for Forest & Environment, a non-profit working for environmental issues, explained to Gaon Connection.



Every mining activity requires environment clearance. Under Sections 120B read with Section 34 of Indian Penal Code, 1860, extraction of sand without a legal permit is a punishable offence. In addition, action under the Motor Vehicle Act, 1989, it is stipulated that the driving license of the driver and permit of the vehicle should be cancelled/suspended.

The environment ministry with its 'Enforcement & Monitoring Guidelines for Sand Mining 2020' regulates sand mining and checks illegal mining. The government's 'Sustainable Sand Management Guidelines 2016' was unsuccessful in putting an end to illegal sand mining in the country. The 2020 guidelines note that "...often there is a tendency to penalize only the drivers of the vehicles. The mafia of illegal mining and transport is much bigger and drivers are only one part of the system. It is necessary to identify all those involved in the offence."

There is no clarity in enforcement of law, said Tongad. "In the 2016 law, enforcement and implementation was a major problem. There is a lot of burden on the local machinery," he observed. "At some places, the mining department is looking into the issue, at others it is the police departments

and RTO (regional transport office), pollution control boards and environment ministry, who are in charge. Multiple departments are involved," Tongad added.

Yogeshwaran, a lawyer from Madras High Court, who has dealt with sand mining at the grassroots level in Tamil Nadu said, "As long as we don't address the problems with the laws, there is very little we can do. Only if the laws are people-friendly will they be environment friendly," he added.

Yogeshwaran, who also practises in the National Green Tribunal, highlighted how people on the ground were alienated from the decision making bodies on sand mining in the rivers and water bodies in their area, despite being the most affected.

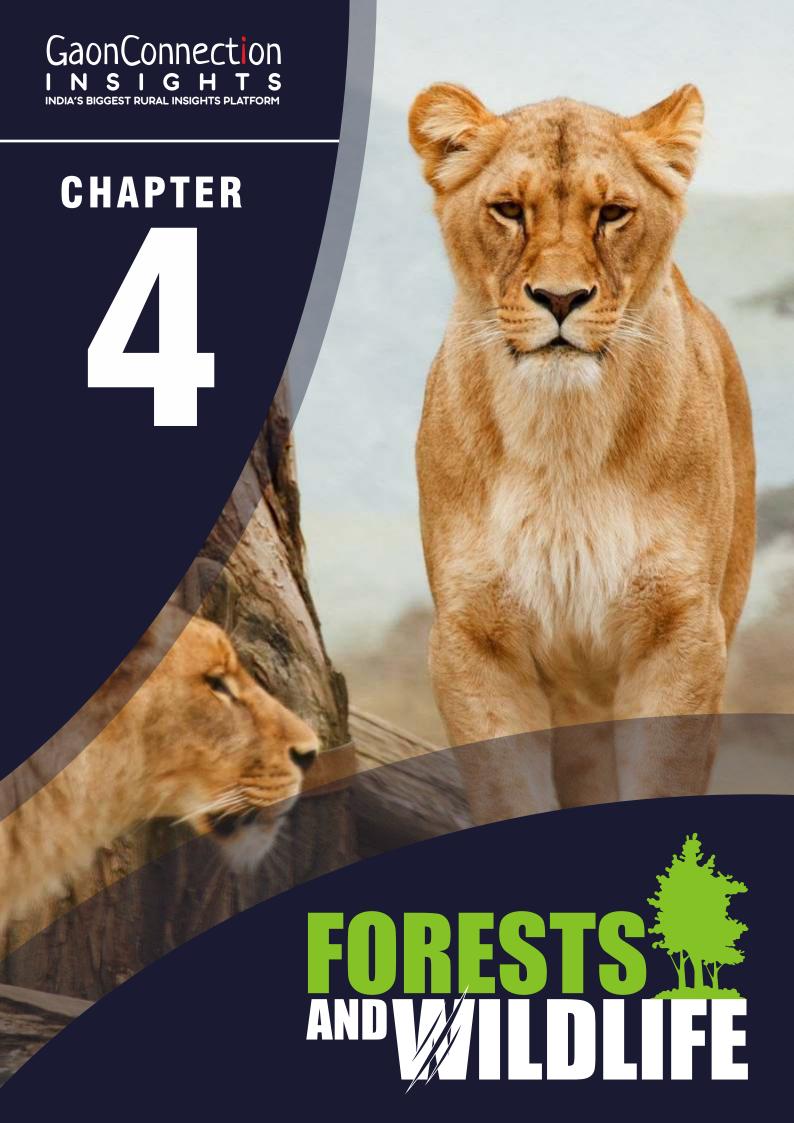
FUNDS UNDERUTILISED

The Mines and Minerals (Development and Regulation) Amendment Act, 2015, mandated the setting up of district mineral foundations (DMFs). The funds accrued under the DMF were to be used for the welfare of the people living in areas affected by illegal sand mining. This was done through the Pradhan Mantri Khanji Kshetra Kalyan Yojana set up by the Ministry of Mines.

"The Centre has asked state governments to form DMFs to keep a check on mining activities in mining-affected districts. So far, states in the north have utilised only 15 per cent of DMF funds," said Rawat, who also pointed out that there was no data in the out-of-date website, on Punjab and Haryana where there is a lot of mining activity.

He alleged the mining and environment departments work only when there is a public outcry or when they are directed by courts. Otherwise, they remain silent.







According to the Union Ministry of Environment, Forest and Climate Change's annual report published in June 2020, nearly 11,500 hectares of forest land across 22 states in India was diverted for non-forestry purposes in the previous year, 2019. Of this, the largest share (a combined total of 8133.59 hectares) was diverted for projects related to irrigation and mining. According to the report, guidelines had also been issued encouraging the relocation of villages from core regions such as wildlife sanctuaries and national parks to the fringes of forests.

In 2020, a new draft of the Environmental Impact Assessment, a process that evaluates the potential environmental impact of a particular project such as irrigation dams, mines, industrial units, was proposed by the environment ministry. However, environmentalists fear that this would further dilute the process since the draft exempts nearly 40 projects such as clay and sand extraction, solar thermal power plants, common effluent treatment plants from approval requirements and public consultation, which are believed to have a severe impact on the environment while displacing the forest dwellers and also affecting their rights over the management and conservation of forests.

Additionally, it also allows for approval of projects after they have started construction, which would waive off any environmental damage they have caused.

DRAFT NATIONAL FOREST POLICY 2020

The forests of India currently continue to be governed by the National Forest Policy of 1988. In 2016, the government had introduced a draft policy that was heavily criticised for not protecting forest-related regulations, and later withdrawn. In 2018, another draft was brought out, it was revised in 2019, and finalised in 2020.

According to the environment ministry's annual report for the year 2019-20, the draft was sent to the cabinet for approval. This draft lays emphasis on water conservation and carbon storage, but experts like Sharachchandra Lele, a fellow at the Centre for Environment and Development at Ashoka Trust for Research in Ecology and Environment (ATREE), believe that it does so at the cost of environmental balance and livelihood.

DIVERSION OF FOREST LAND IN 2020

The North-Eastern Coalfields (NECF), a unit under Coal India Ltd. (CIL) run by the government, proposed undertaking coal mining activities inside the Dehing Patkai elephant reserve in Assam which was approved on April 24, 2020 by the National Board for Wildlife (NBWF). This implied that 98.59 hectares of land would have to be diverted from a proposed reserve forest area belonging to the larger elephant reserve.

However, according to a report by the Shillong office of the Ministry of Environment, Forest and Climate Change, the NECF was already illegally mining most of the proposed land since the expiry of its lease in

2003. The Assam forest department imposed a penalty of Rs. 43.25 crores on CIL on May 6, 2020 despite which the NBWF granted approval for their mining proposal. Several conservationists such as Mubina Akhtar who formerly belonged to Assam's state board for wildlife (SBWF) have been opposing these activities since 2014 due to the threat it causes to elephants and other wildlife.

Further, nearly 108 tribal villages in the Kaimur plateau of Bihar declared they would boycott Bihar's state assembly elections that were held in three phases in October-November 2020. These villages were protesting against the proposed tiger reserve to be established in the area which would threaten their dwellings and livelihood as they would be displaced.

According to these tribal residents, forest department officials engaged in forced evictions and destruction of their crops. They also alleged that tribal activists were arrested on false charges. A fact-finding committee further found that the state government had not been enforcing the Forest Rights Act and had been negligent towards the welfare of the tribal communities.

In Pahalgam area of Anantnag district in the Union Territory of Jammu and Kashmir, the administration issued eviction notices to Gujjar and Bakarwal communities who lived in temporary dwellings in the forest region, saying that these communities had illegally occupied the land. Their dwellings were razed down by the forest administration. These communities were dependent on agriculture and animal rearing, but this eviction and demolition threatened their livelihoods and left them without shelter.

FOREST FIRES IN 2020

Forest fires are a common occurrence in Uttarakhand between the months of February and June. This year, 135 forest fires were recorded in the state as of November 1, affecting 68.33 hectares of forest land. Despite the onset of winter, forested regions such as Uttarkashi reported fires in the month of October leading to the loss of nine hectares of forest land due to dryness from a lack of rainfall. In order to control these, the forest department of the state plans to initiate controlled burning to keep uncontrolled forest fires in check.

In Himachal Pradesh, moreover, nearly 500 forest fires were reported since August 2020, most of which took place in Kullu and Shimla due to the dry conditions prevailing in the state. Additionally, from March to July this year, around 450 forest fires were recorded that affected over 2,500 hectares of land and estimated loss of Rs. 40 lakhs.

THE SINKING SUNDARBANS

The Sundarbans, the large mangrove forest between India and Bangladesh, witnesses rapidly rising sea levels and frequent cyclones. In 2020, for instance, Cyclone Amphan that struck the country in May also impacted the Sundarbans. While the mangroves shielded cities like Kolkata from the full-blown impact of the cyclone, it still devastated the inhabitants of the Sundarbans with houses being swept away and embankments being destroyed.

Furthermore, over the past two decades, the sea level has risen and Subdarban islands are slowly sinking. As a result, villages frequently get washed up, homes and livelihoods are destroyed and available lands shrink. This has not only led to displacement of people but has also pushed the tiger population of the Sundarbans into closer contact with humans and livestock, leading to frequent man-animal encounters.

Additionally, according to the West Bengal forest department, the tiger count in the region has increased from 88 in 2018-19 to 96 in 2019-20 due to conservation efforts, and this has also become a cause for concern for conservationists due to human-tiger encounters and a shrinking habitat.

ATTACKS DUE TO ILLEGAL LOGGING

Due to the COVID-19 lockdown, illegal logging activities by the timber mafia have increased in several states, particularly Rajasthan, Madhya Pradesh, and Maharashtra, leading to more frequent attacks on foresters by the mafia and encroachers, according to the Indian Forest Service Officers Association in a letter to Prakash Javadekar, Minister of Environment, Forest and Climate Change. Illegal logging has also

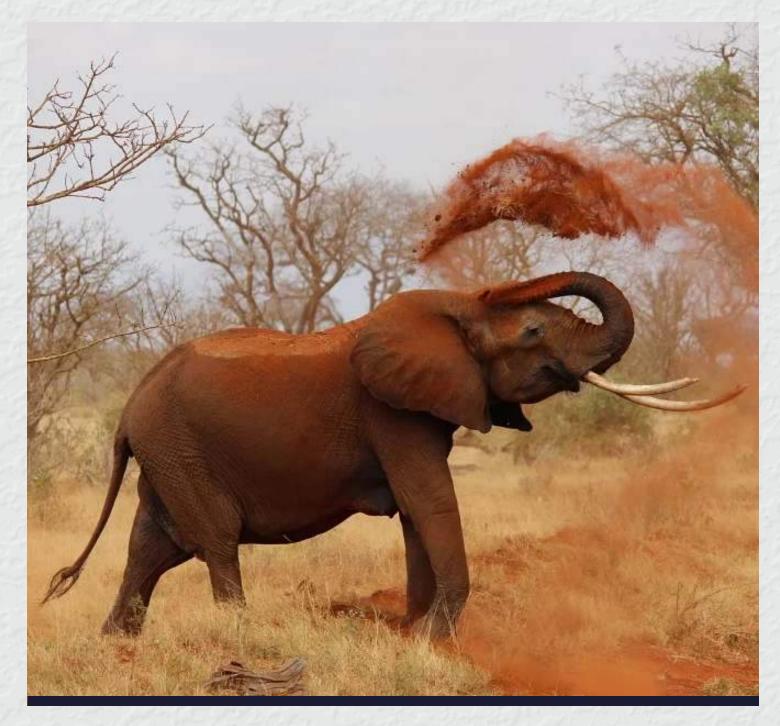
had an adverse impact on wildlife. For instance, in Arunachal Pradesh, the extent of such logging has caused a threat to the rare hornbill species that depend on mature trees (that loggers tend to target) with large holes to lay their eggs, according to the Hornbill Specialist Group of the International Union for Conservation of Nature (IUCN).

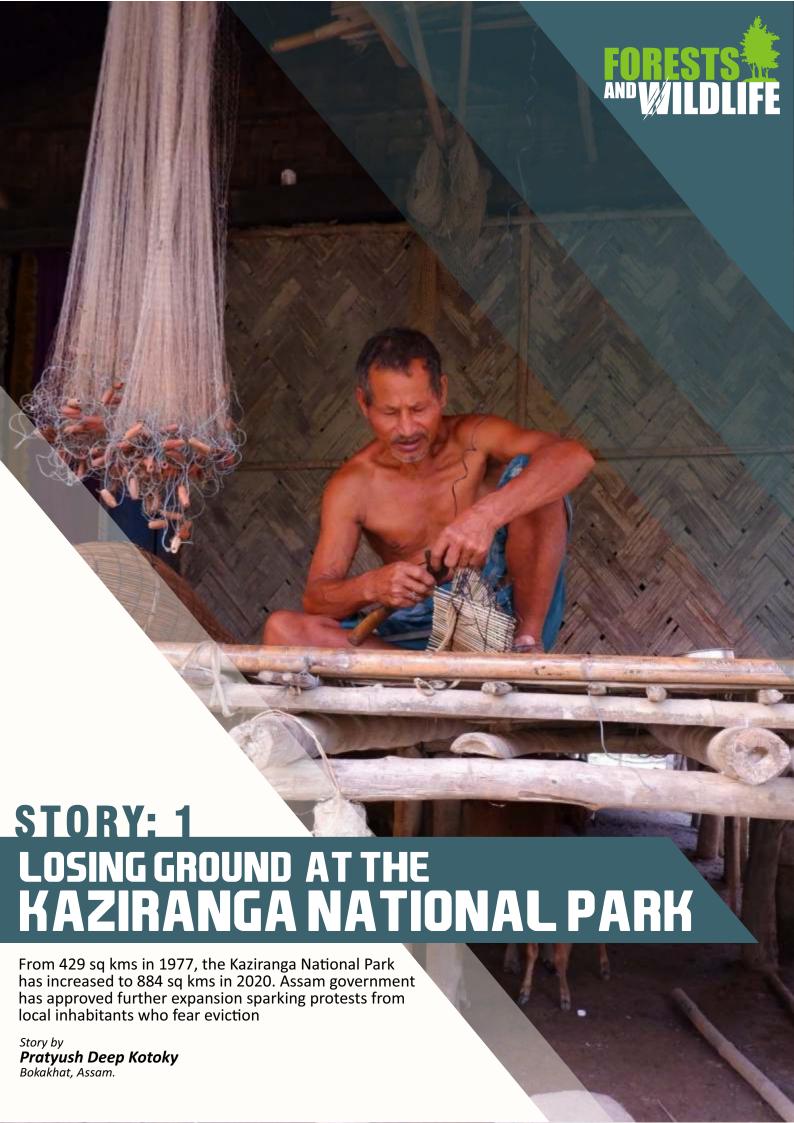
MORE SANCTUARIES ADDED

In the year 2020, some new forest sanctuaries have been added. Maharashtra declared that a 260 km forest at Chandrapur district would become the Kanhargaon Sanctuary. Kanhargaon will be the state's 50th sanctuary. Maharashtra's state board for wildlife also announced 10 new conservation reserves in the state. Dialogues with the local communities will be opened before this happens.

Meanwhile, as the pandemic plays havoc in the country, forest dwellers, marginal communities and the economically underprivileged reel under policies that threaten to cost them their traditional livelihoods and homes. In some areas the 'developments' threaten the very heritage and culture of communities.

Gaon Connection reports on some of the conflicts arising from this in 2020.







All that remains of Yakub Sheikh's home is a pile of bricks. He and his family had to vacate their home of 30 years, in Haldhibari, Bokakhat tehsil, in Golaghat district in Assam, 300 kilometres from the state capital Dispur. They moved to a temporary shelter, on rent. "I have no words to describe the pain of breaking down one's own home. But we had no other option. If we did not do it, the government would have bulldozed it," Sheikh told Gaon Connection.

The 50-year-old tailor was served an eviction notice on October 5 by the Bokakhat circle office because his home fell in the area that is to be added to the Kaziranga National Park, a protected area, which is also a UNESCO World Heritage Site. Forty eight other families living in Haldhibari and Siljuri in Bokakhat subdivision of the Kaziranga National Park respectively, received eviction notices.

The inhabitants of Siljuri have not yet moved. "We have been living here for decades and earn from farming. If they want us to vacate, they have to find us a place where we can resettle," said Tima Bhowmick, a resident of Siljuri. From 429.93 square kilometres (sq kms) in 1977, the national park has more than doubled to 884.43 sq kms in 2020. Recently, on September 30, the Assam government further approved another 30 sq kms to be included in the national park.

THE GROWING PARK

As a consequence, an eviction threat looms large over about 662 families, including those from the indigenous communities. Now, 30 sq km more have been sanctioned, and if that happens, more families may be displaced.

"While we are yet to receive the notice, we know we will be affected by the next round of evictions in our area. But where do we go if the government evicts us from here," asked Indeshwar Kutum, a villager of Borbil, Golaghat district.

"Our crops are often destroyed by wild boars, elephants, or rhinoceros. But we never harm them and regard them as the natural inhabitants of this area, as much as we are. Then why are we being labelled encroachers? We too are an equal and inalienable part of Kaziranga that we revere as our home," Kutum said.

When contacted, sub-divisional officer of Bokakhat, Bipul Das said the eviction drive was as per the High Court order of 2015 and that there was nothing in the court order about relocation. "The fear of eviction is very common in villages which fall under additions to Kaziranga National Park. People still remember the deadly and violent eviction of 2016. We have been opposing eviction since 2016," said Ratan Daw, an activist of Krishak Mukti Sangram Samiti, a peasant right organisation based in Bokakhat.

BLOODY EVICTION AND MUSICAL CHAIR

In 2016, in accordance with the Gauhati High Court's October 2015 order, the first eviction drive took place at the Banderdubi, Palkhuwa, and Deusurchang villages located on the periphery of the national park in Nagaon district. Two people lost their lives in the 'anti-encroachment' eviction drive. The village

inhabitants were forced to scatter.

This High Court order was in response to a 2012 PIL filed by Mrinal Saikia, MLA, Bharatiya Janata Party, in which he had raised concerns about poaching and encroachment in Banderdubi, Palkhuwa and Deusurchang villages.

The High Court had directed the deputy commissioners of Golaghat, Sonitpur, and Nagaon to take steps to evict those encroaching upon the second, third, fifth, and sixth additions to Kaziranga. "We were originally from Bilotiya Bamun Gaon, a village on the banks of the Brahmaputra. We were resettled in Borbill by the Assam government in 1970-71, when we lost our land to erosion and were given three hundred rupees each as resettlement compensation," Rampad Kardong, a 65-year-old farmer, now living in Borbill village, told Gaon Connection.

But even though they were moved to Borbill by the government, the very same people are now facing eviction, as Borbill is located a few kilometres away from the Kaziranga National Park's main entrance, and faces eviction, yet again.

"Legally, in order to safeguard a national park, there should not be any settlement inside the protected area. But politicians themselves settled people on those lands and allowed them to stay there. Now for political reasons they are trying to evict them," said Mirza Rahman, a Guwahati-based research scholar on borderlands, environment and development issues.

GROWING PROBLEMS

The park's expansion is also making members of the indigenous Mising community nervous as their villages on the riverine areas of the eastern range of Kaziranga are now threatened by the addition of a new range covering 190 square kms (19,000 hectares) in Bokakhat division of Golaghat. "It is like we are trapped from both sides. On one side we are being displaced by river erosion, and on the other, Kaziranga is like a monster trying to swallow the meager resources we have," Ritupan Pegu, a resident of Panbari village, Bokakhat, told Gaon Connection. "The government is taking away whatever little we have to make Kaziranga National Park a fortress," he added.

PROTESTS BUILDING UP

Pranab Doley, an advisor with the Jeepal Krishak Shramik Sangha, a peasants' organisation, called the eviction drive "arbitrary and undemocratic".

"When the Kaziranga National Park became a National Park in 1974, people here sacrificed their land and livelihood," said Doley. Calling the authoritative nature of the expansion as 'expansionist' Doley said the matter violated so many codes of the Forest Right Act 2006, that grants certain rights to forest dwellers. "While on paper Kaziranga is expanding, ecologically it is only shrinking," he pointed out.

Kaziranga is being encroached by resorts, roadways and the tourism industry. "The politicians turn a blind eye to all these various businesses coming up in Kaziranga and are trying to earn political mileage out of it," he said.

According to Vikram Rajkhuwa, a Guwahati-based lawyer who has been helping the local villagers, "legally, any alteration of boundaries of a wildlife sanctuary or a national park must take prior permission of the Central government. "Further, they must take permission from the National Board of Wild Life. But it is not clear whether the Forest Department or national park authority has taken any such recommendation. The High Court in its order in 2015 too observed this," he pointed out.

Explaining the issue, he said that there are two important legal aspects to this scenario: protection of wildlife and the rights of local people.

"So, people who have rights such as patta land or other rights must get compensation or be provided alternative land. But in Kaziranga National Park, rights are not extinguished... because though notifications had come earlier, additions are subsequent," he added, stressing wherever there is a people's participatory model, it has proved to be more successful. Meanwhile, on October 5, an interactive map was launched by Environmental Justice Atlas, a project that documents and catalogues social conflict around environmental issues. It shows over 13,450 families living inside or close to 'protected areas' like national parks and bio-reserves who have been displaced in the last two decades in India.





Fifty-five-year-old Kuleshwari Devi's eyes speak of pain along with the tired lines on her face. They tell the story of her hard life in Adhaura, a predominantly tribal village located inside the Kaimur Wildlife Sanctuary in Kaimur district of South Bihar, bordering eastern Uttar Pradesh. Devi, a widow, has three sons whose only source of livelihood is farming.

Since April this year, her life has turned topsy-turvy as there are proposals for a tiger reserve in Kaimur, also known as Bhabua, about 600 kilometres from the state capital of Patna.

One hundred and eight villages out of the total 131 are expected to fall under the proposed tiger reserve, leading to displacement of around 50,000 indigenous people. Devi said that officials of the forest department demolished her mud house and destroyed their crops.

"The forest officials said we don't have permission to live in the forest area," Devi told *Gaon Connection*. "This is the only place I know. This is my home. Where will I go," she asked. The Bihar government has been planning to develop the Kaimur Wildlife Sanctuary into a tiger reserve, because the only such protected area in the state, Valmiki Tiger Reserve, is fast nearing saturation. The proposal for a new tiger reserve in Kaimur was cleared by the state government in August 2019.

"We are sending the project to the National Tiger Conservation Authority for approval. Kaimur Sanctuary is spread across one-thousand-seven-hundred-eighty-four square kilometers and the entire area will be declared as a tiger reserve," Surendra Singh, Conservator of Forest Wild Life, Bihar government, confirmed with *Gaon Connection*.

"The conditions are very favourable in Kaimur Wildlife Sanctuary for tigers. It has a dense forest and is linked to the tiger reserves in Uttar Pradesh and Madhya Pradesh," explained Dipak Kumar Singh, state principal secretary, environment, forest and climate change.

The fear of losing their ancestral homes and lands has sparked protests among the local inhabitants. During one such protest on September 10 and 11, three people were injured in firing and lathicharge by police, villagers alleged.

Of the total 1,784 square kilometres (sq km) of the Kaimur wildlife sanctuary, about 400 sq km falls in the Vindhya Range, which starts from Western Gujarat and extends till the Chota Nagpur Plateau in Jharkhand. In Bihar, it passes through Kaimur district.

The proposal to develop Kaimur as a tiger reserve gained momentum in 2017, after the then Kaimur divisional forest officer (DFO) Satyajeet Kumar sighted two tigers, saw their pug marks and also the carcasses of animals they had preyed on. The very next year, in 2018, the proposal was sent to the Bihar government by the Kaimur DFO.

FEAR FACTOR

The Kaimur Mukti Morcha, a local organisation mainly made up of tribal people from the Kaimur hill region fighting for indigeneous community rights, has been mobilising villagers against the possible displacement due to the proposed tiger reserve. "Historically, these communities have peacefully coexisted with wildlife. Earlier, due to reduced forest cover, wildlife migrated. Now, they want to displace tribal people to bring back the tigers," said Raja Lal Singh Kharwar of the Kaimur Mukti Morcha.

Members of the morcha claimed that people in Ruiya village in Adhaura block were already forcibly displaced by the forest department and police during the lockdown. On being questioned, principal secretary Singh confirmed to Gaon Connection that some encroachments had been freed following a Patna High Court order of September 2017 because "people were illegally cultivating on government land inside the sanctuary".

During a protest against the proposed tiger reserve by the local people, on September 10 and 11, some protesters locked the gate of the forest department's local office in Adhaura region after officials refused to speak to them. In the scuffle, it is alleged, a forest guard opened fire. "Three people were injured. However, none of them was critical and they underwent treatment at the primary health centre," said Pramukh Singh Shikshak, a villager from Jharpa inside the sanctuary, who was also part of the protests. "The buckshot hit the upper portion of my left ear," said Prabhu from Adhaura village.

On September 11, police carried out a lathicharge on the protestors at the site where around a thousand villagers had gathered. "Ours was a peaceful protest. I pleaded with them saying they can't beat us like this," said Milki Devi of Bahabar of Adhaura block, showing *Gaon Connection* her swollen hand. "The forests have been our livelihood since ages. If they don't allow us to gather firewood, graze our livestock and collect tendu leaves from the forest, how will we survive?" she asked.

Kaimur superintendent of police Md. Dilnawaz Ahmed refuted allegations of firing on protestors. He claimed that firing began from the protestors. "In defence, we fired in the air. We did not fire at the protesters. We first tried to calm them but it didn't work. A few more arrests will be made in the case," he said. Meanwhile, station house officer of Adhaura Police Station, Amod Kumar informed *Gaon Connection* that seven people had been arrested on charges of rioting and ransacking of property. "They ransacked the forest department's office and locked the gate," he said.

FOREST RIGHTS

Villagers claim they have a right over their forests, which is also guaranteed under the Forest Rights Act. The 2006 Act gives forest dwellers the right to "hold and live in forest land under individual or common occupation for habitation or for self-cultivation for livelihood by a member or members of a forest dwelling Scheduled Tribe or other traditional forest dwellers," and "right of ownership, access to collect, use, and dispose of minor forest produce which has been traditionally collected within or outside village boundaries".

Kharwar of the Kaimur Mukti Morcha is afraid the proposed Kaimur tiger reserve will go the way of Betla Tiger Reserve in Jharkhand's Palamu. "All the villages that fell under the reserve area were displaced; it was declared an uninhabited area," he claimed. Citing the Forest Rights Act, Kharwar said, "According to the act, even a plantation drive in the forest requires approval from the gram sabha, but these rules have been deliberately violated in the Adhaura block."

Meanwhile, Vikash Ahlawat, Kaimur DFO has assured the villagers there would be no displacement. "There are no such restrictive rules for a tiger reserve. As per the existing Wildlife Protection Act and I ndian Forests Act, a tiger reserve is basically notified symbolically. This facilitates additional funds from the central government for developing the area. The fear about communities being displaced is the result of rumor mongering by vested groups," he added.

To counter the 'misinformation', the forest department is planning a series of talks with the villagers soon. "The Centre is yet to notify Kaimur as a tiger reserve. It's a long process that involves data verification and habitat suitability," he said.

Will the growl of tigers in Kaimur mean the end of interdependence of local tribal communities on their forests?







On October 24, an official statement issued by Kunwar Vijay Shah, forest minister, Madhya Pradesh, stated that approximately 37,420 sq km of degraded forest land (*bigra van kshetra*), which is about 40 per cent of the total forest area in the state, is to be handed over to private companies under the Public Private Partnership (PPP) model. These are areas where there are fewer trees and more scrub.

"Towards the restoration and improvement of the degraded forest area of the state, the forest department has taken the initiative to entrust it to private investment," said Shah. "The proposal will be sent to the Government of India for sanction and approval. The process of inviting private investment will commence after the approval," he added.

Under the contract, 50 per cent of the revenue earned from the forest by the private investor will be given to gram van samitis/ gram sabhas.

Madhya Pradesh enjoys 94,689 sq km of forest cover, and has the highest forest cover in the country, which is about 30 per cent of its geographical area. Of this, tribal communities live in 51,919 sq km, (about 55 per cent) of its forest areas, spread over 24 districts.

There are 9,650 gram van samitis in Madhya Pradesh that traditionally shouldered the responsibility of looking after the 37,268 sq km of forest land that is now going to be handed over to the private sector. Of the 52,739 villages in Madhya Pradesh, 22,600 villages are situated in and around forests. Many of them occupy the *bigra van* that the government plans to hand over. These areas are a major hub of tribal inhabitation and livelihood. The environmentalists and those working with the tribal inhabitants fear that under the cover of development the government may evict the people from their traditional habitation.

"If this scheme is implemented, it will uproot tribal people from a large part of the forests," Subhash Pandey, a Bhopal-based environmentalist, told *Gaon Connection*.

"The areas chosen by the government are densely inhabited by tribal people, for whom forests are the sole medium of sustenance. They sell firewood and leaves gathered from the forest," said Pandey, who demanded to know where they would go when private companies took over.

"The PPP model fetches a better result, so the government is moving towards that," said Chittaranjan Tyagi, additional chief conservator of forests (development) of Madhya Pradesh. "Right now, we are only considering it. The statement that has been issued was only to gather information about the areas," he clarified.

According to Jabalpur-based conservationist Rajkumar Sinha, "The forest land the government is going to hand over belongs to the village society and is community forest land." The government took the

decision entirely on its own, without bothering to ask the community or informing anyone about its move, added Sinha, who described the government move as unjust and an infringement of the Forest Rights Act 2006.

"If these 37 lakh hectares [37,000 sq km] of land are given to private companies, where will the people inhabiting it go?" Sinha asked. Drawing attention to the law under the Fifth Schedule (tribal) areas that entitles the gram sabha control over its natural resources, he demanded to know why the gram sabhas, the van samitis and the local people were not intimated before the decision to hand overforests to private companies was taken. "Such an arbitrary and unilateral move overrides the powers of the gram sabha," he pointed out.

"The government wants to hand over the *bigra van* kshetra to big companies under the pretext of improving them, but the question is, if these are the impaired forests, what have the governments been doing in the last 70 years," asked Satyam Srivastava, also from Jabalpur, and member of the committees relating to habitat rights and community rights constituted by the tribal ministry of Government of India.

"That area which the government has decided to hand over to private bodies falls under the 'low-grade' forest category, which includes dense, less dense and bushy areas," Srivastava explained. But he is against classification of forests as being 'degraded' or 'good', as each kind of a forest has its own identity. "The government has not specified its policy for the people who would be displaced by its handing over their inhabited areas to private companies. The government has not referred to the Forest Act anywhere. Not even a single line is written to assure the protection of people's rights living there under the pre-existent Forest Rights Act," he pointed out.

In October 2001, the government of Madhya Pradesh had passed a bill that stated tribal inhabitants and other villagers living in and around forests would have the first right on the forest produce. Accordingly, forests in the state were being managed through the cooperation of local people under the system of joint forest management.

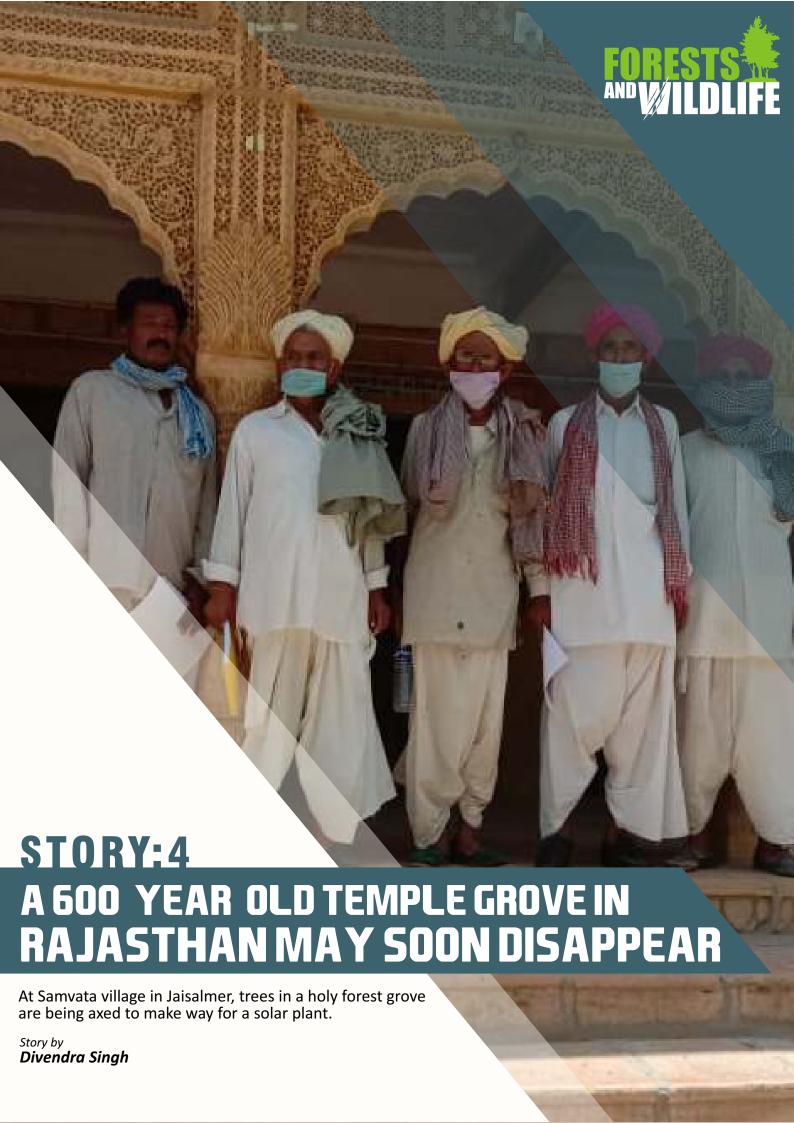
AN OLD PROPOSAL

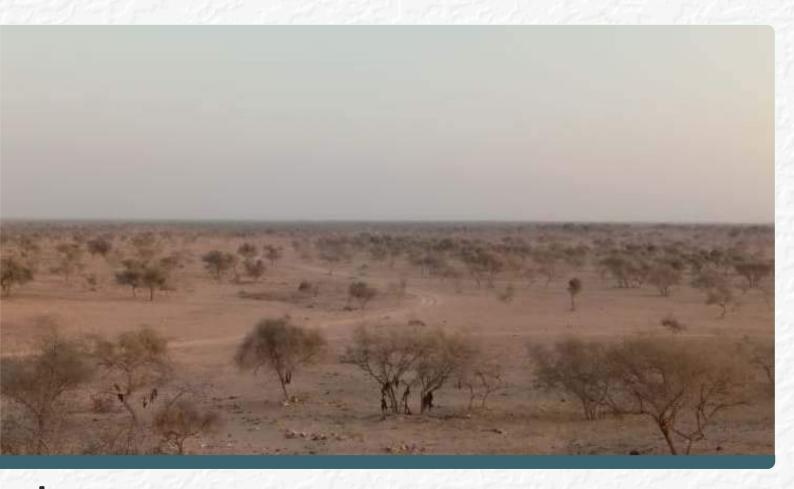
In 2015, Prakash Javadekar, the Union minister of environment, forest and climate change had talked about handing over degraded forest areas to private companies. "We have come up with a scheme in which we will lease our wastelands to private industries upon revenue sharing or some other model, whereby they will be allowed to grow forests for their industrial activity," he had said in a statement.

The reference to PPP comes up again in the Draft National Forest Policy 2018, which states: "The lands available with the forest corporations which are degraded & underutilized will be managed to produce quality timber with scientific interventions. Public private participation models will be developed for undertaking afforestation and reforestation activities in degraded forest areas and forest areas available with Forest Development Corporations and outside forests."

In August 2020, according to a news report, in a draft presentation, NITI Ayog advised state governments to take stock of their degraded forest areas. Since the existing wildlife and forestry programmes have not had the desired effect, it recommended that they go into a partnership with private companies to improve matters.







n Rajasthan, more than 5,000 camels and 30,000 sheep face a fodder crisis, thousands more of wild animals and birds are likely to be affected and millions of plants and trees may be chopped off...

All this, if the 610-year-old Oran (forest grove) of Shri Degarai Mata Temple in Samvata village in Jaisalmer. is destroyed for a proposed solar planIn Rajasthan, the tradition of Oran has been observed for centuries, whereby folk deities reside in these groves and cutting of trees is prohibited. No cultivation is allowed too.

Oran is derived from the Sanskrit word aranya, which means forest where indigenous trees such as Rohira, Bordi, Kankadi, Kumat, Babuland Ker. Bushes like Aak, Khimp, Saniya, Bur, Nagphani and Thor have been growing for years along with grass varieties like Sevan, Dhaman, Motha, Tumba, Gokhru, Saanthi and Doob. It is also the habitat of Goravan, the state bird of Rajasthan, pheasants, deer, jackals, etc.

This particular Oran provides fodder for camels and sheep belonging to the farmers of dozens of nearby villages. However, for the past few days, trees are being cut indiscriminately and the land is being dug up to instal a solar plant.

"We have the largest Oran in Rajasthan. It is a sacred site. No tree can be cut and no one can cultivate anything here. It is a pasture," Sumer Singh Bhati, who lives in Samvata village and owns 400 camels, informed *Gaon Connection*. About 600 years ago, the king of Jaisalmer, donated this land to the temple.

"The copper plate upon which the deed had happened is still with us. In 2004, when the land was reclaimed by the government, several villagers together tried to restore 23,000 bighas for the temple," he explained.



People from dozens of villages are coming forward in the battle to save their Oran. They have also submitted a memorandum at the district magistrate's office in Jaisalmer to disallow the solar plant. There are more than 5,000 camels and more than 30,000 sheep belonging to Samwata, Achala, Bhikhsar, Bhopa, Mulana and Karda villages. The Oran is the only source of fodder for these animals. "We are already facing a reduction in the number of camels. What will the remaining camels eat if the pastures are not there?" asked Sumer Singh Bhati. He added: "I have 400 camels and in the 12 villages nearby, 5,000 camels and 30,000 sheep are dependent on the Oran. Cattle is also dependent on it. If the Oran is not spared, there will be no place for our camels to graze."

When contacted, the Minister of State for Environment and Forests, Sukhram Vishnoi, said he was unaware of any plans for the solar plant at the Oran.

Rajasthan is home to the highest camel population in the country. But their numbers are declining due to poaching, sickness and the lack of grassland. As per the 20th animal census in 2019, there were 2.51 lakh camels in the country, compared to the 19th animal census in 2012, when there were more than 4 lakh camels.

There are many small ponds in these biodiversity-rich Orans. Rain water is collected in these ponds and animals are dependent on these ponds in rain-starved Jaisalmer. Rajasthan has 25,000 Orans with a total area of about 6,00,000 hectares. About 1,100 major Orans are spread over an area of 1,00,000 hectares. Of these, about 5,370 sg km are of Orans in the Thar Desert.

Sumit Dukiya, the assistant professor of the Environment Department at Guru Gobind Singh ndraprastha University, New Delhi, has been working towards the conservation of Rajasthan's state bird — Goravan — for the past several years. Sumit said: "The main profession of the people in the villages here is camel and sheep rearing, and it is with the help of this Oran, they rear camels and sheep. If the Oran does not survive, where will they take their cattle? These are the habitat of many a nimals and birds, where they will go?"

Because Oran is considered to be the place of the total deity, the right to Oran is also with the Temple Committee. "Our Oran is several hundred years old, we villagers are constantly struggling to save it, our sole request to the government is to protect it. It houses a lot of wild animals, vegetation and ponds. This is the centre of our faith," says Girdhar Singh, the priest of the Degarai temple.





The largest Adivasi population in the world resides in India, making up 8.6 per cent of the country's population. There are 705 recognised Scheduled Tribes, while Denotified and Nomadic Tribes comprise nearly 10 per cent of the country's population. The effects of the COVID-19 pandemic was more keenly felt by these communities as it adversely impacted displacement, convictions, and education on their livelihoods.

IMPACT OF COVID-19

A survey led by a Delhi non-profit, Praxis, and undertaken by civil society organisations such as National Alliance Group of Denotified and Nomadic Tribes, collected data between April and June, 2020, from nearly one lakh families from marginalised and minority communities across 11 states. According to this survey, in 55-61 per cent of rural Denotified and Nomadic Tribes (DNT) areas, none of the community members got a job under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

Due to restrictions on mobility due to the COVID-19 lockdown, communities who lead a nomadic lifestyle also suffered, as well as artisans and performers who were forced to undertake manual work. The report also noted an increase in loans taken by these communities who also found it difficult to access relief schemes due to lack of proper paperwork.

The lockdown meant that the forest dwellers, who harvest produce from the forest in the months April to June, were forced to stay home and this impacted their livelihood. In addition, these forest-dwelling communities have long been vulnerable to respiratory diseases and infections that have further been heightened by the COVID-19 pandemic.

However, according to an October 2020 report by the Community Forest Rights-Learning and Advocacy, a national platform that works with forest-dwelling communities, revealed that some tribal communities that reside in or near forests have fared relatively well in the pandemic in terms of their livelihoods. For instance, 29 villages in Gondia district in Maharashtra earned Rs. 2.5 crore during the lockdown by gathering and selling the tendu leaf that is used for rolling cigarettes.

ARRESTS OF ADIVASIS

In its prison statistics report published on August 27, 2020, the National Crime Records Bureau (NCRB) presented data that showed that Scheduled Tribes or adivasis accounted for 13 per cent of the total number of convicts and 10 per cent of the total number of under trials.

In the Bastar region of Chhattisgarh, six villagers who were accused of being Naxals were arrested on

November 12 leading to protests by 6,000 people of tribal communities from seven districts in Bastar for their release. They were also protesting against a mining project that was to come up despite the region being a reserve forest area.

FOREST RIGHTS AND DISPLACEMENT

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, commonly known as the Forest Rights Act, protects the individual and collective rights of India's adivasi and tribal people and other communities who reside in forests, to use, protect, and manage their forests. However, forest dwelling communities and activists fear that the central government is trying to dilute this act, as seen in February 2019 when the Supreme Court ordered an eviction of nearly eight million tribal people and other forest dwellers in a hearing where it was believed that the Union Ministry of Tribal Affairs did not defend its own Forest Rights Act.

This order was later suspended due to public criticism and protests. Additionally, tribal leader Jiten Chowdhary, who convenes the Adivasi Adhikar Rashtriya Manch (AARM), alleged in March 2020 that the central government has been infringing on the rights of tribal communities, adding that nearly 5.3 million adivasi families have not received land rights.

It is further feared that the government has been using the pandemic as a cover for expanding development projects and resource extraction, further threatening habitats and livelihoods of tribal communities. For instance, in November 2020, in Pahalgam area of Anantnag district in Kashmir, the Jammu and Kashmir administration issued eviction notices to Gujjar and Bakarwal communities who lived in temporary dwellings in the forest region, saying that these communities had illegally occupied the forestland. These dwellings were then razed down by the forest administration.

Similarly, in Odisha, the forest department demolished houses of 32 tribal families without prior notice in Kalahandi on April 24, rendering these families without food and shelter amid the pandemic. Moreover, the draft Environmental Impact Assessment was proposed this year by the Union Ministry of Environment, Forest and Climate Change which is aimed to evaluate the potential environmental impact of a particular project such as irrigation dams, mines, industrial units. However, environmentalists fear that this would further dilute the process since the draft exempts nearly 40 projects from approval requirements and public consultation. These projects are believed to have a severe impact on the environment while also affecting the rights of forest dwellers over the management and conservation of forests along with the threat of displacement.

EDUCATION

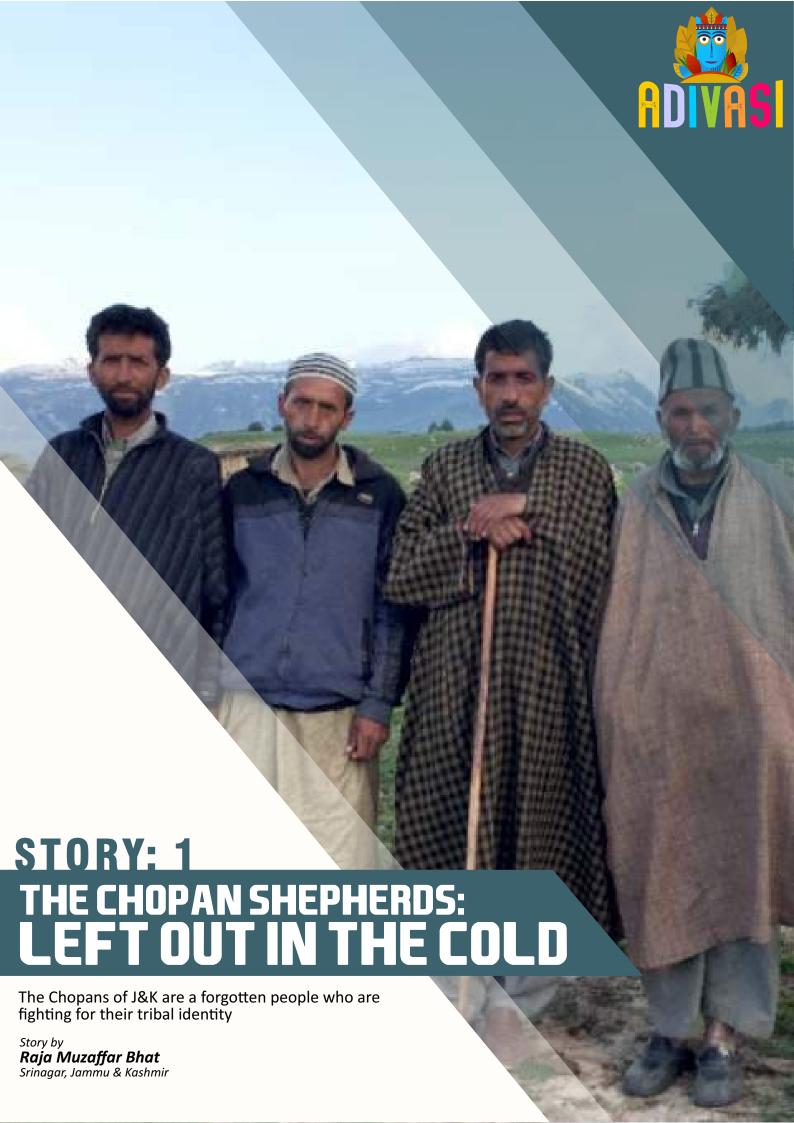
Much of the state and private education in India is geared towards bringing adivasi or tribal children under the mainstream. However, as of 2011, the dropout rate among tribal students was 70.9 per cent for classes 1 to 10. Moreover, one of the main reasons for the lack of participation of adivasi students is different socio-cultural identities, with many of them speaking languages that do not have a written script.

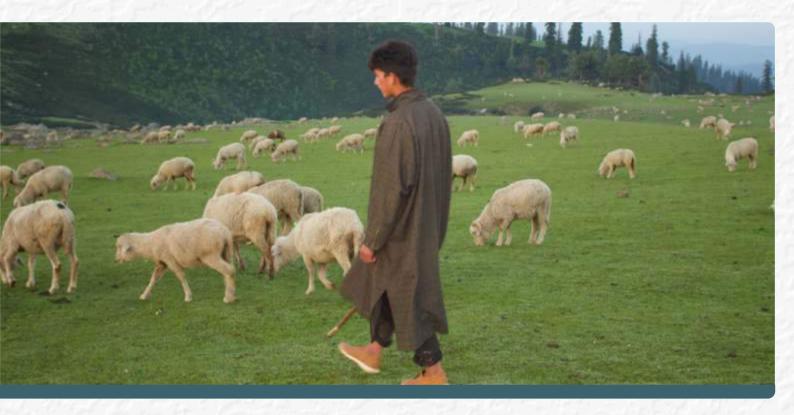
In this regard, the National Education Policy (2020) which proposed structural overhauls in the education system, sought to integrate adivasi knowledge systems into ways of learning, but did not elaborate on how it would equip institutions and educators to do so.

Moreover, while the NEP proposed learning in local languages at least till Class 5, it does not account for the oral languages of adivasis, or differences in mother-tongues and regional languages. On the other hand, in places like Chhattisgarh, pre-school tribal students will soon start learning in 10 different tribal languages across 19,000 anganwadis, as announced in January 2020 by the chief minister of the state.

Due to the COVID-19 pandemic, several adivasi students bore the brunt of the digital divide as many of them could not access online learning material. In some regions like Palghar in Maharashtra, foundations like the Diganta Swaraj Foundation set up loudspeakers in open areas for students to continue their education.

Gaon Connection presents a selection of reports that investigate the effects of the pandemic on the tribal communities and the marginalised in the country. From land conflicts and denial of their rights to the enterprise and innovations they have shown in the pandemic, the investigations reveal equally, the extent of the problems they face and their resilience in the face of adversity.





Around October, the Chopans make their way down from high altitude pastures, with sheep that they will hand over to their respective owners. Then they retire to a life of stillness in their little huts and wait for the summer to come around again.

The Chopans are a nomadic community, scattered across the Union Territory of Jammu and Kashmir (J&K). They usually own no livestock of their own, but take care of sheep belonging to local farmers. It is not uncommon to see these shepherds dotted across the hilly pastures of J&K, in the summer months negotiating treacherous mountain roads to reach high flung meadows where they graze the sheep till the onset of winters. The farmers pay them to look after their sheep.

"Our season begins around mid-March and ends around October. As it gets warmer, we start moving towards pastureland up on the hills. This is a slow process as we have to camp at different places en route before we reach our final destination, the bahak (meadow) in the first week of June," Aziz Chopan from village Jabbad Branawar in district Budgam, told *Gaon Connection*. The 52-year-old shepherd has 700 sheep in his flock and earns Rs 200,000 in eight months. He has no other means of livelihood.

As they are neither recognized as farmers nor have been included in the list of scheduled tribes, they miss out on government subsidy schemes.

The Chopan Welfare Association was established in 1996 to give a voice to this neglected shepherding community, but more than two decades later, the tribal status of the Chopans is still not recognised in J&K.

"Had our population been significantly large, we would have been a strong vote-bank but we are no more than three-and- a half-lakh people scattered across 15 districts. This is the reason we have not been brought under the ambit of scheduled tribe category" Budgam-based Ashfaq Chopan told *Gaon Connection*. He has watched his father, Mohammad Subhan Chopan, struggle to make a living as a shepherd for nearly 30 years. "My father quit being a shepherd and took up work as a labourer so that he could educate his five children," Ashfaq said.

Mohammad Chopan worked on construction sites and on agricultural lands. "My elder brothers are both postgraduates. My sisters are graduates and I am doing my Masters in Physics," said Ashfaq who is studying at the Central University in Ganderbal district, J&K, and is a Chopan rights activist. But because their community is not under the scheduled tribe category, two of his siblings were not appointed as government school teachers, he rued.

"In the agriculture sector, farmers get various facilities and shepherds who belong to the Scheduled Tribe category also get some benefits. Chopans despite their low economic and social status are not offered such beneficial schemes," Verinder Wattal, a trekker from Srinagar who encounters the Chopans on his treks, told *Gaon Connection*.

"There are no specific social security schemes available with the government for Chopans exclusively," admitted Basharat Kuthoo, joint director with Sheep Husbandry Department J&K Govt.

SCATTERED AND MARGINALISED

Every year, Chopans migrate in search of livelihood – they move from one place to another. "The Chopans are similar to the Changpa community of Ladakh or the Gaddis of Himachal Pradesh, except that these other communities have been given schedule tribe status long ago," said Ashfaq. "Two decades ago, on April 10, 2000, the J&K Legislative Assembly had passed a resolution for the inclusion of Chopan community under schedule tribe category, but the Chopans are still waiting," he added. It is a far cry from the paddocks owned by the state in these highlands that are well fenced and well lit. The Chopans wish the government would make similar arrangements for them.

The seasonal schools which were started around the year 2004-2005 for children of Chopan and Gujjar have not been operational for the last few years depriving these children of basic education.

In the months that they spend in the alpine pastures high up in the mountains, the Chopans live in kothas or dark, dingy huts, made of mud and supported by logs. Usually when they return to the kothas in the Pir Panjal mountain ranges to begin their livestock-grazing work, they find them damaged in the severe snowfall of the winters. Often repairing their homes is a big challenge as forest officials prevent them from taking any wood from the forests to do so.

Nazir Ahmad Chopan, annually migrates with the sheep to the Corag pastureland which is located at an altitude of 3,500 meters above sea level, in Budgam district. His hut was damaged during the winter snowfall and he couldn't repair it even with old fallen kail or fir trees as he feared the forest officials. But with the help of a good samaritan he managed to get permission from the forest department to set right his *kotha*. Sometimes the shepherds have to bribe the officials to rebuild their homes. If they don't and take timber to repair their houses, they may find themselves in the police station.

With no secure shelter, the Chopans do what they can to protect their livestock from snow leopards, brown bears and wild wolves that roam the area and carry away the sheep. They build fences with wild juniper bushes known locally as wethar to build makeshift paddocks near their huts. They stay awake most of the night keeping guard, blowing whistles to keep wild animals at bay.

THE ROAD UPHILL

"Had there been no Chopans, Kashmiri farmers would not have been able to afford such a large number of sheep as availability of fodder is a big challenge in villages and the same is available in abundance in the mountains" Ghulam Nabi a farmer from Wathoora in district Budgam told *Gaon Connection*. Nabi sends his sheep to the pasteur with a Chopan and has been doing so for the past 10 years, he said, and acknowledged the hard life the shepherds led. "Chopans take care of our sheep and work very hard in harsh climatic conditions," he said.







Even during lockdowns brought about by the COVID-19 pandemic, 55-year-old Indubai Vithal Wagh had something to cheer about. From earning nothing at all, she now earns Rs 1,200 a month. It gives her a sense of pride that she is financially supporting her family of six in the ongoing crisis.

Indubai lives in Khanduchiwadi, a tribal village in Shahapur block of Thane district in Maharashtra. She sells eggs for a living. "In a situation where we could not step out to work, selling eggs these chicks produce has proved to be a blessing. With this, I manage our household expenses," said Indubai.

Population First, a non-profit that works towards improving the quality of health of the rural women in India, distributed 10 chicks per woman in the village. A total of 18 tribal women, including Indubai, are now earning a livelihood by selling eggs. This has not only provided a source of income to them, but has also addressed malnutrition among pregnant and lactating women and children in the hamlet.

"We started the poultry project in this hamlet in January this year. Most of these women are uneducated. We trained them to look after the chicks. In April, we distributed 10 chicks per tribal woman in the village. So far, we gave 180 chicks to 18 women," said Fazal Pathan, programme manager of Population First.

At a time when supply chains in the country have broken down due to the COVID-19 pandemic, these women are also providing for the eggs to be given to the pregnant and lactating women in the anganwadis (rural child-care centres) in five neighbouring villages. This is helping run the Abdul Kalam Amrut Ahar Yojana — a scheme to combat malnutrition and improving the nutrition of pregnant and lactating women, and children. The anganwadi workers buy eggs from these tribal women directly.

"Earlier, these women would eat the eggs, but when the production increased, they started selling them to local vendors and later to the *anganwadi* workers. Because of the poor roads and connectivity with cities, tribal people here don't get to buy vegetables. They were surviving on wheat and paddy. But, ever since the poultry project started, women and children started consuming eggs, which became a permanent locally available food. This has addressed malnutrition in them," said Pathan.

Rajesh Tope, the state health minister, had said that 1,070 cases of maternal mortality were registered in the state between April 1, 2019, and January 5, 2020. In rural parts of Thane, 327 children were diagnosed with severe acute malnutrition and 1736 with moderate malnutrition. Despite the measures by the state health department, the rate of malnutrition is on the rise. However, the tribal women in this hamlet of Thane, stepped up to address malnutrition themselves.

"Now, we see positive health changes in women," said Pathan. Pathan along with his team has been combating malnutrition issues in the hamlet for five years.

An unintended but serious impact of the lockdown was that about 217 million children in India - 158 million kids registered with the *anganwadis* and 59.6 million students approved for mid-day meals at government schools - are possibly going hungry. But, this tribal hamlet continued its services.

"We have been giving eggs to five pregnant women, and four lactating women in the village since April. We give them eggs six days a week. Diet includes rice, pulses, oil, salt, and eggs," Anita Dharma Wagh, 35, an *anganwadi* worker who lives in the same village told *Gaon Connection*.

According to Pathan, there are around 60 children between 0-6 years of age in this hamlet. "Weight of these children is improving. We see visible changes in women and children," he said.

Indubai sold 250 eggs to the *anganwadi* centres and the local shopkeepers in June and earned Rs 1,250. On average, these tribal women manage to earn Rs 700-800 a month. They sell these eggs for Rs 7-8 per egg. Cost of production of each egg is Rs 2-3.

Indubai also works in farmland provided by the forest department where she grows paddy. She only has to buy the millet to feed the chickens. The rest, she gets from the field and the ration shop at cheaper rates.

Indubai and other tribal women are also rearing new chicks. "Thirteen women started rearing chicks. A total of new 100 chicks were produced. Now, we have 250 birds. These will later produce new chicks, and in turn, more eggs. This would keep multiplying and hence the profit," explained Pathan.

Population First plans to further the pilot project in three more villages and establish linkages between the local market of Shenva, a market which witnesses high sale and consumption of eggs, for these women. This will generate livelihood opportunities for many more women living in the tribal belt of the state.







For the first time, a granular and highly representative data on land conflicts across the country corroborates "marginalised communities – such as tribes and those living in resource-rich but violence-afflicted areas – are disproportionately impacted by land and resource conflicts." *Locating the Breach*, maps the nature of land conflicts in the country, and finds higher concentrations and intensities of land conflicts in tribal-dominated Fifth Schedule Areas (100 districts in 10 states) and districts affected by Left-wing extremism (90 districts in 11 states), many of which have high tribal population. Of the total 703 ongoing land conflicts, 303 conflicts have been reported from the Fifth Schedule Areas and Left-wing extremism affected districts in the country.

"Fifth Schedule Areas are spread over 13.6% of India's districts, but these districts are home to 26% of all conflicts documented by LCW [Land Conflict Watch], 28.5% of all people impacted, and 41% of the recorded area under conflict," reads the report based on three years of extensive field-work by Land Conflict Watch, a network of researchers spread across the country.

Fifth Schedule Areas — 100 districts across 10 states of Andhra Pradesh, Jharkhand, Chhattisgarh, Himachal Pradesh, Madhya Pradesh, Gujarat, Maharashtra, Odisha, Rajasthan, and Telangana — have a preponderance of tribal populations with relatively higher levels of economic backwardness. The Constitution provides special administrative dispensation for these areas.

Left-wing extremism affected districts include 90 districts in 11 states (Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh, Uttar Pradesh, and Kerala) identified by the Union ministry of home affairs. A large number of these districts are also tribal dominated.

"Our report, based on three-years long field-work, shows tribal-dominated areas have higher concentrations and intensities of land conflicts as compared to other regions in the country," Kumar Sambhav, co-author of the recent report told *Gaon Connection*. "Marginalised communities living in resource-rich lands are embroiled in land conflicts, some of which are going on for decades," he added.

NATURE OF LAND CONFLICTS IN INDIA

The researchers documented a total of 703 ongoing land conflicts affecting 6.5 million people spread over 2.1 million hectares (ha) land in the country. Evidence-based data on investments locked in land conflicts were available for only 335 of the 703 documented cases, and showed Rs 13.7 trillion (Rs 13.7 lakh crore) locked due to these conflicts.

Of the total 6.5 million people affected due to these conflicts, more than three million people were affected by infrastructure projects alone, whereas mining-related land conflicts had the second-biggest impact affecting 852,488 people.

The 703 documented land conflicts were categorised into six broad sectors: infrastructure, power, conservation and forestry, land use, mining, and industry. The maximum land conflicts — 43 per cent—were reported in the infrastructure sector, followed by conservation and forestry related activities (15 per cent), such as compensatory afforestation plantations and wildlife conservation schemes.

CONSERVATION AND MINING CONFLICTS HIGHEST IN TRIBAL AREAS

Locating the Breach, shows how tribal dominated areas have higher intensity of land conflicts.

Analysis of all the 703 documented conflicts showed the percentage of mining, and conservation and forestry related conflicts in areas with Left-wing extremism was more than double the national average.

"While they represent only 12 % of India's districts, areas with LWE [Left-wing extremism] accounted for 43 % of all conservation and forestry conflicts and 36 % of all mining conflicts," reads the report. Further, the authors note, 41 per cent of conflicts in areas with Left-wing extremism involved non-implementation or violation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act of 2006, commonly known as FRA, 2006.

The Fifth Schedule Areas reported "higher incidences of mining conflicts; indeed, 60% of all mining conflicts occurred in Fifth Scheduled districts."

1.2 MILLION PEOPLE AFFECTED BY FRA RELATED LAND CONFLICTS

At the heart of land conflicts, lie land laws and their implementation and violations. For instance, the state's acquisition of revenue lands is governed by either the Land Acquisition Act of 1894 (now repealed), the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, or state laws specifically enacted to enable the acquisition of land for certain categories of projects.

Under the Forest (Conservation) Act, 1980, the lands designated by the government as forestlands, or those deemed to be forestlands following Supreme Court orders, are diverted for non-forest purposes and handed over for different economic activities and projects to private or other organisations.

In 2006, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, commonly known as FRA 2006, was enacted. It legally recognises and vests forest rights and occupation in forestlands by scheduled tribes and other traditional forest dwellers that have inhabited the forests for generations. It also empowers gram sabhas to manage and govern the forestlands.

The February 2019 Report No 324 of Rajya Sabha titled 'Status of Forest in India' notes nearly 300 million tribals, other traditional forest dwellers and rural poor in the country derive their livelihoods mainly from forest resources. However, non-implementation and violation of FRA 2006 has led to several land conflicts.

Researchers documented 272 conflicts (of the total 703) related to the forestlands. Of these, 131 (18.6 per cent of the total conflicts) were linked to the violation or non-implementation of the FRA 2006. These 131 FRA-related conflicts impact 1.2 million people and a total land area of 368,138 ha.

"More than half of the conflicts involving the violation or non-implementation of the FRA are caused by conservation and forestry related activities," notes the report. Further, infrastructure projects embroiled in the violation or non-implementation of FRA affect 500,000 people, followed closely by conservation and forestry activities that affect over 473,000 people.

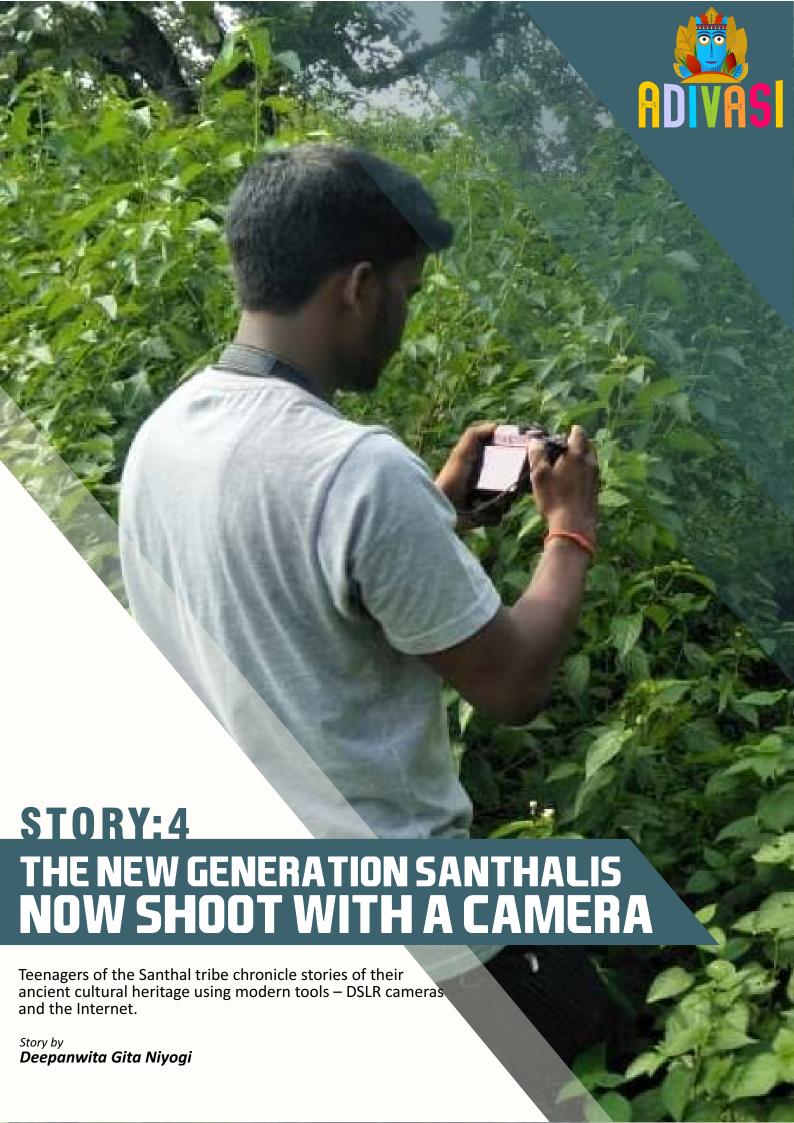
The land conflicts report also records how state governments' driven afforestation/plantation drives are carried out on community forestlands being used by forest dwellers who have rights over these lands. The FRA 2006 empowers village assemblies to manage forest resources traditionally used by forest-dwelling communities. It does not allow any activity, even initiated by the government, on these lands without the consent of the people.

However, data analysed by the researchers of the Land Conflict Watch found 45 conflicts across India where forest officials had undertaken plantation drives in villages without obtaining the mandatory consent of the village assemblies.

A further analysis of 22 such conflicts showed that in 80 per cent of these cases, the state forest department did not take consent from the village assembly. Instead, traditional lands were fenced off. In more than half of these cases, the communities had already received titles under the FRA 2006, affirming their land rights, before the plantation drive began. In all the other cases, title claims were pending before authorities.

Researchers recorded conflicts in Odisha, Jharkhand, Chhattisgarh, Gujarat, Uttarakhand, and Telangana, covering over 100,000 ha of land. These lands were home to 56,480 forest dwellers who have claimed traditional rights over these parcels under FRA 2006.

Clearly, in both the infrastructure growth story and the conservation/forestry story of the country, it is the tribals and other marginalised communities facing increased land conflicts that have a direct bearing on their livelihoods.





Not far from his village home, Simon Baskey moved carefully through the dense forest. In distance, was what he was looking for. He took aim and then a shot...of white mushrooms.

Baskey, belongs to the Santhal tribe, one of India's oldest and largest tribal communities, living across Jharkhand, Bihar, West Bengal, Orissa, and Assam. In Jamui in southern Bihar, young men and women from the community are breaking their bow-and-arrow stereotypes and chronicling the stories of their community, using cameras.

The youth call themselves The Lahanti Club. In the Santhali language, Lahanti means 'to move forward'. The Lahanti Club was formed in 2017 to help children of the Santhal community learn their own language and take pride in their culture.

"There are many green vegetables in the forest and we carefully preserve their names in folders. Our community has been eating forest foods for ages," Sonalal Marandi, who lives in the Govindpur village and is another member of the club, told *Gaon Connection*. "If we do not make such videos, one day our children will forget our rich food tradition. In the monsoons, we collect different varieties of mushrooms," he said.

There are 41 videos uploaded to the Lahanti Club YouTube channel, and the subjects range from local culture to sustainable forest foods.

"I have completed four films till now and am still working on a few others. We all go to the forest for shooting forest foods," said Baskey, who uses a Nikon DSLR camera. The white mushroom he shot is called *badra uhh* in the Santhali language. "My community members used to eat all kinds of forest foods but, now they buy more from the local markets," Baskey said.

Suman Hansda, a resident of Binjha village, a club member who joined last year, said two people work together during a shoot. While one searches for mushrooms or any other forest food, the other films. The short films are part of the CHIRAG project, an initiative undertaken by PRADAN (Professional Assistance for Development Action), the University of East Anglia based in the United Kingdom, and two other organisations, to address food and nutrition security as well as to generate knowledge on local foods.

FORMATION OF THE LAHANTI CLUB

When Gautam Bisht, the founder of Sinchan Education and Rural Entrepreneurship, a non-profit based in Chakai in Bihar's Jamui district, visited the block for a research project, he noticed how educated Santhals looked down upon their illiterate community members. Bisht also found it was difficult for Santhals to represent their educational and cultural aspirations.

After finishing his project, in 2017, Bisht started Sinchan and the Lahanti Club to involve local youngsters, who would then act as a bridge between the younger and older generations. "My focus was to work with youths on culture, education, and local rural livelihood," said Bisht. There 27 members now. Seven are board members who formed the club in 2017.

"Shooting films on wild forest foods gives the Santhal community contextual knowledge and helps them develop a sense of pride in their traditional culture," said Shuvajit Chakraborty, an executive with PRADAN.

TRAINING CLUB MEMBERS TO MAKE FILMS

"Initially we planned to invite people from outside to shoot films with these youngsters giving interviews. But, that was not a good plan for long-term capacity building," Bisht said. "So we handed over cameras to the members and trained them," he added.

Baskey, Hansda and other club members attended a training session in Deoghar, Jharkhand, last year to learn how to use professional cameras. Sonalal had missed this training since he was unwell. But that did not deter him. "Before joining the club, I used to click a lot of photos with my mobile phone. I knew how to shoot and look for perfect angles. Now, I have learned a bit on my own with the camera as well," he told Gaon Connection.

The club members share eight cameras. "We get Rs 1,500 per film. These are four to five minutes long. We take a day or two to shoot a film," Baskey said.

WOMEN WIELD CAMERAS TOO

Kavita Marandi, also from Sonalal's village, joined the club in 2018. "I have made a video on the kekra (crabs) found in the fields, ghongha (edible snail)foraged from the fields, and one on singhara (waterchestnut)," she said.

As per Kavita, Santhals have been eating wild forest food and fruits when agriculture was not common in the community. "We were forced to learn cultivation because forests deteriorated and our foods vanished due to developmental activities," she explained.

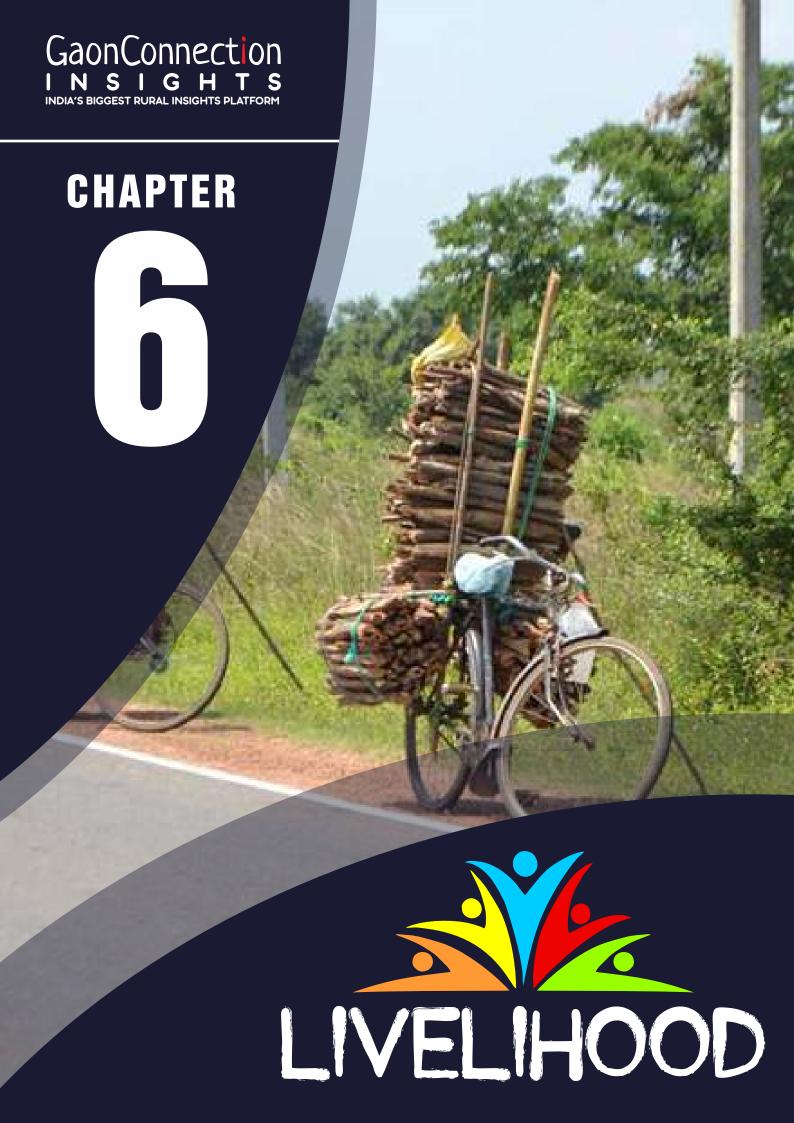
"I like listening to stories about forest food. My mother tells me about the advantages of eating different kinds of saag (greens). During the lockdown, we survived on forest food," Kavita said.

Pooja Hembram who has been associated with the club for some seven months now, also works as a pashu sakhi, a rural animal care service provider, and vaccinates goats and hens. "I did a video on Dumar ka sabzi or Lowa Billi (Ficus racemosa), a kind of fruit, called goolar in Hindi. It is eaten raw and also cooked as a vegetable. I shot it in March," she told *Gaon Connection*.

Kusum Hansda, who joined in December 2018, likes making films. "When I make such videos, I know many people would know me through them. I have graduated in home science from Chakai," she said. "We showcase forest foods which are slowly vanishing, in our videos. We want people to know that we get nutritious food from forests" she added.

Motilal Hansda from Ranadamga village of Bamda panchayat agreed with Kusum. "We bring before our audience forest foods not available in the market. Such videos will help us preserve our food culture forever," she said.







The year 2020 affected the livelihoods of people across the country like never before, due to the COVID-19 pandemic as well as climate-induced disasters. As a response to this, several schemes were set up to provide relief to the affected.

'STATE OF INDIA'S POOR' SURVEY

A survey on the 'State of India's Poor' was conducted between April and June 2020 led by Praxis, a Delhi based non-profit, in collaboration with civil society organisations such as National Alliance Group of Denotified and Nomadic Tribes and Gethu Group workers' think tank based on responses from nearly 100,000 households across 11 states. The survey gathered data about loans, jobs, and livelihoods, accessing and registering for government schemes and benefits, and social issues. Each of the 476 locations surveyed fell under one or more of the categories of Dalit, Adivasi, Muslim, and Denotified and Nomadic Tribes (DNT).

The survey reported that although there was an increase in reliance on the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), workers from these communities in four in ten villages could not get work under the scheme, particularly those belonging to DNTs in which no one from the community in 55-61 per cent of rural DNT areas got a job under the scheme. Lockdown restrictions on mobility further dried up sources of livelihoods of nomadic DNTs. There was an increase in loans and indebtedness in 88 per cent Dalit locations, 78 per cent DNT areas, 64 per cent Muslim areas and 47 per cent tribal areas, subsequently triggering social and economic exploitation.

MGNREGA

Work under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which guarantees 100 days of unskilled work in a year to rural households, saw an increased demand from the month of May 2020. In April, work under this act saw the lowest demand since 2013-14 by 12.8 million households as many migrant labourers were stranded in cities due to the COVID-19 lockdown restrictions.

In May, in contrast, over 36 million households sought work under this scheme and over 40 million in June, significantly higher than the average monthly demand for work between 2012-13 to 2018-19 at 21.5 million households. Due to limited employment opportunities otherwise due to the COVID-19 restrictions, thousands of MGNREGA workers across 108 districts in 12 states observed June 29, 2020, as 'NREGA Adhikar Diwas'. They staged peaceful demonstrations demanding higher benefits under the MGNREGA including increase in annual guaranteed work days from 100 to 200 and revision of minimum daily wage to Rs. 600.

In the current financial year of 2020-21, the MGNREGA was provided with Rs. 84,900 crores in two

instalments out of which Rs. 76,800 crores have already been spent by end November 2020, leaving only 10 per cent of the total funds to be spent in the remaining four months of the fiscal year.

An MGNREGA tracker by a network of non-profit called People Action for Employment Guarantee (PAEG) was released in December, which revealed that the 243 per cent increase in person days (work) generated, higher wage paid, and more households getting work, accounted for the huge expenditure this year.

The tracker further added that there were 90.2 total active work cards this year out of which 83.09 per cent sought work. However, it states that despite this, an average household got only 41.59 days of work (till the end of November 2020) as compared to 48.4 in 2019-20, and only 1.9 million households got 100 days of work.

GARIB KALYAN ROJGAR ABHIYAN (GKRA)

In June 2020, the central government launched the Garib Kalyan Rojgar Abhiyan (GKRA) for migrant workers who had to return to their hometowns or villages due to the COVID-19 induced lockdown. The scheme worth Rs. 50,000 crores of 125 days across 116 districts in 6 states aimed to expedite projects related to 25 public infrastructure works and those that would provide livelihood opportunities for the workers. However, as of the end of September 2020, only 56 per cent of the total amount allocated was utilised, and 300.69 million days of work were generated.

ROLE OF SELF-HELP GROUPS

Under the National Rural Livelihood Mission (NRLM), a government program (partly aided by the World Bank) launched in 2011 to create effective community institutions of the rural poor and boost their incomes, several self-help groups (SHGs) were created. There are now 6.6 million SHGs with 72 million members.

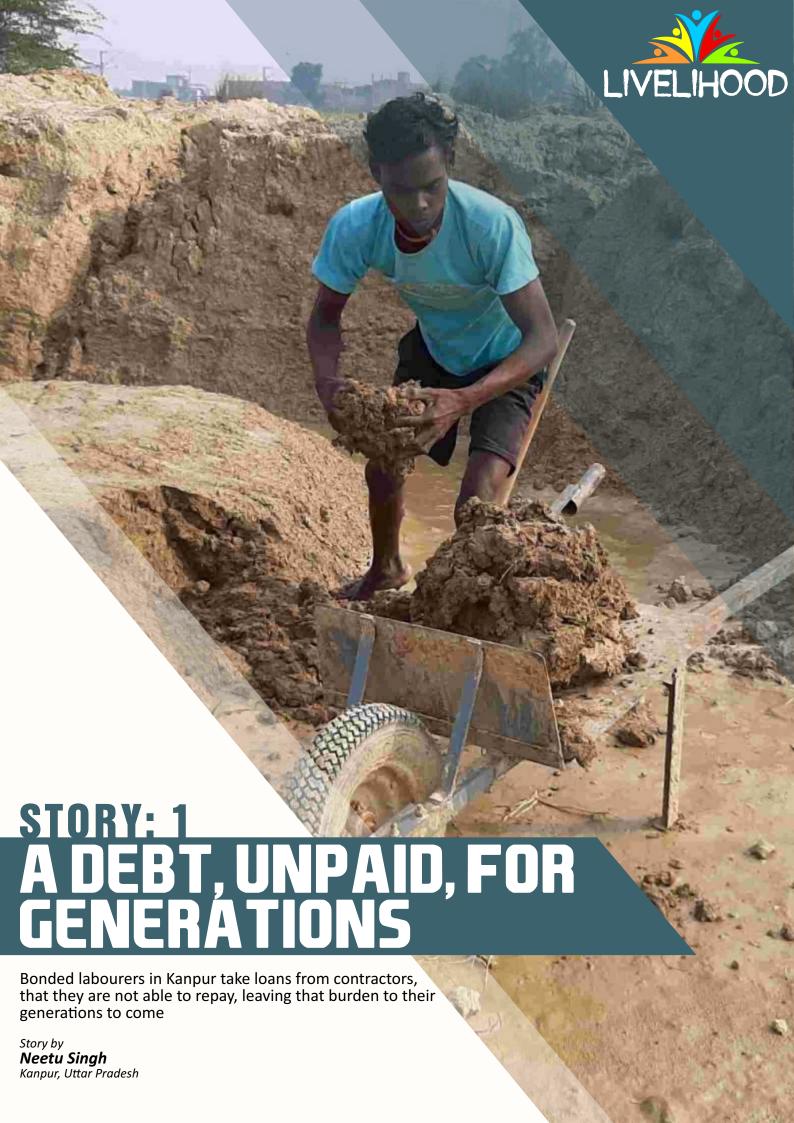
These SHGs have also been functioning efficiently during the COVID-19 pandemic and, as of April 2020 when the country was still under a strict lockdown, 20,000 SHGs produced more than 19 million masks across 27 states in the country as well as one lakh litres of sanitizer and 50,000 litres of handwash. They also set up 10,000 community kitchens across the country to feed stranded workers and the poor.

A recent study published in October 2020 conducted by the International Initiative for Impact Evaluation and a Bengaluru-based nonprofit Vrutti on the impact of the NRLM across seven states found that the earliest (around 2012-13) participants of the mission have seen their household income increase by 19 per cent and savings by 28 per cent on average.

Communities across the country have struggled to survive in 2020. Livelihoods have been snatched away during the pandemic and left people with nowhere to turn. The already vulnerable livelihoods of people are hurtling to extinction while tourist-dependent arts and crafts people are staring at starvation.

Gaon Connection investigates the plight of weaves, toy makers, mattress makers and fishers who were left high and dry to fend for themselves in the debilitating lockdown months and even after.







Pheku Majhi from Gaya district in Bihar has lived under the shadow of debt for 30 years.

The 46-year-old does not remember exactly how many rupees his family had taken as loan from the contractor 30 years ago. But he feels that when he was 15-16 years old, his family would have taken a loan of about Rs 5,000-10,000 from the contractor. Although the loan was repaid by him, he borrowed again from the contractor.

Sometimes labourers like Pheku repay the loan in a year, sometimes they can't and this cycle of borrowing and repaying the loan continues endlessly.

At present, there are 240 brick kilns in Kanpur and 50-100 families working for each. They come from Bihar, Jharkhand, Chhattisgarh, Assam, Uttar Pradesh-Madhya Pradesh (Bundelkhand). Out of these, 90% of the labourers belong to Musahar community of Bihar.

"I have been a bonded labourer for thirty years. I deeply regret the loan which I took from the contractor once as it is not easy for me now to get out of that debt. Wanting to end the loan sooner, I am forced to bring my children (12-15 years) to work," said Pheku, adding, "The childhood of my children ends up in the smoke from these chimneys. Many a time, we even are forced to borrow Rs 10,000-12,000 pledging our own children." Pheku has three boys and a girl who work with his wife and him making bricks.

The contractors give a loan of Rs 30,000-40,000 to a family, usually when they head back to Bihar between June and October. There is no work in the fields at this time and they have no alternative employment so they are forced to take loans to tide over the dry spell.

When news of bonded labour comes to them, they take immediate action, said SP Shukla, additional Labour Commissioner, Kanpur division. "We have the labourers released immediately and give them Rs 20,000. Thereafter, they are given an amount of about Rs 1 lakh for their rehabilitation."

IRON GRIP OF FEAR

Laxmikant Shukla who has been working with these labourers for 20 years said the labourers lived in fear of the powerful contractors and therefore never lodged complaints against them. "The labourers are well aware of what will be done to them there if one of them gives a written complaint against the contractor. They will be beaten and locked up," he said. "This is why they have been silent for years," he added.

"Last year, I took a loan of Rs 40,000 from the contractor. I worked hard and repaid the entire debt. But, according to the contractor, I still owe him Rs 27,000, so this time I was forced to work for him," said Pheku.

"Had I protested, the contractor would have abused me physically as well as verbally. He simply denies having any record of my work for last year," he said.



stranded in fishing boats off the Maharashtra coast.

Meanwhile, the lockdown is a death blow to the livelihood of 16 million fishers and fish workers in the country

Story by

Nidhi Jamwal Mumbai, Maharashtra



At least a hundred thousand fishers and migrant fish workers were stranded in their fishing boats in the Arabian Sea off the Maharashtra coast. A large number of fishers in Maharashtra spend time at sea for days together. They carry food supplies with them when they leave the coast for a fishing trip.

"While they were in the sea, the nation-wide lockdown was announced and now these fishers cannot return to land. They are living in their boats in the sea," Kiran Koli of Maharashtra Machhimar Kriti Samiti told Gaon Connection.

"About one-and-a-half lakh fishermen and fish workers are stranded at sea. We have supplied them with dry ration and drinking water. They can now get off their boats only after the 21-day lockdown period gets over on April 14," he added.

Most of these stranded fishers are migrant fish workers from land-locked states of Uttar Pradesh, Bihar and Jharkhand. They come to coastal Maharashtra to earn a livelihood catching fish.

"If these stranded fishers return, how do we ensure no overcrowding? Where do we house the migrant fish workers? Trains and buses are not plying, so they cannot return to their home states. They have no choice but to be in boats in the sea," lamented Koli.

The Central Department of Fisheries has directed the states to ensure "adequate food, water, shelter, essential sanitary supplies in the light of COVID19 and wages are continued to be made available". It has also told the state administrations to ensure a tally of migrant workers with their full names, residence details and a contact number are made available in order to communicate back to their families about their condition.

The lockdown threw the lives of over 16 million fishers and fish workers in the country out of gear. Of these, half are women.

"Fishing activities along the coastline of India have come to a standstill. None of the fishers are venturing out into the sea to catch fish, as there is no availability of ice, fish workers and transport facilities," said T Peter, general secretary of National Fishworkers' Forum, a federation of state-level trade unions in India.

"All the 1,547 fish landing centres in the coastal states are shut. Fisher families are staring at starvation and need a supply of ration and financial support," he added.

"Please tell the government to help us. Whatever food we had at our homes is finished. We do not know from where our next day's meal will come," Rehman, a fisher attached with the Traditional Fishworkers Trade Union in Andhra Pradesh pleaded with Gaon Connection.

"It is only now the government has started giving five kilogram rice and one kilogram dal [lentil] per person. But, the ration shop gives this dry ration to only 50 people in a day," he said.

The worries of Rehman and other fishers in the eastern coast of the country do not end here. On April 15, the first day post 21-day lockdown, a 61-day fishing ban period came into force in the eastern coast of the country. "We haven't been able to fish in the month of March. Half of April will

also go in lockdown due to the coronavirus outbreak. Thereafter, another two months we cannot fish due to the fishing ban period," said Rehman.

Similar voices emerge from the western coast of the country. "Last year, from August 1 until November 15, there was an excess rainfall and several storms in the Arabian Sea because of which fishers could not do regular fishing. The first fishing season was lost and fishers suffered huge losses," said Koli.

The second fishing season from December is always a lean period when 50 per cent of the boats remain idle. "Post Holi, the third fishing season is our peak season, but coronavirus has killed that season for us. And now, the 61-day monsoon fishing ban period will come into force on the western coast from June 1. We cannot cope with any more disasters. The government must support us," he added.

Maharashtra has a total of 28,000 registered fishing boats, while 15,310 boats have a fishing licence. About 9,310 fishers in the state are eligible for fuel (diesel) subsidy to carry out fishing activities.

Shockingly, the Maharashtra government owes fishers Rs 187 crore towards diesel subsidy. "We buy diesel for our fishing boats and the government later returns us a part of the money as a subsidy," informed Koli. "However, it's been more than four years, the state government hasn't paid this money to the fishers, which now stands at Rs 187 crore for 9,310 fishers in the state" alleged Koli.

Representatives of Maharashtra Machhimar Kriti Samiti met with the state fisheries minister Aslam Shaikh requesting release of the diesel subsidy. The state claims to have released Rs 78 crore. But, according to Koli, the money is yet to reach the bank accounts of beneficiaries.

Soon after Modi announced the nationwide lockdown, National Fishworkers' Forum wote to Pratap Chandra Sarangi, minister of state, Union Ministry of Fisheries, Animal Husbandry & Dairying informing him about how "many boats with fish ...were forced to forgo their catch in the harbour across the coastal states."

As per news reports, fishers in Maharashtra had to throw away 10,000 tonnes of fish catch back into the sea owing to lack of ice and transport facilities.

The Central department of fisheries requested all state chief secretaries to issue directions "to the law-enforcing authorities to include fish and shrimp in the list of commodities to be exempted from the lockdown and allow for the movement of fish and fish products". However, shutting down of ice factories and lack of transportation meant rotting of fish stocks and huge losses to the fishers.

National Fishworkers' Forum demanded the Central government announce an economic package specifically for the fishing community "keeping in mind that the monsoon ban season is arriving and will also affect the livelihoods of crores of fishworkers and ones who are dependent on the occupation."

The Forum also demanded a monthly allowance of Rs 10,000 per fisher family for three months period to be paid in advance. It has demanded an adequate supply of ration with cooking fuel to the fish workers, too.

The Central department of fisheries has indicated it is proposing financial assistance to the fishers with pre-requisite Aadhaar linked bank accounts of the beneficiaries.







At the Bandhaghat cotton market near Kolkata in West Bengal, the twanging sounds of the *jantar*, an instrument used by the *karigars* to fluff cotton, greet the visitor. A narrow gully, strewn with cardboard packaging and discarded placards, leads to a godown, dark with cemented walls looking ghostly as they are covered in wisps of cotton wool. Even the grills that let in some light and air are shrouded in it.

There are mounds of cotton on the grey floor, around which 40 men, in their *lungis*, sit there with their nose and mouth covered as they beat the cotton. These are the cotton carders belonging to the Mansoori community, better known as *dhunias*, who regularly migrate from various districts in Bihar to Bandhaghat in West Bengal, to clean, sort and stuff cotton into mattresses, quilts and pillows.

Many Mansooris from Bihar have been earning their livelihood in West Bengal at Bandhaghat in its century-old cotton market for generations. Some also live and work in Cotton Street in Kolkata, beating and fluffing and stuffing cotton.

The migrant Mansoori community has been hit hard by the novel coronavirus disease (COVID-19) pandemic, as they lost their livelihood, returned to their villages, only to find no work back home. These migrant cotton carders from Bihar are now returning to Kolkata and its neighbourhoods in search of work.

NOT MUCH OF A HOMECOMING

Hit hard by the COVID-19 pandemic, many of these Mansoori *karigars* returned to their villages in Bihar. Mohammad Akhtar, who works at Bandhaghat, spent Rs 2,500, he could ill afford, rented a vehicle along with seven others including his older brother, Razak, and went back home to Samastipur in Bihar, where for some time they worked on a small patch of land that belonged to their maternal grandfather, but that was not enough to support them.

"This year, due to the floods we suffered a loss and though we were supposed to get six thousand rupees from the government of Bihar, as compensation for crop damage, we got nothing," said Akhtar. So the brothers returned to Bandhaghat to resume work as cotton carders. Around the same time Akhtar and Razak went back to their village, Mohammad Anwar who works at Cotton Street Kolkata, also decided to get back home to Begusarai district, Bihar, in time for Ramzan. He managed to obtain a pass and boarded a matador to make that seven-hour journey to his village. "At least there, we could borrow and eat something in the village. Who will do that for us here in the city," said Anwar.

But his stay at Begusaria was short lived as there was no work or wage back home to keep him there. "There is no value for labour," lamented 38-year-old Anwar.

Akhtar and Razak learnt cotton-carding or *dhunai* from their father. Akhtar was only 10-years-old when his father taught him the craft. His older brother started work in Bandhaghat in 1972, and still works there, at the godown. "Most of us here are related. Some are uncles, brothers or neighbours. We don't have any unions here. We just tend to stay in groups and look out for each other because no one else will. If we had a union, we would not have been stuck here," pointed out Akhtar to *Gaon Connection*.

LOSING SLEEP

While the *karigars* are back to the Bandhaghat cotton market, the work does not ensure them a steady source of income. It all depends on the sale of mattresses. Some days it could be Rs 400 they earn as labour for a 40-kilogram cotton mattress, on other days they get nothing at all as there is no work.

In the meanwhile, the shopkeepers selling these mattresses and pillows are also in trouble. "We suffered a loss of at least twelve lakh rupees during the lockdown," Tapan Shreemani, a shop owner in Cotton Street told *Gaon Connection*.

While Bandhaghat caters to a few customers who still come here to get their old mattresses and pillows refurbished, it also sends finished products to other places in West Bengal such as Asansol, Burdawan, Pandua, Diamond Harbour, and Krishna Nagar. The cotton they deal with comes from Coimbatore and Chennai in Tamil Nadu, and Mumbai in Maharashtra.

"There has been a general decline in business in the last ten years," admitted Prasanto Dutta who owns the 95-year-old Gandhi Sowry Stores in Bandhaghat along with his brother Sukanto Dutta. "With foam mattress and other synthetic material coming into the market, there are not too many takers for the cotton mattress," he said. But, he hopes that like it has been with everything else, old-fashioned traditions will make a comeback and with it a demand for their cotton bedding.

OF DUST AND DISEASE

But, Akhtar, Anwar, Islam and their co-workers aren't hopeful. Diseases, such as asthma and tuberculosis, which the Mansooris pick up while making cotton mattresses, is killing them slowly. "It is a dirty job. Do you see this dust flying out of cotton when it is beaten? This dust gets collected in our throat which causes tuberculosis and asthma. And we do not have the money to get ourselves treated," said Islam whose father died of tuberculosis after working 40 years as a cotton carder.

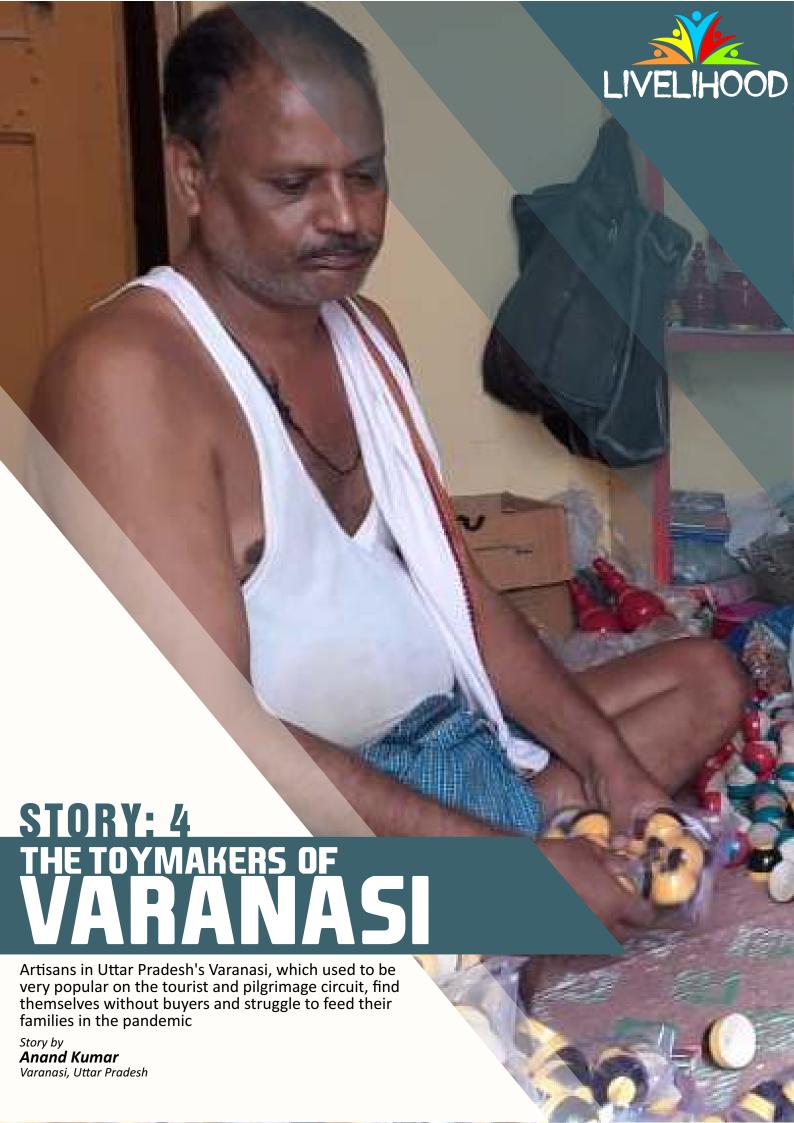
The lint-covered workers said almost everyone had someone in the family who had died of tuberculosis. They pointed to the cobwebs hanging everywhere, saying the cotton dust hung about their lungs and throat in a similar fashion. "That is what happens when you cross a certain age and have spent years in the room beating cotton," said Islam.

The *karigars* eat jaggery and banana to help the dust to pass and not irritate or block their throat. And if the coughing increases then they drink hot milk that helps, but only temporarily, they said.

"Our boys will not enter this line of occupation. They will take another. This work has lots of dust with no benefit," said Islam.

Over the years, the number of *karigars* working in Bandhaghat and Cotton Street has declined. Many of these *karigars* of Mansoori community are now coolies or cart pullers.







Varanasi's famed wooden craft tradition, which is at least two centuries old, is known both for its beauty and ability to stay contemporary. But the novel coronavirus disease (COVID-19) has dulled the toy industry.

Banaras or Kashi, is Indian Prime Minister Narendra Modi's constituency and, hugely popular among tourists, because it is considered a holy place to visit. But since the pandemic, a huge chunk of potential buyers, the tourists have kept away. The artisans tried their best to stay afloat, but are struggling. They are borrowing money to feed their families.

On August 30, Modi appealed to the citizens of the country to patronise indigenous toys to make India self-reliant. He also spoke of the need to better the toys' market in Varanasi. Things, however, are bleak at the ground level.

About 3,000 artisans create wooden toys in Varanasi's Kashmiriganj and Khojwan areas. They make toys, *sindoordaans*, bangle cases and flower vases. The wood craft business here, estimated at Rs 30 crore, is in dire straits as the workshops are closed.

Forty-five-year-old Shyam Gupta of Kasmiriganj has been making wooden toys since he was 10 years old. "Business has come to a standstill. The festive season (Dussehra, Diwali, Chhath) is upon us, but no *mahajan* (buyer) has been coming to buy toys," he said. Shyam now works on *adhiya*, or half wages. "If you work independently, you can hope to receive a wage of three-hundred rupees a day, but if you work on *adhiya*, you work for four-hundred rupees and get only two-hundred," he added.

"It looks like the lockdown will be the death of us. Our income has reduced drastically, no traders visit us and I dread how I will look after my family," rued 56-year-old Parmanand Singh.

Before the lockdown, he made toys during the day and sold them to traders in the evening, earning enough for his family. He still makes toys but there is no one to sell them to. He barely earns between Rs 200 and Rs 250 a day. He recently received an order for toys after months, and said his situation was better compared to that of his colleagues.

One thing craftsman Kishan Singh Parihar, who has been making toys for a quarter of a century, is particular about is educating his children, so that they enjoy a better quality of life. Before the lockdown, he earned about Rs 400 a day. Now, that has been halved. "With meagre earnings, how will I educate my children? They will also end up struggling like me to make ends meet. We don't even get good wood now; it is moist and difficult to work with. Our toy industry is on the verge of being wiped out."

LACK OF GOVERNMENT SUPPORT

The Uttar Pradesh government launched a labour maintenance scheme, Shramik Bharan Poshan Yojna, to help daily wagers and workers affected by the lockdown with Rs 1,000 each for three months. It was said that the amount was transferred to about 1.9 million workers for April and May through direct benefit transfer. On June 13, the third instalment was released to more than a million accounts. "Not a single paisa has reached our account though the women received five-hundred rupees a month in their Jan Dhan account," alleged Shyam Gupta.

Parmanand Singh also denied receiving any aid from the government. "Everyone making toys already filled and deposited the fifty-one-rupee form but no money has come to anyone's bank account," he said. Other craftsmen in Khojwan and Kashmiriganj had the same complaint.

Parmanand Singh has been making toys for four decades. "I am too old to look for some other occupation. I have only made toys all my life. I cannot pull a rickshaw or cart now. I don't see any future. I keep borrowing so my family can eat. My income is stagnant and negligible; my debts are towering," said Singh.



ADVERSE EFFECTS OF CHINESE TOY IMPORTS

The proliferation of Chinese toys has seen the local toy makers reduce their portfolio. "The business is sinking every day," said Parihar. "We have discontinued about 400 models. Their toys are primarily in plastic and machine-made, and so less expensive. They look very attractive, and customers end up buying them. Our input costs are high, we make them by hand. All that adds to

the cost. Wooden toys are of great quality, but because they are perceived as expensive, the demand is dwindling," he added.

China has a lion's share of close to 80 per cent in the Indian toys market. According to the Toy Association of India, toys worth Rs 4,000 crore are imported from China annually; the retail value of the Indian toy industry is around Rs 16,000 crore. It is said that 75 per cent of the raw material needed to make toys is also imported from China.

These toymakers would like nothing better than to pass on their craft to their children, but Parihar said their struggles discourage them from doing that. "This art will die with our generation," he said.

The craftspeople would like their age-old craft to be better branded and marketed. They also demand that the government subsidises machinery used to make toys so that they can scale up without pain. Currently, India's share of the global toy market of 7 lakh crore is negligible.

Parihar said the Prime Minister's appeal to new entrepreneurs to invest in the toys market of Varanasi might give the industry a fresh shot at life. "Our forefathers told us this craft does not promise a good life. They were right," said Parihar.

Can toy makers survive if they increase prices, even by a little? "Not possible," said Bablu Gupta, a toy manufacturer. "Even if we want to increase it by five rupees a toy, the *mahajan* stops buying goods," he added.







Not too long ago, the narrow lanes of Sarainandan in Varanasi's Sundarpur reverberated with the sound of looms. Now, there is only eerie silence.

The weavers of the iconic Banarasi saree are hit by the COVID-19 lockdown that lasted nearly three months, and the continued restrictions still in place.

The hands that wove delicate silks now work with brick and mortar. The poverty-stricken weavers are selling their looms, pawning jewellery and falling into debt.

Varanasi, also called Kashi and Banaras, is about 250 kilometres from Uttar Pradesh's capital Lucknow. It is Prime Minister Narendra Modi's parliamentary constituency and is famous all over the world for three things—the ancient Hindu temple of Kashi Vishwanath, its ghats by the Ganga river and its Banarasi sarees.

Anees Ahmad, a weaver, has opened a tea-leaf shop at his workshop that is manned by his six-year-old son, Sufiyan studying in Class I.

"Abba goes to work and I sell tea here. I sometimes buy vegetables or a packet of masala from the money that comes from selling the tea leaves. Sometimes I also buy biscuits and chips," confided Sufiyan.

"The lockdown has brought ruin to us. A few weeks into the lockdown, we ran out of money. We are being given rice and wheat by the government but that cannot be eaten alone," said Anees. "I had to sell three out of my five handlooms at throwaway prices. We are surviving using this money. My ailing wife's treatment also required money," he added.

"I have been weaving for more than 20 years. I set up the looms with the savings over the years. I gathered individual parts of these looms one-by-one and made five functional looms. It was heartbreaking to let go of them," he sighed.

The annual turnover of Banarasi sarees is more than five billion rupees. About six lakh people are directly and indirectly engaged in this cottage industry. There are many areas in Varanasi where lakhs of weavers did Banarasi binkari (weaving) but they are shut since the lockdown.

Mohammad Asif Ansari's workshop is littered with dismantled handloom machine parts. The 75-year-old is awaiting a scrap dealer to carry them away. "I have never seen such a bad time. We were already poor but, the lockdown forced us to take up some other profession. So now, I am selling off my machine," said Ansari who has been a weaver for 50 years. "The bills are going up. The previous governments gave subsidies to electricity. Not only has this government increased electricity charges,

but GST has also been slapped over it, and now we struggle with coronavirus. The government did not bother to ask after us even once," Asif said, in anger.

Before the lockdown, Naeem used to earn four to five hundred rupees a day weaving sarees on someone else's power loom. His livelihood was destroyed. "I have been jobless for four months. I have the responsibility of a household of four. Our savings helped for two months. Then, I had to sell my wife's earrings. I linger about in the market the whole day hoping to find some job but there is no work to be found," he lamented.

"I am waiting for the situation to improve. I swear, I would go out and work in Mumbai or Delhi but won't stay back to do this work (weaving) anymore," Naeem shared his frustration.

Young Mohammad Javed has two handlooms lying idle. He has taken a loan of Rs. 35,000 from his relatives so far to pay for home expenses. He is unsure about its repayment. "I hoped for orders to resume after the lockdown was over but, there has been no work," he sighed.

"We only got some rice in the ration. We didn't get a single rupee during this entire lockdown. The government should give us something more than just rice," Naeem said.

Varanasi produces silk, cotton, Butidar, Jangla, Jamdani, Jamawar, cutwork, chiffon, Tanchhoi, Korangaja, muslin, Nilambari, Pitambari, Shwetambari and Raktambari sarees that are exported to Sri Lanka, Switzerland, Canada, Mauritius, USA, Australia and Nepal.

Ashok Dhawan, the patron of Banaras Textile Industry Association and a trader of Banarasi Sarees, believes COVID-19 has pushed the trade to the brink of closure. "It will take us several years to recover from the damage that has been caused so far," he said.

"The weavers and traders are in grave distress. The government will have to take effective steps, at the earliest to save us and the trade," he added.

As per the Handloom Census held in the year 2009-10, 43 lakh people are involved in this trade in the country. Handloom work in India has declined sharply in the last decade whereas about 70 lakh people are involved in the power loom.



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INSIGHTS
INDIA'S BIGGEST RURAL INSIGHTS PLATFORM

CHAPTER

Gender 9
Matters



The year 2020 has been a difficult one, and more so for rural women who are already struggling with caste-discrimination, sexual violence and access to welfare measures. The COVID-19 pandemic has magnified these issues and has had a major impact on their lives in rural India

A POINT OF NO RETURN FOR WOMEN INTO THE WORKFORCE

In 2019, the World Bank estimated that the participation rate of women in the labour force in India was merely 23.4 per cent. Due to the pandemic, people who were employed on a non-regular basis (women more than men) were more likely to lose their jobs. While the economy is recovering post-lockdown, the number of women returning to the workforce is still lagging behind that of men.

Data from the Employees' Provident Fund Organisation on the share of women in new payroll additions for 2020-21, reveals that of the 669,914 people who joined the workforce in August, 19.98 per cent of them (133,872) were women. In the preceding months of July and June their numbers were 20.49 per cent and 21.11 per cent respectively. Last year, 2019-20, the share of women in new payroll additions was 25.1 per cent, 24.52 per cent and 22.76 per cent for the months of June, July and August, respectively. Clearly, the number of women falling out of the workforce as a consequence of the pandemic is a lot more than that of men.

COVID-19 AND THE RURAL WOMEN

With their menfolk returning home to their villages when the nationwide lockdown was imposed, with their daily wages being cut off, women have had to sell off their assets such as livestock, jewellery, utensils and other valuables in order to make ends meet.

Gaon Connection's national survey on the impact of COVID-19 on rural india, documented as *The Rural Report 1: The Impact of COVID-19 on Rural India*, revealed that one in five households had to sell their belongings. This would additionally have undone any previous financial independence and decision-

making power earned through schemes and other community support groups. There were reports of an increase in the cases of physical, emotional, sexual domestic violence, with limited access to any form of support.

The pandemic has also affected several reproductive and child health services in villages. Many anganwadi centers run under the Integrated Child Development Scheme (ICDS) in the country, that provided food supplements and nutritional support to pregnant and lactating women were shut down in March. This limited access to supplements, immunisation services, birth control and abortion services has increased unwanted pregnancies, sexually transmitted diseases (STDs), reduced agency over women's sexual and reproductive autonomy, as well as infant and maternal mortality rates. The demands for these services, which were higher in rural areas, were hardly met. States such as Telangana, however, have since provided household delivery of important supplements.

The pandemic hit the rural women particularly hard as they had to make multiple trips a day for long distances in order to fetch extra water for frequent sanitization requirements. A survey conducted by the International Food Policy Research Institute (IFPRI) revealed that 47 per cent women have been spending more time and effort to fetch water for their families and livestock. This aggravated the burden on women, more so as many of them also had to contend with water scarcity in the summer months.

NO TIME FOR SCHOOL

Schools and education centers largely went online due to the pandemic. Children in rural areas were particularly badly hit due to limited access to technology in households. With the men returning home from cities, the household chores for girls and young women increased manifold. According to Professor Amita Rampal, an educationist at Delhi University, this would lead to 20 per cent of girls (mainly from families of migrant workers) throughout the country, dropping out of school, permanently. A survey by the International Food Policy Research Institute (IFPRI) also revealed that women's mobile phones were one of the first expenses to be cut. There already exists a gender literacy gap, and the existing digital gender divide will further deepen.

More alarmingly, as per the Global Girlhood Report 2020 of Save the Children, 200,000 girls in South Asia were expected to be forced into child marriages by the end of this year.

CASTE-BASED VIOLENCE AGAINST RURAL WOMEN

According to an annual report by the National Crime Records Bureau (NCRB) released in September this year, crimes against women saw a 7.3 per cent increase from 2018 to 2019. A total of 4,05,861 cases of such crimes were registered in 2019. Crimes against Scheduled Castes also went up by 7.3 per cent.

For Dalit girls and women, their gender as well as caste are already targets of upper caste exploitation. Recently, a 19-year-old woman was allegedly gang raped and killed by four upper caste men in Hathras district in Uttar Pradesh. According to NCRB's report, such attacks on Dalit women at the hands of upper caste men have increased, with 10 cases of rape of Dalit women being reported, on average, every day. Social and economic boycotts along with the continued practice of untouchability in some regions have also seen a rise.

WOMEN FARMERS IN PROTEST

The contribution of women farmers to the economy remains largely unacknowledged, and despite the fact that they toil in the fields alongside their menfolk, the women continue to be largely invisible. But in 2020, the women farmers came out on the roads, protesting the three farm laws that were recently

passed by the government. The farmers, especially from Punjab and Haryana, feared the laws would weaken their hold over their land, and promote contract farming that would leave them open to exploitation by private owners. While many women farmers turned out for the protests, many more stayed back in the villages taking care of their home and hearth besides the agricultural chores in addition to their household work.

USED AND ABUSED: SEX WORKERS AND THE TRANSGENDERS

The transgender community, and the hijra community in particular, which has been on the margins of the Indian society, was pushed into further poverty due to the pandemic. In Kerala, however, temporary housing and food provisions were arranged for them. Many people of the hijra community, over the past few years, had migrated from rural to urban areas to find work. The pandemic has either forced them to go back or left them on their own without any means which they otherwise earned through public interaction.

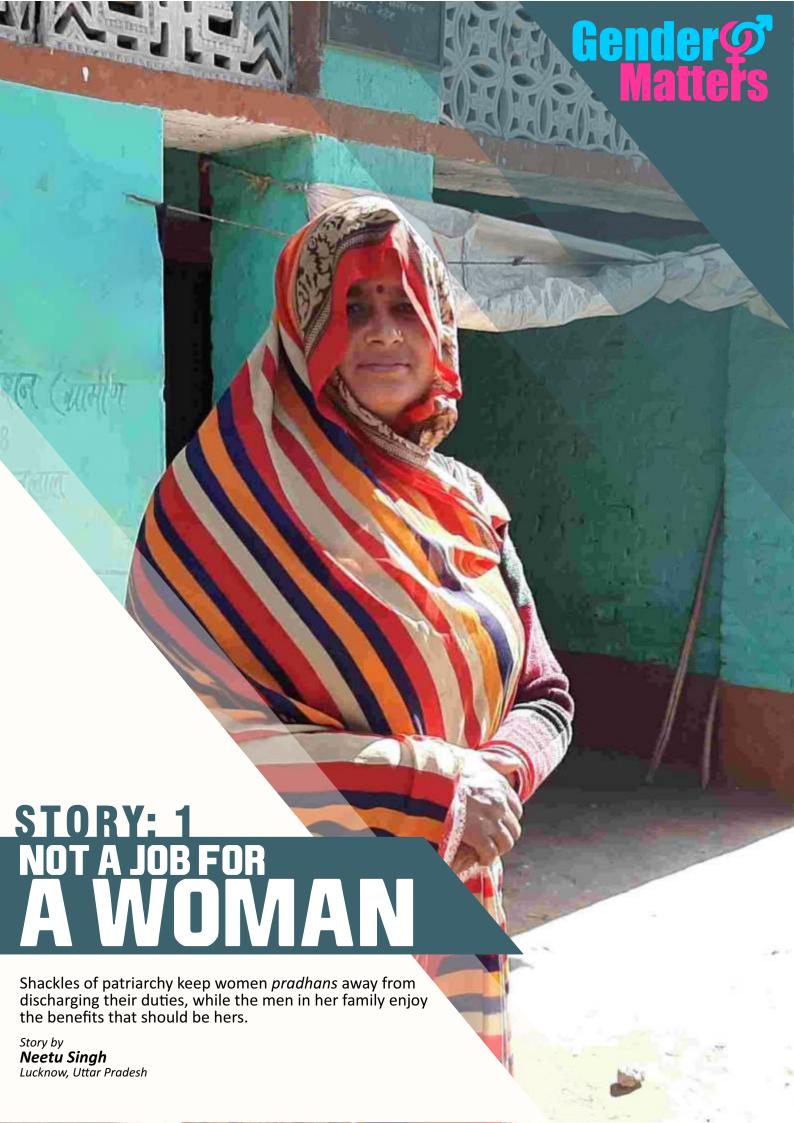
But some crowdfunded campaigns such as one in Tamil Nadu, raised money for a rural transgender community. There have been several such campaigns in a few parts of the country. While the government had announced a relief package for the poor in March, access to this proved difficult for the transgender community as many of them lacked the required official documentation and identity proof.

Sex workers faced a similar struggle as the mandated physical distancing during the pandemic went against the nature of their work. Also, for those who were HIV positive, their access to medicines were cut off. There was some respite for the sex workers in Maharashtra when in November, the state announced a monthly compensation of Rs 5000 for them, along with rations without the requirement of identity proof.

The scale of problems faced by women and the transgender community in rural India increased manifold during the pandemic, and other problems that were latent, also came to the fore.

Gaon Connection presents a selection of reports that touch upon some of the issues faced by rural women in India 2020







At the Attari gram panchayat, 55 kms away from state capital Lucknow, 55-year-old Jaydevi Yadav is the gram pradhan (village head), but only on paper. It is her son Anil Yadav's name that figures as the gram *pradhan* for the year 2019-2020, on the wall of a pre-secondary school. "I am only the *pradhan* representative, my mother is the gram *pradhan*," Anil Yadav insisted. "All the development-related work in the panchayat happens with the *pradhan*'s consent. I simply execute them," the 28-year-old told *Gaon Connection*.

Not all buy this argument. "If the pradhan is a woman, 75 per cent of the work is done by her husband, son or father-in-law." said Roop Narayan from Attari. "Because of reservation, the woman is just a namesake pradhan who has no say in the work. The woman is just a rubber stamp, all block level officers know this," he added.

Yadav countered this allegation, saying, "My mother is aged. There was a seat reserved for a woman, so she contested the elections. But now she won't be able to manage on her own and I have to accompany her." He argued that a gram pradhan had several responsibilities, and a woman would not be able to handle them all. His mother, Jaydevi, the gram pradhan was not available for comment.

About 70 per cent of India's population lives in villages and there are 2,39,000 gram panchayats across the country. Fifty per cent of the seats are reserved for women in panchayat elections in 20 states of the country. Uttar Pradesh is not a part of this yet. The number of women pradhans in the panchayat has increased, but their participation is still very low.

"In south India, Uttaranchal and the north-east, women





are leading in almost every area, whether it is in farming or in the panchayat," Chandrashekhar Pran, founder of Teesri Sarkar that works with panchayats across the country, told *Gaon Connection*. While the role of women in panchayats in the past 25 years has changed drastically, it is not so in Uttar Pradesh, he rued. "Even if 20 per cent of women are able to be at the helm of panchayats affairs, it is a major change," he declared.

Yadav, who said he was only his mother's assistant said that a gram *pradhan* needed an assistant just like the members of parliament did. "Many times, these women are not educated, so the men of their families have to help them out," he pointed out. While Yadav assured *Gaon Connection* that the Attari gram panchayat organised six meetings in a year, which his mother presided over, the villagers said otherwise.

"We have never met since she won the election, so if indeed there was a meeting, we were not aware of it," an irate villager told *Gaon Connection*.

Just a kilometer away, the Kerora gram panchayat is also headed by a woman *pradhan*, another Jaydevi. "We have built pavements and drains. The anganwadi centre was also repaired. The village is defecation-free and homes have also been provided," she said. She, however, admitted that he official work of the block office was done by her husband. "I cannot possibly go everywhere by myself. He looks after the work of the pradhan more than I do," she said. "Although it was a male seat, my husband could not contest the elections because he is in a government job, so I fought and won by 200 votes," Jaydevi of Kerora told *Gaon Connection*.

Stepping into the role of a *pradhan* in Kerora was not easy, she confessed. "I go to the *anganwadi* once a month. I sort out those problems that I can. I visit the block office with my husband," she explained. It was for the first time that Jaydevi contested the elections at Kerora. She said it took her while getting comfortable stepping out of the house, but she is picking up the ropes.

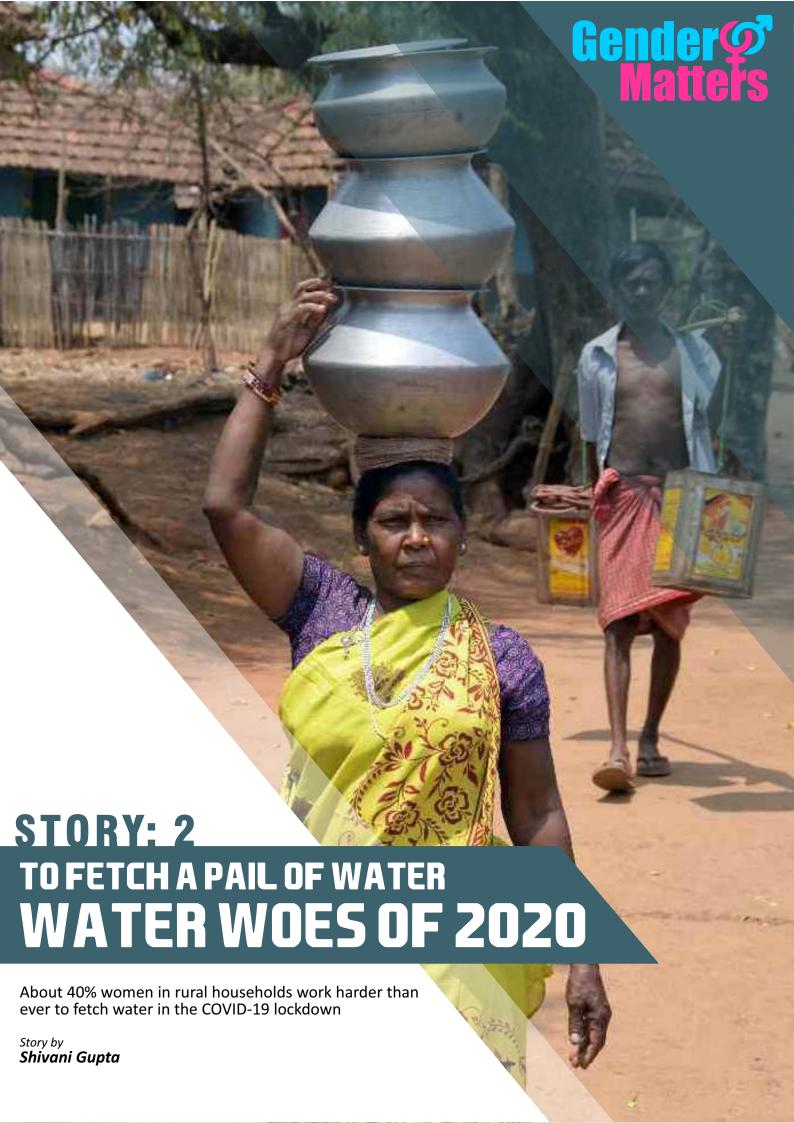
The Kerora panchayat has become child-marriage free and Vatsalya, a non-profit working in this gram panchayat has helped it become so. "The panchayat has a team of young people who are reporting to us if there is a possibility of a child marriage in the village," Saurabh Singh, project coordinator of the community development programme at Vatsalya, told *Gaon Connection*. "The lady gram *pradhan* here did not show much interest in the programme as she remains in *parda*," said Singh. The involvement of a woman gram pradhan could make a huge impact especially in developing the welfare of women and children. "We work in 20 gram panchayats of which five have women gram *pradhans* but their contribution to the panchayat is negligible, either because of patriarchal oppression and other social restrictions," she said.

Four kilometres away from Kerora is the Shahmau Naubsta gram panchayat where Vijay Lakshmi is the gram *pradhan*. But again, all the panchayat work that she should be doing is carried out by her father-in-law and brother-in-law. Explaining why, her father in law Madarilal said: "If there is a need for her presence, she is there. One may have to step out anytime for work, so how can a woman *pradhan* be expected to move alone," he demanded to know.

Allegations are that Vijay Lakshmi has not met anyone after winning the panchayat elections and has never attended the meetings. "She lives in Lucknow and it is her brother-in-law and father-in-law who take care of her job," said a Shahmau villager on condition of anonymity. The villagers were disappointed about this as she said they had pinned their hopes on Vijay Lakshmi who was educated. "We hoped that an educated woman as the *pradhan* would bring development to our village, but nothing happened," she said. "While reservation brought women into the political arena, they still did not have the right to have their say in anything," said the villager.

"There is a different kind of politics that work in the villages," pointed out Chandrashekhar Pran. Social restrictions prevent women from stepping out and working full time for the panchayat. "But if the men cooperated with the women instead of assuming the full charge of her responsibilities, the women can bring about better development in panchayats, and may perform even better than the men," Pran said.







Ilonee Devi, a resident of Thengadih village in Jharkhand's Deoghar district, walks a kilometre every day to fetch water for her family of four. For the 46-year-old, water shortage is something she faces all year round. Come rain, hail, or pandemic (COVID19), she has to make multiple trips, at least five in a day, to get water.

"Hamara paani ka bahut takleef hai, aur yeh jindagi bhar ka takleef hai (We face a severe water problem, and it is lifelong)," Devi told Gaon Connection.

The COVID-19 pandemic has added to Devi's water woes as the government and health agencies recommend frequent handwashing. According to the World Health Organization, washing hands regularly and thoroughly with soap and water kills the viruses. This means the daily water requirements of the family has increased and Devi has to get more water.

Like Devi, hundreds of thousands of rural women complained of the extra distances they had to walk to find water for the family. This was reflected in the recent first-of-its-kind national survey on the impact of COVID-19 pandemic on rural India, conducted by *Gaon Connection*, across 23 states and three union territories in the country.

Overall, two-thirds of the households reported having adequate water. But 38 per cent households complained that the women had to travel extra to meet the additional water needs of the family.

At present, nearly 820 million people in 12 major river basins of India are facing high to extreme water stress situations. In a recent publication of NITI Aayog titled *Composite Water Management Index*, about 82 per cent of rural households in India do not have individual piped water supply, and 163 million live without access to clean



water close by.

Women in rural India are often the primary providers of water for their families. They have, for years, been fetching water. This coupled with the lockdown during the peak summer months of April and May has put a direct burden on rural women. "The burden on villagers for water aggravated amid the pandemic," Shraddha Shrinagarpure, chief executive officer of Swaraj Foundation, a non-profit working with tribal communities of Palghar in Maharashtra, told *Gaon Connection*. According to her, villages in Mokhada block of Palghar suffer acute water scarcity for at least three months a year. Rivers and wells mostly run dry after November-December and acute water scarcity sets in after Holi, she said.

"For two pots of water, people in these tribal villages have to stay awake the entire night to fetch water from the local dugwells. They have to descend into the dry well to collect water using a *vaati* [bowl] to fill a *handa* [pot to store water]. Imagine the crisis for such people if they have to fetch extra water for regularly washing hands," she added.

HIGHEST WATER BURDEN ON CHHATTISGARH'S RURAL WOMEN

In Chhattisgarh, eight in 10 households said women had to put in extra effort to access water during the COVID19 lockdown. Experts from local non-profits attribute two factors to this – fast depleting groundwater levels, and chemical contamination of water by pollutants such as fluoride, arsenic, iron, and other heavy metals at many places in the state.

"Tribal people living in Bastar face water problems. As there are many mines here, people suffer because of laal paani [red contaminated water]. They are forced to drink that water," Tameshwar Sinha, a resident of Bastar, Chhattisgarh, told *Gaon Connection*. "That is why many villagers seek natural sources of water. For which the rural women have to walk one or two kilometres a day. But what can they do? Water from natural sources is better than drinking the *laal paani*," he added. "Apart from mining areas, there are several villages in the state which have their own set of water problems. There is a high amount of fluoride in water here," Raju Samsun, a resident of Rajnandgaon district, Chhattisgarh told *Gaon Connection*.

"Women have to go as far as one or one-and-a-half kilometres daily to arrange water. Some fetch water from jihiya (drains) or hand pumps from nearby villages," said Samsun who is associated with Lokshakti Samaj Sevi Sansthan, a non-profit which has been working on water, sanitation and health issues in the state for the past 35 years.



WATER, AN UPHILL TASK IN UTTARAKHAND

The survey revealed that women in 67 per cent rural households in Uttarakhand had to put in extra efforts to access water. "We face a lot of problems in arranging water. The water here is supplied hardly once in two days. Not just for us, we have to arrange for water for our cows and goats too," Vicky Kumar Arya, who lives in Almorah, Uttarakhand told *Gaon Connection*.

While rural households in Himachal Pradesh, Rajasthan, Haryana, Jammu & Kashmir, and Gujarat were most likely to have adequate water for handwashing, households in Odisha, Jharkhand, Tripura and West Bengal reported low water availability for handwashing repeatedly.

According to the *Gaon Connection* survey, 65 per cent rural households in Odisha did not have adequate water for handwashing in the pandemic. "In our village, there is a problem of water supply. In this time of trouble [pandemic], we are unable to go outside to fetch water," Padmini Mudili, a resident of Puri, Odisha told *Gaon Connection*.

Many rural households in Jharkhand claimed they did not have piped water supply. The survey showed 55 per cent of rural households in the state work hard for additional water in the pandemic. "There's no proper water facility for us here. We do not have hand pumps or taps. The other villages have already received these facilities," Rupa Devi, a resident of Palojori village, Deoghar, Jharkhand told *Gaon Connection*.

"Sometimes when the line gets damaged, labourers ask us for money. We have lost our livelihoods in the lockdown, how would we arrange for money? We want the government to look into this problem so that we get a regular supply of water," she added.

Rural households in Uttar Pradesh also complained of water shortage in the lockdown especially in Bundelkhand, Sonbhadra and Mathura. The survey revealed around three (27 per cent) in every 10 rural households in the state had to work hard to get additional water.

Pieshe, who lives in Maura village in Mathura of Uttar Pradesh struggled with water shortage in the pandemic. But her woes were not limited to the pandemic. "Hamne paani ka sukh to kabhi dekhyo na hai (I never had enough water in my life)," she lamented. "It has been 35 years of our marriage but I have been struggling for water for ever. Every day I have to walk to another village to fetch water. Aadmi jiye ya mare, hume wanhi se paani lana hota ha (Whether we live or die, we have to bring water from there)," she said, exasperated.

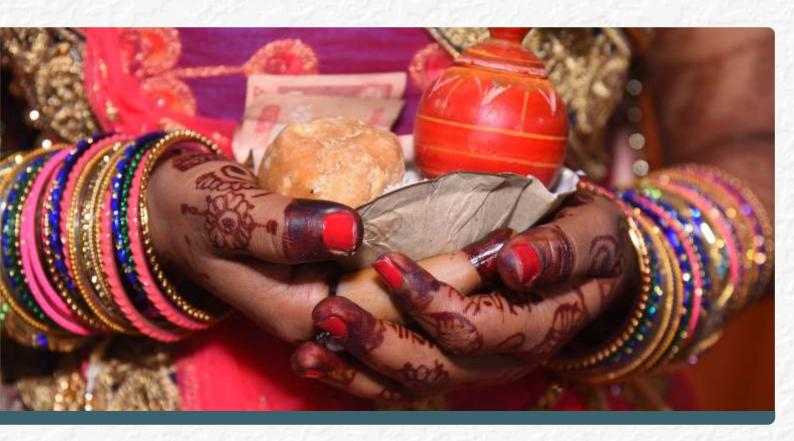
For a large population already suffering water woes, arranging water for handwashing seems like a distant dream.





West Bengal which accounts for about 26 per cent marriages of girls aged 15-19 years, in India

Story by Purnima Sah Cooch Behar, West Bengal



Wo months ago, 16-year-old Sumi Roy, from a village in Cooch Behar district of North Bengal, over 700-kilometre from Kolkata, was married off against her will to a 20-year-old boy from a neighbouring village. Her father, a farmer, was heavily in debt and marrying off his daughter in the COVID-19 lockdown also meant less wedding expenditure.

Sumi informed the state's child helpline by dialing 1098, and the local police intervened and warned her parents. However, the same night, her wedding to the boy was solemnised. "I was petrified. The moment I reached the groom's place, I created a ruckus by screaming till I woke up the neighbours who gathered around and the police arrived," Sumi narrated her ordeal to *Gaon Connection*.

It is not uncommon in the villages of Bara Atharakotha and Chhota Atharakotha in Cooch Behar district of West Bengal for girls to be married at the age of 15 or younger and even bear children. As per the Indian government's Child Marriage Restraint Act, 1929, a boy has to be 21 years old and the girl 18 years old for solemnising the marriage. But that hasn't stopped child marriages in the country, especially in the low-income group families.

According to the Union health ministry's National Family Health Survey-4: 2015-16, West Bengal accounts for 25.6 per cent of child marriage of girls aged 15-19 years in the country.

The state also has the dubious distinction of having one of the highest numbers of teenage pregnancies in the country. A 2020 report by the Observer Research Foundation says, at least 27 per cent of women in India are married before the legal age of 18 years. The trend is higher in West Bengal (44 per cent), Bihar (42 per cent), Jharkhand (39 per cent), Andhra Pradesh (36 per cent),



Jammu & Kashmir, Kerala (9 per cent) and Lakshadweep (5 per cent).

"We have partnered with the state government to run seven child helplines across West Bengal. Over the last two years, we have prevented nearly 1,932 cases of child marriage in the state and received around 966 calls reporting child marriages, on the child helplines," Lopamudra Mullick, programme manager (Child Protection) at Child in Need Institute (1800 121 5323 Teenline by CINI), a non-profit, based in South 24 Parganas, West Bengal, told *Gaon Connection*. The Teenline by CINI is 1800 121 5323. Cooch Behar district in north Bengal is one of the top eight child marriage-prone districts in West Bengal. More than half the marriages — 54 per cent —in the district are child marriages, as per the District Child Protection Unit. These numbers have remained the same for five years now. The other child marriage-prone districts are North and South 24 Parganas, Murshidabad, Malda, Howrah, North Dinajpur, Jalpaiguri and East Mednipur.

Between March 1 and August 15 this year, amid the COVID-19 pandemic and the lockdown, 119 child marriage cases were reported in Cooch Behar district, as recorded by the District Child Protection Unit. Of these, 97 marriages were stopped and seven FIRs were lodged. The rest of the cases were related to elopement and are under investigation.

"Cooch Behar has just two child helplines, and that is woefully inadequate," Snehashis Chowdhury, district child protection officer told *Gaon Connection*. "The pandemic has made our work even more difficult. We were conducting awareness programmes to educate the panchayats. That has stopped now and many outreach workers are infected or quarantined," he added.

According to Chowdhury, sometimes, the District Child Protection Unit is tipped off about child marriages in remote villages such as Tufanganj, Dinhata, Mathabhanga, Mekhliganj and Haldibari. "We receive the information just a couple of hours before the marriage. Some of these villages are located closer to Assam or the Bangladesh border, and even the police find it difficult to reach there in time," he lamented.

MARRIAGE OF CONVENIENCE

Kusum Khatun was married to 18-year-old Amir Haq. She had only studied till the sixth. "My in-laws saw me and because they thought I was beautiful they demanded less dowry. My parents agreed," said the 15-year-old who is already pregnant. "It was convenient for my parents to conduct the wedding during the lockdown as the wedding expenses were greatly reduced," she stated.

Paulami Das who wanted to become a teacher was forced to discontinue studies even though she was a good student. The 15-year-old was married off to 18-year-old Hemant Das. "I begged my parents to allow me to continue studying so that I could get a job and look after them, but they didn't agree," Paulami, who is now pregnant, told *Gaon Connection*.

Like her, Rosida Khatun was also not allowed to finish her schooling and was married off at an age of 15. Within a year she gave birth to her first child. Three years later she had her second baby. To make both the ends meet, she and her husband now work as contract labourers. "I wish I had at least studied till class ten. Maybe I could have landed a government job," she said.

LURED AND SOLD OFF

Sometimes, teenage girls, lured by promises of marriage and a better life, run away from home. Like 16-year-old Rupa Khatun eloped with 20-year-old Riju Haq during the lockdown. "We thought the lockdown was the best time to run away as tracing our whereabouts would be more difficult," said Rupa who is already pregnant.

For 14-year-old Riya Roy who eloped with her boyfriend, life became a nightmare. He sold her into the flesh trade and for almost a year she was forced to service many men in a day in Delhi. Finally, when she was rescued, she bore the marks of violence, both physical and mental, and was severely traumatised. After counselling sessions and rehabilitation, she went back to school and passed her tenth exam this year.

"Preventing child marriages is an uphill task," Iti Biswas, health assistant from the sub-health centre Bara Atharakotha in Cooch Behar told *Gaon Connection*. "In January this year, we stopped a 15-year-old's wedding. But within a few days the family married her off. And a few months later the girl visited



the health centre, six months pregnant," narrated Biswas. According to her, in such a situation, the first priority is saving the life of a young mother. There is also the problem of an uncooperative panchayat, political goons and a widely held belief that breaking marriages is evil, she added.

The biggest challenge, Chowdhury said, is changing the mindsets of people who think there is nothing wrong with child marriage, a practice of their forefathers.

"We want to educate every individual in the society. Boys who marry at the age of seventeen or eighteen must realise it is illegal and they can only marry after they turn twenty one," Sudeshna Roy, special consultant with West Bengal Commission for Protection of Child Rights told *Gaon Connection*. The Commission's helpline numbers are: 9836 300 300 (WhatsApp) and 033 6824 6363. The West Bengal Commission for Protection of Child Rights has aggressively conducted awareness programmes through webinars, pamphlets and posters against the evils of child marriage. Also, school text books of the West Bengal state board carry a page with information on child rights and important phone numbers where child marriages can be reported.

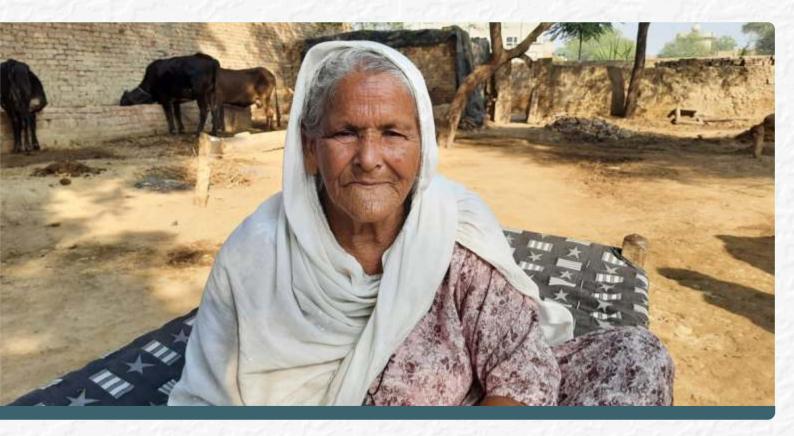
Ekhon Biye Noy (No Marriage Now) is the message, anti-child marriage activists are spreading in the state. Whether it will save other Sumis, Rosidas and Rupas remains to be seen.

(Some of the names in the story have been changed to protect the identity of the people. Names of the villages they come from are withheld for the same reason.)





Story by **Vivek Gupta**



Three-hundred-and-fifty kilometres away from the power corridors of Vigyan Bhavan in New Delhi, where the fifth round of negotiations over the contentious agri laws is at present being held between farmer leaders and the central government, 65-year-old Rajinder Kaur and her daughter-in -law, Taranjeet Kaur, are busier than usual at their six-acre farm in Ghudda village in Punjab's Bathinda district.

Rajinder's son Resham Singh left home last week, to join the tens of thousand of farmers in Delhi who are protesting against the agri-bills. So, the chores he did of feeding the cattle, milking them, taking care of the calves, etc. have been taken over by his wife and mother. "Although I want all the farmers to return home as soon as possible, they must come back as winners," Taranjeet told *Gaon Connection*. "But we are prepared for a long haul if the protest in Delhi lingers on," the 32-year-old added.

Neighbours have helped both the women with irrigating the recently-sown wheat. Meanwhile, Rajinder managed to spray pesticides on the land with the help of a labourer. "These are desperate times. We all need to stand up," she said.

As village after village in the Malwa region of Punjab, which comprises 11 districts of Ferozepur, Muktsar, Faridkot, Moga, Ludhiana, Bathinda, Mansa, Sangrur, Patiala, Anandpur Sahib and Fatehgarh Sahib, have joined the protests against the Centre's three new agri laws, rural women in the state have taken up the cudgels to till and irrigate their lands, look after their cattle and keep the rabi farming activities going while a large chunk of men and youth from the villages are away at Delhi.

Take the case of Rajinder's Ghudda village which has a population of about 5,500 people in about 983 households.



The men from about 150 of these households are at the protests in Delhi. "In their absence, we make sure that their families and farms get all possible support," Ashwini Ghudda, a local farmer leader of Nauzwan Bharat Sabha, told *Gaon Connection*. "Our workers even helped them in cotton harvesting in many fields. The village panchayats are offering all sorts of help to families whose men are in Delhi," he added.

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The mothers, wives, daughters and sisters of the protesting farmers say that they are contributing to the cause by taking care of home and hearth by staying back. "We want our sons and husbands to stay as long as it takes to repeal these black laws passed by the Modi government, while we are strongly staying behind them, praying for their safe return," Dalip Kaur from Baras in Patiala's Patran Tehsil, told *Gaon Connection*. The 60-year-old cuts fodder for the cattle, feeds them and then goes to her land to check on the wheat crop. "What option do I have? All the men in the house have gone to Delhi for the protest. The cattle will go hungry if I don't work," she said.

There are hundreds of women like Taranjeet, Rajinder and Dalip Kaur in Punjab who are holding fort at their villages while the rest are away, 'fighting'. "The farm bills have attacked the very foundation of our existence. Therefore we all need to put up a strong front till the time these Acts are not repealed," said Taranjeet.

Meanwhile, far away from the green fields and comfort of their homes, in the harsh metropolis of Delhi, the farmers are struggling to keep their resolve intact in the cold winter days, camping outdoors, sometimes with no access to toilets or running water.

"There is a huge problem at the protest sites, especially of toilets," Gurpreet Kaur, a young farmer leader from Baras admitted. "But no movement is successful without hardships. Everyone whether in protest or back home has been displaying exemplary conduct," she added. Gurpreet who has come back to her village to muster more protestors and logistics, will be returning to Delhi with another batch of men and women.

Eighty-year-old Mohinder Kaur of Bathinda's Bahadurgarh Jandian village, says she still has a lot of fight left in her. She has helped her husband and sons in farming all her life and even now she regularly works on the farm and does whatever she can to take care of it. "If we don't stand up right now, our future generation will suffer," Mohinder told *Gaon Connection*.

There were apprehensions, especially when young people left home to join the protests, said 22-year-old Mandeep Kaur, from Harigarh village in Punjab's Barnala district, whose younger brother has accompanied their father to Delhi. "Many warned us of the dangers involved and advised us not to send him," said Mandeep who is still worried, as her family was latchicharged and water cannoned and are now braving the winter nights outdoors. "But this agitation is a battle for our survival. Even we will go to Delhi if needed in future," she declared.

"I will never ask my husband to come back until these laws are taken back by the centre," Karamjot Kaur, also from Harigarh, told *Gaon Connection*. The unprecedented scale of the people's movement is one of the largest Punjab has seen, said Harjeshwar Pal Singh, assistant professor (history) at the Chandigarh-based Sri Guru Gobind Singh (SGGS) College. "It has revived the bondings within villages and brought together farm organisations despite differences in their ideologies," he told *Gaon Connection*.

He dismissed the conspiracy theories doing the rounds that the agitation was politically funded. "Those who understand the Punjabi culture will never make such statements," he said. "The resources were largely mobilised by people themselves using voluntary contributions and village level donations.

The logistical support is being provided by langurs and gurudwaras," he explained.

BEHIND EVERY PROTESTING FARMER ...

"We make announcements through the gurdwara public address system and villagers generously come forward and donate supplies that are sent via tractors and trolleys daily basis to the Delhi borders," Sukhwinder Singh, a farm leader from Bhartiya Kisan Union (BKU) Ugrahan from Barnala district, informed *Gaon Connection*. He said the supplies included milk and cooked food like *saag* and *makki ki roti*. The winters were a blessing as the milk and food did not spoil so easily, Sukhwinder said.

"Every day three quintals of milk is dispatched through a private bus operator who runs a free bus service from Dhaula to Delhi," said Krishan Singh Shanna, from Barnala district. "The milk supply from our district has not stopped ever since protest began in Delhi," he added proudly.

As the cups of hot tea, and food from home bolster the spirit of the protesting farmers, the meeting is underway at hall number 2, Vigyan Bhavan where Narendra Singh Tomar, Union minister of agriculture and farmer welfare, rural development and panchayat raj, Piyush Goyal, Union railways and commerce minister, and Som Prakash, minister of state for commerce, are negotiating with the farmers. "Today, will be the final battle, one way or another. After this there will be no more conversations," Rampal Singh, the leader of Kisan Sanyukt Morcha, declared in a statement.



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INSIGHTS
INDIA'S BIGGEST RURAL INSIGHTS PLATFORM **CHAPTER** CLIMATE
CHANGE



loods, cyclones, drought, heatwaves and untimely rainfall have been harbingers of the adverse consequences of climate change. The COVID-19 pandemic this year has further highlighted the threats climate change can pose to the world, as some reports suggest a correlation between the changing climate and emergence of new viruses and diseases.

In June 2020, the Union ministry of earth sciences released an important report titled 'Assessment of climate change over the Indian region', which documents the rising global temperatures and impact of climate change on India. It is predicted that by the end of the 21st century, in a business-as-usual scenario, the average temperature over India will rise by approximately 4.4°C relative to the recent past (1976–2005 average). There will be more heatwaves, droughts, tropical cyclones, warming of the Indian Ocean and rising sea levels, and a shift in rainfall patterns.

According to another recent study published in December 2020 by the Council on Energy, Environment and Water (CEEW) India, which looks at hydro-meteorological disasters between 1970 and 2019, India has had 310 extreme weather events post-2005 as compared to 250 between 1970 and 2005, with over 75 per cent of Indian districts (comprising 638 million people) becoming targets of such extreme events.

Between 1970 and 2019, climate change led to heavy rain and increased water levels, exposing 97.5 million people to floods every year. Additionally, 79 districts experienced extreme drought while 24 districts experienced extreme cyclones every year. Extreme rainfall tripled between 1950 and 2015 and affected 825 million people with 17 million rendered homeless and 69,000 killed.

In 2020, the draft Environmental Impact Assessment, a process that evaluates the potential environmental impact of a particular project such as irrigation dams, mines, industrial units, was proposed by the Union ministry of environment, forest and climate change.

However, environmentalists fear that this would further dilute the process since the draft exempts nearly 40 projects from approval requirements and public consultation, which are believed to have a severe impact on the environment.

TEMPERATURE RISE AND HEATWAVES

On 26 May, this year, Churu in Rajasthan recorded a temperature of 50°C while the temperature in Delhi soared to 47.8°C. Madhya Pradesh, Maharashtra, and Uttar Pradesh also experienced severe heat waves this summer. According to the Union earth sciences ministry report, India's average temperature has risen by 0.7°C between 1901 and 2018. This rise is primarily due to an increase in global warming because of higher emissions of greenhouse gases (GHG).

The ministry's June 2020 report has found that the Hindu Kush Himalayas (HKH) warmed by 1.3 degrees between 1951 and 2014. For the communities living in the Indian Himalayan region, the vulnerabilities are particularly high due to the steep terrain, which also limits the feasibility of such elevated agricultural systems.

The report also warns that the frequency of summer heatwaves is projected to increase by two-three times, while the duration of these heatwaves is expected to double (both relative to the baseline period of 1976-2005).

LOCUST SWARMS

In 2020, desert locusts (a grasshopper species) swarmed parts of India. This was the worst locust attack that India had witnessed in decades. Locust swarms are known to consume everything in their path leaving behind destroyed crops and barren land, and the large-scale damage could lead to scarcity of food.

In May 2020, the locusts were reported to have destroyed crops in Rajasthan and Madhya Pradesh. In June, these swarms appeared in Delhi and nearby regions and invaded sugarcane fields and threatened further crop damage at a time when people, especially in rural regions, had already incurred job losses.

Research points out that the warming oceans that feed cyclones have also bred record-breaking swarms of desert locusts. Such plagues could grow bigger and more widespread with climate change. This year's locust attacks, which spread from Kenya to Pakistan and India, are the worst in the past 30 years.

CYCLONES

While parts of the country reeled under heatwaves and soaring temperatures in May, Odisha and West Bengal faced the wrath of Cyclone Amphan. It left behind loss of life, property, flooded villages and crushed livelihoods. According to climate experts, rising sea temperatures and global warming cause such tropical storms, and these are bound to increase as the climate crisis worsens in the absence of adequate response.

In Odisha alone, nearly 9,833 villages were affected. Fishers and livestock rearers also bore the brunt of the cyclone due to the damage. In the Sundarbans, most of the existing infrastructure was harmed. This, along with the loss of employment due to the pandemic, exacerbated the devastation.

Only a few days after Amphan struck the east coast of India, Cyclone Nisarga hit the western shores of the country, damaging many slum and rural dwellings and thousands of hectares of land in Maharashtra

In November 2020, another Very Severe Cyclonic Storm Nivar was formed in the Bay of Bengal, off the coast of Tamil Nadu.

FLOODS

Floods were frequent and devastating in different parts of the country this year. Assam witnessed an onslaught of floods this year starting in May 2020, and within the next few months, millions of people were affected, their homes submerged, means of livelihood destroyed and property damaged. Amid the pandemic, several healthcare workers had to wade through submerged villages to provide medicines while also dealing with other potential water-borne diseases.

Heavy rainfall triggered floods in other parts of the country such as Kerala in the month of August, killing over 20 people. It resulted in landslides in Munnar, where approximately 50 people died. There was heavy loss of livestock and agriculture.

Similarly, in Bihar, nearly 8.3 million people across 16 districts were affected, and hundreds of hectares of agricultural land were destroyed. Uttar Pradesh also faced massive floods this year.

LIGHTNING STRIKES

According to data recorded by the National Disaster Management Authority, lightning strikes have killed 315 people, 90 per cent of them in Uttar Pradesh and Bihar. All of these took place between the months of May and July this year. Most people who died were farmers working in their fields when lightning struck. Bihar Chief Minister Nitish Kumar announced a compensation of four lakh rupees each to the families of the deceased, and free treatment for the injured. While thousands of people die in India due to lightning strikes and heavy rains, this year in particular saw plenty of thunder cloud formation, atypical for the month of June in that region.

DELAYED MONSOON WITHDRAWAL

The seasonal (June-September) southwest monsoon rainfall over the country as a whole was 109 per cent of its Long Period Average (LPA) in 2020. It was the third highest after 112 per cent of LPA in 1994 and 110 per cent of LPA in 2019.

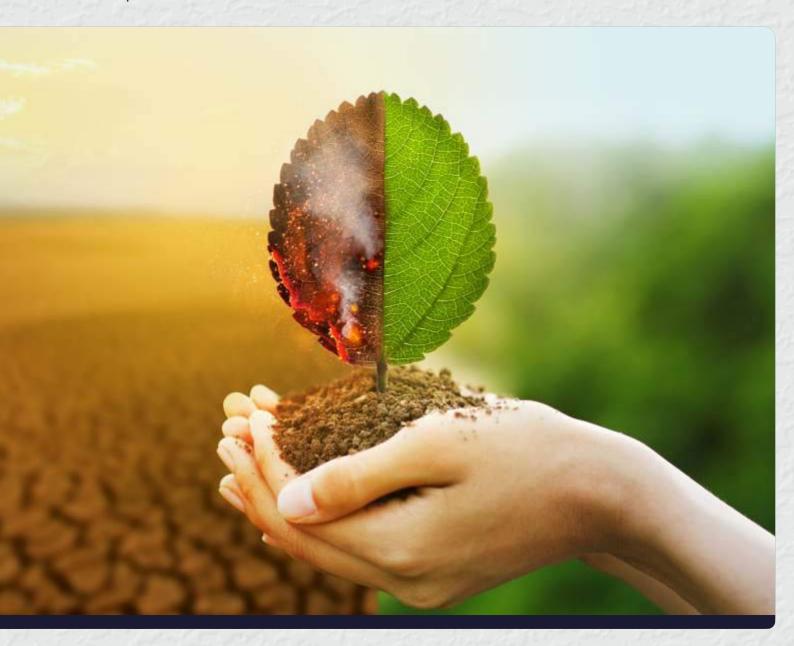
During the monsoon season 2020, a total number of 12 Low Pressure Systems were formed. Due to active monsoon conditions, riverine floods occurred over Odisha, Telangana, Madhya Pradesh, Maharashtra, Gujarat and Rajasthan. The active monsoon conditions consecutively for 4 weeks led to excess rainfall activity over the country.

The formation of two low pressure areas in the month of September led to an active monsoon trough which delayed the withdrawal of monsoon. The Southwest Monsoon withdrew from the entire country on 28th October 2020.

While COVID-19 has had a devastating effect on the world in 2020, climate change has also been playing havoc. Changes in rainfall, temperatures, sea levels and weather patterns have caused enormous damage and grief in the country. The impact of floods, rains, droughts, violent storms and locust attacks of Biblical proportions created havoc along with the pandemic.

On a positive note, a significant milestone of the year was the launch of India's first climate change assessment report — Assessment of Climate Change over the Indian Region — prepared by the Union Ministry of Earth Sciences.

Gaon Connection investigates the adverse effects of climate change and presents a selection of stories about the impact it has had on the land.







On June 18, Prime Minister Narendra Modi launched the auction of 41 blocks of coal for commercial mining in the country. The very next day, on June 19, India's first climate change assessment report — Assessment of Climate Change over the Indian Region — prepared by the Union Ministry of Earth Sciences, was formally released.

The report notes the average temperature in the country is projected to rise further by approximately 4.4°C by the end of the century. This means an increase in the intensity and frequency of extreme weather events. The rise in temperature is induced by greenhouse gas emissions.

Combustion of coal is a major contributor to such emissions. Coal, from mining to transportation and utilisation in thermal power plants and disposal as fly-ash, is linked with ecological degradation, carbon emissions and climate change. However, while launching the auction process, Modi called it a "big step". He described it as a "win-win situation for every stakeholder. The market for coal is now open. It will help all sectors".

The commercial mining of these coal blocks is expected to generate approximately Rs 33,000 crore of capital investment in the country over the next five to seven years. These blocks, spread across Odisha (9), Jharkhand (9), Madhya Pradesh (11), Maharashtra (3) and Chhattisgarh (9), are expected to provide employment to 2,80,000 people and contribute Rs 20,000 crore revenue annually to the state governments.

Meanwhile, the Ministry of Earth Sciences' report, the first of its kind for the Indian region, raises concerns over anthropogenic contribution to global warming and climate change, which is already manifesting in terms of an increase in extreme weather events.

"If the current GHG [greenhouse gases] emission rates are sustained, the global average temperature is likely to rise by nearly 5°C, and possibly more, by the end of the twenty-first century. Even if all the commitments (called the "Nationally Determined Contributions") made under the 2015 Paris Agreement are met, it is projected that global warming will exceed 3°C by the end of the century," reads the report.

It must be noted that India ratified the Paris Agreement on climate change and pledged a 33-35 per cent reduction in emissions intensity by 2030, compared to 2005 levels. It also plans for 40 per cent of installed electric capacity to be renewable or nuclear by 2030.

"Knowing fully well how the long-term impacts are looking, and continuing to act in cognitive dissonance, by expanding more coal projects, loosening of environmental norms, and opening up pristine natural ecosystems to commercial activity shows that all sides of the government decision-making system don't have the same view of the solutions," said Aarti Khosla, the director of Climate Trends, New Delhi.

4.4°C TEMPERATURE RISE BY 2099 IN INDIA

As per the climate change assessment report, the average temperature in the country has risen by around 0.7°C during 1901-2018. This is largely on account of GHG-induced warming, partially offset by forcing due to anthropogenic aerosols and changes in land use and land cover.

The report projects that by the end of the twenty-first century (2070-2099), average temperature over India may rise by approximately 4.4°C relative to the recent past (1976-2005 average).

Both the temperatures of the warmest day and the coldest night are on the rise too. By the end of the twenty-first century, these temperatures are projected to rise by approximately 4.7°C and 5.5°C, respectively, relative to the corresponding temperatures in the recent past (1976-2005 average).

"With an observed change of 0.7°C in average temperatures over India, we already see a spike in extreme weather events over the region. Rainfall patterns have changed, with longer dry spells intermittent with heavy rainfall events. The frequency of very severe cyclones has increased over the Arabian Sea," said Roxy Mathew Koll, a scientist with Pune-based Indian Institute of Tropical Meteorology, and lead author, IPCC Oceans and Cryosphere.

The assessment report warns of an increased frequency of heatwaves. "The frequency of summer (April– June) heat waves over India is projected to be 3-4 times higher by the end of the twenty-first century... The average duration of heatwave events is also projected to approximately double..."

The Hindu Kush Himalayan region has experienced a temperature rise of about 1.3°C between 1951 and 2014 and the annual mean surface temperature is expected to increase by about 5.2°C by the end of the twenty first century.

"The impacts of climate change will be difficult to manage... Changes in the Hindu Kush Himalayan mountains, glaciers and snow will have a significant impact on water systems, already scarce in South Asia," said David Molden, director-general of the International Centre for Integrated Mountain Development, Kathmandu.

CHANGING RAINFALL PATTERN AND INCREASING DROUGHTS

Between 1951 and 2015, the summer monsoon precipitation (June to September) over India declined by around six per cent, notably over the Indo-Gangetic Plains and the Western Ghats.

"The overall decrease of seasonal summer monsoon rainfall during the last 6-7 decades has led to an increased propensity for droughts over India. Both the frequency and spatial extent of droughts have increased significantly during 1951-2016," reads the assessment report.

Areas over Central India, southwest coast, south peninsula and north-eastern region experienced more than two droughts per decade, and the area affected by drought has also increased by 1.3 per cent per decade over the same period (1951-2016).

The climate change assessment report has projected the likelihood of an increase in the frequency, intensity and area under drought conditions in India by the end of the 21st century.



A RISE IN THE SEA LEVEL AND INTENSE STORMS

Global warming has led to sea levels rising because of the continental ice melt and thermal expansion of ocean water. Between 1874 and 2004, the sea-level rose in the North Indian Ocean at a rate of 1.06-1.75 mm per year, and accelerated to 3.3 mm per year in the last two and a half decades.

The recent report warns that by the end of the twenty-first century, steric sea-level (caused by ocean thermal expansion and salinity variations) in the North Indian Ocean is projected to rise by approximately 300 mm relative to the average over 1986-2005.

Nearly 250 million people live within 50 kilometres of the country's coastline. More than seven million families of fishers and farmers are threatened by the rising seas. Between 1990 and 2016, the country has already lost 235 square km of its coastal area.

Interestingly, the climate change assessment report notes a "significant reduction in the annual frequency of tropical cyclones over the NIO [North Indian Ocean] basin since the middle of the twentieth century (1951–2018). In contrast, the frequency of very severe cyclonic storms (VSCSs) during the post-monsoon season has increased significantly during the last two decade (2000–2018)".

"The report makes clear climate change is not an abstract idea; its effects are with us already in India, and are expected to accelerate," said Navroz K Dubash, professor at the Centre for Policy Research, and IPCC Chapter Lead Author.

In such a scenario, is the mining of coal and its combustion a "win-win situation"?







Pointing to an elevated structure on bamboo poles behind him, 42-year-old Ilias Hossain, said it was his home. There are hundreds of such 'hanging houses' in Kalabagi village, Khulna district, Bangladesh. This is the only way to survive the wrath of the Shibsa river, Hossain told *Gaon Connection*. Cyclone Aila that hit the coastal areas of the country in 2009 changed the lives of the people in Khulna's Sutarkhali union of Dakop upazila forever.

"We had some land, and we made a living through agriculture. But Aila finished us," said Hossain. "We lost our homes and our land. There is no other option other than to live this way. High tides are frequent, so we elevated the house," he explained.

According to the Bangladesh government, Cyclone Aila killed 190 people, injured over 7,000, and damaged and destroyed over five lakh houses in 11 districts in southern Bangladesh, including the most-affected districts of Satkhira, Khulna, Bagerhat, Barguna, Barisal, Bhola, Pirojpur and Patuakhali.

The houses in Kalabagi were once on the ground. There were front yards where children played. There were small vegetable gardens. But, when Aila came visiting, they lost everything. However, the disaster taught them to build 'hanging houses', their best bet against high tides.

Most people at Kalabagi make a living by catching shrimps in the river and some villagers work in the Sundarbans, across the river Shibsa. "The village had a lot of lands. But, it was all lost due to erosion," said 45-year-old Ruhul Amin, a resident of the village. Moniruzzaman, 48, also faced the same plight. His house was near the Sundarbans, but he had to move when river erosion increased.

Cyclone Aila caused extensive damage to over 1,400 kilometres of embankments, 8,800 kilometres of roads, and 3,50,000 acres of farmland. The embankment built after Cyclone Aila has been giving way in the past few years. New embankments are being constructed around Sutarkhali funding from the World Bank. More than five hundred families of Kalabagi are living outside the embankment. Since there is the constant threat of erosion by the Shibsa river, the new embankments are being built far away.

LACK OF EMPLOYMENT OPPORTUNITIES

The Sundarbans and the Shibsa river have long provided livelihoods to the Kalabagi villagers, but their income has declined since Aila. While new rules prevent them from catching shrimp, alternative job opportunities have not been provided to them. People who were already devastated by natural disasters have lost jobs too.

Saiful Islam, 44, a resident of Kalabagi, remembers how the village was before the cyclone hit. "Our houses were on the ground. We had green trees. There were roads inside the village. There was work, and the economic situation was good," Saiful said. "Since Cyclone Aila, we have faced many natural disasters. But, there is no help from the government," he lamented.

Rafiqul Islam Khokon, executive director of Khulna-based non-profit Rupantar, said the area has been at high risk after the cyclone. "Locals lost land due to erosion. This has made infrastructural development impossible in the area," he said. "These people are victims of climate change. They have to be relocated and rehabilitated," he added.

LACK OF CLEAN DRINKING WATER

Even before the cyclone, Kalabagi had a shortage of clean drinking water. The water crisis increased because the cyclone resulted in saline water entering ponds, canals and even groundwater. Even digging tubewells didn't help get fresh water. Even the water of the river that is sweet during the Bengali month of Jaistha-Ashar turns saline post this period. People now store water brought from Dakop upazila, Sadar and Khulna in numerous plastic drums. People save rainwater in drums. The problem is so severe that people fear theft of water from the drums and seal the mouth of the drums tight.

"I can eat rice thrice a day, but I can't drink water frequently," said Sakiran Bibi, 45, wife of Jalal Mir of Kalagabi. "During the rainy season, I use rainwater and save it too. However, when the rains stop, there is a severe shortage of drinking water," added another villager Zaida Khatun.

SALINE WATER AFFECTS PREGNANCY

The saline water is also leading to miscarriages in the village. Between 2012 and 2017, the International Center for Diarrheal Disease Research, Bangladesh monitored 12,867 pregnant women from coastal and hilly areas, from the time they conceived till they delivered. It found that women from coastal areas, living within 20 kilometers from the sea, were more prone to miscarriages than women from the highland areas. This is due to the amount of salt in their drinking water.

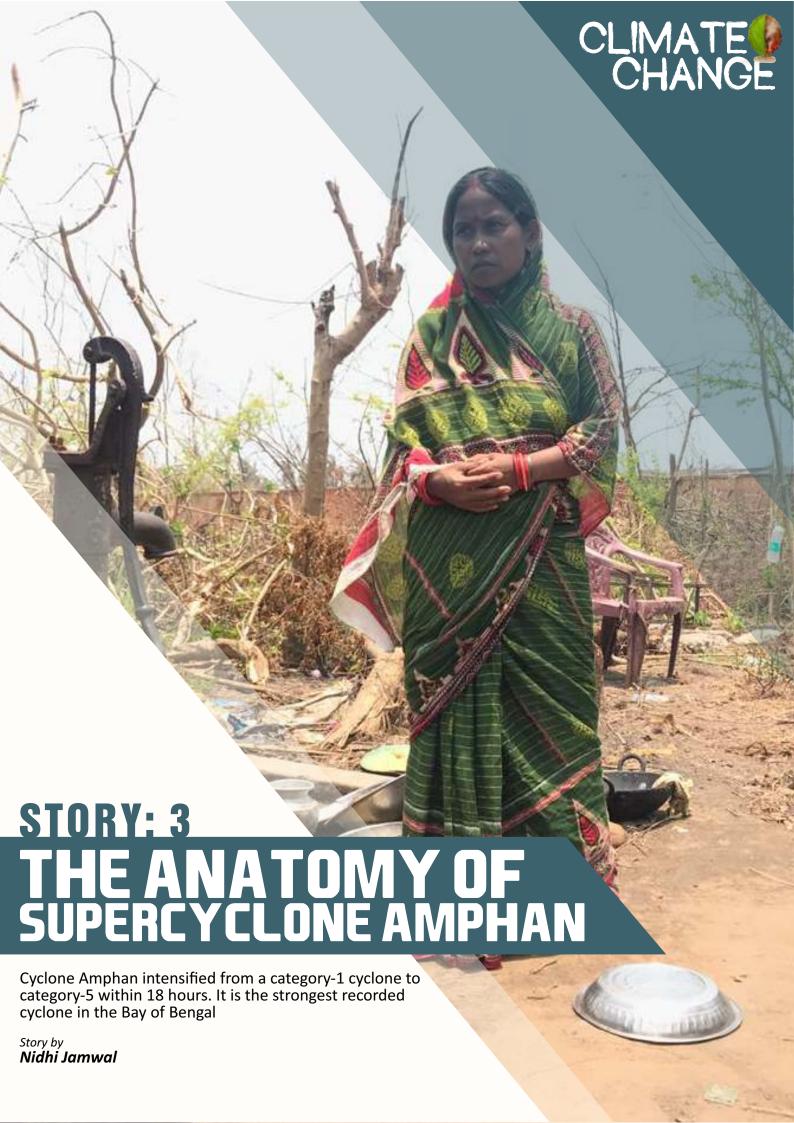
They work long hours in the river's saline water, catching shrimps and even drink saline water. Shefali Begum, 60, has spent her entire life using saline water. "We are poor people. Where do we go?" she sighed.



CLIMATE REFUGEES

It's been 11 years since Cyclone Aila hit the area, but people continue to face extreme crises. The 'Hanging village' of Kalabagi is a testimony to this. People living along the coast of Bangladesh are becoming climate refugees. A new study published in Scientific Reports journal said Bangladesh is at high risk from rising sea levels. Strong coastal storms can hit. The strength of the waves can increase and there may be high tides. The risk of periodic flooding could affect millions.

"The number of cyclones in the coastal areas of Bangladesh has increased in the last few years," said Gawhar Naeem Wara, convener of the Bangladesh Disaster Forum. "The strength of the cyclone, river erosion and tidal surges have also increased. Many people in coastal areas lost their homes. Proper rehabilitation of these people affected by climate change is essential," he added.





Super cyclone Amphan weakened to an extremely severe cyclonic storm and moved north-northeastwards in the Bay of Bengal, and reached the West Bengal-Bangladesh coasts between Digha (West Bengal) and Hatiya Islands (Bangladesh) on May 20, in the afternoon hours. The India Meteorological Department (IMD) warned that "the cyclone would cause extensive large scale damage," including uprooting of communication and power poles, damage to standing crops and roads.

The met department issued a heavy rainfall warning in Odisha, West Bengal, Sikkim, Assam and Meghalaya. During landfall, the gale wind speed was expected to be 155 to 165 kilometres per hour (kmph), gusting to 185 kmph, along and off east Medinipur and north and south 24 Parganas districts, and 110-120 kmph, gusting to 130 kmph, over Kolkata, Hooghly, Howrah and West Medinipur districts of West Bengal.

Fishing activities were suspended. A storm surge of about four to five metres was "likely to inundate low lying areas of south & north 24 Parganas and about 3-4 meters over the low lying areas of East Medinipur District of West Bengal during the time of landfall". To provide help in West Bengal, 19 teams of the National Disaster Response Force were deployed, and four teams were kept as standbys. In Odisha, 13 teams were deployed and 17 were on standby.

The Bay of Bengal recorded a super cyclone after two decades. The last such super cyclone was in October 1999, when it lashed Odisha and killed over 10,000 people.

Cyclone Amphan intensified from a category-1 cyclone to a category 5 within 18 hours, becoming the strongest cyclone ever recorded in the Bay of Bengal.

"Bay of Bengal has been particularly warm, which may have had some role in the rapid intensification from a depression to a cyclone and then to a super cyclone in a very short time," explained Roxy Mathew Koll, climate scientist with Indian Institute of Tropical Meteorology, Pune.

For example, some of the INCOIS/NIOT moored buoys in the Bay of Bengal registered maximum surface temperatures of 32-34°C consecutively, for the first two weeks of May. "These are record temperatures driven by climate change— we have never seen such high values until now. These high temperatures can supercharge a cyclone since tropical cyclones primarily draw their energy from evaporation at the ocean surface," he added.

"Formation of cyclones needs many ingredients. A warmer ocean — anything more than 27.5 degree C, reduced wind shear, an area for convergence for making air flow rotate anti-clockwise to form a low pressure area, strong humidity level, etc," M Rajeevan, secretary, Union ministry of earth sciences told

Gaon Connection. "Only sea surface temperatures are not sufficient, both dynamical and thermo-dynamical factors will determine whether a cyclone will form or not," he added.

But, according to him, for intensification of a cyclone, ocean heat content is more important, not just temperatures at the ocean surface. "Both sea surface temperatures and ocean heat content are more this time. It could be an effect of global warming," he surmised.

This rapid intensification was also documented by the IMD during the Ockhi cyclone of 2017 which killed 347 fishers in Tamil Nadu and Kerala. A report by met department had noted the unusual features of Ockhi cyclone: "There was rapid intensification of Ockhi during its genesis stage, as it intensified into a CS [cyclonic storm] at 0830 IST of 30th, after its genesis as a depression at 0830 IST of 29th (within 24 hrs)." The report went on to mention that the cyclone "intensified from deep depression into a cyclonic storm over the Comorin area within six hours." This intensification normally takes two days.

"Global warming is leading to an increase in the heat content of the upper oceans around the globe," said V Vinoj, assistant professor, School of Earth, Ocean and Climate Sciences at the Indian Institute of Technology Bhubaneswar, Odisha. "This is also true for the oceanic regions around the Indian region. This is one of the causes of the increasing number of cyclonic activities in our region during pre-monsoon times," he added.

According to Sridhar Balasubramanian, associate professor with the department of mechanical engineering, Indian Institute of Technology Bombay, apart from the high sea surface temperature, atmospheric waves provide the necessary convective push for the formation of the cyclone Amphan.

These atmospheric waves include convectively-coupled Kelvin Wave (CCKW) and the Madden-Julian Oscillation (MJO). "The sea-surface temperature in the Bay was very high till May 11, after which it started dropping slowly. But, the cyclone Amphan started forming only from May 16," said Balasubramanian.

This is because by then the MJO had moved into our Indian Ocean basin and so had the convectively-coupled Kelvin wave. "Together, the high sea-surface temperature and these atmospheric waves gave the necessary push for the formation and intensification of the Cyclone Amphan," he added. As these waves have now decoupled from the system and moved out of our basin, the cyclone has started to weaken, he said.

From a Super Cyclone, Amphan weakened to an extremely severe cyclonic storm and at landfall was expected to be an extremely severe cyclonic storm, or could further weaken to a very severe cyclonic storm. Either way, the damage was going to be very high and timely evacuation of people living in low-lying areas and providing them safe shelter could save many lives. Such evacuation had saved several lives last May when Cyclone Fani hit Puri in Odisha.

But, the COVID-19 pandemic posed further challenges. "Cyclone Amphan, was expected to compound the COVID19 pandemic as well as lockdown and social distancing measures. While Bangladesh has an enviable system of cyclone warning and cyclone shelters, it would be almost impossible to practise social distancing in those shelters," said Saleemul Huq, director, International Centre for Climate Change and Development, Bangladesh.







Sitting in the courtyard of her pucca house, in Venkatraipur, a coastal village in Ganjam district of Odisha, about 165 kms away from Bhubaneswar, the state capital, M Savitri shudders at the memory of the 1999 super cyclone that killed about 10,000 people in the state. "The cyclone took away our home with it. Our entire village was inundated. We had nothing to eat. This house that you see is a new one," the 58-year-old told Gaon Connection.

But two decades later, there is a sense of confidence amongst the residents of Venkatraipur, and those of Noliasahi, 270 kilometers away, in Jagatsingphur district, as they have been certified 'Tsunami-Ready' by UNESCO last month.

These two tiny coastal villages in Odisha are the first to receive this certification among 22 Indian Ocean member states (countries). Venkatraipur and Noliasahi are now certified for both disaster-preparedness and disaster response. And this is important because Odisha's coastline is battered by calamitous cyclones year after year.

The Tsunami-Ready programme was devised by the Intergovernmental Oceanographic Commission of UNESCO to develop and implement the Indian Ocean Tsunami Warning and Mitigation System. It trains coastal communities in disaster-preparedness in order to minimise loss of life and property and works with various stakeholders such as the inhabitants of the tsunami-vulnerable villages, community leaders and national and local management agencies.

"Venkatraipur and Noliasahi achieved the distinction of becoming first in the Indian Ocean region to become Tsunami-Ready, and we hope this recognition by UNESCO-IOC will catalyse wider implementation in other communities in India and the wider Indian Ocean region," said Srinivasa Kumar Tummala, head of the Indian Ocean Tsunami Warning and Mitigation System.

DISASTERS REVISITED

The super cyclone that swept away Savitri's home was perhaps one of the worst ever to hit Odisha in more than a 100 years. At Noliasahi, there was mayhem. The IMD reported more than 7,000 deaths in 209 villages of Ersama block. "Noliasahi village was almost totally submerged, over 200 people died, and those who survived fled to a nearby hilltop. We didn't have shelter buildings," recollected Bhimasen Rout, sarpanch, Noliasahi village.

That year, 14 districts of Odisha were decimated by the cyclone. At least 1.9 million houses were damaged. Heavy rains and floods cut off the state from the rest of the country. More than 10,000 people died.

After the cyclone, the Odisha government implemented several policy measures, built cyclone and flood shelters and set up the autonomous Odisha State Disaster Mitigation Authority, which was later renamed as Odisha State Disaster Management Authority in 2008.

"It was of utmost urgency to prioritise disaster training," Kailash Chandra Behara, block development officer of Ersama, told *Gaon Connection*.

Within five years of the 1999 super cyclone, a tsunami hit the Indian Ocean in December 2004, that swept away 230,000 lives and displaced over 1.6 million people, with estimated economic losses of US\$14 billion.

In its aftermath, the United Nations General Assembly mandated The Intergovernmental Oceanographic Commission of UNESCO to form an Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System. This was established in June 2005. It took UNESCO-IOC, Australia, India and Indonesia another eight years of hard work before the tsunami warning and mitigation system was declared fully operational in 2013.

DISASTERS REVISITED

The Indian Ocean Tsunami Ready programme was kickstarted in September 2017 at a workshop in Jakarta, Indonesia, by the Intergovernmental Coordination Group, the Indian Ocean Tsunami Warning and Mitigation System, and the Indian Ocean Tsunami Information Centre. In India, to implement the tsunami-ready programme, a National Board was formed.

As part of the programme, in 2018, over 119,000 people across 10 countries in the Indian Ocean Region took part in tsunami mock exercises, called IOWave18 that tested their tsunami readiness indicators. This would enable the communities to apply for certification.

Six coastal communities from Odisha – Jayadevkasaba Pahi (Balasore district), Podhuan (Bhadrak district), Tantiapal Sasan (Kendrapara district), Keutajanga (Puri district) and the villages of Noliasahi (Jagatsinghpur district), and Venkatraipur (Ganjam district) along with one community in Oman (AlSawadi Alsahil), took part in the exercise.

"The programme allowed us to test the tsunami-readiness of the community," Bholanath Mishra, General Manager (Geo-Technology), Odisha State Disaster Management Authority, who led the Tsunami-Ready mission in Odisha, said to *Gaon Connection*.

HOW NOLIASAHI AND VENKATRAIPUR BECAME TSUNAMI READY

In order for the communities to get the Tsunami-Ready tag, eleven parameters had to be adhered to. They were, conducting community tsunami-risk reduction programs, designation and mapping of tsunami hazard zones, public display of tsunami information, easily understood evacuation maps, outreach and public education materials, participation in mock drills, community emergency plans, and the presence of a reliable 24-hour early warning system.

"Nearly 5,000 residents in Venkatraipur community were trained in tsunami preparedness," Prabhu Prasad Maharana, district project officer, Ganjam, Odisha State Disaster Management Authority, informed *Gaon Connection*. Maharana shared how both community learning and prior knowledge from awareness camps and mock drills helped achieve this feat in a short time.

After the IOWave18 exercise in 2018, delegates from the National Board, Indian Coast Guard and Indian Ocean Tsunami Warning and Mitigation System surveyed Noliasahi and Venkatraipur in December 2019, interacted with the local communities and assessed how prepared they were to respond to tsunamis.

And, eight months later, in August this year, the villages were awarded their Tsunami-Ready tag. Odisha has not been hit by a tsunami, but cyclones have lashed the state's coastal belt with unfailing regularity. But the rigorous training and awareness drives have made people more confident of facing the adversities brought on by the natural disasters. "The tsunami-ready certification has prepared us for all water-related disasters – floods, cyclones or tsunamis," he added.

The two tiny villages of Venkatraipur and Noliasahi have set an example to other coastal communities on how to weather the storms better. They have shown the way in disaster-preparedness that is crucial in these times of climate change and extreme weather conditions. In the meanwhile, the National Board has declared its intention to get Odisha's four remaining identified coastal communities tsunami-ready as well.





Gas leaks, accidents, floods, lighting strikes, natural calamities... 2020 has been a year like no other. What has made it an even more difficult year is the global COVID-19 pandemic that has thrown the world off its stride and exacerbated matters and magnified the adverse impact of the natural and human made disasters. There were several anthropogenic disasters across the country that led to severe consequences for their victims, the impact of the pandemic adding to the severity of the adversities.

COVID-19

Due to the lockdown measures imposed due to the COVID-19 pandemic, thousands of migrant workers in parts of the country tried to squeeze into state buses, while many had to walk back to their villages. The economic shock of the pandemic further impacted the incomes and livelihoods of migrant workers who earn daily wages, and transport restrictions disabled them from travelling back to their villages through normal routes.

According to data compiled by the SaveLIFE Foundation, a non-governmental organisation that does road safety related work, 198 migrant workers lost their lives due to road accidents in the lockdown period, comprising 26.4 per cent of total deaths during the lockdown. In May, special trains were arranged to transport the migrant workers back home, and nearly 56 lakh migrants were sent back home as of the beginning of June 2020, according to the Union Ministry of Railways.

In Surat in Gujarat, nearly 500 labourers gathered on the streets to demand transportation to return to their hometowns and villages. The police fired 30 tear gas shells to disperse the crowds and arrested over 90 migrant workers. Moreover, in the month of May in Aurangabad district of Maharashtra, 16 migrant workers were killed and 5 were injured by a goods train. They were walking from Jalna to Bhusawal, from where they were going to board a train to their native places in Madhya Pradesh. They had stopped for a rest and slept on the tracks and were run over by a train in the morning.

FLOODS

In 2020, Assam, Bihar, Uttar Pradesh, Maharashtra, Madhya Pradesh, Karnataka, Kerala, Andhra Pradesh, Telangana experienced floods. Assam witnessed an onslaught of floods this year that initially started in May 2020, and within the next few months the floods had affected millions of people, submerging houses, and destroying their means of livelihoods. Relief camps were also set up to provide refuge to displaced populations. In rural areas like the Gagolmari village, families had to turn rescue boats into makeshift houses. Cultivable land was also rendered barren by the floodwater, ruining the crops and grains.

Amid a pandemic, several healthcare workers had to wade through submerged villages to provide medicines while also dealing with other potential water borne diseases. Both the state and central government provided relief funds along with crowdfunds.

Floods also affected other parts of the country such as Kerala in the month of August due to heavy rainfall, killing over 20 people. It resulted in landslides in Munnar, where nearly 50 people died. There was a heavy loss to livestock and impacted agriculture as well. Similarly, in Bihar, nearly 8.3 million people across 16 districts were affected, with 7.54 million hectares of agricultural land being destroyed.

LIGHTNING DEATHS

According to data recorded by the National Disaster Management Authority, lightning strikes during heavy rains additionally killed 315 people this year, 90 per cent of whom belonged to Uttar Pradesh and Bihar. All of these took place between the months of May and July.

Most people who died were farmers who were working in their fields when the lightning struck. Bihar's Chief Minister, Nitish Kumar, announced a compensation of four lakh rupees each to the family of the deceased, and free treatment for the injured. While thousands of people die in India due to lightning strikes and heavy rains, this year in particular saw plenty of thunder cloud formation, which was atypical for the month of June in that region.

BAGHJAN GAS LEAK AND FIRE

The gas and oil leak and subsequent fire at the Baghjan oilfield in Tinsukia district of Assam that began on May 27, burned for five months. It led to two deaths, destruction of houses, and evacuation of nearly 9,000 people from nearby villages.

The National Green Tribunal (NGT) committee that was appointed found that Oil India Limited (OIL) had violated the terms under which it was given clearance to set up the oil field as well as ignored various environmental laws and safety measures. The committee ordered a payment of Rs. 25 lakhs for families whose houses had been completely destroyed, and Rs. 10 lakhs and Rs. 2.5 lakhs for the severely and moderately damaged houses, respectively.

OIL also promised to pay Rs. 50,000 to displaced families, but several discrepancies such as delays and some families not receiving payment have been found. Many families are still displaced and have lost their livelihoods, with no clarity of when they will be able to return to their villages.

INDUSTRIAL DISASTERS

In November this year, a chemical warehouse on the outskirts of Ahmedabad in Gujarat collapsed due to an explosion, leading to the death of 12 labourers with 9 others being injured. The rescue operation took nearly nine hours. The government announced a compensation of Rs. 4 lakhs to each of the families of the deceased and ordered an investigation into the incident. The families of the deceased labourers claimed the negligence of the factory owners as the cause behind this explosion, and the factory owners were booked following an FIR filed by the police.

Similarly, at Dahej in Bharuch in June, a chemical blast killed 5 workers, injured 50, and temporarily displaced 4,800 people from two nearby villages. They moved as a precautionary measure due to the intensity of the explosion.

On May 7, a gas leak in the LG Polymers plant at RR Venkatapuram village near Visakhapatnam in Andhra Pradesh led to the death of 11 people. Thousands of others fell sick after inhaling the toxic vapours. All villages within a five-kilometre radius were affected, with 800 people from the ground village and nearly 500 people from neighbouring villages being evacuated to safer places.

The Andhra Pradesh government announced an ex-gratia payment of Rs. 1 crore to each of the families of the deceased, and the National Green Tribunal (NGT) ordered the factory to deposit an initial amount of Rs. 50 crores. It was found that the storage tanks at the plant were outdated, and the leak occurred due to a lack of basic safety norms. The plant did not have environmental clearance, even before the leak.

COVID-19 took over 2020 and cast its gloom across the world and in the country. The pandemic had debilitating consequences on lives and livelihoods. Hundreds of thousands lost their lives. *Gaon Connection* presents a selection of ground reports on disasters, both natural and human-induced that had a devastating impact on people and places across the country.





Kuntola Bora, has not been home for nearly six months. The 45-year-old, and a few others in the village of Baghjan, in Tinsukia district, Assam, are still not allowed to return and are living in rented temporary shelters in Tinsukia town.

This is because their village lies just a few metres away from the PSU Oil India Limited's (OIL) Baghjan-5 oil and gas rig where there was a gas leak on May 27 this year followed by a huge explosion and fire on June 9.

The fire burned for nearly six months and OIL only managed to douse the fire completely on November 15. However, the disaster is far from over for the villagers. Six months later, many of them are still displaced. Apart from their houses, the disaster has also affected their farmlands, polluted their water bodies and wiped off their livelihoods.

"We are left with nothing," lamented Kuntola as she pointed to the betel nut trees in her compound, which were a source of her livelihood, that have withered in the explosion and fire. Her family's paddy field has gone too.

"Fishing and farming are the main sources of livelihood, and because of the blowout, people could not cultivate paddy this year. Those who grew vegetables too suffered a massive loss, as the entire crop was gutted," Mahesh Hatibaruah, resident of Natun Gaon, another affected village, near the Maguri Motapung beel (wetland) told *Gaon Connection*. It was the breeding season for fish when the blowout happened. "Those in the village who rely on fishing in Maguri Motapung beel have suffered as the condensate has killed fishes in the beel,"Hatibaruah added.

INDUSTRIAL DISASTERS

Anima Bora, of Baghjan village, recalls what happened on May 27 when the oil and gas rig started to leak gas. "It was around ten in the morning and we were having our morning meal. Suddenly, we heard a loud hissing sound and the entire area was filled with smoke. It was so terrifying," she shuddered. The same day, over 3,000 people of Baghjan village were moved to four relief camps set up by OIL.

When the explosion of June 9 happened, 6,000 more people within a three kilometers radius of the blowout site were moved "The relief camp was in a high school. We were at least three-four families in one room," said Anima. There was overcrowding, said Anima, and the fear of the pandemic was at its peak, but OIL did provide them all with facemasks and COVID tests were also conducted.

Towards the end of September and beginning of October, villagers were asked to return to their now-safe homes or move into rented accommodation.

RELIEF AND RECOMPENSE

"In September, OIL asked us to vacate the relief camps. We were promised Rs 50,000 per month as compensation to take care of our rent and other expenses, when we moved out," Rupam Moran, a Baghjan resident told *Gaon Connection*.

The villagers claimed they have received compensation for only the month of October. "Now, since the fire is doused, we heard they are not going to provide any more compensation, except for those whose homes were gutted in that fire," said Moran, who is living in a rented accommodation with his family.

According to OIL about 1,289 families were given the monthly compensation of Rs 50,000, that for now has been paid out for only the month of October. A one-time compensation of Rs 30,000 was also sanctioned to the affected villagers by OIL, which the company claims to have paid to the district administration who will pay the villagers.

A senior public relations officer of the company told *Gaon Connection*, "We don't see any point in continuing the compensation for those who can return safely to their homes, now that the fire is doused. But, I think the monthly compensation to those who have lost their homes or can't return there for some reason, will be continued till they are able to return,".

Meanwhile, a committee set up by the National Green Tribunal suggested three categories of compensation packages: Rs 25 lakh for families whose houses were completely destroyed; Rs 10 lakh for houses severely damaged; and Rs 2.5 lakh for moderately damaged houses. All eleven families

whose homes were completely gutted in the fire were paid 25 lakhs rupees. Other assessments are still underway.

NOT COMPENSATED

But local activists complained that not all have received their rightful compensation. Niranta Gohain, a resident of Natun Rangagora village, two kilometres away from the blowout site, claimed that Natun Rangagora was not included in any of the three categories of compensation.

"Many of the 70-80 families in Natun Rangagora did not get the fifty thousand monthly compensation, nor the one time compensation of thirty thousand rupees," said Gohain. He said the villagers thrice submitted a memorandum to the district administration, about the compensation, but nothing had come of it.

The OIL spokesperson said, "As a corporate we don't have the competence to prepare and decide the beneficiaries. The authority to choose or decide beneficiaries lies with the government of Assam or the district administration. If there are any anomalies highlighted by local communities, only the district administration can address it," he stated.

An official at the office of Diganta Saikia, the deputy commissioner of Tinsukia district said there were no anomalies and the compensations were given on the basis of the survey of the affected people, conducted by the district administration.

A BLOW TO LIVELIHOOD

"Villagers till the saporis or low-lying flood-prone riverbanks of Magur Motapung beel, for rabi cultivation," said Gohain adding that the oil condensate from the blowout at Baghjan well no-5, that can be toxic and





harmful to the environment, animals and humans, has covered everything in the area.

At Limbuguri, villagers are staring at a grim future. Their small-scale tea cultivation is still reeling from the oil inferno. "Not just the kerosene-like stench that still pervades everything here, including the tea leaves, but the production of the leaves have gone down by forty per cent when compared to last year's," said Devid Nag, who cultivates a bigha of tea.

Maguri Motapung beel is home to more than 80 species of fishes and over 100 bird species including some endangered ones. Locals fear that migratory birds will no longer return to the beel. The area is also close to the Dibru-Saikhowa National Park, a bioreserve that is spread over 765 sq kms.

The public relations manager of OIL, though admitting that there was some environmental damage caused, said the impact would be short-lived.

"Because of the nature of the gas and the condensate, they easily evaporate and are washed away by rains. Since the blowout, the area has witnessed many rainfalls. So, these elements will not have long-term impact either on the air or the soil," he told *Gaon Connection*.

However, 45-year-old Kuntola Bora, who has lost her house, farmland and livelihood to the Baghjan disaster, begs to differ. And rightly so.







In the last two days, 16 people have died in lightning strikes in Jharkhand. A week earlier, on July 4, lightning struck 21 others in Bihar, killing them. But, the biggest lightning disaster was on June 25, when 93 people were killed, again, in Bihar. And another 24 lost their lives in Uttar Pradesh. Since then, at least 154 lightning strike deaths have been reported in Bihar, Uttar Pradesh and Jharkhand. On average, 2,500 people die every year due to lightning strikes in India, notes a 2018 report of the National Disaster Management Authority. These accounted for about 39 per cent of all deaths from natural disasters in the country between 1967 and 2012.

According to V Gopalakrishnan, a senior scientist with the Indian Institute of Tropical Meteorology (IITM) Pune, lightning strikes take place in Uttar Pradesh, Bihar and parts of Jharkhand every year in the last week of June and early July.

"The death toll has been high, as a large number of people working in the open agricultural fields were struck by lightning and died," he said.

In the last two years, IITM Pune, an institute of the Union ministry of earth sciences, has installed 83 lightning sensors across the country of which seven sensors are in Bihar and Uttar Pradesh. These sensors detect lightning within an area of 200-300 kilometres and automatically pass on the information to the central processing unit to issue forecast warnings to the concerned state governments.

"It is possible to warn local people about lightning strikes 25-30 minutes in advance. And if people run to safer closed locations, lives can be saved," he added.

"Majority of the deaths are in rural areas where farmers work in the wet fields to sow *kharif* crops. Warnings are issued but last-mile communication remains a challenge," admitted Pradhan Parth Sarthi, professor at the Department for Environmental Sciences, Central University of South Bihar in Gaya. He is also the president of Indian Meteorological Society, Patna. One of the lightning sensors of IITM Pune is located at this university in Gaya, Bihar since last August.

THUNDERSTORMS AND LIGHTNING

According to Gopalakrishnan, lightning strikes are common when the southwest monsoon is setting in the country. "The thunderstorm and lightning clouds are different from the monsoon clouds. The former need high surface heating and moisture," he said.

"Because of the summer, there is enough surface heating. And the monsoon winds bring moisture from the ocean, thus aiding the formation of thunderclouds that cause these lightning strikes," he explained.

Apart from Bihar and Uttar Pradesh, lightning strikes are also reported in Telangana and Andhra Pradesh. "Once the monsoon sets in the country properly, these lightning strikes will reduce," said Gopalakrishnan.

Sridhar Balasubramanian, associate professor of mechanical engineering and an adjunct faculty member at IDP Climate Studies, IIT (Indian Institute of Technology) Bombay claims the recent lightning strikes are due to prolonged Western Disturbances.

"Thunderstorms and lightning events require strong instability to prevail from surface to mid-latitude along with a lot of moisture incursion. The instability could either come from a convective system, like ground heating, or from a synoptic system like Western Disturbance," he explained.

A Western Disturbance is an extra-tropical storm, which originates in the Mediterranean region and carries moisture from the Mediterranean Sea and from the Caspian Sea, and travels in an easterly direction causing precipitation in northern India.

Balasubramanian has analysed temperature data for the month of June over North India, which doesn't show much anomalous heating. But the Western Disturbance season shows a clear prolonged period, where a Western Disturbance hit North India as late as June 4-5.

Weak Western Disturbance conditions also prevailed over North India until June 10th. This kept the instability active at the surface and mid-levels, leading to the formation of thunderclouds, he said.

Also, the moisture was abundant due to the rapid progress of monsoon currents to Uttar Pradesh and Bihar, wherein timely onset was seen in Bihar, and early onset over East Uttar Pradesh.

"These monsoon currents brought in a lot of moisture from the Bay of Bengal branch. The combination of instability and moisture abundance triggered massive thunderclouds along with charged particles, which eventually led to intense rains and lightning events over Bihar and Uttar Pradesh," Balasubramanian said.

According to Parth Sarthi, there are three broad reasons that make Bihar and parts of Uttar Pradesh prone to lightning strikes. "This region is in the Terai belt on the foothills of the Himalayas. Apart from the surface heating and moisture, its geographical location is also responsible for high lightning strikes, as the Himalayas provide orographic lift due to their steep gradient," he told *Gaon Connection*.

According to Gopalakrishnan: "There are two peaks in lightning strikes — once in the afternoon and then at night. The lifting mechanism of the Himalayas causes night lightning strikes. But, most deaths occur during the day time when people are out in the open," he pointed out.

MODELLING AND FORECASTING LIGHTNING

Lightning can be forecast through meteorological modelling in which models can predict lightning 24 hours in advance. This data is available with both IITM and India Meteorological Department, which disseminate it.

However, data generated through these models is for a very large area and not specific to a location. Then there is a network of 83 lightning sensors across the country that automatically transmits information.

Explaining how these sensors help forecast lightning strikes, Gopalakrishnan said: "There are two types of lightning inside a thundercloud. One is intracloud, which is within the cloud. And the other is cloud-to-land. The former starts 25-30 minutes before the lightning strikes from cloud to land."

Thus, as soon as intracloud lightning starts, the sensor transmits the data, and issues an advance warning. "These sensors detect cloud movement, hence we can warn where the lightning strikes are expected in the next one hour or so," he added.

The ministry of earth sciences has an app – Damini – specifically meant for lightning alerts. This app provides information on lightning strikes within 20 kilometres radius.



The India Meteorological Department website has a page on real-time lightning across the country. For this, it uses INSAT3D satellite merged with ground lightning instruments installed by the IITM and the Indian Air Force.

Meanwhile, the Department of Disaster Management, Bihar government has its own mobile phone app, Indravajra, to pre-warn people about lightning strikes.

With sensors, satellites, mobile apps, why are so many still dying due to lightning strikes?

LAST MILE COMMUNICATION CHALLENGE

Parth Sarthi reiterated that the last mile communication continued to be a challenge. "Not everyone in rural areas has a smartphone. There is a need for regular training and awareness programmes in villages. Local mukhiya and sarpanch should be roped in for these programmes to educate the people," he said.

The state governments need to proactively work with the local communities as only issuing alerts on mobile phones may not be enough. These over 2,500 annual deaths due to lightning strikes are preventable. Scientific data and timely communication must translate into saving lives.







n Ramnagar tehsil's Bilhari village, Barabanki district Uttar Pradesh, *Gaon Connection* met Parmanand, resting on a half-submerged cot outside his water-logged house. Fifty five-year-old Parmanand is one among those who chose to remain in the village despite frequent floods.

"When the Saryu river washed away our part of the village in 1983, we moved to another place within the village. That place was flooded in 1992 and we relocated again," he said. "I built this house in 2003. It has been seventeen years in Bilhari village but I have spent my whole life dealing with floods" he lamented.

All one can see behind Parmanand's home is floodwater. It submerges acres of farmland with ruined paddy and mentha. "Wheat, paddy, all that I had sown are gone. Every farmer here would have suffered a loss of at least Rs 50,000," Parmanand said.

"This time, we were hit from all sides – first the coronavirus lockdown and then the floods. There is no help from the government at all," he complained.

Approximately 80 villages fall in the Ramnagar tehsil of Suratganj block. The Saryu river known as Ghaghra in eastern UP, has flooded at least 25 villages so far. Many families from these villages are living in tents built in long rows, on both sides of the embankment providing shelter to the villagers whose houses were submerged.

The situation in Kanchanpur village was not any different. The villagers there have been demanding a bridge connecting Bahraich and Barabanki for years. "The bridge will make movement easier and it will control the land erosion due to the river. But, the officers do not come to take a look at all," Anil told *Gaon Connection*, from his chair outside his house, with water swirling around his feet.

"Neither my paddy field nor my nursery was spared by the floods. I had to procure paddy from a village situated on the other side of the embankment," Suresh Awasthi of Madraha village, complained.

Kodhari village, adjacent to the embankment, was marooned and accessible only via boats. About 40 families here have been rescued and moved to the tents on the embankment while some others, are still at the village.

Sridevi, who lives in one of the tents bemoaned the lack of any help from the government. "What help? The ration we get lasts only 10 days. People's farms have drowned and now we have to suffer as long as there is a flood," she said.

"I have faced floods since birth, spending three months each year on the dam and living here. Before the embankments were built, the situation was not as bad," Sridevi noted.

Sudhir Kumar is also living with his family on the same embankment. "My house was washed away in

the floods of 2008 and I could not rebuild it so far. The five-six *bigha* land I owned was also washed away," he said. "Now I am simply passing my days here on the embankment. Relief items do not reach everyone. Only we know how we are surviving," Sudhir sighed.

The distance of these villages near the embankment is about one and a half to two kilometres from Saryu River. People from dozens of villages like Kanchanapur, Hetamapur, Kedaripur, Kodhari suffer not only from floods every year but also loss of livelihood as thousands of acres of their crops are damaged due to recurrent flooding.

Many villagers from affected villages have packed their belongings and have moved away from the villages to stay in the tents at the embankment.

"Facing floods maybe in our destiny but the government's apathy is also partly responsible for our suffering. The river would have been contained had the bridge been made," said Anil Tiwari, a resident of the flood-affected village of Kedaripur.

SEPTEMBER BARABANKI

The Saryu river has been in spate for four months now, and nearly 88 villages in Uttar Pradesh's Barabanki district are severely affected. Seven people have died in three *tehsils* — Ramnagar, Ramsanheghat and Sirauligauspur. Sixty families have lost their houses to the raging waters and the villagers are swamped.

The river has already swept away around 15 houses in Tilwari village of Sirauligauspur *tehsil* of Barabanki district, 30 kilometres (km) from Uttar Pradesh capital Lucknow. Tilwari has a population of just 500 people. "House after house is giving way, and people are breaking down their damaged houses so that they can retrieve bricks and wooden beams before they are consumed by water," 40-year-old Mamata Singh told *Gaon Connection*. "No one seems to be bothered about us. Everyone is talking about some actress' house being demolished in Maharashtra," she complained.

"Our fields were already flooded by the river and now even our house is about to be lost to the Saryu river. The government has not made any arrangement to settle us in a safer place. No one is listening to us," she said.

As per data provided by the Barabanki district administration, about 3,400 hectares of agricultural land across 52 villages and about 62,000 people have been affected by the Saryu river, which continues to flood.

"Numerous officials visited us, looked around and went, but there's no respite," 65-year-old Surya Lal of Tilwari village told *Gaon Connection*. "The floods have abated a bit, but the river is gradually eroding our village."

As many as 16,300 cattle have been displaced by the floods in Barabanki, and all the connecting paths to these villages have gone under water. "The Saryu has started eroding the land at Tilwari and it has been reported to the flood block officer," Chhattrapal Singh Chauhan, SDM Sirauligauspur, told *Gaon Connection*. "Work has begun to stop the erosion and efforts are on to provide help to those affected by the flood," he added.



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INDIA'S BIGGEST BURAL INSIGHTS PLATFORM

CHAPTER





In the midst of the turmoil created by the COVID-19 pandemic, a significant milestone was the introduction of the National Education Policy by the Government of India that spelt out important measures and proposed changes in the education sector.

Meanwhile, schools, colleges, students and teachers struggled to come to terms with virtual classrooms and online studies, and a large portion of them, especially in rural areas had no access to teaching and learning due to lack of connectivity and smartphones. The pandemic caused a major upheaval in the education system, impacting youth.

NATIONAL EDUCATION POLICY (NEP)

The National Education Policy was introduced in July 2020. It furnishes guidelines to schools and higher education institutions to improve enrolment rates and infrastructure and provide greater flexibility in subject choices besides changing the annual examination method, and making higher education more digital and open.

It advises a Gender Inclusion Fund and Special Education Zones for economically and socially disadvantaged groups. The NEP also recommends imparting education till Class 5 in the students' mother tongue.

While it has been hailed in several quarters, there are concerns amongst educationists on the NEP's implementation. They have criticised the lack of transparency in the framing and approval of this policy. Fears have been expressed about graded autonomy in higher education that may lead to more privatisation of the education sector and, therefore, higher fees. The emphasis on digitisation is also a cause of worry, as the pandemic highlighted how a large chunk of rural India was left behind due to lack of infrastructure to support such a system, more so for marginalised students in rural areas.

ANNUAL STATE OF EDUCATION REPORT (ASER) SURVEY

According to the Annual State of Education Report (ASER) survey conducted in September this year, nearly one in three rural children had not undertaken any learning activity in the week of the survey due to the impact of the COVID-19 pandemic. This also affected the availability of learning material wherein nearly 20 per cent of students in rural areas did not have access to textbooks.

The survey also showed that 5.5 per cent children were not enrolled for the 2020-21 academic year as compared to 4 per cent in 2018. There was a shift in enrollment of students from private to government schools with 69.55 per cent children in the age group of 6-14 enrolled in government schools. Because of the COVID-19 lockdown measures, there was a shift to online learning this year. The ASER survey revealed that 61.8 per cent of enrolled children lived in households with at least one smartphone; however, despite this rate, only one-third of them had access to weekly learning material due to factors like multiple enrolled children in a single household, gender disparities, and being pushed into the labour market for income support.

STUDENTS WITH DISABILITIES)

In India, nearly 2.68 crore people identify as having disabilities, with 69 per cent of them living in rural areas. Of them, only 2 per cent graduate from school and one per cent is gainfully employed. Before the pandemic, people with disabilities already faced issues of access to teaching and examination systems, educational environment, and learning resources, and with all of these going online due to COVID-19, there has been an added impact on students with disabilities.

Online education platforms are not convenient for these students due to inaccessible design (such as font size), denial of adaptive controls and software, lack of sign language (SL) interpreters, lack of training for using the equipment, and the absence of one-on-one support.

Under the Union ministry of social justice and welfare, the department of empowerment of persons with disability released the Comprehensive Disability Inclusive Guidelines during COVID-19 for the safety of people with disabilities, which included provision of financial support, accessible COVID-19 information, doorstep delivery of essentials and a helpline number. These guidelines, however, did not account for their educational needs as there were no provisions that would ensure open, home-school, or distance learning for these children.

PM EVIDYA PACKAGE

In May, the Union finance ministry launched the PM eVIDYA package. One of the initiatives of this package included 'One Class One Channel' where 12 DTH (Direct To Home) channels would telecast lessons (for classes 1 to 12). Another portal called DIKSHA (One Nation, One Digital Platform) would provide educational content to students and researchers in the form of QR-coded textbooks.

IMPACT ON EDUCATIONAL INSTITUTIONS

Due to the COVID-19 pandemic and subsequent lockdown restrictions, many examinations scheduled by schools, colleges and other institutions, were postponed or cancelled. These caused a delay in the academic calendar, and were a cause of concern for newly graduating students. For many schools and colleges like Delhi University, exams were conducted online to ensure safety during the pandemic, but students faced issues of poor internet connectivity and other network issues. There was also opposition from student bodies due to the lack of uniform accessibility.

On the other hand, some entrance examinations such as the Joint Entrance Exam (JEE) and National Eligibility cum Entrance Test (NEET) were physically conducted in September with precautions taken, despite dissent from opposition parties as well as students who were affected by COVID-19 and calamities such as floods. Most schools and colleges have been conducting online classes, and some campuses reopened, but had to be shut again due to a spike in COVID-19 cases, such as in the Indian Institute of Technology (IIT) Madras.

Several students have also struggled to pay fees because of loss of income in the family. Many unaided private schools fear they will have to shut down. While the University Grants Commission (UGC) had requested higher education institutions to consider alternative fee payment options to ease financial stress on economically disadvantaged families, some institutions such as the IIT-ISM (Indian School of Mines) in Jharkhand terminated 214 students for not paying fees.

YOUTH UNEMPLOYMENT

According to a joint report published by the Asian Development Bank (ADB) and International Labour Organisation (ILO), youth unemployment rate in India may hit 32.5 per cent, with 6.1 million young people aged 15-24 likely to lose their jobs due to the COVID-19 pandemic. According to this report, construction and farm workers account for most of these job losses. Along with lack of job prospects, there has also been a disruption in firm-level apprenticeships and internships.

ADOLESCENT AND YOUTH MENTAL HEALTH

Uncertainties caused due to the COVID-19 pandemic, have had an impact on the mental health of the Suicide Prevention India Foundation (SPIF), over 70 per cent of therapists who took part in the

study said there was an increase in the number of people who expressed suicide ideation or a death wish. Nearly two-thirds of therapists said the number of people who had harmed themselves had also risen. This was particularly true for those in rural areas who had limited or no access to therapy and support.

According to the report, while all demographics had been affected, young populations sought help the most. Additionally, according to the Department of Child and Adolescent Psychiatry at the National Institute of Mental Health and Neurosciences (NIMHANS), out-patient care was being provided to an average of 35-40 children every day, with an additional 30 children and adolescents seeking teleconsultation.

While the COVID-19 pandemic upturned the lives of people across the spectrum, it was the children, adolescents and youth who were significantly affected, especially those who were socially and economically disadvantaged. Gaon Connection shone the light on the glaring chasms that existed between urban and rural India. The pandemic highlighted disparities in incomes, education and mental health of the young rural Indians. Yet, in all the grim darkness, there were pockets of innovation and hope as educators and students made the best of what they had and kept the learning going.





Story by **Umesh Kumar Ray** Gaya, Bihar.



Still Prime Minister Narendra Modi announced a nationwide lockdown in March this year to control the spread of COVID-19, 13-year-old Ranjit, a resident of Chakand village in Gaya district of Bihar, used to study in the local government school. With the school shut and his parents losing their jobs as daily wagers, Ranjit was made to board a bus that took him 1,200 kilometres away from his home to Jaipur in Rajasthan to work in a bangle making factory.

"Poverty at home drove him to leave the village along with a few more children headed to the same bangle factory," Pravesh Bind, Ranjit's father who works at a brick kiln, told *Gaon Connection*.

Fifteen-year-old Mukesh from Kujap in Gaya district was also trafficked to work at the same bangle factory in Jaipur. "I work in the fields for eight to ten hours a day and get five kilos of rice as wages... We had no money due to the lockdown, so Mukesh moved to Jaipur," Parvati Devi, Mukesh's mother, told *Gaon Connection*. Her husband Madan Chaudhary is unemployed too. "We had to borrow money to run the family. We had no choice [but to let Mukesh go and work at Jaipur]," she added helplessly.

The heart wrenching story of trafficking of children due to the combined effect of poverty and COVID-19 lockdown is playing out in various districts of Bihar.

Between July and September this year, about 250 children from Bihar have been rescued from child trafficking, according to data from officials of the state's Child Welfare Organisation, the Social Welfare Department and Child Protection Unit. Twenty one children were rescued from Kolkata in West Bengal; 14 from factories in Delhi; 15 were intercepted in an Amritsar -bound train; six were rescued from Dehri-on-Sone in





Bihar, six more from Mokama in Bihar and Koderma in Jharkhand and 19 from Gorakhpur, Uttar Pradesh.



The impunity with which children are being trafficked in the state is frightening. There seems to be no political will to stem the rot. "Children are not voters, so no political parties bother about them. Leave alone trafficking, even malnutrition of children, or their lack of education are not election issues," Rupesh, a Patna-based social activist, told *Gaon Connection*.

Clearly, children are becoming increasingly vulnerable with the employment crisis brought about by COVID-19. Millions of migrant labourers have returned to Bihar due to the lockdown. They are jobless, have no food and are desperate.

Brokers are exploiting the desperation of these poverty stricken families and persuading them to send their children to work as labour in factories far away from home. Of the total 250 kids rescued between July and September, 136 children were rescued from bangle

factories alone in Jaipur. The rest have been rescued from other states, including Delhi, Uttar Pradesh, Punjab, Jharkhand and West Bengal.

THE COST OF CHILDHOOD

Brokers or *dalals* offer anything between Rs 2,500 and Rs 3,000 to desperate families to send their children to work in other states. The children are promised about Rs 2,500 a month for their work at the factories, but they seldom get to see the money.

"The broker paid Rs 2,500 to my father for sending me to the bangle factory," 12-year-old Manohar Manjhi told *Gaon Connection*. "I was forced to work in the bangle factory for fifteen hours daily with other children. If there was any defect in the bangle, the owner would beat us. Sometimes, they served food very late," said Manohar, who was rescued in May this year.

Fifteen-year-old Birendra Kumar from Morangpur, Gaya, was rescued from a bangle factory after two years. "In 2016, I went to Jaipur through a broker who immediately paid my father two thousand rupees and sent me off. I lived with fifteen other children in a room at the bangle factory," he told *Gaon Connection*.

"We started work at seven in the morning and worked continuously till eleven in the night," he said. "We were served food thrice during sixteen hours of rigorous work. But, the food did not fill my stomach. There were no weekly breaks, except for seven hours relaxation on Sundays," Birendra added. According to him, none of the children working at the bangle factory was allowed to go out, and even if one of them fell sick, they were not taken to the doctor. Medicines were brought to them.

Birendra was promised a monthly wage of Rs 3,000, and the owner said he would pay up in bulk when he went back to his village. When the police rescued Birendra in 2018, he had already put in two years of hard labour. But the owner absconded and Birendra got paid nothing.

DESPERATE AND DEVIOUS

"Trafficking of children has increased due to schools shutting down and families losing their sources of income," said Suresh Kumar, executive secretary of Centre Direct, a Patna-based non-profit working against child labour.

Recently, Gaon Connection released the findings of its national rural survey on the impact of COVID-19 on rural India with 25,300 respondents spread across 179 districts in 23 states/union territories. It found that in Bihar, only 13 per cent rural households got work under the MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act, 2005). To make ends meet during the lockdown, a large number of villagers borrowed money, mortgaged or sold land or jewellery.

Desperate poverty has forced the parents to become complicit in trafficking for child labour. Brokers are persuading e parents to travel along with the children to the factories. "To avoid suspicion, parents now accompany their children to the factories, and in case they are intercepted by authorities, they

say they are visiting relatives," Raj Kumar, director, social welfare directorate, admitted to *Gaon Connection*. "In such a situation, we can't stop them because we have no basis to question them," he added.

BACKWARD CASTE KIDS TRAF CKED THE MOST

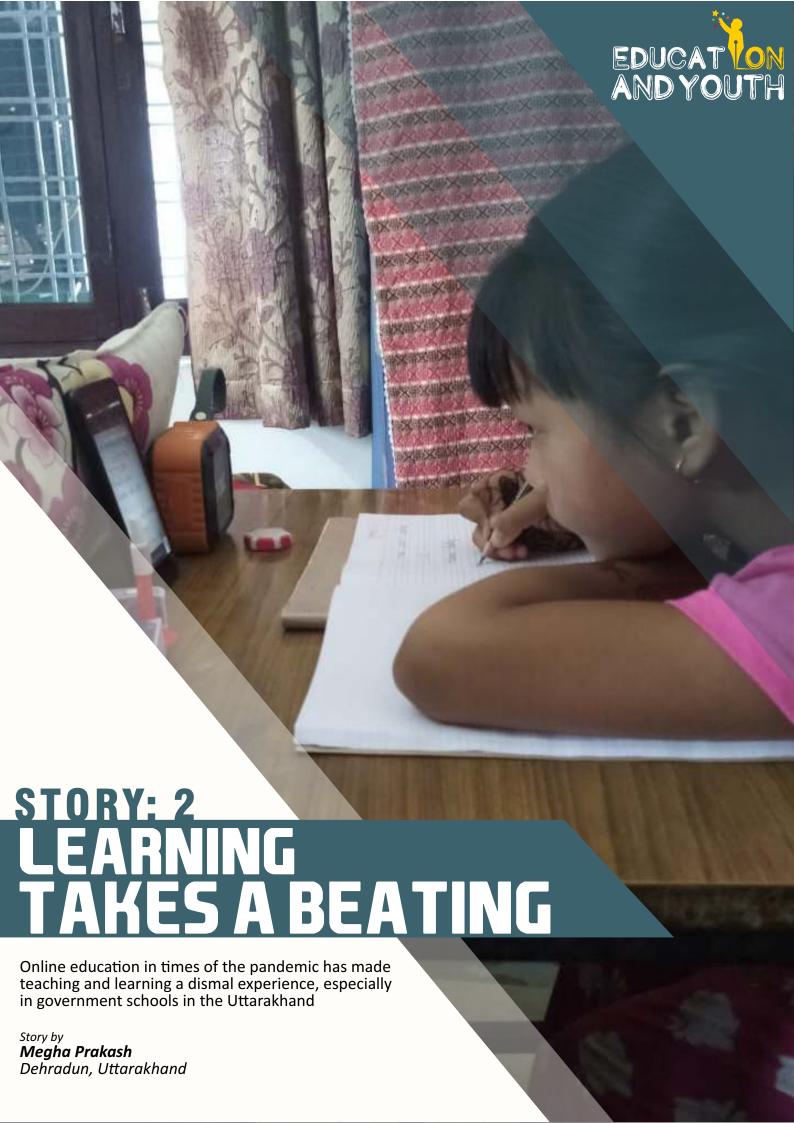
According to data from the State Labour department, most of the rescued children belonged to Musahars, Pasi, Paswan and other backward communities (deduced on the basis of children's surname). With no access to food or education, these children were vulnerable to exploitation.

"To stop child trafficking you need to give employment to downtrodden communities; you have to ensure education and food for their children," D M Diwakar, Patna-based political analyst and economist, told *Gaon Connection*. "The government will have to take pro-poor development issues forward. But these may not garner votes. Political parties push only those issues that electorally benefit them," he added, explaining the lack of political will to act on this.

In the meanwhile, some state agencies are taking measures to tackle the problem. "Child protection units have been set up in Aurangabad and Gaya panchayats. They will be coming up in other panchayats as well," said Raj Kumar, director of the social welfare directorate. "Ward members in each unit will keep us informed and help us take prompt action," he added.

(Names of the children have been changed to protect their identity)







Pratapnagar block in Tehri Garhwal district of Uttarakhand, 175 kilometres from the state capital Dehradun, has about 6,500 students enrolled in government primary schools and junior high schools. In the ongoing COVID-19 pandemic, schools across the country have switched to online mode of teaching. But, in this block of the Himalayan state, only over 38 per cent students are able to access online education, leaving more than 60 per cent deprived of learning.

"Of the total 6,500 kids, only 2,500 benefit from online teaching. The remaining do not have smartphones or high speed internet connectivity at their homes," Vinod Matura, block education officer of Pratapnagar told *Gaon Connection*. Also, mobile phone towers are yet to reach several hill villages. Continuous heavy rainfall and landslides have added to the problem.

Poor internet connectivity, limited smartphones and extreme weather conditions have made online schooling in the pandemic a challenge, both for the students and the teachers.

Matura's office has collected information on the number of students in the block having access to online schooling using smartphones. It reveals that a large number of children in far-flung hilly areas are missing out on learning opportunities.

TEACHERS JUGGLING TASKS

Amid the COVID-19 pandemic, government school teachers are also involved in coronavirus tracking duties, distribution of dry ration, etc.

Anuradha Kukreti, a resident of Kotdwar in Pauri Garhwal district of Uttarakhand, travels about 45 kilometres one way to reach a government primary school in Amola village in Jaiharikhal block where she teaches.

When the lockdown was imposed in March this year and migrant workers started to return to the state, her school was converted into a COVID-19 quarantine centre and she was deputed to monitor the returnee migrants there.

"Our only means of commuting in the hill districts is the maxi jeeps, which are the lifeline of the hills. But, during

the nationwide lockdown, these were off the roads. Travelling to school was a herculean task," said Kukreti.

While online teaching is the norm now, Kukreti still has to commute and visit the school twice a week for other duties, including distribution of dry ration to school kids in the first week of every month in



including distribution of dry ration to school kids in the first week of every month in lieu of their midday meals.

Jaimala Bahuguna, another school teacher, caters to the students of Mehergaon, Supani and Bhyupani villages in Srinagar area of Tehri Garhwal. "Though we have created subject groups on WhatsApp, we perform additional tasks of managing incoming migrants or report incidences of COVID-19 to the authorities. Most of the time, we are posted at police chowkies, check post and quarantine centres, and, hence, teaching suffers," said Bahuguna.

"In some villages, college students have returned to their villages due to COVID-19. We are taking their help to assist school students in their village and, sometimes, lend them their smartphones," she added.

School teachers raise concerns over teaching science through smartphones. "It is difficult to take science practical sessions online," said Nitesh Bahuguna, a science teacher at Government Senior Secondary School, Raithal in Uttarkashi district. The combined strength of classes 9 and 10 in his school is 35. A common concern of teachers is the challenge to teach subjects such as e mathematics, physics, and chemistry, all of which require special characters and symbols. "Mathematical equations cannot be taught online," he said.

Shambhu Nautiyal teaches science to high school children at the Government Inter College, Bankholi Uttarkashi district, and finds it difficult to solve students' queries over phone. "If teachers are expected to go to school for book distribution, national day celebrations, releasing dry ration for *anganwadi* kendra and maintaining official records, then why not allow students to come and get their problems solved while following physical distancing norms," asked Nautiyal.

In spite of various challenges, teachers are walking an

extra mile to make education available to students amid the pandemic. For instance, Aparna Rawat teaches Hindi to students of Government Inter College, Diuala, located in Pauri Garhwal's. Since, the teaching position for a Hindi teacher for classes 11 and 12 is not filled, she teaches students from class 7 to 12. She has created a WhatsApp group for students and regularly shares poems, stories and other study material uploaded on YouTube.

"For students who do not have internet connectivity, we reach them through text messages and phone calls. But, internet connectivity and mobile network is a challenge throughout the hill state," pointed out Rawat.

Ramakant Kurketi teaches Hindi at the Government Inter College, Kanva Ghati in Kotdwar. According to him, of the total 83 students, around 50 are connected on apps such as Google Meet and WhatsApp. "These students contact me to clear their doubts over phone calls, WhatsApp and video calls. But, for the remaining students, I take adequate precautions and visit the school on fixed hours to help them," he said.

Pratapnagar block in Tehri Garhwal has 122 government primary schools and 32 junior high schools, all of which, except one, are in durgam (difficult terrain, as classified by the state government) areas. Teachers have created WhatsApp groups where they upload study material and then follow up with students and their parents over phone calls to ensure kids are learning and completing their weekly tasks.

"We realised due to poor internet connectivity, heavy rains and non-availability of smartphones, online teaching was not sufficient for our children. So, in association with the Azim Premji Foundation, a non-profit that works in the state for improving education, we have developed worksheets. These subject-wise worksheets are printed and given to students in Tehri Garhwal district," Matura told *Gaon Connection*.

One of the major drawbacks of online schooling is assessing and evaluating how much the child has learnt. To address this issue, the Azim Premji Foundation is trying to train the teachers. "The worksheets





are developed in a way that the learning outcomes can be evaluated. Since, the NCERT books have not been printed and distributed for this session, these worksheets will help the students," said Pramod Painuly, who is associated with the Azim Premji Foundation and is the district coordinator (elementary education) for Tehri Garhwal.

A quick impact assessment of this exercise in two blocks of Chamba and Narendranagar in Tehri district revealed 90 per cent students were provided these worksheets, and 92 per cent of them returned these worksheets after completing the tasks.

PARENTS DILEMMA

The COVID-19 pandemic has led to loss of livelihood for millions in rural India. This has caused acute financial stress and parents in villages are finding it difficult to even buy notebooks for their children, let alone smartphones. With people losing jobs and incomes, parents have not been able to purchase notebooks for this academic session. And, in a family with two to three kids, a single smartphone is not sufficient. With the lockdown being lifted, male members have started migrating for work, and families do not have enough money to buy new phones or recharge existing ones.

TEACHING THROUGH TELEVISION

The Uttarakhand government has launched television programmes offering curated teaching materials and lectures. Soon, Swayam Prabha, an initiative of the Union ministry of human resources development launched in 2017 to provide 32 high quality educational channels through DTH, will be included. A mobile app is also being developed.

But, many districts of Uttarakhand are grappling with extreme weather events such as landslides, heavy rainfall and flooding which has disrupted roads, telephone towers and electric poles. Sirwari Boonga village in Rudraprayag district had a cloudburst on 9 August, which displaced the local villagers sheltered at the primary school. "Electric poles and drinking water lines have been damaged. Even to charge mobile phones, we walk to the nearby village. In this situation, online education is not at all feasible", said Dinesh Rauthan of Sirwari Boonga.





Shala suru jhali, shala suru jhali... (school has begun, the school has begun) goes the peppy Marathi song as kids come skipping in, to the open area and settle into the circles drawn on the ground.

It is 8 am and children clutching their notebook and pencils get ready for their first lesson of the day across 40 villages in Mokhada block of Palghar, a predominantly tribal district, in Maharashtra, 114 kilometres north of Mumbai. Gradually, the giggles and chatter subside, and they start to listen to their teacher, who they respectfully address as Speaker Dada or Speaker Tai.

"That is how they address the loudspeakers, as dada or tai," laughed Shraddha Shringarpure, who heads Diganta Swaraj Foundation, that is into tribal development with a focus on health, education, livelihood and good governance. The foundation has been devising ways and means of keeping education alive in rural tribal areas in the pandemic. So while hi-tech has failed these children of far-flung villages, the loudspeaker invented in the 1800s is proving to be a boon. "We made hour-long audio capsules with interactive voiceovers that are played over the loudspeakers. The kids love their speaker tais and dadas and implicitly obey them," she said.

NOT A LEVEL PLAYING FELD

According to the Union ministry of education, it is estimated that there are 13.04 lakh rural schools in India. Since the pandemic began, education in these areas has been thrown completely out of gear, especially in the remote areas where, sometimes, there is no electricity, let alone internet connectivity.

"In the tribal Malkangiri district of Odisha, many villages do not have electricity. They cannot even dream of





of education through smartphones and internet," said Jayanti Buruda, a reporter on rural matters, from Odisha, who has travelled across several districts of the state to document how tribal kids and girls were dropping out of schools as they have no access to online education. In many places, parents are getting their daughters married off early.

"There is no money for food...why will anyone worry about their daughters' education," Buruda asked.

According to Shringarpure, the pandemic has highlighted the wide rift between children in rural and urban areas. "Most of these children in Mokhada are first-generation learners. And, where they live, there is no connectivity whatsoever, so we have to think of ways to get their education restarted without the benefit of 'online' classes and gadgets," she said.

"Nothing has shown up the inequality of education in our society as harshly as the pandemic," reiterated Pankaj Pushkar, a politician who is associated with higher education in Uttarakhand. "If we normalise online education, then the divide is going to grow even further," he warned. "Gender, economics, geographical locations, all these have to be taken into account. One size does not fit all." he said.



A CLASS APART

But, in the midst of all the despair, there are pockets of hope, where educators are making a significant difference.

In a village school in Dumka, a tribal district in Santhal Pargana division of Jharkhand, a loudspeaker is making its booming presence felt. "I take a round around the villages on my Bullet motorcycle, and it does the job of a school bell, and the kids know the teachers are waiting for them," said Shyam Kishore Singh Gandhi, headmaster, UMS Bankati, in Dumka.

Teachers from Gandhi's school, with loudspeakers fixed to autos and tempos, visit nine villages and hold classes. The 'classrooms' are usually under a tree or in the village square. "We are in a very poor quarter of Jharkhand. Most of the children are from tribal families. They cannot afford mobile phones, nor do they have reliable connectivity. And I firmly believe that the phone is not more important than the teacher," said Gandhi. "There is music, dance, games and even movies that we show them on a projector," he said. A cowshed swept clean doubles up as the 'cinema hall'.

THE COMMUNITY CARES

"As soon as they come to know that we are beginning classes, villagers voluntarily sweep and clean up the area where we set up, someone brings us chairs, others help out with the children. There is a sense of apnapan (ownership)," said Gandhi with pride.

Shringarpure couldn't agree more. "When we put up the loudspeakers, people living around there at once swept their verandas so that children could sit there," she said. Whenever there were no teachers available, villagers took up the responsibility of playing the lessons on the loudspeakers.

Meanwhile, in Tamil Nadu in south India, Vidyavanam, a CBSE school for tribal children, in Anaikatti village, about 560 km from the state capital Chennai, has enlisted the

help of its senior students to teach the younger children in their respective villages. "Children from around 20 villages study at our school. We are trying to see how we can keep the learning processgoing," said TM Srikanth, principal of Vidyavanam.





"We have a big community hall where the children gather for the classes," said Saranya Vinayagan, a 16-year-old class 12 student of Vidyavanam. Along with Vinayagan are six other class 11 and 12 students, belonging to the Irula tribe, who teach the children at Vadakalur village.

At the moment, the children are engaged in a project on 'drought'. They ask the elders of their village about their experiences of drought. "In the process, they bond with their grandparents and learn from their wisdom," said Vinayagan.

MAKING A DIFFERENCE

Initiatives like these are proving to be pillars of support in a world thrown into chaos. "Earlier, the kids would be running wild all day and the parents had no way of reining them in. Now, the children have something to learn, are meeting other children, singing...doing 'normal' activities under the watchful eyes of a grown up," said Shringarpure, adding that the parents were very happy with this.

Meanwhile, in the Mokhada Block, children wind up for the day, singing the last line to their school anthem, *Nisargat laple aple guru*...Our teachers are hidden in Mother Nature...



The stipend for medical interns in Uttar Pradesh and Rajasthan, is much less than the standard pay fixed for unskilled labourers

Story by **Daya Sagar**



emant Rai is one of the millions of Corona Warriors who are fighting the battle against the novel coronavirus. He has no significant issues with the pressure of an increased workload due to the ongoing crisis; he feels he is doing his job. However, he is upset with his remuneration – called 'stipend' in medical parlance. "A corona patient comes to us first, but if we have to buy N-95 masks, we have to use up our two-day stipend," said the 25-year-old, who is interning with the BRD Medical College in Gorakhpur, Uttar Pradesh.

Dinesh Chaudhary, 26, is also an intern at the SN Medical College of Jodhpur, Rajasthan. He is sent for duty in villages that are 200-250 km away from Jodhpur. He too does not have any problem with it because he believes it to be a part of his duty. But he is outraged by the government stipend that he is being paid.

Doctors and health workers like nurses, paramedical staff, lab technicians, medical interns and ASHAs play pivotal roles in the battle against coronavirus in the country. But their salaries do not do justice to their role. About 4,000 medical interns from Uttar Pradesh and Rajasthan have actively registered their protest over the inadequate stipend.

In Uttar Pradesh, a medical intern gets a monthly stipend of Rs 7,500, while in Rajasthan it is only Rs 7,000 a month. These medical interns say that the stipend they get is much less than the government standard pay fixed for the unskilled labourers.

"Our workload has increased manifold due to the coronavirus pandemic. We are being sent to villages 200-250 km away without any special facility and where there is no hospital or other medical facility," explained Chaudhary. He said they had to arrange for their food. "How can we arrange for food when everything is closed due to the coronavirus lockdown? It is solely due to the kindness of the villagers that we do not sleep hungry," he said.

"By and large, we do all the things that a nurse, doctor or a paramedical staff does. Our duty of eight hours stretches to 12 and further to 14 hours, but the stipend that we receive is insufficient for keeping ourselves afloat financially. This is the bitter truth," said Rai.

For MBBS students in the country, a one-year internship is to be followed by a four-and-a-half-year medical course; only after this do they get their MBBS degree and a licence to practice. This internship is done in their medical college or in the nearest government hospital. These trainee doctors get a stipend every month from the government, but there is wide parity in stipend that an intern receives across different states.

A medical intern in the central medical colleges gets a stipend of Rs 23,500 per month. In Assam, it is 30,000; in Chhattisgarh, Kerala, Karnataka and Odisha it is 20,000; in Tripura they receive 18,000; in Chandigarh and Himachal Pradesh 17,000; it is 16,590 in West Bengal; 15,000 in Punjab and Bihar; 13,000 in Gujarat; 12,300 in Jammu and Kashmir; and Rs 11,000 in Maharashtra. These are all two to

four times more than the stipend given in Uttar Pradesh and Rajasthan.

Farhan, 24, a medical intern and a resident of Anandnagar, Maharajganj, Uttar Pradesh, said the difference between the stipend is beyond comprehension. "I have many colleagues who are doing the same kind of job at BHU, Varanasi or AMU, Aligarh, but being a central medical college, they are getting Rs 23,000 for their work. Tell me, is it justified? This difference irks us all," he said.

The condition of interns studying in private medical colleges in Uttar Pradesh is even worse. These intern doctors, on the condition of anonymity, said that while some private medical colleges give only Rs 6,000 stipend, many private colleges pay interns nothing.

The Indian Medical Association, Medical Students Network and All India Medical Students Association have written to the Uttar Pradesh chief minister Yogi Adityanath demanding an increase in the stipend of medical interns. The letter also draws the chief minister's attention to the problems and general difficulties faced by medical interns during the ongoing coronavirus crisis. The demand has also been endorsed by the United Resident and Doctors Association and Federation of Resident Doctors Association.

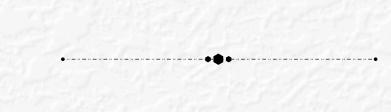
Neeraj Kumar Mishra, state President of the United Resident and Doctors Association (Uttar Pradesh) hasstated in his letter to the chief minister that interns face the highest risk of corona because the patient first goes to them. He notes that braving all risks, they are doing their job remarkably at the ground level. So, he has appealed to the government to increase the stipend to at least make it on par with the central medical colleges, in view of the risk involved and to boost their morale and enthusiasm.

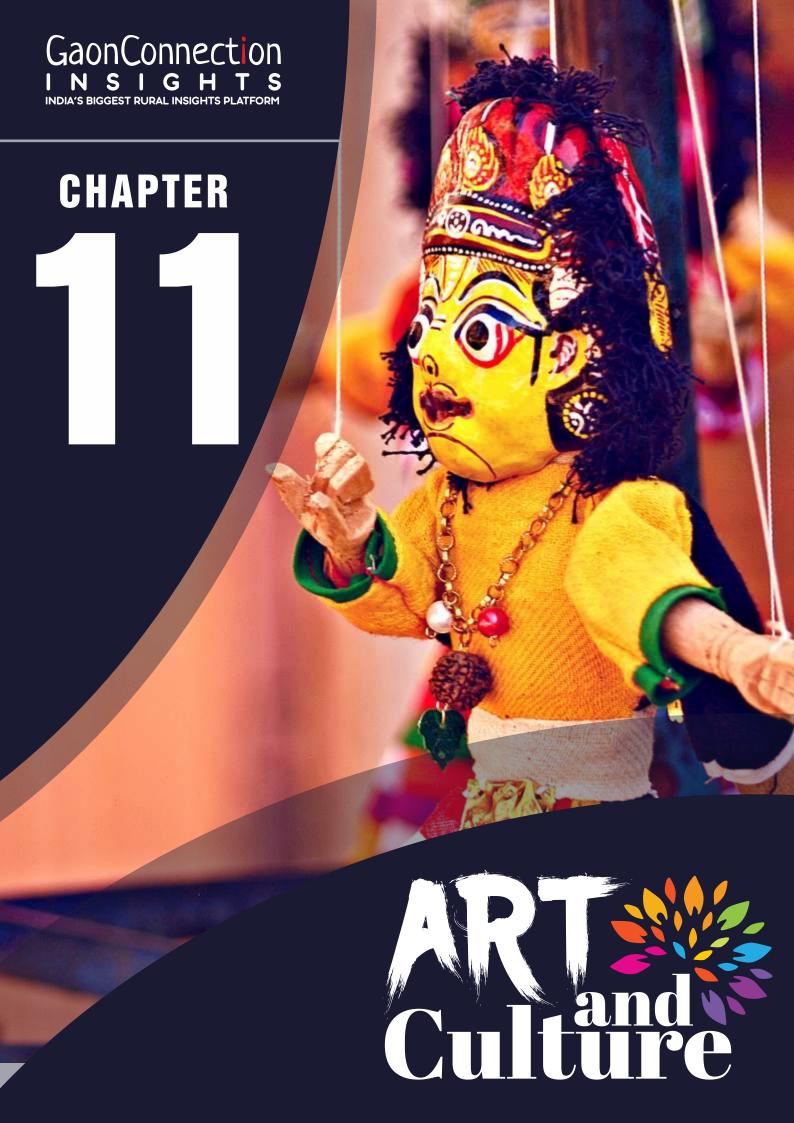
There are more than 50 medical colleges in Uttar Pradesh comprising private and government institutions, having about 2,500 medical interns. In Rajasthan there are eight government colleges and about 1,300 medical interns.

Earlier, in Uttar Pradesh, the stipend of a medical intern was Rs 2,100, which was increased to Rs 7,500 by the Mayawati government in 2010. It has been 10 years since then, and the cost of living has gone up too.

In Rajasthan, the stipend was last raised in 2017 when the state government had increased it from Rs 3,500 to Rs 7,000. At that time, these intern doctors had to take to the road and go on strike. However, these intern doctors cannot go on a strike during the corona pandemic. So, they have resorted to protesting on social media regarding the issue. They have tagged the chief minister, the health minister and the Prime Minister with the hashtag #WeDemandstipendincrement on Twitter through videos, photos and posts.

However, the government is yet to respond to their letters and tweets. The Directorate of Medical Education and Training, Uttar Pradesh (UPDGME) was also unavailable for clarifications.







Over 13 million people in rural and semi-rural areas of the country are involved directly or indirectly with art and craft. The handloom and handicraft sector is one of the biggest employers in the country after the agricultural sector.

However, like it did to every other sector, the COVID-19 pandemic caused a huge upheaval in the life of artisans. Markets shut down, raw material was not accessible and there were no takers for finished products, leaving craftspeople with no source of livelihood and in all kinds of difficulties. In addition, calamities like the Assam floods also significantly impacted the livelihoods of artisans in that state.

In the midst of the pandemic, on July 27, 2020, the government abolished the All India Handloom Board that fell under the Union Ministry of Textiles, and the decision was received with much anguish by many people who have spent several years trying to nurture the handloom sector through the handloom board.

The All India Handloom Board was the only one of its kind that included 88 weavers and artisans from all over the country, and created a platform for direct contact with the government. But the government justified its move saying that the board had only met six times in the last 15 years and had failed to make an impact on policy making. The board had served as an advisory body not only in terms of policy but also to make suggestions for employing more people within the handloom and handicraft sector and to preserve its heritage.

TRIFED

According to the Tribal Cooperative Marketing Development Federation of India (TRIFED), tribal handloom and handicraft worth Rs 100 crore remained unsold since the imposition of the lockdown. TRIFED bought the unsold material and provided cash to artisans registered with them. It also collaborated with technology institutions all over India such as the Indian Institute of Technology (IIT) for a 'Tech for Tribal' programme that sought to provide training to 15,000 tribal artisans in order to market their products better.

GOVERNMENT SCHEMES FOR ARTISANS

The Central Government released Rs. 5462.69 lakh in funds this year under various schemes. They are the Cultural Function and Production Grant Scheme, Repertory Grant Scheme and a Financial Scheme for the Development of Buddhist/Tibetan Art and Culture to provide financial assistance to artists during the COVID-19 pandemic.

Various zonal cultural centres (ZCCs) provided funds worth Rs. 927.83 lakhs to artistes as well this year. Alongside this, the ZCCs organised online events that allowed folk and tribal artistes to display their art forms, and helped them register under financial schemes that would provide them assistance and benefits.

The Union Ministry of Culture has also introduced the Kala Sanskriti Vikas Yojana (KSVY) for the promotion of art and culture during this pandemic, which helps artistes get financial assistance for holding virtual events.

For instance, folk artistes like the Behrupiyas, who perform in villages and markets across the country by impersonating figures from mythology and folklore, initially suffered financially and many had to resort to selling vegetables to earn money. The KSVY enabled them to conduct performances online and be paid for it. However, many of them claimed that they could not avail these benefits as they could not afford phones or data charges required to do so.

In October this year, the Jammu and Kashmir government introduced two schemes that would provide a financial stimulus for the handloom and handicraft sector in the Union Territory. One of the schemes proposed to provide cooperatives and self-help groups in urban and rural areas Rs. 1 lakh each in two equal installments. The other scheme provided a credit facility for artisans and weavers of the handloom and handicraft sector for meeting their needs for both investment and working capital.

KUTCH CRAFT COLLECTIVE

Various craft organisations of Kutch such as Khamir, Kala Raksha, Shrujan, Qasab, and Vivekanand Rural Development Institute (VRDI) came together in 2020 to form the Kutch Craft Collective to augment development efforts, showcase the craftsmanship of Kutch globally, and to make the products available online.

They reached out to nearly 8,000 artisan families for this purpose, and in February this year, they held an exhibition in New Delhi to present these crafts under one roof. Since March, moreover, nearly 1,100 artisans and weavers have been attending online classes to learn about marketing and setting up business pages on social media

SELF HELP GROUPS

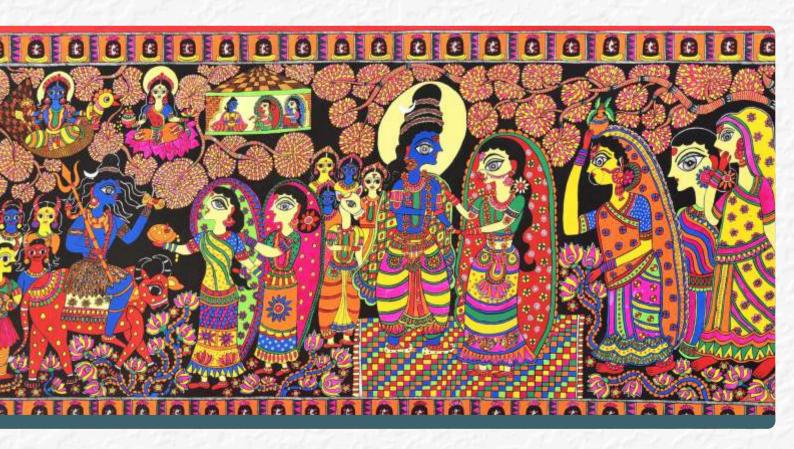
To further deal with this setback, self-help groups (SHGs), weavers, and artisans came together to manufacture masks. According to the World Bank, over 19 million masks were manufactured as of April by 20,000 SHGs across 27 states in India. In fact, artisans of various art forms such as Madhubani, Gamcha, Kalamkari, Ajrak, Kantha and traditional block prints have been making masks, and Dastkari Haat Samiti launched a catalogue that displayed these masks. This association, in collaboration with Google Arts and Culture (a digital platform set up to display the world's art and culture online in an accessible manner), showcased India's rural art and crafts virtually on a global scale.

As a result of the COVID-19 pandemic, several artisans across the country lost their means of livelihood. Government and non-government organisations introduced various schemes and methods to alleviate this, while also providing technical education to the artisans to market their products more effectively. Arrangements were also made to hold virtual and physical exhibitions and events.

Looms fell silent, musicians were no longer in demand and folk artists had nowhere to perform. *Gaon Connection* reports on a year that has been mostly grim for art and artisans, with a few glimmers of hope.







Stories of Shiva abound during the Madhushravani festivities, held annually during the monsoon in the Mithilanchal region of Bihar. One tells the story of how, out of Shiva's semen on the leaves of five lotuses were born five Nagakanyas. Another version says the daughters were born from Shiva's hair that fell into the Sonada lake. They were born as lotuses, and he gave them their real form. Thus emerged Jaya Bishari, Dhothila Bhavani, Padmavathi, Mynah Bishari and Manasa Bishari, the little daughters of Shiva, and sisters to Karthik and Ganesh.

In Bihar, West Bengal and Odisha, Shiva's daughters are revered as snake goddesses and worshipped during the monsoon. Another story from the Shivapuran emanating in the neighbouring country of Bangladesh, speaks of Behula, a devout wife who travelled to the heavens on a raft to save her husband Lakhindar who was bitten by a snake. This is performed as a play, on boats to appease the snake goddess Manasa.

Some years ago, Delhi-based Madhubani artist Manisha Jha, 49, started documenting the Madhushravani tradition, and the Madhubani Art Centre in Delhi, an organisation run by her, will publish the book called Madhushravani, in Maithili and English. The book contains 100 paintings, 45 sketches, folktales, Maithili folk songs and description of rituals. The 162-page hardbound book is priced at Rs 2,500.

Shalini Karn, a 27-year-old Madhubani artist from Ranchi in Jharkhand (Jharkhand was a part of Bihar till 2000), hadn't heard of this story until she celebrated the Madhushravani ritual as a new bride last year. Recalling the festivities, Karn who is also a Madhubani artist said, "As my maternal home is in Madhubani, Bihar, I went there and reconnected with family and relatives as a new





bride; it was a lot of fun," she said. "I fasted for a day. I relaxed, dressed up and participated in the rituals. A lady who knew various dant katha or folk tales, narrated stories related to Nature, gods and goddesses. There is a lot of learning hidden in these stories," she said.



Madhushravani is celebrated over 13 days, with an older woman or bidkari presiding over the festivities, and narrating stories every day. The brides visit their maternal homes where they fast, feast and deck up in their finery and perform pujas seeking a happy marriage. Serpent gods and goddesses, the navagrah (nine planets) and Shiva-Parvati are propitiated by the family and relatives. The new brides team up with friends to pick specific flowers and leaves such as *juhi* (jasmine), *purain ka patta* (lotus leaf), *maina ka patta* (taro or arbi plant) to be used in the rituals and as offerings.

"For me, Madhubani is an amalgamation of *kala-katha-vrat* [art, stories and fast/resolve]. It is so rooted in the culture it comes from. I felt that unless we know and understand the culture, our knowledge about this art form will remain superficial, which is why I started documenting this ritual," said Jha, who also performed the ritual soon after getting married.

The 100 paintings capture different features of the ritual. Some paintings draw from the 15 stories of snake goddess Manasa, of Mangala-Gauri, Samudra Manthan (churning of the Ocean), and the birth of Earth in both Kachni and Bharni styles of Madhubani – narrated on each day of the festivities. While the Kachni style is characterised by monochromatic line work, Bharni is about shading

The paintings in the book are by Jha, sourced from her collection and that of the Indira Gandhi National Centre for the Arts (IGNCA) and also has works by master artists such as Bimala Dutt and Padma Shri awardee Bauva Devi who has depicted the story of Mauna Panchami, that is narrated on the first day of the festival.

"Madhushravani imparts knowledge about Nature, women empowerment and society," explained Jha. Many rituals take place around the *maina ka patta*. "On five leaves, five serpents are drawn with vermillion, kohl, sandal and rice paste. The message is of co-existence and instilling love and respect fo our ecology," she added.

The Madhushravani festival also underlines the importance of relationships and the respect a new entrant to the family deserves. "The bride stays with her parents and, in some communities, even the husband goes and stays with her. It is a time for bonding. The in-laws send clothes and food for her and her parents," she said.

Jha shared a fun story about Shiva's sister Asavari, which is also part of the book. Parvati, feeling lonely in Kailash hills, requested Shiva for a sister-in-law with whom she could share her feelings. "Lord Shiva created Ashavari on her insistence. Ashavari would play pranks on Parvati. She had cracks in her heels that were so huge, she once hid Parvati inside them when Shiva came looking for her. He could not find her."

The artist has also included a few folk songs sung on the occasion in the book. Sample this song dedicated to Bishari, the snake goddess who is believed to save people bitten by snakes.

Purainik patta, jhilmil latta, tahi chade baisali Bishari mata Haath supari khoicha paan Bishari karti shubh kalyan (Goddess Bisahari, seated on a lotus leaf, holding a betel nut in hand and paan in the pallu of her sari, showers us with her blessings.) The book is bilingual so that many non-Maithili speakers and youngsters can read it. Having documented the ritual in its entirety, Jha also intends her book to be used as a resource book by scholars for further research.

Septuagenarian Bimala Dutt is glad Jha has made this effort. The Madhubani-based veteran artist said: "I performed the Madhushravani ritual. My daughters-in-law did it, and my daughters. It goes on. This documentation will increase the reach, understanding and awareness of Madhushravani."





Raees Ahmed, the hero of this story, introduced his two heroines – Gulabo and Sitabo. "This is Gulabo, and this is Sitabo," Ahmed said, and both Gulabo and Sitabo clapped their hands in acknowledgment. The two glove puppets, Gulabo on his right hand and Sitabo on his left, earn Ahmed his living. He walks from place to place, narrating stories through these two, who are sometimes sisters-in-law, or two women married to the same man, or sometimes a man's wife and mistress. "Today's story is of a man's wife and mistress. Sitabo is his wife, and Gulabo is his mistress. The stories are of their fights,"

Gulabo and Sitabo are made of papier-mâché, their faces are painted on, they have moveable 'hands', and wear colourful, traditional attire, and gaudy ornaments.

Ahmed, a resident of Lucknow in Uttar Pradesh hails from a family of puppeteers. His family has been into puppetry for over 35 years. In his father's days, puppeteers were invited to affluent households and were paid well for the 'Gulabo-Sitabo' show.

"All I have to do, usually, is announce my arrival. Kids, adults, and the old alike used to assemble to see my show," Ahmed said. He tells stories with words and songs. "I used to earn some 500-600 rupees a day, and we used to survive on that. But, ever since the lockdown began, I've been struggling to earn a rupee," Ahmed lamented.

This art traces its roots back to the 17th century. The puppeteers used to be invited to palaces to entertain the royals. But the advent of television and mobile phones are pushing out the puppets.

According to the puppeteer, he worked for six months in a year and relaxed for the rest of the year, especially in the monsoon. However, the lockdown turned everything upside down. Others have started taking up other work, but Ahmed hasn't done that yet. "I still go to known places and perform a show or two, but I hardly make any money. Now, if I don't do some other work, my kids will starve," he said.

The government is not doing much to help, complained Ahmed. He doesn't take too kindly to those who come and take his pictures and videos and write about him and leave. That is not bringing him any benefits, he said. "They share the footage on mobile, or they put it on television, but our state remains the same," he said.

"If people don't come out of their houses, how will Ahmed show his play? How will he earn," asked Savitri Devi, Ahmed's neighbour, who runs a small shop.

Ahmed, however, is not ready to let Gulabo and Sitabo go. "They helped me feed my kids. I earned my living through them. I am still doing that. I could feed my kids because of them. And they are like my kids," he said.

Ahmed explained.



NO MUSIC TO THE EARS

The COVID-19 situation has left Gulam Mohammed Khan and his colleagues without a job for three months. "The pandemic and the lockdown pushed us into debt. Before this, we used to do at least four to five programmes a month, and earn some fifteen to twenty thousand rupees," Khan said. In peak season, this would double, he said.

Khan plays the *shehnai* and his colleagues accompany him on the tabla, harmonium, and dholak. He recalls the time when the shehnai was considered a must during weddings, and every other important function. But all that was a 'pandemic ago'.

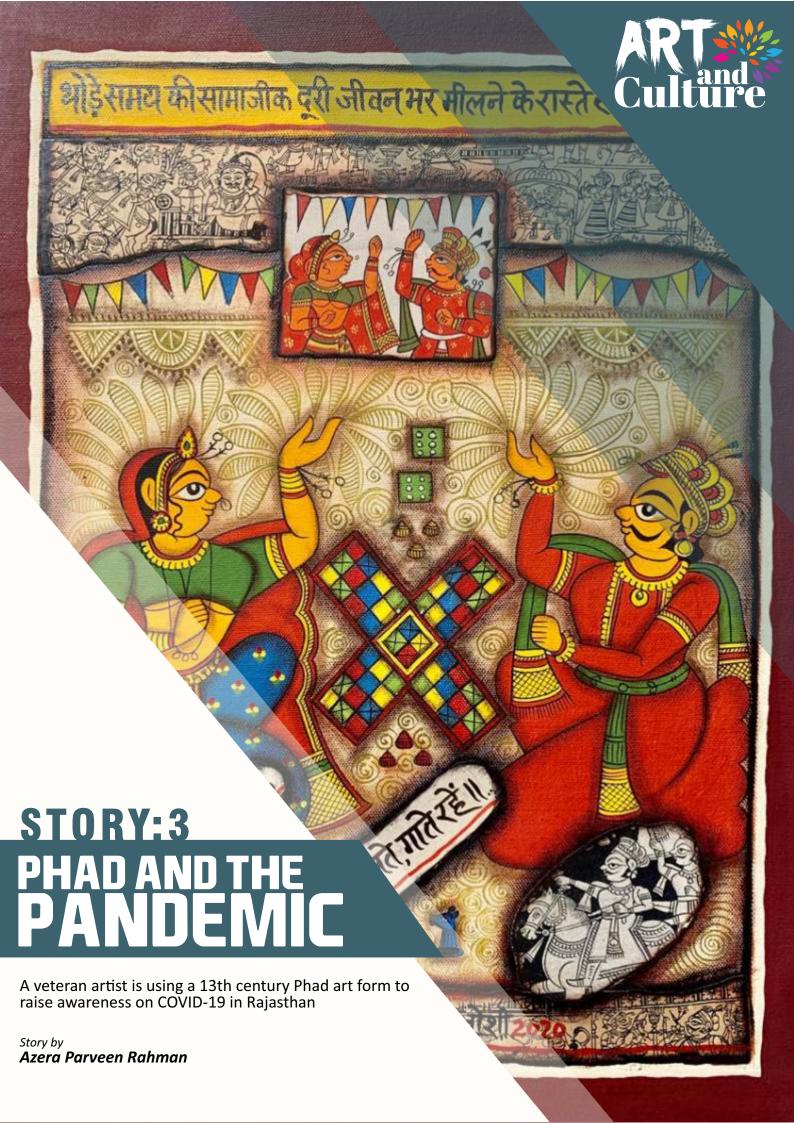
The shehnai Khan uses is at least 200 years old, he told us. He started playing when he was just 15 and the instrument was passed on to him by his father.

While the pandemic has made things worse for Khan and his troupe, the decline had begun some years ago. "We used to be invited to many rich households back in the day, and we were respected too, for our talent," Khan said. "But, with the band parties and DJs, people started losing interest in shehnai," Khan rued.

Bharat Ratna awardee Ustad Bismillah Khan was a father-figure to him, said Khan. Bismillah Khan and Khan's grandfather were neighbours in Benaras. "We are also from the same Banaras *gharana* as Ustad Bismillah Khan *Saheb*. He is a relative. There cannot be anyone like him in the whole world," he declared, with pride. "My grandson plays at Kashi Vishwanath temple. I feel happy," Khan added.

"We didn't foresee what's going on now, with the pandemic and the lockdown, at all. Now, I feel we should leave this field and done something else to earn a living," Abrar Khan, *dholak* player, and Gulam Khan's colleague, told *Gaon Connection*:

Gulam Khan said he had an appeal for Prime Minister Narendra Modi. "I request Modiji to take note of our misery and do something for us. There are many artistes like us who have been rendered jobless," he said.





he style has remained the same, and so has the natural colour palette. Even the canvas — cotton fabric — on which this centuries-old traditional art form of Rajasthan — Phad — is rendered, remains the same. "Bas kahaani badal gayi (only the story has changed)," Kalyan Joshi, a veteran of the Phad art form told Gaon Connection.

Joshi is expanding the repertoire of this 13th-century art form to include messages on coronavirus diseases (COVID-19) and is documenting the present times, along with the traditional stories of deities and gods. One such painting is his 41-scene, 2.5 feet x 4 feet Phad that encapsulates how the novel coronavirus laid siege in the country, followed by the nationwide lockdown, which dramatically changed the lives of the citizens in the country.

On March 19, the first COVID-19 case was detected in Bhilwara and the world changed dramatically. The scenes and the experience — of educational institutions, markets, eateries, everything, closing down and of people disappearing from the busy streets — inspired a visual story in Joshi's mind.

"I painted three scenes. The first of a woman washing her hands. The second of people in masks greeting each other, with one extending his hand, but the other folding his in a 'namaste'; and the third, a person cycling, far from a crowd. Each picture carried a message on the importance of hand-washing and on physical distancing, that has become essential to avoid the spread of the (COVID-19) infection," Joshi explained to Gaon Connection.

The style and the colours used for these paintings were traditional, naturally-sourced ones. Even the process of filling the colours into the drawings was the same — first was beige, or "colour of the skin", then yellow (for the





jewellery), then green (for foliage and dresses), brown, red, blue, and finally, the most delicate, black, for the outline of all the figures.

There were, however, some differences. "Instead of cloth, for example, I painted these scenes on paper," Joshi said. And since it was not possible to narrate these scenes publicly, given the lockdown, he decided to use social media to spread his message.

And soon, the COVID-19 Phad scenes went viral.

In his next narration through Phad, Joshi, went back to his traditional medium —the starched cotton cloth. This scroll, a 41-scene Phad, which traces the timeline since the first coronavirus case was detected in the country, is a marvellous amalgamation of a modern-day story, narrated old-school style.

"The size of this Phad is 2.5 feet (width) by 4 feet (length), and the scenes are in miniature," Joshi said. The story unfolds from the time coronavirus was first detected in Wuhan, China, and how it spread throughout the world (depicted through a dragon spewing the virus), finally reaching India. There are scenes from the airport and how travellers are screened, from hospitals where healthcare workers — all in masks — are treating corona patients, and even the display of gratitude to frontline workers — through lighting of diyas, showering flower petals, and clapping of hands.

"Traditionally, Phad does not have any text, but in this, I have added a line each for better understanding, like a graphic novel," he said. The scroll also has scenes from homes and how people have to deal with the lockdown. Families are shown spending time together, individuals working from home, children helping in the kitchen and people pursuing their hobbies.

These paintings were the first part of Joshi's experiments with Phad in relation to COVID-19. "In the second part, I am visualising scenes from the village and how migrant workers are returning home from the cities on foot, in trains and buses," said Joshi.

AN AGE OLD TRADITION OF STORYTELLING

Phad is a form of scroll painting which has, over the centuries, narrated stories to people in village gatherings. These stories — of Devnarayanji, an incarnation of Lord Vishnu, and Pabuji, a local hero — was narrated by priest-singers called Bhopas and Bhopis who would carry these paintings with them wherever they went.

In a dramatic unfolding of scenes, the narrators would un-scroll every fold, or Phad amid a large gathering after the sunset, and narrate the stories section by section. Both the artist and the narrator played a role in the tradition. According to Kalyan Joshi, it was the members of the Joshi family, belonging to the Chipa caste, who created these paintings. The Phad art form has been passed down his family through generations, for over 700 years, he said. Joshi's father Shree Lal Joshi is a Padma Shri awardee, and his brother Gopal Joshi is also a national-award winner.

"However, as radio, television, and now mobile phones have made inroads into the villages, the attraction towards Phad has gradually decreased," he regretted. The number of Bhopas and Bhopis have dwindled too. It's a similar story for the Phad paintings themselves. With digital prints of such scrolls making an appearance, the challenge is greater. "For example, if we had orders for 1,000 paintings earlier, now we get just 50," complained Joshi. To compensate, the price of these handmade, intricately-designed scrolls has also increased. But if it's a Bhopa who comes for the Phad, the price is negotiated by a big margin.

"A 20 feet by 5 feet Phad of Pabuji costs about Rs 2 lakh but for a Bhopa we charge Rs 30,000 only," said Joshi.





"My father would always say — never send back a Bhopa empty-handed. We will not let that tradition die," he added.

REVIVING INTEREST

As social and environmental issues started making appearances in his paintings too. Two years ago, for instance, Joshi did a series on water conservation.

Commissioned by a non-profit, the paintings were done on flex boards and on the boundary walls in Chirawa in the Shekhawati region of Rajasthan where water scarcity is a major issue. The paintings, Joshi said, recapped scenes of the past — when fields and festivals had enough water. They also depicted the present where ponds have dried up and there is over-extraction of water for borewells. This led to people migrating from the area, spread of diseases, etc. The final series showed water harvesting and the recharging of wells which ultimately brought life back into the villages. So, while the story has changed, the essence of Phad painting, of conveying a message to the people, has remained.



Like many other traditional art forms, even daughters were not taught the art form, "since they would get married and become a part of another family oneday". Shree Lal Joshi, however, broke the tradition and established the Joshi Kala Kunj in Bhilwara in 1960. This



was rebranded as Chitrashala in1990, under Kalyan Joshi and his brother Gopal Joshi. So far, more than 4,000 students have been taught here. They also started conducting online classes during the lockdown. More than 200 of their students now earn their living through Phad.





Baburhat, a village in Cooch Behar district of North Bengal, over 700 kilometres from Kolkata, once thrived on handloom. About four decades ago, traditional hand- woven tant saris and Assam's traditional costume Mekhla Sador were woven on these looms to be sold across West Bengal, Odisha, the north eastern states, Bangladesh, and Nepal.

Today, the clacking looms have fallen silent. Weavers are selling vegetables, fish, lottery tickets, and taking up jobs in tea shops or run battery-operated rickshaws.

Neel Kamal Biswas, in his mid-60s, once owned 15 handloom machines at his home in Baburhat and wove Mekhla Sador, Baluchari, Jamdani, Mulmul, Doria, Charkhana, Chikan saris, and even shawls. Around 40 weavers from nearby villages worked for him, producing 45 saris a day.

"We never had to go to other cities to sell our work because Baburhat had one of the largest haats (bazaar) in North Bengal where wholesalers and retailers would purchase directly from the weavers," reminisced Biswas. Today, he doesn't have a single loom at home.

FROM GLORY TO MISERY

In the early days, weaving was practised and controlled by those who belonged to the weaving community. When

people from other communities began to learn the craft, there was an increase in the number of weavers in the state. This, however, also gave a nudge to competition and internal conflict. That's when the need to form a guild was felt — to run the show in an organised manner.

This, in turn, gave birth to the 'Mahajan' who loaned money to weavers. He hired a group of assistants called 'paikars' who were assigned to lend money to the weavers and collect products directly from them at a fixed price set by the mahajan.

When the All India Handloom Board was set up by the Indian Government in 1945, along with an active Industrial Cooperative Society formed in Baburhat that offered employment to thousands of weavers from in and around the village, it boded well for the weavers, but it was short lived. Biswas, a weaver from Baburhat, was one of the members of the Cooch Behar Industrial Cooperative



Society. "Before the *mahajans* and political parties intruded, the owners employed weavers, and also worked for others at the same time." "But, *mahajans* and *paikars* broke the system, forced us to take loans and charged a heavy interest rate," he added. When the weavers failed to pay, many of them lost their land and looms to the money lenders.

"I have seen families who once had hundreds of looms starving to death," narrated Biswas, who now sells raw thread for a living. His son works in Cooch Behar in an apparel store. "Handloom work, once

the pride of North Bengal, was slowly uprooted," he lamented.

THE LONE HANDLOOM MILL OF BABURHAT

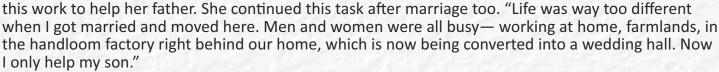
Sunil Debnath is the lone and last owner of a handloom mill in Baburhat. He continues to weave inside a small handloom mill in his 3.5 acres of land.

"Our great grandfathers moved here in 1947, during the India-Pakistan partition. By the time I was a teenager, I had mastered the technicalities of running handloom and spinning mills. But, due to the slow decline in handloom, baba [father] opted to sell vegetables," Debnath told *Gaon Connection*.

Debnath and wife do not have any kids and his ageing father is a pensioner from the gram panchayat and cooperative society.

"The pension from the cooperative society is thousand rupees a month, but from the panchayat, it is much lesser. Baba was registered in the year 1984. These cooperative societies only exist on paper today," complained Debnath.

His mother Ranibala Debnath helps in rolling threads on a spinning wheel. She was a young girl when she learned



Today, Debnath only takes orders from a client in Fakiragram village of Kokrajhar district, Assam. "I sell a single piece of Mekhla Sador for Rs 182. The market price varies from retailers to stores, some sell it for Rs 300 and some for even Rs 500," he informed. When there is work, Debnath earns Rs 500 per day. "In a month, we have to deliver 300 pieces of Mekhla Sador and *tant* saris. During the lockdown, we had zero revenue since there was no production and supply. We have slowly resumed work now," he added.

Seven years ago, Debnath received Rs 50,000 as loan from the government to invest in business. "It was under a special scheme by the central government, meant for the handloom sector. Three years ago, we were supposed to get another fifty thousand rupees under the Pradhan Mantri Mudra Yojana, but we never did," he said.

DAILY STRUGGLE FOR CONTRACT WEAVERS

The lockdown phase has been hard on these weavers as they didn't have jobs for three months. "My wage is four hundred rupees a day. Since there was no work, I took a loan of thousand rupees from our owner in May," informed Deb, whose wife and daughter work as household help in Cooch Behar, but even they have no work now due to the pandemic.

"My son works in a powerloom unit, which was also shut during the lockdown. It's been hard to arrange a square meal a day. We are slowly getting some work, hope it gets better" he added. Many in the village, like Deb, still do not have ration cards. The only ration they received during the lockdown is through the central government scheme.

Baburhat village comes under Kharimala Khagrabari panchayat with around 1,946 houses with a total



population of around 7,844, as per the data shared by coochbehar.nic.in, a website for the urban and rural population in Cooch Behar district.

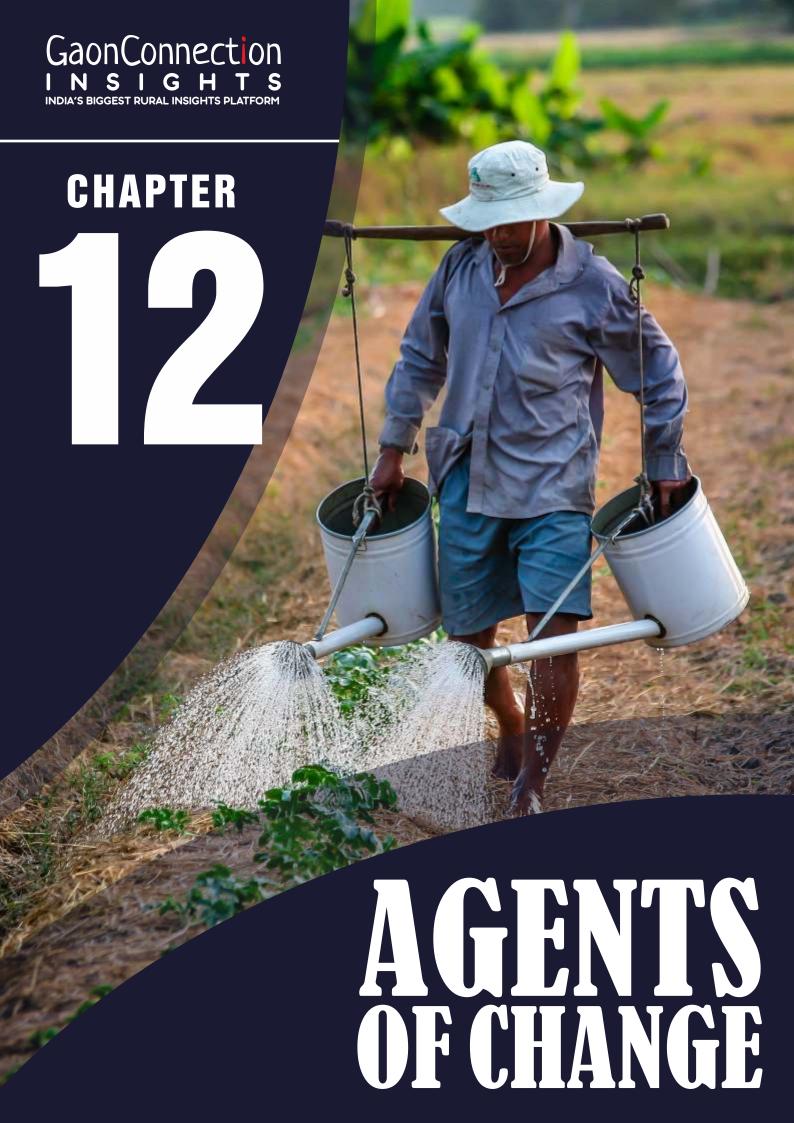
NO FUTURE OF HANDLOOM IN BABURHAT: OFFCIALS

"I want to understand what happened to the government's slogan of Make In India that boasted so much about encouraging rural economy," asked Debnath.

Cooch Behar has been neglected for a long time, said an official who is engaged with the Primary Weaver Cooperative Societies and Clusters, Cooch Behar, for 17 years. There were plans to develop a cluster of weavers in Baburhat. "I had even submitted a proposal to the government this January and it was approved. The problem is, to form a cluster, we at least need a minimum of 500 active weavers, which we haven't been able to find in this area," he said.

He agreed Cooch Behar was once rich in handloom, but added "We have to move ahead and live in the present... We don't see any future of weaving in Baburhat."







Amid the COVID-19 pandemic in 2020, several initiatives started by individuals, organisations, and the government have provided respite and some relief to vulnerable sections of society whether providing livelihoods or nutritional support. Alongside, have been projects to safeguard and repair the environment through soil, water and forest conservation.

NUTRITION GARDENS

The Union Ministry of Women and Child Development has encouraged states and union territories in 2020 to establish nutri-gardens at *anganwadi* centres where locally available nutritious fruits and vegetables can be grown to tackle malnutrition as well as help pregnant women and children build immunity.

In Phiringia in Kandhmahal district in Odisha, for instance, nutrition gardens were set up by the efforts of the non-profit CARE India Solutions for Sustainable Development (CISSD) as part of their Technical Assistance and Research for Indian Nutrition and Agriculture (TARINA) project under the Integrated Child Development Services (ICDS) scheme. With 220 anganwadi centres in Phiringia, 44 nutrition gardens were proposed to be built under this project, out of which 10 have have been launched in August 2020. Each of these gardens caters to nearly 40 children.

As part of the National Nutrition Month in September this year, an emphasis was laid on planting these nutrition gardens in rural areas across the country such as Punjab, Assam, Andhra Pradesh, Rajasthan, Telangana.

In Maharashtra, 92,000 nutrition gardens were planted between June 25-July 15 under the Maharashtra State Rural Livelihood Mission.

MAKING SANITARY PADS

Women in Sadaramangala at Whitefield in Bengaluru lost their means of livelihood with the COVID-19 pandemic, but soon took to making reusable sanitary pads under The Good Quest Foundation, a non-governmental organisation that taught these women the skill. They began making 25 pads a day, and earned Rs. 162 each day. These pads were then distributed to tribal women in MM Hills in Karnataka along with awareness drives on menstrual health and hygiene.

In Rewa, Madhya Pradesh, too a group of adivasi women calling themselves Dastak Kishori Samuh have been making pads since 2018 and have sold them at 26 villages at Rs 15-20 a pad. They continued distributing them but free during the lockdown.

SELF HELP GROUPS

The National Rural Livelihood Mission (NRLM), a government program (partly aided by the World Bank) was launched in 2011 to create effective community institutions of the rural poor and boost their incomes. Under this, 6.6 million self help groups were created with 72 million members.

During the pandemic, while the country was still under lockdown, 20,000 SHGs produced more than 19 million masks across 27 states in the country. They also prepared one lakh litres of sanitisers and 50,000 litres of handwash. SHGs also set up 10,000 community kitchens to feed stranded workers and the poor.

A study published in October 2020 conducted by the International Initiative for Impact Evaluation and a Bengaluru-based nonprofit Vrutti on the impact of the NRLM across seven states found that the earliest (around 2012-13) participants of the mission have seen their household income increase by 19 per cent and savings by 28 per cent on average.

AGROFORESTRY PROJECT IN PURULIA DISTRICT WEST BENGAL

In 1998, an initiative was started by villagers of Jharbagda village in Purulia district in West Bengal with help from an non-profit called Tagore Society for Rural Development (TSRD) to plant saplings around the villages that experienced heatwaves and extreme weather conditions The non-profit intended to plant 36,000 saplings over the next five years after which the work continued.

As of 2020, the village and its surrounding 387-acre land is now covered with a dense forest which is also home to various species of wildlife such as elephants and migratory birds. Natural structures were also erected during plantation for groundwater conservation, which has enabled villagers to install solar pumps to extract water. Moreover, using the natural resources of the forest such as solar-pumped groundwater and dry leaves for fuel, villagers have been able to save Rs 6 lakhs, according to the treasurer of TSRD. These efforts have now benefitted 30,000 people across 21 villages.

POULTRY PROJECT BY TRIBAL WOMEN

Tribal women from the Ma Thakur tribe in Khanduchiwadi, a remote village in Shahapur taluka in Maharashtra, started undertaking a poultry project in January 2020 through a project introduced by Population First, a non profit that focuses on advocating issues of health and population from the perspective of gender and social development. Training in poultry farming was provided to these women in January this year.

Eggs produced through this project were then sold to *anganwadi* workers and neighbouring villages, providing a steady income for these women.

This project has also helped the government in running its supplementary nutrition scheme for tribal children, which has mandated eggs as an important part of their diet.

While the pandemic shrouded the country in despair and gloom, a few bravehearts took up the challenge to keep things going. They innovated, experimented, took calculated risks and helped heal their fellow countrymen and their land. *Gaon Connection* presents a selection of stories of those who were instruments of change.

LIGHTNING STRIKES

According to data recorded by the National Disaster Management Authority, lightning strikes have killed 315 people, 90 per cent of them in Uttar Pradesh and Bihar. All of these took place between the months of May and July this year. Most people who died were farmers working in their fields when lightning struck. Bihar Chief Minister Nitish Kumar announced a compensation of four lakh rupees each to the families of the deceased, and free treatment for the injured. While thousands of people die in India due to lightning strikes and heavy rains, this year in particular saw plenty of thunder cloud formation, atypical for the month of June in that region.





Banyan, peepal, jamun and mahua are part of the 250 varieties of plants that fill a three-and-a-half-acre campus of a government school in Mahadeva village, Sahawal block, about five kilometres from Satna district headquarters in Madhya Pradesh. The walls of the school have paintings of foliage and flowers. It took headmaster Alok Tripathi decades to ensure this level of greenery in his school; he wants it to set an example of environment protection.

There was a time when the school had no boundary walls and villagers freely grazed cows and buffaloes on its grounds. "In 1986, when this used to be a primary school, the first five saplings were planted, but some people uprooted the plants and took them away," Tripathi told *Gaon Connection*. "After that, I tried putting up a boundary wall around the school, but that took many years. Then, with the help of local government authorities and the forest department, I began planting saplings; they were uprooted too," he added.

Finally, in the year 2000, when the school was upgraded to middle level and the number of senior students in the school went up, Tripathi found that the older students connected well with nature. He made another attempt to green the school in 2018. He attended a greening programme and shared the issues he faced with raising saplings; one of his friends Rakesh Raikwar stepped in to help him.

"This programme taught me to plant saplings with a tree guard. I planted 27 saplings, including mango, amla, almond and banyan. Today, they have grown by 10 feet to 12 feet," elaborated Tripathi. Gradually, the students took to planting saplings regularly and raised awareness among people. Even during the COVID-19 lockdown, Tripathi got a pass issued to be able to go to school and water the plants. "I feel hugely responsible for the plants and sought permission to visit school twice a day. That is why the campus has remained green and lush, and is well maintained," he added.

Besides teaching his students about the need to keep their surroundings green, Tripathi also speaks to people about environmental issues. He also encouraged the children of nomadic families to enter the formal education system in the village. "Some drum-making nomadic artisans used to come visiting our village. Many families had children in the school-going age. I urged the head of the community to enrol the children in our school. First, three children came, then 12, and later 30 children joined the formal education stream. We sorted out administrative glitches, and because they had to keep moving due to the nature of their profession, we also helped the children with pre-examination preparation," he recalled. For this, the Madhya Pradesh School Education Department bestowed Tripathi with the Outstanding Teachers (Governor) Award in 2017.

Tripathi lives in Dhawari near Mahadeva, and believes that like the brain needs oxygen to function well, the earth needs greenery, and so saplings must be nurtured in schools. "I hope people recognise our school's efforts to green the environment, and that amid the concrete jungle, we remain an oxygen chamber," he said.





he villagers in the Gonda district of Uttar Pradesh were worried for their livelihood when the COVID-19 lockdown started. But, around 50 women who were associated with ten self-help groups (SHG) in four developmental blocks decided they would do something about it. They were from Itiathok, Mankapur, Chhapia, and Haldharmau. The women have been involved in planting saplings of teak, sahjan, guava, mango, jamun and roses since 2018.

While the saplings are yet to translate into an income for them, they became a source of livelihood for many male migrant labourers who had returned from cities, and were jobless.

These women worked part-time at nurseries, but with the lockdown, they made it a full time job. "My husband lost his job. This nursery work was our only source of income," said Sunita Devi of Binhuni village, Itiathok.

Women linked this project to MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) so that they could get government funds to purchase saplings and pay labour charges.

"For a month, we earned Rs 200 per day as MGNREGA wage. A government official told us the profit from the sale of these saplings will also be divided among us," she said.

Most women in the area are farm labourers barring a few involved in stitching and other handicraft work. The lockdown hit them hard. "We earned Rs 10,000-15,000 each from this nursery business last year. Since this was the only source of livelihood, we planted more saplings," said Vinita Pal, head of a self-help group in Bishnupur village of Haldharmau in Gonda.

"When migrant workers arrived from Mumbai and Gurugram and asked for some work, we could employ them, since we had increased the plantation, and required more helping hands," said Meera Pal, another member of the self-help group.

When *Gaon Connection* spoke to Bishnupur's retired schoolmaster Mithilesh Srivastava, he said, "These women were into this business for the last two years but nobody realised it could be a source of livelihood for those who came walking, sometimes hitchhiking from big cities, with empty pockets and shattered dreams," he said.

FROM RIDICULE TO RESPECT

A narrow road leads to Bishnupur village in Gonda where the one-acre nursery is. A few women were working there under the guidance of Deepak Kumar, a local villager who had worked in Mumbai as a gardener years ago.

"While some people ridiculed the efforts of the women initially, a local district administration official encouraged them. I was sceptical too and wondered if it would push them into debt," admitted Kumar. "The women's group pays Rs 50,000 per month as rent for the nursery," he said.

During the lockdown, 1.50 lakh saplings, including roses, were planted in the nursery, and women and migrants worked together on them.

"I used to get Rs 11,000 in Mumbai before lockdown. When I reached here, I was jobless with no money. I was depressed. I got married in October last year," said Kumar.

Locals suggested he should work with self-help groups like the other five-six migrant workers in the village. "I had heard about the nursery but was not sure whether I would get work there," he said.

The 10 SHGs between them employed 60-70 migrant workers during the lockdown. "They were paid from the account of the SHG," said Vinita Pal. "Bishnupur Nursery planted 1.50 lakh saplings and it would not have been possible without the help of migrant workers," she said.

These women have emerged as changemakers. Not just in the village or the panchayat, but in their families too. "My relatives called me to congratulate me. Those who were given jobs during the lockdown are grateful. It feels good," said Meera Devi.

The success of these women has also changed the perspective of men towards them. Pal Ravinder Kumar, Mohit and Anil Pal of Paharapur village of Gonda used to work in a plastic box-manufacturing firm in Mumbai. They have been jobless since they returned from the city in May.

"I borrowed Rs 10,000 from my friend in Mumbai to come home. I read about this self-help group and it is inspiring," said Pal Ravinder Kumar, 22, who got married a year ago. "When my wife asked me to work with these groups when I returned from Mumbai, I snubbed her," he confessed.

Pal is now motivating his wife and other women to form such a group and work on some ideas. Gonda District Magistrate Nitin Bansal said, "There are a lot of rural livelihood schemes. We are motivating people to come forward. The government is ready to assist them to become self-reliant."

TOWARDS SELF RELIANCE

"We will earn more money once the saplings are sold. The district administration has assured to buy these plants," Anila Devi or Binhuni village told *Gaon Connection*.

"We purchase plants from different nurseries and the saplings prepared by the SHGs will be purchased at a good price," said a government official. A rough estimate suggests five lakh saplings have been purchased for around Rs 10-15 lakh and the target is to plant 50 lakh saplings.

The acknowledgment and support from the local officials have motivated these women to expand their work. These villages have more than 300 migrant labourers who have returned from big cities.

"Our effort is to reach out to them and provide them work. We will approach the women first. More self-help groups will be formed," said Vinita Pal.

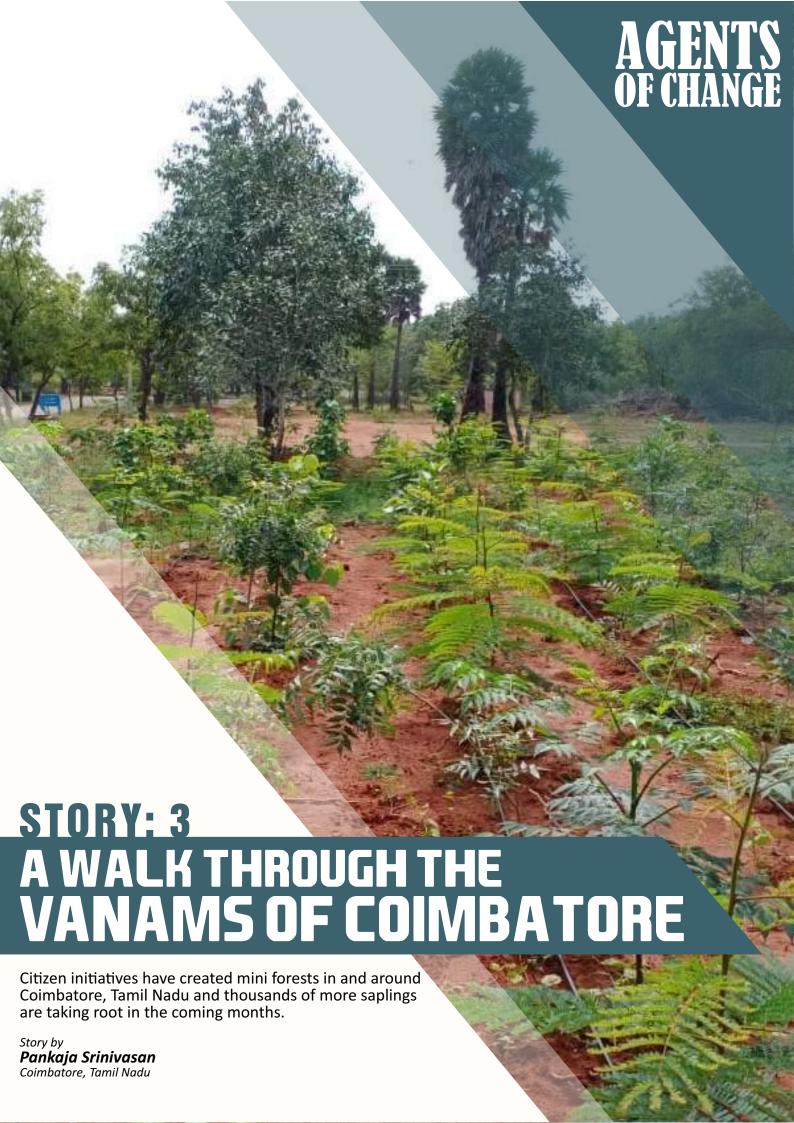
Another SHG member Reema Devi said, "We don't know how long this [COVID-19] situation will persist. A self-help group is a stable source of income."

Women in this area said that they had been working as farm labourers, and so were their spouses. "But farm work is not a regular source of income. Paddy is being sown these days but after 10-15 days, we will be jobless again. It is better to start such work [like the SHGs did]. We work farms for daily wages, here we will work for ourselves."

Uttar Pradesh has more than 3.50 lakh self-help groups across 75 districts. Almost 4,000 of these have less than five members.

The state government has just completed the skill mapping of migrant workers, including women, to provide them jobs under rural job schemes. The head of the State Rural Livelihood Mission, Sujit Kumar said more women will be employed in the coming days through SHGs across the state.







The COVID-19 pandemic notwithstanding, a group of citizens, masks in place, gathered on the edge of a 10.87 acre-land with construction debris, garbage and broken bottles strewn around. "A preliminary round of cleaning has been done and soon we can start planting the saplings," an excited Aparna Sunku, of a Rotary Club in Coimbatore, told *Gaon Connection*. Soon this patch of wasteland, handed over by the Indian Railways, will be covered with over 30,000 saplings that will eventually grow into a mini urban forest, to be called Hope Vanam, a forest of hope. Despite the pandemic, citizen-driven tree planting drives in Coimbatore, the second largest city in the southern state of Tamil Nadu, located about 500 kms from its capital, Chennai, haven't lost steam.

"We had to excavate nearly four feet of debris before the soil came into view. A bund was built with sand, vetiver and stones to filter treated sewage water that will be used to water the saplings," said V Chandrasekar who heads afforestation projects of an environmental non-profit, Siruthuli (meaning a water droplet) that is providing the expertise for Hope Vanam.

"We will be planting nearly 25 species of native trees including Neem, Pungan, Orchid tree, Star gooseberry and Vilva," explained landscape consultant for the project, Shanthni Balu, who along with Sujani Balu of Siruthuli, readied the soil to receive the saplings. "We have to give the soil time to heal from all the toxic waste that has been dumped on it for years. Pits are hollowed out, nourished, the soil is allowed to breathe free and only then are the saplings planted," Sujani explained.

Hope Vanam will get added to the list of vanams citizens have already created in Coimbatore over the last two decades, including Kalam Vanam, Bhararthi Vanam, a vanam of 7,000 trees at the Central Reserve Police Force campus, and another 10,000 trees vanam at the Coimbatore Central Prison.

FROM WATER TO TREES

Siruthuli was born in 2003 out of the desire to do something about the dire water shortage in Coimbatore.

"The monsoons had failed for three consecutive years and groundwater had depleted alarmingly," said Vanitha Mohan, managing trustee of Siruthuli. A few like minded people concerned about the environmental wellbeing of the city, began identifying derelict ponds, dried lakes and abandoned wells and borewells. With the help of the local administration, the non-profit has restored nearly 27 tanks till date.

Siruthuli went on to take up afforestation drives. "The city was growing exponentially and trees were the first victims," said Mohan. For example, in 2005, the population of Coimbatore and its adjacent suburban areas was 1.82 million. In 2020 it is estimated to be 2.78 million.

GREEN HONOUR

In 2005, when late President APJ Abdul Kalam visited the city he planted a Peepal tree (ficus religiosa). Siruthuli promised Kalam it would plant 80,000 saplings more in time for his 80th birthday. And, did so. In the coming few years, a hundred thousand trees were planted in panchayat poramboke lands, private sites and roadside avenues.

Six years later, on his 80th birthday in October 2011, Kalam re-visited the city and commemorated it by planting another sapling, this time of a Jamun tree, in a place called Nandangarai. This was no ordinary sapling but was from a tree that was planted by Mahatma Gandhi in the 1930s when he came to Coimbatore.

MIYAWAKI METHOD OF URBAN FORESTATION

The success of the greening drives in the city, initially, was mixed. While some saplings were nurtured by neighbourhoods and allowed to grow into trees, others were damaged or wilfully destroyed. Siruthuli had to return to the drawing board and come up with tamper-proof alternatives.

Then it came across Miyawaki, a new concept of urban forestation where saplings of native trees are densely packed into small spaces.

Coimbatore-based Anna University campus was bare and dry. But now it boasts of 80,000 trees planted by the Miyawaki method. In the honour of the late President, this urban forest is called Kalam Vanam. "We planted as many as 80,000 saplings in the campus of Anna University in the year 2016 which is now a mini forest," said Chandrasekar.

Taking its cue from the success of this project, Bharathiar University, Coimbatore, organised a huge event last year where 5,000 students from 20-30 institutions planted 10, 000 saplings in three minutes in order to create another urban forest called Bhararthi Vanam.

In the coming weeks 10,000 saplings more will be planted at the forest in Central Prison and another 30,000 at the CRPF campus in Coimbatore.

AFTER COIMBATORE THE GREENING OF TIRUPPUR

Tiruppur, a major textile and knitwear hub, about 40 kms east of Coimbatore followed suit. In July 2015, textile exporters, manufacturers and industrialists there decided to get together and green their dusty and dry city. They started a movement called Vanathukul Tiruppur (Tiruppur within a forest). Like it was in Coimbatore, the Vanathukul Tiruppur was a homage to late President Kalam.

"In 2005, we were 25 of us, but today we have 200 donors, scientists, government officials, journalists and green volunteers who are putting their heart and soul into restoring the city's green cover. We set ourselves the target of planting and nurturing one lakh trees," said TR Sivaraman, one of the founder members of the movement.

"Between 2015 and 2019, Vanathukul Tiruppur planted eight lakh saplings of native species in 1,800 acres of private land in and around the town. We are dreaming

of a million trees in our city in six years," he added. Industrialists in Tiruppur are spending almost a crore rupees every year for afforestation.

Vanathukkul Tiruppur sought the help of a Coimbatore-based environmental agency, Siddharth



Foundation, that conducted a microanalysis of 70 sites out of the total of 500 sites in Tiruppur. "We had planted 48 native species of saplings and after five years, the survey revealed there were now 169 new species of shrubs, herbs and climbers, besides a large number of insects, reptiles and birds. Vegetation has improved and so has the quality of the soil that now holds more moisture," claimed Sivaraman.

TRACKING THE SAPLINGS

A novel tree certificate scheme is adding to the people's investment in the greening drives in Coimbatore. For instance, citizens can sponsor a sapling, get a tree certificate with a QR code in return, and use it to watch their sapling grow from any corner of the world.

"Anyone can sponsor a sapling for Rs 500 and get a tree certificate with a QR code and her name on it. Scan the QR code, and no matter where in the world you are, you can see how your tree is doing," said city chronicler and jeweller, Rajesh Govindarajulu who has campaigned enthusiastically for the tree certificate initiative.

"A community of jewellers in Coimbatore nurtured 2,500 saplings that were planted at the Anna University Campus and they were gifted the tree certificates with QR codes," explained Govindarajulu. "It is not always the big sponsorships that make a difference. The role of ordinary citizens like us is as significant. We are all tree ambassadors," he concluded.



AGENTS OF CHANGE



STORY: 4
STORIES THAT COMMEMORATE
WONTENSOR

STORIES THAT COMMEMORATE

WONTENSOR

STORY: 4



t took Nisha immense courage to tell her daughter that she was a sex worker. "I told her about the circumstances that led me to that job that gave me enough money so that she may study," Nisha, who also works as a social activist, told *Gaon Connection*.

"My husband beat me every day and my children had to look to others for every little thing they needed. I tried my hand at many different types of work but could not make ends meet," she said. "I finally resorted to sex work so that my children had a better future."

Nisha dreams of turning her daughter into an instrument of change. "She is pursuing a bachelor's degree in social work. It is my belief that she will bring about a huge change in society," said Nisha.

Born in Delhi, Nisha's family married her off at the age of 17 to a drunkard. She worked at a construction site, but was unable to feed her son and daughter, and so, she became a sex worker.

Nisha is now happy as she has earned enough to educate both son and daughter at a good school in Delhi. The husband does not bother, but to the world, she is a part time working housewife. She too doesn't want anyone to know about her work.

"I did not want my daughter's life to be ruined like mine. She should know how difficult it was to earn the money which paid her school school fees. All I want is for her to study well and become a dedicated social worker," said Nisha.

Nisha is associated with the All India Network of Sex Workers. The organisation has a membership base of more than two lakh sex workers across the country.

"Many women in our organisation have been subjected to physical and mental exploitation. Why can't they take up prostitution as a profession when they have already suffered," asked Kusum, a human rights activist.

The working age of a sex worker is limited. Nisha is not too old, but she says that her body is not as 'saleable' as it used to be. She is no more the first choice of her customers.

"Every man needs a beautiful and young girl. The customer also wants a new girl every time so I do not get paid well. Yes, a few of my customers are loyal and continue to come to me regularly," she said.

"Most of my clients are aged, retired people, but everyone desires a 16-year-old girl. Here, a girl gets paid on the basis of her age, fitness and complexion. Normally, we get anything between Rs 200 and Rs 2,000 for one engagement," explained Nisha.

"Once you come into this profession, it is difficult to get out. The difficulty is everywhere. It is difficult to find the first customer. If you join a group, you get only 30-40 per cent of the money you'd earn," said Nisha adding: "Most girls who work as sex workers have told me that most customers don't want contraception to be used. Although girls refuse, the customers prevail at times and pay extra for not using protection."

Because of this, most of them are vulnerable to disease. "If we go to the hospital for a checkup and are found to be AIDS positive, the hospital staff treats us badly. Families disown the patient..." said Nisha.

IN CHOPPY WATERS

"BOAT FISHING IS THE TRADITIONAL OCCUPATION OF THE MEN IN THE COMMUNITY. BUT SHEILA NAIK WHO HAS BROKEN INTO THE MALE BASTION WAKES UP AT 3 AM EVERY DAY TO GO SHING WITH THE MEN."

Neetu Singh



t is her desire to see her children educated that makes Sheila Naik, set aside any fear she may have of a risky job. She is a boat fisher. "Of course, I feel scared. But what is to be done. I quelled my fear and set out to earn for my children's education," said Naik as she set out at the crack of dawn to fish.

Sheila lives in the Mahishnur Bagan Tola of Angada block, about 35 kms away from Banchi district.

Sheila lives in the Mahishpur Bagan Tola of Angada block, about 35 kms away from Ranchi district headquarters in Jharkhand. There are 45 houses in this colony. Boat fishing is the traditional occupation of the men of this community.

Naik has not just broken the male bastion but has also inspired other women to do the same.

"When I get up at three in the morning to go to the dam, I always fondly caress my sleeping children. I never know if I will return alive," said Sheila emotionally.

Sheila rides the choppy waves every day. She drops the nets into the waters of the dam to trap the fish once in the morning and once in the evening.

"It was all for my children, so either foolhardiness or courage led me to this job," she said. "I am happy right now because my children are studying in a good school. We are able to arrange their fee and school books."

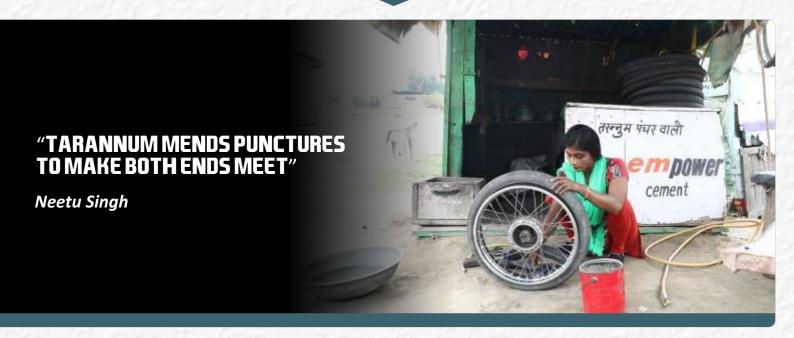
Sheila was born into a poor family. Being the eldest of four sisters and two brothers, she was married at the age of 15. The financial condition of her husband's family was bad too. It was becoming difficult for her to support her three daughters and a son. So, she learnt boating, her husband, Karthik Naik's occupation for 18 years.

"I have been doing this for the past five-six years, but nothing untoward has happened so far," said Sheila. "We don't have farm lands. We aren't educated enough to do other jobs. Now, we are left with only this skill with which we are able to raise children well," she explained.

"By the time I reach home with the fish, the children are all set to leave for school. If the daughter gets up early, she even cooks," said Sheila.

As soon as she reaches home, Sheila takes the fish to Lalpur Bazaar in Ranchi, 30 kms away, to sell them. She returns home by noon and repeats her fishing expedition in the afternoon. "I leave for the market immediately. If the fish are not delivered in time, people won't buy them," she explained. Depending on the size of her catch, Sheila's daily income is between Rs 500 and Rs 2,000. Unless it is very rough weather, every day is a workday for her. "People who see my work appreciate me. I feel good but then my work is no bed of roses," smiled Sheila.

MENDING PUNCTURES TO EKE OUT A LIVING



Passers by always give this shop a second look. "It seems a surprise to everyone that a woman is fixing punctures," laughed 37-year-old Tarannum, as she repaired a scooty tyre.

"I don't remember when I last put henna on these hands," said Tarannum who fixes punctures so that her children can eat and get a better life.

Tarannumis has two sons and a daughter. The older son and the daughter are married. Born in a poor family, Tarannum was married at the age of 15. Her husband was unwell and so Tarannum had to step in to help support her family. She preferred fixing punctures to being a domestic help.

"The children could not be educated much. Just having two meals a day is an achievement. But while there is not much income, we don't go hungry anymore," she said.

LIVING WITH HIV



Mona Balani thought she was dying fifteen years ago. "People were preparing for my last rituals.

But my son's words gave me the courage to rise and sit up," she said. Balani was HIV positive and had almost given up hope when, she says, her son's words brought her back from the brink. "Papa has already left us. You cannot leave me and go away. How I will live ...," he had begged at her bedside.

"I still feel that had my son not spoken these words, I might not have been alive today," said the 43-year-old Balani sitting beside her son and stroking his head fondly at their residence at Sarita Vihar in Delhi.

From Jaipur, Rajasthan, Mona began working with Network for People Living with HIV in 2006. Only then did she learn that she was not the only woman who had HIV.

Now, she is working in 10 states as director for two projects of the national alliance of people living with HIV in India. The institution is directly associated with 1.2 million people infected with HIV.

"My husband had HIV, which we came to know in 1999. I too was detected as HIV positive. Two years after this, my year-old son passed away. Our entire savings were used up. We even had to sell up our house," recalled Mona.

Mona is a beacon of hope for millions of HIV-positive patients in the country today. But her journey was not an easy one.

Born into a middle-class Brahmin family, Mona married out of her community and her family severed all ties with her. It was only as her husband lay dying that her family met him for the first time. He died in 2005.

Soon after her husband's death, Mona began working with Network for People Living with HIV. After working for the institution in Rajasthan for nine years, she moved to Delhi.

"I had to live for my son, so I continued to work despite having HIV. I had to provide my son a sound upbringing," she said.

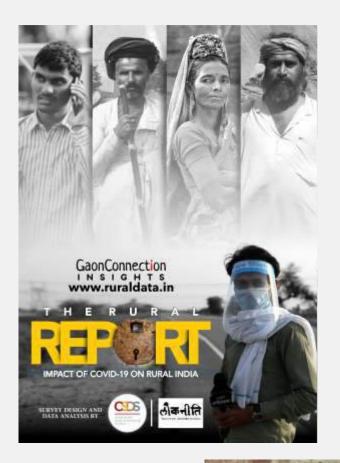
Balani's son Mohit is now 23. "I am proud of my mother. After my father passed away, she took care of all my needs and ensured I lived well," he said.

"It was a difficult time for us," recalled Balani. "But I do not at all regret my decision of marrying him. He was a very sweet and caring individual. Even today, he is not far away from me. I live with his memories."





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