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A Community Delivered Intervention for DNTs in India

A Gap Analysis Report



PRAXIS



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Introduction

This report identifies currently existing gaps in services for Denotified Tribe (DNT) communities in India, with a focus on those that are at increased vulnerability to human trafficking. DNT communities are a historically marginalized group in Indian society; they have experienced a long history of discrimination that stretches back to British rule, when they were declared “hereditary criminals” by the colonial administration. It is important to note that historical marginalization varies among DNTs, with specific emphasis on the detrimental impact on nomadic groups listed under the Criminal Tribes Act (CTA). These communities faced social exclusion and discrimination in Indian society even before British rule, and the British exacerbated their plight by criminalizing them through the CTA and using state machinery for suppression. Furthermore, the CTA was later employed to quell political dissent within these marginalized communities (Radhakrishna, 2000). The Indian government has ended most legal discrimination against the DNT communities, but they still face widespread systemic bias and casteism from Indian society due to their historical practice of occupations like domestic work, begging, folk artistry, marginal farming, pastoral and sex work (Idate, 2017).

Because of this historical discrimination and the lingering negative perceptions about DNTs among many Indians, these communities face extremely high levels of poverty, prejudice, and deprivation, even when compared to other low-income Indian communities. DNTs are routinely discriminated against and denied access to facilities and services outside of their communities, particularly access to healthcare, education and basic government services like obtaining documentation or land titles. Additionally, despite government efforts, DNTs still have limited access to job training programs aimed at placing them in work outside of traditional occupations.

Combined, these factors mean that DNT communities face a heightened risk of human trafficking (HT); a lack of social support leaves them unable to meet their basic needs without accepting exploitative work. The risk is especially high among young women and girls in certain tribes (such as the Bedia and Bachara communities), with many being trafficked from their rural communities into the commercial sex industry from a young age due to a lack of other vocational options (Misra & Kaushik, 2023). Men and boys also face a heightened (compared to non-DNTs) risk of HT due to the lack of formal job options, often as forced laborers in low-skilled labor sectors. This analysis will focus on pinpointing the systematic gaps in services that lead to this heightened vulnerability and identifying potential interventions that might help address these shortcomings.

Methodology

This report combines a desk-review approach supplemented with a series of focus groups with community members across several DNT hamlets in two districts, Morena (in the state of Madhya Pradesh) and Krishnagiri (in the state of Tamil Nadu). Figure 1 (below) shows the exact locations of the two districts within India. The two study regions of Krishnagiri and Morena are highlighted in the map. What is especially evident is the size of the two study regions, as this facilitates logistical- and measurement-based operations.

Desk Review

The desk review consisted of an analysis of existing literature (including academic papers, policy reports, and government publications) on DNT communities and the challenges they face in modern Indian society.

Community Interviews

As a part of the study's process, focus groups and interviews were conducted by Praxis staff and trained members of the DNT community, specifically Bediya and Irular communities, in each of the DNT intervention hamlets. The Bediya community, in Morena, are traditionally nomadic and involved in folk dance and music, faced stigmatisation through the Criminal Tribes and Caste Act of 1871 due to their nomadic lifestyle, theft cases, and involvement in sex work. Although the Act was repealed in 1952, the stigma of criminalisation persists. Currently, the Bediyas are known for engaging in intergenerational sex work and erotic performances, such as dancing in dance bars, Arkestra, or social occasions (Rana et al., 2020). The Irular community, in Krishnagiri, identifies itself by various names such as Erlar, Poosari, Yerakalar, Yerukular, Vedars, Pujari, and Erukular, while others may refer to them as Eralolu, Irula, Shikari, and Pujari. The term Irular is derived from Irul, signifying darkness or black complexion. In Tamil Nadu, the Irular (ST) are found in the Nilgiri, Coimbatore, South Arcot, and North Arcot districts. Traditionally, the Irular engaged in hunting and trapping porcupines, rats, and snakes. Nowadays, their livelihood involves settled cultivation and agricultural labor. They have their own community council and follow Hinduism. As of the 1981 census, 8.79 percent of Irulars are literate, and they hold a positive attitude towards both traditional and modern medicines, as well as family planning methods. The community has received support in the form of residential houses, free cultivation land, subsidies, and loans for acquiring milch animals, goats, and agricultural implements.

These data gathered through interviews with Bediya and Irular communities were used to supplement the findings of the desk review by supplying insights on gaps in services available to community members that might not otherwise be reflected in the literature, as well providing first-person accounts of the struggles that DNT communities face. These interviews focused on two major themes: healthcare and climate change. Members of the DNT communities spoke about the state of healthcare and sanitation facilities in their hamlets as well as the issues that they face when attempting to access healthcare in non-DNT towns. They were also asked about the effects of several aspects of climate change, including higher temperatures, water scarcity, and agricultural challenges, on their communities and way of life. Focus groups were conducted in 10 hamlets located in the districts of Morena (in Madhya Pradesh) and Krishnagiri (in Tamil Nadu). Interviews took place from October to December in 2023. Aside from the qualitative discussions about healthcare and climate change, interviewers also collected information about the population of each town, the number of toilets installed in the hamlets, and the distances to nearby health clinics.

Challenges & Limitations

Since Praxis focused the interviews and focus groups on the DNT intervention hamlets, the findings in this gap analysis are not representative of all DNT experiences. Additionally, due to the difficulties with registration and access to formal identification, the scope of the DNT population is unknown. Therefore, this gap analysis provides insight only into the needs of documented DNTs, and may leave out challenges faced by communities that were not interviewed and have been excluded from the existing literature on the topic for reasons such as discrimination or lack of access.

History of DNT Communities

Although the communities that are now referred to as Denotified Tribes have existed for well over a century, their status in modern-day Indian society can mostly be traced back to 1871, when the colonial British government passed the Criminal Tribes Act (Idate, 2017). This law, which was updated throughout the remainder of British rule in India, branded members of over 198 “notified” tribes, many of which were traditionally nomadic, as criminals based solely on their birth place. Many of the tribes that were criminalized in the bill also participated in the Rebellion of 1857 (Idate, 2017). The Act allowed British authorities to surveil and harass tribal members, as well as strip them of their traditional rights of hunting and gathering in the name of maintaining order. Entire communities, which before had been nomadic and traditionally owned no land, were placed in government-run settlements. In these settlements, DNTs were subject to prison-like conditions, including strict regulation of movement and hard labor assignments for any perceived misbehavior. Although this system of oppression was originally introduced in the late 1800s to the north of India (Punjab and modern-day Uttar Pradesh), by 1911 an updated Criminal Tribes Act expanded the practice across the entire country (Idate, 2017).

After their independence in 1947, India began efforts to address these discriminatory practices. The Criminal Tribes Act was repealed in 1952, decriminalizing millions of Indians who had suffered under the harsh terms of the Act at the hands of the British government (Idate, 2017). This repeal “de-notified” the tribes listed in the 1871 Act, giving the members of the tribes their current name (DNTs). However, in the same year, the Lok Sabha—the lower house of India’s bicameral parliament—also passed the Habitual Offenders Act, which, although it doesn’t refer to any specific tribe or class of citizen, has effectively been used by many states to re-criminalize members of DNT communities (Idate, 2017). Furthermore, many DNTs have also been branded as criminals by state anti-vagrancy and anti-begging laws, which respectively criminalize migration as well as one of many DNT communities’ historical professions.

In modern Indian society, DNTs are still at the bottom of the social hierarchy. Despite caste discrimination being banned by the Indian Constitution, DNT communities are often discriminated against by other castes due to their historical criminalization and association with occupations deemed unsavory by higher castes. These occupations, which include subsistence agriculture, domestic work, begging, and sex work, lead to unstable incomes and mean that many DNT workers exist outside the formal economy, where job security and worker protections are weak or nonexistent. The vast majority of DNTs do not own land, and many communities are also semi-migratory; they usually return to their settlements after leaving for seasonal work, but might move on to new land depending on a range of factors including a changing climate, economic conditions, or hostility to their presence from non-DNT communities. This migration, coupled with the historic lack of government services in DNT communities, means that even DNTs that have seasonally lived on the same land for generations often lack official titles to that land, leaving them vulnerable to displacement. Finally, as the Indian economy has developed, a growing number of DNT community members have sought to leave their traditionally rural communities and pursue economic opportunities in larger cities, where they are often exploited by higher-caste employers who prey on their lack of social connections outside of their DNT communities.

DNTs have also been historically excluded from India's reservation system, a post-independence affirmative action plan enshrined in India's constitution that provides reservations in certain institutions (government ministries, universities, etc) for historically disadvantaged castes and tribes. Although DNT communities are among India's poorest and least represented in institutions like these, there is no central list of DNT communities, meaning that they lack comprehensive access to the reservation system and its opportunities (Idate, 2017). Some tribes qualify as Scheduled Caste/Scheduled Tribes (SC/ST), and others have access to reservations for Other Backward Class (OBCs) or Economically Backward Classes (EBCs), but there are many tribes that are not classified into either of these categories and therefore remain ineligible for any designated benefits (Childiyal, 2018).

Efforts to Address DNT Needs

In the face of the historical and continued challenges and discrimination faced by DNT communities, the Indian central government and many state administrations have undertaken a variety of initiatives aimed at helping DNTs escape the cycle of poverty, discrimination, and exploitation. Most of these programs are aimed at economic empowerment, and several specifically focus on job training and upskilling to provide DNTs with access to employment in the formal economy.

National Commission for Denotified, Nomadic, and Semi-Nomadic Tribes

Part of the Ministry of Social Justice and Empowerment, this commission was established by the Indian federal government in 2005 to study and recommend development strategies for DNTs and other traditionally nomadic tribes (Garud, 2021). Several reports have been released detailing the current state of India's DNT communities and endorsing a series of government action plans aimed at improving outcomes for DNTs. The first of these reports, released in 2008, recommended that all DNT communities be eligible for India's reservation system.

The commission's most recent report, released in 2017 and known as the "Idate Commission" report (after the current chairman, Bhiku Ramji Idate), contains a state-by-state list of DNT communities, identifies regions with large DNT populations, and makes multiple policy recommendations for state administrations as well as the federal government. Among these recommendations are 1) the creation of a permanent commission to hear the proposals and grievances of DNT communities and coordinate state and federal aid efforts, 2) the inclusion of DNTs in reservation lists (similar to the 2008 report), and 3) the nomination of at least one DNT representative to each legislative assembly where DNT communities exist (Idate, 2017). The report also details current government efforts (state and federal) to aid DNT communities but does not include evaluations of the effectiveness of these programs.

This Commission's work to identify DNT communities across India, report on their living conditions, and recommend policies to improve those conditions has been instrumental in helping to shape the national conversation around the status of DNTs in Indian society. However, most of the policy recommendations made by the commission have yet to be adopted. For example, DNTs are still not always eligible for the reservation system. Although some qualify for the OBC or SC/ST reservations, they often struggle to obtain these spots as they are poorer and less integrated into Indian society than other OBCs, putting them at a disadvantage in the competition for limited reservation spots (Ghildiyal, 2018).

Scheme for Economic Empowerment of DNTs (SEED)

This program, funded and run by the federal government, is aimed at providing resources to enable the economic empowerment of DNT communities throughout India (Ministry of Social Justice and Empowerment, n.d.). Established in 2022 by the Ministry of Social Justice and Empowerment, the scheme has four main objectives:

1. Provide interview and examination coaching services to DNT students,
2. Provide low-cost health insurance to DNT communities,
3. Support “livelihood generation” programs (aimed at training and placing DNT community members in steady jobs outside traditional occupations) within DNT communities, and
4. Support the construction of housing in rural DNT communities through home-building grants and land allocation.

Designed with the long history of discrimination against DNTs in mind, this scheme aims to integrate DNT communities into broader Indian society by strengthening their claims to their historical lands (through the granting of land titles and the construction of new homes) and training younger DNT who attend school in formal occupations outside of traditional DNT work (Ministry of Social Justice and Empowerment, n.d.). Importantly, the implementation plan acknowledges that DNTs have often been excluded from government programs aimed at aiding poor Indians due to their lack of firm membership in lists of scheduled castes and tribes. Therefore, SEED specifically targets DNT communities as opposed to a broader designation of poor Indian citizens or Scheduled Castes and Tribes (Ministry of Social Justice and Empowerment, n.d.).

SEED is targeted at DNT families with an annual income of ₹250,000 or less (approximately \$3,000USD). It is currently funded through 2026, and aims to spend roughly ₹400 million (\$4,812,000USD) annually on all aspects of the program combined. However, program expenditures during the first nine months of 2022 were only ₹20,000,000 (\$246,000USD), around 5% of allocated funds (Dogra, 2023). Furthermore, uptake has been very low so far, with only 5,400 applications for funding submitted by the end of 2022 (Lakshman, 2022). This may be due to the online application process, a burden for many DNT communities that lack stable internet access and are unused to navigating complex bureaucratic online applications.

Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi (PM-DAKSH)

Also funded by the Ministry of Social Justice and Empowerment, this program (which, roughly translated, is known as the “Prime Minister’s Efficiency and Skilled Beneficiary Scheme”) aims to support upskilling and increase earning potential among several historically disadvantaged groups in Indian society (National Backward Classes Finance and Development Corporation, n.d.). Although it is not exclusively aimed at DNTs, they do qualify for the program, and have lower entry requirements (i.e. no family income cutoff for entry) than other eligible groups.

The initiative mostly focuses on providing training and support to young people in these communities, with a variety of different short-term trainings on upskilling and entrepreneurship and longer-term classes aimed at providing eventual employment opportunities in non-traditional occupations to program participants (Ministry for Social Justice and Empowerment, 2023). Eligible Indians can apply through an online portal. While enrolled in one of these programs, which can range in length from a single week to six months, participants with a record of 80% attendance or higher are eligible for a monthly stipend of approximately ₹1,000 (\$12USD)(NBCFDC, n.d.).

PM-DAKSH was implemented in 2020, budgeted at ₹450 million (\$54 million USD), and has trained 107,000 participants (Ministry of Social Justice & Empowerment, 2023). There is a goal to train an additional 132,000 people by the end of 2026. As a result of this programming, 77,000 past trainees have been placed in employment after the completion of the program, a success rate of 58%; however, journalists have raised questions around the program's effectiveness in certain states and for certain classes, with one report finding that not a single Scheduled Caste participant in Jaipur found employment after completing training (Dutta, 2023).

National Backward Classes Finance and Development Corporation

The National Backward Classes Finance and Development Corporation, a government-owned corporation housed in the Ministry of Social Justice and Empowerment, has a mission to promote economic development, skill development, and self-employment among OBC, EBC, and DNT communities (Centre For Market Research and Social Development, 2020). It does this by providing loans and microfinance opportunities to Indians who historically have been prevented from accessing the financial system due to lack of capital and/or discrimination. The corporation currently provides loans of up to 85-95% (depending on loan size, which can range up to ₹1,500,000) for projects in four broad sectors (Kerala State Backward Classes Development Corporation, n.d.):

1. Agriculture & Allied Activities;
2. Small Business/Artisan & Traditional Occupation;
3. Transport & Service Sectors; &
4. Technical and Professional Trades/Education Loans for Professional Courses.

The corporation was established in 1992, and has an authorized share capital of ₹15 billion (\$180 million USD) and has lent over ₹66 billion (\$723 million USD) to recipients so far (NBCFDC, 2023). Loans are distributed through state agencies or development banks. In 2017-19, more than 450,000 loans were distributed to beneficiaries, the vast majority of whom were women (80%) and located in rural areas (77%;Centre For Market Research and Social Development, 2020). The average loan size in 2018 was ₹33,138 (\$400USD).

State-Level Programs (Madhya Pradesh & Tamil Nadu)

Many states in India have implemented programs to address the needs of DNT communities within their borders. For this analysis, we will focus on government initiatives that exist in the states where the study interventions are taking place: Madhya Pradesh (where the Morena district is located) and Tamil Nadu (home to Krishnagiri).

Madhya Pradesh maintains several welfare programs that provide benefits to DNTs living within the state. They fund a general scholarship for all DNT students (through Grade 10), as well as an employment program open to families living below the poverty line throughout the state (Idate, 2017). State authorities have also implemented community development programs aimed at improving the sanitary conditions of DNT hamlets (by installing public toilets, improving drainage systems, etc) and providing grants for home construction (Idate, 2017). Finally, since 1992, the state government has run a program aimed at discouraging DNT women and girls from joining the caste-based sex trade by providing resources for childcare, support for former sex workers, and funding for public awareness campaigns (Rana et al., 2020). However, this effort has been mostly unsuccessful, as former sex workers “rescued” by the government were often sent back into sex work by their families (Rana et al, 2020).

Tamil Nadu has implemented a range of measures aimed at uplifting DNT communities in their state, particularly focused on education. The state provides several scholarship programs, mostly merit-based, for DNT students in secondary and post-secondary education (Idate, 2017). They also provide funding (₹650 [\$7.83USD] a month for 10 months) for the housing of DNT students who attend boarding schools in the state. Finally, the state has implemented a program that provides free bicycles for DNT students in 11th standard (usually 16-17 year olds) at government-subsidized schools (Idate, 2017).

Although state-level programs like the ones outlined above are important, they cannot compare in magnitude of funding or impact to those implemented and funded by the federal government. That being said, state initiatives like these can sometimes do a better job of targeting the specific needs of DNT communities within their states than the necessarily broad approach of a federal government program.

Legal Framework to Combat Human Trafficking in India

Although India's Constitution has specifically outlawed slavery since independence in 1947, the country has historically struggled to enforce these protections, and many forms of trafficking, bondage, and exploitation still exist in India today.

Constitutional and Legal Protections

Article 23 of India's Constitution prohibits "trafficking in human beings... and other similar forms of forced labor." To enforce this, Section 370 of the Indian Penal Code defines human trafficking as physical or sexual exploitation, slavery, servitude, and/or the forced removal of organs (Mandlik, 2020). The code specifies a punishment of 7 to 10 years in prison, as well as a fine, for convicted traffickers; traffickers of more than one victim, as well as traffickers of minors, can be sentenced to life in prison.

Beyond these protections, India has passed several laws specifically targeting trafficking and bonded labor within its borders. The Immoral Traffic Prevention Act (1956) aimed to end sex trafficking by laying out harsh penalties for running brothels and participating in the sex trade; however, this act also criminalized prostitution for sex workers, driving them into the black market and weakening the already fragile protections that they had (Mandlik, 2020). The Bonded Labor System (Abolition) Act (1976) ended the previous system of bonded labor, where borrowers are forced to work to pay off debts at extortionate interest rates, that had existed in India since colonial rule (Sahi, 2023). The act outlawed bonded labor nationwide and canceled all debts held by bonded laborers, but enforcement of this act has been weak (Office to Monitor and Combat Trafficking in Persons, 2023).

India's Supreme Court has also contributed to India's system of protections against trafficking and exploitation. For example, in 1982, (*People's Union for Democratic Rights v. Union of India*) it ruled that the protection against forced labor included a right to a minimum wage (Mandlik, 2020). In *Bachpan Bachao Andolan v. Union of India*, a 2011 case, the court defined trafficking as an organized crime and established extra protections against the trafficking and bonded labor of children.

Enforcement Efforts

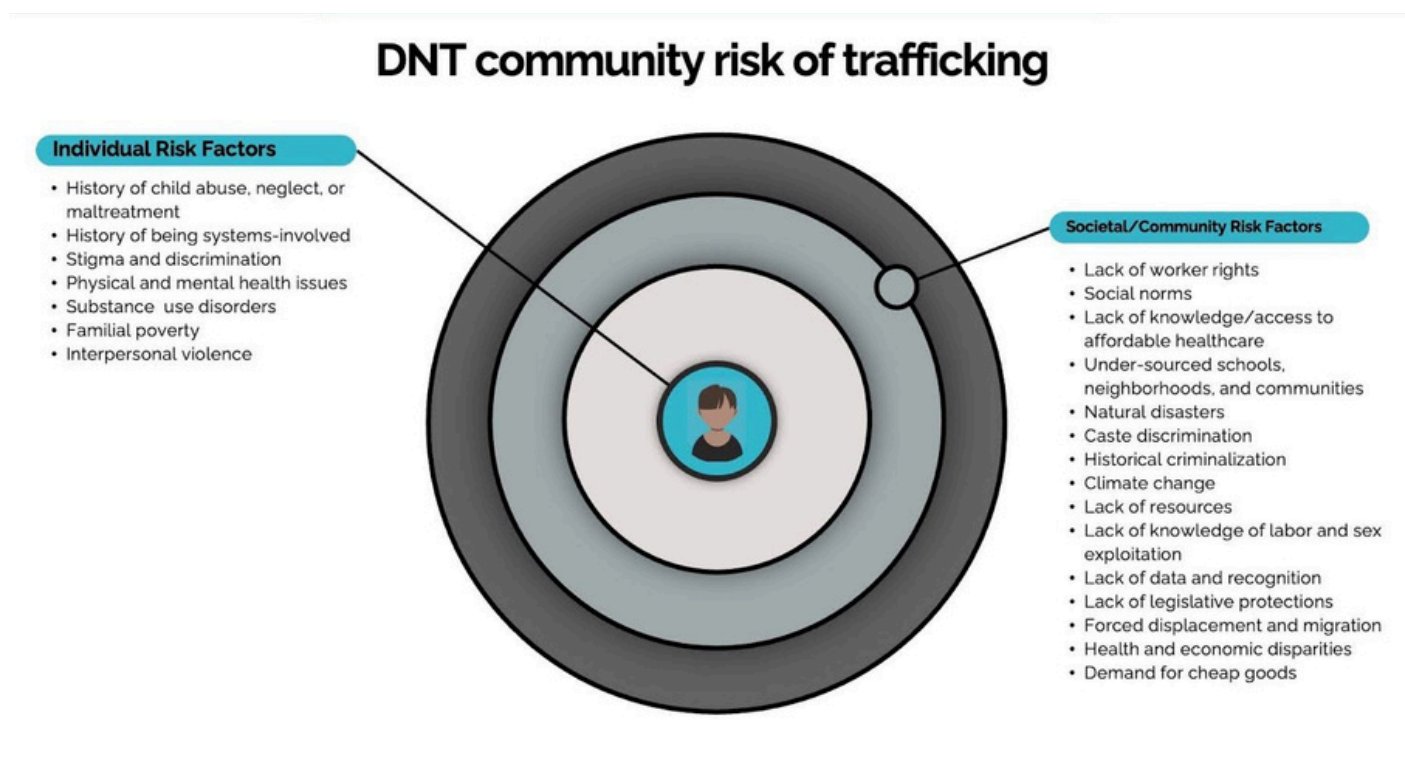
Despite this plethora of legal protections, human trafficking and exploitation still occur with some frequency in modern India due to enforcement efforts that are often uncoordinated. For example, in 2022, a majority of Indian states and territories (22 out of 36) reported zero violations of the Bonded Labor System Abolition Act within their borders, despite reports of bonded labor in many of those states (Office to Monitor and Combat Trafficking in Persons, 2023). Meanwhile, an estimated 11 million Indians are forced to work without pay every year, a clear violation of the Act (Walkfree, 2023). The prosecution system as a whole struggles to deal with trafficking; in 2021, 84% of trafficking cases (approximately 1,700) that were brought to trial resulted in an acquittal, up from 73% in 2019 (Office to Monitor and Combat Trafficking in Persons, 2023).

To address these shortcomings, the Indian government has established Anti Human Trafficking Units (AHTUs) in nearly all (696 of 732) of India's districts (sub-state jurisdictions (Office to Monitor and Combat Trafficking in Persons, 2023). These police units, run by state governments but funded in part by the federal Ministry of Home Affairs, have a wide mandate to ensure the prevention and prosecution of trafficking as well as the protection of potential victims; they are also tasked with developing databases on traffickers and encouraging inter-agency (including NGOs) collaboration to combat exploitation. Qualitative research suggests that AHTUs have been effective in combating trafficking cases where they have been implemented, but some stakeholders have reported that the government has underfunded the units and they are frequently regarded by police officers as a less prestigious assignment (Sen, 2020). Beyond this, victims of trafficking have stated that police corruption, criminalization of trafficking victims, and a lack of government funding and capacity have made anti-trafficking laws less effective than they might otherwise have been (Burns et al., 2021).

Trafficking and Exploitation of DNTs

Despite their history of exploitation and documentation of their risk and vulnerability (see Figure 1), especially as part of the commercial sex trade, there are currently no federal laws specifically aimed at preventing the trafficking of DNT community members.

Fig. 1: DNT Community Risk of Trafficking (Alpert et al., 2017)



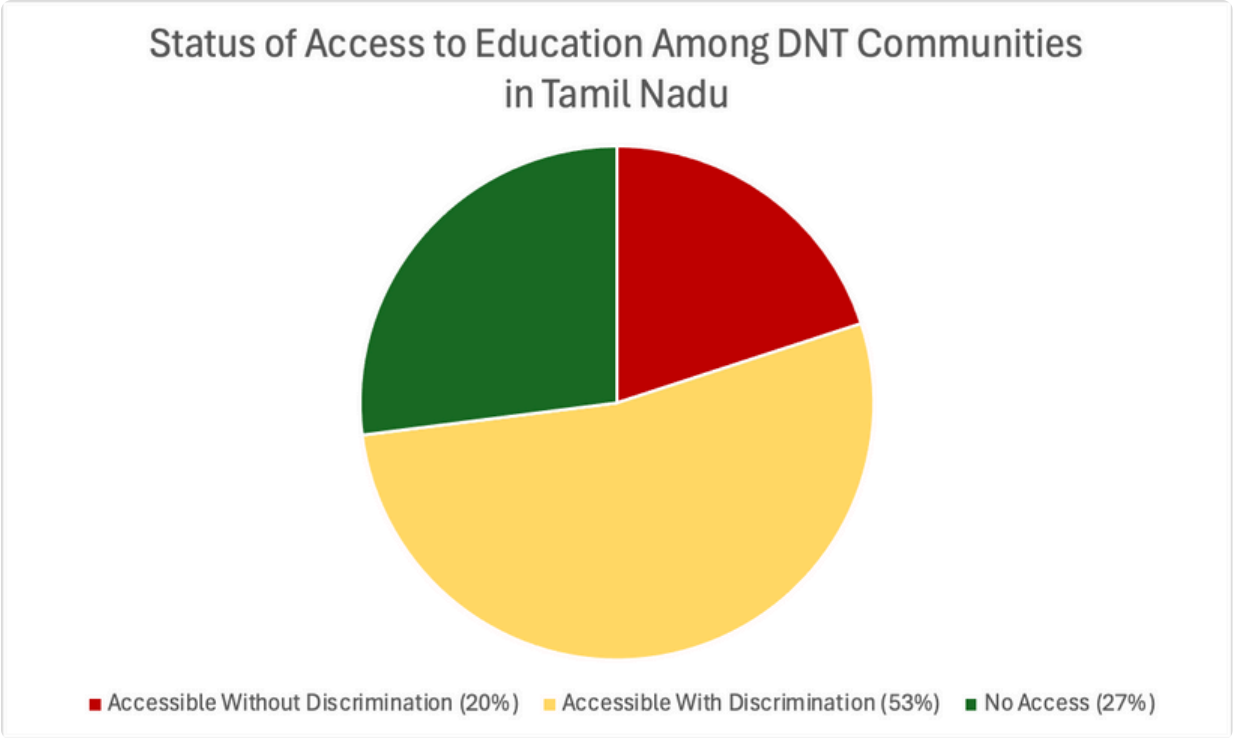
Gap Analysis

We conducted both a desk review and community interviews and focus groups which yielded the identification of four main areas in which DNTs encounter gaps in services (compared to other parts of Indian society). These identified gaps may contribute to the prevalence of human trafficking and exploitation among DNT communities. These four areas are by no means exhaustive, but they broadly cover the most relevant areas where DNT communities are underserved, thus leading to their exploitation.

Education

DNT communities have faced a dearth of educational opportunities, especially in higher education, for generations. There are many factors that contribute to this problem, but arguably the two most important are the discrimination faced by DNT students attending schools in non-DNT communities and the economic pressure faced by older students to drop out of school and provide an income to their families.

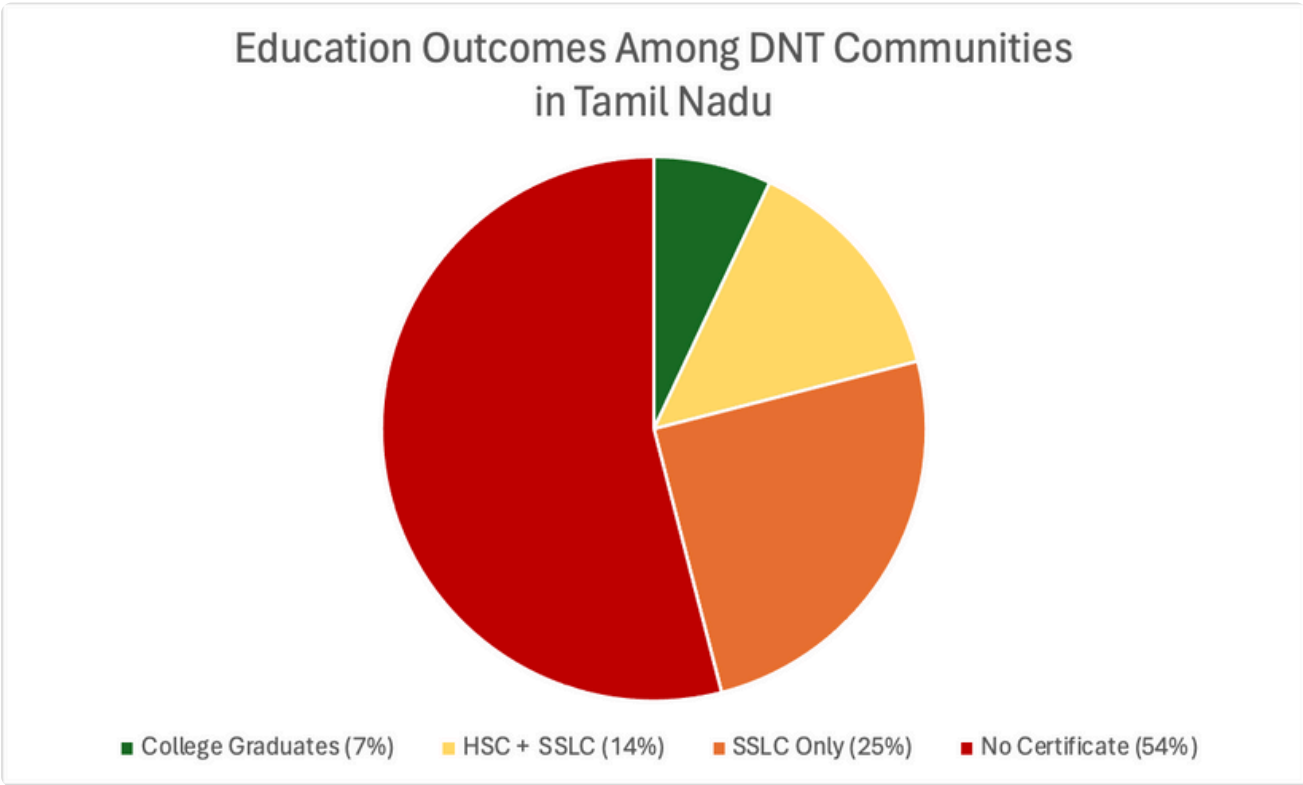
Figure 2. Education Access in DNT Communities (Sukumar, 2023)



A recent study conducted in DNT settlements in Tamil Nadu found that over half of DNT students faced repeated discrimination at school because of their class background (see Fig. 2); only 20% of households surveyed (out of 1,485) had access to education at schools where they were not routinely discriminated against due to their DNT heritage (see Fig. 2). The discrimination comes from teachers and other authority figures, but also from other (non-DNT) students who refuse to socialize with the DNT community members at their schools. Students are given derogatory nicknames, are often assigned to menial tasks such as bathroom cleaning, and are socially isolated from their peers, who often refuse to share a meal or sit close to DNT students in classrooms (Sukumar, 2023). The effects of this discrimination also extend to parents of DNT students, who are often reluctant to visit their children’s schools in fear of giving their non-DNT classmates another reason to ostracize them. Finally, female DNT students often face what one report calls “misbehavior” (sexual harassment) from male teachers and students, with little or no recourse from school authorities (Sukumar, 2023). This compounding discrimination leads many DNT individuals, especially women and girls, to view the education system as hostile toward them and their communities, which results in many students dropping out to pursue occupations in DNT communities that do not require formal education.

Aside from this discrimination, many DNT students face pressure from their own communities to drop out of school and start earning an income. From a young age, many DNT youths accompany their parents and older siblings to work on weekends and/or school holidays (Sukumar, 2023). This trend intensifies as children reach adolescence, with the majority of teenagers in most DNT settlements leaving school completely by the time they turn 14 or 15 (see Fig. 3). Indian law (the Right to Education Act, passed in 2009) provides for a free and compulsory education for all citizens up to the age of 14; it is probably no coincidence that most DNT students leave school around the age that education becomes non-compulsory, as the short-term economic benefits (e.g., being able to earn money by working as a daily wage worker) of dropping out greatly outweigh the benefits of staying in school, even when school is free (Idate, 2017). As outlined above in “Current Efforts to Address DNT Needs,” some opportunities for paid stipends do exist for DNT students; however, these are limited and generally pay much less than a day job.

Figure 3. Education Outcomes for DNT Communities (Sukumar, 2023)



The effects of these combined factors are clearly present in the data on DNT educational outcomes. In the study in Tamil Nadu, surveyors found that only 25% of DNT households had a member that had earned their Secondary School Leaving Certificate (SSLC), which is obtained by passing an examination at the end of 10th grade (standard compulsory education ends after 8th grade). Beyond this, only 14% of households contained someone that had obtained a Higher Secondary Certificate (HSC), the equivalent of a high-school diploma, and just 7% had a college graduate in residence (see Fig. 2). Multiple settlements reported having no residents with higher education than an SSLC, and many had no college graduates in residence. Most starkly, a survey of DNT communities in Andhra Pradesh found that 60% of DNTs surveyed were illiterate (Korra, 2017).

Many of the DNT communities in hamlets surveyed by Praxis reported similar gaps in their access to education; however, there was a significant difference in educational attainment between hamlets located in Morena and Krishnagiri. DNTs in Morena had much higher levels of academic achievement, with only 6.7% of residents reported as illiterate. Twenty-two percent of residents there completed secondary school, and around 7.5% of residents had completed a college degree (Praxis, 2024). In Krishnagiri, 37% of respondents were illiterate, only 10% had completed secondary education, and around 1% had earned a college degree. Most young children (> 80%) attended school regularly, but attendance data was not collected on children older than 12 (Praxis, 2024). Anecdotally, communities reported facing issues with long distances between schools and their hamlets, a need for English training classes for younger students, and a high rate of child marriage (Praxis, 2023).

Access to Economic Opportunities

Most DNTs have little, if any, access to employment opportunities outside of traditional, low-wage occupations. These traditional forms of work vary widely. For example, various DNT tribes have traditionally worked as hereditary farmers, beggars, musicians, hunters, sex workers, and snake charmers (Idate, 2017). However, there are two elements that these professions have in common: they are nomadic or semi-nomadic in nature and their existence is outside of the modern, formalized economy. In recent years, many of these jobs have become economically non-viable due to a range of factors, including post-independence legislation and climate change. The Forest Act of 1952 rescinded ancient tribal rights to periodic cultivation and grazing, leading DNT communities to migrate less. Moreover, various anti-begging and anti-vagrancy laws have criminalized a major source of income for many DNT communities (Idate, 2017). Many traditional jobs, including begging, performing, and hunting, required periodic movement to provide fresh audiences and hunting grounds. Particularly for pastoral and hunter gathering communities, the inability to migrate freely (due to legislation like the Forest Act) has led to a decline in this type of work (Singh & Bhandari, 2023).

Because of this, many DNTs have pursued work in non-traditional occupations. These new jobs include low-wage work in the construction sector, at brick kilns, as agricultural laborers or sharecroppers, and as rickshaw drivers. DNT community members are generally excluded from higher-paying jobs due to caste discrimination and their general lack of education qualifications (the causes of which are outlined above). Most DNT communities contain a mix of workers in traditional occupations and the above listed jobs. Praxis interviews found that the majority (almost 70%) of DNT community members in Krishnagiri are employed as agricultural laborers; a small minority were farmers on land that they owned or worked as sharecroppers (Praxis, 2024). Most agricultural work is seasonal, so DNTs reported moving between different jobs (e.g., apple harvesting in the fall, honey extraction in the winter/spring) as seasonal conditions changed (Praxis, 2023).

In rural areas, many DNTs also take advantage of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), passed in 2005, which provides up to 100 days of guaranteed work each year for Indians in rural areas (Chitravanshi, 2015). This initiative has provided an important safety net for DNTs and other disadvantaged Indians, but the program generally only provides employment for unskilled manual laborers. This, coupled with the 100-day limit to employment, means that the MGNREGA does not necessarily help DNT community members gain skills that could be used to find employment in higher-wage jobs as a day laborer. Praxis interviewers found that around 40% of households in Krishnagiri had worked under MGNREGA in the last year; however, almost no households in Morena had taken advantage of the program (Praxis, 2024). Women tended to work many more days in the program than men, averaging between 26-50 days, while most men did not use the job guarantee at all. Most DNT workers in the MGNREGA program reported being paid in full for their work, but around 15% had reported only partial payment in the last year (Praxis, 2024).

Infrastructure

Along with the lack of educational and economic opportunities afforded to them, many DNT communities also face a severe lack of critical infrastructure in several important sectors. Although some government policies are beginning to address these shortcomings (for example, the SEED program funds construction of new housing and healthcare centers in DNT communities), many DNTs still lack access to many basic modern amenities.

Electricity

India has rapidly electrified the vast majority of its households in recent decades. A little less than half (47%) of the population reported having electricity at home in 1994, but 97% of households were connected to the grid in 2020 (Agrawal et al., 2020). This is a remarkable achievement, but unfortunately, many DNT communities still lack reliable access to electricity. Many states report that 100% of households are electrified, but this figure generally only accounts for larger settlements and fails to capture the smaller hamlets usually inhabited by DNTs (Ministry of Power, 2024). For example, Tamil Nadu reported 100% electrification in 1987, but one study found that a hamlet in the state (occupied by the Boom Boom Mattukaran tribe) lacked electrification as late as 2012 (Sukumar, 2023).

Data on DNT electricity access is sparse, but all sources agree that the percentage of DNT households with grid connections remains far behind the overall percentage of Indian households. One 2017 study, which surveyed tribal communities in Andhra Pradesh, found that only 70% of households had a grid connection at home (Korra, 2017). Praxis workers identified one village in Krishnagiri without access to any electricity, and another where 55 households (representing over half of the population of the village) had no electric connection at home (Praxis, 2023). Even households that do have a grid connection often suffer from unreliable power access.

The lack of stable electric connections means that many DNTs are forced to rely on power sources outside their communities if they wish to have any access to electricity at all. Residents of communities that lack electricity often charge their phones and other electronic devices in larger, non-DNT settlements, where they must pay shop owners for the privilege, which compounds economic inequality between them and non-DNT communities. At home in their communities, children must finish their school work before dark, and families must eat dinner and finish the day's work before nightfall. The lack of electricity and proper lighting greatly hampers the ability of DNTs to engage in any communal activities after dark, meaning that they must balance these with their work, school, and other responsibilities during the day.

Water

The Supreme Court of India has consistently held that access to clean drinking water is a fundamental right of all Indians and that the state has a duty to provide potable water to all citizens (National Human Rights Commission of India, 2021). Access to drinking water in rural India remains low, but has greatly improved nationwide, and among DNTs, in recent decades. In 2022, 60% of rural Indian households had access to safe drinking water, up from 35% in 2016 (Burgeño Salas, 2023). A study of DNT settlements in Tamil Nadu found that every village surveyed (out of 15) had access to drinking water, with the majority of settlements receiving access between 2000 and 2010 (Sukumar, 2023).

However, villagers in some of these towns reported that the water coming from the newly installed connections was of low quality (Sukumar, 2023). This problem is mirrored in the reports of many DNTs surveyed by Praxis. Although every community interviewed reported having consistent access to water (through wells, pumps, or other means), multiple settlements have had consistent complaints about the quality and accessibility of their water (Praxis, 2024). For example, residents of Khadiyahaar (a DNT hamlet in Madhya Pradesh) have access to wells, but often rely instead on hand pumps due to declining water levels. These pumps provide water when the wells fail to do so, but the water provided is often sandy, and residents have reported that the water may have led to a rise in illnesses in the village (Praxis, 2024).

Sanitation

As with water and electricity, the Indian government has made expanding access to sanitation facilities, especially toilets, a major priority over the past decade. Although a great deal of progress has been made, with an estimated 82% of Indian households having access to a toilet in 2021 (up from only 30% in 1993), many DNT communities have been left out of these gains, and even the DNTs that do have access to toilets often cannot use them due to the poor conditions caused by lack of maintenance (Jain et al., 2023).

In a study from Tamil Nadu, around half of DNT communities surveyed had access to toilets, but none of the communities regularly used the facilities due to their poor condition (Sukumar, 2023). Among the DNT communities Praxis surveyed, most households reported having access to toilets, but many of these households did not make regular use of the toilets, instead presumably choosing to defecate outdoors (Praxis, 2024).

Places of Worship

DNT communities often have distinct cultural and religious practices from other parts of Indian society. For DNTs, religion serves as a cultural unifier, and places of worship act as sociocultural hubs that help them connect to their cultural roots (which are often closely tied to religious beliefs). DNTs have historically had their own deities and rituals, distinct from those of mainstream Indian society, that traveled with them as they practiced a semi-nomadic way of life. In modern India, these traditions have been maintained, but they are also complemented by the worship of more mainstream Hindu deities in non-DNT temples as DNTs have become less migratory.

Unfortunately, many DNTs are routinely discriminated against by temples in non-DNT communities, whose members exclude them from religious ceremonies and prevent them from worshipping as they wish. This effectively shuts DNTs out of the social structure of Indian society, as being accepted into a village's temple is a crucial sign of legitimacy and recognition within that village and broader Indian society. Much of the social life of a rural village is centered around its temple, and the refusal to allow DNTs to participate in temple ceremonies excludes them from an important part of the social fabric that defines life in rural India. To combat this discrimination, DNT communities are forced to build their own temples or rely on temples that existed prior to their settlement. A study of DNT communities in Tamil Nadu found that over half of the settlements surveyed had opted to build their own temples instead of attending ones in non-DNT settlements (Sukumar, 2023). These DNT-led temples allow them to practice their religion without fear of discrimination, but also effectively shut them out of the social system that revolves around the temples in non-DNT settlements.

Healthcare

According to Praxis' health mapping reports, most DNT hamlets have access to a primary health center (PHC) within 10 kilometers (usually around 5) from their village (Praxis, 2024). These state-run facilities serve as the basic units of the Indian government's publicly funded healthcare system, are usually operated by a single physician, and provide access to essential medical services as well as minor surgeries. Nearly all DNTs also have access to childcare centers, known as Anganwadis, in their hamlets or less than a kilometer away (Praxis, 2024). These state-run facilities are primarily used to deliver childcare, but they also provide immunization services, basic checkups, and programs to combat child hunger and malnutrition as well as referrals to larger healthcare centers. Many hamlets also have access to private health clinics and pharmacies, which sell over-the-counter medicines and often provide quicker treatments than government-run facilities (Praxis, 2024). To access treatment beyond basic services, checkups, and immunizations, DNT community members are forced to travel a considerable distance (20+ km) into non-DNT communities for care at larger government hospitals.

In interviews conducted by Praxis, members of the DNT community reported varying levels of discrimination faced when accessing healthcare services. Most, but not all, said they could rely on PHCs to deliver non-discriminatory care; the same goes for government hospitals in larger towns. Many DNT community members, however, face discrimination when accessing the private healthcare system or purchasing medicines at pharmacies in non-DNT communities. To avoid this, many communities rely on a range of traditional and folk medicines, as well as spiritual healers, to provide treatment for lower-level maladies.

The quality of care provided at the PHCs near DNT hamlets is generally satisfactory, with only two hamlets (Baliganur and Khadiyahaar) surveyed reporting a low level of quality at their PHC (Praxis, 2024). Many DNT communities seem to be skeptical about the quality of care and services offered by the Anganwadis in their hamlets. Several report that most DNTs in their hamlets do not make use of the basic health services provided there.

Among all healthcare sources, private care providers appear to have the most variation in quality. Some communities rely heavily on their local private clinics for a range of minor ailments, as they are often located quite close to the village centers and provide quick appointments to residents, albeit at a higher cost than government-run facilities. Additionally, some private doctors also allow patients to pay for their services on credit, which can be especially helpful when battling diseases like malaria or typhoid (Praxis, 2024). However, some communities have also reported predatory practices occurring at private clinics, especially when appointments at government hospitals are hard to come by. For example, DNT community members described one doctor at a private clinic in Morena (Gurudwara hamlet) who frequently redirects patients from the nearby government hospital (where he also works) to his private practice, where he can charge them higher prices. Practices like this contribute to high levels of catastrophic health debt, especially among poor Indians (like DNTs), who still pay for the majority of their health expenses out-of-pocket despite India's movement toward a system of universal healthcare (Sriram & Albadrani, 2022). Results showed that 49% of households that sought hospitalization and/or outpatient care experienced catastrophic health expenditures and 15% of households fell below the poverty line due to out-of-pocket expenditures (Nanda & Sharma, 2023). The high burden of out-of-pocket expenditures and associated financial burdens increases vulnerability for DNT households already struggling with extreme poverty. With crippling healthcare debt, DNT members are at great risk for human trafficking (forced labor and sexual exploitation).

Additionally, many private physicians are “quacks,” unlicensed doctors who operate without government supervision or regulation. New regulations were put in place in 2023 by the National Medical Commission to establish a nationwide registry of licensed doctors and prevent the unlicensed from continuing to practice (Dutt, 2023). Nevertheless, these quacks and other untrained medical professionals appear to have continued to operate in many hamlets based on field reports (Praxis, 2024).

In underserved communities, the community health worker (CHW) concept has been employed to improve health and lessen unfavorable health consequences. In India's rural healthcare delivery system, auxiliary nurse midwives (ANMs), accredited social health activists (ASHA workers), and Anganwadi workers (AWWs) are the primary field-level frontline officials who come into direct contact with the population (Kalne, 2022). Despite India having one million ASHA workers, DNT access to these health workers is limited.

Government Documentation

DNTs face extreme difficulty in obtaining government documents that would allow them to access the benefits they are entitled to. The most important of these forms of documentation, called the caste certificate—sometimes referred to as the community certificate—allows DNTs to access government benefits available to SCs/STs/OBCs, including the reservation system. One study found that only 42% of DNT households contained a member with a caste certificate, meaning that over half of the population is shut out from obtaining benefits that they are legally entitled to (Korra, 2017). Furthermore, only 36% had an MGNREGA card, which gives them access to a rural employment guarantee. Sixty-eight percent had an Aadhar number (i.e., unique government ID); this identifier is widely used to apply for passports, open bank accounts, and many other essential bureaucratic procedures. Due to their traditional nomadic practices, many DNTs also lack access to land titles, despite some having lived on the same tracts of land for generations.

According to the survey conducted by Praxis, residents of the DNT hamlets located in Krishnagiri reported a similar lack of consistent access to government documentation (Praxis, 2023). More than half of DNT respondents lacked community certificates and Aadhar cards. Beyond this, only a small minority (around 10%) in all three hamlets surveyed reported having access to a welfare card, and many DNTs lost out on access to pensions, pregnancy benefits, and housing funds (Praxis, 2023).

Effects of Climate Change on DNT Communities

Nearly all DNT hamlets surveyed by Praxis' health mapping team reported facing serious negative effects from climate change, especially ones relating to rising temperatures and declining water sources (Praxis, 2024).

Average temperatures in India have risen nearly 1° C (1.8° F) since records began in 1901; beyond this average rise, heat waves have begun occurring more often and with much greater intensity (Sharma, 2020). In interviews conducted by Praxis, many DNT respondents stated that these rising temperatures have led to a surge in illnesses among their communities, especially skin conditions, dehydration, and allergies (Praxis, 2024). The increase in average temperatures has also made it much easier for malaria-spreading mosquitoes to breed in and around DNT settlements, something that DNTs report was considerably less common only 20 years ago (Praxis, 2024). Finally, the higher temperatures have made it harder for DNTs to maintain farms in their communities, forcing them to rely on outside sources of food and reducing their ability to be self-sufficient.

As temperatures have risen, all of India has faced a growing crisis of water availability that will only intensify in the future (Zhong, 2023). Groundwater, which supplies 60% of the country's irrigation resources, has become harder to access, requiring ever-deeper boreholes to maintain a constant supply for crops in rural areas; rainfall has also become more unpredictable as rising temperatures have increased weather variability (Prabhu, 2024). DNT communities, which traditionally have relied on a mix of wells and hand pumps to provide water, have been forced to drill new wells to provide sufficient water for irrigation. In the short term, this has actually resulted in an increase in available irrigation water in many DNT communities, but it may be contributing to a long-term decline in the water table in these areas as more water is pumped out of the ground for agricultural use. As previously discussed, DNT communities surveyed by Praxis have expressed concerns in recent years about the amount and quality of available drinking water in their hamlets, with villagers in one community reporting an increase in illnesses due to a decline in water quality (Praxis, 2024).

References

Agrawal, S., Mani, S., Jain, A., & Ganesan, K. (2020). *State of Electricity Access in India*. Council on Energy, Environment and Water.

Burgueño Salas, E. (2023, October 30). *India: Access to safe drinking water 2022*. Statista. <https://www.statista.com/statistics/1130441/india-rural-population-with-access-to-safe-drinking-water/>

Burns, C. J., Chen, K., & Stoklosa, H. (2021). Pushing for the same thing on the same set of tracks: a qualitative study exploring the anti-trafficking response in Bihar and Uttar Pradesh. *BMC public health*, 21(1), 1204. <https://doi.org/10.1186/s12889-021-11213-w>

Centre For Market Research and Social Development. (2020). *Evaluation Study on "Functioning of National Backward Classes Finance and Development Corporation (NBCFDC)." https://socialjustice.gov.in/public/ckeditor/upload/Executive%20Summary-Evaluation%20of%20NBCFDC_1648795070.pdf*

Chitravanshi, R. (2015, October 8). Nationwide review of rural job scheme NREGS ordered by government—T.... *The Economic Times*. <https://archive.ph/smdAi>

Dogra, B. (2023, April 5). *Welfare Schemes For Denotified And Nomadic Tribes Need A Big Boost| Countercurrents*. <https://countercurrents.org/2023/04/welfare-schemes-for-denotified-and-nomadic-tribes-need-a-big-boost/>

Dutt, A. (2023, November 1). Doctors to get unique ID in national medical register by the end of 2024 | India News—*The Indian Express*. Indian Express. <https://indianexpress.com/article/india/doctors-to-get-unique-id-in-national-medical-register-by-the-end-of-2024-9008302/>

Dutta, S. (2023, June 4). PM-Daksh: Not one of 295 trained found a job. *The Times of India*. <https://timesofindia.indiatimes.com/city/jaipur/pm-daksh-not-one-of-295-trained-found-a-job/articleshow/100737083.cms>

Garud, S. (2021, December 1). *Report of the National Commission for Denotified, Nomadic and Semi-Nomadic Tribes (Idate Commission)*. <https://ruralindiaonline.org/en/library/resource/report-of-the-national-commission-for-denotified-nomadic-and-semi-nomadic-tribes-idate-commission/>

Ghildiyal, S. (2018, January 9). 'Give denotified tribes pie of SC-ST-OBC quota.' *The Times of India*. <https://timesofindia.indiatimes.com/india/give-denotified-tribes-pie-of-sc-st-obc-quota/articleshow/62422061.cms>

Idate, B. R. (2017). *National Commission for Denotified Nomadic and Semi-Nomadic Tribes*. Ministry of Social Justice and Empowerment.

<https://socialjustice.gov.in/writereaddata/UploadFile/Idate%20Commission.pdf>

Jain, A., Kumar, A., Kim, R., & Subramanian, S. V. (2023). Prevalence of zero-sanitation in India: Patterns of change across the states and Union Territories, 1993-2021. *Journal of Global Health*, 13, 04082. <https://doi.org/10.7189/jogh.13.04082>

Kalne P S, Kalne P S, & Mehendale A M. (September 20, 2022). Acknowledging the Role of Community Health Workers in Providing Essential Healthcare Services in Rural India-A Review. *Cureus* 14(9): e29372. doi:10.7759/cureus.29372

Kerala State Backwards Classes Development Corporation. (n.d.). *NBCFDC Schemes*. Retrieved February 14, 2024, from <http://www.ksbcdcd.com/index.php/nbcfdc-schemes>

Korra, V. (2017). Status of Denotified Tribes: Empirical Evidence from Undivided Andhra Pradesh. *Economic and Political Weekly*, 52(36), 61–66.

Lakshman, A. (2022, December 26). Expedite categorisation of denotified, nomadic, semi-nomadic tribes: House panel. *The Hindu*. <https://www.thehindu.com/news/national/expedite-categorisation-of-denotified-nomadic-semi-nomadic-tribes-house-panel/article66307303.ece>

Mandlik, A. (2020). *Human trafficking laws in India*. <https://legalserviceindia.com/legal/article-3245-human-trafficking-laws-in-india-.html>

Ministry of Power. (2024). *Saubhagya Dashboard*. Retrieved February 14, 2024, from <https://saubhagya.gov.in/>

Ministry of Social Justice and Empowerment. (2006). Recommendations of the Technical Advisory Group. Retrieved March 15, 2024 from <https://www.scribd.com/doc/933435/TAG-Report>

Ministry of Social Justice and Empowerment. (2023, December 8). *1,69,300 trainees to get training till 2025 under PM-DAKSH, An amount of Rs. 286.42 crore likely to be spent on these trainings*. Retrieved February 13, 2024, from <https://pib.gov.in/pib.gov.in/Pressreleaseshare.aspx?PRID=1983885>

Ministry of Social Justice and Empowerment. (n.d.). Scheme for Economic Empowerment for DNTs. Government of India. https://dwbdnc.dosje.gov.in/public/images/SEED_scheme_guidelines.pdf

Misra, V., & Kaushik, S. (2023, November 11). Challenges to curbing community-based prostitution. *The Pioneer*. <https://www.dailypioneer.com/2023/columnists/challenges-to-curbing-community-based-prostitution.html>

Nanda, M. , Sharma, R (2023) A comprehensive examination of the economic impact of out-of-pocket health expenditures in India, *Health Policy and Planning*, Volume 38, Issue 8, October 2023, Pages 926–938, <https://doi.org/10.1093/heapol/czad050>

National Backward Classes Finance and Development Corporation. (n.d.). Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi (PM-DAKSH) Yojana. A Govt. of India Undertaking, Ministry of Social Justice & Empowerment. <https://nbcfdc.gov.in/pm-daksh/en>

National Backward Classes Finance and Development Corporation. (2023). *NBCFDC Annual Report 2022-2023.pdf*. <https://nbcfdc.gov.in/sites/default/files/sidemenu/NBCFDC%20AR22-23.pdf>

National Human Rights Commission of India. (2021). *Right To Water*. <https://nhrc.nic.in/sites/default/files/Right%20to%20water.pdf>

Office to Monitor and Combat Trafficking in Persons. (2023). 2023 Trafficking in Persons Report: India. *United States Department of State*. Retrieved February 13, 2024, from <https://www.state.gov/reports/2023-trafficking-in-persons-report/india/>

Prabhu, S., & Chitale, V. (2024). *Decoding India's Changing Monsoon Patterns*. Council on Energy, Environment and Water. <https://www.ceew.in/publications/decoding-changing-monsoon-rainfall-patterns-due-to-climate-change-in-india>

Praxis. (2023). *Combined Field Reports: Chinnakuthi, Sigaralapalli, and Thanneergundalapalli*. Internal Report.

Praxis. (2024). *Gudisalur (Krishnagiri) Climate Change Report*. Internal Report.

Praxis. (2024). *Gurudwara Mohalla Ward No. 10 (Morena) Climate Change Report*. Internal Report.

Praxis. (2024). *Gurudwara Mohalla Ward No. 12 (Morena) Climate Change Report*. Internal Report.

Praxis. (2024). *Household Mapping Baseline Survey Statistics*. Internal Report.

Praxis. (2024). *Participatory Health Mapping Report: Baliganur*. Internal Report.

Praxis. (2024). *Participatory Health Mapping Report: Gudisalur*. Internal Report.

Praxis. (2024). *Participatory Health Mapping Report: Gurudwara*. Internal Report.

Praxis. (2024). *Participatory Health Mapping Report: Khadiyahaar*. Internal Report.

Praxis. (2024). *Participatory Health Mapping Report: Ranpur*. Internal Report.

Praxis. (2024). *Participatory Health Mapping Report: Tholluvabetta*. Internal Report.

Praxis. (2024). *Ranpur (Morena) Climate Change Report*. Internal Report.

Radhakrishna, M. (2000). Colonial Construction of a “Criminal” Tribe: Yerukulas of Madras Presidency. *Economic and Political Weekly*, 35(28/29), 2553–2563. <http://www.jstor.org/stable/4409505>

Rana, U., Sharma, D., & Ghosh, D. (2020). Prostitution in northern Central India: An ethnographical study of Bedia community. *International Journal of Anthropology and Ethnology*, 4(1), 2. <https://doi.org/10.1186/s41257-020-0027-5>

Sahi, S. (2023, January 22). The Bonded Labor System in India and the Need for Reform. *Jurist Legal News & Commentary*. <https://www.jurist.org/commentary/2023/01/shreya-sahi-bonded-labor-india/>

Sen, R. (2020). *A National Study on Status of Anti Human Trafficking Units in India (2010-2019)*. Sanjog. <https://idronline.org/wp-content/uploads/2020/10/AHTU-Watch-Status-of-Anti-Human-Trafficking-Units-in-India-2010-2019.pdf>

Sharma, V. (2020, June 15). Average temperature over India projected to rise by 4.4 degrees Celsius: Govt report on impact of climate change in country. *Tribuneindia News Service*. <https://www.tribuneindia.com/news/nation/average-temperature-over-india-projected-to-rise-by-4-4-degrees-celsius-govt-report-on-impact-of-climate-change-in-country-99583>

Singh, H., Bhandari, P. (2023, September 26). Shrinking Pastoralism, fear of eviction - Forest Rights Act is the only hope for Van Gujjars of Sirmaur. Retrieved March 15, 2024 from <https://www.downtoearth.org.in/blog/forests/shrinking-pastoralism-fear-of-eviction-forest-rights-act-is-the-only-hope-for-van-gujjars-of-sirmaur-91954>

Sriram, S., & Albadrani, M. (2022). A STUDY OF CATASTROPHIC HEALTH EXPENDITURES IN INDIA - EVIDENCE FROM NATIONALLY REPRESENTATIVE SURVEY DATA: 2014-2018. *F1000Research*, 11, 141. <https://doi.org/10.12688/f1000research.75808.1>

Sukumar, V. (2023). *Status of Nomadic Tribes in Tamil Nadu: Participatory Survey Report*. Vanavil Trust.

Walkfree. (2023.). *Global Slavery Index*.. Retrieved February 14, 2024, from <https://cdn.walkfree.org/content/uploads/2023/05/17114737/Global-Slavery-Index-2023.pdf>

Zhong, R. (2023, September 1). Warming Could Push India Toward a Groundwater Crisis. *The New York Times*. <https://www.nytimes.com/2023/09/01/climate/india-groundwater-depletion.html>