



Summary of Findings Delhi Citizens' Handbook 2017

ADMINISTRATION

Implementation and Outreach of the e-District Delhi Project under the National e-Governance Plan

The researchers analyse the online application procedure at Sub Divisional Magistrate (SDM) offices to assess the extent to which the e-District Project has been able to reach its envisioned goals. The paper examines the reasons for the success and failure of the project, and recommends policy changes.

KEY FINDINGS

1. All applications for the concerned Government-to-Citizen services are processed through the e-District Portal, regardless of whether the application was made through the Common Service Centre (CSC) or Citizen mode.
2. CSCs are not functional in Delhi, with the exception of those operating as facilitation counters at the Certificate Branch within the SDM office complex.
3. E-District has not been able to help shorten the queues at the SDM offices.
4. 54% of the applicants had to make only one visit to the SDM office. This is in compliance with the goals set by the e-District Project.
5. The CSC staff working at SDM offices is proportional to the workload that the subdivision receives. This workforce comprises of government employees, civil defence volunteers and private workers employed on a contract-basis. Additionally, implementation of e-District has not reduced the workload.
6. With an increase in the number of CSCs (offline transactions), number of online transactions also increase, and vice versa.
7. Issuance of OBC/SC/Income certificates is the most highly demanded service amongst those provided under the Revenue Department in e-District. These services have the highest rejection rates among all services offered across different sub-divisions.
8. District Administration is not involved in promoting e-District. Outreach programs and awareness campaigns do not fall under the ambit of the Revenue Department, but rather under the Directorate of Information and Publicity (DIPR). DIPR has not taken any steps in the past two years to promote the e-District Project among citizens.
9. The e-District website is user-friendly but the process of documentation is lengthy and the time limit may vary due to server problems or power outage.
10. The Grievance Redressal System available at the e-District portal is defunct.

POLICY RECOMMENDATIONS

1. A dedicated help desk employing a token system must be installed in every SDM office to assist citizens with the steps involved, eligibility criteria, and the required certificates.
2. There should be at least three CSC operators in all offices; first to accept offline applications and feed them into the system, the second to assist the first in scanning and uploading relevant

documents, and the third to verify veracity of these documents (for both online and offline applications).

3. All SDM offices should put up information boards (both in English and Hindi) about the e-District portal, the services offered online, the documents required for each service and the Delhi Right of Citizens to Time Bound Delivery of Services Act, 2011.
4. Biometric scanners should be installed for verification of citizens who apply using the Aadhaar Card. For applicants using other identity proofs, web cameras should be installed at the verification desks in these offices.
5. To make awareness programmes more effective, different unions and institutions should be targeted. For example, organisations working for disabled and elderly people are well connected to each other as well as to the affiliated citizens. Therefore, information regarding new schemes can be shared easily.
6. All SDM offices should be asked to publish reports on the e-District Project on a public platform. These reports should contain data about the number of online and offline transactions conducted for each service, as well as the measures taken by the offices to increase project outreach and improve efficiency.
7. The website should be available in Hindi as well as regional languages, and questions on the form should be simple, clear, and precise. The size-limit on the documents to be uploaded online should be increased from the current 100KB limit.
8. The website should offer an option to fix meetings with SDMs instead of DMs, as doing so would distribute the work of one DM to three SDMs. Moreover, SDMs are relatively closer to the citizens living in the respective sub-divisions and therefore can solve grievances more efficiently.
9. Doorstep-delivery of certificates can be initiated by the Delhi Government to increase the outreach of the e-District Project.

EDUCATION

Accessibility, Inclusivity and Efficiency of Provisions under Section 12(1)(c) of the Right to Education Act 2010

Despite the Right to Education (RTE) Act 2010 mandate of 25% reservation in private unaided schools for students from Economically Weaker Sections (EWS) and disadvantaged groups, social inclusivity continues to remain a challenge today. This paper examines private unaided schools across Delhi to gauge the level of social inclusivity as mandated under the RTE.

KEY FINDINGS

1. From a household survey conducted in South Delhi, 7 out of 25 private unaided schools were found to have not yet implemented the provisions under Section 12(1)(c).
2. 83% of families belonging to the General Category in the Budget Private Schools (BPS) sample had an overall positive attitude towards EWS inclusion, as compared to just 64% in the non-BPS sample.
3. Though the General Category parents expressed positive views on the scheme, the non-BPS sample was strongly opinionated against EWS Category inclusion citing negative influences (owing to difference in upbringing, belief and value systems of EWS students) as the main reason.
4. The interaction between the groups was found to be low—both at the students’ as well as the parents’ level.
5. The BPS section felt a transfer of financial burden due to this scheme highlighting the need of reviewing the government reimbursement process.
6. The EWS Category faced challenges in terms of lack of awareness and the burden of extra payments. This burden was borne more by parents sending children to non-BPS.
7. Government/Media accounted for the lowest share of sources for spreading awareness regarding the scheme.
8. 83% of families from the EWS Category, who send their children to BPS were found to have a conducive learning environment, as compared to 71% from the non-BPS sample.
9. Barring exceptions, the inclusivity index decreased with an increase in fees charged by the school (an indicator of type of school). The lower inclusivity score of non-BPS was influenced by the low score on understanding language and content, and teachers’ perception.
10. Although non-BPS were found to adopt extra measures to accommodate the needs of children from the EWS Category, segregation inside classrooms was higher in non-BPS than BPS.

POLICY RECOMMENDATIONS

1. Central Statistic Office (CSO) should help set up local community centres, strengthen them to disseminate information and assist families in the process of admission.
2. Indus Action has an efficient helpline in place to assist EWS families with the process of admission. Till now, they have engaged with about 80,000 families. The Government should outsource the responsibility to establish and manage a helpline for families across the 27 sub-districts of Delhi, to organizations such as Indus Action.

3. Within the application process, the government needs to ensure that information regarding the availability of seats available under the quota for eligible schools, is made easily accessible.
4. Applications should be accepted through both online and offline modes. The procedure must start earlier i.e. in the month of September, to ensure that the whole process is completed by March. This will ensure students do not miss out on school.
5. There is an urgent need for improving the online admission platform, in order to make it more user friendly. Minor changes in the online portal, like provision for families to send a rejection notification to schools, when confronted with school choices, will help speed up the admission process.
6. Government must discontinue the requirement for Income Certificate as an income proof (since these can be faked easily). Other documents that are already being demanded as proof of economic status, as a precondition to avail other government schemes, should be asked for instead.
7. The lengthy procedure of reporting and inspecting a possible fake admission needs to be amended. This is essential since schools (especially BPS) have neither the resources, nor the intent to do so. Schools should be able to instantly file an online complaint alongside preliminary evidence, with the government following up on the complaint and performing subsequent inspection checks.
8. The formula for calculating per-student expenditure should be made transparent. There is a need to review it, such that capital costs are included as well.
9. Reimbursements should be timely and must include costs of school uniform, books and stationery items.
10. A system of progressive reimbursement, which depends on the ranking of schools, can be established. This will ensure that schools have adequate incentives to take up inclusion practices and work towards achieving better learning outcomes for students.
11. Government can give contracts to institutions like Adhyayan for constructing a comprehensive grading system of schools (with special focus on inclusivity).

FOOD AND CIVIL SUPPLIES

Effectiveness of the Public Distribution System and efficacy of Fair Price Shops

Delhi's Public Distribution System (PDS), a scheme to sell subsidised food beneficiaries through Fair Price Shops (FPS), is abound by leakages. The inefficacy of the scheme poses a significant threat to food security in the capital. The paper surveys the leakages along with the feasibility of the Direct Benefit Transfer (DBT) scheme suggested as a measure for blocking said leakages.

KEY FINDINGS

1. FPSs in Delhi function inadequately due to low profit margins. 60% of reviewed FPSs were closed during hours of operation, while only 15% properly displayed the government-mandated information to beneficiaries.
2. The procedure for quality analysis as prescribed by the Food Corporation of India (FCI), is of insufficient scale and is also unable to ensure adequate quality of food supplies. As a result, 54.5% of beneficiaries expressed extreme dissatisfaction with the quality of grains they acquired from their respective FPSs.
3. The State's internal Grievance Redressal Mechanism, is ineffective because of jurisdictional overlap between regional Food Security Officers (FSO) and Assistant Commissioners. Moreover, only 24.25% of beneficiaries were aware of the Public Grievance Redressal System (PGRS).
4. Vigilance Committees are defunct due to a lack of initiative on behalf of the State and low attendance during committee meetings.
5. Errors of inclusion persist in the PDS. It was discovered that many beneficiary households were availing the PDS services, despite earning more than Rs.1 lakh/year.

POLICY RECOMMENDATIONS

1. As per the current selection requirements for acquiring an FPS license, an applicant need only have a 12th grade education along with prior experience in operating a store. The allocation process for FPS licences should, thus, be made more selective. This can be done through:
 - a. Increasing the focus on allocating FPS ownership to consumer-cooperatives. This will encourage consumer participation and improve the regularity with which the FPSs remain open, as well as reduce pilferage of grains from the store, as beneficiaries themselves would have a stake in its successful delivery.
 - b. Focusing the selection process on store owners with pre-existing stores or those with the ability to supplement their revenue through the sale of other products such as Non-Sales Force Automation Goods that are not covered under the Essential Commodities Act.
2. A Ration Card Portability System should be introduced to improve economic viability. This system would allow a ration cardholder to buy their food grain entitlement from any FPS in their circle. Such a system would encourage store owners to improve their services, by fostering competition between FPSs within the same circle.
3. Officials of the Circle Office should conduct door-to-door surveys in each circle on a bi-annual basis, to weed out ineligible households who still avail of ration at subsidised rates.

4. The pilot phase for the e-PoS (Electronic Point-of-Sale) machines should be extended, in order to better understand the accessibility problems it poses before implementation across Delhi.
5. To ensure transparency, the Delhi government should enforce specific guidelines on attendance by members of the Vigilance Committee. A minimum number of meetings should be attended compulsorily annually and attendance by at least one government representative – either the Food Security Officer or the Member of Legislative Assembly should also be mandated.
6. The minutes of Vigilance Committee meetings from all circles should be posted with increased regularity. The Delhi Government must also increase the frequency with which it updates the Delhi Food Security Portal, with information regarding FPS and the commodity-wise allocation made to them.
7. The Delhi Government should revive the Grievance Redressal Mechanism by doing the following:
 - a. Posting essential information about the FPS; not only at the entrance of the FPS, but also at a few locations within a 500m–1km radius of the store. This display of information would ensure greater transparency between the beneficiaries and FPS store owners, therefore, strengthening the mechanisms of accountability.
 - b. Streamlining the internal grievance redressal system by resolving the jurisdictional confusion that is slowing down the processing of complaints. A time bound, stage-wise system for the passage of complaints, from the FSO’s office to the Assistant Commissioner’s office, should be outlined.
8. The FSO or Circle Inspector should conduct an inspection of each FPS in his/her respective circle within one week from the date of delivery of food supplies. This makes it possible for the Inspector to better observe how the FPS conducts business, because the store is likely to still have a large stock of leftover grain. Moreover, this gives the Inspector a chance to engage directly with the beneficiaries, a large majority of whom collect their food supplies within two weeks of delivery.

HOUSING INFRASTRUCTURE

Availability of Affordable Housing to the Urban Poor in Delhi by the Government

This paper examines the various problems associated with the provision of affordable housing, by explicating the very concept of affordable housing and all that it entails in context of national-level policies, schemes carried out by governmental and autonomous authorities in Delhi, and the efforts made by the Delhi Development Authority (DDA).

KEY FINDINGS

1. The narrow definitions of affordable housing at the national and state planning level fall short of addressing the needs of the poor sections of society. All factors including size of the house, the location of the house, services provided (electricity, water, community services like parks, schools and hospitals nearby), the quality of construction, state of the economy at the time of purchase, and the demand and preference patterns of consumers are not adequately taken into consideration.
2. Settlements are generally located far away from the beneficiary's place of work. A lack of coordination between the government and autonomous agencies that provide connectivity, transport, employment opportunities etc., has resulted in unavailability of cheap and well-connected means of transport to the residents. This results in a low vacancy rate.
3. A large number of DDA flats intended for use by low income groups and economically weaker sections have been either sold off or rented out. Very few original allottees reside in these flats. In case of allotment schemes which prohibit the sale of houses for an initial period of five years, allotted houses lie vacant.
4. Due to the low quality of the houses and services provided, the intended beneficiaries find it more useful to sell off these houses in the black market at high premium rates or rent them out, securing for themselves a regular source of income.
5. 50% of the respondents were not satisfied with the size of the house provided. Of the remaining 50% who were satisfied, 27% were satisfied only because they had small families of three to four members only.
6. In a number of settlements, allotted housing spaces have been illegally expanded into commercial or commercial-cum-residential spaces. Lack of regular inspection and corrupt inspection officers contribute to the situation.
7. Low-cost housing invariably leads to low quality of infrastructure because the cost of construction is very high. Technological upgradation for bringing down costs is hard to attain as it is required to go through multiple sanctions and approvals from governmental echelons.
8. Improving the current scenario of affordable housing in Delhi will require:
 - a. Greater awareness among all stakeholders involved, especially the beneficiaries so that they are able to demand proper services.
 - b. Stricter administration to ensure that all agencies work in tandem to make affordable housing schemes successful.

POLICY RECOMMENDATIONS

1. **Precise and comprehensive definitions of affordable housing:** National-level policies and schemes initiated by various government and autonomous agencies in Delhi all define and view affordable housing in terms of two parameters i.e. income of the intended beneficiary and size of the house. Various income groups are provided houses of varying sizes, with the size of the house being directly proportional to the income of the beneficiary. Other key aspects of affordable housing such as location, quality of construction and services and size of the house, remain unaddressed.

Until and unless the provisions for affordable housing, both at the national and local levels, do not take into consideration the above-mentioned factors in a manner that ensures these considerations also filter into the final ground level activities for affordable housing, the efforts directed towards affordable housing will continue to fall short of adequately benefiting the target group.

2. **A separate committee with better representation, responsibility and accountability must be formed for handling the provision and maintenance of affordable housing:** At present, multiple agencies are responsible for various jobs such as construction of the houses, provision of electricity, provision of water, provision of sanitation, regular and timely maintenance of construction, provision of roads and better connectivity, ensuring access to cheap and convenient means of transportation. There is a lack of coordination between these agencies. Each agency tries to shrug off responsibility and a blame game ensues, when a beneficiary complains about or tries to avail a facility that has not been provided. Thus, that a separate committee under the Ministry of Housing and Urban Poverty Alleviation (MoHUPA) must be formed, which is solely entrusted with the duty of providing and maintaining affordable housing.

This new committee must have representatives from all the major stakeholders involved in the provision of affordable housing, with the Central Government acting as the ultimate overseeing and approving authority (through the MoHUPA). The committee must be involved in all activities relating to affordable housing, rather than being concerned solely with construction and disposal of affordable houses. For ensuring a smooth functioning of all operations, the committee must be divided into separate wings to cater to the four geographical divisions of Delhi. Further subdivisions can be made if the need arises. This committee must be the one point of contact for any problems that the beneficiaries might have with regards to affordable houses at any point in time.

3. **The private sector must be given a role to play in technological upgradation:**

The level of technological sophistication can vary with the political party in power. The private sector must be given the impetus of technological upgradation as it would greatly increase efficiency of these affordable housing schemes. By ensuring better construction quality, they would also make the process more economical. Private entities can also provide services that require maintenance over a long period of time, for instance, elevators.

LABOUR AND EMPLOYMENT

Implementation and Effectiveness of the Minimum Wages Act

This paper investigates the implementation of the 37% hike in minimum wages enacted by the Delhi Government. Security guards and construction workers, who form a part of the informal sector, which is vulnerable to exploitation and non-payment of minimum wages, have been interviewed for the same.

KEY FINDINGS

1. The Delhi Government enacted a 37% hike in minimum wages across all scheduled industries on 6 March 2017. Five months after the hike came into force, there is no visible evidence of its implementation.
2. There is little to no awareness of the mandated minimum wage among both employers and workers. The government has not made any significant efforts to rectify this deplorable situation.
3. 88% of the respondents do not receive the standard minimum wage. Alarming, 68 (of the 105) workers who know the exact minimum wage, are unable to demand or negotiate their rightful due. Workers engaged in public works, undertaken by the government, are in no better state.
4. One of the key issues discovered is the increasing shift towards contractualisation, with even the government opting for the same. These contractors usually end up with a free reign, due to lack of regulation, and exploit the workers by paying wages that are much lower than the stipulated amount.
5. Construction workers and security guards lack the ability and opportunity to unionise, attributable to the mobile nature of their employment. This puts them in a weak bargaining position to negotiate their wages.
6. Inspectors appointed by the government are responsible for the enforcement of the Act. However, a lack of manpower and engagement in corrupt practices has undermined the essence of this very provision.
7. There is no effective grievance redressal mechanism set up to address the atrocities faced by these workers.

POLICY RECOMMENDATIONS

1. Awareness campaigns for minimum wage must be taken up by the government, civil society, and NGOs. The government should publicise the set minimum wages and mandates of the Act through television, radio and newspaper advertisements. NGOs should step forward in creating awareness at the ground level by setting up awareness camps.
2. There should be an increase in the number of accessible Worker Facilitation Centres. This would allow workers to gain information about minimum wage and social security benefits. A booklet can be circulated listing details of the various wages set, social security schemes, their provisions and the procedure for availing them.

3. Legal representation and activism in the field of “workers’ rights” is required. NGOs, like Centre for Indian Trade Unions and the National Centre for Labour, should initiate national debates, exploratory meetings and workshops targeted towards discussing problems of labourers in the unorganised sector. Efforts for mobilisation and organisation of these workers can be attained through rallying and disseminating information about their rights in labour chowks.
4. Daily wage workers like construction workers, who form a part of mobile and unregistered labour, are unable to receive benefits such as ESI, PF and various other social security schemes from the government and the employer. To uplift this section of the society, formation of labour unions should be encouraged.
5. Proper regulation of contractors and provision of safeguards to workers must be ensured by both, the government as well as the civil society. Increased transparency in legal contracts will bring down corruption and the exploitation of workers by contractors. The government should not set a very high minimum wage which de-incentivises businesses and agencies to come into existence given the decreased chances to make profit.
6. Labour inspectors must be given higher wages and other benefits. This will incentivise them to resist underhand dealings and other forms of illegal activities which render their role ineffective.
7. Enforcement strategy must be based on awareness and information, effective and regular labour inspections and punitive measures in case of violation. A system of checks and balances on the inspector can be initiated through the concerted efforts of trade unions and the civil society as they would have greater incentive to ensure enforcement. A labour inspector could be accompanied by a member of workers from labour union or any NGO working towards the cause of labourers of the unorganised sector at the site of inspection.
8. There should be a separate provision in the Act which mandates the setting up of a formal Grievance Redressal Cell, that is easily accessible to all workers. The settlement of disputes which are received through this Cell should be held in an efficient manner which gives equal voice to all the stakeholders involved. The coverage should extend to the district level where filing of complaints occurs in an impartial way at minimal costs.

PUBLIC HEALTHCARE

Quality and Accessibility of Public Healthcare Facilities like Government Hospitals and Mohalla Clinics

The World Health Organisation (WHO) underscores ‘quality’ and ‘accessibility’ as the two key elements of a good healthcare system. In this context, this research paper seeks to examine the extent to which Delhi Government hospitals and mohalla clinics provide convenient entry into the healthcare system whilst ensuring proper services to patients.

KEY FINDINGS

1. A massive 70% of the Out Patient Department (OPD) load of the Delhi Government hospitals comes from outside Delhi, as per the interviewed government officials.
2. The Bed to Population Ratio of Delhi is 2.76 beds per 1000 population; way short of the WHO recommendation of 5 beds per 1000 population, as per the Delhi Economic Survey 2016–17.
3. 64.8% of the patients at the surveyed mohalla clinics were female, indicating the easy access of these clinics to the female population of the neighbourhood.
4. 84.8% of the patients at the surveyed mohalla clinics gave an ‘above average’ satisfaction rating to the services of these clinics.
5. 55.3% of the patients surveyed at the Delhi government hospitals gave an ‘above average’ satisfaction rating to these institutes.
6. Nearly 70% of the patients at the surveyed Delhi government hospitals were not given enough information by the doctors about their illnesses, treatments and medicines.
7. 64.8% of the people at mohalla clinics and 51.3% at government hospitals were not aware of the presence of fake doctors in Delhi.
8. Between 2012 and 2015, the Delhi Medical Council asked the police to register cases against 422 fake doctors. Of these, 300 cases have still not been registered by the Delhi Police, as per media reports.
9. Only a meagre 16.4% of people at Delhi government hospitals were aware of the mohalla clinic scheme, launched over a year ago.
10. A staggering 93.1% of the patients surveyed at the Delhi government hospitals were not aware of the existence of other schemes like the Delhi Aarogya Nidhi and Delhi Aarogya Kosh.

POLICY RECOMMENDATIONS

1. Information asymmetry with regard to the Delhi Government’s schemes (DAN and DAK), the presence of fake doctors, treatment procedures can be remedied through the following:
 - a. Use of bilingual information billboards in Aam Aadmi Mohalla Clinics (AAMCs) and hospitals for those who are not literate in English.

- b. Use of bilingual billboards in the vicinity of AAMCs informing people about the presence of the clinics. No indicators informing people about the presence of these clinics were found at the three clinics visited during the study.
 - c. Creation, regulation and maintenance of information kiosks and help desks at Delhi government hospitals to reduce the burden on doctors and pharmacists of informing patients about the treatment and medicines prescribed.
 - d. Information dissemination drives to educate the population about the presence and dangerous consequences of visiting fake doctors.
2. To combat pre-consultancy delays arising from long, chaotic queues, the existing first-come-first-serve system can be replaced by an offline registration system wherein people are handed tokens which signify their position in the queue. This will reduce confusion and increase convenience for patients.
3. The ill-treatment of patients by doctors and lack of two-way communication can be assuaged by enhancing the communication skills of doctors through effective skill building sessions. Doctors can also be taught how to improve patient-provider rapport and focus their attention to the patient's individual needs.

PUBLIC TRANSPORT AND WOMEN SAFETY

Challenges Faced by Women Service Providers in the Transport Industry

Women conductors and drivers within the Delhi Transport Corporation (DTC), at present, face major challenges due to the absence of a formal policy for safety and security at the workplace, inefficiency of existing grievance redressal mechanisms, and a lack of appropriate infrastructure. This research paper takes a closer look at these challenges.

KEY FINDINGS

1. 70% of the female respondents said they prefer an office job over a route job.
2. Female respondents at 10 out of 16 depots cited a lack of basic amenities including water, sanitation and washrooms at the depots.
3. 37% of the female respondents said that they have been on the receiving end of harassment either from a co-worker or a passenger.
4. 76% of the total respondents felt that there is a need for an official platform for women conductors to collectively discuss issues and raise concerns.
5. 72% of the female respondents admitted to having witnessed sexual harassment on the bus in one form or another.
6. 68% of the total respondents felt that the grievance redressal system in DTC is ineffective.
7. Almost all respondents cited DTC's "passenger first" approach as a problem.

POLICY RECOMMENDATIONS

1. **Provision of washrooms within bus depots, terminals, and along bus routes** should be initiated with immediate effect. For routes which do not have a washroom, the least that can be done is the provision of washrooms at the start and end point of the route, especially for those routes that do not begin at the depot. Upon identification of priority routes by the DTC, proposals can be sent to Urban Local Bodies (ULB) for approval as per the route. ULBs in specific zones shall allocate funds and work under the Swachh Bharat Mission. The toilets have to be built under the category of public toilets. Once the State and ULB's have identified land for the creation of these toilets, the private sector should be encouraged to build and maintain the toilets through a Public Private Partnership.
2. **Grievance Redressal Mechanisms must be set up through:**
 - a. **Punitive action against Depot Manager:** In case of non-adherence to the time limit of conducting and concluding the investigation, punitive action should be taken against the depot manager. A possible form of action could be an official reprimand in the ACR of the depot manager. The above system creates pressure on the depot manager to actively resolve issues arising within his depot while maintaining the anonymity of the complainant at the depot.
 - b. **Depot Women's Cell:** To resolve grievances of women conductors that may arise within the depot, a separate Women's Cell can be set up within each depot. The Depot Women's Cell (DWC) will be responsible for:

- i. Dealing with complaints pertaining to gender discrimination/sexual harassment in a time bound manner. Anonymity of the victim should be maintained for as long as possible. Appropriate disciplinary action should be taken against the accused if found guilty. There should also be a provision for an inter-depot transfer for either the victim or the accused.
 - ii. Ensuring female conductors have the flexibility to choose their routes or to change routes if they have a legitimate reason for the same.
3. Coordinating with the DWCs from other depots to create an official platform for all female conductors. This platform will play an important role in creating a community for conductors where they can interact with each other and collectively attain great bargaining power to push for their demands.
4. Problems regarding lack of safety, eve-teasing or sexual harassment should be dealt with through gender sensitisation training for all employees, integration of the Himmat app and other safety apps for conductors and drivers, installation of CCTVs in busses, installation of GPS devices for enhancing efficiency of helplines and swift action.
5. A zero-tolerance policy against harassment must be put in place. This can be done with the help of civil society organisations and non-profits through awareness programs. Periodic efficiency assessment of grievance redressal systems should also be conducted by collecting and analysing empirical data on the rate of resolution of complaints to create a system of checks and balances. The Delhi Police must ensure that all complaints of eve-teasing are registered under Section 298 (A) and (B) of Indian Penal Code that prescribes up to three months imprisonment for making obscene gestures or remarks to a woman.
6. To deal with the general lack of awareness about helplines and other means of assistance, display boards should be set up on bus stops with relevant information.

WATER AND SEWAGE

Effectiveness of Pollution Control and Wastewater Management Systems

Addressing the alarming levels of pollution in River Yamuna, this paper reviews the limitations of following a centralised approach to cleaning up the river and instead, suggests a de-centralised sewage and wastewater management system as a sustainable solution to the problem.

KEY FINDINGS

1. Despite an expenditure of around Rs 7,000 crores on the Yamuna Action Plan I and II, a longitudinal analysis of the change in water quality standards over the years reveals that it has had little/no effect on the pollution levels of the Delhi stretch of the Yamuna.
2. The Interceptor Sewer Project has led to little reduction in the Biological Oxygen Demand (BOD) levels, from 55 to 47 mg/l by 2016, even after almost a decade of its inception, which is still quite far from the target BOD level of 12 mg/l that was set in 2008.
3. The state agency, Delhi Jal Board (DJB), is responsible for collection and treatment of sewage in the city. However, capacity is less than required, and over 25% of the existing capacity is underutilised due to various reasons, for example, inefficient sewage conveyance, unavailability of land and faulty projections of population in the catchment area of a Sewage Treatment Plant (STP). In addition, almost 30% of the operational capacities are not meeting basic quality standards of treated water.
4. Direct disposal of domestic sewage through the storm-water drains (which were meant for rainwater harvesting but have now become merely open sewers carrying untreated wastewater directly into the Yamuna) and the lack of dilution due to scarcity of freshwater and poor quality of treated water, are all responsible for crores of investment going down the drain with no effect on the river's health.
5. 46% area of Delhi is presently un-sewered and according to DJB, it will take 20 years and about Rs 20,000 crores to connect all of Delhi to a centralised sewage system.
6. The present sewage system involves the construction of large-scale infrastructure, which has high operation and maintenance costs, and has to be centrally monitored for performance. The long conveyance structures make it impossible to detect system issues such as the need for rehabilitation, clogging, and leakages, in time, thereby leading to inefficiency and ineffectiveness of such expensive technologies.
7. Decentralised sewage management systems are more feasible than centralised ones on all fronts - economic, social, planning, administrative, technology and environment - provided their limited shortcomings are kept in check.
8. A system which is 'collectively planned' by community institutions and the DJB, 'managed singularly' by the community and 'monitored' by both Residents Welfare Associations and the DJB, will increase accountability and responsibility of the community, and also better the ties between DJB and the people by way of an increased community involvement and transparency in operations.

POLICY RECOMMENDATIONS

1. Generating community awareness through increased involvement and transparency is important to deal with the lack of institutional trust in the DJB, and to build a sense of accountability among the people. This can be achieved through:
 - a. Real time communication of sewage quantity, and quality of input and output from all the existing Sewage Treatment Plants (STP). Restrictions on public visits to STPs should be removed. Records of maintenance and utilisation of sludge produced should be publicly available.
 - b. College and school visits to the STPs should be encouraged to counter any misgivings regarding the use of reclaimed water.
 - c. Promotion of urban horticulture and farming using sludge and treated wastewater.
2. DJB can continue to augment existing STPs in an effort to improve their operations. But for future planning, the current structures and implementation methods need to be enhanced by using a bottom-up approach instead of a top-down approach. Planning must be done with the involvement of the executive/assistant/junior engineers as well as people in the relevant catchment area, as they would have better region-specific knowledge.
3. For further planning in the un-sewered areas, especially the unauthorised colonies, local studies should be conducted to analyse population-specific needs of water supply, sewage treatment and water re-use, with the involvement of the local head.
4. On the basis of these local plans, a decision can be taken regarding the choice between laying sewer lines and connecting the area's sewage to the nearest STP or developing a local system of treatment for that particular area, depending on what is more economically feasible
5. Decentralised wastewater treatment systems should be 'collectively planned' by community institutions and the DJB, 'managed singularly' by the community and 'monitored' by both RWAs and the DJB (because pilot studies suggest that communities can't be given the 'sole monitoring' responsibility). The added responsibility and accompanying power given to the local authority like RWA, will improve accountability because they have the highest stake in treating the area's sewage. In addition, there will also be economic savings as per the Central Pollution Control Board (CPCB) model discussed in the study. Treated water can also be re-used within the locality, for purposes other than drinking and bathing. However, in adopting this system, attention must be paid to the administrative capability for continued monitoring and timely addressing of technical glitches.
6. Gathering comprehensive and region-specific demographic and water-use data, using citizen organisations like RWAs etc., will also help in preparation of sewage treatment plants locally. Such a step will reveal realistic numbers and data, thus preventing skewed projections.
7. The Faecal Sludge and Septage Management (FSSM) policy, announced by the Union Government in February 2017 is an appropriate way ahead for local sewage management. The policy covers all projects of the Central government and enjoins state governments, local urban bodies and private facilities to ensure that the provisions of the policy are implemented for onsite sanitation services. A similar policy, integrating the setting up of decentralised systems for a local area and an on-site system for specific purposes (like toilet complexes in these areas), could be the way ahead for Delhi.