The State of India's Pollution Control Boards

Are they in the green?

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1. INTRODUCTION

The Indo-Gangetic plain (IGP) in India is one of the most polluted regions in the world. A densely populated region, with a large number of sources emitting a range of pollutants, regulating air pollution here is an extremely difficult and complex task. Several measures are afoot to improve air quality in this region, and the State Pollution Control Boards and Pollution Control Committees (SPCBs/PCCs) are playing a key role. However, these frontline agencies in pollution regulation are faced with several institutional constraints and challenges in discharging their mandate effectively.

In a recently published working paper series, we explored some of the key institutional issues faced by Boards through three papers:

1. **"Who has a seat at the table?"**[1] – Examines the composition of the Boards and their ability to engage in policy-making and take decisions in furtherance of statutory goals;
2. **"Who is at the helm?"**[2] – Analyses the qualifications of the Boards' leadership and whether they are well-placed to guide the Boards' functioning; and
3. **"Who is in the field?"**[3] – Evaluates the adequacy of the Board's capacity – particularly technical capacity – to perform critical functions like consent granting, inspection, monitoring, and enforcement.

In the fourth paper of this series, we train our lens on the fiscal health of the 10 SPCBs/PCC located in the IGP. Poor fiscal health is often cited as an antecedent cause of the various institutional challenges of the SPCBs/PCC discussed in the three previous working papers. Whether it be the inability to fill the huge number of vacancies especially in technical roles, investing in necessary infrastructure, or implementing modern pollution monitoring or control mechanisms, the lack of adequate financial resources is cited by officials as a key stumbling block. We believe the resultant failure in effectively meeting their statutory mandate is directly linked to the fiscal health of these institutions, a relatively understudied aspect of SPCB/PCC functioning.

Based on information collected from state governments and pollution control boards through applications filed under the Right to Information Act, 2005 (RTI Act), and from various government websites, along with information and views shared by senior Board officials during interviews, this paper describes the means through which SPCBs/PCCs collect revenue and analyses their approach to expenditure and investment. It also analyses the extent of financial support provided to these SPCBs/PCCs by the Central and state governments, and how that then affects their financial decision-making. The analyses reveal the following key takeaways:

- **Most Boards are turning a surplus every year:** A majority of the Boards we examined turned a surplus for each of the 3 years for which we reviewed their finances, with many struggling to spend the entirety of the amount they collect through fees and other sources.
- **Surplus funds are directed to investments:** The substantial surplus generated each year by SPCBs/PCCs are directed toward short and medium-term fixed deposits rather than investments in manpower, infrastructure and equipment. Overall, we conservatively estimate that Rs. 2893 crores are invested in fixed deposits by the 10 SPCBs/PCCs as of 31 March 2021. The interest earned from these investments plays a significant role in the fiscal health of the SPCBs.
- **SPCBs do not receive financial support from the Government:** For all but two states, there was no financial support provided by state governments to their respective SPCBs/PCCs. Central Government funding is sparse, and is tied funding linked to existing centrally sponsored schemes.

- **Conservative expenditure stems from unreliable government funding:** The lack of consistent untied funding from the government leads to Boards depending on funds raised independently through consent fees and accruing interest from investments. This creates additional concerns as the majority of Board staff then tend to focus only on revenue generating consent management functions.
- **Expenditure skewed in favour of staff pay and away from infrastructure and research:** Pay and allowances for staff comprise over half of SPCB/PCC expenditure, with some skewing upwards of 80%. Despite the poor state of infrastructure in many States, spending on new infrastructure including lab facilities is low, with some exceptions. Spending on research, development and studies comprise a tiny fraction of overall expenditure across the board.

Our analyses also raise the following overarching questions with respect to the functioning of SPCBs that bear consideration.

- **SPCBs lack absorptive capacity:** Low median fund utilisation across the SPCBs indicate a lack of fiscal expertise within these institutions to accurately predict income and expenditure on an annual basis. This is mirrored even in programs where there are clearly laid out guidelines on expenditure such as the NCAP.
- **Board member engagement on finances is insufficient:** Strengthening the fiscal functioning of the Boards will require greater engagement from Board members on financial matters. However, as we have seen from the first working paper of this series, there is minimal focus on substantive issues such as finance in Board meetings.
- **Reliance on consent fees and third-party inspections surface the principal-agent problem in regulation:** The overreliance on consent fees as an income source coupled with the lack of internal technical capacity means many Boards outsource regulatory functions such as inspections to third-parties paid for by Industry. This raises questions around conflict of interest and the ability of the SPCBs to effectively regulate.
- **Income sources, financial and functional autonomy:** In the absence of regular funding either from the Central or State governments, income gained from investments play a key role in keeping SPCBs in the green every year. In our analysis, we find that without the interest income, 6 out of the 10 States studied would turn a loss for at least one of the three years. This reliance on interest income constrains the ability of the Boards to allocate funds towards anything besides routine expenditure.

2. BACKGROUND AND RATIONALE FOR THIS WORK

When examining the past literature on the financial state of India's SPCBs, two contradictory narratives emerge. At the outset, financial constraints i.e., lack of financial resources have been cited as an obstacle towards SPCBs effectively delivering on their mandate. A 2009 report by the Centre for Science and Environment claimed that SPCBs would require far greater financial resources to reduce environmental pollution in the country. The report recommended that Boards increase the water cess and consent fee amounts charged by them to industries to raise the necessary revenue.[4] A more recent study conducted by the Centre for Chronic Disease Control in 2020 cited financial constraints as one of the barriers to achieving the National Ambient Air Quality Standards in India. As per the report, "Interviewees cited the chronic lack of funding as a major challenge in carrying out their day-to-day responsibilities, and as a significant hindrance in onboarding trained personnel". Moreover, the study also explains how meagre financial packages for employees and inadequate allocations to onboard new personnel at SPCBs were a major hindrance in retaining existing staff and hiring additional manpower.[5]

While challenges remain with respect to allocations for manpower, the same does not appear to be true with respect to programmatic expenditure. A 2017 news article covers the case of the Maharashtra SPCB, where the funds "given to it to reduce air, water and noise pollution" were being under-utilised, while the environmental indicators in the state continued to deteriorate.[6] In other cases, even if the Boards were able to spend funds, the purposes for which the funds were spent appeared incongruous with the extent and nature of the work needed. A CAG report from 2016 that reviewed environmental degradation in Assam detailed the disproportionate spending on non-technical staff which led to the Board being unable to fulfil its core mandate of industrial inspection and scientific research.[7] A CPCB performance audit conducted in 2019 affirmed that most SPCBs/PCCs "do not have any kind of financial constraints and the budget utilisation is mostly for non-plan activities". In this case, non-plan activities were activities carried out by the Boards as part of their routine functioning, as opposed to activities like strengthening of laboratories, which the report recommends need to be taken up as a priority.[8]

In order to reconcile these two narratives of paucity of funding and ineffectual expenditure, there is a need to assess the actual state of financial resources of the SPCBs/PCCs, their sources of funding, and to identify trends in their utilisation. In this paper we breakdown the sources of revenue and the expenditure by the Boards. We analyse this data to understand the financial status of the Boards, compute the rate of fund utilisation and estimate the amount of funds set aside by the Boards in the form of investments. To our knowledge, this is the first comprehensive assessment of how SPCBs generate and spend funds that goes beyond simple metrics of utilisation proportions commonly found in performance audits. Our analysis also raises a number of big picture questions on the current and future financial status of SPCBs, their absorptive capacity, the boards' involvement in financial management, and requirements of an evolving regulatory environment. As our frontline environmental regulators, any goals we set for improvements in air quality rest squarely on the capacity and capability of the SPCBs to execute on complex, intersectoral action plans undergirded by adequate finances that are effectively utilised.

3. METHODOLOGY

Information on the finances of nine SPCBs and one PCC situated in the IGP were sought through applications filed under the Right to Information Act, 2005 (RTI) in March-April 2022. Through the applications we requested information on the revenue and expenditure of the Boards for three financial years: 2018-19, 2019-20 and 2020-21. The RTI applications suggested a template for the public authority to provide information.[a] However, we received information in different formats. To allow comparison and analysis, the data was categorised using a standardised template. The categories in the template were created based on the reporting structures of finances used in the annual reports of the Boards. They align with the main sources of revenue and the primary functions of the Boards. The information received through RTI responses was corroborated with Annual Reports of the SPCB/PCCs where possible. All SPCBs are mandated to prepare their annual reports as per the Air Act[b] and make them publicly available as per the RTI Act.[c] Of the 30 annual reports that should have been published by the 10 Boards over the study period of three financial years, only 11 annual reports were accessible on their official websites.

We also spoke to 20 current and former senior leadership and staff of the CPCB and SPCBs (Chairpersons, Member Secretaries, Environmental Engineers, Legal Officers and Accounts Officers) across the IGP states. Interviewee responses were anonymised, and States were coded to ensure participant confidentiality. These data

[a] A copy of the standardised template with the line items that fall under each category can be found in Section 1 of the Annexure.

[b] The Air (Prevention and Control of Pollution) Act, 1981 ('Air Act'), sec 35(2)

[c] Right to Information Act, 2005, section 4(b)(xi)

were supplemented by a review of previously published research and reports on SPCB functioning, responses to parliamentary questions and data that are publicly available on various government websites.

4. HOW DO SPCBs GENERATE REVENUE?

In our RTIs filed with each of the 10 SPCBs/PCC, we followed the format for budgetary reporting used by the specific SPCB/PCC in their annual reports. Where such formats were unavailable, we generated a reporting format to be filled in by the SPCB/PCC. To maintain consistency and cross-state comparability in our analyses, we consolidated the revenues generated by the SPCBs/PCC into the following six categories:

1. Fees from No Objection Certificates (NOC), Consent to Operate, and Consent to Establish
2. Grant-in-aid from CPCB and other Central Government bodies
3. Grant-in-aid from State Government
4. Interest received
5. Cess reimbursement
6. Other receipts

Figure 1 below captures the break-up of revenue across 10 SPCBs/PCC over each of the three years of our study, and figure 2 breaks down the proportion that each source of income contributed to the overall revenue of each SPCB/PCC over the three years.

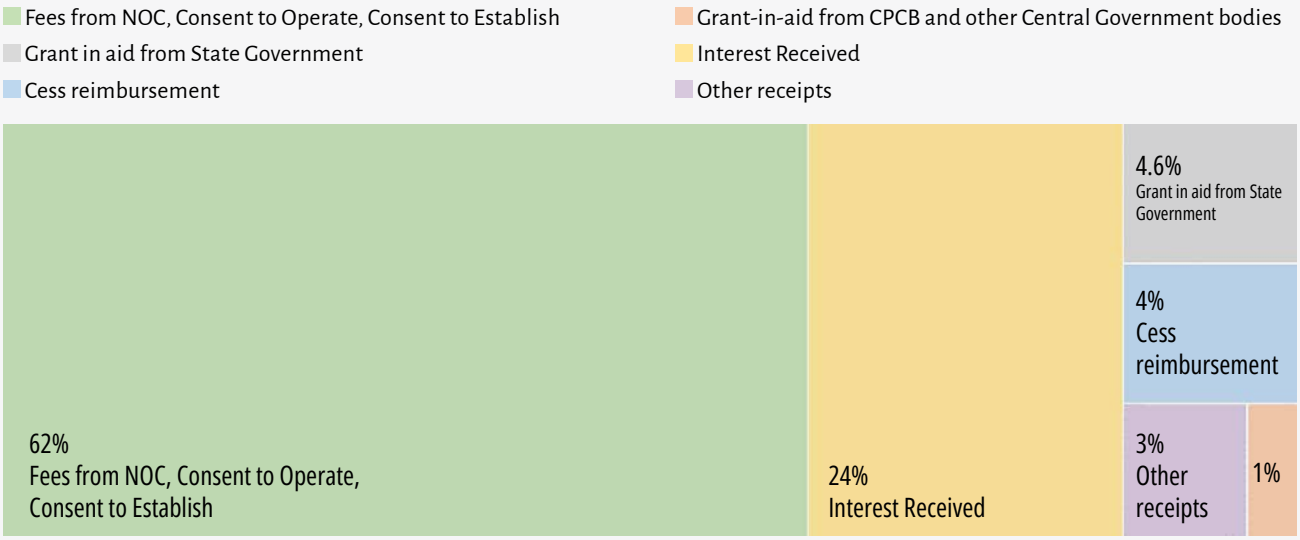

Figure 1A: Contribution of Revenue Sources aggregated across 9 SPCBs & DPCC in 2018-19

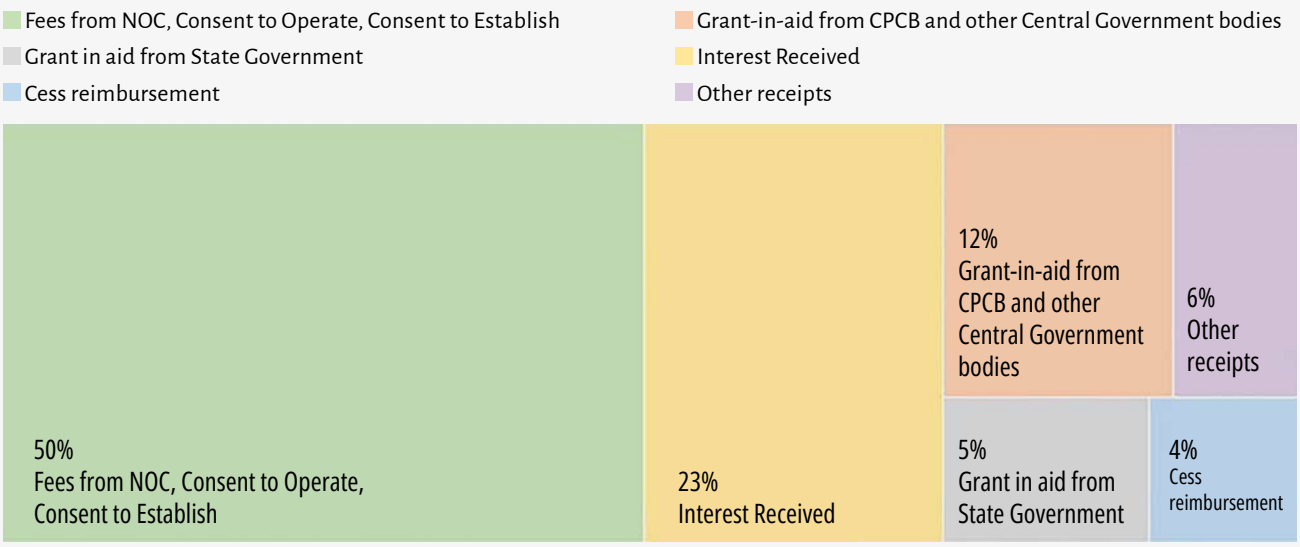

Figure 1B: Contribution of Revenue Sources aggregated across 9 SPCBs & DPCC in 2019-20

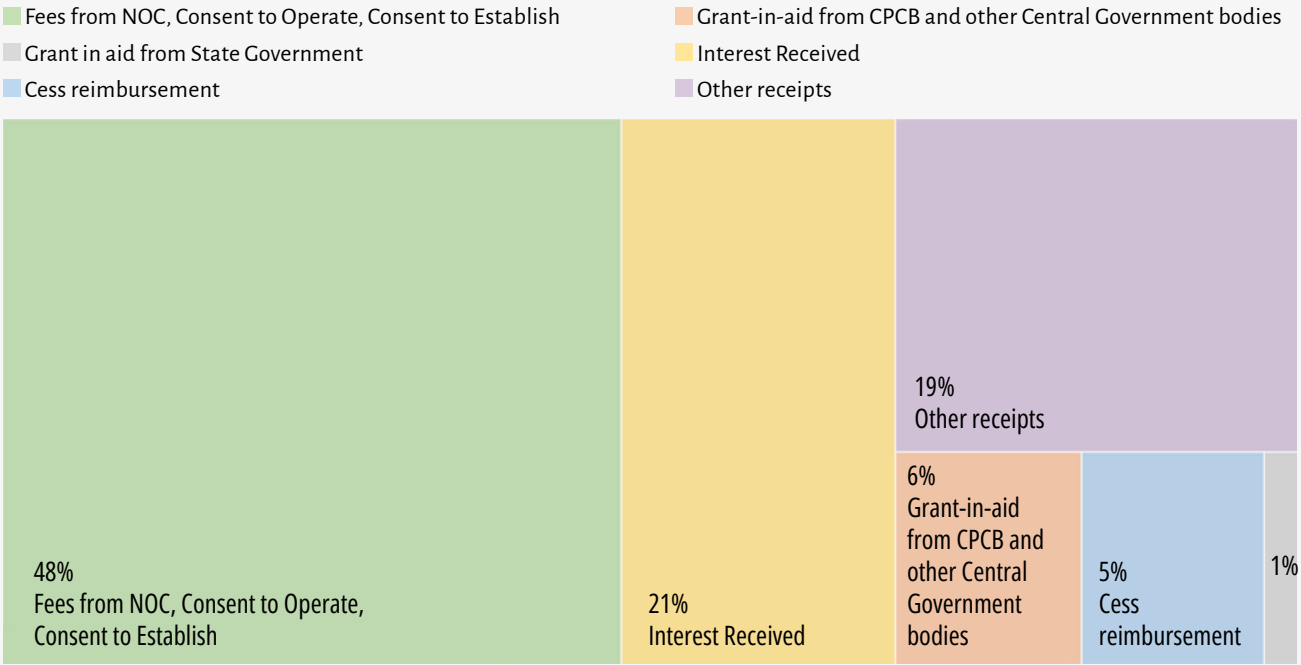

Figure 1C: Contribution of Revenue Sources aggregated across 9 SPCBs & DPCC in 2020-21

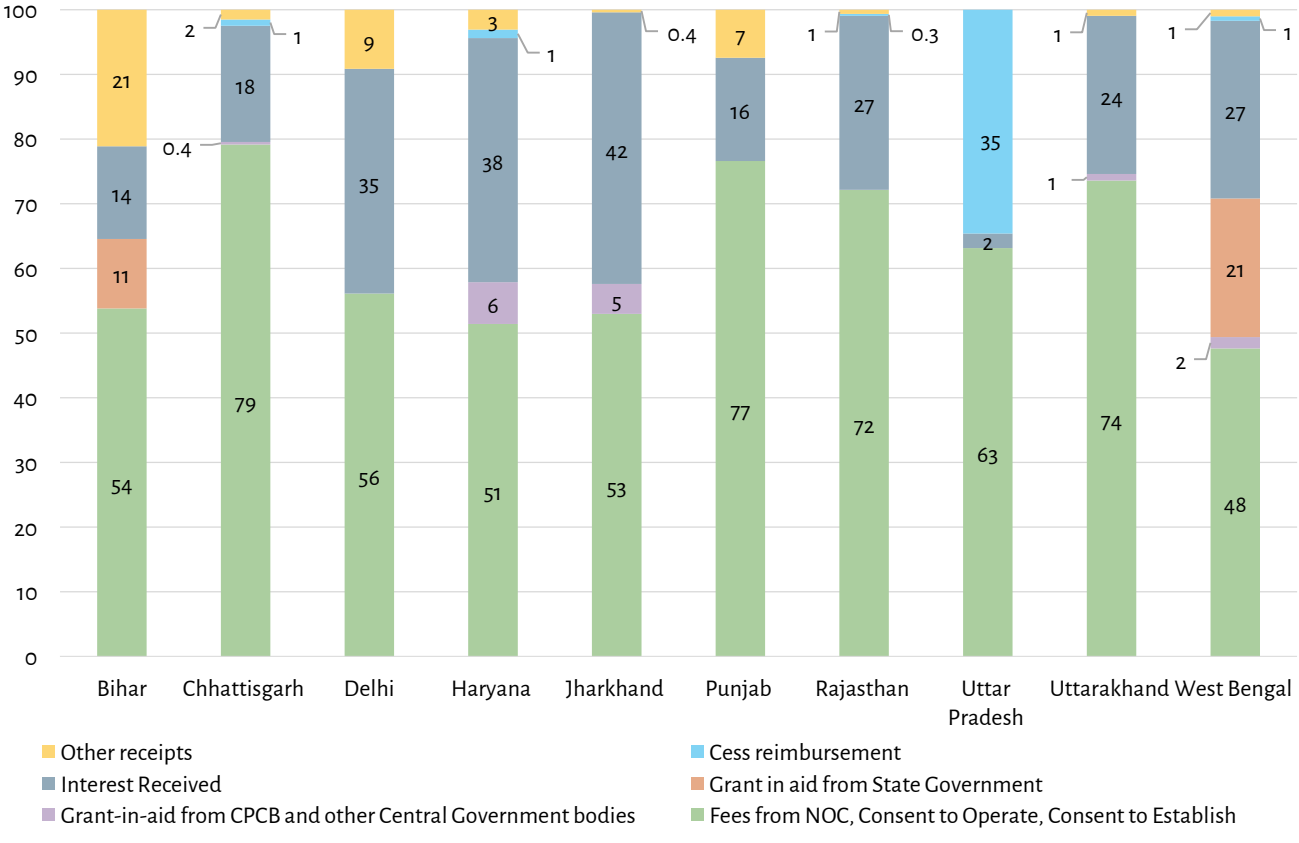

Figure 2A: Contribution of Revenue Sources aggregated across 9 SPCBs & DPCC in 2020-21

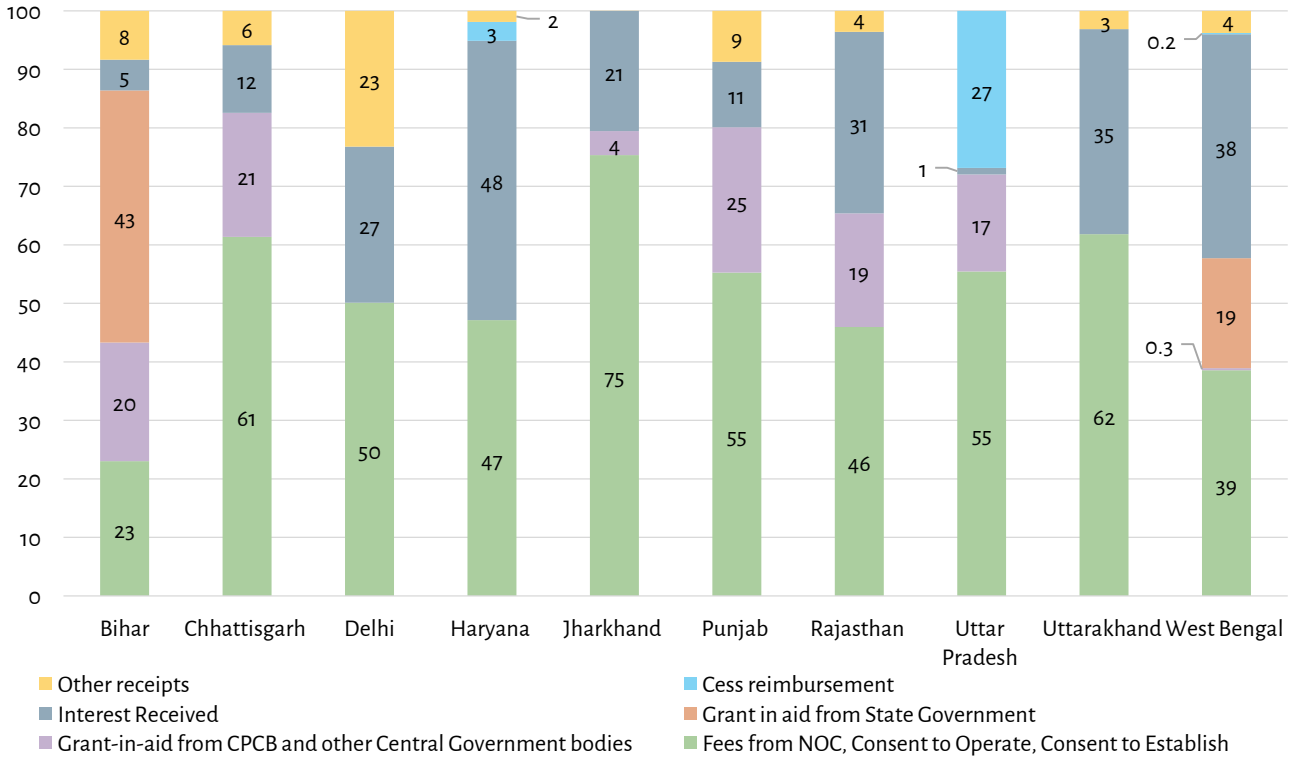

Figure 2B: Percentage Contribution of Revenue Sources of 9 SPCBs and DPCC in 2019-20

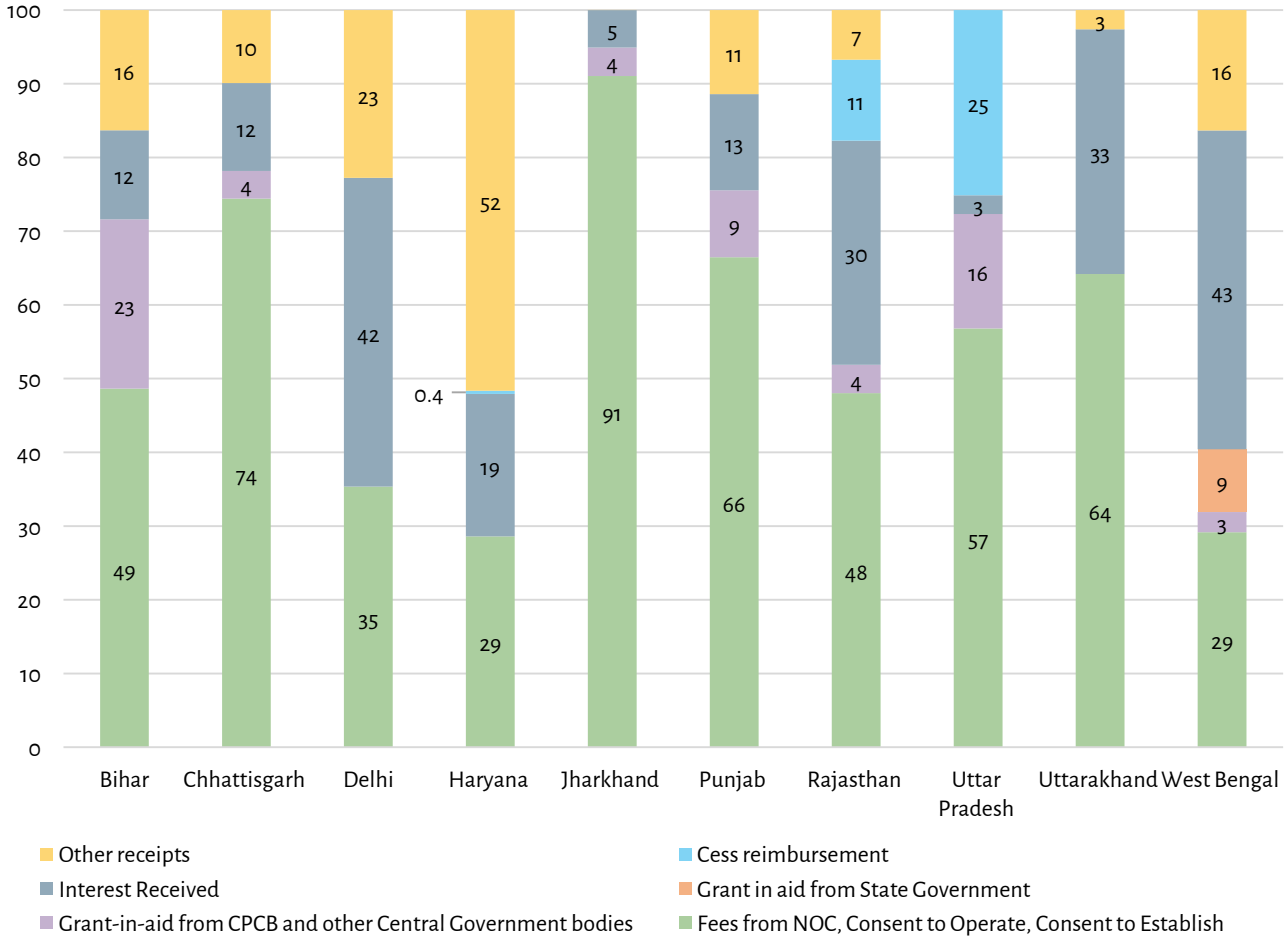

Figure 2C: Percentage Contribution of Revenue Sources of 9 SPCBs and DPCC in 2019-20

4.1. Fees from No Objection Certificates (NOC), Consent to Operate, and Consent to Establish

Consent fees act as the single direct revenue source for the SPCBs. This category includes the fees collected from regulated industrial units for the grant of consent to operate, consent to establish, licence fees and authorization primarily under the Water Act,[d] the Air Act and the Hazardous Waste Management Rules.[e] For the purpose of this paper, revenue items such as Licence fees, Battery fees, E-waste fee and Bio-medical authorisation were also clubbed under this category.

Consent fees are consistently the largest source of revenue for all SPCBs/PCC. Six out of ten states received the largest proportion of revenue from this source in all three years of the study, while three states received the largest proportion of revenue from this source in two years of the study. Six out of ten states reported consent fees as constituting more than 50% of their revenue for at least two out of the three financial years.

The fee amount is usually determined by each state. A comparison of consent fees charged by the Boards of the Indo-Gangetic plain reveals that the consent fees charged to the same industry can range from Rs. 1000 to Rs.

[d] The Water (Prevention and Control of Pollution) Act, 1974 ('Water Act')

[e] The Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016

15000 depending on which state it is being established in.[f] The application fees for relatively recent regulations such as the Hazardous Waste Management Rules, the Bio-medical Waste Management Rules and Solid Waste Management Rules, the Construction and Demolition Waste Rules and the E-Waste (Management) Rules have emerged as additional revenue sources.[g] The Chairperson of State 1 in our interviews noted that consent fees are crucial sources of revenue, because, in the context of limited to no funding from the state governments, the salaries of the Board need to be generated through the same. The Member Secretary of State 2 concurred, "We rely on consent fees and EC. We don't even receive 5% from the state government".

4.2. Grant-in-aid from CPCB and other Central Government bodies

Funds that have been transferred to SPCBs/PCC by the CPCB, the MoEF&CC or other Central Government bodies under a centrally sponsored scheme (CSS) for environmental conservation and pollution control have been considered under this category. This includes programmes such as the National Air Monitoring Programme and the National Water Monitoring Programme, and schemes such as Namami Gange.

While the grant-in-aid amount that the CPCB received from the MoEF&CC every year was fixed through the three study years at Rs. 100 Crores, the amount that was sent to the State Boards by the CPCB as grant-in-aid varied for every study year.[9–11] This is because the CPCB does not send funds to each SPCB and PCC every year. All states in our study received funding from the CPCB and other Central Government agencies in at least one of the study years, with the exception of Delhi PCC, which did not receive any funds from this source in the three study years. 2 out of 10 states - Bihar and Uttar Pradesh - received more than 10% of their funding from the CPCB and other Central agencies, in at least 2 of the financial years under study.

The Boards also directly receive funds from other Central Government bodies such as the MoEF&CC if they are part of a CSS. While the funds from a CSS are provided solely by the Central Government, the grant-in-aid from the Central Government can be augmented by grants-in-aid from a state government.[12]

4.3. Grant-in-aid from State Government

In this category we consider funds that have been transferred to SPCBs/PCC by their respective state governments. Only two states - Bihar and West Bengal - received grants-in-aid from their respective state governments during any year of the study period. While Bihar received over 43% of its receipts from the state government in 2019-20, it did not receive any funds in the subsequent year. West Bengal received 21% of its receipts from the state government in 2018-19, which steadily declined to 8% in 2020-21. Explaining the lack of consistent funding from the state government, the Member Secretary of State 6 referred to the pollution control boards as being "government out of the government", alluding to their position as an autonomous regulator outside the direct administrative control of the state government.

4.4. Interest received

This category covers all the interest income that the SPCBs/PCC accrue through investments in fixed deposits, savings accounts and advances. The median value of interest income as a proportion of revenue for all ten SPCBs/PCC across the three-year study period was 22.5%.[h] Five out of the ten states reported an above median share i.e., a greater

[f] Please refer to Section 2 of the Annexure for further details.

[g] The Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016, rule 6; The Bio-Medical Waste Management Rules, 2016, rule 9; Solid Waste Management Rules, 2016, rule 14; Construction and Demolition Waste Management Rules, 2016, rule 8; The E-Waste (Management) Rules, 2016, rule 13.

[h] We made use of the median since it is a measure of central tendency that is not biassed by outliers.

than 22.5% contribution of interest income to overall revenue for at least two years, of which four states received an above median share in all three study years. Delhi (in 2020-21), Haryana (in 2019-20), Jharkhand (in 2018-19) and West Bengal (in 2020-21) reported their interest income as comprising more than 40% of their revenue. On the other hand, Bihar (10.5%), Chhattisgarh (13.8%), Punjab (13.4%), and Uttar Pradesh (1.9%) reported a relatively low average proportion of interest income across the three studied financial years. The Chairperson of State 1 said, "There is a practice of investing surplus funds in short-term fixed deposits as the income generated can be used towards the activities of the Board". The Member Secretary of State 3 said that the Board resorted to saving their surplus, as they "do not have enough good ideas to implement." On being asked why investing surplus funds in FDs was standard practice, a member of the accounts department in State 6 answered "What else do we do with the money?", suggesting a lack of attention on the appropriate programmatic use of these surplus funds.

4.5. Cess reimbursement

As per section 8 of the Water Cess Act, water cess was to be collected by the SPCBs and deposited with the Central Government.[i] Eighty per cent of the amount realised and deposited by an SPCB/PCC was to be reimbursed back to it by the Central Government. The water cess was subsumed under the Goods and Services Tax (GST) compensation cess in 2017.[13] All water cess payments made to SPCBs/PCC after the implementation of GST are arrears for years preceding 2017.

Since our study begins from 2018, the contribution of water cess to the revenue of the Boards in seven states was either nil or negligible, with any cess reimbursements likely arrears from the Central Government. In the three remaining states, i.e., Haryana, Rajasthan and Uttar Pradesh, the average contribution of cess reimbursement as a proportion of revenue across the three years was 1.6%, 3.7% and 28.8%, respectively. In a CAG report of 2017, the UPPCB has been criticised for failing to realise water cess bills from municipalities and industries. Another issue pertaining to non-utilisation of water cess has been highlighted in the report which recorded a revenue loss of Rs 193.32 crores in terms of cess reimbursement for UPPCB.[14] The realisation of the unrecovered water cess could have contributed to the greater proportion of this component in UPPCB's receipts 2018 onwards.

4.6. Other receipts

Revenue from all other sources not mentioned in the previous categories are included here. Since this category of receipts clubs together all the miscellaneous receipts of the Boards, it ranges from 0 to 51% of the total revenue of the Boards. Fees for monitoring of air, water and noise is the most common component of these receipts across all Boards. Other common components include revenue from sale of application forms, environment compensation fee that is paid by industries or institutions in violation of environmental norms, and the fees for conducting public hearings.[15]

5. WHAT DO SPCBs SPEND MONEY ON?

In this section, we analyse only 9 states of the Indo-Gangetic Plain. We have excluded West Bengal PCB from the analysis as information on expenses sent in response to our RTI application was not sufficiently disaggregated to include in the analysis. The tabulation of expenses incurred by the nine Boards has been classified into eight categories:

[f] Please refer to Section 2 of the Annexure for further details.

1. Pay and allowances
2. Legal and professional charges
3. Infrastructure development
4. National Clean Air Programme implementation
5. National Air Monitoring Programme implementation
6. Research and development, reports and studies
7. Other expenditures
8. Uncategorised expenditures

Figure 3 below captures the break-up of expenses across 9 SPCBs/PCC over each of the three years of our study, and figure 4 breaks down the proportion that each source of expense contributed to the overall expenditure of each SPCB/PCC over the three years.

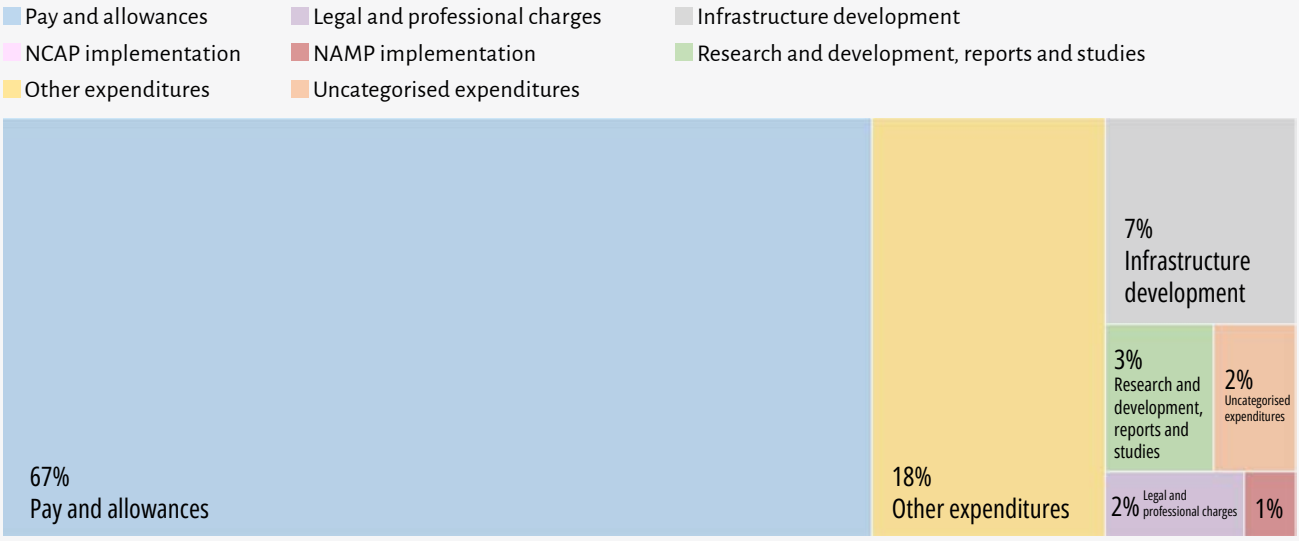

Figure 3A: Contribution of Expenditure Sources aggregated across 9 SPCBs & DPCC in 2018-19

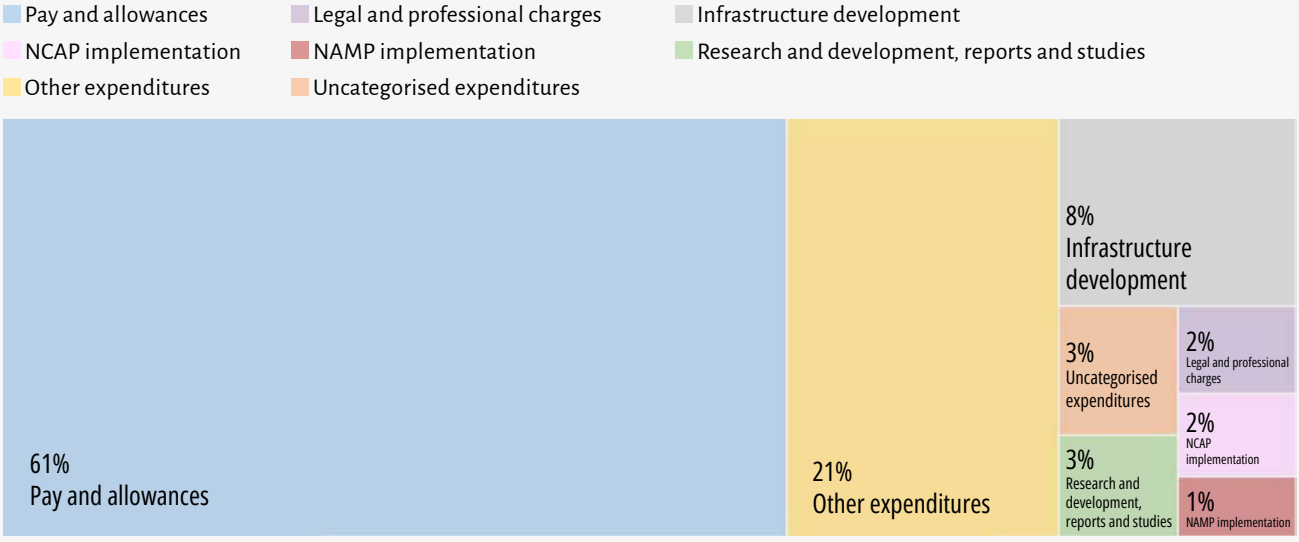

Figure 3B: Contribution of Expenditure Sources aggregated across 9 SPCBs & DPCC in 2019-20

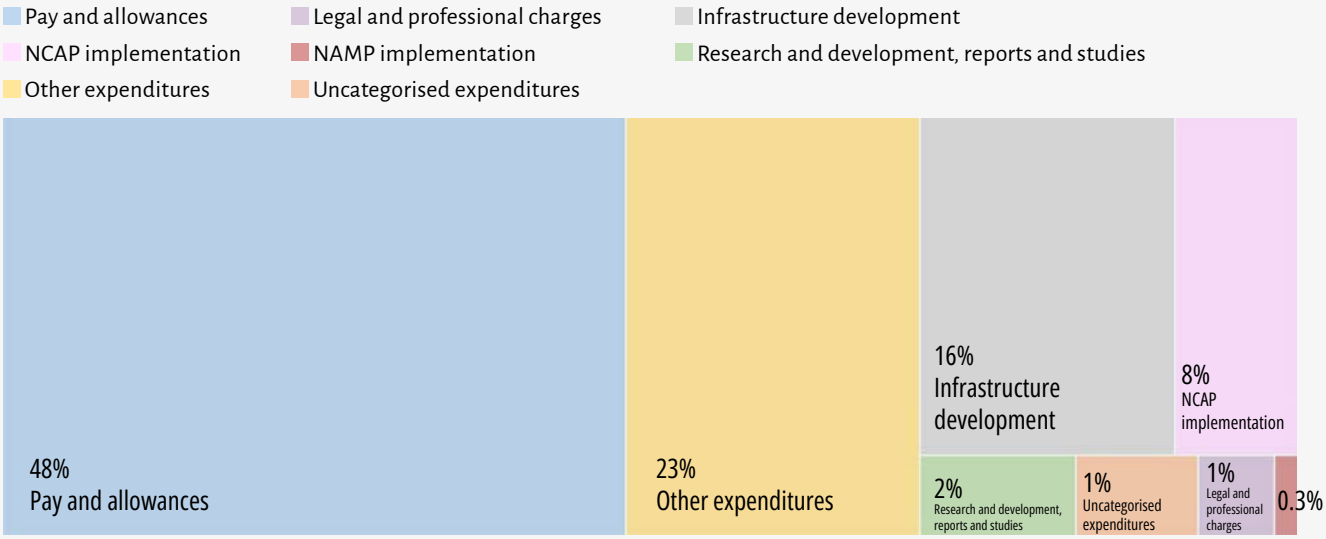

Figure 3C: Contribution of Expenditure Sources aggregated across 9 SPCBs & DPCC in 2020-21

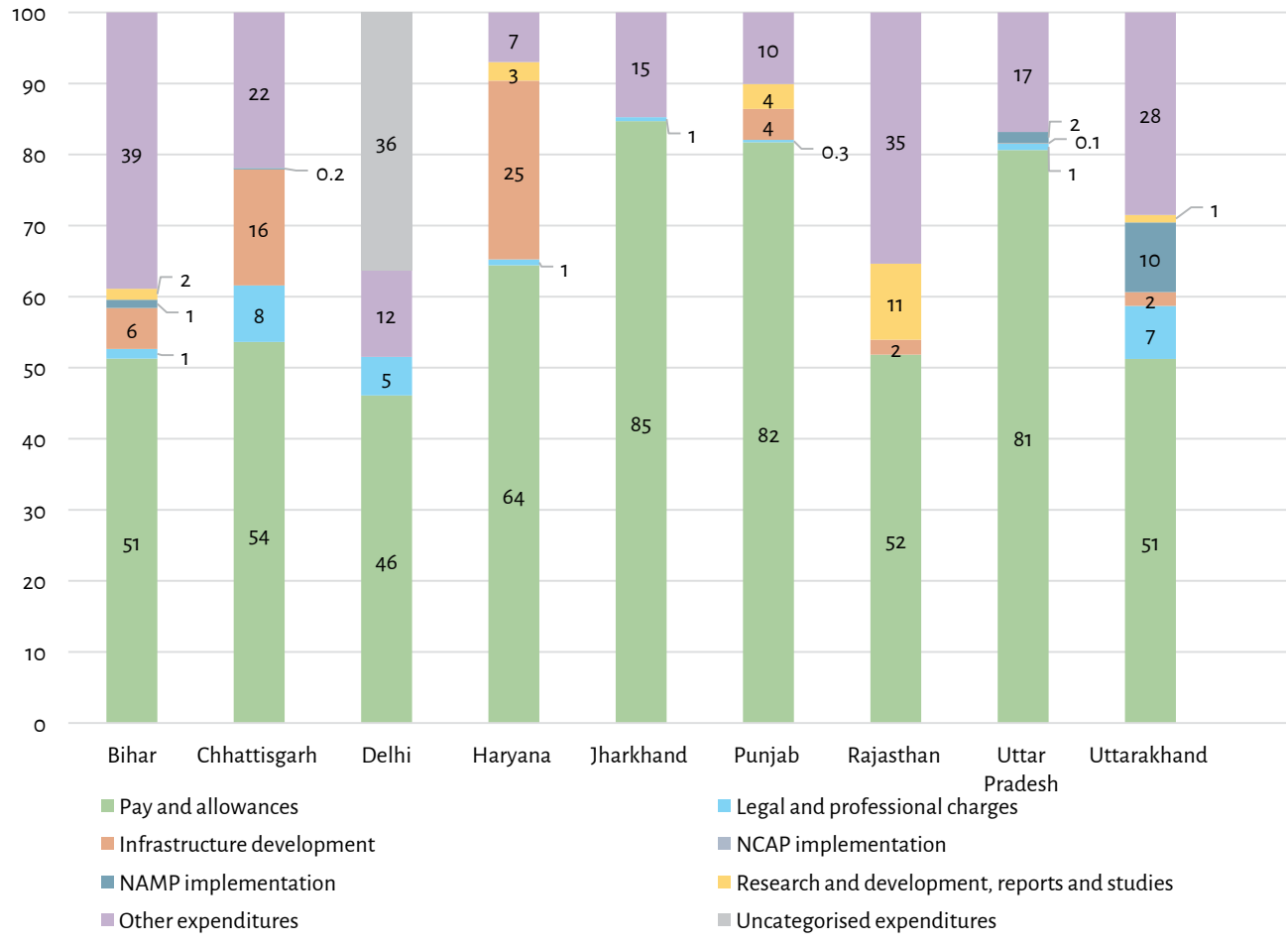

Figure 4A: Percentage Contribution of Expenditure Sources of 9 SPCBs and DPCC in 2018-19

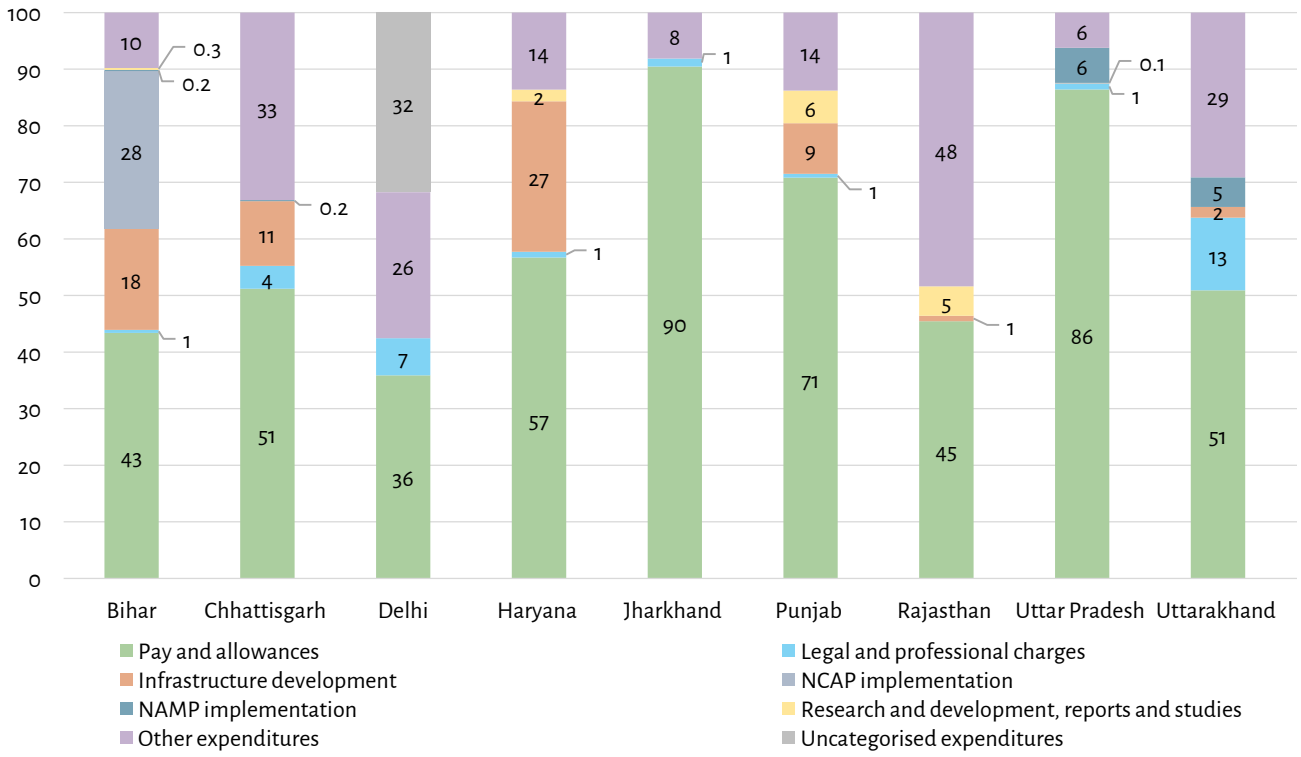

Figure 4B: Percentage Contribution of Expenditure Sources of 9 SPCBs and DPCC in 2019-20

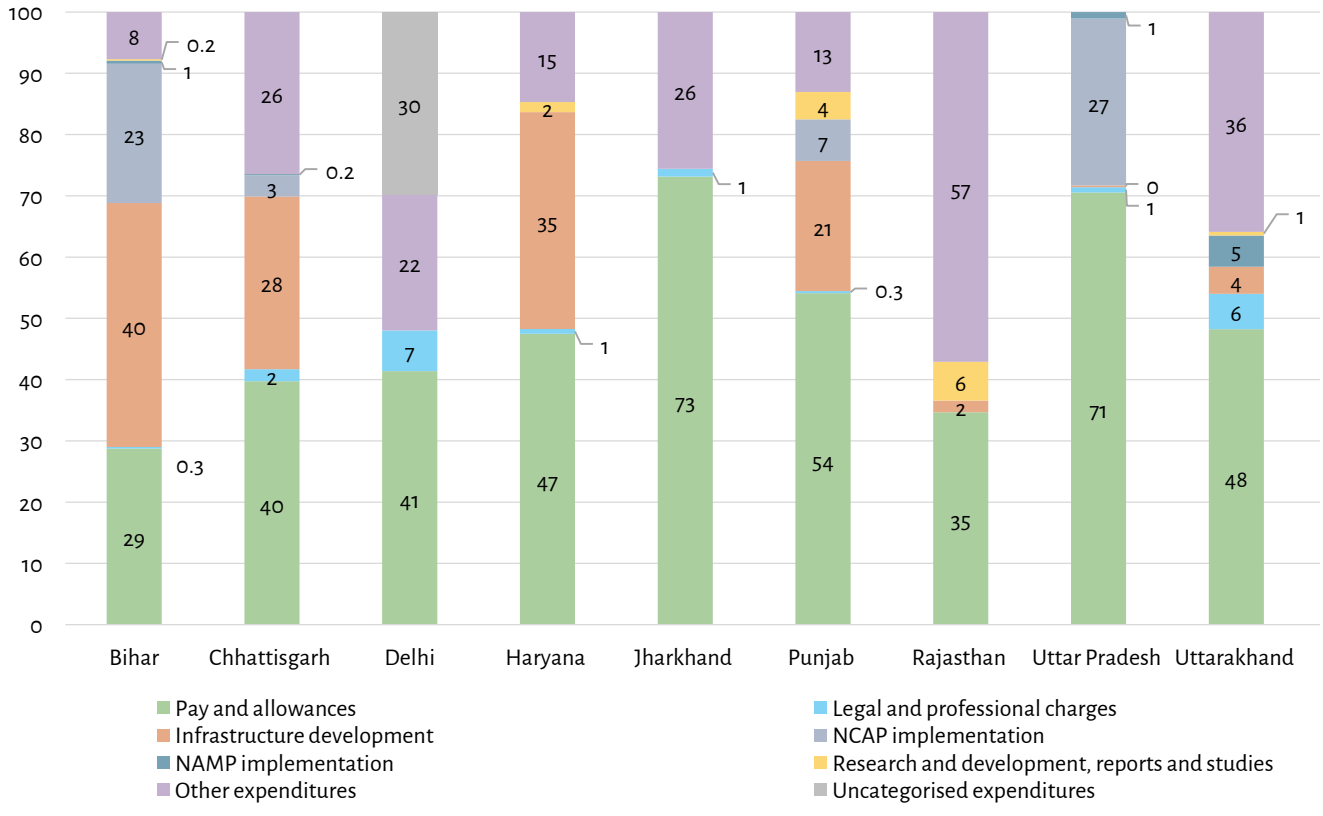

Figure 4C: Percentage Contribution of Expenditure Sources of 9 SPCBs and DPCC in 2020-21

5.1. Pay and allowances

The salaries and other monetary benefits offered to SPCB staff members such as employer's contribution to the provident fund and travel allowances have been included in this category. Pay and allowances is consistently the most substantial expenditure category across all SPCBs. The median share of pay and allowances as a proportion of total expenditure is 51%. Interestingly, we observe that the average share of this category of expenses is decreasing over the three years. This is not the trend we observe with the actual amount of funds being spent under pay and allowances, with six out of nine states actually spending more under this category in 2020-21 than in 2018-19. This is indicative of increased spending in other categories over the study period.

5.2. Legal and professional charges

Legal and professional charges include charges paid for legal services, audits and the costs paid to external consultants for analysis of air and water quality. This category constitutes less than two percent of the expenditure in six out of nine Boards in all the three years under study. Out of the remaining three Boards, only Delhi and Uttarakhand spent more than five percent of their total expenditure in this category for at least two of the three years, while Chhattisgarh spent 7%, 4% and 1.9% in the three consecutive years. Rajasthan PCB is the only SPCB to have not reported any expenses under this category.

5.3. Expenditure on infrastructure development

Expenditure on infrastructure development covers one-time capital expenditure such as construction of laboratories and office buildings, purchase of vehicles, and procurement of new equipment. Overall, we find an increasing trend in the proportion of expenditure on infrastructure development across all SPCBs over the three years of our study. Bihar and Punjab seem to have the highest increase in expenditure under this category, at 10% and 3.3% respectively. The baseline proportion of infrastructure development expenditure (i.e., the expenditure amount at the beginning of the study in FY 2018-19) seemed to be the highest in Haryana and the lowest in Uttar Pradesh (out of the SPCBs that do spend under this category). Delhi and Jharkhand were the only exceptions with no expenditure on infrastructure development in the three years. The relevance of a baseline effect with respect to infrastructure status and spending is further covered in section 6.5. below.

5.4. National Clean Air Programme implementation

Expenditure of funds allocated under the National Clean Air Programme (NCAP) to invest in activities for improvement of air quality in non-attainment cities come under this category. The NCAP was launched in January 2019, hence only covers 2 years of our study period. Five out of nine states did not make any expenditure on NCAP in the two study years during which NCAP was being implemented. One of these five Boards - Delhi - did not receive any funds until the end of 2022, while Haryana has still not received any NCAP funds.[j] Bihar had the highest proportion of expenditure on the NCAP with 28% in 2019-20 and 23% in 2020-21. Notably, Uttar Pradesh spent 27.2% of total expenditure on NCAP in 2020-21.

5.5. National Air Monitoring Programme implementation

This category covers expenditure of funds allocated under the National Air Monitoring Programme (NAMP) to enhance monitoring of ambient air quality. Five out of the nine Boards studied had zero expenditure on NAMP in all three study years. Out of the remaining four, Bihar and Chhattisgarh spent an average of less than one percent of their expenditure on NAMP while the two other Boards - Uttar Pradesh and Uttarakhand - spent a more substantial proportion of their funds on NAMP with an average expenditure of 2.95% and 6.71% respectively.

[j] As of 14 January 2023

5.6. Research and development, reports and studies

All expenditure on projects, training and studies that feed into research and development (R&D) fall under this category. Four out of nine Boards in the IGP have no R&D expenditure at all across the three years. Of the remaining five, three Boards spent less than 3% on research & development. This is concerning since research and development is a crucial component of setting and enforcing environmental standards. Of all the Boards in the IGP, Rajasthan had the highest proportion of expenditure on R&D, ranging from 5.2% in 2019-20 to 10.7% in 2018-19 (translates to expenditure of Rs. 2.8 and Rs. 5.6 Crores respectively).

5.7. Other expenditures

The category of other expenditures includes all other miscellaneous expenditure such as operational expenditure, advertising charges, organising events, etc.[k] This expense category, comprising highly heterogeneous expenses, constitutes more than twenty percent average expenditure for five out of the nine Boards over three years. While it comprised 46.2% and 32.7% of the total average expenditure of Rajasthan and Uttarakhand, it comprised 10.7% and 8.4% in Haryana and Uttar Pradesh respectively. Publicity and awareness is a common expense across many Boards under this category, while some Boards have components such as laboratory expenses and financial assistance for installation of Effluent Treatment Plants (ETPs) in this category.

5.8. Uncategorised expenditures

This category was created solely for the Delhi Pollution Control Committee (DPCC) since the sum of the expenditure line items received in the RTI response from the DPCC did not add up to the stated total expenditure amount. Hence, the sum of the expenditure proportions of the seven previously explained expenditure categories of the DPCC does not add up to 100.

6. ANALYSIS

6.1. State surpluses would deplete if interest income is excluded

In order to assess the financial health of the SPCBs/PCC, we looked into the financial balance of the 10 Boards across three financial years from 2018 to 2021. Comparing revenue and expenditure for each SPCB/PCC, we find that all SPCBs operate on surpluses each year. The only instance of a deficit is in the case of Bihar in FY 2020-21, which could be attributed to the substantial increase in expenditure on infrastructure development that year.

In order to better understand the role that investment of funds plays in maintaining the financial stability of the SPCBs, we looked at the balance of SPCBs/PCC excluding the interest income component.[l] In this scenario, we find that 6 out of 10 states would be in a deficit for at least one of the three studied years without the revenue accruing from interest income. This highlights the crucial role that invested funds - ranging from 1% to 48% of Board revenue in any study year - play in keeping the Boards afloat in the absence of a consistent source of funding.

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[k] We have excluded the expenditure under the CM Relief Fund in the financial year 2020-21 made by the Haryana Pollution Control Board, Rajasthan Pollution Control Board and Uttarakhand Pollution Control Board from our analysis. This is because this single line item under the "Other Expenditures" category was a one-off expense. Moreover, while this line item was equivalent to 1-1.7% of the total expenditure of that financial year in the case of Haryana, it was 13.6% in the case of Rajasthan and 600% in the case of Uttarakhand, proving to be a much more significant expense in the case of the latter two states. Since these amounts were outliers that were causing the expenditure proportions for that year to become skewed relative to the previous years, we excluded these one-time expenditures from the analysis.

[l] Please refer to Section 3 of the Annexure for further details.

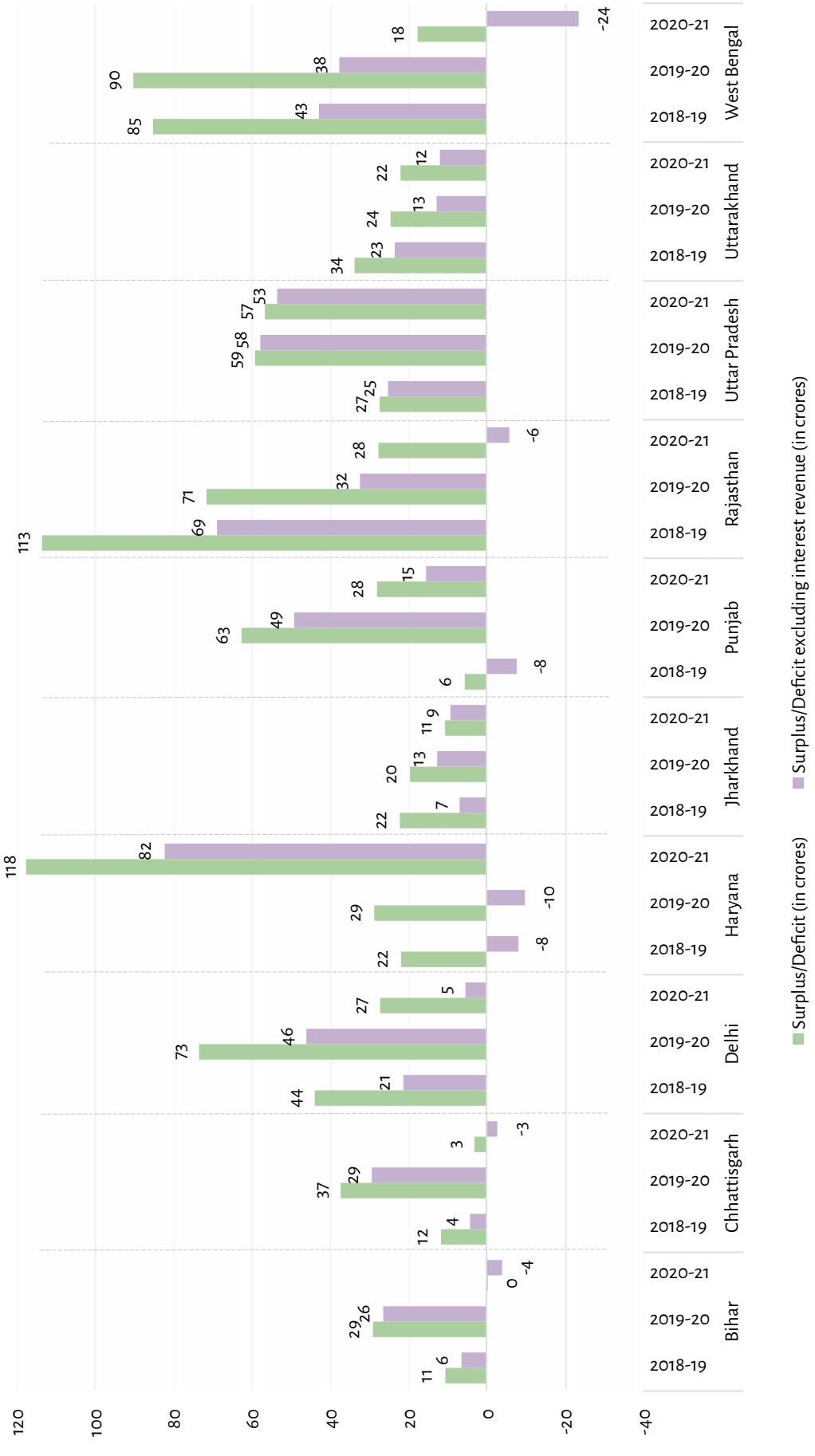

Figure 5: Balance of the Boards with and without interest income

6.2. Fund utilisation rate is low across the Board(s)

The fund utilisation rate for each state for the study period was computed. Since most of the expenditure is planned at the beginning of the financial year based on the expected revenue for that year, it is important to see what proportion of funds are actually spent by SPCBs/PCC. In order to do this, we looked at the total expenditure as a proportion of the total revenue generated in that year for each of the 10 Boards in the IGP. [m]

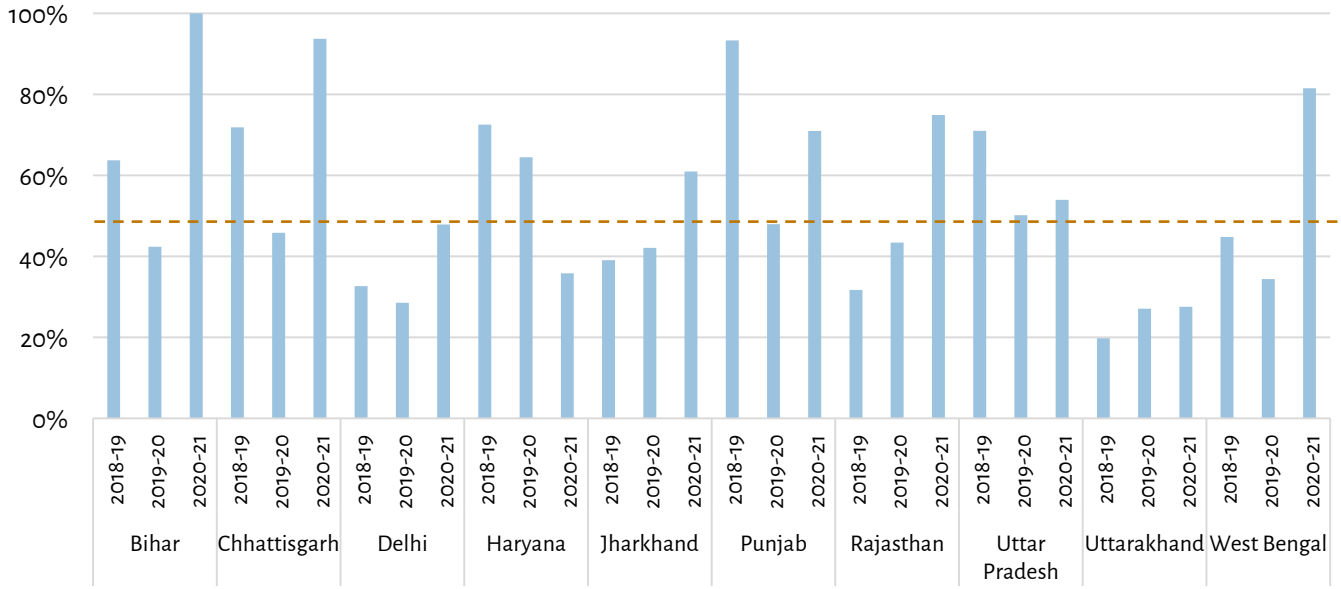

Figure 6: Fund Utilisation Rate across the Boards

We find that the median fund utilisation rate across SPCBs/PCC for the three years of our study is 48%. Out of the 10 states studied, we find that the average fund utilisation rate is the highest in Punjab at 71%, while it is the lowest in Uttarakhand at 25% across the three study years. This raises the question of why the Boards are not able to effectively spend their money, especially in light of issues such as staff shortages, inadequate infrastructure and an increasing reliance on capital intensive technologies for pollution monitoring. In an attempt to increase expenditure, the CPCB's Performance Audit of 2020 recommended that the UPPCB "make a plan for increasing its spending on mandated functions which was merely 5% of its annual budget in 2019 at the time of Audit."[8]

An analysis of twenty documents recording the minutes of the meetings of three of the Boards in our study - the Haryana SPCB, Delhi PCC and Uttarakhand PCB, provides a potential explanation.[n] Of the 31 instances of discussion on finances found, the majority of the financial discussions were about ad-hoc expenditures that had financial implications (48%). 27% of these expenditures with financial implications were approvals given "ex-post facto" i.e., approvals that had been provided after the expenditure had already been incurred. The other major component was administrative decisions around finances (32%) such as approving annual budgets and investment planning. The most infrequent financial discussions were on capital expenditure decisions (19%).[o]

[m] Please refer to Section 4 of the Annexure for further details.

[n] We were able to access information on the minutes of board meetings from only 2 SPCBs and one PCC in our study, since these were the only Boards that made their minutes of meetings publicly available.

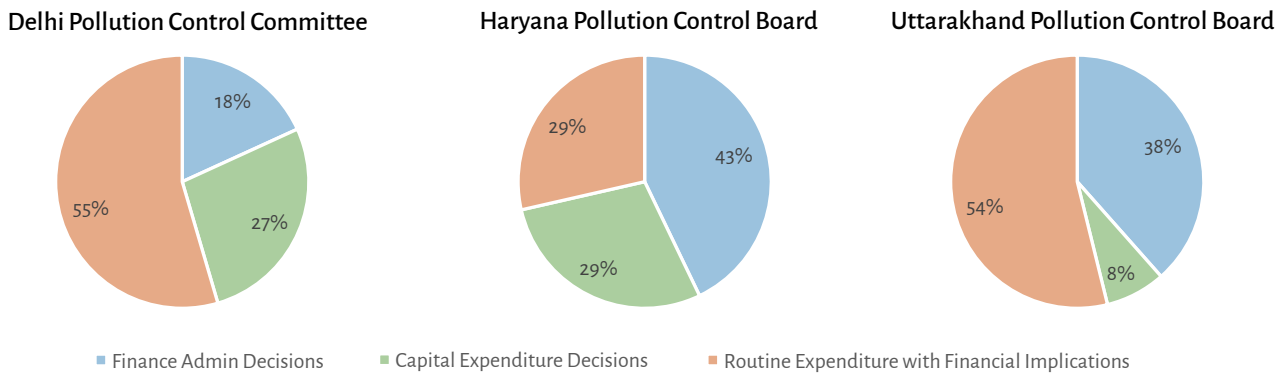

Figure 7: Analysis of Finance Discussions in Board Meeting Minutes

Analysis from the first working paper of this series '*Who has a seat at the table?*' similarly showed that the boards "play a limited role in planning programmes and action plans for the control of pollution".[1] Thus, the lack of robust financial planning and the consequent underutilisation of available resources could be an outcome of the limited attention that the primary decision makers of the Boards, i.e. the board members, give to planning of substantive interventions.[o]

The absorptive capacity of an institution plays a crucial role in determining whether it can absorb the funds and effectively utilise them to achieve its outcomes.[16] While this form of capacity is traditionally defined in terms of the ability of an institution to absorb new information, it can also be used in the context of assimilation of new resources. In the context of public finance, this capacity determines the efficiency with which an institution can effectively allocate and utilise new financial resources. In cases of international public investment, it has been observed that in the absence of adequate absorptive capacity, the recipient institution may resort to narrowing their focus of work that may not be as effective in fulfilling the institution's overall mandate.[17] Even in the context of various Indian Government schemes that have decentralised execution at different levels of administration akin to how pollution control has been structured in India, a 2018 working paper observes that "the poor capacity for planning and implementation at the lower units of the decentralised structure has been argued to result in poor budget formulation and execution of these schemes". Moreover, the paper goes on to argue that the presence of institutional shortfalls such as lack of planning and manpower exacerbate the issue of ineffective resource allocation.[18] This illustrates how mere allocation of funds towards control of pollution is not enough, there is a need to equip the institutions - in this case SPCBs - entrusted with these funds, to have the capacity (administrative, financial, and technical) to utilise them effectively.

6.3. NCAP fund utilisation is reflective of overall fund utilisation

Apart from the overall fund utilisation of the Boards, we delved deeper into the utilisation of funds allotted to states under a key pollution control scheme - the National Clean Air Programme (NCAP). The programme was launched in 2019, as a part of which funds were allocated to the SPCBs/PCCs for the purpose of enhancing monitoring and abating air pollution in the 131 non-attainment cities across India. We looked into the city-wise allocations under the NCAP and compared them with the reported expenditure under NCAP from 2019 to 2022.[19] Since the programme started in 2019, one year after our study period begins, we decided to include FY 2021-22 in this case to be able to cover a three-year period. The analysis could only cover eight out of the ten SPCB/PCCs.[p] This is because despite having a non-attainment city, NCAP funds have not been disbursed to Haryana yet and in the case of Delhi, the funds were disbursed late in FY 2021-22, so there has not been sufficient time for the DPCC to spend the funds.[20]

[o] Please refer to Section 5 of the Annexure for further details.

[p] Please refer to Section 6 of the Annexure for further details.

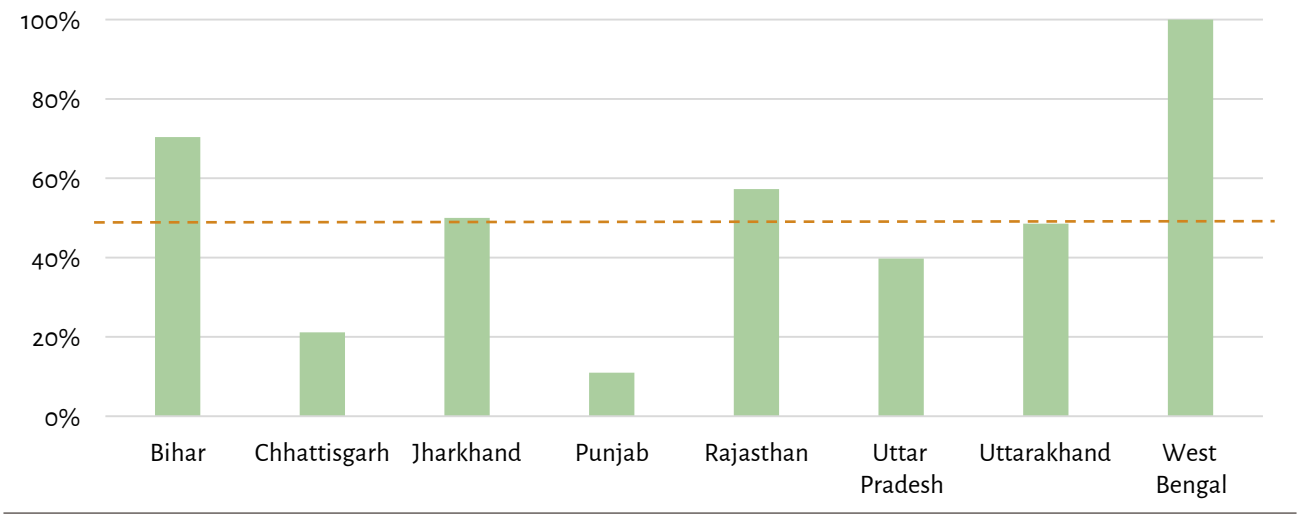

Figure 8: NCAP Fund Utilisation Rate

The rationale for this comparison between utilisation rates between revenues generated by the SPCBs themselves, and funds that were allocated to them under NCAP was that since NCAP funds have clear guidelines on what and by when they must be spent, there is a lower likelihood of delays due to administrative indecision. Interestingly, we see that the median fund utilisation rate under NCAP from 2019-22 is 49%, which is similar to the overall SPCB fund utilisation of 48% between 2018-21. This is in line with the trend of overall NCAP fund utilisation across other states in India. A progress report on NCAP by Centre for Research on Energy and Clean Air states "Since the notification of the National Clean Air Programme (till December 2022), a total of Rs 652.61 crores have been released as critical gap funding, out of which only Rs 301.69 crores were utilised, showing less than 50% utilisation".[21] More recently, it was also reported that the Maharashtra SPCB had spent only a third of the NCAP funds allocated to it.[22]

6.4. Estimating the amount set aside in investments

The finding of interest income playing such a significant role in the finances of the Boards raises the question of the quantity of funds invested by the Boards. We estimated the amount of money invested by each Board by using the data received through our RTI responses on the interest income accrued by each Board in each year. Along with this, a standard interest rate for each financial year in our study was used, based on which the approximate principal amount invested was calculated.[q] It is important to note that these estimates are indicative and not completely accurate.

TABLE 1: Estimated Principal Amount Invested by SPCBs/PCC (in lakhs of rupees)

State	Year	Interest Amount	Estimated Principal Amount
Bihar	2018-19	414.66	6171
	2019-20	264.26	3974
	2020-21	367.36	6312
Chhattisgarh	2018-19	740.98	11026
	2019-20	793.83	11937
	2020-21	583.39	10024

[q] We use the monthly group wise Weighted Average Domestic Term Deposit Rates (WADTDR) for public sector banks published by the RBI. For further details, refer to Section 7 of the Annexure. Source: https://rbidocs.rbi.org.in/rdocs/content/docs/PR139E30042021_ML.xlsx

State	Year	Interest Amount	Estimated Principal Amount
Delhi	2018-19	2263.73	33686
	2019-20	2737.18	41161
	2020-21	2181.3	37479
Haryana	2018-19	2994.81	44566
	2019-20	3846.66	57845
	2020-21	3537.55	60783
Jharkhand	2018-19	1524.52	22686
	2019-20	692.79	10418
	2020-21	137.1	2356
Punjab	2018-19	1325.45	19724
	2019-20	1343.13	20197
	2020-21	1254.15	21549
Rajasthan	2018-19	4468.07	66489
	2019-20	3918.08	58918
	2020-21	3342.74	57435
Uttar Pradesh	2018-19	213.21	3173
	2019-20	133	**2000**
	2020-21	314	5395
Uttarakhand	2018-19	1026.48	15275
	2019-20	1176.46	17691
	2020-21	1005.45	17276
West Bengal	2018-19	4235.82	63033
	2019-20	5256.75	**79049**
	2020-21	4115.33	70710

We find that there is no consistent trend in the estimated invested amounts across the years or the Boards in the study. The highest estimated principal amount is by the West Bengal PCB, where we estimate that the WBPCB has invested approximately Rs. 790.5 crores in FY 2019-20, while the lowest estimate is for the UPPCB, at Rs. 20 crores in FY 2019-20 as well. We corroborated our estimates with the stated principal amount in the Report of the Performance Audit of SPCBs/PCCs for the financial year 2018-19.[8] The report contains the stated principal amount invested for all of the states in our sample, except the union territory of Delhi. For 7 out of the 9 Boards, the estimated invested amounts were lower than the stated principal amount values. Moreover, the average percentage difference of the estimates from the actuals (when excluding outliers) is -6%, reinforcing that our estimates are conservative.[r]

[r] Please refer to Section 7 of the Annexure for further details.

While setting aside a proportion of their revenue in the form of investments (mostly in fixed deposits), the Boards try to maintain a balance between accruing higher returns and securing liquidity. The Accounts Officer of State 1 explained that the tenure of the fixed deposits is usually 1-2 years, so that "money is not blocked for a long period of time". Moreover, the Accounts Officer of State 6 explained that the Boards seek to maximise returns from investments by opting for fixed deposits with the highest interest rates within a pool of public and private banks that are empanelled by the SPCB. The meeting minutes from the HSPCB board meeting held in February 2020 highlight this very trade off by acknowledging that even though a specific bank offered the highest rate of interest at the time, the Board decided against investing in the bank due to a recent decline in the value of their shares.[s]

6.5. Expenditure on infrastructure development is incongruent with the state of infrastructure

In an attempt to understand the trend of increasing expenditure on infrastructure development across all Boards in our study, we conducted a review of the state of infrastructure in the Boards with the lowest proportion of expenditure on infrastructure development, namely - Delhi PCC, Jharkhand SPCB and Uttar Pradesh SPCB. While Delhi PCC and Jharkhand SPCB had not undertaken any expenditure towards infrastructure development, Uttar Pradesh SPCB had incurred some expenditure on infrastructure development in all three study years, albeit less than 0.3% of revenue.

In the CPCB's performance audit of the Delhi PCC in 2020, the existence of a full-fledged laboratory, and adequate monitoring infrastructure has been recorded. However, it recommended that the DPCC needed "best infrastructure both in terms of facilities and manpower. Major expansion in all aspects including staff, buildings and related infrastructure, opening of regional offices / laboratories, logistics etc. (is required)".[8] In the case of Jharkhand SPCB, the same performance audit noted that the SPCB had a major weakness in the area of laboratories, and emphasised that the infrastructure particularly needed attention. Yet, the RTI responses we received reported zero expenditure on infrastructure development between 2018-19 to 2020-21.

The CAG's performance audit in 2017 found that the UPPCB had inadequate testing facilities in the laboratories, and took note of its failure to monitor six out of nine core parameters for assessment of water quality, and nine out of twelve parameters of air quality.[14] This implies that by the end of 2015-16, two years before the period covered by our RTI questions, the state of infrastructure was judged to be inadequate. The CPCB's Performance Audit conducted in 2019 noted that the improvement in infrastructure was less than satisfactory. Accordingly, the report recommended the UPPCB to "continue its efforts" to ensure adequate and accredited laboratory facilities.[8] However, the data from our RTI response shows that the UPPCB had still been spending a marginal proportion of its funds on infrastructural development between 2018 and 2021.[t] Hence, we see that while the trend of increasing expenditure on infrastructure development is encouraging, a lot more needs to be done by the Boards to be equipped well enough to effectively deliver on their mandate.

6.6. Lack of discretionary expenditure can be attributed to erratic government funding

In the absence of consistent funding from the government, the Boards are entirely reliant on revenue that they are able to generate themselves. Consent management and collection of consent fees is one such channel that Boards spend considerable amounts of time and resources on. In fact, in previous published work, SPCB officials cited consent management as their primary task.[5] This lack of a guaranteed pool of untied funds and associated alignment of incentives with respect to consent fees has led to the Boards focusing more on the revenue generating aspects of consent management such as granting and renewal of consents and less on monitoring compliance with the consent conditions.[23] The other key source of revenue generation for the Boards is income accrued from investments of

[s] Meeting Minutes of the 187th meeting of the Haryana State Pollution Control Board held on 17.02.2020, p.10

[t] Expenditure on infrastructure development has ranged from 0.07%-0.28% of expenditure in Uttar Pradesh. Please refer to Figure 4 for further details.

unutilised revenue. In some cases, revenue from interest income has a greater contribution to revenue than consent fees (such as in the case of Delhi in FY 2020-21, Haryana in FY 2019-20 and West Bengal in FY 2020-21).

Since interest income and consent fees can provide a guaranteed yet ultimately limited fund flow, the Boards resort to maintaining an operational surplus to stay afloat. Turning this surplus also allows the SPCBs to re-invest these funds every year, but largely at the expense of spending on other aspects of their work such as building out new labs, investing in equipment, and expanding their pool of technical resources.

A 2006 OECD Assessment report suggests, "Creating a stable source of [government] funding would also correct an over-dependence on fees that can lead to mixed incentives and priorities for PCB staff".[24] A former senior CPCB official explained during our interviews that, "Every state is flushed [sic] with money but they don't want to spend the money because they don't have the courage to properly spend [it]. They don't know how to spend the money, and whatever money they're spending is on pollution monitoring, not control". The official added context on the challenges facing officials even when they do want to spend money on programmes or initiatives noting, "If I spend the money and when I am not in that position, some inquiry will happen, some vigilance cases will be there and I will be in trouble. So, most of the Members Secretaries and Chairpersons prefer that money should be in a fixed deposit".

Consequently, we see that in the absence of un-tied funding from the government, the leadership of the Boards focus most of their energies on revenue generation and less on planning expenditures necessary to meet their mandate beyond consent management. As a result, we observe that the expenditure of the Boards is focused on routine aspects such as salaries and allowances and not on discretionary expenditure such as infrastructure and research that contributes to standard setting that in their view could raise red flags.

7. CONCLUSION

The analysis in this report has helped us understand the sources of revenue and expenditure, as well as the constraints and limitations under which the nine State Pollution Control Boards of the Indo-Gangetic Plain and the DPCC function. The key takeaways can be summarised as follows:

- **Most Boards are turning a surplus every year:** A majority of the Boards we examined turned a surplus for each of the 3 years for which we reviewed their finances, with many struggling to spend the entirety of the amount they collect through fees and other sources. Analysis of overall and NCAP fund utilisation reveals that funds are not being spent completely.
- **Surplus funds are directed to investments:** The substantial surplus generated each year by SPCBs/PCCs are directed toward short and medium-term fixed deposits rather than investments in manpower, infrastructure and equipment. Overall, we conservatively estimate that Rs. 2893 crores are invested in fixed deposits by the 10 SPCBs/PCCs as of 31 March 2021. The interest earned from these investments plays a significant role in the fiscal health of the SPCBs.
- **Government support is largely absent:** For all but two states, there was no financial support provided by state governments to their respective SPCBs/PCCs. Central Government funding is sparse, and is tied funding linked to existing centrally sponsored schemes. While Central Government funding is regular yet inadequate since it is linked to existing centrally sponsored schemes, consistent funding from state governments is largely non-existent.

- **Limited revenue generating sources:** As Boards can no longer charge water cess, licensing and consent fees along with interest income accruing from investments are the sole revenue generation mechanisms of the Boards. This also creates a structure where the Boards are incentivised to focus as much of their attention as possible toward consent management as this is their sole consistent source of revenue.
- **Expenditure skewed away from infrastructure and research:** Pay and allowances for staff comprise over half of SPCB/PCC expenditure, with some skewing upwards of 80%. Despite the poor state of infrastructure in many States, spending on new infrastructure including lab facilities is low, with some exceptions. Spending on research, development and studies comprise a tiny fraction of overall expenditure across the board.

Broader overarching questions also arise as a result of our analyses as outlined below. These bear consideration as we continue to evaluate the performance of SPCBs, and identify pathways to strengthen them to tackle an evolving regulatory space.

- **SPCBs lack absorptive capacity:** Median fund utilisation across the 10 SPCBs/PCC examined in this study was 48% for the 3-year period between 2018 to 2021. The low median fund utilisation coupled with the large amounts of money being invested in investments indicate a lack of fiscal expertise within these institutions to accurately predict income and expenditure on an annual basis. This issue is not unique to the SPCBs, but reflective of larger issues of state capacity and budget credibility.[16,17] This challenge in effectively spending down funds is mirrored even with respect to funds allocated to States under the National Clean Air Program (NCAP). A centrally sponsored scheme, the NCAP has clear guidelines on expenditure, yet in our analysis the median fund utilisation rate for funds specifically received under NCAP was 49% in FY 2019-22.
- **Board engagement on finances is insufficient:** Traditionally, the Board of an institution is tasked with ensuring its fiscal credibility by holding leadership to account on the credibility of their projections. In the first working paper of this series, we examined the membership and deliberations of some of the boards and identified the minimal focus given to substantive issues, especially finance. Board members have a fiduciary responsibility to ensure the fiscal health of the institution, and in this case, there is greater need for the boards themselves to engage much more deeply with leadership of the SPCBs on enhancing their budget credibility.
- **Reliance on consent fees and third-party inspections surface the principal-agent problem in regulation:** The reliance of the Boards on the industries they regulate as their primary source of income is concerning given the potential for perverse incentive structures to drive decision-making. Indeed, as we noted in the second working paper of this series, the Member Secretary of State 1 highlighted the potential for money to influence decision-making of staff working at the Boards. Simultaneously, the lack of technical capacity at SPCBs as outlined in the third working paper of this series constrains the ability of the SPCBs to conduct routine activities such as monitoring and inspection of industries. In the absence of this capacity at SPCBs, "independent" third-party evaluators are engaged by the industries to carry out the inspections, based on which consents are issued or denied. The relationship between the third-party inspectors and industries raises questions around the principal-agent problem in environmental regulation manifesting through financial conflicts of interest. As we have seen in prior work done in India, the engagement of third-party inspectors by industries poses challenges for regulators around the accuracy of the data reported, and thereby their ability to effectively regulate.[25]
- **Income sources, financial and functional autonomy:** In the absence of regular funding either from the Central or State governments, income gained from investments play a key role in keeping SPCBs in the green every year. In our analysis, we find that without the interest income, 6 out of the 10 States studied would turn a loss for at least one of the three years. This reliance on interest income constrains the ability of the Boards to allocate funds towards anything besides routine expenditure, and investments in infrastructure at least in the case of one State we studied was contingent on grant-in-aid from the State government. While SPCBs are envisioned as autonomous bodies under the law, the reliance on consent fees, the lack of unrestricted financial support

from government, and the dependence on interest income coupled with the associated lack of expenditure on infrastructure, research and development raises questions as to whether they are functionally autonomous or if their financial predicament has indirectly constrained their ability to fulfil their mandate effectively.

Our research reveals that while many SPCBs are adequately financed, this is a necessary but not sufficient condition to ensure that the SPCBs/PCCs fulfil their mandate. While the framework by which the SPCBs were established and the finances they are able to generate indicate *de jure* autonomy, questions remain over *de facto* autonomy given the dependence on interest income and the various issues raised in the previous working papers in this series. This has manifested in many ways including through the worry of SPCB leadership over authorising large expenditures on equipment, manpower or research for fear of being questioned. These funds instead find their way to investments.

In our interviews, several respondents indicated that the NGT's order empowering SPCBs to impose environmental compensation[26] provided a much-needed replacement for revenue lost when the water cess was subsumed under the GST regime. The Chairperson of State 1 praised the transformative move which in his words reformed the otherwise "Toothless, poison-less" nature of enforcement, and provided a means for the Boards to invest in environmental restoration and protection programmes.

The proposed amendments to the Air Act and the Environment Protection Act[u] in the Jan Vishwas Bill[v] currently tabled in Parliament envision significant changes to the regulatory regime, with adjudicatory powers to be placed in the hands of Central Government appointed bureaucrats and fines accruing to the environment protection fund of the Central Government. It is unclear at this stage (in the absence of any appended rules) what this means for the current regulatory regime and the role of SPCBs. It would no doubt have ramifications on their role in the regulatory state and affect their ability to generate revenue from environmental compensation. Given that the SPCBs are unable to meet their statutory mandate effectively under the current fiscal and regulatory conditions, there must be greater debate around what form SPCBs take and what role they have in a forward-looking regulatory regime that aims to substantially reduce air pollution from current levels by leveraging modern approaches and regulating at the level of airsheds, not States.

[u] The Environment (Protection) Act, 1986

[v] The Jan Vishwas (Amendment of Provisions) Bill, 2022

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