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E-KATCH (KANGRA APPLICATION FOR TRACKING CHUNAV)

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Abstract— **e-KATCH (Kangra Application for Tracking Chunav) - Web application and Web view for the purpose of election expenditure monitoring - a novel initiative of District Kangra for the Himachal Pradesh Assembly Election 2022. One of the most important aspects of election monitoring is Expenditure monitoring which is paramount for a free and fair election. Since the Election Expenditure monitoring machinery works directly under the DEO, it is imperative that a monitoring tool be placed in a position to supervise the functioning of all the expenditure monitoring teams. The e-KATCH platform serves as a monitoring tool that enables the DEO and other authorized personnel to supervise and manage the activities of these expenditure monitoring teams effectively. This system helps in ensuring that candidates and political parties adhere to the election expenditure limits set by the Election Commission. It enables real-time monitoring of expenses, provides data analysis and reporting features, and facilitates transparency in the electoral process.**

Keywords— **Complaints, Nakkas (Check Posts), Monitoring, MCC, Expenditure, Seizure, Software**

I. INTRODUCTION

Kangra is the largest district in Himachal Pradesh and has 15 Assembly constituencies that are spread over a vast area. The conduct of elections in such a large number of constituencies simultaneously is challenging for the District Election Officer and his various teams at the district level. In District Kangra in the HP Assembly election 2022, a total of 45 Static Surveillance teams (3 per constituency) have been put in place in the district for establishing check posts and randomly checking vehicles for detecting any unauthorized movement of cash, liquor, drugs, arms, explosives, bullion and other items.



Fig 1 First Screen of the Application

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These teams are required not only to report any illegal items but also to report details of the vehicles searched and the places where nakkas (check posts) are established. Similarly, 45 Flying Squads (3 per constituency) have been detailed in the district who attend to all model code of conduct violations and other related complaints and attend to all complaints of



Fig 2 Entry Screen of the Application

threat, intimidation, movement of antisocial elements, liquor, arms and ammunition and a large sum of cash for the purpose of bribing of electors, etc. In addition, 30 Video Surveillance Teams, 15 Video Viewing Teams, and 15 Accounting Teams have been constituted which are tasked with maintaining a shadow observation register and folder of evidence for the expenditure incurred by each contesting candidate. These teams are beside the teams of Excise Departments and Police authorities to monitor Cash, Seizure of various items like Gold, Silver, Arms, Drugs, Liquor, explosives, and other intoxicants, manning of inter-State Nakkas (Check Posts), and distillery management during the election period.

II. BACKGROUND

Previously, all this work was done manually using paper pen/pencil and the Magistrate of the SST/FST used to send the Daily Activity report to the D.E.O. with a copy to R.O., S.P. and Expenditure Observer, General Observer, and Police observer. Similarly, the Excise authorities and police officials used to send their daily reports to the DEO with a copy to their respective District and State heads. Monitoring the election expenditure in each constituency, and collecting the various reports was proving to be a daunting task. It was observed that many times, the reports would not reach in time and hence it was very difficult to monitor the various aspects of election expenditure and activities like seizures of illegal and unexplained goods/cash, expenditure done by candidates on a daily basis, expenditure on rallies, where the various nakkas (check posts) were put in the district, etc.

III. ONLINE PROCEDURE

The online e-Katch application has been developed to digitize these expenditures and streamline search and seizure processes related to elections. It covers the entire process of monitoring at the field level and ensures online reporting in real-time and without any delay and also provides data analysis and reporting features, and facilitates transparency in the electoral process. The e-Katch application also provides the DEO with an option to directly call any team member through the application. This eliminates the need for storage of the individual contacts of all the team members. The time frame for which the reports can be generated is also customizable and can range from the entire duration of MCC to as low as one minute.

IV. METHODOLOGY

To digitize the election expenditure monitoring and ensure that the details with regard to work done by various EEM teams in all assembly constituencies ranging from putting nakkas (check posts) at various locations, acting on MCC complaints by FST teams, Suo moto inspections, seizures by various teams of EEM, excise, and police, recording of expenditure of rallies, the movement of liquor from distilleries and other election-related expenditure by the candidates, etc. the idea of e-KATCH application came about. At the outset, the various reports which are required to be submitted by teams were scrutinized and reports of the last elections were called for analysis. It was observed that these reports ran into pages and there were significant gaps in reports from various teams, in the sense that many of the teams had not submitted the data timely. The mandate of each of the teams was studied in detail and improvisation was made, wherever required in reports, for instance, a 'District/Constituency at a glance' report. Based on the requirements of the teams, modules were developed. As many as 8 modules were developed namely – FST, SST, MCC, Excise, Police SHO Level, Police Naka, Observer, GST, and Rally modules. The software has been prepared in .NET framework with SQL server as a back end technology.

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Start Date Time: 19-10-2022 15:41:00 End Date Time: 02-11-2022 15:41:00

District at Glance

Cons ID	Cons Name	Cash	Gold	Silver	Drugs	Liquor	Arms	Explosive
6	Nurpur	98,010.00	0.00	0.00	0.00	848.00	0.00	0.00
7	Indora	974,500.00	66.00	106.00	0.00	4290.00	0.00	0.00
8	Fatehpur	0.00	0.00	0.00	0.00	53.70	0.00	0.00
9	Jawali	33,010.00	0.00	0.00	0.00	118.65	0.00	0.00
10	Dehra	0.00	0.00	0.00	0.00	83911.75	0.00	0.00
11	Jaswan Pragpur	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Jawalamukhi	0.00	0.00	0.00	0.00	16.35	0.00	0.00
13	Jaisinghpur	0.00	0.00	0.00	0.00	9.00	0.00	0.00
14	Sullah	0.00	0.00	0.00	0.00	23.87	0.00	0.00
15	Nagrota	1,500,000.00	0.00	0.00	0.00	14.40	0.00	0.00
16	Kangra	0.00	0.00	0.00	0.00	15.00	2.00	0.00
17	Shahpur	0.00	0.00	0.00	0.00	114.60	0.00	0.00
18	Dharamshala	231,300.00	0.00	0.00	0.00	543.98	0.00	0.00
19	Palampur	0.00	0.00	0.00	0.00	28851.60	0.00	0.00
20	Baijnath	0.00	0.00	0.00	0.00	30.57	0.00	0.00
		2,836,820.00	**66.00**	**106.00**	**0.00**	**118,841.47**	**2.00**	**0.00**

Fig 3 Constituency-wise seizure report

Logins have been created for the various teams to feed their data. All SST, FST, MCC, VST, Excise, and Police teams enter the data of any type of Seizure, Vehicle Inspection, Event data, and expenditure data of political candidates, and any other event on the e-Katch application. For a particular item like cash, the seizures made by the various teams were algorithmically collated at the back end and item-wise reports can also be generated. The detailed data entry including the names of persons checked and the number of vehicles searched is also fed into the system and is available to view in the detailed reports of the application. Logins have also been created for all stakeholders namely - the CEO, observers, DEO and his nodal officers, and DIG/SP for real-time monitoring. There are more than 300 users using this portal in the district. Using the e-Katch application, all monitoring teams are able to see their data directly from the field level using their own logins. This has obviated the need to send the data to Observers/DEO office/ SP manually, as they have their logins so they can get all the reports



Total Vehicle Searched

Constituency	Total No. of Vehicle Searched
Nurpur	3565
Jawali	3517
Nagrota	4161
Jawalamukhi	3632
Dharamshala	2837
Indora	3695
Dehra	5580
Jaisinghpur	2551
Kangra	4458
Palampur	6306
Jaswan Pragpur	2372
Fatehpur	2578
Shahpur	3207
Baijnath	2947
Sullah	4102

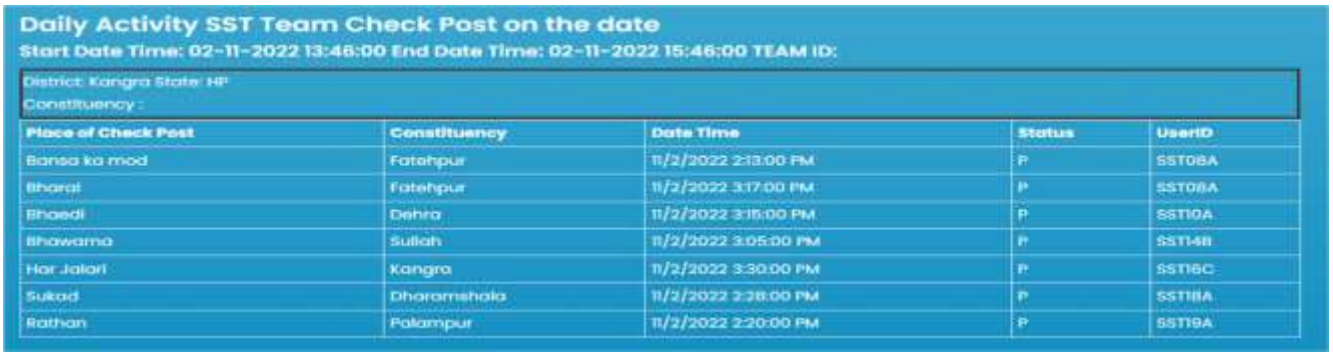
Total Check Posts

Constituency	Total No. of Check Post
Nurpur	198
Jawali	181
Nagrota	314
Jawalamukhi	165
Dharamshala	193
Indora	184
Dehra	220
Jaisinghpur	164
Kangra	131
Palampur	173
Jaswan Pragpur	185
Fatehpur	260
Shahpur	156
Baijnath	156
Sullah	133

Fig 4 Constituency-wise vehicle search report

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pertaining to their constituencies at the click of a button on their mobiles/desktops. In the Rally module, the items and rate list as fixed by the DEO have been pre-fed in the application and the VVT teams have to enter only the quantity against the item and rates will be calculated automatically which is very useful during the expenditure monitoring meeting with political parties. The data entered by these teams is being monitored at various levels. There are various reports for the Chief Election Officer, District Election Officer, General Observers, Expenditure Observers, Superintendent of Police, Excise Office, Assistant Expenditure Observer, Returning Officers, and various control rooms established at different places in the district. In addition, customized reports have been generated for the DEO and observers. The DEO and observers have also been



Daily Activity SST Team Check Post on the date

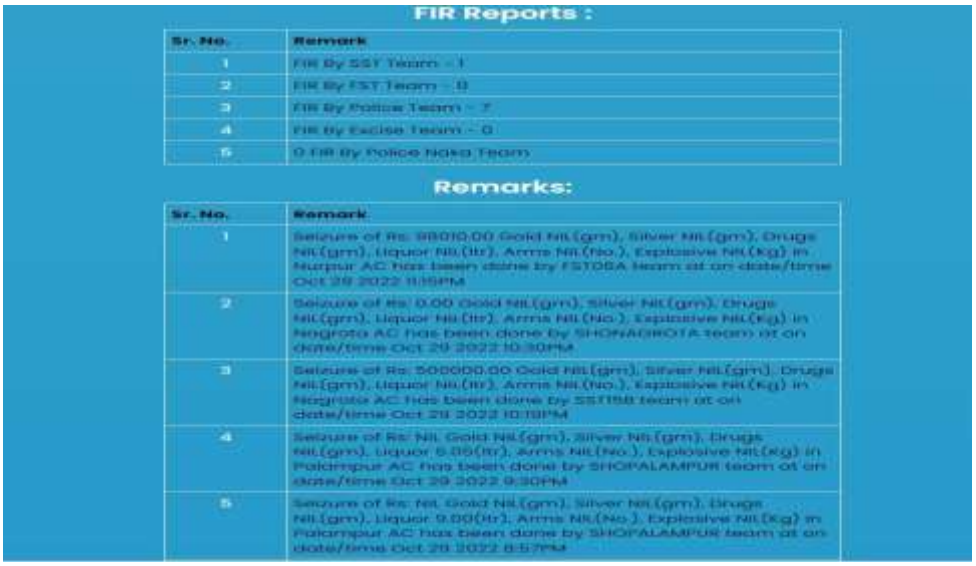
Start Date Time: 02-11-2022 13:46:00 End Date Time: 02-11-2022 15:46:00 TEAM ID:

District: Kangra State: HP
Constituency :

Place of Check Post	Constituency	Date Time	Status	UserID
Bansa ka mod	Fatehpur	11/2/2022 2:13:00 PM	P	SST08A
Bharal	Fatehpur	11/2/2022 3:17:00 PM	P	SST08A
Bhaedi	Dehra	11/2/2022 3:15:00 PM	P	SST10A
Bhawarna	Sullah	11/2/2022 3:05:00 PM	P	SST14B
Har Jalari	Kangra	11/2/2022 3:30:00 PM	P	SST16C
Sukad	Dharamshala	11/2/2022 2:28:00 PM	P	SST18A
Rathan	Palampur	11/2/2022 2:20:00 PM	P	SST19A

Fig 5 Active Check Posts at different locations report

given a report to view the check posts established by the SST teams in real-time so that they can inspect their work with an element of surprise as well. There are reports on the dashboard of the District Election Officer for monitoring various Nakkas (check posts) at different places in real time. The Dashboard of the District Election Officer (DEO) includes real-time reports on various Nakkas (check posts) located at different places. These reports provide valuable insights into the activities and movements observed at these check posts during the election. The real-time monitoring allows the DEO and other authorized personnel to stay updated on the situation and take necessary action promptly. In addition to facilitating expenditure monitoring, the e-KATCH system provides customizable reporting features that allow the generation of reports for various time frames. Alternatively, reports can be generated for a shorter duration, even as low as one minute, depending on the specific monitoring requirements. By offering customizable reports and real-time monitoring capabilities, the e-KATCH system enables the DEO and relevant stakeholders to have a comprehensive view of election-related activities, expenditure patterns, and adherence to regulations.



FIR Reports :

Sr. No.	Remark
1	FIR By SST Team - 1
2	FIR By FST Team - 0
3	FIR By Police Team - 7
4	FIR By Excise Team - 0
5	0 FIR By Police Naka Team

Remarks:

Sr. No.	Remark
1	Seizure of Rs: 98010.00 Gold Nil(gm), Silver Nil.(gm), Drugs Nil.(gm), Liquor Nil.(ltr), Arms Nil.(No.), Explosive Nil.(Kg) in Nurpur AC has been done by FST06A team at on date/time Oct 29 2022 11:15PM
2	Seizure of Rs: 0.00 Gold Nil(gm), Silver Nil.(gm), Drugs Nil.(gm), Liquor Nil.(ltr), Arms Nil.(No.), Explosive Nil.(Kg) in Nagrota AC has been done by SHONA(ROTA team) at on date/time Oct 29 2022 10:30PM
3	Seizure of Rs: 500000.00 Gold Nil(gm), Silver Nil.(gm), Drugs Nil.(gm), Liquor Nil.(ltr), Arms Nil.(No.), Explosive Nil.(Kg) in Nagrota AC has been done by SST15B team at on date/time Oct 28 2022 10:13PM
4	Seizure of Rs: Nil, Gold Nil.(gm), Silver Nil.(gm), Drugs Nil.(gm), Liquor 9.00(ltr), Arms Nil.(No.), Explosive Nil.(Kg) in Palampur AC has been done by SHOPALAMPUR team at on date/time Oct 29 2022 9:30PM
5	Seizure of Rs: Nil, Gold Nil.(gm), Silver Nil.(gm), Drugs Nil.(gm), Liquor 9.00(ltr), Arms Nil.(No.), Explosive Nil.(Kg) in Palampur AC has been done by SHOPALAMPUR team at on date/time Oct 29 2022 8:57PM

Fig 5 Customized report

V. RESULT

The e-Katch application has proved to be very useful for monitoring, and compilation of data in a speedy way, for greater transparency, and for ease of monitoring of election processes. This has ensured great ease not only on the part of monitoring by the DEO office and Observers; but also has helped the various teams in maintaining the data in an efficient and hassle-free manner. By digitizing the process, e-Katch software eliminates the need for paper-based reports, leading to a significant reduction in paper consumption.

VI. CONCLUSION

It has eliminated the need for printing more than 15-20 thousand papers during the election period only for District Kangra resulting in reduced expenditure for election management. This not only saves resources but also has a positive environmental impact, making the process more sustainable. It has also been felt that the EEM teams have also become more vigilant as they are aware that they are being monitored in real-time and hence it has increased the overall efficiency of the entire expenditure monitoring system.

VII. REFERENCE

[1]. Khakhlary Anup Kumar,(2022) , Candidate Expenditure Monitoring System, 7, https://ceomadhyapradesh.nic.in/(S(3cx0rr45eza4w33jft2sms55))/Links/Circular/Candidate%20Expenditure%20Monitoring%20System%20for%20online%20maintenance_0001_0001.pdf

[2]. Commissioner Govt. of Telangana State,(2021), GUIDELINES ON ELECTION EXPENDITURE MONITORING,16-28 https://tsec.gov.in/pdf/observerportal/2021/TSEC_-_GUIDELINES_ON_ELECTION_EXPENDITURE_MONITORING,_2021_398.pdf

[3]. Election Commission of India ,(2022), Compendium of Instructions On Election Expenditure Monitoring,15-56 https://eci.gov.in/files/file/14497-compendium-of-instructions-on-election-expenditure-monitoring-september-2022/

[4]. Election Commission of India, (2022), Instructions On Election Expenditure Monitoring,edition6,36, https://ceorajasthan.nic.in/Publications/compendium%20%202022%20English.pdf

[5]. Chief Election Officer Kerla, (2021), Instruction on Election Expenditure Monitoring System, 31, https://www.ceo.kerala.gov.in/pdf/govt_orders/compendium.pdf

[6]. DASH P.K., Director General (ECI),(2014), Compendium of Instructions on Election Expenditure Monitoring For Jammu & Kashmir,23, https://ceojk.nic.in/pdf/compendium%20elction%20expenditure%20monitoring2014_03022014.pdf

[7]. Misao T. , Election Officer, (2019), Compendium of Instructions On Election Expenditure Monitoring, 34, https://ceodelhi.gov.in/WriteReadData/2019/fwdcompendiumofinstructionsonelectionexpendituremoni.pdf

[8]. Election Commissioner, ECI ,(2019), Election Guide for candidates, 3, https://adrindia.org/sites/default/files/eleexp.pdf

[9]. Chief Electoral Officer, Bihar, (2019) , Election Expenditure Monitoring GUIDANCE PLAN, 36 Slide, https://ceobihar.nic.in/ceobihar_materials/Training_Material_2023/V4%20Th15%20Election%20Expenditure%20Monitoring.pptx

[10]. Srivastava Pankaj & Yashvendra Singh, Director (ECI), (2021), Election Expenditure Monitoring,slide no 10-26 https://ceomanipur.nic.in/resources/ppts/EEM%20fo%20RO%20certification%20@%20S.Kar.pptx

[11]. Kumar Avinash, Secretary , ECI, (2020), Election Expenditure Expenditure Monitoring,20, https://cachar.gov.in/sites/default/files/swf_utility_folder/departments/cachar_epr_amtron_in_oid_2/portlet/level_2/expenditure_monitoring_2-converted-compressed.pdf

[12]. Election Commission of India (ECI), (2020), Compendium of Instructions On Election Expenditure Monitoring,33, https://ceoharyana.gov.in/Website/ELECTIONCOMMISSION/Images/66657c8a-0eae-4e67-bb0a-b2774825e0ba.pdf

[13]. Election Commission of India ,(2022), Compendium of Instructions On Election Expenditure Monitoring, 35, https://eci.gov.in/files/file/14497-compendium-of-instructions-on-election-expenditure-monitoring-september-2022/

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