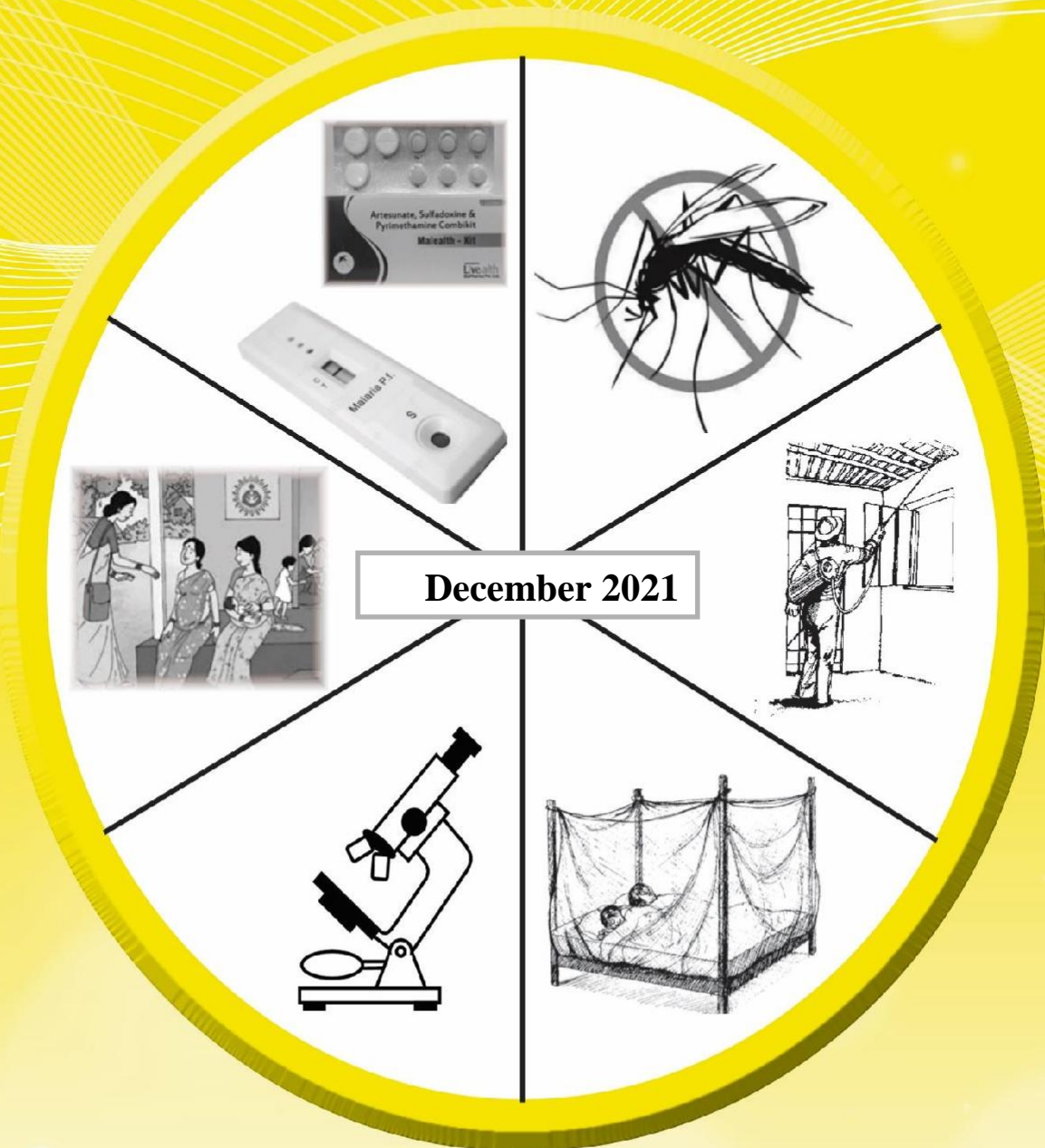




Monthly Malaria Situation of Category - 2 States/UTs



**Monitoring and Evaluation Division
National Vector Borne Disease Control Programme
Dte. GHS, MOHFW, Govt. of India, New Delhi**

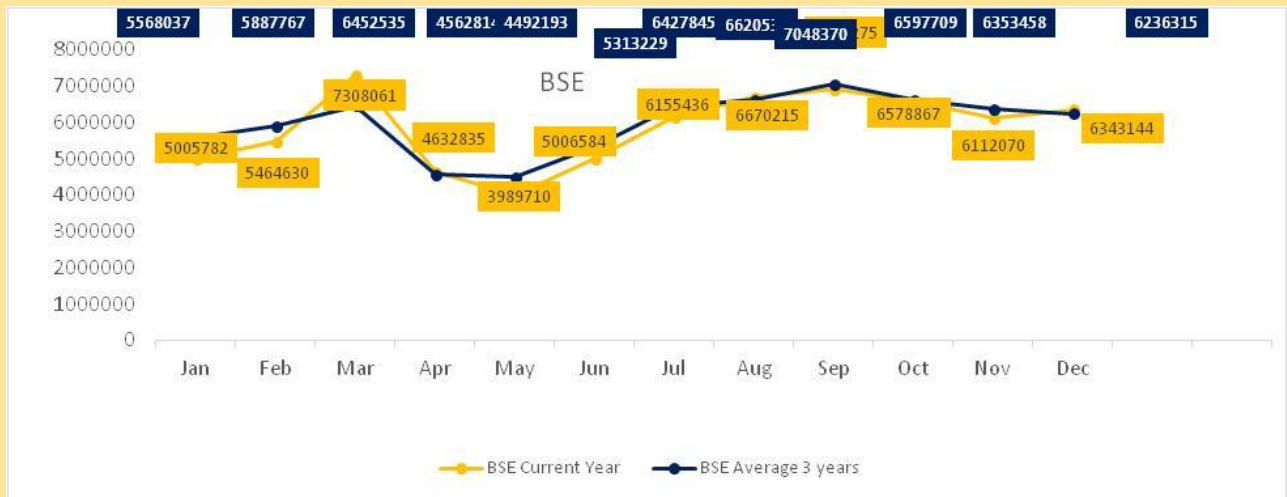
Situational Analysis, Trends and Action Points

Category 2 States	Page No
1) Summary Sheet – Category 2 States	2-5
2) Assam	6-7
3) Bihar	8-9
4) Gujarat	10-11
5) Karnataka	12-13
6) Maharashtra	14-15
7) Nagaland	16-17
8) Tamil Nadu	18-19
9) Uttar Pradesh	20-21
10) Andhra Pradesh	22-23
11) Telangana	24-25
12) West Bengal	26-27
13) Epidemiological Indicators – Malaria	28

INTRODUCTION & SUMMARY SHEET

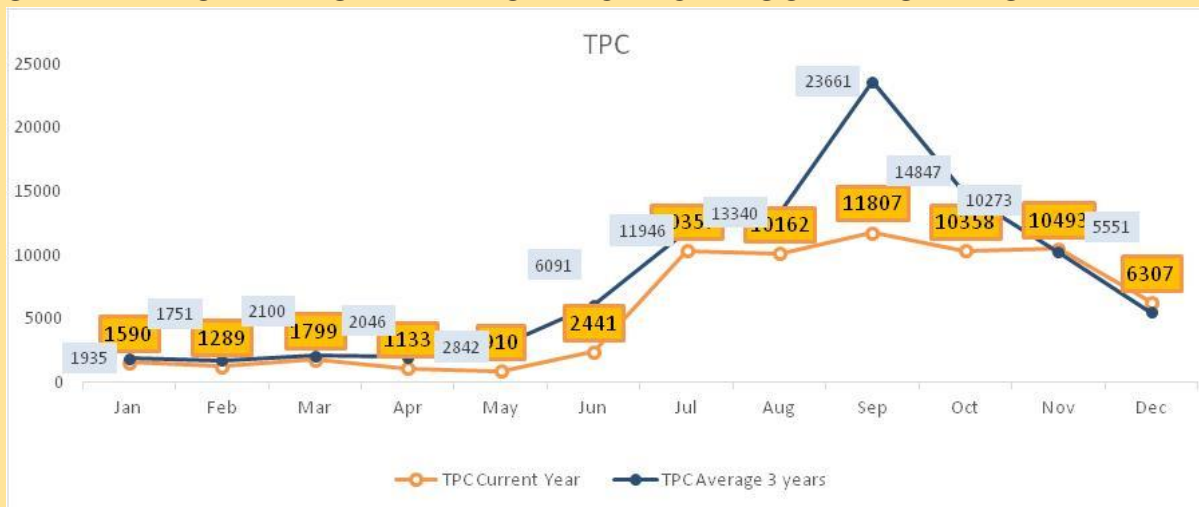
The surveillance information of Malaria of December 2021 in Category-2 states is enclosed in this Monthly Malaria Situation Information Report. The various indicators analyzed in this report are Blood Slide Examination (BSE¹), Total Positive Cases (TPC²), Total Positive Rate (TPR³) and Plasmodium Falciparum (PF⁴).

GRAPH 1: MONTH WISE TREND OF BSE IN CATEGORY- 2 STATES



There is decline of BSE by 6.3% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 21.7% upto December 2021 vis-à-vis upto December 2020.

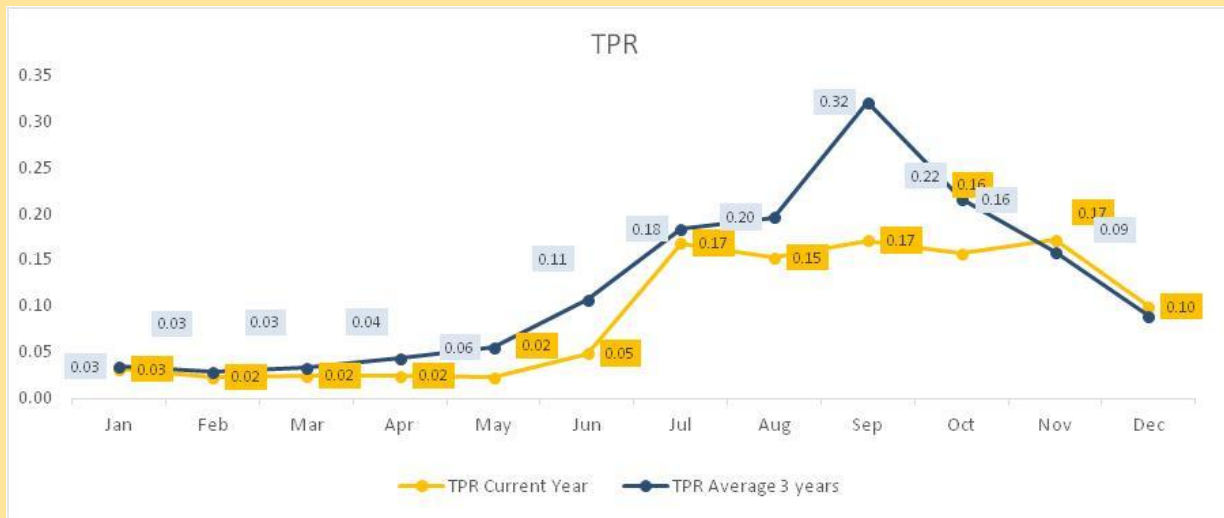
GRAPH 2: MONTH WISE TREND OF TPC IN CATEGORY- 2 STATES



There is 43.8% decline in TPC upto December 2021 as compared to last three years average cumulative. There are also 3.4 % declines in TPC upto December 2021 vis-à-vis upto December 2020.

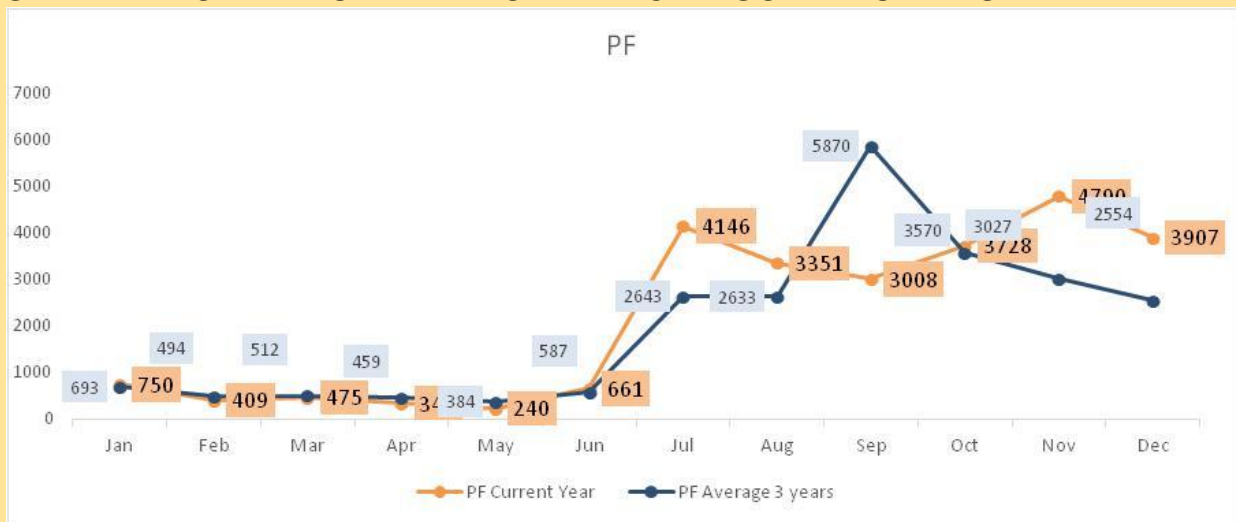
¹ BSE: No of blood slides examined
² TPC: No of total positive malaria cases
³ TPR: (TPC/100)*BSE
⁴ PF: No of Plasmodium Falciparum malaria cases

GRAPH 3: MONTH WISE TREND OF TPR IN CATEGORY- 2 STATES



The TPR was 0.10 Upto December 2021 as compared to 0.16 for last three years average and 0.12 upto December 2020.

GRAPH 4: MONTH WISE TREND OF PF IN CATEGORY- 2 STATES



There is 2.7% decrease in PF cases upto December 2021 as compared to last three years average. There is 35.2% decrease in PF cases Upto December 2021 vis-à-vis upto December 2020.

List of Districts showing a decrease in Surveillance in the Category 2 States

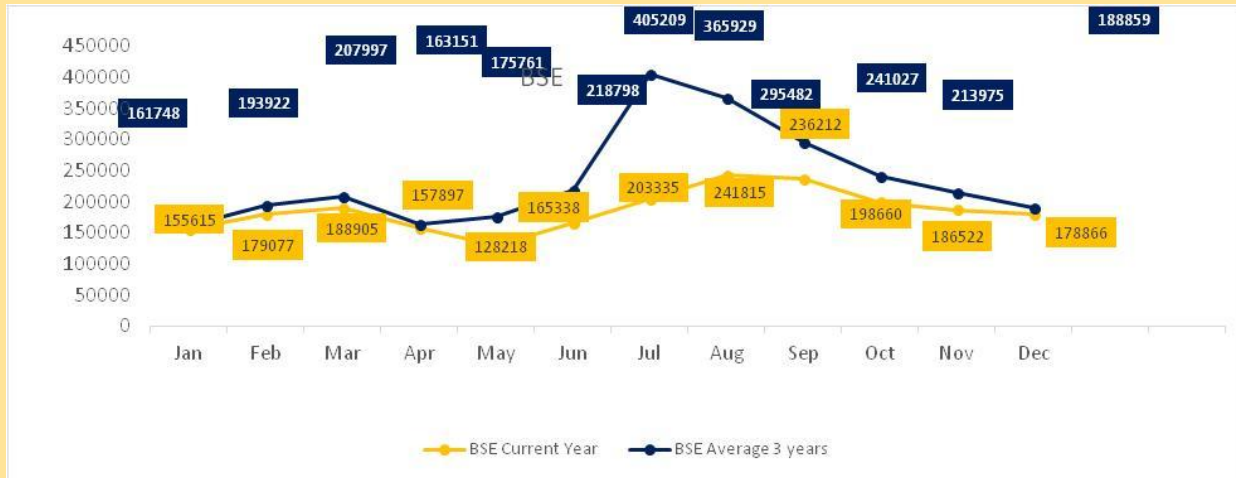
S. No.	States / UTs	Districts Showing a decrease in Surveillance
1	Assam	Udalguri, Nalbari, Kokrajhar, K-Anglong, Kamrup (R), Dhubri, Dhemaji, Chirang
2	Bihar	Saran
3	Karnataka	A.M.U. Kembhavi, Hassan, Chamarajnar, Bangalore(Rural), Bangalore(Urban)
4	Maharashtra	Wardha, Chandrapur, Bhandara, Washim, Akola, Latur, Osmanabad, Hingoli, Parbhani, Jalna, Sindhudurg, Sangli, Kolhapur, Satara, Pune, Nashik, Jalgaon, Nandurbar, Ahmednagar, Ratnagiri
5	Nagaland	Mon, Longleng, Tuensang, Mokokchung
6	Tamil Nadu	Chennai Corp., Nagapattinam, Kallakurichi, Thiruppattur
7	Telangana	Kothagudem(Bhadradi), Khammam, Mahabubabad, Janagoan, Warangal(Urban), Jagityal, Karimnagar, Nirmal, Asifabad(Kumarambheem), Nizamabad, Suryapet, Sangareddy, Medak, Mahabubnagar
8	Uttar Pradesh	Ballia, Mau, Sitapur, Badaun, Bareilly

Action points for all Category 2 States/UTs:

- States /UTs need to share the detailed case reports regarding any COVID19- Malaria co-infections reported in the state.
- States/UTs need to focus on improving Malaria surveillance along with COVID19 activities.
- States/UTs need to perform data analysis at sub district level to identify hotspots and implement focal strategies.
- States/UTs need to focus on surveillance of migratory workers.
- States/UTs need to conduct regular meetings of district and state task force for Malaria Elimination.
- States/UTs need preparedness and response for any Malaria outbreak.
- States/UTs need to intensify monitoring and supervision activities.
- State /UTs need to ensure >80% usage of LLIN by community.
- States/UTs need to intensify vector control measures by identifying potential vector breeding sites, environmental management; biological control and focus based adult vector control measures.

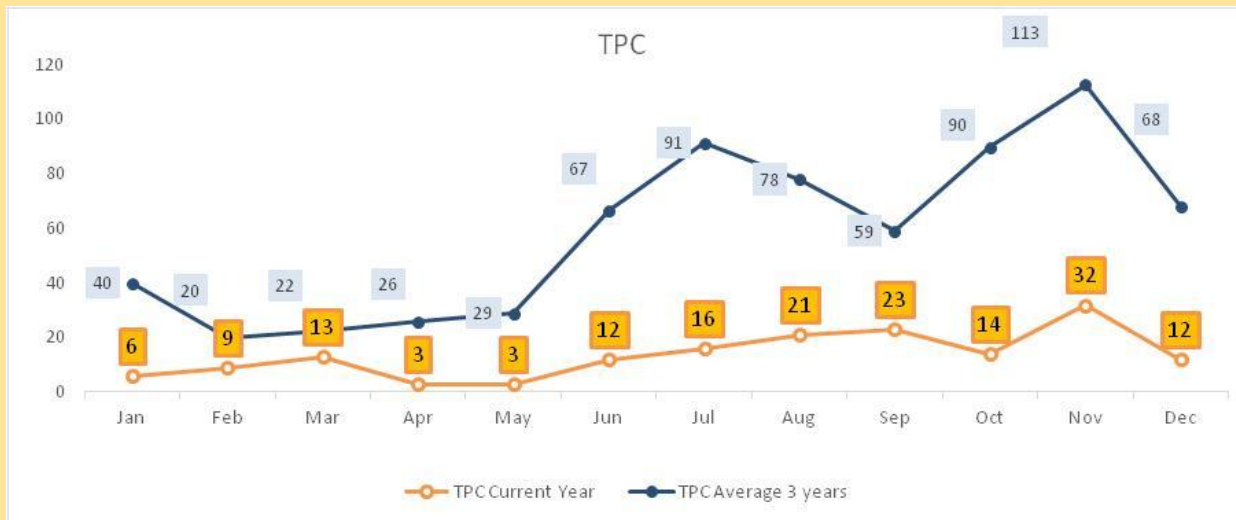
2) ASSAM

GRAPH 1: MONTH WISE TREND OF BSE IN ASSAM



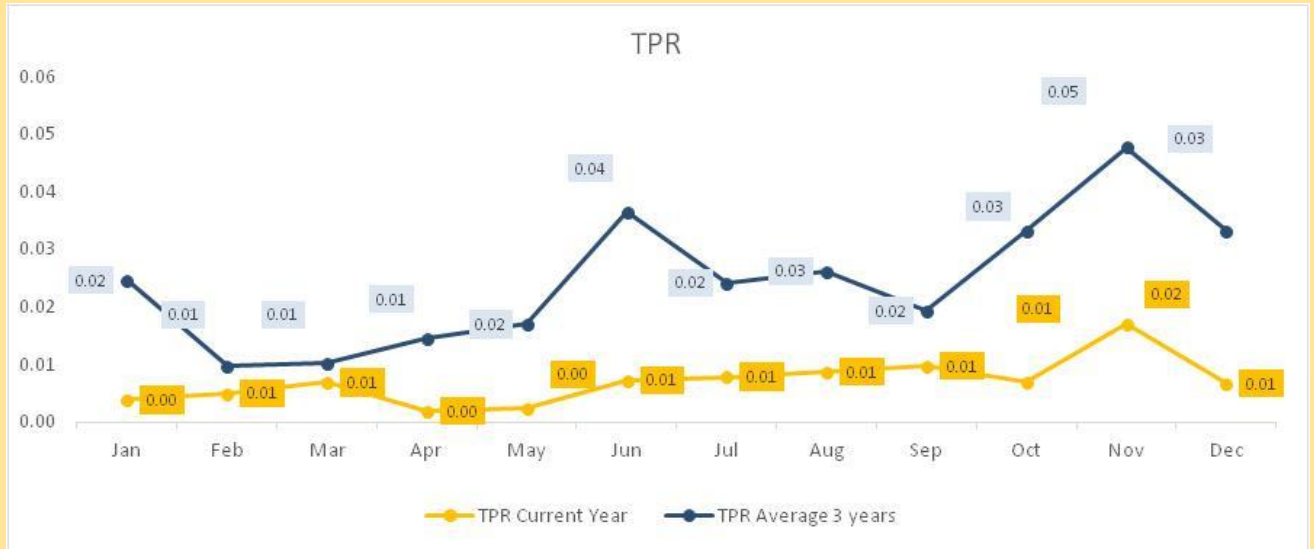
There is decline of BSE by 22.9% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 15.5% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN ASSAM



There is 91.5% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 66.1% decrease in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN ASSAM



The TPR was 0.01 Upto December 2021 as compared to 0.07 for last three years average and 0.03 upto December, 2020.

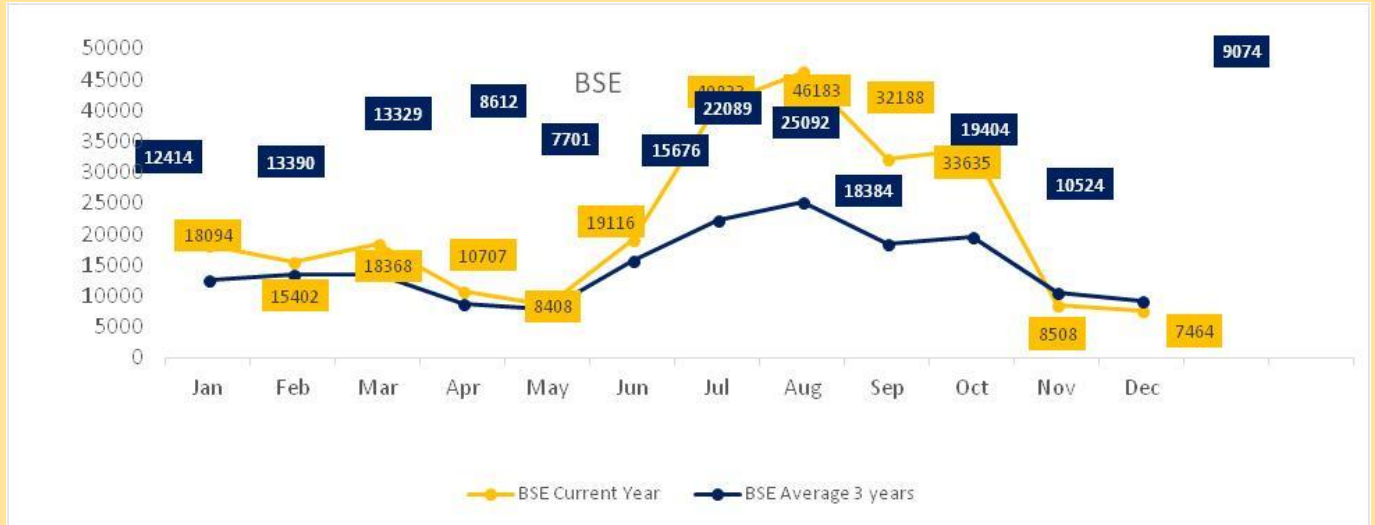
GRAPH 4: MONTH WISE TREND OF PF IN ASSAM



There is 95.0% decrease In PF cases upto December 2021 as compared to last three years average. There is 76.4% decline in PF cases Upto December 2021 vis-à-vis upto December 2020.

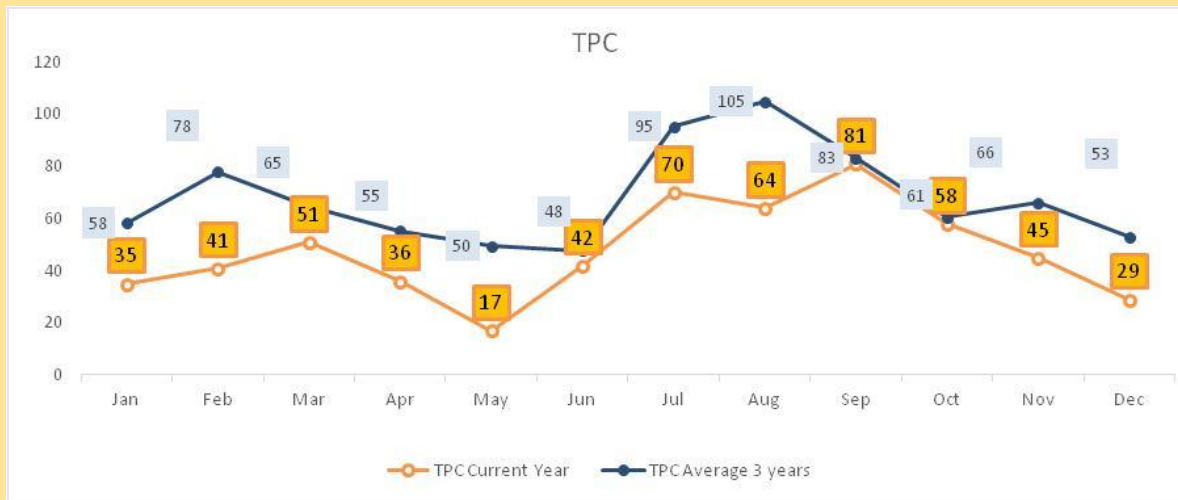
3) BIHAR

GRAPH 1: MONTH WISE TREND OF BSE IN BIHAR



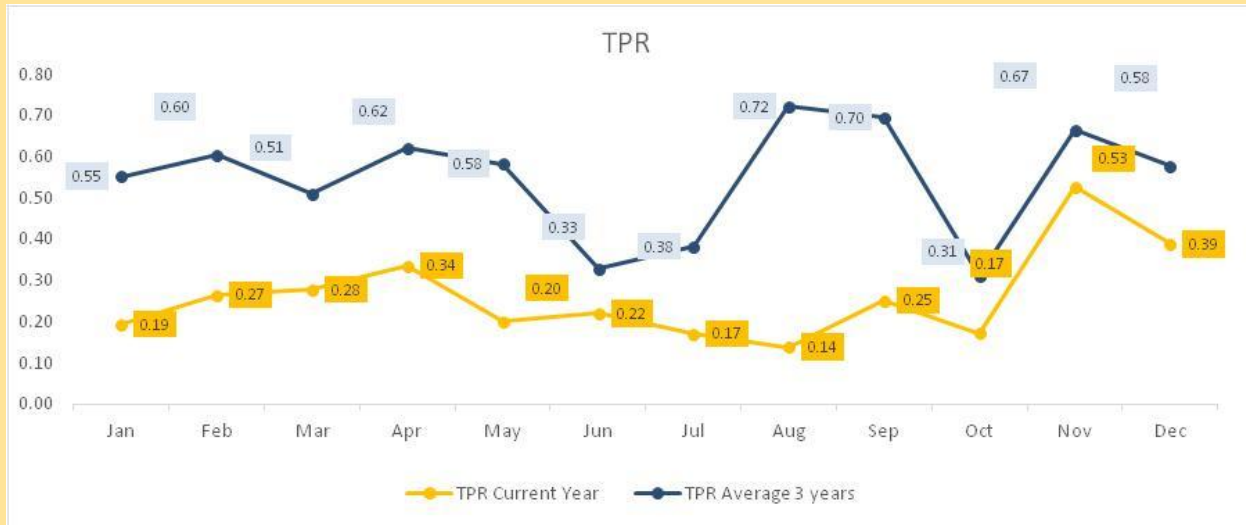
There is 109.3.6% increase in BSE upto December 2021 as compared to last three years average cumulative. There is also an increase of 199.3% in BSE upto December 2021 vis-à- vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN BIHAR



There is 44.6% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 29.0% an increase in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN BIHAR



The TPR was 0.22 upto December 2021 as compared to 0.81 for last three years average and 0.46 upto December 2020.

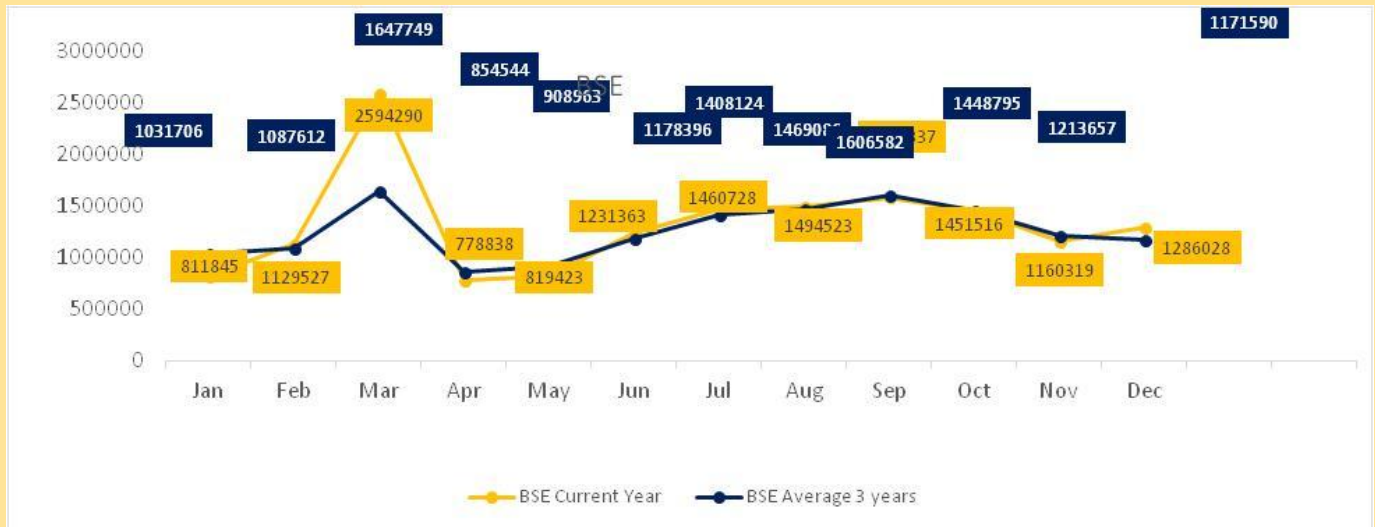
GRAPH 4: MONTH WISE TREND OF PF IN BIHAR



There is 44.1% decrease In PF cases upto December 2021 as compared to last three years average. There is a 36% decrease in PF cases Upto December 2021 vis-à-vis upto December 2020.

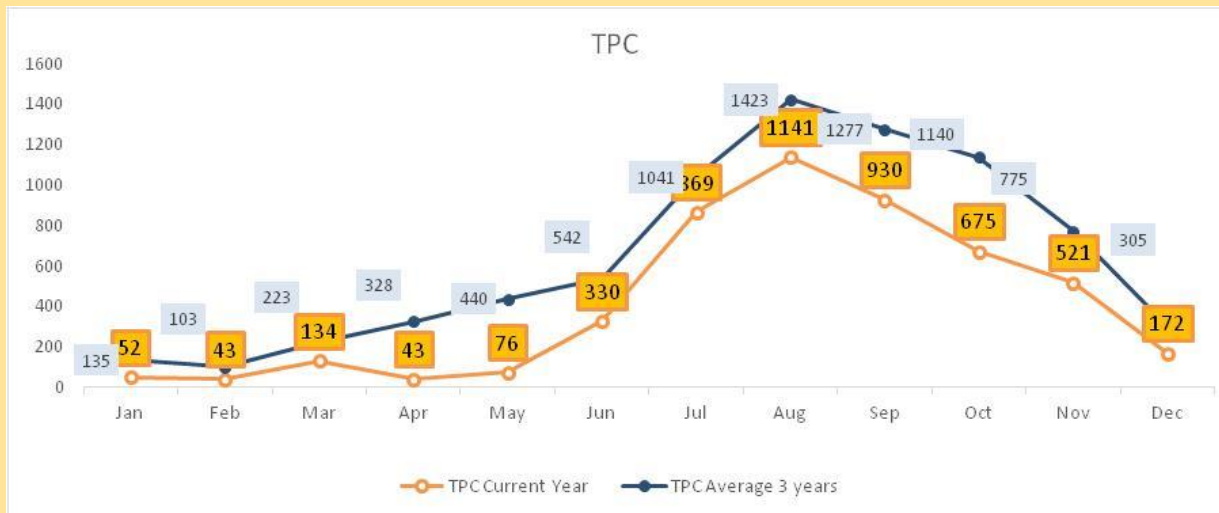
4) GUJARAT

GRAPH 1: MONTH WISE TREND OF BSE IN GUJARAT



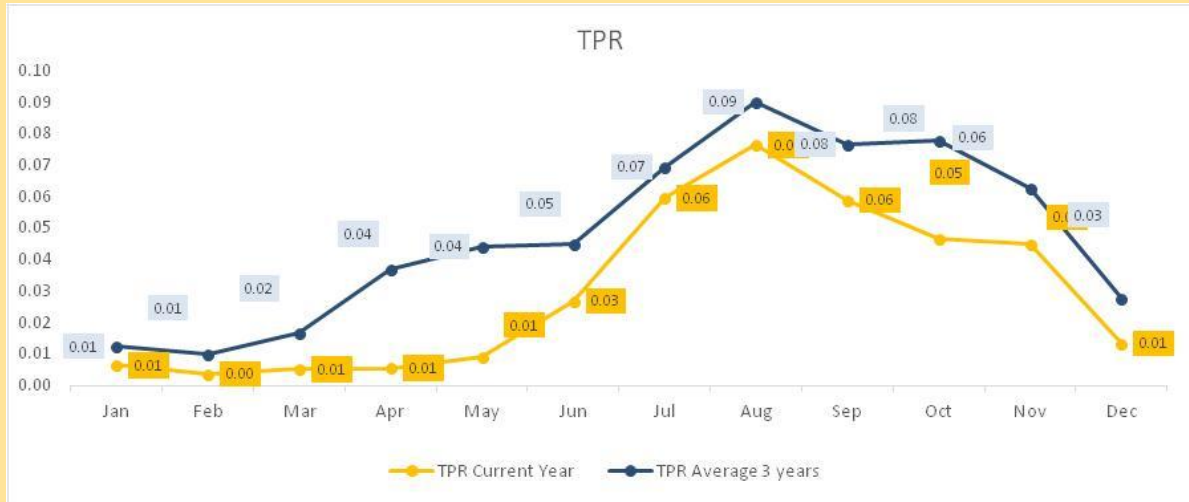
There is an increase of BSE by 6.2% upto December 2021 as compared to last three years average cumulative. There is also an increase of BSE by 21.5% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN GUJARAT



There is 62.2% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 4.4% increase in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN GUJARAT



The TPR was 0.03 upto December 2021 as compared to 0.09 for last three years average and 0.04 upto December, 2020.

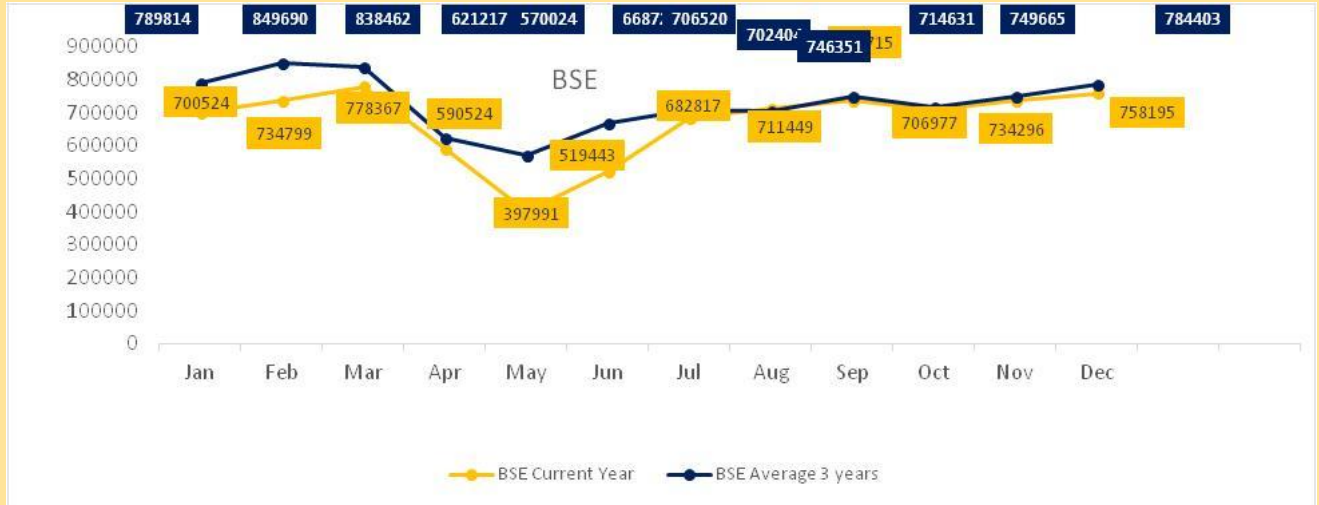
GRAPH 4: MONTH WISE TREND OF PF IN GUJARAT



There is 53.9% decrease in PF cases upto December 2021 as compared to last three years average. There is 43.5% increase in PF cases upto December 2021 vis-à-vis upto December 2020.

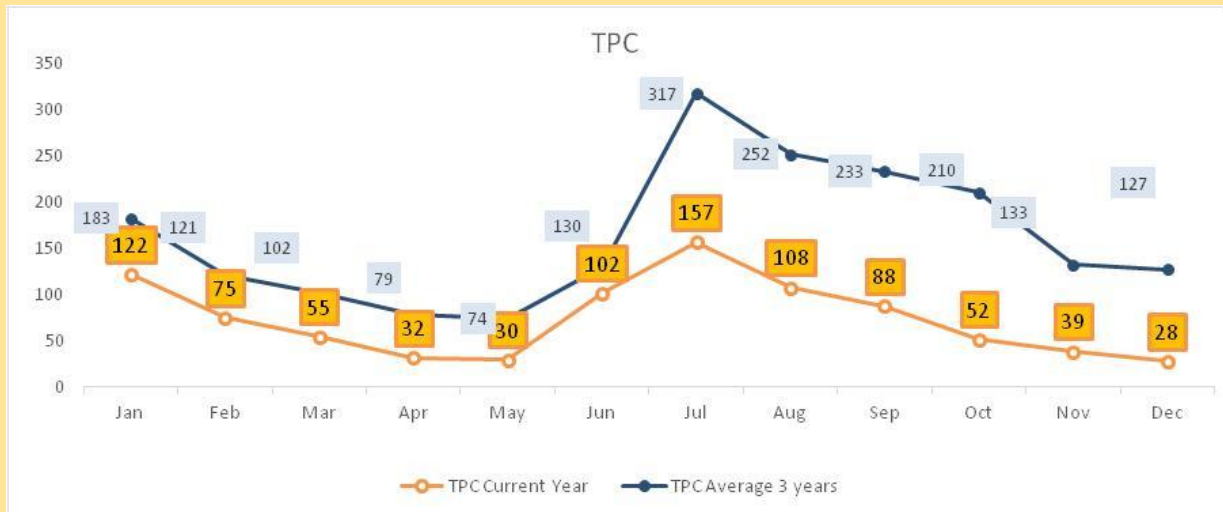
5) KARNATAKA

GRAPH 1: MONTH WISE TREND OF BSE IN KARNATAKA



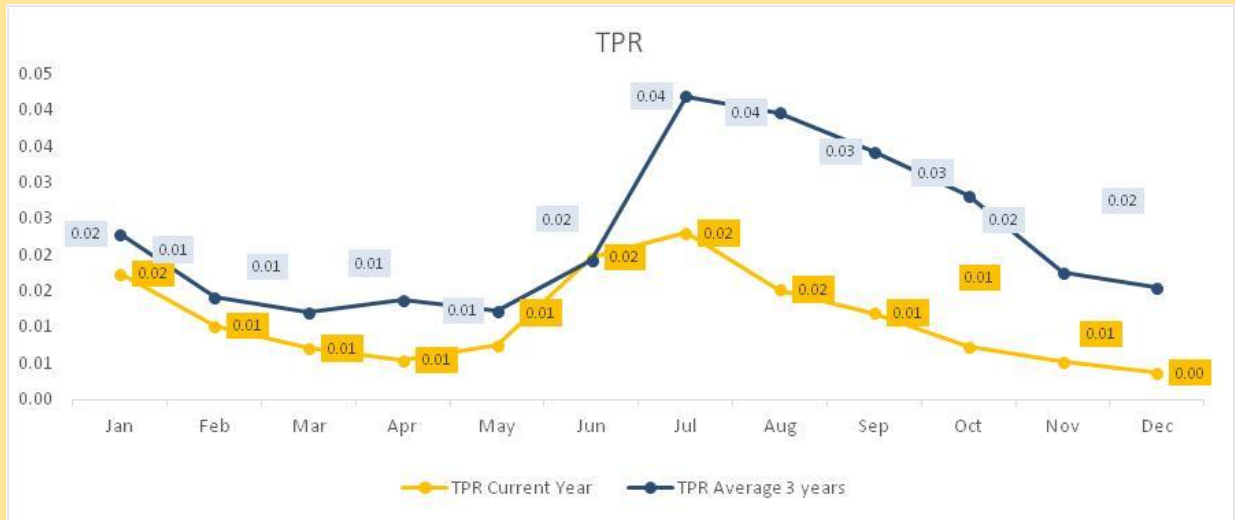
There is decline of BSE by 16.5% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 16.2% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN KARNATAKA



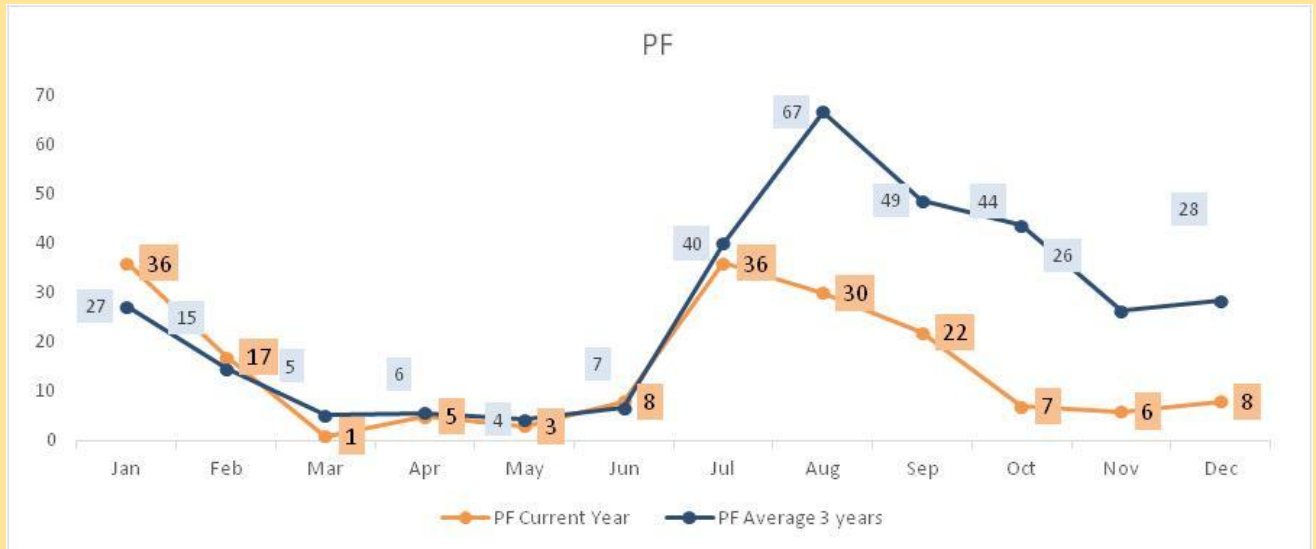
There is 74.2% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 46.6% decrease in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN KARNATAKA



The TPR was 0.01 upto December 2021 as compared to 0.03 for last three years average and 0.02 upto December 2020.

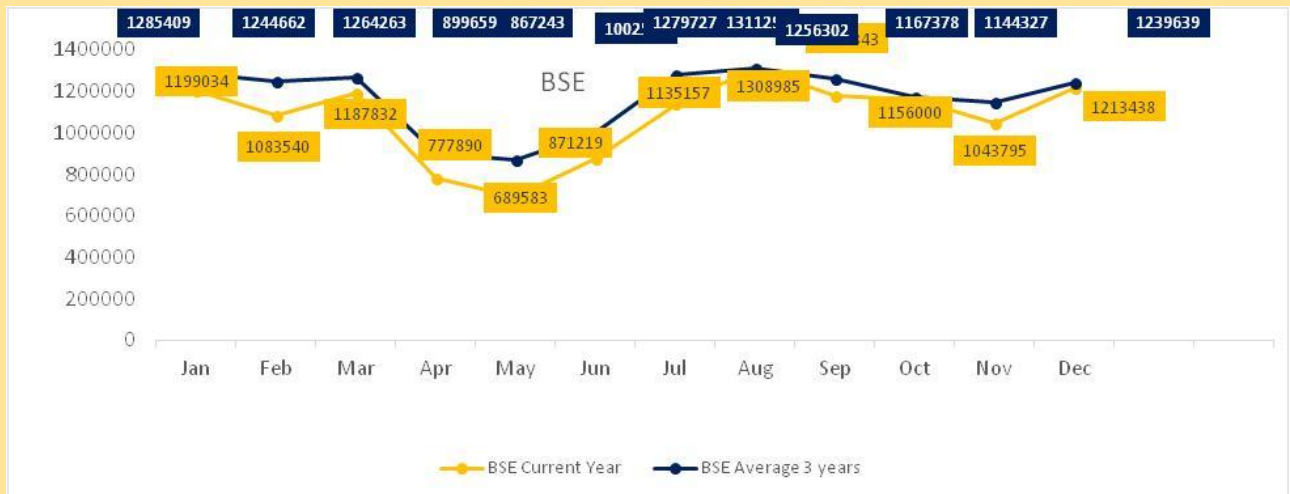
GRAPH 4: MONTH WISE TREND OF PF IN KARNATAKA



There is 65.8% decrease In PF cases upto December 2021 as compared to last three years average. There is 22.2% decrease in PF cases upto December 2021 vis-à-vis upto December 2020.

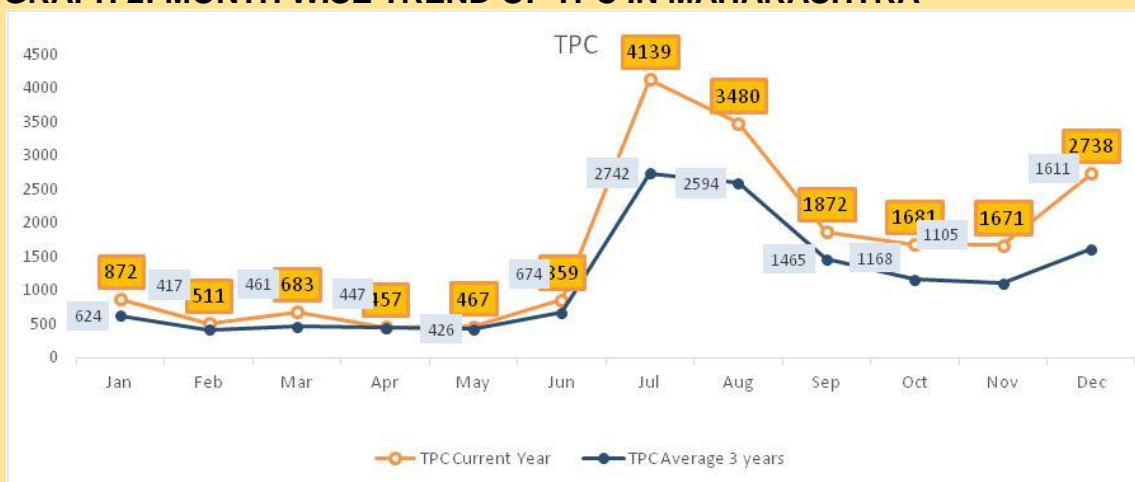
6) MAHARASHTRA

GRAPH 1: MONTH WISE TREND OF BSE IN MAHARASHTRA



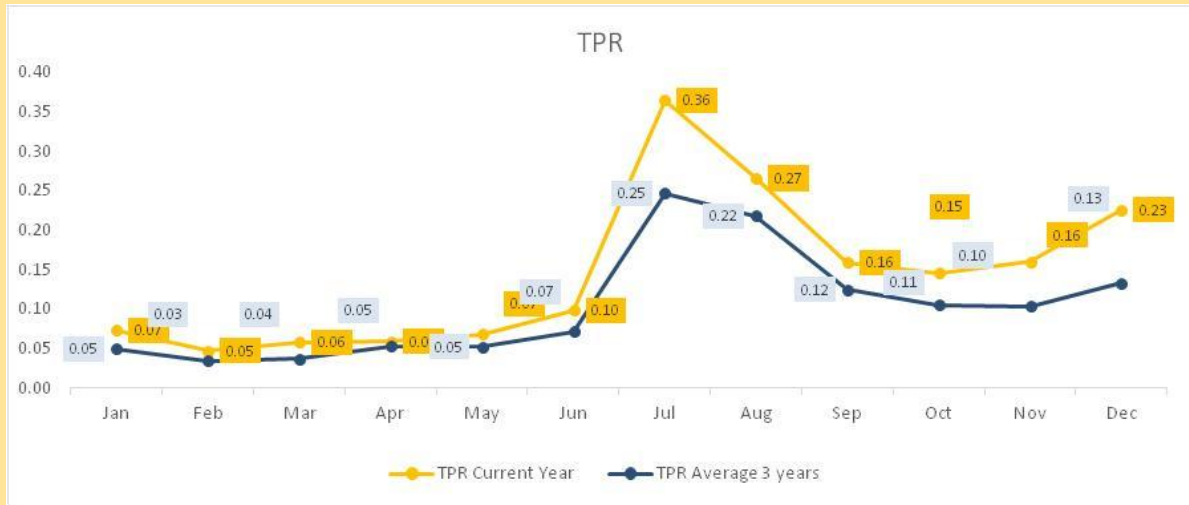
There is decrease of BSE by 15.6% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 8.0% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN MAHARASHTRA



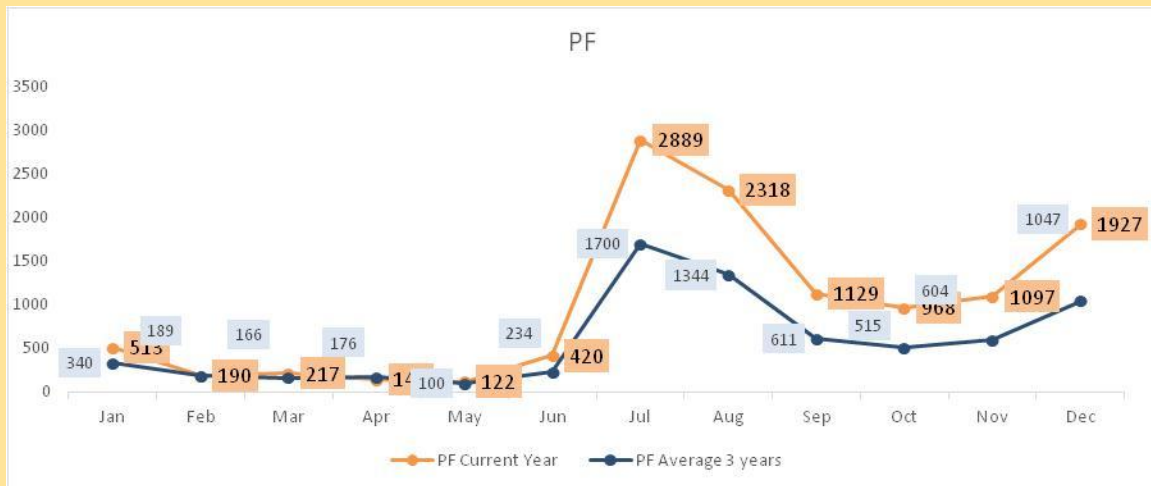
There is 79.3% increase in TPC upto December 2021 as compared to last three years average cumulative. There is 50.5% increase in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN MAHARASHTRA



The TPR was 0.15 upto December 2021 as compared to 0.07 for last three years average and 0.11 upto December 2020.

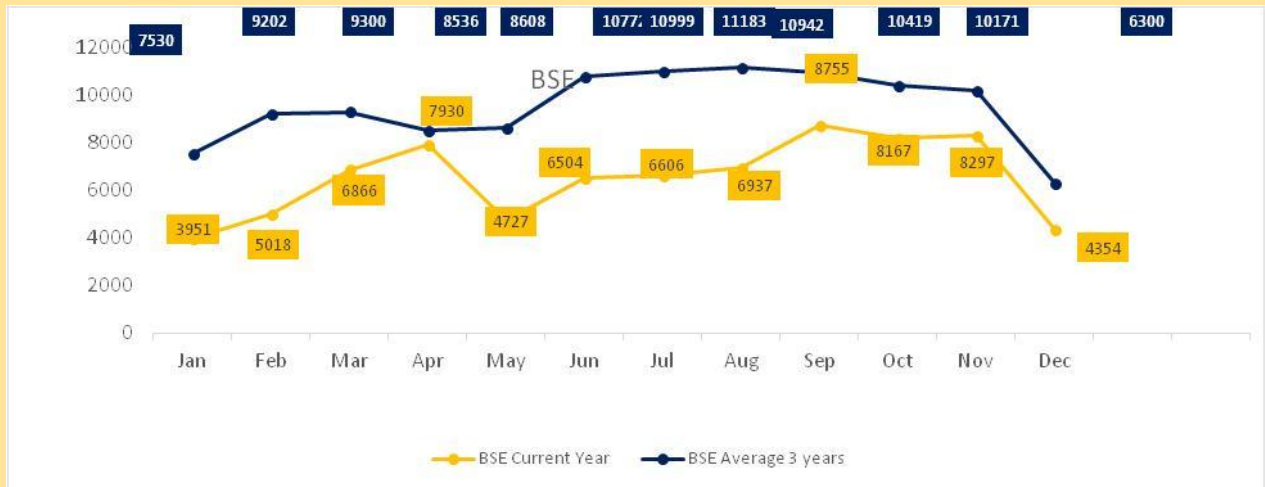
GRAPH 4: MONTH WISE TREND OF PF IN MAHARASHTRA



There is 202.5% increase In PF cases upto December 2021 as compared to last three years average. There is also increase of 81.5% in PF cases upto December 2021 vis-à-vis upto December 2020.

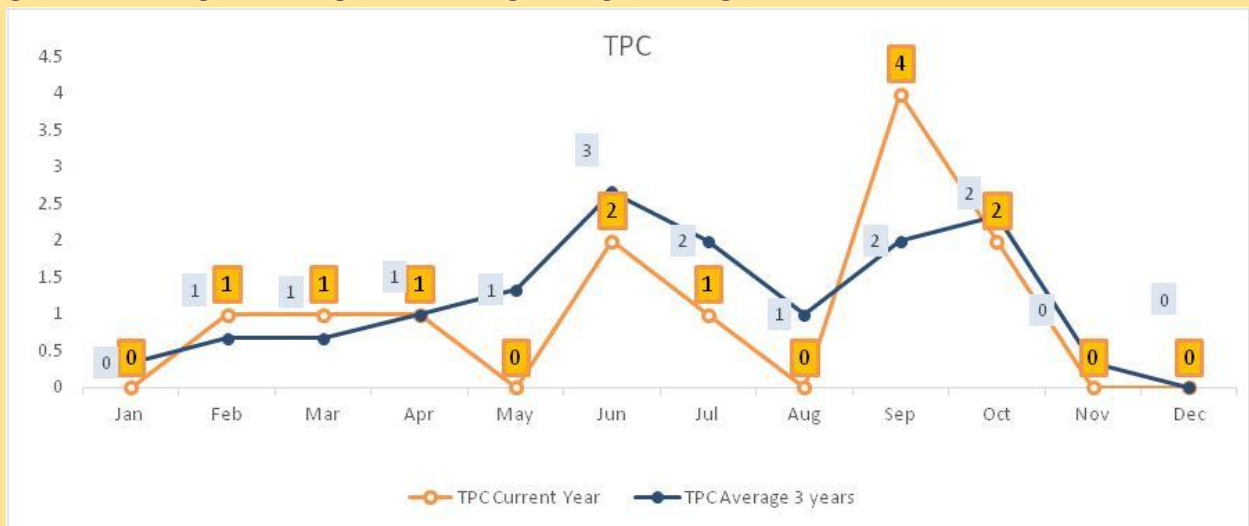
7) NAGALAND

GRAPH 1: MONTH WISE TREND OF BSE IN NAGALAND



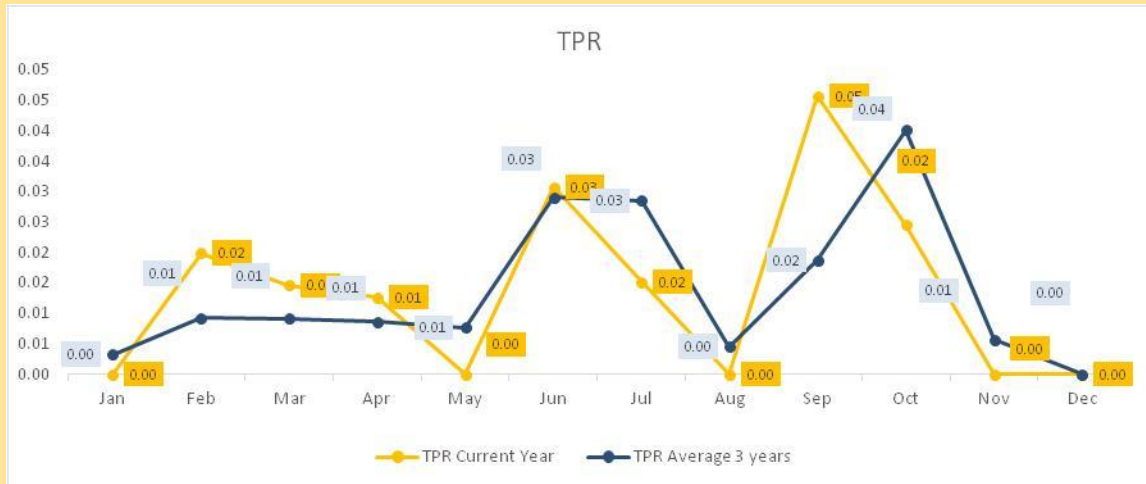
There is 54.7% decline of BSE upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 15.6% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN NAGALAND



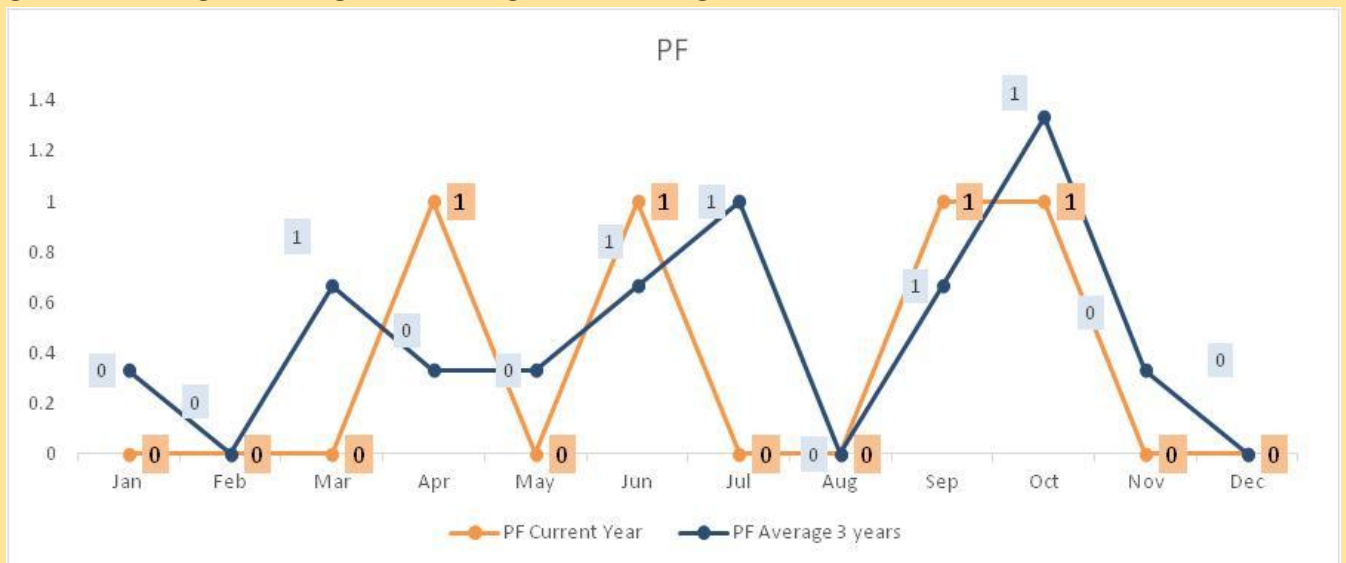
There is 75.3% decline in TPC upto December 2021 as compared to last three years average cumulative.

GRAPH 3: MONTH WISE TREND OF TPR IN NAGALAND



The TPR was 0.02 Upto December 2021 as compared to 0.02 for last three years average and 0.02 upto December 2020.

GRAPH 4: MONTH WISE TREND OF PF IN NAGALAND



There is 70.0% decrease In PF cases upto December 2021 as compared to last three years average. There is a 55.6% also decrease in PF cases Upto December 2021 vis-à-vis upto December 2020.

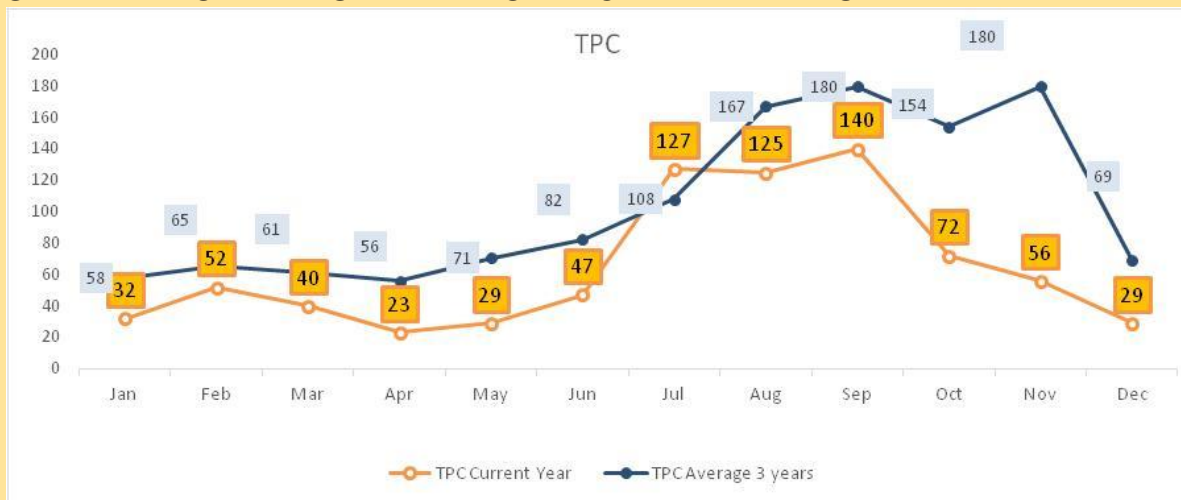
8) TAMILNADU

GRAPH 1: MONTH WISE TREND OF BSE IN TAMILNADU



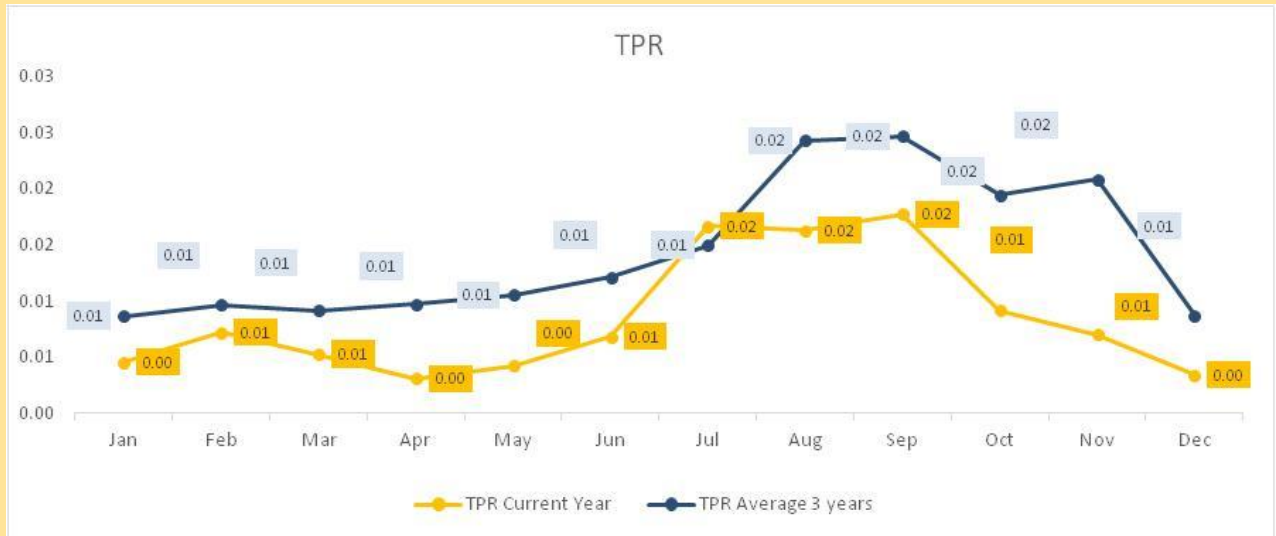
There is an increase of BSE by 12.1% upto December 2021 as compared to last three years average cumulative. There is also an increase of BSE by 22.1% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN TAMILNADU



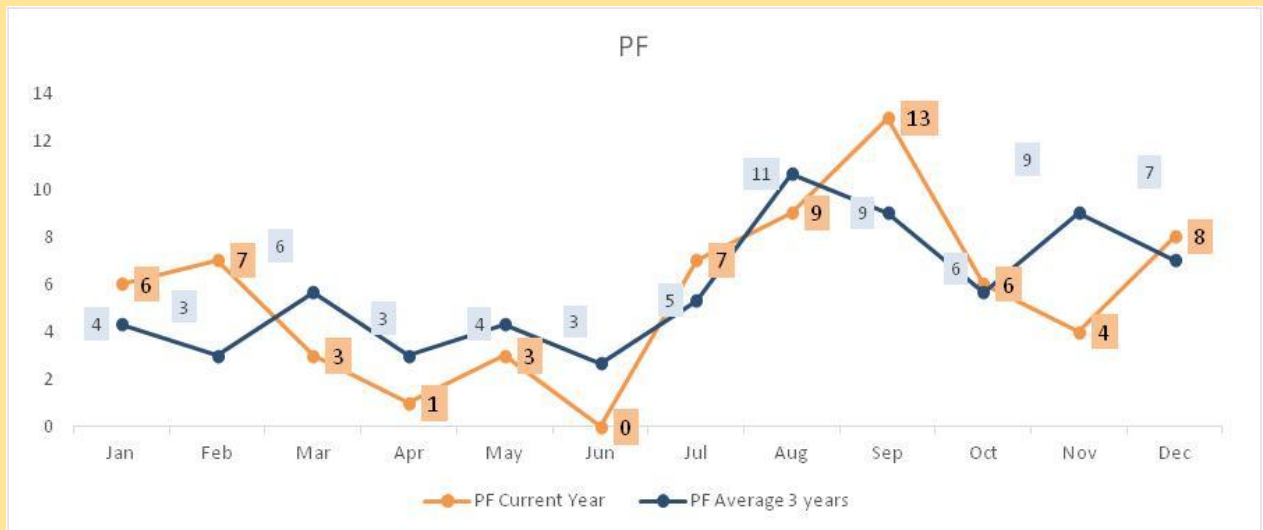
There is 65.6% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 13.4% decrease in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN TAMILNADU



The TPR was 0.01 upto December 2021 as compared to 0.03 for last three years average and 0.01 upto December 2020

GRAPH 4: MONTH WISE TREND OF PF IN TAMILNADU



There is 37.2% decrease In PF cases upto December 2021 as compared to last three years average. There is 15.5% increase in PF cases upto December 2021 vis-à-vis upto December 2020.

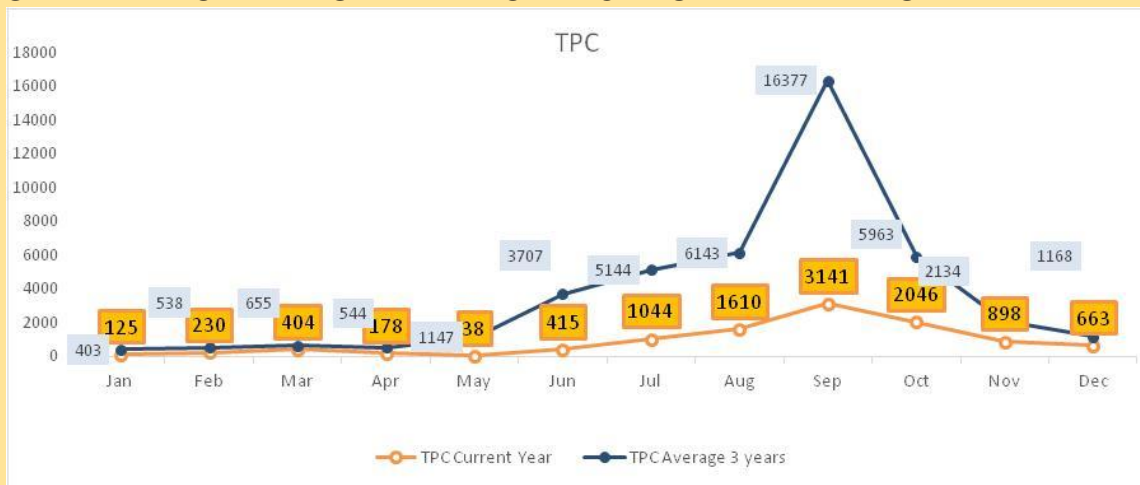
9) UTTAR PRADESH

GRAPH 1: MONTH WISE TREND OF BSE IN UTTAR PRADESH



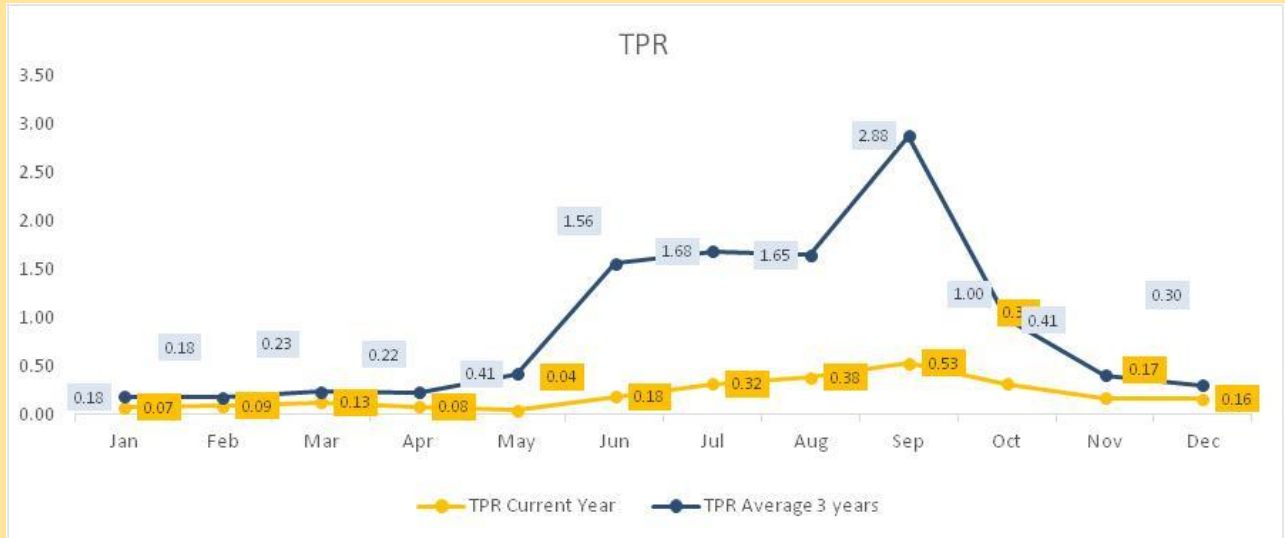
There is decline of BSE by 6.7% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 61.6% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN UTTAR PRADESH



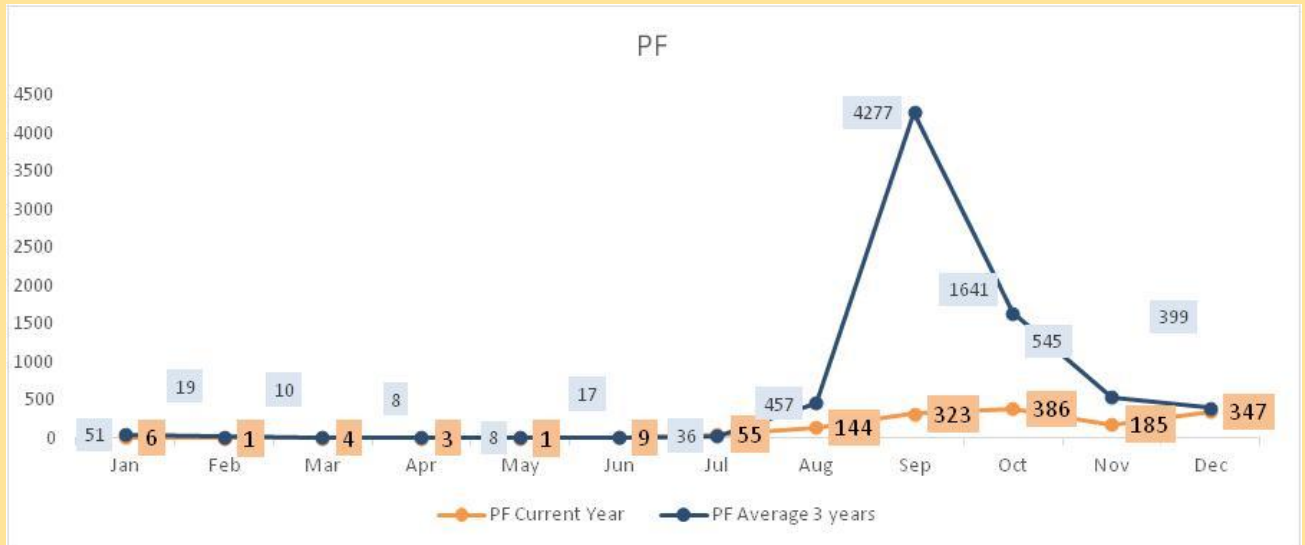
There is 82.6% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 61.8% decrease in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN UTTAR PRADESH



The TPR was 0.25 upto December 2021 as compared to 1.31 for last three years average and 1.08 upto December 2020.

GRAPH 4: MONTH WISE TREND OF PF IN UTTAR PRADESH



There is 88.7% decrease in PF cases upto December 2021 as compared to last three years average. There is 77.4% decline in PF cases upto December 2021 vis-à-vis upto December 2020.

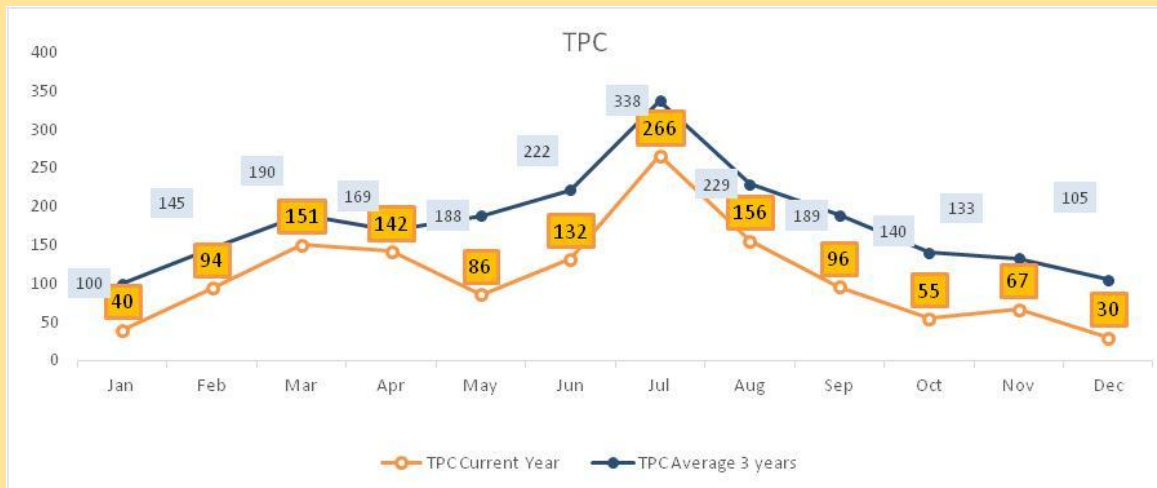
10) ANDHRA PRADESH

GRAPH 1: MONTH WISE TREND OF BSE IN ANDHRA PRADESH



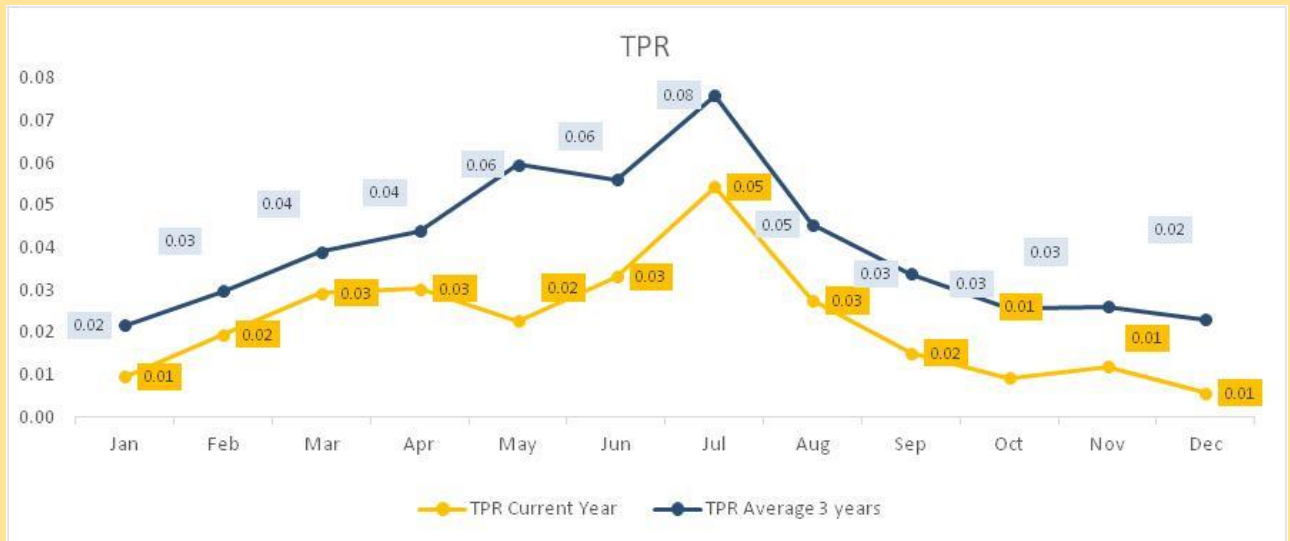
There is an increase of BSE by 3.3% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 39.0% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN ANDHRA PRADESH



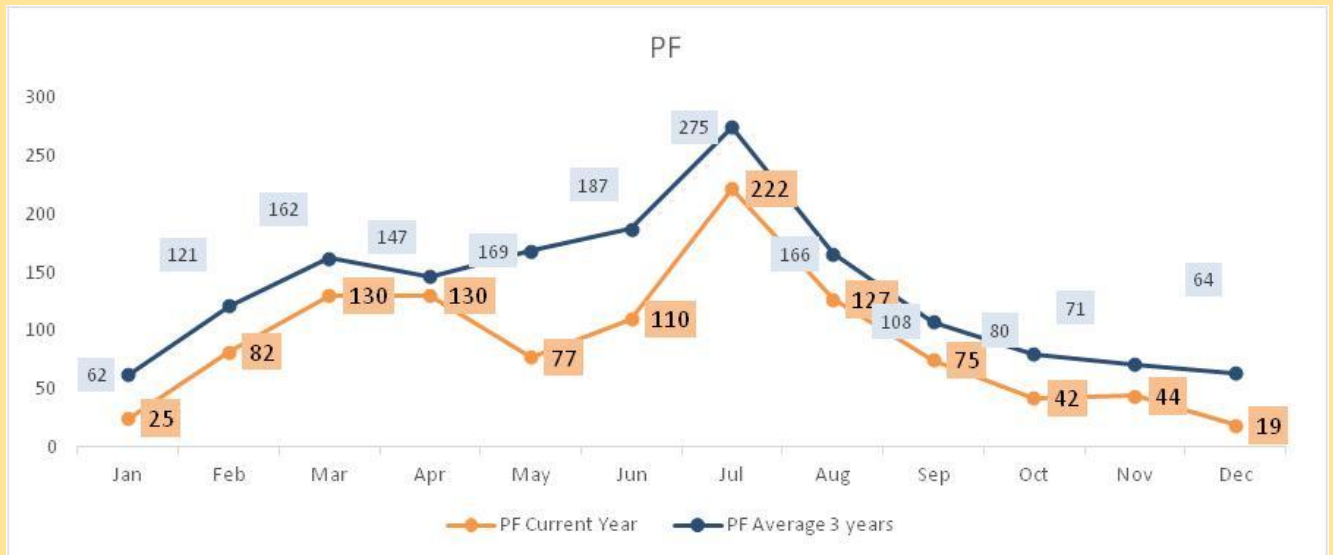
There is 64.7% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 35.1% decrease in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN ANDHRA PRADESH



The TPR was 0.02 upto December 2021 as compared to 0.06 for last three years average and 0.05 upto December 2020.

GRAPH 4: MONTH WISE TREND OF PF IN ANDHRA PRADESH



There is 59.2% decrease in PF cases upto December 2021 as compared to last three years average. There is 38.6% decline in PF cases upto December 2021 vis-à-vis upto December 2020.

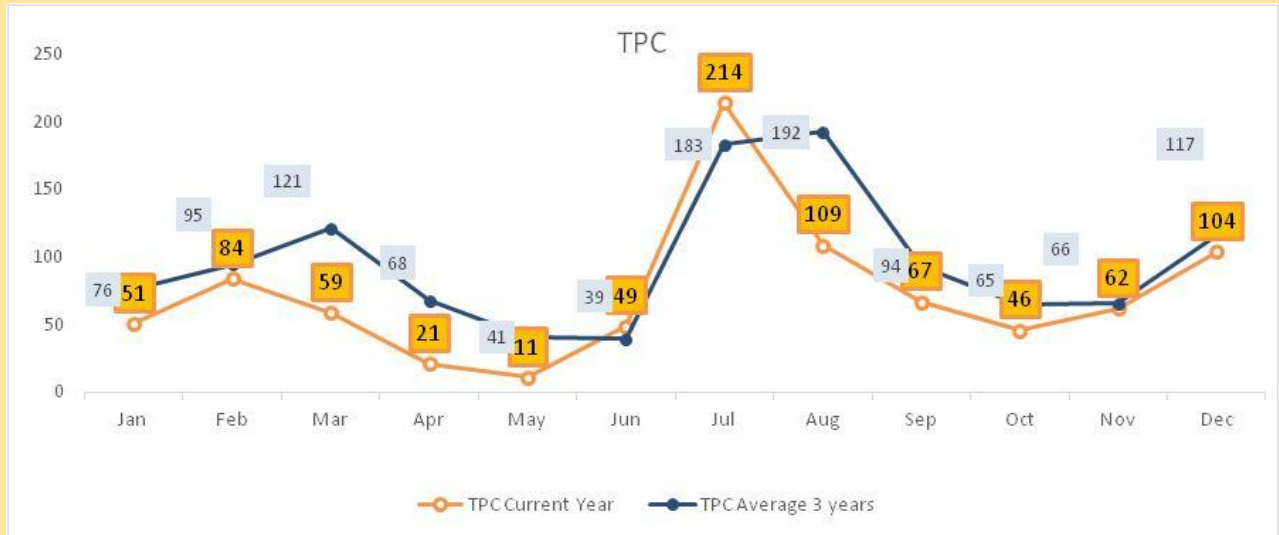
11) TELANGANA

GRAPH 1: MONTH WISE TREND OF BSE IN TELANGANA



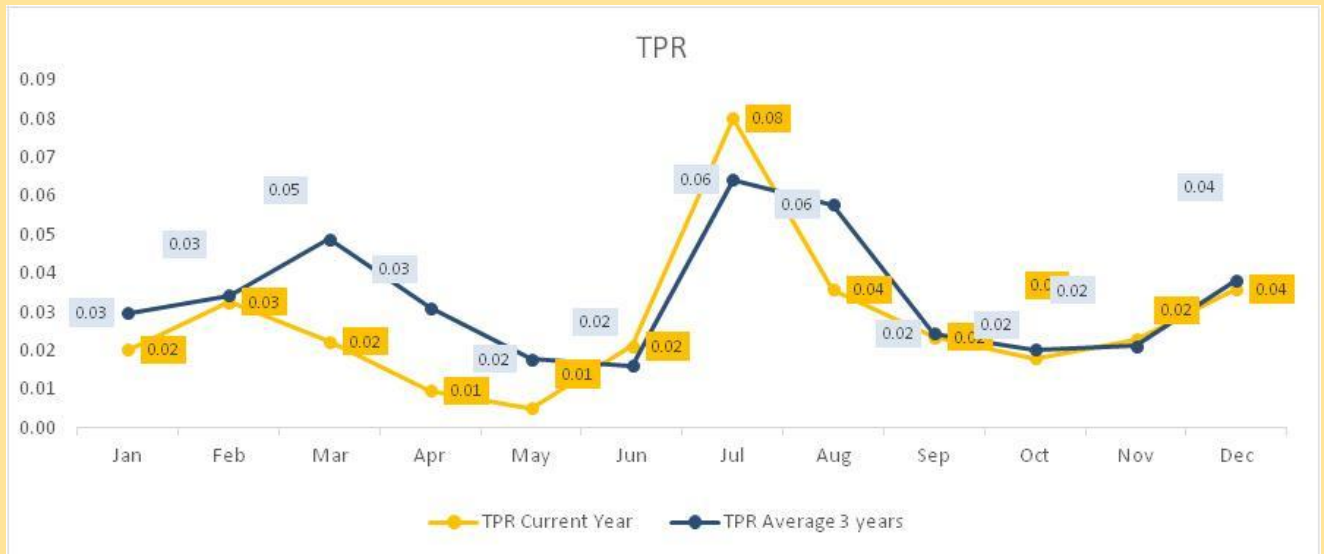
There is decline of BSE by 7.1% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 5.8% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN TELANGANA



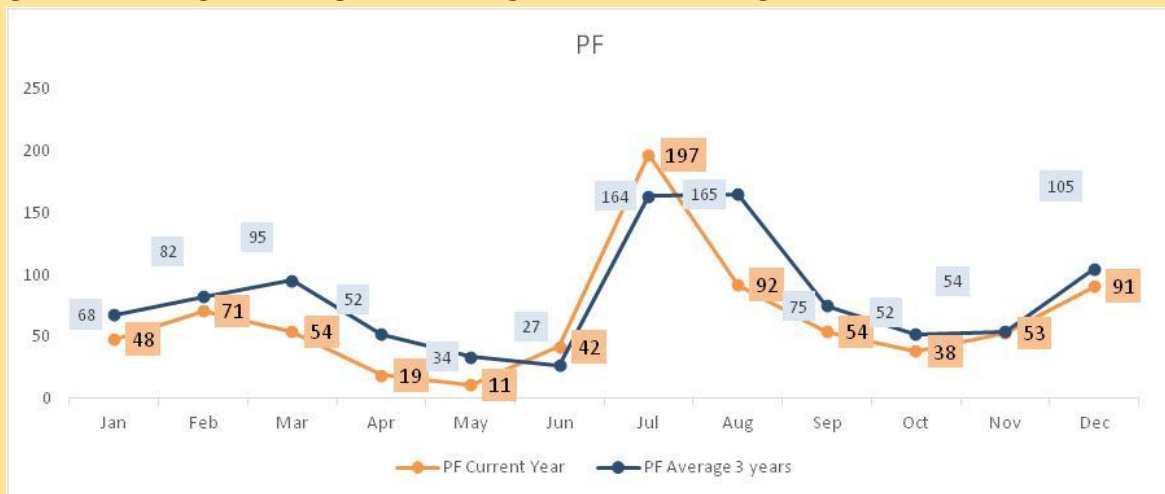
There is 39.9% decline in TPC upto December 2021 as compared to last three years average cumulative. There is 0.3% decrease in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN TELANGANA



The TPR was 0.03 upto December 2021 as compared to 0.04 for last three years average and 0.03 upto December 2020.

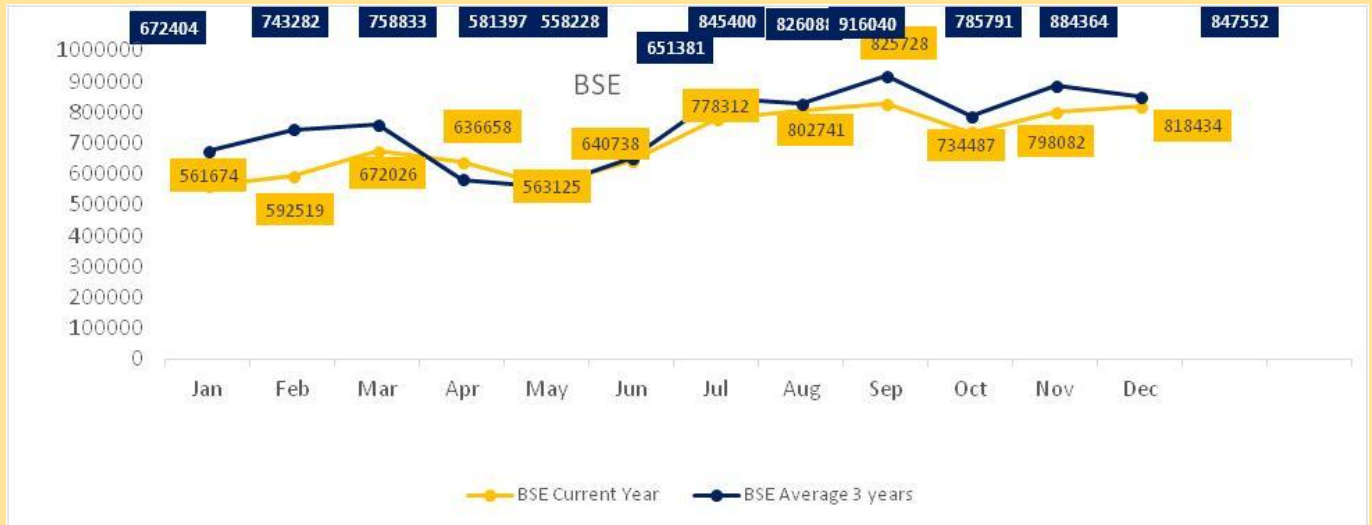
GRAPH 4: MONTH WISE TREND OF PF IN TELANGANA



There is 35.7% decrease In PF cases upto December 2021 as compared to last three years average. There is 3.8% increase in PF cases upto December 2021 vis-à-vis upto December 2020.

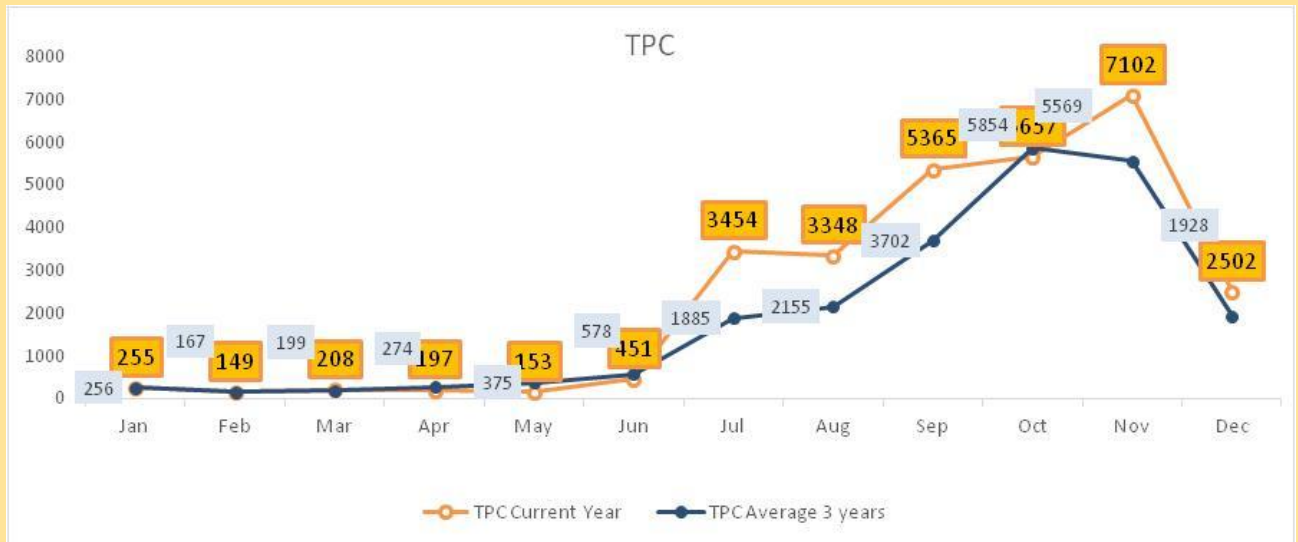
12) WEST BENGAL

GRAPH 1: MONTH WISE TREND OF BSE IN WEST BENGAL



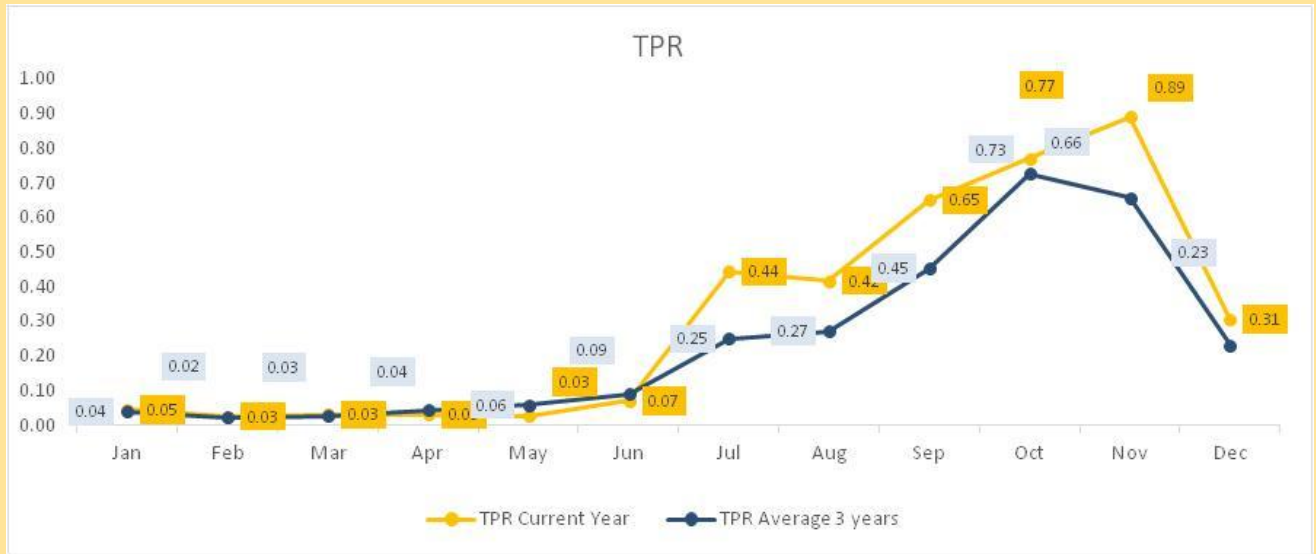
There is decline of BSE by 16.9% upto December 2021 as compared to last three years average cumulative. There is an increase of BSE by 31.5% upto December 2021 vis-à-vis upto December 2020.

GRAPH 2: MONTH WISE TREND OF TPC IN WEST BENGAL



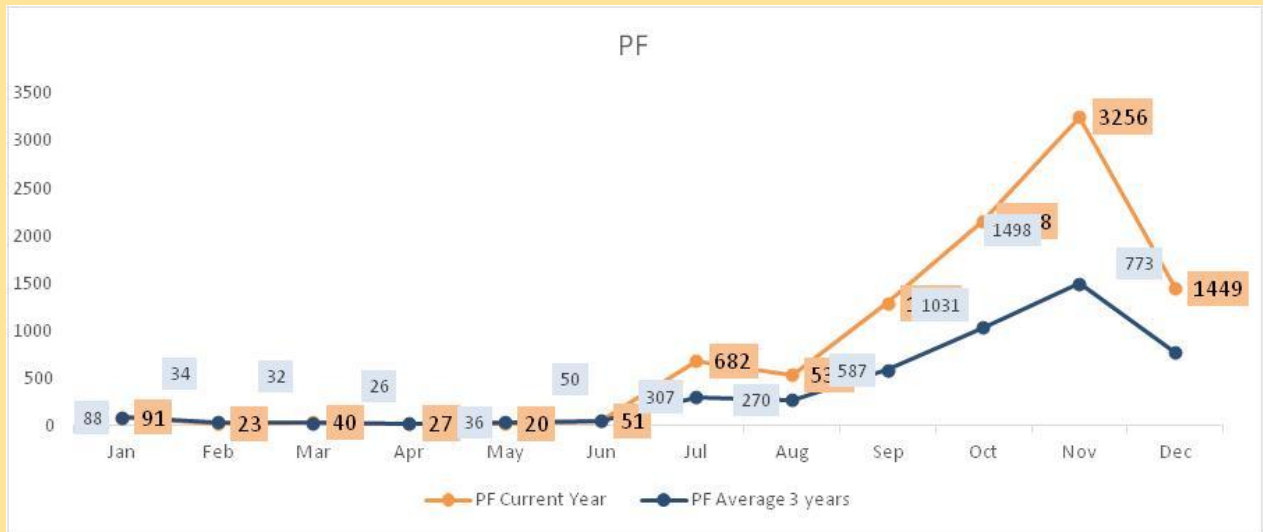
There is 30.4% increase in TPC upto December 2021 as compared to last three years average cumulative. There is also an increase of 105.2% in TPC upto December 2021 vis-à-vis upto December 2020.

GRAPH 3: MONTH WISE TREND OF TPR IN WEST BENGAL



The TPR was 0.34 upto December 2021 as compared to 0.22 for last three years average and 0.22 upto December 2020.

GRAPH 4: MONTH WISE TREND OF PF IN WEST BENGAL



There is 274.8% an increase in PF cases upto December 2021 as compared to last three years average. There is 301.5% increase in PF cases upto December 2021 vis-à-vis upto December 2020.

13) Epidemiological indicators - Malaria

S. N.	Area	Indicator
1	Surveillance/ case finding	No. of Fever cases, No. of Malaria cases, No. of Pf cases
2	Surveillance/ case finding	Monthly Blood Smear Examination Rate (ABER) (should be more than 1%of population)
3	Surveillance/ case finding	Annual Blood Smear Examination Rate (ABER) (should be more than 10%of population)
4	Disease burden & impact	Annual Parasite Incidence (API)
5	Disease burden & impact	Annual Falciparum Incidence (AFI)
6	Disease burden & impact	Slide Positivity rate (SPR):Is independent of surveillance activity, therefore a better indicator for impact assessment
7	Disease burden & impact	Slide falciparum Rate (SFR):It is independent of surveillance and indicates Pf preponderance
8	Disease burden & impact	Pf Percentage (Pf %):Indicates trends in proportion of cases due to Pf out of total cases
9	Input	Nos of RDTs & ACTs Planned versus Received & used
10	Input	% of spray Equipment in working condition
11	Input	% of Spray workers trained
12	Process	% of facilities (SC and PHC) / village level functionaries (ASHA, AWW) reporting stock-out of anti-malarial lasting more than 15 days during the quarter.
13	Process	% of MPH/ASHA/other volunteers trained for use of RDT / ACT
14	Process	% of Diagnostic facilities functional with microscopy/RDT in the last reporting period
15	Output	Nets treated once/twice in a year
16	Output	% of Eligible Villages Covered by LLINs Should be 80% or more
17	Output	Insecticide use
18	Outcome	IRS Coverage – Population (%) Should be 80% or more
19	Outcome	IRS Coverage – Rooms %
20	Outcome	% of fever cases who were tested for malaria by microscopy/ RDT with a positive test result for RDT and were started on treatment no later than the next day with ACT
21	Outcome	% of households in which beneficiaries reported having slept under ITNs/ LLINs previous night
22	Outcome	% of PHC sampled in which utilization of ITNs/ LLINs was more than 80%