# RANKING OF DISTRICTS ON THE BASIS OF PROGRAM REVIEW INDICATORS

Apr - Aug  2015

# OBJECTIVE

- The objective of the analysis is to rank districts based on their performance

  - Performance is measured using set of input and output indicators used for program reviews by GoUP
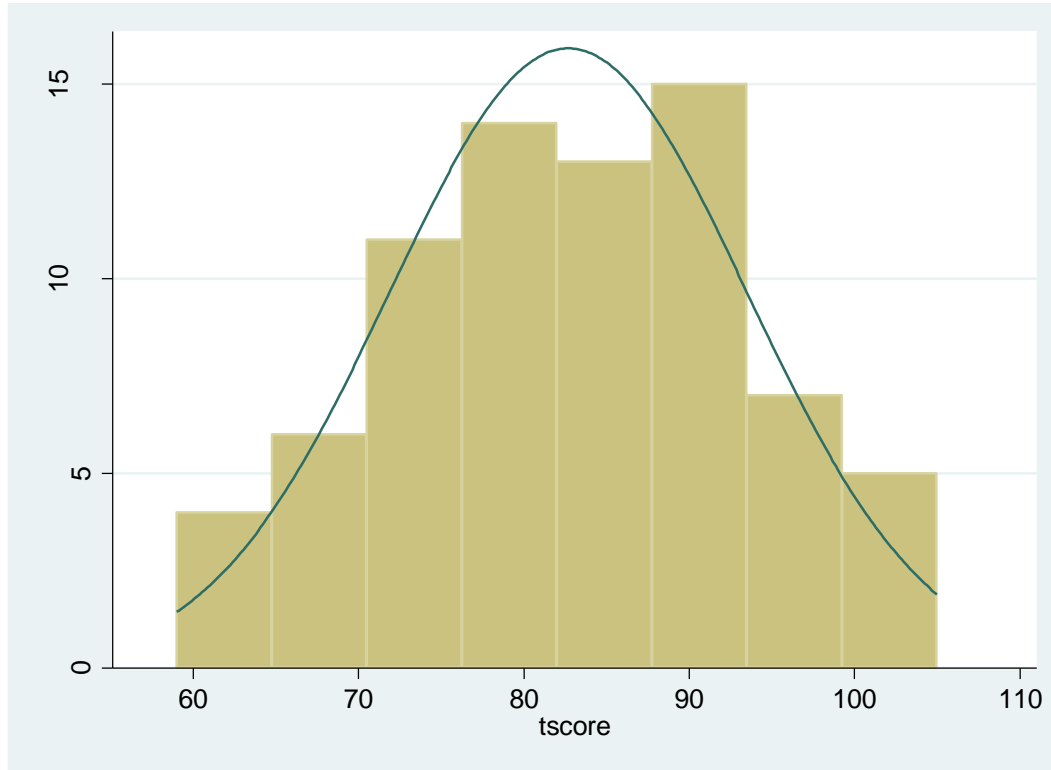
## Description of the variables

- To begin with, 25 indicators are taken for measuring the performance of the districts (CMOs), of which 7 are input (yellow) and 18 are output indicators (green)
- These indicators are routinely used by the NHM for reviewing performance of the district and/or CMOs during review meetings at the state
- Data on change in AYUSH OPD is highly unreliable and was available for 73 districts hence dropped from the analysis
- Considering state priority and MD NHM suggestions, four additional indicators were included after first round of analysis -shown in the separate table (brown)
- Finally, set of 28 identified indicators for ranking of 75 districts.
- Present ranking prepared for Apr-Aug (2015-16) for HMIS/MCTS and financial data (28 indicators).

| Variables | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| Rate of change of ins del rate | 16.2 | 38.9 | -38.2 | 198.9 |
| % of pregnancy identified as HRP | 0.8 | 1.5 | 0.0 | 11.7 |
| % received full ANC (3 ANC) | 65.8 | 9.0 | 40.4 | 84.4 |
| Maternal death reported per 1000 expected death | 26.6 | 40.7 | 0.0 | 176.5 |

| Variables | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| % change in OPD from last year | 16.0 | 24.2 | -58.6 | 124.0 |
| % change in IPD from last year | 16.7 | 54.2 | -52.2 | 257.7 |
| Bed occupancy rate | 25.9 | 24.5 | 0.0 | 161.3 |
| % change in pathology investigation from last year | 55.3 | 62.2 | -43.7 | 283.5 |
| % Institutional deliveries | 41.4 | 11.6 | 14.0 | 76.2 |
| % of beneficiaries received JSY | 79.1 | 61.3 | 22.1 | 579.1 |
| % % Institutional deliveries ASHA received JSY benefits | 55.7 | 17.0 | 12.4 | 92.1 |
| % of C-section deliveries | 3.1 | 4.0 | 0.0 | 24.1 |
| % fully immunized children | 80.1 | 14.0 | 52.3 | 157.2 |
| dropout children from BCG to Measles | -3.5 | 10.1 | -45.6 | 18.9 |
| % of Sterilization to total workload | 2.7 | 2.8 | 0.0 | 13.0 |
| % of IUCD insertion to total workload | 14.1 | 6.4 | 3.5 | 32.3 |
| % of PPIUCD insertion to total IUCD inserted | 9.5 | 9.0 | 0.0 | 48.9 |
| % Cataract Operation against target | 2.9 | 3.8 | 0.0 | 19.1 |
| % facilities uploaded HMIS data on or before 5th | 85.4 | 19.4 | 19.3 | 100.0 |
| % of estimated preg women registered in MCTS | 50.2 | 12.9 | 24.3 | 84.8 |
| % of estimated children registered in MCTS | 27.4 | 10.0 | 9.1 | 56.2 |
| % of Budget utilized RCH flexi pool | 35.8 | 9.3 | 11.8 | 69.7 |
| % of Budget utilized Mission flexi pool | 15.4 | 6.7 | 3.8 | 34.8 |
| % of Budget utilized RI | 21.6 | 21.7 | 0.3 | 172.9 |
| % of Budget utilized NUHM | 24.5 | 15.2 | 0.0 | 60.8 |
| % of Budget utilized National programme | 16.8 | 7.9 | 0.4 | 46.4 |
| % of construction works completed/in progress | 88.0 | 23.6 | 0.0 | 100.0 |
| % Budget utilized in construction work | 64.1 | 29.3 | 0.0 | 100.0 |

# METHOD

Distribution of score (final run, 28 variables)



- All variables are divided into quintiles; districts in the lowest quintile gets a score of `1' and those are in highest quintile gets a score of `5' for each variable. Rank of total scores is computed to order the districts as per their performance
- This method generates top 5 and bottom 5 districts
- The distribution of score is found to be normal indicating robustness of the methodology adopted

# Summary of output indicators between poor and best performance districts

| Variables | Mean | Std. Dev. | Min | Max | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|---|---|---|
| | Poor performer | | | | Best performer | | | |
| % change in OPD from last year | 16.7 | 22.6 | -1.9 | 53.9 | 15.1 | 4.4 | 10.5 | 19.9 |
| % change in IPD from last year | 0.7 | 18.7 | -29.4 | 19.3 | 39.8 | 63.0 | -7.5 | 136.1 |
| Bed occupancy rate | 23.8 | 36.1 | 2.3 | 87.3 | 61.0 | 59.5 | 12.8 | 161.3 |
| % change in pathology investigation from last year | 18.4 | 52.2 | -41.1 | 97.8 | 75.7 | 64.2 | 18.9 | 177.9 |
| % Institutional deliveries | 38.7 | 10.3 | 31.3 | 57.0 | 58.6 | 10.2 | 45.1 | 68.3 |
| % of beneficiaries received JSY | 161.2 | 234.3 | 40.0 | 579.1 | 75.6 | 14.9 | 56.8 | 90.3 |
| % of ASHA who received JSY | 40.5 | 12.2 | 29.7 | 60.0 | 59.9 | 12.8 | 45.5 | 78.0 |
| % of C-section deliveries | 0.3 | 0.4 | 0.0 | 1.0 | 4.0 | 6.4 | 0.1 | 15.2 |
| % fully immunized children | 74.3 | 9.9 | 63.7 | 86.5 | 83.0 | 9.9 | 73.0 | 98.7 |
| dropout children from BCG to Measles | -3.3 | 5.8 | -11.7 | 2.4 | -2.1 | 8.7 | -12.5 | 7.7 |
| % of Sterilization to total workload | 0.7 | 0.8 | 0.1 | 2.0 | 4.0 | 3.1 | 0.3 | 8.3 |
| % of IUCD insertion to total workload | 11.8 | 6.3 | 4.3 | 21.3 | 19.7 | 8.7 | 11.4 | 32.3 |
| % of PPIUCD insertion to total IUCD inserted | 7.2 | 6.6 | 2.9 | 18.8 | 9.7 | 7.6 | 2.8 | 22.1 |
| % Cataract Operation against target | 1.1 | 1.9 | 0.0 | 4.4 | 8.7 | 5.0 | 2.7 | 14.0 |
| % facilities uploaded HMIS data on or before 5th | 83.5 | 10.4 | 74.7 | 99.2 | 89.2 | 13.4 | 71.8 | 100.0 |
| % of estimated preg women registered in MCTS | 51.8 | 15.2 | 34.0 | 73.3 | 57.5 | 14.0 | 39.1 | 72.9 |
| % of estimated children registered in MCTS | 22.8 | 7.5 | 14.7 | 34.8 | 38.7 | 12.4 | 24.2 | 56.2 |

## Summary of output indicators between poor and best performance districts

| Variables | Mean | Std. Dev. | Min | Max | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|---|---|---|
| | Poor performer | | | | Best performer | | | |
| Rate of change of institutional delivery rate | 4.1 | 4.8 | -1.4 | 10.3 | 25.1 | 23.3 | 2.5 | 61.9 |
| % of registered pregnency identified as high risk (MCTS) | 0.5 | 0.9 | 0.0 | 2.0 | 0.6 | 0.4 | 0.1 | 1.1 |
| % of registered pregnant women received 3 ANC | 62.8 | 4.0 | 57.3 | 67.1 | 70.1 | 12.7 | 51.7 | 84.4 |
| Maternal death reported in HMIS per 1000 expected deaths | 4.8 | 6.6 | 0.0 | 13.0 | 49.4 | 44.8 | 12.2 | 112.9 |

## Summary of input indicators between poor and best performance districts

| Variables | Mean | Std. Dev. | Min | Max | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|---|---|---|
| | Poor performer | | | | Best performer | | | |
| % of Budget utilized RCH flexi pool | 31.1 | 4.5 | 25.3 | 35.3 | 39.5 | 6.5 | 31.1 | 48.3 |
| % of Budget utilized Mission flexi pool | 9.8 | 2.7 | 5.8 | 13.3 | 18.3 | 5.5 | 12.0 | 26.6 |
| % of Budget utilized RI | 19.9 | 20.5 | 2.4 | 54.7 | 26.9 | 16.8 | 3.2 | 41.0 |
| % of Budget utilized NUHM | 18.0 | 20.0 | 0.0 | 51.4 | 33.6 | 15.9 | 15.5 | 55.3 |
| % of Budget utilized National programme | 10.6 | 7.2 | 0.4 | 18.3 | 23.2 | 13.8 | 13.5 | 46.4 |
| % of construction works completed/in progress | 65.0 | 48.7 | 0.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| % Budget utilized in construction work | 40.4 | 31.0 | 0.0 | 73.3 | 81.6 | 24.9 | 44.5 | 100.0 |

The mean difference between best and poor performer is (i.e; 39.6) is found to be statistically significant

## Summary of output indicators for best and poor performance districts

| Variables | Chitrakoot | Kanpur Dehat | Shahjahanpur | Kushinagar | Ballia | Bagpat | Shrawasti | Muzaffarnagar | Firozabad | Lalitpur |
|---|---|---|---|---|---|---|---|---|---|---|
| | Poor performer | | | | | Best performer | | | | |
| **Total score** | 59 | 60 | 61 | 63 | 66 | 100 | 100 | 101 | 101 | 105 |
| **Rank** | 1 | 2 | 3 | 4 | 5 | 71.5 | 71.5 | 73.5 | 73.5 | 75 |
| % change in OPD from last year | -1.9 | 53.9 | 8.1 | 2.2 | 21.0 | 18.6 | 10.5 | 16.2 | 10.5 | 19.9 |
| % change in IPD from last year | 10.1 | 19.3 | -3.9 | -29.4 | 7.1 | 71.9 | -6.7 | -7.5 | 136.1 | 5.6 |
| Bed occupancy rate | 18.5 | 8.3 | 87.3 | 2.3 | 2.8 | 161.3 | 12.8 | 42.5 | 23.1 | 65.3 |
| % change in pathology investigation from last year | 5.8 | -5.9 | -41.1 | 35.2 | 97.8 | 37.1 | 177.9 | 18.9 | 46.8 | 97.8 |
| % Institutional deliveries | 57.0 | 35.0 | 35.6 | 31.3 | 34.6 | 50.8 | 68.3 | 61.6 | 45.1 | 67.2 |
| % Institutional deliveries ASHA received JSY benefits | 52.1 | 46.6 | 88.4 | 579.1 | 40.0 | 89.5 | 90.3 | 77.1 | 64.4 | 56.8 |
| % of ASHA who received JSY | 37.2 | 29.7 | 60.0 | 43.9 | 31.8 | 67.5 | 78.0 | 45.5 | 54.7 | 53.9 |
| % of C-section deliveries | 0.0 | 0.2 | 0.0 | 0.1 | 1.0 | 1.7 | 0.1 | 15.2 | 0.3 | 2.5 |
| % fully immunized children | 86.5 | 65.2 | 81.3 | 74.9 | 63.7 | 76.6 | 98.7 | 81.5 | 73.0 | 85.0 |
| dropout children from BCG to Measles | -6.9 | 2.4 | -1.3 | 0.9 | -11.7 | -12.5 | 7.7 | 4.0 | -0.3 | -9.5 |
| % of Sterilization to total workload | 0.4 | 0.7 | 0.4 | 0.1 | 2.0 | 5.1 | 0.3 | 8.3 | 4.4 | 2.0 |
| % of IUCD insertion to total workload | 13.5 | 21.3 | 11.4 | 4.3 | 8.5 | 11.4 | 19.2 | 11.9 | 23.6 | 32.3 |
| % of PPIUCD insertion to total IUCD inserted | 2.9 | 3.4 | 5.9 | 5.1 | 18.8 | 11.5 | 7.3 | 2.8 | 5.0 | 22.1 |
| % Cataract Operation against target | 0.0 | 0.3 | 4.4 | 0.8 | 0.0 | 13.2 | 4.7 | 9.2 | 2.7 | 14.0 |
| % facilities uploaded HMIS data on or before 5th | 75.2 | 99.2 | 79.7 | 74.7 | 88.7 | 100.0 | 77.8 | 71.8 | 96.3 | 100.0 |
| % of estimated preg women registered in MCTS | 73.3 | 54.6 | 34.0 | 40.9 | 56.3 | 70.0 | 72.9 | 39.1 | 50.3 | 55.2 |
| % of estimated children registered in MCTS | 22.0 | 19.1 | 14.7 | 23.6 | 34.8 | 56.2 | 42.4 | 24.2 | 29.9 | 40.8 |

# Summary of output indicators for best and poor performance districts

| Variables | Chitrakoot | Kanpur Dehat | Shahjahanpur | Kushinagar | Ballia | Bagpat | Shrawasti | Muzaffarnagar | Firozabad | Lalitpur |
|---|---|---|---|---|---|---|---|---|---|---|
| | Poor performer | | | | | Best performer | | | | |
| Rate of change of institutional delivery rate | 2.3 | 1.4 | 10.3 | 7.9 | -1.4 | 20.9 | 9.3 | 30.9 | 61.9 | 2.5 |
| % of registered pregnency identified as high risk (MCTS) | 2.0 | 0.4 | 0.1 | 0.0 | 0.0 | 0.1 | 0.6 | 0.1 | 0.9 | 1.1 |
| % of registered pregnant women received 3 ANC | 62.9 | 57.3 | 67.1 | 60.7 | 66.1 | 66.9 | 51.7 | 84.4 | 67.9 | 79.3 |
| Maternal death reported in HMIS per 1000 expected deaths | 0.0 | 0.0 | 13.0 | 11.0 | 0.0 | 112.9 | 16.1 | 12.2 | 25.9 | 80.0 |

# Summary of input indicators for best and poor performance districts

| Variables | Chitrakoot | Kanpur Dehat | Shahjahanpur | Kushinagar | Ballia | Bagpat | Shrawasti | Muzaffarnagar | Firozabad | Lalitpur |
|---|---|---|---|---|---|---|---|---|---|---|
| | Poor performer | | | | | Best performer | | | | |
| % of Budget utilized RCH flexi pool | 25.3 | 34.3 | 27.4 | 35.3 | 33.2 | 31.1 | 36.6 | 48.3 | 43.2 | 38.3 |
| % of Budget utilized Mission flexi pool | 10.3 | 5.8 | 9.9 | 9.9 | 13.3 | 20.1 | 16.1 | 26.6 | 16.8 | 12.0 |
| % of Budget utilized RI | 19.8 | 14.5 | 8.0 | 54.7 | 2.4 | 15.3 | 35.6 | 41.0 | 39.4 | 3.2 |
| % of Budget utilized NUHM | 14.6 | 0.0 | 6.2 | 18.0 | 51.4 | 15.5 | 30.0 | 55.3 | 43.6 | 23.6 |
| % of Budget utilized National programme | 8.9 | 0.4 | 8.8 | 18.3 | 16.6 | 15.2 | 13.5 | 25.0 | 46.4 | 15.7 |
| % of construction works completed/in progress | 0.0 | 100.0 | 100.0 | 100.0 | 25.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| % Budget utilized in construction work | 0.0 | 20.0 | 41.7 | 73.3 | 67.0 | 67.0 | 100.0 | 96.3 | 44.5 | 100.0 |

# TOP AND BOTTOM PERFORMER- AUG 2015

- **Top 5 performer** :
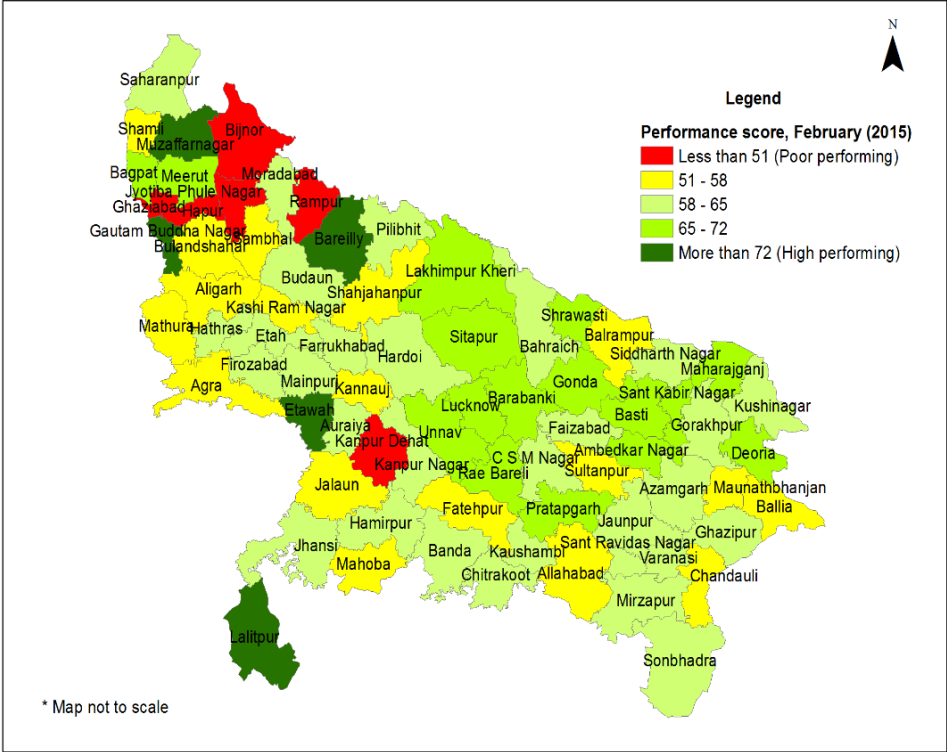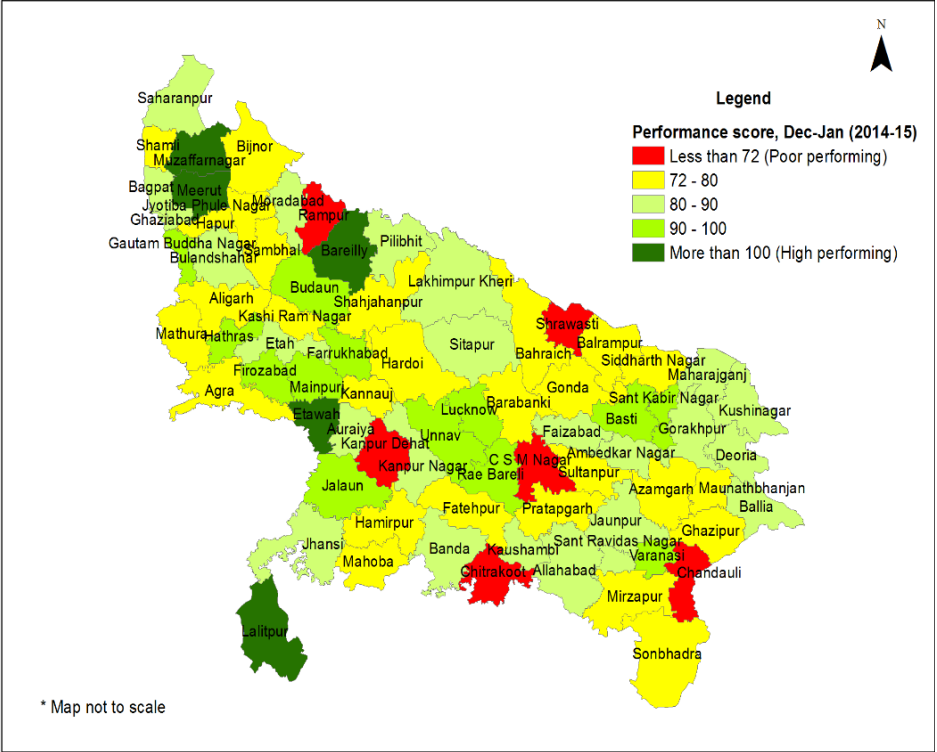Bagpat (100), Shrawasti (100), Muzaffarnagar (101), Firozabad (101), Lalitpur(105)
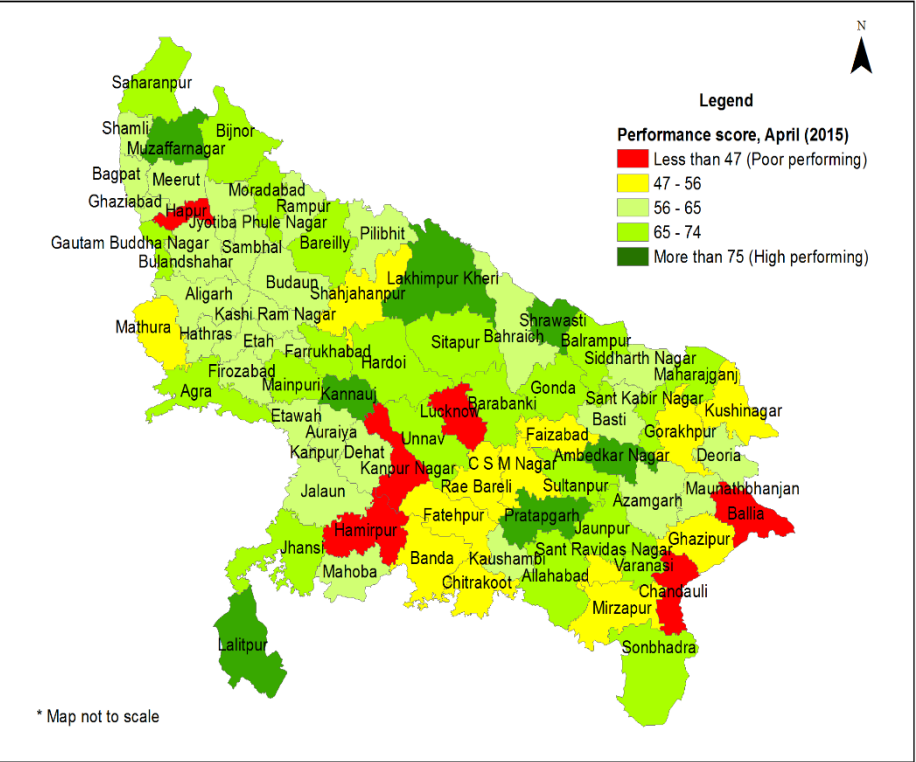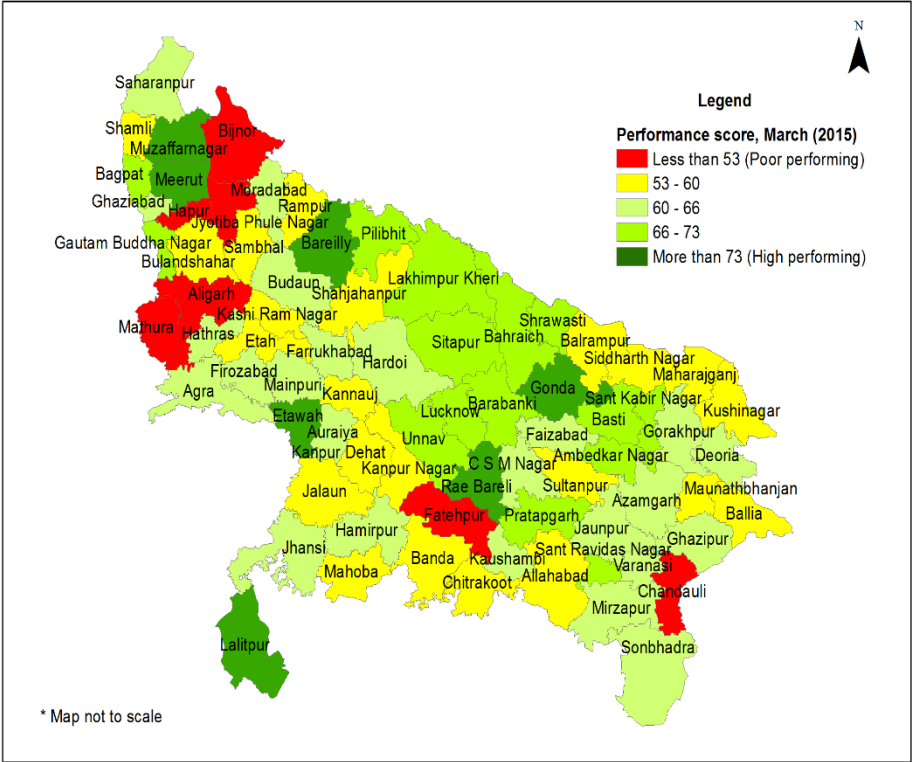
- **Bottom 6 performer :**
Chitrakoot (59), Kanpur Dehat (60), Shahjahanpur (61), Kushinagar (63), Ballia (66)
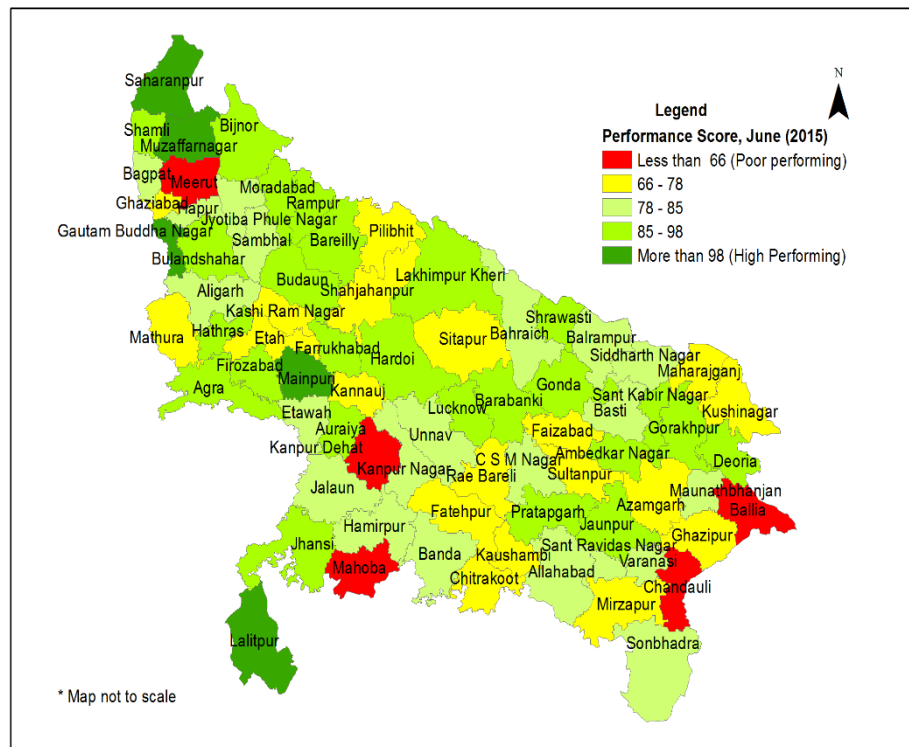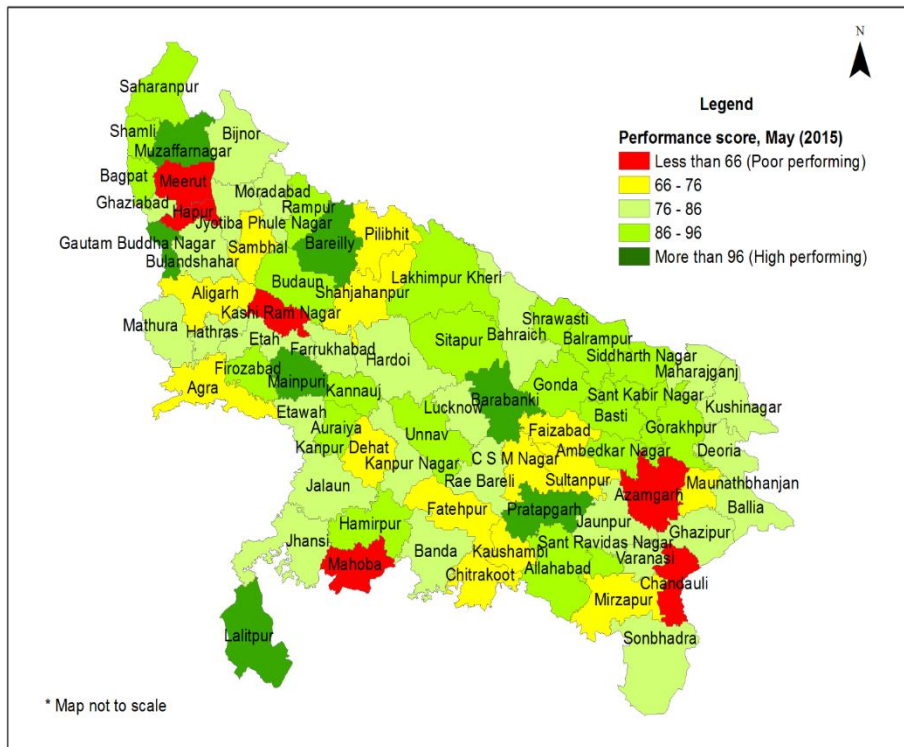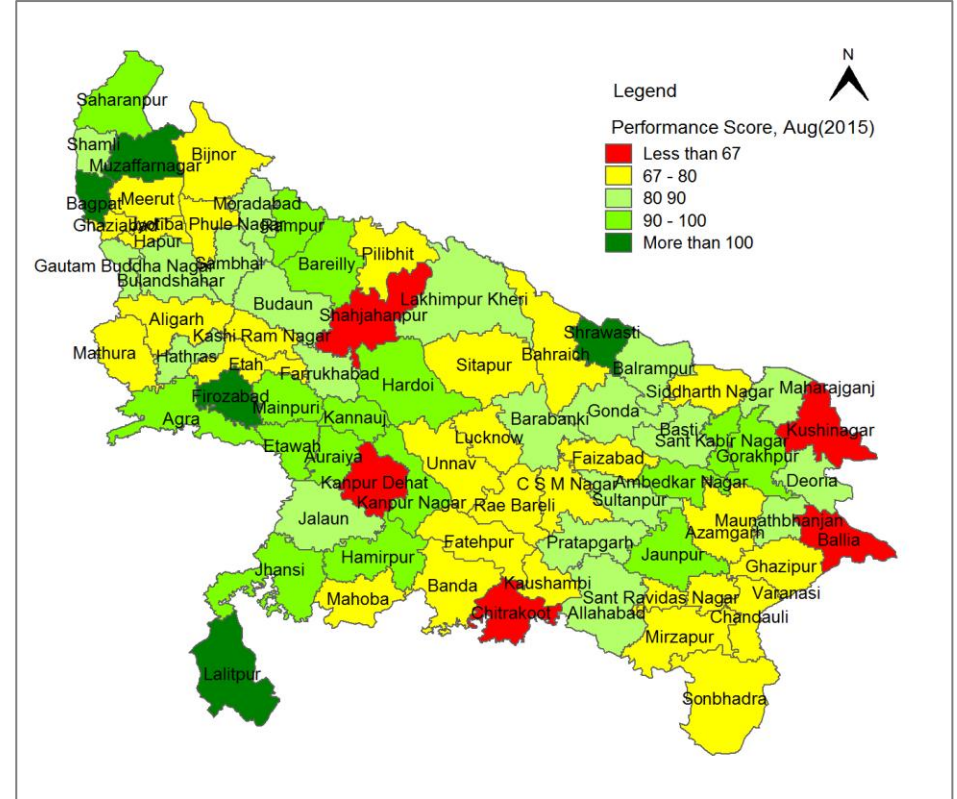
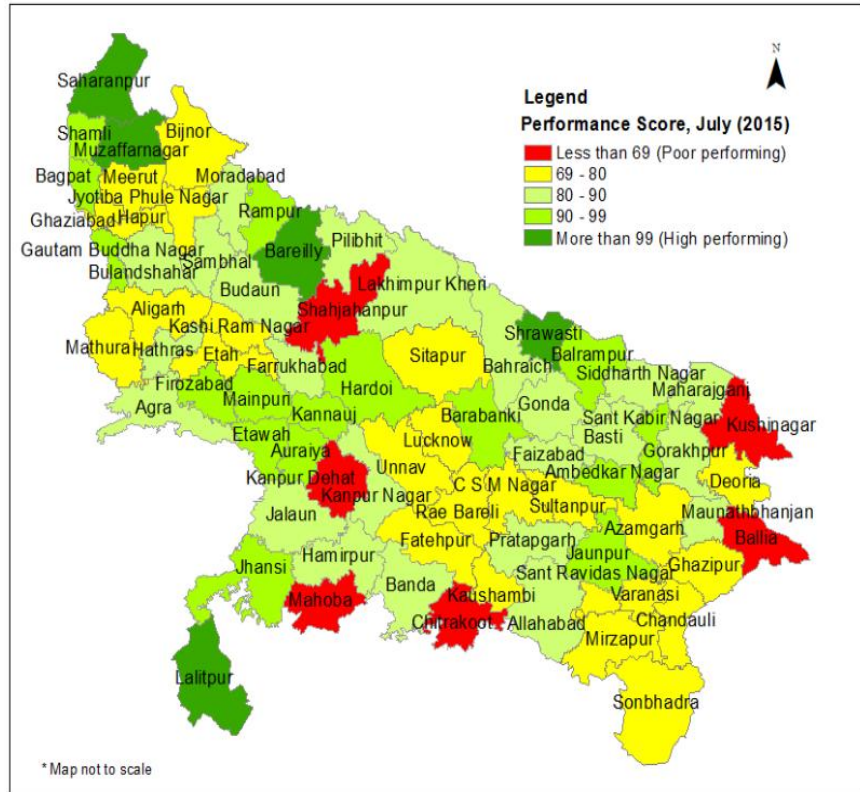*() indicates score obtained by the districts

# Classification of districts of Uttar Pradesh based on performance score

# Classification of districts of Uttar Pradesh based on performance score

# CLASSIFICATION OF DISTRICTS OF UTTAR PRADESH BASED ON PERFORMANCE SCORE

# COMPARATIVE PERFORMANCE RANKING

| Category | Dec-Jan (2014-15) | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | July-15 | Aug-15 | Consistent |
|---|---|---|---|---|---|---|---|---|---|
| Top performing | Etawah (115), Bareilly (107), Muzaffarnagar (106), Meerut (104) Lalitpur (101) | Etawah (80), Bareilly (76), Lalitpur (75), G B Nagar(75) Muzaffarnagar (73) | Etawah(79), Bareilly(77), Gonda(76), Meerut(74), Muzaffarnagar(74), Rae,Bareli(74), Lalitpur(74) | Kannauj (78), Muzzafarnagar(77), Shrawasti(76) Lalitpur (76) | Pratapgarh (98), Bareilly(101), Lalitpur (102) Muzaffarnagar (109) | Gautam Buddha Nagar(99),Main puri(100),Lalitpur(101),Muzaffar nagar(103),Saharanpur(106) | Lalitpur(100), Saharanpur(100), Bareily (101), Shrawasti (104), Muzaffarnagar(107) | Bagpat (100), Shrawasti (100), Muzaffarnagar (101), Firozabad (101), Lalitpur(105) | Etawah, Bareilly, Muzzafarnagar, Lalitpur |
| Poor Performing | Chitrakoot (69), Chandauli (69), Rampur (70), Kanpur Dehat (70), C S M Nagar (70), Aligarh (70) | Hapur (47), Bijnor(49), Ghaziabad (50), Rampur (50) Kanpur Dehat (51), JP Nagar(51) | Hapur(47), Chandauli(47), J P Nagar(51) Bijnor(52) | Lucknow(38), Hapur(44), Chandauli(44), Balia(47), Kanpur Nagar(47) Hamirpur(47) | Chandauli (59), Azamgarh (62), Kashi Ram Nagar (63), Hapur(66) Meerut(66), Mahoba (66) | Chandauli(60),Mahoba(62),Kanpur Dehat(62),Meerut(64),Ballia(66) | Kanpur Dehat (62), Shahjahanpur (64), Mahoba(65), Kushinagar (68), Chitrakoot (68), Ballia (68) | Chitrakoot (59), Kanpur Dehat (60), Shahjahanpur (61), Kushinagar (63), Ballia (66) | Hapur, Bijnor, JP Nagar Chandauli, Ballia |

*() indicates score obtained by the districts

# THANK YOU