

SMS BASED MONITORING SYSTEM FOR FAIR PRICE SHOPS IN TAMIL NADU

The Co-operation, Food and Consumer Protection Department of the Government of Tamil Nadu has the operational responsibility of identification of beneficiaries, issuance of ration cards and supervision of movement and distribution of food grains from godowns through Fair Price Shops located all over the state of Tamil Nadu. Diversions, leakages, delays in allocation & transportation, and inappropriate distribution of food grains to fair price shops often go unchecked because of lack of timely information for monitoring. To counter these inefficiencies and enhance transparency in the system, SMS based monitoring system for Fair Price Shops has been introduced in Tamil Nadu.



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For strengthening of Public Distribution System in the state of Tamil Nadu, a monitoring system has been developed by NIC TNSC that employs SMS facility to collect stock details of PDS commodities from Fair Price Shops (FPS) and godowns distributed all across the state. Fair Price Shops in Tamil Nadu are run by the Cooperative Department and Tamil Nadu Civil Supplies Corporation (TNCSC). The Cooperative Department in Tamil Nadu operates around 30,636 Fair Price Shops. These shops are run by 4562 registered Cooperative

Societies. These Cooperative Societies also operate 262 kerosene bunks. In addition to these, there are around 1466 Fair Price Shops in the state which are operated by the Tamil Nadu Civil Supplies Corporation (TNCSC). The Cooperative Societies procure various commodities meant for distribution from 422 godowns of the Tamil Nadu Civil Supplies Corporation (TNCSC), and supply them to Fair Price Shops as per the allotment fixed by the Civil Supplies & Consumer Protection Department.

NIC TNSC has developed a system to effectively track down the daily stock available for essential commodities including raw rice, boiled rice, AAY rice, sugar, wheat, palm oil, tur dal, urad dal, atta, rava, maida and

District-wise Daily Closing Balance

08/08/2014

| Sl. No. | District Name | Total Shops | Reported Total Stock | Reported Stock WTD | Total Reported Stock | Boiled Rice | Raw Rice | AAY Rice | Sugar | Palm Oil | Wheat | Other Cereals | Other | ATP | Other | Maida | Rava | Other | Other |
|---------|---------------|-------------|----------------------|--------------------|----------------------|-------------|----------|----------|--------|----------|--------|---------------|--------|-----|-------|-------|------|-------|--------|
| 1 | Arundhikudi | 426 | 415 | 0 | 415 | 732355 | 127631 | 256612 | 96391 | 46278 | 70888 | 36361 | 30735 | 0 | 145 | 20 | 0 | 0 | 41374 |
| 2 | Chidambaram | 1230 | 1207 | 7 | 1204 | 3754514 | 617816 | 461769 | 426798 | 30027 | 355247 | 61959 | 64208 | 0 | 752 | 0 | 0 | 0 | 12174 |
| 3 | Coimbatore | 1126 | 1147 | 16 | 1163 | 2875675 | 642918 | 363832 | 376374 | 174943 | 381668 | 207413 | 20 | 0 | 0 | 0 | 0 | 0 | 107039 |
| 4 | Dharmapuri | 995 | 927 | 0 | 928 | 174238 | 147584 | 405544 | 144786 | 63762 | 171292 | 134478 | 40178 | 215 | 243 | 275 | 0 | 0 | 97363 |
| 5 | Dindur | 700 | 723 | 7 | 726 | 1708191 | 317171 | 145421 | 124367 | 173218 | 177953 | 114256 | 76172 | 20 | 0 | 0 | 23 | 0 | 41393 |
| 6 | Erode | 1873 | 1926 | 0 | 1926 | 3928495 | 448775 | 4255448 | 353649 | 29115 | 195886 | 194344 | 70396 | 0 | 121 | 42 | 0 | 0 | 173463 |
| 7 | Kanniyakumari | 1177 | 1144 | 2 | 1146 | 2363029 | 706792 | 357144 | 254329 | 111298 | 133117 | 112736 | 74263 | 0 | 0 | 0 | 0 | 0 | 1150 |
| 8 | Kanyakumari | 554 | 471 | 0 | 457 | 981984 | 479148 | 779344 | 179642 | 107563 | 116992 | 47729 | 10336 | 433 | 513 | 882 | 0 | 0 | 154234 |
| 9 | Karikal | 562 | 536 | 0 | 536 | 1627643 | 56183 | 374723 | 140279 | 14712 | 96379 | 30371 | 18888 | 0 | 0 | 0 | 0 | 0 | 56010 |
| 10 | Kanyakumari | 1027 | 1027 | 0 | 1027 | 17152 | 138191 | 476232 | 384291 | 98388 | 171816 | 191423 | 49443 | 0 | 0 | 0 | 0 | 0 | 89337 |
| 11 | Kanyakumari | 1316 | 1242 | 0 | 1242 | 2919393 | 443428 | 454255 | 479934 | 186818 | 893843 | 143135 | 113293 | 0 | 0 | 0 | 0 | 0 | 30745 |
| 12 | Kanyakumari | 739 | 470 | 0 | 458 | 842368 | 219492 | 314581 | 146113 | 76784 | 75026 | 41634 | 30456 | 0 | 0 | 0 | 0 | 0 | 34953 |
| 13 | Kanyakumari | 898 | 775 | 2 | 777 | 1757849 | 312954 | 1284503 | 371185 | 72367 | 134845 | 77121 | 57495 | 0 | 0 | 0 | 0 | 0 | 33917 |
| 14 | Kanyakumari | 389 | 321 | 0 | 321 | 626599 | 17181 | 90548 | 39641 | 17364 | 23584 | 8058 | 639 | 0 | 0 | 0 | 0 | 0 | 44113 |
| 15 | Kanyakumari | 717 | 544 | 4 | 548 | 970266 | 101662 | 73734 | 371478 | 176987 | 388364 | 148763 | 136643 | 0 | 0 | 0 | 0 | 0 | 112888 |
| 16 | Kanyakumari | 278 | 274 | 0 | 274 | 729227 | 164749 | 343128 | 88815 | 33101 | 82548 | 38948 | 17999 | 0 | 0 | 0 | 0 | 0 | 38434 |

| Shop No | Shop Name | Closing Date | Mobile Number | Reported Date | Store Price | Stock Price | Commodity in R |
|---------|---------------------|--------------|---------------|---------------|-------------|-------------|----------------|
| DC001 | HEAD OFFICE | 04/05/2014 | 9677454615 | 04/05/2014 | 7100 | 7100 | ... |
| DC002 | Modestur 1 | 7/04/2014 | 9945517060 | 07/04/2014 | 2017 | 2700 | ... |
| DC003 | Modestur 2 | 02/05/2014 | 9012787004 | 02/05/2014 | 6000 | 5040 | ... |
| DC004 | Puchermani Road, P | 03/05/2014 | 9676581953 | 03/05/2014 | 560 | 330 | ... |
| DC005 | Puduchery 2 | 7/05/2014 | 9656656373 | 07/05/2014 | 1367 | 1161 | ... |
| DC006 | Motipura godown | 04/05/2014 | 9000207150 | 04/05/2014 | 8074 | 8100 | ... |
| DC007 | Mankani Road 1 | 03/05/2014 | 9408148155 | 03/05/2014 | 481 | 4307 | ... |
| DC008 | Kannan Rice Mill | 04/05/2014 | 9443717060 | 04/05/2014 | 1004 | 5052 | ... |
| DC009 | Nadu street | 03/05/2014 | 9344000074 | 03/05/2014 | 2500 | 3000 | ... |
| DC010 | Sudhama Rice Street | 03/05/2014 | 9750350002 | 03/05/2014 | 1073 | 1704 | ... |
| DC011 | Peppara Street | 04/05/2014 | 9500710040 | 04/05/2014 | 21 | 1440 | ... |
| DC012 | Avakkal Street | 03/05/2014 | 9764755000 | 03/05/2014 | 130 | 6000 | ... |
| DC013 | Puduchery 1 | 03/05/2014 | 9700010300 | 03/05/2014 | 474 | 5004 | ... |
| DC014 | Puduchery 2 | 03/05/2014 | 9666411013 | 03/05/2014 | 8000 | 3367 | ... |
| DC015 | Peppara 1 | 7/05/2014 | 9100530000 | 07/05/2014 | 1130 | 8812 | ... |
| DC016 | Peppara 2 | 08/05/2014 | 9500710000 | 08/05/2014 | 510 | 8140 | ... |

kerosene, in the Fair Price Shops located all over the state. Data in the form of SMS is sent daily through mobile phones by the salesmen of Fair Price Shops in pre-defined formats. The system facilitates compilation and generation of required MIS reports, providing instant access through a web based system to all the decision making authorities.

There are defined individual formats for SMS messages pertaining to each of the following:

- Daily closing stock of commodities in the FPS
- Daily stock receipts of commodities at the FPS
- Daily closing stock position of commodities in godowns
- Monthly count of empty gunnies/barrels
- Status of electronic weighing machine/billing machine in the FPS
- Record of inspections as and when carried out by inspecting officials

Through a single SMS, the salesman sends information comprising

the day's closing stock of all the commodities available in the shop. Similarly, a single SMS is sent for stock receipts of all the commodities in the shop, and so on. When there is any problem in the functioning of electronic weighing machines or billing machines the salesman can report the working status of the machines, before and after repair, in the defined syntax to the headquarters through SMS. Officials at various levels, who carry out periodic or surprise inspections of the shops, can also send their preliminary reports via SMS.

The system accepts SMS data only from registered mobile numbers. Salesmen and godown clerks may send SMS pertaining to those shops/godowns alone for which their number has been registered. Registration and management of valid mobile numbers of salesmen, godown clerks and inspectors is done through a web interface by authorized officials at the district level and the concerned Cooperative Societies.

The application software parses the SMS string and updates the database in case the message is error free. Invalid SMS messages including

those that follow wrong syntax, wrong codes, duplicate commodities, or originating from unregistered mobile numbers are displayed through web based reports. The respective societies can keep a track record of these and take corrective actions in time.

The software has been developed using Open Source Technology, in JSP & Java Servlet on Struts framework, and hosted at Tamil Nadu State Data Centre. The SMS gateway of NIC has been utilised for sending SMS. Implementation of the system requires salesmen of Fair Price Shops, godown clerks and the inspecting officials to have mobile phones for transmitting data. A desktop PC system with internet connection is required by the district level officials of the cooperatives, societies, and the officials of TNCSC for registration and management of mobile numbers and for accessing reports.

The system has been in place since Feb 2013. Daily data generated from nearly 94% of the shops of the Cooperatives and TNCSC is being currently received through the system. The system has enabled decision makers at Co-operation, Food & Consumer Protection Department, the Registrar of Cooperative Societies and Tamil Nadu Civil Supplies Corporation, to monitor the critical level stock position of commodities in the shops on daily basis, and ensure timely movement of stocks of PDS commodities, thereby improving service levels at the various Fair Price Shops.

The daily stock position in the Fair Price Shops has also been made available in the public domain through the portal <http://www.consumer.tn.gov.in/>, as well as in the e-PDF Portal of India.

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