

INFORMATION DISCLOSURE PROGRAM FOR AIR POLLUTION ABATEMENT (STAR RATING PROGRAM)



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Why Information Disclosure?

Information Disclosure programs share quantitative/qualitative information on industrial pollution with **public** and **industry**

- **Disclosure** may enlist industry and public in pollution abatement.
 - **Disclosure to industry** spurs abatement by improving factory managers' information about their own plants' emissions
 - **Disclosure to public** spurs abatement by creating pressure on industry from public, regulator, shareholders, customers, and employees
- Similar programs:
 - United States' Toxic Release Inventory (**TRI**)
 - Indonesia's Program for Pollution Control, Evaluation, and Rating (**PROPER**)
 - Programs in China, Ghana, Vietnam, Philippines, Ukraine, etc.



What is Information Disclosure?

- **Stationary stack samples** high-pollution-potential industries are collected and analyzed.
- **Selected industries' environmental performance** is rated from one to five stars based on samples.



- **Ratings are published publically**, and mailed to industries.
- **The program is evaluated** by comparing environmental performance of rated industries to unrated industries.



Why Evaluate?

- **Similar programs** around the world:
 - USA: Toxic Release Inventory (TRI)
 - Indonesia: Program for Pollution Control, Evaluation, and Rating (PROPER)
 - China, Ghana, Vietnam, Philippines, Ukraine, etc.
- **Hard to measure impacts** of these programs, separate from underlying trends of pollution over time.
- **Evidence encourages innovation** in environmental regulation—in India and beyond.
- By **randomly selecting** industries for disclosure of ratings, we can show exactly how ratings impact environmental performance.



Why Maharashtra

- Maharashtra is the most industrialized state of India – more than 75,000 industries
 - 12,500 red
 - 15,500 orange
 - 47,000 green
- MPCB conducts **extensive** stack and ambient air monitoring
 - 19,738 stack and ambient air samples collected between September-2012 to June-2014
 - 10,199 stack samples
- Such a detailed dataset can be used for innovative regulation schemes without further constraining manpower



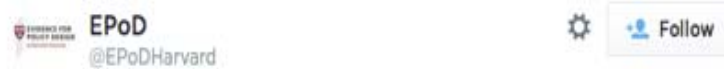
Positive Stakeholder Response

- **March 2013:** Initiative to share information on industrial emissions developed through a partnership between Maharashtra Pollution Control Board (MPCB) and J-PAL South Asia.
- **July 20, 2013:** Pilot Project approved by MPCB.
- **December 2014:** J-PAL and MPCB finalized the emissions database and ratings methodology.
- **January, 2015:** Project presented to the Principal Secretary to CM and Environment Secretary.



Positive Stakeholder Response

Presentation by Mr. Motghare on star rating at policy dialogue (New Delhi 31st-July-2014)



V.M. Motghare of MPCB: Maharashtra has leading Info Disclosure Program for #Airpollution Abatemnt #CleanGrowthIndia #BCUREdialog

Reply Retweet Favorite More

12:07 AM - 31 Jul 2014



#maharashtra: RCT to evaluate impact of ratings disclosure to public! Me: Excellent initiative! #evidence! #cleangrowthindia @3ieNews

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11:38 PM - 30 Jul 2014



Nick Ryan @Yale: Vacuum of info in environ space creates lack of unified vision for solutions #BCUREdialog @UChiDelhi

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Verification of Data by MPCB

- Dataset verified by MPCB Field Officers to ensure correct allocation of industries into sectors
- MPCB HQ has sent dataset to Regional Offices for second round of data verification, to identify:
 - Closed industries.
 - Discrepancies in sector data
 - Add additional industries missed in dataset.
- Methodology and Implementation area needs to be discussed internally.



Methodology for Rating

- Industries from all sectors, meeting the criteria in the table below, and sampled for **PM** will be considered for rating

Pollution Category	Investment
Red	>25 crores
Orange	>250 crores

Note: These industries fall under CC/CAC category of industries , as defined by MPCB

- The ratings, based on stack monitoring data of PM, will represent **air pollution performance** of an industry as reflected by their **PM emissions**
- Comparison will be made on the **average** emission value **of latest two sample dates**. If there is a single sample date, its emission value will be taken for comparison.
- Industries will be divided into 5 equal percentiles of average PM emission value as calculated above

Percentile	Stars
0-20	★★★★★
21-40	★★★★☆
41-60	★★★☆☆
61-80	★★☆☆☆
81-100	★☆☆☆☆



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Methodology for Rating

An example

- ABC industry has been sampled 4 times for PM in the period under consideration. The four emission values (in mg/Nm³) are:

Sample 1	Sample 2	Sample 3	Sample 4
304	557	417	217

- Average of last two PM emission values for ABC Industry: **317 mg/Nm³**
- Based on average PM emission values calculated for all industries, the above value is in the 85th percentile.

As the average PM emission value of ABC Industry falls in the between the 81st and 100th percentile, it will receive 1-star: ★☆☆☆☆



Methodology for Evaluation

- The program will be conducted as a **Randomized Control Trial (RCT)** to evaluate its impact
- Industries to be divided in three **groups**:

Group	Disclosure
Treatment Group 1	Ratings disclosed to public
Treatment Group 2	Ratings disclosed to industry
Control Group	No disclosure

- Such an allocation will help evaluate the impact of the two disclosure strategies w.r.t. each other, and separately w.r.t. status quo
- Post-disclosure, stack monitoring data will be collected again to **evaluate** the impact of disclosure on industries' PM emissions
- Once successfully backed by evidence, the program can be **scaled up** by MPCB for periodic (quarterly/semi-annual) release of ratings



Website

- Ratings will be publically available on the MPCB website.
- The website will include a simple map-based browsing feature, as well as a searchable, interactive ratings list.

Industrial Air Pollution: Industry Rankings

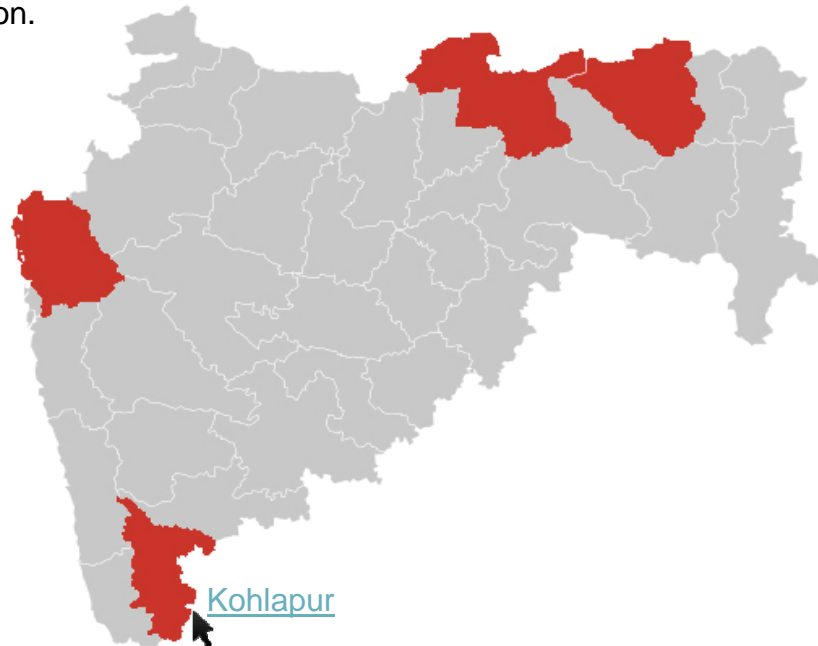
[Browse Ratings](#)

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All Industries

Click a region to see Air Pollution Ratings for all industries in that region.



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[Kohlapur](#)

Website

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Industrial Air Pollution: Industry Rankings

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Quick Links:
10 most-polluting industries of each region
10 most-polluting industries of each sector
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Browse By Sector
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Star Rating Program: Making Our Air Cleaner
The Star Ratings Program is an innovative approach to reducing air pollution from stationary sources in Maharashtra. Click to learn [more about the program](#), or for details of [how the ratings are calculated](#).

Browse Ratings
Click a region to see Air Pollution Ratings for all industries in that region.

KOHLAPUR All Industries

Search Industry, Region Go

Company	SRO	Sector	Rating
E. N. V SUPER POWER	Ratnagiri	Misc.	★ ★ ★ ★ ★
INDO CHEMICAL	Ratnagiri	Chemical	★ ★ ★ ★ ★
CORD TEXTILE PVT LTD	Chiplun	Textile	★ ★ ★ ★ ★
ASIAN CEMENT LTD	Ratnagiri	Cement	★ ★ ★ ★ ★
ASHOK PRECIOUS CATALYSTS PVT LTD	Sangli	Chemical	★ ★ ★ ★ ★
M. J. K. POWER (INDIA) LTD.	Chiplun	Power	★ ★ ★ ★ ★
GADRE TEXTILE LTD	Chiplun	Textile	★ ★ ★ ★ ★
SUPER STEEL PVT. LTD.	Chiplun	Steel	★ ★ ★ ★ ★
FORM CHEMICALS PVT LTD	Ratnagiri	Chemical	★ ★ ★ ★ ★

Address: At. Nandiwade, Po. Jaigad Tal. Dist. XXX
MIDC: MIDC 1
SRO: Ratnagiri
RO: Kohlapur

Sector: Chemical
Category: Red
Consent: CC
Size: Large

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KOHLAPUR TEXTILE MILL Kohlapur Textile ★ ★ ★ ★ ★
M. K. L. CHEMICALS Kohlapur Chemical ★ ★ ★ ★ ★
SARDAR AUTOMOBILES Chiplun Engineering ★ ★ ★ ★ ★
MARATHA POWER PVT. LTD. Ratnagiri Power ★ ★ ★ ★ ★
SIDHARTH AUTOMOBILES Sangli Engineering ★ ★ ★ ★ ★
REARDEN STEEL Chiplun Steel ★ ★ ★ ★ ★

Show Ratings All Clear

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10 most-polluting industries of each region
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Industrial Air Pollution: Industry Rankings

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• Thane
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Narrow By:

Question
Region
Sub-region
Sector
Report Card Release
Data Format

Go

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All Industries
Click a sector to see Air Pollution Ratings for all industries in that sector.

Sectors
Cement
Chemical
Engineering
Power
Steel
Textile

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10 most-polluting industries of each sector
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Website

Search: Industry, Region

KOLHAPUR

All Industries

Industry	SRO	Sector	Rating
KEM CHEMICALS PVT LTD	Kolhapur	Chemical	★☆☆☆☆
CABDURY LIRIL LTD	Kolhapur	Food	★☆☆☆☆
POSCO INDIA PVT. LTD.	Chiplun	Steel	★☆☆☆☆
E. N. V SUPER POWER	Ratnagiri	Misc.	★★☆☆☆
INDO CHEMICAL	Ratnagiri	Chemical	★★☆☆☆
CORD TEXTLE PVT LTD	Chiplun	Textile	★★☆☆☆
ASIAN CEMENT LTD	Ratnagiri	Cement	★★☆☆☆
ASHOK CATALYSTS PVT LTD	Sangli	Chemical	★★☆☆☆
M. J. K. POWER (INDIA) LTD.	Chiplun	Power	★★☆☆☆
GADRE TEXTILE LTD	Chiplun	Textile	★★★☆☆
SUPER STEEL PVT. LTD.	Chiplun	Steel	★★★☆☆
FORM CHEMICALS PVT LTD	Ratnagiri	Chemical	★★★☆☆
PATHAK STEEL LTD.	Kolhapur	Steel	★★★★☆
MARATHA POWER PVT. LTD.	Ratnagiri	Power	★★★★☆

Show Ratings [All](#) | [Clear](#)

★☆☆☆☆
 ★★☆☆☆
 ★★★☆☆
 ★★★★☆
 ★★★★★

Quick Links:

[10 most-polluting industries of each region](#)

[10 most-polluting industries of each sector](#)

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- Amravati
- Aurangabad
- Chandrapur
- Kalyan
- Kolhapur
- Mumbai
- Nagpur
- Nashik
- Navi-Mumbai
- Pune
- Raigad
- Thane

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Report Card

Air Pollution Report Card Green Textiles Private Limit

Overall Air Pollution
(Last Sampling January, 2013)



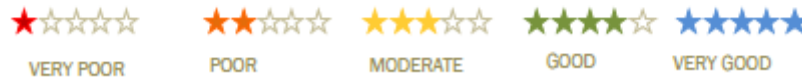
This industry is rated "moderate" for PM air pollution. This means Green Textiles' PM emissions concentration is about the same as emissions at other industries in Maharashtra.

Industry Description:

Address B-47, MIDC Phase-I,
Dombivali, Dist. Thane
RO Thane
SRO Tarapur I
MIDC Dombivali
Type Red
Scale Medium
Sector Textiles

Air Pollution Explanation:

This industry is rated "moderate" for air pollution. This means Green Textiles' the concentration of particulate matter (PM) is about the same as other industries in Maharashtra. This rating is based off stack samples from the Maharashtra Pollution Control Board database.



STAR RATING KEY



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Methodology for Star Rating

- **Criteria for Rating**
 - CC/CAC industries
 - Eight sectors: Cement, Chemicals, Metal works, Paper, Pharmaceuticals, Power, Sugar, and Textile
 - A minimum of four recent PM samples
- Star-Ratings calculated based on median PM concentration amongst recent samples.



Website & Industry Report Card

KOHLAPUR All Industries

Search Industry, Region

Company	SRO	Sector	Rating
E. N. V SUPER POWER	Ratnagiri	Misc.	★☆☆☆☆
INDO CHEMICAL	Ratnagiri	Chemical	★★☆☆☆
CORD TEXTLE PVT LTD	Chiplun	Textile	★★☆☆☆
ASIAN CEMENT LTD	Ratnagiri	Cement	★★☆☆☆
ASHOK PRECIOUS CATALYSTS PVT LTD	Sangli	Chemical	★★☆☆☆
M. J. K. POWER (INDIA) LTD.	Chiplun	Power	★★☆☆☆
GADRE TEXTILE LTD	Chiplun	Textile	★★★☆☆
SUPER STEEL PVT. LTD.	Chiplun	Steel	★★★☆☆
FORM CHEMICALS PVT LTD	Ratnagiri	Chemical	★★★☆☆

Address: At. Nandiwade, Po. Jaigad Tal. Dist. XXX
 MIDC: MIDC 1
 SRO: Ratnagiri
 RO: Kohlapur

Sector: Chemical
 Category: Red
 Consent: CC
 Size: Large

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KOHLAPUR TEXTILE MILL	Kolhapur	Textile	★★★★☆
M. K. L CHEMICALS	Kolhapur	Chemical	★★★★☆
SARDAR AUTOMOBILES	Chiplun	Engineering	★★★★☆
MARATHA POWER PVT. LTD.	Ratnagiri	Power	★★★★☆
SIDHARTH AUTOMOBILES	Sangli	Engineering	★★★★☆
REARDEN STEEL	Chiplun	Steel	★★★★★

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Information Disclosure Program for
 Air Pollution Abatement

Air Pollution Report Card

Skyline Chemicals Private Limited



MODERATE

Industry Description		Release Information	
MPCB Regional Office (RO)	Kolhapur	Release Number	First (Phase-I)
Sub-Regional Office (SRO)	Ratnagiri	Release Date	26-January-2015
Type	Red	What does the rating mean?	
Scale	Medium	Skyline Chemicals Private Limited is rated "moderate" (3-star) for air pollution.	
Sector	Chemicals	Better performing plants (i.e. plants with lower particulate matter (PM) concentration in stack emissions) get more stars. A 4-star or 5-star rating implies that most of the recent stack samples of the plant report PM emissions below a standard of 150mg/Nm ³ . A plant's star rating also benchmarks its relative performance: as of ratings date, 51 percent of rated plants have done better (received 4 or 5 stars) and 33 percent of rated plants have done worse (received 1 or 2 stars).	
Address	Skyline Chemicals Private Ltd. Plot No. 123/B PO Jaigad, Dist. Kolhapur Pin: 416220 Maharashtra.		

Star Rating Key



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Status and Timeline

Activity	Status/Timeline
Stack monitoring data collection	• Complete
Finalizing rating methodology	• In Process
Report Card & Website Design	• Complete
Assigning ratings to industries	• Complete

Details of collected data (Samples taken between Sep12 – Jul14)*	
Number of PM samples	6166
Number of samples from CC/CAC targeted industries	3271
Number of targeted industries	~800



THANK YOU



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