



# Green ratings

## Small Industries Development Bank of India (SIDBI), India

<http://smallb.in>

Green rating is an estimate of an industry's environment friendliness. It assesses the adverse impact on environment caused by an industry's activities and methods adopted by an industry to minimize the damage. This assessment is done by a credible third party evaluator. The rating is arrived at after considering industry's current processes and technology and their impact on the environment, adoption of clean technology, and various processes adopted for mitigating adverse impact on environment.

### Green rating in India

Green rating initiatives in India are spread across various sectors ranging from buildings to manufacturing industries.

### Green building initiative

In order to create more energy efficient and eco-friendly buildings, the Ministry of New and Renewable Energy in collaboration with The Energy and Resource Institute (TERI) initiated Green Rating for Integrated Habitat Assessment (GRIHA), the National Rating System for Green Buildings in India. GRIHA rating system consists of 34 criteria categorized under various sections such as site selection and site planning, conservation and efficient utilization of resources, building operation and maintenance, and innovation points. For further details, visit GRIHA.

### Green rating project

It is a nongovernment initiative launched by Centre for Science and Environment (CSE) in 1995 to guide Indian industries to improve their environmental performance. The project mainly relied on voluntary participation of companies and depended upon the company's eagerness to avoid bad publicity as these ratings are released for public. Along with the assignment of green rating, the initiative charted out steps need to be taken by each industry to improve their performance. In majority of the cases, the companies have implemented the road map provided by CSE. The industries covered in this project are paper and pulp, cement, automobile, and the chlor alkali sector. For further details visit Green Rating Programme. A larger proportion of companies rated for green credentials under this program are large enterprises

### SMERA green ratings

In India, green rating of enterprises is offered by SME Rating Agency of India Limited (SMERA). Green rating is a joint initiative of SMERA and SIDBI. The Energy and Resource Institute (TERI) acts as a knowledge partner. SIDBI promotes and facilitates the process by offering credit at concessional rate to Green-rated companies. The government of India (GoI) has urged lending institutions to encourage borrowing MSMEs to go for "Green Rating."

### Benefits of green rating

- **An independent third party evaluation about environment friendliness:** It indicates that the micro, small and medium enterprises (MSME) is conscious about its duty toward environment and society at large.
- **Credit at concessional rate:** It will help a MSME to obtain credit at a concessional rate from lenders like SIDBI.
- **Mitigation of environmental risk:** It reduces the risk associated with the stringent environmental norms that is becoming stricter.
- **Confidence among value chain partners:** The rating assures lenders, buyers, collaborators, Joint Venture (JV) partners that the MSME is a responsible corporate citizen and does not adversely impact ecology.
- **Self-assessment tool:** Green rating is a self-assessment tool that can be used to identify areas of improvement.
- **Creating awareness:** Green rating awarded by an independent agency improves the visibility of MSME in the eyes of various stakeholders such as buyers, suppliers, and collaborators/JV partners.

### Green rating process

A typical green rating process is described in the below diagram. Typically the entire process starting from information receipt to assignment of rating takes 15 business days (Source: SMERA). The cost of green rating conducted by SMERA is Rs. 50,000 (service tax extra).

- Request for Rating by MSME;
- Submission of financial and managerial information;
- Finalizing the assignment and detailed questionnaire;
- Site visit and discussion with management;
- Proposed rating before rating committee;
- MSME advised on rating;
- Appeal before rating committee; and
- Publishing of final rating.

### Indicative list of documents required

- Small scale industries (SSI) registration certificate/entrepreneurs memorandum;
- Audited accounts report and balance sheet of last 3 years;
- Pollution control certificate for air, water, and noise pollution;
- Latest test results conducted by Pollution Control Board;
- ISO certificate or any other quality certificate;
- Energy audit certificate, if any;
- Details of process map and energy usage as per process map; and
- Any specific step by unit to mitigate harmful impact on environment.



# Cleaner production case studies from Viet Nam

## Vietnam Denmark Development Cooperation in Environment Program (DCE), Viet Nam

<http://sxsh.vn>

### Vietnam PLATO JSC.

Vietnam PLATO JSC., is a private company specializing in electroplating, locating at Bong Hong Cluster, Bai Bong Town, Thai Nguyen. Prior to 2008, the company operated under the name of An Khanh Mechanic Workshop, in the field of zinc electroplating of Honda, Yamaha motorbikes' features (mirror handlebars, main stands, gear shift), springs, furniture features. From middle of 2008, due to the market needs, a Nickel–Chromium plating line was installed and come into operation; the company at the same time renamed into PLATO JSC. The company operations have provided jobs for a significant number of employees, around 160–200 labors every day.

In 2009, the company has received the financial support from the Ministry of Industry and Trade (MOIT) through the Cleaner Production in Industry Component (CPI) and technical assistance from Vietnam Cleaner Production Centre to conduct CP Assessment and propose CP options. The company has established a CP team led by Mr. Hoang Anh Hung, company director and five members to assess two production lines: Zinc plating and Nickel–Chromium plating. The team has conducted a walk-through assessment on the production line. After identification of waste streams, the team has conducted mass and energy balances for the whole production line. All collected data have been used to analyze and identify cleaner production options for each production steps.

After conducting cleaner production assessment (CPA) and identifying improvement options, the company has carried out 22 no-cost and low-cost options with total budget of VND 32 million during the period from November 2009 to February 2010. With the technical and financial assistance from the CPI, the company has actively implemented two high-investment options: changing to Ni–Cr plating on plastics technology and install wastewater electrolysis system to improve the production performance and reduce environmental emissions to the environment and meet the market demand.

The company has also set up environmental policy, whereby it is requested that the environmental protection law and other regulations should be followed strictly, ensuring the sustainable development of the company and reducing waste emission sources. The company has integrated process management system with the environmental management system; therefore, energy and material consumption is monitored at the same time with the monitoring of pollutant parameters in the waste streams.

### Phu Dong Textile Company Limited

Phu Dong Textile Co. Ltd. is founded in 2006, and specializes in manufacturing grey fabric and interlocked and sized fabric according to

the demand of markets. Products are mostly for domestic markets such as central region, Hanoi, and Ho Chi Minh City, 40 percent of the products are exported to European, Korean, and Japanese markets. The capacity of plants is 5,000,000 m of sizing and warping per year, and 1,000,000 m of raw fabric per year.

Before applying CP, the serious problem of the company is pollution caused by wastewater and exhaust fumes. Wastewater of the company has exceeded the limit values in the standard TCVN 5945-2005; chemical oxygen demand (COD) (140.5 mg/l) was exceeded 2.8 times; biochemical oxygen demand (BOD) (73 mg/l) was exceeded 2.43 times; and total suspended solids (TSS) (132 mg/l) was exceeded 2.64 times. Company's exhaust fumes generated from fuel burning and boiler operation. CO content (1.264 mg/m<sup>3</sup>) in exhaust gas was exceeded 1.2 times in comparison with the limit value in national standard. For solving these problems, in 2009, the factory received the support from the Ministry of Industry and Trade via the CPI to conduct Cleaner Production Assessment and Application.

Under the MOIT support, in 2009, the company had implemented CP assessment. In the 1st phase (from July 2009 to February 2010), the company established a CP team led by Mr. Doan Xuan Tinh, Director of the company and other six members to assess the whole production line. The team has conducted a walk-through assessment on the tea production line at place. After the assessment and identification of waste streams, the team has conducted mass and energy balances for the whole production line. All collected data have been used to analyze and identify cleaner production options for each production step.

After conducting CPA and identifying improvement options, the company has carried out nine no-cost and low-cost options with a total budget of VND 50 million. Such application has reduced material and electricity-specific consumption to 20 percent and 3.4 percent respectively and saved 230 million dong. In the second phase (from March 2010), the company has actively implemented high-investment options to improve the product quality and solve completely the environmental issues at place and received CPI's support (2 billion dong) to install by a 3-pass horizontal boiler, update and repair sizing machine, install new automatic splicing machine, install dust suction and filtering system to improve environment working. Benefits from those solutions are 1.2 billion dong by reducing raw material consumption and reducing environment treatment cost.