Anatomy of a Project
Manufacturing PVC in India

IFC sees every investment as a potential collaboration with clients to improve the overall performance of their business. The timing of our entry into a project can dramatically influence how much we can contribute to its design and sustainability. We therefore seek partners who are already committed to high standards of corporate governance and social and environmental performance, or with whom we feel we can engage constructively in these areas.

The following is an example of a Category B investment – signaling limited adverse social and environmental impacts – in which the client’s positive engagement with IFC led to improvements well beyond compliance with our safeguards.

DCM Shriram Consolidated Limited (DSCL) approached IFC in 2004 for a loan to expand the PVC (polyvinyl chloride) and carbide production capacities of its plant at Kota, in the Indian state of Rajasthan. During appraisal, the project was classified as a Category B investment because it was expected to have limited adverse social and environmental impacts that could be readily addressed through mitigation measures.

### ISSUE 1
Early Review

**SHOULD WE INVEST IN PVC PRODUCTION?**
PVC production has been the focus of heated global debate. The concern lies mainly with the disposal of PVC, which is associated with the unintentional release of persistent organic pollutants (POPs).¹ In 2004, IFC became the first multilateral bank to issue a position paper on POPs. One of the commitments made in the position paper is that IFC will invest in the manufacture of PVC products only if they have compelling benefits over alternative products. In addition, IFC will invest only in those PVC resin plants that meet accepted criteria for Best Environmental Practices (BEP) and Best Available Techniques (BAT). Deciding whether the plant at Kota met these criteria was therefore one of the first things IFC needed to do, even before beginning the official appraisal process.

Most of the company's PVC resin production is used for the manufacture of pipes and conduits intended for irrigation in rural areas and for the supply of drinking water in urban areas, and for the protection of cables. The company’s PVC manufacturing process uses abundant local resources, such as limestone and coal, and has a low impact on local ground and surface water. The economic benefits to the Indian market therefore outweighed the alternatives, once satisfactory mitigation of environmental impacts had been assured.

¹. POPs are chemicals that have five characteristics of environmental and public health concern: they are toxic, long-lived and mobile, they accumulate in fatty tissue, and they magnify in the food chain. Their high mobility makes them a global issue, while their other properties mean that they are hazardous to animal and human health even at low levels of exposure. For IFC’s position on POPs, see [http://www2.ifc.org/sustainability/docs/Sustainabilitynewfile2.pdf](http://www2.ifc.org/sustainability/docs/Sustainabilitynewfile2.pdf)
The main concern was that the plant still used outdated sludge-producing mercury cells in the production process. Although the company had established excellent waste management procedures, which met national regulations and IFC safeguard requirements, it was still difficult to justify investing in the project given the criteria stated in IFC's position paper on POPs.

“Given the possible issues, an engineer visited the Kota plant with an environmental specialist and an investment officer. This allowed us to assess the issues in advance so that there would be no surprises later, for the Company or for IFC. The pre-appraisal allowed for a better informed appraisal and for speedier processing.”

Anil Chandramani, Transaction Leader, IFC

**ISSUE 2**

**Appraisal**

**Negotiations**

**Commitment**

**PHASING OUT MERCURY CELLS**

At the time of appraisal, the DSCL plant was producing PVC using chlor-alkali production technology from mercury cells. The use of mercury cells produces highly toxic waste and is undergoing a gradual phase-out in most developed countries. Nevertheless, the company did plan to upgrade to the use of much more environmentally friendly and efficient membrane cells and had established a timeframe for doing so even prior to approaching IFC.

Given the commitment on both sides, IFC proposed to increase its investment so that the company could undertake an environmental upgrade much sooner than it had planned. This was a key turning point in the negotiation process. Despite a high short-term cost, the use of membrane cells will benefit the company in the long term by increasing productivity and reducing the cost of maintenance and waste treatment.

**WHAT THE CLIENT BROUGHT**

- Motivation to partner with IFC and improve its performance
- Recognized excellence in environmental, health and safety management
- History of community involvement
- Prior commitment to upgrading from mercury cells

**WHAT IFC BROUGHT**

- Additional investment for an environmental upgrade
- Expertise in environmental and social management
- Encouragement for the client to go beyond compliance
ENSURING EMPLOYEE AND COMMUNITY HEALTH

Although an environmental impact assessment (EIA) wasn’t required in this case by country laws or by IFC safeguards, the company commissioned an EIA upon IFC’s request. The assessment identified dust levels at a few locations as being within local limits but falling slightly short of IFC guidelines. The EIA also anticipated that noise levels during the construction phase could affect employees. The company agreed to mitigate these factors as part of a corrective action plan (CAP). In addition, IFC asked for three more wells to be dug to monitor the downstream groundwater flow for traces of mercury and other heavy metals that may result from the existing landfills.

CONTRIBUTION TO DEVELOPMENT

Offering a more sustainable product
The plant expansion and environmental upgrade will strengthen the company’s ability to provide PVC to the Indian market in a more cost-efficient and sustainable way.

Providing employment
At Kota, DSCL employs about 1,658 people directly and is estimated to be responsible for another 1,700-2,000 local jobs. The project will create 94 new jobs directly and also help secure existing employment.

Influencing competitors
At least one other company in the region has begun phasing out mercury cells in a way similar to DSCL.

Helping local farmers
DSCL is supporting local farmers and its own fertilizer business through a network of rural retail stores that provide agricultural products and advisory services to farmers.

PARTNERS OF CHOICE

Before approaching IFC, DSCL already had a long history of supporting education, health, and local community development in the city of Kota. In the last ten years, the company has also won numerous awards for excellence in pollution abatement, energy efficiency, and oil conservation. IFC’s involvement in the company’s expansion contributed to DSCL’s long-term strategy to ensure that its operations continue to meet international best practice standards.

Through the investment process, IFC has helped the company establish an integrated environmental, health, and safety management system. DSCL now has a general manager responsible for corporate-wide EHS issues and reports to the corporate management board. The company has asked for IFC’s support in developing an integrated corporate social responsibility program to cover its community engagement and social responsibility activities.