

Greening the Golden Corridor: Exploring the possibilities in Ankleshwar and Vapi Industrial Estates of Gujarat, Western India

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Introduction:

The State of Gujarat has been among one of the top industrialized states in India. During last decade and more , consistently it has maintained a higher pace of industrialisation and economic development. Gujarat ranks second in respect of statewise percentage share in Net Value added by manufacturing factory sector of India among all the states (Socio-Economic Review, Gujarat State, 2002-03). In yearr 2000-01 the net value added by manufacture under factory sector was Rs. 19,149 Cr. (Rs. 19,1490 million). According to annual survey of industries 2000-01, the industry group of chemical and chemical products accounted for about 48.72 percent of the net value added by the factory sector, followed by textiles (8.02 percent) in Gujarat.

The nature of chemical and chemical products group industries in the region is highly polluting. An attempt has been made in this paper to study Ankleshwar and Vapi industrial estates. The problem of pollution in these estates and efforts made to tackle this problem are studied. The paper critically discusses the role of

various stakeholders as of now and its socio-economic and environmental consequences for the region and for the economy of Gujarat. Based on the conclusions the policy implications for greening of these industrial estates and the “Golden Corridor” are being suggested. The implementation of these will help in pursuing sustainable development in the state. The study is based on secondary sources of information and getting first hand information through personally contacting related experts in the two industrial estates.

Importance to Economy: -

The chemical and chemical products group has contributed significantly to the economic development of the region. These industries gradually expanded during late 1970s and during 1980s. Not only contributing in terms of almost 50 percent to net value addition in manufacturing factory sector of Gujarat, but it also leads significantly in terms of other indicators as well.

Considering the number of factories and employment provided the chemical and chemical products (except products of petroleum and coal) group is leading industry group with 17.14 percent (total no. 3500) of the working factories and second highest in terms of employment provided (17.72 percent), after textile products group (18.73 percent) in Gujarat. The fixed capital in Chemical and chemical products group also accounts for almost 52 percent of total fixed capital in Gujarat in all industries upto 2000-01 (Socio-economic review, Gujarat State 2002-03).

In Gujarat, the secondary sector contribution approximately 38 percent annually to the state domestic product, since economic liberalisation. During 2001-02, the state gross domestic product was Rs. 83570mn at constant prices. The Chemical and Chemical products industry group, thus is of considerable significance to the economy of Gujarat. Further, it is significant to note that Gujarat accounts for almost 80 percent of production of chemical and chemical products industry in India.

The industrialization in Gujarat is mainly concentrated along a 350 km stretch from Ahmedabad in north till Vapi in South. Due to immense development of manufacturing facilities here, it is widely known as the “Golden Corridor” of India. A cluster-based model has been adopted for industrial development in Gujarat. This involves setting up related industries together in vicinity of each other as far as possible. This allows such industries to share common infrastructure for their benefit. The industrial estates of Ankleshwar and Vapi houses firms mainly producing Chemical and Chemical products. The other industrial clusters located in the “Golden Corridor” include textiles, petrochemicals, jams and jewellery, pharmaceuticals, drugs etc. Most of these manufacturing activities have been pioneers during industrialization in India. Thus, it is quite evident from above that the Chemical and Chemical products group industry has contributed to the faster growth rate of the state of Gujarat and it has been the prime contributor of industrialization.

Industrial estates of Ankleshwar and Vapi- Extent of pollution and remedial measures:

The two industrial clusters in Ankleshwar and Vapi are dominated by Chemical and Chemical products group industries. These include units comprising of organic chemicals, inorganic chemicals, solids, liquids and gaseous chemical, pharmaceutical manufacturing and paints and dye industries. There are mainly small and medium sized units in two industrial estates. Ankleshwar and Vapi at present houses approximately 1700 and 1150 units respectively. Out of these approximately 30 percent units have been closed down due to various reasons. The remaining units are working much below their full capacity.

Both these industrial estates are infamous for being excessively polluted. The industry emitting untreated effluents, smoke and water in the environment without any fear of harming the environment is common. During the late 1990s the pollution was completely unchecked and a situation of no return was reached. Since then due to increasing awareness of ill effects and efforts of the regulatory regime and various stakeholders to control pollution, the situation has marginally improved.

There are many steps taken to reduce and abate pollution by various industrial units individually and collectively to improve the environment. Trees are planted in public places and maintained as well. Further, some public parks have been developed. Many common effluent treatment plants (CETPs) have been created for small-scale units not having capacity to setup their own ETPs. The Gujarat Pollution Control Board (GPCB) is taking some strict measures to curb the

increasing pollution in these industrial estates by quick emergency checks and uninformed visits of their officials to industries.

However, during night time there is a free-lance release of pollution in terms of smoke and effluent water without their treatment in both the industrial estates of Ankleshwar and Vapi. The effluent water is directly put in sewage and into ground water and air pollutants into the environment. It is claimed that the extent of pollution is much less than it was some years ago. However, for a new person in the region the extent of pollution is exorbitantly high inspite of contributions and efforts to reduce pollution from various stakeholders. The role of various stakeholders is being discussed in following lines. These stakeholders are Gujarat Pollution Control Board (GPCB) the government institution controlling pollution, setting safe standards and taking measures for abatement of all types of pollution in the state of Gujarat. Secondly, the industrial representatives and associations in respective industrial estates constitute a major stakeholder and thirdly, judiciary through timely and effective intervention is also supposed to play an effective role in controlling pollution and lastly, the public at large is also an important stakeholder and is directly affected by bearing social cost, by the level of pollution in the region.

Role of Gujarat Pollution Control Board (GPCB): -

The GPCB is responsible for enforcement of the various laws for prevention and control of pollution Acts of 1974, 1981 and 1986 and management of hazardous

wastes. The major objectives of the Board are centered on pollution control and the prevention of the environment quality. The important activities carried out by GPCB pertaining to betterment of Environment includes- installation of effluent treatment plants (ETP), installation of Air Pollution Control Measures (APCM), solid waste disposal sites (ISDF), installation of incinerators, preparing zoning atlas, monitoring the pollution levels, holding seminars and workshop for environment awareness.

At best, it emerges that GPCB is only partially successful in its efforts. But is making its presence felt, atleast during past some years now. Various ETPs and CETPs have become operational in the two industrial estates. Efforts to reduce pollution, due to solid waste, effluent water and air pollution have also succeeded partially. The officials of industrial estate are of the view that pollution level has come down drastically. GPCB is forcing polluting units to close down. Almost 25 percent of the units located in industrial estates have been forced to stop production by GPCB.

However, GPCB suffers from certain shortcomings due to lack of powers to enforce law and impose penalties on defaulting units. Inability of GPCB to continuously monitor pollution levels by various industrial units is also a concern. The industrial units tend to release waste and effluents during night hours to avoid being noticed. The functioning of GPCB suffers due to lack of political will to enforce law. Corruption among inspectors and other officials also allows

industries to pollute. Hence, a greater thrust on improving awareness is required on part of GPCB to facilitate voluntary adherence of law and promote green and clean production in the two industrial estates.

Role of Industry Association and Industrialists:

It has been observed that in both Ankleshwar and Vapi, the majority industrialists have realized the benefits of adopting environment friendly technology for production. The mutual will of majority of industrialist in the region has resulted in pollution levels reducing considerably. The GPCB and related policies have also contributed in motivating industrialist to amend their polluting ways of production. The Vapi Industries Association (VIP) has incorporated Vapi Waste and Management Company Limited (VWEMCL) in January 1997. This is a non-equity, non-profit entity, based on Cooperative principles with corporate culture of management. The VWEMCL has taken the responsibility of operations of Common Effluent Treatment Plant. It has further, initiated a Comprehensive Environment Management Program (CEMP) for Vapi Industrial Estate. The three-track programme includes:

- (i) Effective Pollution Control Efforts
- (ii) Effective Pollution Abatement Efforts and,
- (iii) Efforts to Improve Resistance Capacity of Environment.

This programme has been taken up in phased manner. The first phase was completed in the year 2001 and the second phase will be over by year 2006. The first phase has shown encouraging results. The steps initiated are Effective

Pollution Control by Treatment of liquid effluents, management of solid waste and air to ensure ambient air. The VWEMCL is also encouraging its members for effective pollution abatement. Out of 800 working industrial units 744 units have joined the membership of VWEMCL. All these members are at different stages of adoption of Cleaner Production and Cleaner Technologies. The member industries are aiming at Waste Minimization, Optimization of recycling and reduction and elimination of hazard-bearing contaminants from such waste streams.

The other steps initiated include improving impact resistance capacity of environment through improving "Green Cover" in industrial estate by massive tree plantations, keeping bio-diversity in focus and identify and provide remediation of polluted sites as a damage control exercise. Effectively, environmental consideration has become integral part of planned development in coordinated manner. The monitoring of various indicators for measuring environment impact is done on a continuous basis in its own laboratory by trained technicians using state of art instruments.

The efforts of VWEMCL has resulted in attitudinal change among people and has significant positive change in perception in local population including school children and students regarding need to protect environment. Still there is a long way to go in restoration of healthy environment. Even today during night hours untreated effluents are discarded in air and water every day by various industrial

units in both industrial estates. But in setting up of VWEMCL a good beginning has been made. A similar company to manage waste has also been started in Ankleshwar. The collective efforts led by VWEMCL has resulted in pollution dropping to less than 50 percent of the pollution levels some 4 years ago. This is quite creditable achievement in a highly polluted region. Thus, there is a silver lining emerging indicating better future.

Role of Judiciary system:

Although, the market system ensures profits to producers and satisfaction to consumers, there is no internalization of the externality caused by adverse impact of growth. Initiation of corrective measures such as voluntary bargain, the polluter pays principle, taxes and subsidies or even ex-post liability approach have their own limitations in the internalization of the externalities. Thus, state intervention to internalize the externality plays an important role. The Indian judiciary has adopted a unique approach of public interest litigation(PIL) to safeguard public interest against the state.

In the two industrial estates, however the judiciary has been only partially successful in fulfilling its obligations. This limited success is because the courts of law, depend on the advice of experts especially on scientific and technical knowledge. The courts are also unable to provide adequate compensation if environmental pollution causes harm to the citizens, if the claim is based on sentimental value or mental agony. The legal delay also account for shortcoming

of judiciary to internalize the externalities. Further, the system of appeals is often used to correct errors made by lower Courts for various reasons.

It is true that the authorities in most of the instances have failed to implement the Court orders, which aggravates environmental degradation and also leads to damaging social relations among stakeholders. Involvement of lawyers, who provide services to their clients and save them from legal liability or make arguments for damage compensation, at times is against their code of conduct. Thus, the judiciary finds itself with lot of hurdles in fulfilling its obligation. All of above mentioned factors contribute to the failure of judiciary in ensuring sustainable production and adoption of green methods of production both in Ankleshwar and Vapi estates.

Role of General Public:

The other important stakeholder is the affected population in the polluted area. These constitute employees and other residents in and around industrial estates. These publics feel helpless and bear maximum harmful consequences of pollution in the region. In the wake of poor awareness regarding nature of pollution, legal and constitutional remedies, being unorganized and lack of bargaining power and connection to power circle, the general public finds itself handicapped to voice its concerns and seek justice to lead a healthy life. Hence, it more or less silently suffer harmful social cost inflicted by pollution by

industries. This is clearly evident from the experience of Vapi and Ankleshwar industrial estates in Gujarat.

Conclusion:

It is evident from the study that Chemical and Chemical products industry is of considerable significance to the state economy in Gujarat. However, the industrial estates of Vapi and Ankleshwar which houses Chemical and Chemical product group industries are suffering a high level of pollution and consequent threat to environment. Of late various stakeholders have realized the benefits of environment protection and adopting greener technology along with pollution abatement measures.

Thus, inspite of considerable difficulties and need to correct past damage to environment, now it appears that current direction of efforts hold good future for ensuring green production in the “Golden Corridor” of India. But as of now it is a long distance away.

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