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COMMUNITY RESPONSE TO POLLUTION FROM LEATHER INDUSTRY MICRO LEVEL EVIDENCES FROM TWO VILLAGES IN DINDIGUL ENVIRONS

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ABSTRACT:

Leather Industry is one of the oldest and traditional industries in India. It has massive potential for employment generation, production of leather products exports and contribution to gross domestic product. The industry has huge opportunities for development because of conducive policy of the government and globalized market, but at the same time there are certain challenges of modernization and competition by multinational companies. In order to promote and support to the entrepreneur engaged in leather industry, the government of India and state governments have undertaken special policy measures and created a good network of developmental agencies in the country.

KEYWORDS: *Leather, Industry, pollution, Export, gross domestic product, Dindigul.*

INTRODUCTION

A definition typical of all contemporary discourses on development is given by Ridell "Change in favour of general human improvement and change of two kinds usually linked: expansion in consumption and enhancement of welfare (Cohen, 1985). This development model is based on the panacea for every crisis that hits mankind. It will eradicate poverty, ill health and associated human miseries and will lead to general human welfare. Economic growth, productivity and consumerism thus gain prime importance in a county's planning as indicators of development. Both capitalist and socialist countries follow the same model of development with little variance. In capitalist country, market is the chief allocator of resources, whereas in socialist's countries, central planning assumes that role. However, both consider industrial growth, increased production and consumption, progress in science and technology as the index of development. The increased material prosperity is to be achieved by conquering the forces of nature with the help of science and technology.

STATEMENT OF THE PROBLEM:

Environmental pollution is increasing due to industrialization, urbanization, consumerization, Chemicalization energization, etc. The disposal of industrial wastes and industrial effluents is becoming a major problem. Leather processing has emerged as an important activity of some of the developing countries like India. The leather industry consisting of around 2500 tannery unit is highly polluting industry. Leather processing is mainly carried out in various tanneries concentrated in Tamil Nadu, Uttar Pradesh. West Bengal and Punjab. Around 7.0 lakhs tones of hides and skins are processed in India, releasing 75000 m^2 / day of liquid effluents. The main pollutants are sodium chloride, sodium sulphide, lime and chromium preservatives and protein matter. Tanneries which discharge in the process of tanning hides and skins, large quantities of toxic effluent, polluting the air, land and water. The leather tanning industry has changed the process of vegetable tanning to chrome tanning. The

process contains that spoils the quality of air, water, and land, damage to the cultivable land, reduction of crop yield, damage to livestock, damage to drinking water, damage to property in the neighborhood of the tanneries. Not only the flora and fauna, but men were affected severely due to the continuing pollution. It renders fertile agricultural land unfit for crop cultivation, water unfit for drinking and the air is impure and all contributed to severe health hazards. Keeping these views in mind, the researcher has carried out a study entitled "Community response to pollution from leather industry: Micro Level Evidences from two villages in Dindigul Environs".

OBJECTIVES OF THE STUDY

The major objectives of this study are:

- To present the socio-economic profile of the sample households living in Periapallapatti and Chinnpallapatti villages existed and located nearer to leather industries in Dindigul environs;
- To illustrate the cause and effect of pollution from leather industry on living environment of the sample households; and
- To suggest sustainable ways and means to solve or mitigate the pollution from the leather industry.

METHODOLOGY

This study is purely based on the primary data, collected from the sample households of Periapallapatti and Chinnapallapatti village of Dindigul environs. Required information and data were gathered from the sample household's respondents with the help of well-structured and pre-tested interview schedule, which was administrated with 117 households of two villages.

Production

The Indian leather industry comprises the following key sectors: tanning and finishing, footwear, footwear components, leather garments and leather goods and accessories.

Key sector – wise Leather Production

Item	Capacity
Hides	65 million pieces
Skins	170 million pieces
Leather footwear	909 million pairs
Leather shoe uppers	100 million pairs
Non-Leather foot wear	1056 million pairs
Leather garments	16 million pieces
Leather goods	63 million pieces
Industrial gloves	52 million pairs
Saddlery	0.10.million pieces

source : CLRI &www.leatherindia.org/ind_at_glance.asp

Exports

India's exports of leather goods touched $3.47 billion in 2007-08. The country exports a host of niche leather goods –garments, bags, foot wear, gloves, and saddlery and harness, The International demand for leather products is shifting from luxury goods to necessary goods. It is important for Indian manufacturers to strike a balance between quality and quantity to cater to the present need. Indian producers need to gear up to manufacture goods at competitive prices.

Category Wise Leather Exports

Top Ten Indian Leather Exporters

1. Tata International Ltd
2. Florind Shoes Ltd
3. Punihani International
4. Farida Shoes Ltd
5. Mirxa Tanners Ltd
6. T. Abdul Wahid & company
7. Hindustan Level Ltd
8. Super House Leather Ltd
9. RSL Industries Ltd
10. Presidency Kid Leather Ltd

Environmental Issues: Leather is traditionally considered as a polluting industry in the tanning and finishing stages of the production chain. Global standards set by importing countries affect the entry and increase the cost of market access to products of developing countries. Usage of many chemicals has been banned by various countries. The product specifications for leather are constantly under review, leading to greater stringency.

Category	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Finished leather	673.37	841.13	1024.69	1090.22	777.14	81262.62	1046.45	888.89	47376.86	44084.67
Footwear components	1507.49	1758.67	2079.14	2055.93	19369.28	22085.68	284.34	300.05	78062.86	19003.09
Leather garments	428.62	425.04	572.45	563.48	36067.17	36945.77	553.11	536.51	29232.36	28907.12
Leather goods	757.02	855.78	1089.71	1178.96	81911.00	88857.54	1370.84	1321.61	73281.89	82428.11
Saddlery and harness	83.39	87.92	107.54	108.32	8804.99	9948.29	146.38	143.08	8261.84	9334.20

Government Support: Technology up gradation and modernization of the entire leather value chain should be given priority. Recently, the government approved Rs. 2.9 billion for modernization and technology up gradation programmed.

Trends: The industry needs to keep itself abreast with latest fashion trends in the sector. It is observed that Italian buyers pay attention not only to the quality of the leather products but also to the accessories used in the garments. It is imperative that adequate care is taken about the packing material.

Training Facilities: Training programmers should enable the industry to foresee and adapt to changing trends a technology. It is imperative that the staff is skilled and well qualified to train the students. Further, programmers need to be conducted to make Indian exporters aware of different standards and requirements in the global market to ensure that Indian exports do not get rejected due to environmental norms.

Initiatives

Given its nature, modernization of the leather industry requires the following initiatives to make it efficient, agile, responsive and competitive:

1. Enhance productivity;
2. Reduce wastage;
3. Increase the product design;
4. Automate the production process;
5. Understand the customer needs;
6. Extend the reach through e-commerce; and
7. Introduction of new technologies

Policy initiatives: Foreign Trade Policy for the period Sept. 1, 2004 to August 31, 2009 has identified leather as one of the special focus sectors. Under the policy initiatives, leather and footwear sectors shall be extended the following facilities:

1. Duty –free import entitlement of specified items shall be 5 per cent of the free-on-board (FOB) value of exports during the preceding financial year.
2. Duty-free entitlement for the import of trimmings, embellishments and footwear components for footwear (leather as well as synthetic), gloves, travel bags and handbags shall be 3 per cent of FOB value of exports of the previous financial year. The entitlement shall also cover packing material such as printed and non-printed shoeboxes, and small cartons made of wood, tin or plastic materials for packing footwear.
3. Machinery and equipment for effluent treatment plants shall be exempt from basic customs duty.
4. Re-export of unsuitable imported materials such as raw hides and skins and wet blue leather is permitted.
5. Countervailing duty (CVD) is exempted on lining and interlining material notified at S. No. 168 of Customs Notification No. 21/2002 data 01.03.2002.

Environment vs. Development – A Case of Leather Industry

Human Life cannot exist in isolation. The life depends on the environment. According to human tradition right from the Vedic times, the environment and life of people formed an inseparable part of the living system. The economic life, social and cultural activities of mankind are shaped by the environment. Development depends upon environment. Environment is nothing but the endowment of nature and so conservation of environment is in fact the very basis for all development. Environment is an input into development process and goods may be achieved more rapidly, if more attention is paid into these inputs. Development activities could be classified into two groups. One group of activities is meant for increasing primary production, namely agricultural activities including irrigation projects, construction of dams and sinking of bore wells. These lead to deforestation, water-logging, climate change etc. The second group of activities is related to secondary production which includes industrialization and the consequent urbanization. The story goes on. Thus economic development for the improvement of quality of life results in dreadful consequences of environmental pollution and now it has become a global issue. .

Categories of Highly Polluting Industries

S.No	Category	Total number of units
1	Aluminum	1
2	Caustic Soda	3
3	Cement	15
4	Copper	1
5	Destillery	16
6	Dye an Dyeing	1
7	Fertilizers	9
8	Iron and steel	1
9	Leather	80

10	Pesticides	1
11	Pharmaceuticals	16
12	Petrochemicals	6
13	Pulp an paper	5
14	REfinery	2
15	Sugar	36

All other industries fall under this category in Tamil Nadu have adequate facilities to comply With the environmental standards prescribed by the governments. (Central and State) Since, the study is on pollution created by tannery-industry the red category industry the mainfocus is on tanning industries, which are functioning in Dindigul District of Tamil Nadu, India.

POLLUTION FROM LEATHER INDUSTRIES

Leather Industries in India is very old and traditional. The natural advantages such as long tradition of leather craftsmanship, availability of raw materials, cheap labour, etc., are major causes for the development of leather industries in India.

The leather industry in India is spread over different segments namely tanning and finishing, footwear and footwear components, leather garments, leather goods including saddlery and harness. Tanneries are the foundations on which a strong leather product industry can be built. In India the tanneries have traditionally been in small scale and cottage sector, but now the entire leather sector is now no more under SSI reservation. There are about 2500 tanneries located in different tanning centers of India with a total processing capacity of 60, 00,000tons of hides/skins per year. It is estimated that about 90% of the estimated 2500 production units fall in the category of small scale sector.

Out of 45 major clusters of tanneries in India, 35 are located in Tamil Nadu which is reported to account for over 60% of all leather produced in India. The dispersion of tanning units in India is non-uniform.

Distribution of tanneries in Tamil Nadu

S.No	Centre	No Of Tanneries
1	Chromepet	123
2	Pallavaram	13
3	Madhavaram	17
4	Ambathur	3
5	Other in Chennai	15
6	Pernampet	18
7	Gudiyatham	4
8	Vaniyambadi	138
9	Vellore	11
10	Melvisaram	39
11	Ranipet	209
12	Melpudupet	19
13	Dindigul	62
14	Trichy	36
15	Erode	41
16	Coimbatore	41

Tanneries in Dindigul

Though tanning industry in the backbone of the leather sector, it is a typical example of what may be termed as an "Ecological Parasite" and it is practically realized in Dindigul, the study area. Nobody knows why the tanneries came to Dindigul in the first place. But tannery is one of the important economic features of Dindigul District. At present there are tanneries in and around Dindigul 62 tanneries are located in Dindigul. All the tanneries in Dindigul are located within 5 KM distance from the heart of the town.

The solid wastes like salt dust, lime, sludge, chrome tanned shaving and splits dumpted in the vacant land or in the premises of tanneries also damaged the soil and water. All the tanneries together process about 16000 Kg of skins/hides daily, and the total tannery effluents water generation is 2150 m^3 / day and the total annual production of bio sludge is 1095 tonnes.

All the 62 tanneries in Dindigul district, are connected with the common Effluent Treatment Plant, which is approved by the Tamil Nadu Pollution Control Board and the performance of CETP is evaluated by National Environmental Engineering Research Institute, Nagpur in 1992. Though the tanneries protect the environment by converting the hides and skins of the meat industry, the tanneries create intensive pollution since the chemicals used in the tanning process. Apart from that, tanning is a water intensive industry. It requires enormous quantity of fresh water. Every 100 kg of skins 3200 liters of fresh water is used for tanning. Dindigul is traditionally a drought-prone area.

Community Response to Pollution from Leather Industry: Micro Level Evidences

The purpose of this chapter seeks to present the data and interpretation on community response to pollution from leather industry from 117 households (respondents) from two selected villages viz., Periapallapatti and Chinnapallapatti of Dindigul District. Required data for this study, have been collected directly from the respondents through well structured and pre tested interview schedule. The collected data and information were tabulated under different headings, which are given below:

Social Profile of the Sample Households in the Study area

S.No	Particulars	PeriaPallapatti	ChinnaPallapatti	Total
1	**Gender**			
	Male	29	29	58 (49.57)
	Female	36	23	59 (50.43)
	Total	65 (55.56)	52 (44.44)	117 (100)
2	**Educational Status**			
	Illiterate	16	8	24 (20.52)
	Primary	20	15	35 (29.91)
	High school	16	19	35 (29.91)
	Higher secondary	9	6	15 (12.82)
	College	4	4	8 (6.84)
	Total	65 (55.56)	52 (44.44)	117 (100)

- Of the 117 respondents, 50.43 per cent of them are female and 49.57 per cent are male;
- Majority of the respondents (86.33 per cent) belong to the Hindu religion, followed by Christian (7.69 per cent) and 5.98 per cent by Muslim;
- Educational status of the respondents exhibits that 20.52 per cent of them are illiterate and 79.48 per cent of them are literate;

Respondent's Awareness on the role of Go's and NGOs in the solving environmental problem in the study area

S.No	Particulars	PeriaPallapatti	ChinnaPallapatti	Total
1	**Awareness on the role of Go's**			
	Yes	-	-	-
	No	65	52	117
	Total	65 (55.56)	52 (44.44)	117 (100)
2	**Awareness on the role of NGo's**			
	Yes	25	22	47 (40.17)
	No	40	30	70 (59.83)
	Total	65 (55.56)	52 (44.44)	117 (100)

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- All the respondents in these two villages have unanimously accepted that they do not have any awareness on the role of GOs in controlling the problem of pollution caused by leather industry. Around 60.00 percent of the respondents have awareness on the role of NGOs, in mitigating the problems of pollution emerged out of leather industry and the rest of them (40.0 per cent) do not have any awareness on the role of NGOs in solving the problem of pollution.

SUGGESTIONS AND RECOMMENDATIONS

Major suggestions and recommendations emerged from this study are given below:

- To increase the literacy rate in the study area, Anganvadi and pre-primary school should be opened by the government;
- Long term loan facility are to be given to those houses are degraded and eroded by the tannery pollution so as repair the wall;
- Recently announced Kalainger Home/Housing scheme and Insurance scheme should be strictly implemented by the local government, which enable the tannery victims for obtaining the benefits from these schemes;
- In order to reduce the migration of people from these villages, the village panchayat can send a proposal to start small and rural industries in these areas or it can approach the owners of tannery units to start any kind of ancillary units, which can support the tannery units already set up by them;
- Both GOs and NGOs should provide short term training programmes for tannery victims of these villages and they could provide awareness programme about their right to environment; and

- Pollution Control Board can advise the tannery unit to adopt cleaner production methods, and eco-environment friendly methods to process the hides and skins in the tannery units.

CONCLUSION

Community response and perception of people on tannery effluents and its resultant pollution from leather industry reveal a fact that the household environment has completing degraded in terms of land pollution, water pollution, air pollution etc. The net results of these pollution are environmental damage, loss of land productivity, change the cropping pattern, reduction of grazing land, fall in livestock and trees population, conversions of farmers into labourers, increase the people's people's migration, and finally people living nearer to the vicinity of tannery units have been converted into tannery victims and thus they become "ecological and environmental refugees", whose voices are unnoticed, whose works are exploited and finally they are the victims of leather industry. The problems of these victims have to be analyzed carefully and proper actions and programmes may be implemented with the support of the government and the owners of leather industry.

REFERENCES

1 .Rajan. T., **Water Pollution in Dindigul,** Indian Journal of Environmental Health, Vol. 33 (3), 1990.
2. Rathakrishnan, L., " **The Impact of Tannery Industrial Pollution on Health**", Paper presented in the UGC Sponsored National Seminar on Environmental Issues and Natural Resources Management, organized by Post Graduate and Research Department of Economics, Gobi Arts and Science College, Gobichettipalayam, (2004).
3. SrinivasaGowda.S and PradipGovil.K "**Distribution of heavy metals in surface water of Ranipet Industrial area in Tamil Nadu",** India: Environmental Monitoring and Assessment (2008)
4. Subodh Kumar Rastogi et.al "**Occupational Health risks among the workers employed in leather tanneries at Kanpur".** Indian JOURNAL of Occupational Environmental Medicine, (2008)
5. Sunil. K.P. "**The Devastation of Dindigul"**, The Illustrated Weekly of India, June 21, (1991).
6. Sybil P. Parkar, "**Concise Encyclopedia of Science and Technology"**, (New York: McGraw Hill Book Company, 1984).
7. **Council for Leather Exports**, India 2008.
*8 .**Director General of Commercial Intelligence and Statistics** 2013(DGCI&S)*
9. **CLRI, Directory of tanneries** 2008 (25)
10**.** www.leatherindia.org/ind_at_glance.asp

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