Local Political Ecology and the Effect of Globalization
A Study of Industrial Water Pollution in Tirupur, South India

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Globalization and international competition put pressure on local communities to adjust to international standards of price and quality in production. Tirupur in India produces clothes for exports to the first world market. Because of the process of dyeing and bleaching of fabrics the river Noyyal that flows through the town and the surrounding ground water have become polluted. At the local level actors, like the state, business, NGOs and grassroots take action in different ways depending on their interests. The aim with this thesis is both to analyze the situation at the local level from the views and actions of different actors and how the local situation is influenced by globalization. Qualitative interviews have been made with representatives from these actors in Tirupur and its surroundings. This material has then been analyzed from the theory of Third World political ecology and globalization. The conclusions drawn from this study are that the situation in Tirupur cannot exclusively be explained at just one level. Local, national and global politics affect Tirupur. A politicized environment characterizes the local situation where actions against the pollution are not taken for the benefit of the powerful. People also lack empowerment to take action because of dependency on the industry. At the national level centralization is a problem in India because it results in difficulties for the civil society and people to reach elected representatives and influence from the local community. Another problem is the policy maker’s lack of understanding of the local situation. At last globalization limits the way to handle the pollution because of the global competition and the retreat of the state. But it also gives possibilities for the civil society to grow stronger internationally, perhaps with the possibility to create a change.
Abstract

Globalization and international competition put pressure on local communities to adjust to international standards of price and quality in production. Tirupur in India produces clothes for exports to the first world market. Because of the process of dyeing and bleaching of fabrics the river Noyyal that flows through the town and likewise the surrounding ground water have become polluted. At the local level actors, like the state, business, NGOs and grassroots take action in different ways depending on their interests. The aim with this thesis is both to analyze the situation at the local level from the views and actions of different actors and how the local situation is influenced by globalization. Qualitative interviews have been made with representatives from these actors in Tirupur and its surroundings. This material has then been analyzed from the theory of Third World political ecology and globalization. The conclusions drawn from this study are that the situation in Tirupur cannot exclusively be explained at just one level. Local, national and global politics affect Tirupur. A politicized environment characterizes the local situation where actions against the pollution are not taken for the benefit of the powerful. People also lack empowerment to take action because of dependency on the industry. At the national level centralization is a problem in India because it results in difficulties for the civil society and people to reach elected representatives and influence from the local community. Another problem is the policy maker’s lack of understanding of the local situation. At last globalization limits the way to handle the pollution because of the global competition and the retreat of the state. But it also gives possibilities for the civil society to grow stronger internationally, perhaps with the possibility to create a change.
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1 Introduction

When you in just any store in Sweden buy that nice pair of trousers or the latest dress, it has probably been produced in another country. 90% of our clothes are imported and 35% comes from countries in the South, like China, Bangladesh, India and Pakistan.\(^1\) It is possible for production and consumption to take place on opposite sides of the world because of the international world trade. This gives the companies the opportunity to choose, for example where to produce the clothes at the cheapest cost and then to sell it where people can pay the price. Lack of environmental policy enforcement and cheap labor are factors that can make the cost of production lower. Third world pollution is probably not the first thing you come to think of when you see that perfect sweater on the hanger in just any store in Sweden.

The textile industry is the first to establish when a country starts to industrialize and because of export possibilities it often gives a significant income of foreign currency. In India 50 million people are occupied within the textile industry and it contributes with 38% of the country’s export income.\(^2\) The town Tirupur is the center for hosiery manufacture in India. In Tirupur the process of dyeing and bleaching of fabrics has caused severe water pollution of the river Noyyal and the ground water in the surrounding area. Water pollution is very serious when it comes to the consequences for health and well being of people and in India 70% of the available water is polluted.\(^3\)

The situation causing the pollution in this case is highly globalized because of linkages to international trade and global consumption pattern. But the place, for example Tirupur, where the pollution is experienced and where it is being managed are very local. Lipschutz argues that all environmental problems are local, because we experience them in our own locale and the environment that people confront in their daily lives are not easily changed, abandoned or erased. When it comes to changing activities that leads to environmental destruction it is not always possible to trust reason or economic calculations because people are emotionally committed to customs, habits and expectations that effect the environment. This is according to Lipschutz the reason why the greatest change only can be made at the local level and that’s why to have broader impact, politics must be exercised locally. This does not mean that the casual chains are only local or that effects of local activities do not extend to other areas. The meaning is that the most effective change occurs at the local level where people live in the affected environment.\(^4\)

My point of departure is the importance to understand the processes at the local level, where a number of actors with different interest and roles take action. They all face problems and have different interest regarding the water pollution. I am interested in both that local situation and how it is affected by globalization.

1.1 Aim

The overall aim with my study is to understand the possibility of different actors at the local level to influence the problem of industrial water pollution. The case study is the water pollution from bleaching and dyeing units in Tirupur, India. The study is performed at a local basis but how the actors are affected by national and global aspects is also a part of the study even though only local actors are in focus. The aim can be divided in three parts:

- To analyze how actions and interests of different actors regarding water pollution shape the situation at the local level.

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\(^1\) Åker Zeander, 2003:5
\(^2\) Åker Zeander, 2003:6
\(^3\) Sapru 1998:156
\(^4\) Lipschutz, 2004: 132ff
• To analyze the affect of central /state politics at the local level and vice versa with departure from experiences of the local actors regarding the industrial water pollution.

• To analyze how globalization affects the local community in the issue of governing industrial water pollution and how it affects different actors’ room for maneuver.

The actors I have chosen to put my focus on are the state, business, non governmental organizations (NGOs), Tirupur inhabitants and farmers affected by the pollution.

1.1.1 Definitions

India is a developing country, which since its independence has maintained a democratic tradition. It is also a country with quite developed environmental policy. For example the need for environmental protection is written in the Indian constitution. India has the last decades tried to industrialize and has increased its share in the world trade. Tirupur has developed through the export of textile knitwear and there are many exporting units and subcontractors to foreign companies in the town. This makes it interesting to link the problems with industrial pollution in Tirupur to globalization. These are important factors that made India and Tirupur fit for this field study.

Even if the aim include national and global perspectives the field study are performed at the local level. The local community is in the center of analysis because I want to learn about the actions of different actors regarding industrial water pollution and how they are limited. Karlsson has in her multilayered study of governance included the global, the national and the local arena. In her study she defines the local level as the level where the local representation of national government agencies interfaces directly with the farmers within a municipality. It is also the level where the environmental degradation takes place and the consequences are experienced.\(^5\) I do not draw a special line for where the community in this study begins or ends but included in the local level are where the pollution takes place and where it is experienced. The farmers interviewed are not living within Tirupur municipality but a few kilometers downstream. They are not included in the community per se but rather seen as outsiders that have big interests in the pollution from Tirupur. Two of the NGOs included in this study do not have any office in Tirupur but they are or have been working with the Tirupur pollution and are therefore included. I regard all these as actors at the local level.

I have tried to include the actors in a society that is relevant for my aim. First is the state that traditionally is seen as the actor that regulates activities within the society. The second is business, which in this case is causing the pollution. The third actor is NGOs or the civil society representing organized groups in the society and at last the affected group consisting of local inhabitants and farmers. Within each group of actors I have made a selection, which is explained in chapter 3, Methodology.

1.2 Disposition

The first chapter gives an introduction to the aim and definitions of the study. The second chapter gives a background to the problem Tirupur are facing and the actions taken so far to control the pollution. This chapter also introduces the reader to India and its environmental policy. Chapter three is the part where the theoretical perspective is explained and developed. The perspectives are political ecology, as the interest and actions of different actors and also globalization and its effects. The fourth chapter is Methodology, where I explain how the field study and analysis was carried out. In chapter five the empirical material is analyzed and discussed in relation to the aim. Chapter six ends the thesis with conclusions.

\(^5\) Karlsson, 2000:19
2 Background

2.1 India- Politics and Environment

When India became free from the British in 1947 after 150 years of centralized rule they got left with a centralized administrative system as well. India is still today a very centralized country even though it has 25 states. According to Koithara the states have no original status and are quite powerless. There is no distinction between central and state laws and the center has also been given all the four major sources of revenue. But if the constitution left the states weak in relation to the center they left the local bodies utterly powerless and totally at the mercy of state governments. Local self-government with the power to raise meaningful resources does not exist in India. India has been a quite stable democracy since independence but there are democratic problems, for example due to absence of effective local governance, which makes it difficult for voters to seek democratic accountability from whom they elect.  

Economic growth has been the main justification for public policies in the third world. The goal has been and still is development and the way to reach it, industrialization and exploitation of the nature. Environmental issues do not have a stronghold among the political parties in India which none of them has formulated objectives or strategies regarding environmental issues. Local and national elites would consider respect for the environment as anti-developmental. Politicians are under pressure from the industrialist, that in India often is politically powerful and have links to both state and central governments. Environmental issues have low priority when it is election and you do not win by promising environmental improvements. The making of environmental policies are very tied to the bureaucracy and never politicized or in the debate.

The policy-making agency at the central level is the Ministry of Environment and Forests (MEF). The ones to control the pollution are the monitoring agency, the Central Pollution Control Board (CPCB) and the implementing agency, the State Pollution Control Board (SPCB). The CPCB at the national level are foremost for technical assistance, to coordinate the SPCB and to make minimum national standards. States can make more stringent standards but not less. The main functions of the SPCBs are to inspect industries, monitor their pollution level and implement standards. The Board also makes awareness programmes and publishes materials related to pollution control. The states also have local PCB offices where needed for example where industrial clusters are located.

India has a centralized system, where the environmental policies are made at the central level while implementation and finances are local. The MEF have to compete for scarce resources against more powerful agencies and the ministry has powerful enemies in the industrialist community while its supporters are diffuse and hard to mobilize. India’s main concern is development and environment comes in second hand, which you can see on the 0.2 percent environmental issues received from the budget. Despite all, India does not lack environmental policies but when it comes to implementation in the real local circumstances problems arise. Because of centralization the policies does not reflect the local reality and the implementing State

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6 Koithara, 1999:30 ff  
7 Desai, 1998:295 ff  
8 Tropp, 1998: 89ff  
9 Sapru, 1998: 162f  
10 Tropp, 1998: 89ff  
11 Kuik 1997: 79-86  
12 Peritore 1999: 73f  
13 Tropp 1997: 92
Board also lack provision of implementation funds from the Center. The local officials also have local elites to face and there are problems with corruption and political influence in the bureaucracy even at the local level.  

If citizens feel that the implementation of the environmental policy is not functioning properly and that PCB are not taking proper action against polluting industries, it is possible to file a Public Interest Litigation (PIL). This is an opportunity for citizens to act against pollution through the higher judiciary, which now has a higher importance in environmental issues. The possibility of PIL has been used to close polluting industries and to force the PCB- officials to act.

![Figure 1. Map over the study area](image)

### 2.2 Tirupur- a Polluted Town

The place for this study is Tirupur, the industrial center in the Coimbatore-region in South India (see figure 1). There has been an industrial boom in cotton knitwear production and export over the last two decades. The number of garments exported form Tirupur has increased nine fold during the nineties. Because of the many exporting units, Tirupur is tied to the world trade and globalization. Untreated effluents from the processes of bleaching and dyeing of cotton have been let out in the river Noyyal during a long time. As a result the ground water quality of the entire town is hazardous and unfit for use, for example the level of salinity is high. The ground water is not suitable for drinking and agricultural purpose. Some of the dyes also contain substances with Benzedrine structures and heavy metals. The water quality is even unfit for some of the industrial use. The bleaching and dyeing units import water from the surrounding villages. Other pollution problems are due to lack of waste management; there are no collection, treatment and disposal of sewage. Untreated municipal water that are discharged on land and

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14 Sapru, 1998: 170ff
15 Kuik, 1997: 87f
16 Chari, 2000: 579
17 Azeez, Penthilnathan, 1999
18 Palanichamy p5
19 Blomqvist, 1996: 134
water are also increasing the pollution load on Noyyal.\textsuperscript{20} Because of the bad infrastructure and heavy traffic, air pollution is also becoming a problem.

\subsection*{2.2.1 Pollution Control in Tirupur}

The Tamil Nadu Pollution Control Board was formed in 1982 and it posted an employee in Tirupur 1989.\textsuperscript{21} The State Board has direct control over the PCB in Tirupur. In Tirupur the Board is responsible for the supervision of the industries. Now the local PCB has five employees in Tirupur.

The Pollution Control Board failed to tackle the growing environmental problems in Tirupur during the beginning of the nineties. This was in part due to the many small, around 800, polluting industrial units and too few employees of the board. Because of this, the Tamil Nadu Pollution Control Board thought of using the idea of Common Effluent Treatment Plants (CETPs). Basically the idea is that clusters of polluters treat their liquid effluents collectively instead of individually.\textsuperscript{22} At first CETPs were planned to be built to make it easier for PCB to regulate the industry. But after a while the pollution control board realized they could not force all the industries to join a CETP and it became allowed to build Individual Treatment Plants (IETP) as well. Therefore finally only eight CETPs were built in 1998. Out of 702 units, 278 units have joined a CETP and 424 are treating their effluents individually.\textsuperscript{23} The bleaching and dyeing units had an incentive to join a CETP due to subsidies from the Central and State governments. It covered the capital costs of CETPs up to a certain limit.\textsuperscript{24}

Dyers Association was formed 1989 to uphold the interests of the dyers against the Pollution Control Board. In 1995 approximately 95 percent of all dyers in Tirupur were members of the association.\textsuperscript{25} Among the huge amount of associations defending the interest of the industry in Tirupur, there are also federations for Individual and Common Effluent Treatment Plants.\textsuperscript{26}

\subsection*{2.2.2 Environmental Protection in the Public Interest}

The pollution has affected the groundwater in Tirupur and the surroundings. Tirupur’s population gets water from villages outside the polluted area and there have been several water schemes and a lot of protests in order to get sufficient supplies.\textsuperscript{27} Most affected by the pollution are the farmers downstream. In order to increase the irrigation in the dry area, a large dam where constructed and ready in 1992, just in time for the big export boom. Instead of irrigating the land, the Orathypalayam dam downstream the town has become a storage tank of the industrial effluents from Tirupur. Because of the highly saline water the farmers cannot make use of the water for irrigation purposes. The water will just damage the crops.\textsuperscript{28}

The success of the farmers was in 1996 when the parties affected by the effluents from the industry, filed a Public Interest Litigation (PIL). It resulted in an order by the Green Bench, Madras High Court in 1997. In short the order from the court said that industrial units without IETP, nor had become members of a CETP were to be closed. It also made the polluting units liable for the past damages.\textsuperscript{29}

\begin{thebibliography}{99}
\bibitem{Sankar2001} Sankar 2001: 247
\bibitem{Blomqvist1994} Blomqvist, 1994: 143
\bibitem{Blomqvist1994b} Blomqvist, 1994: 141
\bibitem{Appasamy2001} Appasamy, 2001
\bibitem{Sankar2001b} Sankar, 2001: 250
\bibitem{Blomqvist1994c} Blomqvist, 1994: 143ff
\bibitem{Sankar2001c} Sankar 2001: 252
\bibitem{Blomqvist1994d} Blomqvist, 1994: 75
\bibitem{Sankar2001d} Sankar, 2001: 186
\end{thebibliography}
Involved in protests against the pollution and the PIL has also been NGOs in the area. There are mainly four NGOs that are working with awareness among different actors in the local community.

2.2.3 Remaining Problems

Even though ETPs are built there are still huge problems with effluents from the industries among other sources as well. At present both IETP and CETP are not designed to meet all the standards from the PCB. Standards not covered today are total dissolved solids (TDS) and chloride. This makes the water saline. When this field study was conducted there were notifications from the Pollution Control Board and discussions about how to fulfill this standard in the nearby future. Foremost the technique of Reverse Osmosis is seen as the solution to the problem with TDS. Another problem is the huge amount of sludge, containing heavy metals, as a result of the water treatment. Today there is no other possibility other then to store the sludge directly on the ground within the units’ property. The NGOs in the area and the farmers are still protesting and making complaints to the PCB even though the biggest activity has gone down after the PIL.

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30 Parikh, 2002: 141
31 Sankar 2001: 250
32 Sankar 2001: 262
3 Theory

3.1 Third World Political Ecology

In the book Third World Political Ecology, Bryant et al., puts an actor and power perspective on the environmental crisis in the third world and also links it to the wider development crisis. I find it interesting to use this theory because different actors are in focus in this thesis. The authors mean that the environmental crisis is politicized because it is linked to the actions and interests of different actors and therefore to economic and political struggles. Political ecologists mean that the environmental crisis cannot be seen as a neutral process. It has political sources, conditions and ramifications that are linked to socioeconomic inequalities and political processes. The cost and benefits associated with environmental change is distributed unequally between the different actors. This inequality reinforces or reduces existing social and economic inequalities. Changes in environmental conditions must have impact at the political and economic situation and vice versa. Environmental change and crisis also has political implications in the power relation between different actors. It has impact at different actors’ possibility to influence and control other actors. There is an asymmetry between the actors that bear the cost of and those who benefit from the environmental change. But also between the actors that largely control efforts to solve the problem and those who do not.

The most common way to describe environmental problems is as a physical phenomenon but political ecologists mean that we instead should describe the crisis with the social and economic affects it causes. Then the third world environmental crisis is more a crisis for some actors than for others. The crisis may even be a source of opportunity for powerful actors. The authors mention the actors, state, business, NGOs, Grassroots and multilateral institutions. The state and the business are here the powerful actors that suppress the weaker grassroots in their hunt for wealth and power. The NGOs are a kind of defender of the values that the powerful tend to forget.

Third World Political ecology is the main theoretical approach for this essay because of my ambition to keep different actors and their interest and action in focus. To be able to discuss the impact of globalization, I will also use theory around globalization in this thesis. To understand globalization and how it changes the role of different actors at the local arena I will use a model to view the society as a triangle. Under 3.2 I first explain what this mean within the national borders. Under 3.3 where I explain globalization I will also discuss the impact the globalization has at different actors within the triangle model. My main way to approach the empirical material is however from the view of different actors and their ways and possibilities to influence the situation.

3.2 The Society as a Triangle

The society can be pictured as a triangle with the state, the market and the civil society making out its corners. The state is the institution that rules a country. It is an idea or an institution that needs continuing affirmation from its citizens to exist. The state keeps the order in the country so that people, businesses and institutions can plan its daily activities. For that reason and also to defend the laws that symbolize its existence, the state has monopoly of violence. The state support and regulate economic activity that occurs on the market. The market is characterized by human interaction with money as medium- the part of money circulating within the society that

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33 Bryant, 1997: 27ff
34 Bryant 1997: 37
35 Bryant, 1997: 29ff
does not pass through the state. The civil society consists of associations with a focus or aim outside itself. In the civil society you formulate and propagate for views and interests that is not properly handled by the state and not made or sold at the market. These three parts that build up the society all have different roles and they exist dependent of each other and in cooperation. The state support and regulate the interactions within the market and the civil society. The market allocates resources between parts of the community and the civil society work with issues that affect how the state and the market develop and act.\(^{36}\)

Since my study is based at the local level the actors that will be treated in my study are the state, business, NGOs and grassroots. Business represents the market and NGOs, the civil society. NGOs are characterized by operation on a voluntary, non-profit basis. Their activities are linked to public goods and they are located in the civil society, clearly differentiated from economy and state.\(^{37}\) The grassroots can take action in the market or civil society depending on their action. They are the ones affected and the ones that take part in the society that the other actors create. The grassroots in this case would be the inhabitants in Tirupur and the farmers. There is a tradition to view the grassroots as utterly powerless and without resources but quite many of the Tirupur inhabitants are well off. Because of this I will not use this term but instead Tirupur inhabitants and farmers.

### 3.3 Globalization

I have found the most interesting view of globalization in the sociologist Ankie Hoogvelt. She means that globalization is transforming the world society in an irreversible way. The globalization is not the expansion of the capitalist economy but instead a deepening. It is the sociology of globalization that drives the globalization of the economy not the other way around. This happens in three ways. First, the global market discipline, meaning that all over the globe there is a internalized consciousness about global competition that limit individuals and groups to adjust to international standards. This can happen because today we feel that time and space looses its importance because of technology, like IT. Second is the existence of a new global division of labor that cut through national and geographical boundaries. The rich and those who have exist in all countries same as the poor and those who have not. The expression core-periphery that used to explain the relationship between the rich countries in the west and the poor third world countries are starting to get another meaning. Core-periphery is now more a social relationship than a geographical one. The third is that money exists in real-time because of the global financial market. Money can be moved in a qualitative new way. Because of this international mobility in real-time, capital can be separated from social relations.\(^{38}\) Hoogvelt explains the world’s interconnectedness in this way:

\[\text{“The world is now like this: if our pension funds work well for us, the peasants in northern china will just have to go a bit more hungry.”}\(^{39}\)

There are other ways to look at globalization; in fact there even is a dispute around the mere existence of it. Skeptics of globalization are often looking at the world in just economical terms, like world trade and the integration of national economies. The numbers in such a study indicates that the world trade is not very integrated around the globe so it is in fact a lack of globalization in many places, for example in Africa.\(^{40}\) What the skeptics tend to forget is that even if a country

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\(^{36}\) Andersson, 2001: 37ff

\(^{37}\) Tropp, 1998: 41

\(^{38}\) Hoogvelt, 2001: 120ff

\(^{39}\) Hoogvelt, 2001: 141

\(^{40}\) Hoogvelt, 2001: 120
does not take part in the world trade it can be highly affected by globalization. Globalization exists because of the consequences for all even if you are no real part in the global community.

Another view that does not contradict Hoogvelt's that much is the hyperglobalist. It is more interested in politics and concludes that the market is global and almost without boundaries but the politics is still mainly tied to the national arena. This lead to the market actors’ power over the politicians because the companies are free to move to the county where they get the most favorable conditions to make profit.  

3.3.1 Network Capitalism

One side of globalization is a change in the production structure. Earlier the transnational companies were organized as big inclusive, hierarchical colossuses. As a part of the fordistic assembly line they included all production stages. Now these companies have reorganized into fluctuating networks. Strategic decisions, design, development and marketing are made at the head offices but the responsibility for the production and profit has shifted to the different stages of the production to subsidiary companies and/or independent result units. If one part is not effective enough they are replaceable. The new post fordistic way to structure the production has developed and reshaped the fordistic mode of production, with large inclusive companies to floating networks. To outsource parts of the companies is now common. Several industrial units produce for other companies according to the agreement they can get. This leads to bigger competition and lower cost for the companies, which are buying from competing subcontractors. This is in turn followed by a political adjustment to make the situation in each country as favorable as possible for that country’s companies to receive necessary contracts for export.

3.3.2 Actors not Equally Globalized

There are formal institutions at a global level that in their activities resemble the role of the state, for example the UN. The problem is that this organization only can act on behalf of the member countries. It has no own permission to act and not the same monopoly of violence as a state within its own territory. UN cannot act in a country without the permission from the actual state because of the principle of sovereignty. A real state at the global level does not exist.

The market is the most globalized actor distributed over the world. The economy is organized from what is profitable rather than from the origin of a company. At the same time the economic activity is situated in a country but with the possibility to change location after the best conditions. This makes the business global. The business do not have ties to the state at the global because there is no global state or at the national level because one country can just be changed to another. The only string to attach the business today is the consumers and the possibility to sell products.

In the civil society it is not possible to separate the national from the global. Many organizations have international ties and cooperation over the borders. This is because their interests often have an international or global character. Internet has made global ties possible in a greater way.

The market goes first in the process of globalization because the state does not develop regulating institutions if it does not have to. The state at the national arena is forced to adjust to

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41 Hoogvelt, 2001: 120
42 Andersson, 2001: 93ff, Hoogvelt, 2001: 104f
43 Andersson, 2001: 96ff
44 Andersson, 2001: 45f
45 Andersson, 2001: 51f
46 Andersson, 2001: 53f
the global business growing out of the nation state and thereby political initiative to control the market actions is lost. The global civil society can be seen as developing as a response to the market domination and the state’s incapability to control it. The global politics more and more articulates within the civil society. 47

47 Andersson, 2001: 55
4 Methodology

4.1 Field Study in India

To be able to understand the possibilities of the local community to manage water pollution and the problems that people face in a third world country, it is important to talk to the people involved. A research journey to the place in question gives a better possibility to write an essay, where you try to understand the problems that a third world country are facing, than from staying at home in Sweden. This attempt to explain and understand another society is criticized. It is important to remember that you are an outsider to the society and that your previous understanding and pictures of India, environmental problems and the society will color your study.48

My fieldtrip to India mostly concerned the textile industry town, Tirupur but I also performed interviews in Chennai, the capital city of Tamil Nadu, and in the industrial towns Coimbatore, Dindigul and Erode in the region surrounding Tirupur. (See figure 1) The field study was performed in one period that lasted for seven weeks, from October to December 2002. We were two persons who did the field study together and even though we have different aims we share the same empirical material in broad outline.

4.2 Selection of Informants

It is important to be aware of the interest of organizations and institutions to maintain a good picture of its activities. During interview this can give some contradictions in the information given. Therefore I tried to talk to as many different groups of informants as possible to get a wider picture compared to just consider information from one informant alone. Because of the fact that we were two people that worked with different aims in one field study the selection of interviews are wider than if we had been doing the field study on our own. Generally I could have had several informants instead of just one in each organization/industry, this to have a more security in the information given. But this had not been possible due to the timeframe of the study and capability of the informants to give of their time. Instead of more interviews I think I could have performed a more equal amount of interviews in each group. I feel that I used my energy more to interview many people in groups that were easy to reach than putting more energy in contacting more in the other groups. But the study is quite wide so I think this will not affect the outcome in a significant way. Appendix 3 shows a list over all the interviews.

The state

I interviewed four politicians from four different political parties. One was the present Member of Legislative Assembly for ADMK (Annadurai Dravida Munnetra Kazhagam), one was former Member of Legislative Assembly for CPI (Communist Party of India), one former Member of Legislative Assembly from CPIm (Communist Party of India Marxist) and one municipality chairman from BJP (Bharatiya Janata Party). It felt important to interview the MLAs because they have represented Tirupur at the state level. The first three parties were chosen because they represented the three largest parties in Tirupur. The municipality chairman was chosen because he represents the municipality towards the citizens.

Three interviews were made with one informant, an Assistant Environmental Engineer at the PCB. I only had one informant out of five employees at the Pollution Control Board in Tirupur because of their limited time and resources. I also interviewed one person at the TNPCB in Chennai to get their picture and a background to the situation in Tirupur.

48 Agar, 1980: 48f
Business
I took part in seven interviews with industrial units. I wanted them to be in different sizes and locations and that both units with CETP and IETP would be represented. Totally three interviews were made with units being members of a CETP and four with IETP.

As representatives of the industry I also interviewed a former employee of the Dyers association and a person from TEKMA, the textile exporter’s interest organization. I interviewed these to get a more general picture of the situation for the industry in Tirupur and because it often is these associations that manage the contacts with other actors like politicians and environmental NGOs. Dyers Association and the Textile Exporters Association, TEKMA can also be seen as NGOs but in this case I only regard them as business representatives.

NGOs
NGOs can be very different from each other because of their multifunctionality and appearance at all levels. They have disparate interests, objectives and strategies. This makes them difficult to categorize in a natural way so a categorization is often constructed.49 I tried to avoid that problem by meeting all NGOs working with environmental issues in Tirupur and I also had the criteria that they had to be based on a local level, in Tirupur and the area around. I tried to establish contact with as many NGOs as possible before conducting my field study. I found three NGOs before going to Tirupur and one more after the arrival. I tried to find out if there were any more NGOs by asking the ones I already had contacted and also through the local phonebook. In Tirupur and the area around there were several NGOs, but a second criterion was that they should have an environmental approach. No more then these four could be found. The interviews were performed with the headpersons in the organizations at their offices. Two of the NGOs were just local and the other two were larger. One of them was a NGO based over all India with one field office in Tirupur, which I visited. The other had a number of offices in Tamil Nadu and I went to visit the field office in Erode and to the main office in Dindigul, to have an interview with the chairman for the NGO. I also interviewed, a consumer organization, a NGO that are not having an environmental approach but instead has done a lot of work regarding the issue of water supply. I found this organization interesting because most protests in Tirupur has been related to insufficient water supplies. Totally I performed nine interviews with six informants from five NGOs.

Farmers
The farmers and the Tirupur inhabitants were the most difficult groups in doing the selection for interviews in. They are both very large groups, difficult to picture clearly and it is hard to reach people in a systematic manor. My interpreter played a vital role in helping me choosing people to interview and to get in contact.

Different groups of farmers in the area downstream Tirupur are affected in different ways. The most affected farmers, in comparison, could be found around the Orathypalayam dam. There I performed one single interview and one with a group of farmers affected by the pollution. They had no proper farmers’ organization in that area, but a few people were active in a group that first was formed around the irrigation of the water from the dam and they have tried to organize some kind of resistance. Totally there were two interviews performed with farmers.

Tirupur inhabitants
When it comes to inhabitants it is even harder because there is no organized group to contact. You could pick just anybody in the street but there is a language problem and it is difficult as an outsider to make contact in a simple way. In the end I could just talk to people that the interpreter had some contact with. Because of that I did not talk to any really poor. As a criterion

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49 Tropp, 1998: 43
I wanted the informants to be native in Tirupur. The interviews became three at last but I would have wanted them to be more. To get a wider picture of the life in Tirupur I will use information from NGOs that are working with the poor.

Other informants
A lot of interviews where performed to get an overall picture of the situation in Tirupur, for example with researchers. These are not represented or included in the analysis except for some information from two doctors regarding the health situation in Tirupur.

4.3 Performing the Interviews
The collection of data in this field study was based on qualitative interviews. It demands a lot of time, but it is a flexible research method. When it comes to qualitative research there are few rules in standard and methodology. The methodology can be called non-standardized and there are no common procedures for research with interviews.50

Mostly I performed individual interviews, meaning that the questions were asked to one informant who was alone with my research companion and me. When performing the interviews we where most of the time three persons, two researchers and our interpreter. Sometimes we were two persons without the interpreter or just one of us with the interpreter. In some cases it was more than one person who took part in the interview as an informant and sometimes there were several people that were silent in the room or made short comments to my questions. Performing interviews with a group is different from an interview with just one informant. When it is a group a kind of interpersonal social cooperation between the persons that are present exists. Even if the other person is silent the informant is aware of that the other person listens to the answers given. This can give a negative affect when taking about sensitive issue or in good way if they through the interaction can contribute with more thorough information. Understandings and opinions are shaped and being presented in a different way in the social interaction between several persons. But this fact did not change the way I performed my interviews and how I arranged the material afterwards, compared to the way I did with the individual interviews.51

Before conducting the interviews I prepared an interview guide, to be sure that the relevant areas would be covered during the interviews. Even though it is important to let the informant talk freely, like in a usual conversation. In the interview situation I did not follow the manual precisely but I covered all its themes. The purpose with the guide was that it would function as a support during the interviews, not affecting the flexibility of the conversation between the person interviewed and myself.52 The questions changed a bit with different actors and informants but generally we talked around the same themes. (See interview guide in Appendix 2).

The interviews performed were semi structured. I wanted a certain type of information from the informants and therefore I had a set of questions with me, but the answers were open.53 I did not decide any special order in which the questions would be asked. Everything was dependent on how the discussion developed during the interviews.54 Often the interviews were more like an informal discussion based on me and my research companion’s questions rather then a formal interview. Usually the conversations lasted between almost an hour to two hours, with informal talk before, during and after the interview. The interviews took place in many different locations.

50 Kvale, 1997: 19
51 Holme, 1997: 108
52 Holme, 1997: 101
53 Klöfver, lecture, 2002-01-21
54 Merriam, 1994: 88
Often it was in the office of the informant, or an office close to the factory or the workplace, but also in the private home. Only one interview was performed at my place and it was the informant who initiated that.

Several interviews were taped to be able to complement the notes afterwards. Just relying on notes can lead to that the data is being reduced in an unsystematic way. Most of the time we were two persons that performed the interview and both of us took notes, especially if we could not use the tape recorder. There are both positive and negative aspects with a recorder. If we talked about sensitive issues it could be difficult for the informant to talk freely if the interview was being recorded. Sometimes it was not an appropriate situation; the tape recorder would have had a negative impact on the interview, for example because of noise in the background. Before the interviews started we informed about our purpose of the field study, the anonymity of the informants, the use of the tape recorder and for what the interviews would be used.

4.4 Working with Interpreter and Cultural Aspects

I used two interpreters, one of them in Chennai, where I performed five interviews but only two were interpreted. Four of these interviews where merely to provide a background to the study and are not included in the analysis. In this case all the informants could speak English so I was not totally dependent on the interpreter; he was more like a facilitator and help for me to understand the different ways to express in English. This interpreter worked, with issues related to the industrial pollution in Tirupur, at a university in Chennai. I established connection with him in Sweden during his research visit. In Tirupur I used one interpreter. He had a wide contact net in Tirupur so it was easy for him to arrange meetings with industrialists and associations. To have someone to introduce you in a proper way is important to be accepted and for a good interview. Even if the informant spoke English I needed an interpreter to understand each other’s dialects and to decrease the amount of misunderstanding. My interpreter always started the interview with some informal talking. It is very important with a social contact and sometimes the informant was a bit suspicious against me. Then my interpreter was a big help to create a socializing and comfortable conversation. It is also a fact that the interpreter had some kind of social connection with many of the informants, even though they did not know that from the beginning. Tirupur is a small town and many seem to know or be related to each other. But I do not think them having some kind of social contact had an impact on the information given by the informants. It would have been difficult to find a local interpreter not having any of these social contacts in town.

Working with an interpreter affects the information that you get from the informant because it is impossible for the interpreter to make a perfect translation. But the interpreter can be vital for the understanding, for example because of my lack of knowledge in local expressions and local conditions. I always discussed the aim with the study and the interview with the interpreter before the interview. The interpreter’s translation was often shorter than the answer of the informant. This is likely depending on that the interpreter chose what to translate, made it shorter and more understandable for an outsider. The informants followed the translation of the interpreter and could fill in if something were missed in those cases when the informant could understand English. I felt that making interviews with interpretation worked well and that I had a good cooperation with the interpreters. Both of the interpreters were well educated and aware of the situation in Tirupur and the aim of my field study.

55 Lantz, 1993: 78
56 Blomqvist, 1994: 55
57 Blomqvist, 1994:.55f
When I interviewed the NGOs I did not use interpreter, because I knew that they could speak good English. I had a meeting with the NGO before the interview, to get a picture of their work and introduce myself, this because I wanted to be able to get a more relaxed and informative interview the next time. Since the NGOs were few in number I had the possibility to create this social contact before the interviews were performed.

The fact that I and my research companion are outsiders to the society affect the way the informant look at us and how they perceive the interview and our questions. Especially since we were white women walking around in their city, almost everybody in the town knew about our presence. Many people assumed that we were businesswomen, but since we lived and dressed in a local manner people could not really understand or put us in a category. During interviews the informants often asked a lot of questions about what we were doing in Tirupur, were our families were and if we were married. I do not know how the fact that we are western women has affected the information.

4.5 Analysis of the Result

The analysis of the material started already during the interviews, because in the qualitative research there is an interplay between the collection of data and analysis. The research interview is a conversation that is transcripted to texts that will be interpreted. I create and interpret texts by working through the collected information from my interviews. During the field study we tried to transcript the interviews the same day from the tape or write it out from the notes. We double-checked and complemented each other’s notes.

There are no well-developed routines, procedures or techniques to work with the information from qualitative interviews. When the field study was over I organized and structured the information after three main aspects, based on the aim of the study. The three main categories are:

- Actions taken from different actors at the local level
- Experience of the central/ state level
- Globalization

I searched for regularity in the material, which is the meaning of the development of categories in the information. In this way I created data through a selection of information I totally gained from my interviews. In this process there is also a kind of structured reduction of information. After this I analyzed the results based on the theory I have read and at the end drew conclusions from the analysis of the material.

When I analyze the statements of the informants I will not referee to the particular informant all the time. I will instead mention to which actor the informant belong. If it is a quotation I will referee to the informant who said it. Sometimes I will relive very little of an informant to protect the anonymity of the person. Then I will do this in a way so it will not affect the understanding of the analysis.

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58 Merriam, 1994: 136
59 Kvale, 1997: 50
60 Holme, 1997: 139
61 Merriam, 1994: 145
62 Lantz, 1993: 79
5 Analysis

The analysis will be structured in three main points like my aim. After the overview I turn to the local level and different actors, which will be analyzed from the theory of political ecology. Then I turn to the issue of centralization and the interaction between central /state and local level. At last globalization will be in focus.

5.1 Overview of the Situation

The farmers downstream Tirupur at the Orathypalayam dam do not feel any positive change after the installed treatment plants. They cannot use the water for any purpose other than to irrigate some coconut trees. They have to get water from other villages. They grow some fodder crop and tend cheep but only if there is rainwater. Some also fish the one kind of fish that survive in the water.

The TNPCB has the responsibility to control the polluting units and to enforce the environmental policies in Tirupur. A lot of the informants in general say that even if the treatment plants are built, the water is not treated 100%. One problem is that they are not constructed to treat TDS but they also claim that raw effluent is let out in the river untreated, especially during the night. Even though some of the informants think that more water is treated now than before the building of the treatment plants, obviously the implementation of the environmental policy and the PCB’s standards are not working properly.

5.2 Action and Interest of Different Actors

5.2.1 Cheating Industries and Corrupt Officials

Even if a unit has invested in a treatment plant, there is a continuous cost to treat the water. That is the reason why raw effluent from the bleaching and dyeing units still is let out in the river even though treatment facilities are installed. One farmer explains the situation like this:

In my view I do not foresee that Tirupur treats the water at all. Maybe the smaller ones that are afraid of some action to be taken are treating the water to some 50%. But the bigger, the CETP ones are not treating at all or at least they store it during the day and release it in the night. I don’t see any proper action from the industrialist’s part to treat the water. We hear from the sources, the Dyers Association and our association that it costs about 890 paisa to treat 1 liter of water properly. It was a part of their profit before and we are not expecting that they will spend almost a rupee a liter to treat all the water.

Some informants call the treatment plants eyewash and mean that it is a way to fool people. When the plants are build people think the problem with pollution is solved but actually the plants are not treating sufficiently and sometimes they are not used at all. There seem to be problems with untreated outlets from both kinds of treatment plants even if it happens in different ways. In the individual treatment plant the owner is responsible for treating the water. In the common plant it is more difficult for an individual to cheat because here the responsibility lies at the CETP board. Despite this several informants from different actors are more skeptical towards the CETP. They believe that the board, containing powerful industrialists, that are responsible for the treatment, take the money from the individual units but then do not treat the water.

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63 Indian currency, 100 paisa = 1 rupee = 0.023 US Dollar (exchange rate 06 January 2005)
64 Informant: group of farmers
One of the informants from the business that is running his own dyeing unit means that corruption is a way to handle the local PCB officials. He also says that with the proper contacts you receive warnings before PCBs inspections. Several informants mean that the PCB in Tirupur is corrupt and it is possible for the industrialists to bribe them. Different informants think it happens in different amounts but most consider the corruption a fact. One person from the public says that:

“The town is spoiled because of corruption and it is also higher in Tirupur. Officials and bureaucrats wants to be transferred to Tirupur because the possibility to earn money.”

Tropp describes the Indian state as particularistic, which means that the state does not govern according to rules but base its actions on personal favors and connections and the possibility to earn money. This lead to a difference between the politics on paper and in practice and a situation where power in hold of a person within the state, often is used to maximize ones own gain instead of serving the public. The particularistic Indian state fosters relations based on clientism, that is patron-client relations instead of rational-legal relations. Clientism involves exchange of favors and resources between the patron and client where the patron are in a power situation. The particularistic state leads to corruption among bureaucrats. Also an article by Robert Wade explains difficulties within the Indian bureaucracy. He means that the system of corruption is underpinned by the system for transferring officials. If a bureaucrat is too little or too much corrupt, complaints are made and the person gets transferred to a position that is considered to be less desirable. Officials then automatically adjust to the system to be able to get to the sought-after positions. Corruption tells us about the relationship between the industry and the state as a cooperative one, that they have mutual interests in earning money.

5.2.2 Lobbying and Politicized Bureaucracy

The industrialists, owners of dyeing and bleaching units, and the PCB in general have a very cold relationship, even if they have the corruption in common. Several owners of bleaching and dyeing units feel that the PCB harass them and pressure them. In the eyes of the industrialists the PCB are the police that just control them but provide very little support. One informant from the industry says that this pressure from PCB can be controlled not just with corruption but also through political contacts.

The relationship between politicians and the business society is very warm and characterized by the local elected representatives’ total support for the industry. The industrialists lobby to the government at the state level, which in turn have control over the TNPCB. According to Kuik political pressure can be put on PCB to control the board’s actions. The informant at the local PCB admits that the government can slow down the process of enforcing zero discharge even if he/she mean that they cannot stop PCB entirely. The government can even transfer officials that do too much and a few of the informants mention that this has actually happened in Tirupur. This lead to a situation where an official at PCB cannot follow the rules if he/she wants to keep his/her job. Peritore writes that India’s bureaucracy works on a patronage system, where procedures and rules are applied differently to benefit patrons and their local clients. The industry

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65 Informant: public person 1
66 Tropp, 1998: 31f
67 Wade, 1985: 409ff
68 The SPCB are under the control of both CPCB and the State government. The state government nominate the chairman and member secretary and can also remove them. Kuik, 1997: 76
has the attention of the party bosses, who then intervene in the administrative processes.\textsuperscript{69} The ties between the politicians and industry or between patrons and clients together with the political influence over PCB result in that the industry to some extent can control the TNPCB. The politicians get in return support during elections like votes and political and economical support.

There is strong lobbying from the industrialist towards elected representatives, especially through associations like Dyers Association. The industrialists feel a great support from the government but some also feel that the government soon will get stricter and demand zero emissions. They lobby towards the government to make PCB less strict but also for financial support. Eriksson concludes in here thesis from Tirupur that there are links between the industry and the government on one hand and between the government and the regulation on the other. This implies a situation where the industry has influence over the decisions taken within PCB and the government.\textsuperscript{70}

5.2.3 Dependent People and Lack of Public Pressure

Because of the political control over the PCB a greener agenda from the government could affect the board in a more enforcing direction. According to several informants public pressure for an enforcement of the pollution control could make the government change in that direction. One NGO argues that PCB would not do anything without pressure from the public that affects the government. Even PCB concludes that with more public pressure it is easier for the board to put more pressure on the industry. The actual cause of reason for PCB or the government to take action is influenced from many directions but public pressure would of course matter. For example some industrialists feel that the government is very attentive to public pressure and they think that if there are a lot of public protests the government would close the polluting units.

But none of the informants thought that it was any actual protest from the public regarding industrial water pollution. In the past there have been protests about water and the untreated effluents from industrial units but it have mostly concerned the lack of water supply caused by polluted ground water. If people get enough water for domestic use they are satisfied. Even today it happens that people come to the municipality office and complain about the water but only rarely. One of the elected representatives explains that it is a peculiar situation in Tirupur. In other places there is less pollution than in Tirupur but more protests. That is because without the industry, Tirupur is nothing. He thinks it is about survival. The same person said in the assembly when he was Member of Legislative Assembly:

\textit{When the Noyyal was living the people were not and now the people are prosperous and the river is dead.}\textsuperscript{71}

All three informants from the public have their own business and relatives working in the industry, which make them dependent on the textile industry. If the industry has a lot of business and earning money their companies are also profitable. Especially one of the Tirupur inhabitants was very proud of the industry and how it had changed the town. Many informants point out that Tirupur community is depending on the industry for its survival. If you do not work in the industry you probably know somebody who does. Many of the other employments of the town are dependent on the industry and that people have the possibility to consume but also on the big floating population that comes to the town for work. That is why the inhabitants of Tirupur are very careful about their industry. It is also important to understand that most people do not feel that they are directly affected by the pollution as long as they get sufficient water supplies.

\textsuperscript{69} Peritore, 1999: 74
\textsuperscript{70} Eriksson, 2003: 37
\textsuperscript{71} Informant: elected representative
Because the treatment plants are built and also because less colored water are released during daytime the people are more positive since they sense a change in the right direction. This is what some informants call the plants eyewash. The industry has a great local support and local embeddedness. They are more seen as heroes than the bad guys.

The inhabitants that I have interviewed are a part of the better off in Tirupur. But it is important to remember that there are many poor in Tirupur. Of the population of 900 000 people, 60% live in eighty slum areas around the town. Many of the people have migrated from other parts of Tamil Nadu. They are mostly farmers that now are working in the industry under poor conditions and for a small salary. Their water supply is not sufficient and they drink of polluted water that according to the two interviewed doctors in Tirupur causes skin- and kidney problems. They also have to spend a lot of time trying to get water from private lorries and paying a considerable part of their salary to receive it. But these people have come to Tirupur for work and if the industries close down the possibility to earn their living disappear.

5.2.4 PIL and the Farmers

The farmers filed a PIL against the offending industries. The court order demanded building of treatment plants otherwise the units would be closed. The PCB official says that after the PIL they felt the pressure from the court, which led to a fast enforcement of the policies. But according to PCB, they would have acted at this point with or without the court order because of their own ambition. A lot of informants do not think anything would have happened without the PIL. Some industrialists also think it was the PIL that made PCB take more strict action. Before the PIL there had not been any real pressure from the PCB. According to Kuik the possibility for third parts to launch a PIL against offenders, make PCB more alert and reduce the possibility of secret deals between Board officials and offending industries.

PIL are empowering for the environmental movement and people in general, because it makes them a force that the polluting industry cannot totally ignore. But in this case the farmers and NGOs are quite skeptic because they feel that the implementation lies in the hand of PCB and the industrialists and then they argue, you cannot know what will happen.

Now after the PIL and the building of the treatment plants there are fewer protests than before from the farmers. The farmers mean that the protests are still there but they do not feel any response to the protests. A lot of farmers do not have means or time to participate in resistance even though they want. It is difficult to protest because they have to travel to reach the right people and they do not posses that amount of recourses. When the farmers try to arrange meetings and invite the TNPCB or elected representatives they often get canceled. When they finally come for a visit promises are maid about some actions but nothing happens. One time they got a visit from the Minister of Environment and he told them he would write a press release about their situation but when the release came it told a totally different story. The farmers feel that the industry has an advantage in every decision that the government takes even though the farmers are many more. The industrialist has the money and the support of the government.

The farmers have protested a lot but when nothing happens a feeling of hopelessness spreads and they lack resources and energy after years of spoiled farming. According to Kuik, experience has shown that while people may be mobilized for a well-defined short-term objective, it is

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72 Prithiviraj, 2002: 19
73 Kuik 1997: 94
74 Kuik 1997: 94
difficult to keep people in a perpetual state of participation, mobilization and action. But the farmers are also starting to build up a relationship with the industry that also makes it more difficult to fight it. This is because more and more young people from the villages are going to Tirupur for work. One of the farmers that were interviewed says that in his family they have two sons and one of them is working in the Tirupur industry and they are depending on the weekly salary. Before a lot of people wanted to close down the industries and many propagated for violent methods but now more and more farmers have a relation to the industry, which makes it difficult to fight it.

5.2.5 Non Confronting NGO Activities

NGOs are a potential force in changing the situation since public pressure could lead to action taken to control pollution. Their role could be to mobilize people. But for now there are no NGOs based in Tirupur that actively are working to stop the “end of pipe” water pollution from the dyeing units. Of the Tirupur based NGOs one are working with social issues like women’s situation, child labor and workers’ situation. When the farmers filed the PIL this NGO did some work to help them. The NGO in Tirupur, which is more focused on environmental issues are working with waste management and cleaner production awareness programmes for dyeing units, which in the long run can have an effect on the pollution. This NGO has a very cooperative approach. One NGO based in Tamil Nadu helped the farmers filing the PIL. Now it is not doing anything special in Tirupur but is working with pollution and child labor in other industrial towns in Tamil Nadu. The Coimbatore based NGO has recently done a study regarding “dirty shirts”, both regarding pollution and workers’ situation in Tirupur for a Dutch NGO. This is the most concrete activity regarding the industrial pollution in Tirupur for the last years but nothing is really confronting the industry. According to several actors there have been protest regarding the water supply in the past. Tirupur consumer’s organization was active in these protests. But now the water supply is more sufficient and there are not any protests regarding the water pollution just as long as the water supply is enough.

The NGOs have not made any real difference in the issue of water pollution in Tirupur except providing help with the PIL. The NGOs do not confront the industry or the pollution control board. They as everybody else feel the importance of the industry and they do not want the industries to close down. One NGO informant concluded that if you protest or agitate against the industry there would just be a no directly. It is better to create a dialogue. The usual activities of the NGOs in this area are trying to create awareness about environmental and social issues and also doing some lobbying toward the government. But they think it is difficult to reach out because of less resources and power compared to the industry. One of the Tirupur inhabitants that I interviewed started an environmental group and they thought about doing something regarding the water pollution first but then they realized that they would get all the dyers and their resources against them so they started planting trees instead. The most important activity of these NGOs is the work with awareness among people. Some with the aim that people go together and protest to pressure the industry to take action.

One NGO also work with awareness among the industrialists regarding cleaner production and have regular contact with PCB and Dyers Association in creating these programs. According to Eriksson the work with awareness among the industrialists in Tirupur are important to create incentives for better treatment and processes and it is also a sign of partnership and cooperation between different actors in handling the problem of pollution. Tropp concludes that NGOs can play an important role in the local management of resources and through being a link between

75 Bhatt, 1995: 85
76 Eriksson, 2003: 40
the state and the community; they can come up with solutions. This can be a way to create solutions in the future.

NGOs in Tirupur are important and for example they strengthen the civil society, create awareness and support the grassroots. But they have not done so much regarding water pollution, except giving support for the PIL and providing information for the first world NGOs.

5.3 Cost and Benefit Distribution

The whole society is focused on economy and then it is difficult to give priority to environmental issues.

The distribution of the consequences of pollution is unequal. This affects the different actors in their will to take action for pollution control. In Tirupur the powerful actors, like the state and the business, all make a bigger profit of the situation staying the way it is. The industry has problems of meeting the cost of the pollution treatment. Therefore corruption and lobbying towards the state is a less costly solution. According to Peritore corruption is considered a business cost. This gives the industrialists a higher profit margin and sometimes even this amount of money is what makes a unit stay in business. As long as the board officials receive their bribe, they also have an incentive for not enforcing the standards. And even if PCB will force the units to comply with zero discharge, that is to build the reversed osmosis plants, it does not mean it will be used. Even if the unit has installed technology for zero-discharge there will always be a cost of operating the plant. Incentives for corruption exist even if technology is already installed. The situation can even be more profitable for officials the more treatment the units will avoid. One industrialist says that because of corruption the PCB are the real beneficiaries from the PIL. Bryant et al mean that corruption is a big problem in enforcing environmental legislation. Often it is neither in someone's political or economical interest to implement the environmental laws.

It is also important to remember that the winners in Tirupur are more than the traditional powerful actors of business and the state. A lot of the Tirupur inhabitants and especially the three I have talked to have their own business. If the textile industry is making profit in Tirupur this will spread throughout the community. Even the poor workers living in the city slums and the farmers through their children get their share. It is not equally distributed but it is enough to build up a tie and a dependence on the industry. This affects the possibility to organize people and build up a public pressure. The protest regarding water supply has shown the potential of people in Tirupur.

The biggest cost load for the industrial pollution is put on the farmers. And initially they protested a lot but it did not lead to any actual change in their situation. But as mentioned even the farmers are beginning to build up ties to the industry making them less eager to protest. The farmers have no option of leaving this area because they cannot sell the land which lead to difficulties in mobilizing resources.

The poor urban slum and the farmers downstream have to take most of the problems with the polluted water, at the same time as they become more and more dependent on income from the

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77 Tropp, 1998: 103
78 Tropp, 1998: 71
79 Informant: NGO 4
80 Peritore, 1999: 75
81 Bryant 1997: 65
industry, which make it difficult to act against it. Also among farmers in other areas around Tirupur possibilities to profit from industrial and domestic demand for water exist. Water markets have emerged where private lorries go to villages outside Tirupur to buy water from farmers. If farmers engage in both farming and selling water they can maximize their gain. So even within actor groups the interests divide.

NGOs play a very little role in the water pollution but they are there and create a more vivid civil society. But the limited capacity and engagement from people, makes civil society not a strong force in Tirupur today. The industry has power over the people because they are poor and lack alternatives. Eriksson also argues in her study from Tirupur that the industry gain power over people through their providing of work.

Many sources in the literature view the problems with implementation of environmental policies as common in India. This is connected to the problem with clientism within the state. Clientism is defined as informal relationship between actors of unequal status. It involves exchange of resources, like votes and political support for services and other favors. Tropp mentions in his study problems with implementation of environmental policy in Chennai. There clientism fosters poor and skewed implementation. Bureaucrats find it difficult to challenge local power elites like politicians and industry. The ones who make the law are responsible to national and international pressure but the one who implement are responsible to the local powers and industrialists. The local power situation also makes officials of PCB adjust to local power structures otherwise they risk getting transferred.

5.4 Centralization

As discussed in the background part there is actually no lack of environmental policy in India but there is a problem with centralization and implementation. I have interviewed local elected representatives, the present Member of Legislative Assembly but also two former Assembly members. They felt the problem with centralization in general. The local elected Member of Legislative Assembly try to influence the state government because the municipality has little independence and have to get the attention of the state government to receive funding and to get things done. The municipality cans according to one of the elected representatives only plan 8% of their budget for themselves. The present Member of Legislative Assembly is trying to get subsidy from the government to the industries for the building of the reversed osmosis plant. One of the former Member of Legislative Assembly also mean that Tirupur are earning big money for the central government in export income but they get nothing back to fix roads, proper drainage and waste management. The trade policies and structural adjustment are also decided at a national level influencing Tirupur without the possibility for real influence.

It is difficult for NGOs to reach to a proper political level to lobby because of the centralized political system and that most NGO work on a local basis. Their politics are thus essentially of movements around issues that are a great concern to people in the local community in which they work. Political parties however routinely ignore these issues as they do not make much sense at the macropolitical level and hence do not enter their electoral calculus. As mentioned in the background political parties in India generally lack a green agenda.

82 Palanisami, p. 145
83 Eriksson, 2003: 38
84 Tropp, 1997: 34
85 Tropp, 1997: 93
86 Peritore, 1999: 75
87 Sheth, 1995: 31
In Tirupur there are many associations to look after the industrial interests. The industry has financial recourses to lobby at the state level and because the government’s influence over PCB, the industry has more possibility to avoid regulation. Farmers do not think the court order from the PIL will ever be enforced; the implementation is not working, the industry is prioritized and have political influence. They do not blame PCB as much as they blame the government because it is the politicians that do not respond to their claims. A problem for the NGOs and people in general is that the state is particularistic, which lead to limited transparency, unresponsiveness and hierarchical structures. If they lack the necessary personal ties it is difficult to get access to the state through formal channels. Tropp says that the environmental and political context in Chennai and Tamil Nadu reveals a situation where political outcomes are difficult to foresee and distanced from influence from NGOs and citizens.88

The state has problem with centralization, which makes the local political situation very isolated and without resources and powers. It is difficult for the civil society to reach out and influence from the local level.

5.5 Globalization

Tirupur is highly globalized because of the linkages to international trade. Many of the units produce for an international market. Knitwear producers are of three types in Tirupur: domestic producers, direct exporters and suppliers of export garments to final exporters (merchant exporters).89 The two last producer groups are especially tied to the network structure of the global business but also the domestic producers are influenced by the global competition.

Many informants from the business and the state are worried about the international competition from for example China. Soon the quota for textile products will be removed and that will increase the international competition. This makes one of the elected representatives worried because then the industry will face further international competition and for that they have to produce cheaply. One of the industrialists concludes that a lot of cost goes to the management of the ETP and the problem with installing and running a reversed osmosis-plant is that he/she cannot put the cost on the buyer. If the owner of a unit increases the price for selling products to be able to afford treatment then China will be cheaper and if not there will be no profit margin which will perhaps lead to closure of the unit. According to Sankar there is problem with installing treatment facilities, causing increased cost, in relation to international competition.90

According to Lipschutz the factory owner in general is compelled to dump wastes illegally because he/she is a subcontractor operating under strict contractual conditions that are laid down by the foreign corporation. If the owner would act otherwise it would mean higher costs, loss of business and perhaps closure.91 The demands that are put on the subcontractors are often regarding price and quality.92 The individual has to respond to these cost cuttings or suffer the consequences, which could be hunger, or bankruptcy according to Lipschutz. The displacement of responsibility onto the individual, here the factory owner, obscures the role of power in the political decisions about market rules and organization, made and enforced in other places by other people.93 When the units are producing for a first world market the criteria’s for price and quality are set by actors in the first world, the importing companies and the consumers but the burden to treat the water are still left upon the dyers and bleachers.

88 Tropp, 1997: 33
89 Chari 2000: 597
90 Sankar, 2001: 186
91 Lipschutz 2004: 141
92 Andersson, 2002: 6
93 Lipschutz, 2004: 141
Increased globalization and outsourcing has lead to growth of the supply chain and also of the
length of transportation. This is distanceling the buyers and users of the clothes from production.
The environmental problems connected to production are moved from the first world to the
third world. For the consumer and the importer it is difficult to view the whole chain of
producers and to know about the environmental hazards at each step. Often it is just the last step
that counts. The industrial units of dyeing and bleaching are not in the final step of production.
This makes it harder for the importers and consumers at the end of the supply chain to realize
that they through their purchases contribute to pollution at earlier stages of the production
process. Even so the dyeing units feel the demands from the international market. According to
several informants from the industry the importers demand soft-flow machines, which is a dyeing
process that gives higher quality. There are also demands for eco dyes, without poisonous
substances, which are seen as a health hazard in the first world. Bailey concludes that green
strategies related to issues of quality and health is more used if the products are for the first world
market.

Also NGOs see the problem with just demanding more technology from the industry without
considering the international competition. If importers demand environmental protection during
the production stages then it will have a greater effect than the present incentives. The retailer has
potential to influence the product they sell through supplier pressure. Business is the actor that
is at heart of the global capitalist system. Good capital accumulators are benefited in this system.
They are trying to minimize the production cost, so natural resources and labor must be as cheap
as possible. A strive to minimizes cost got the first world to turn to the third world for cheap
natural resources in the first place. Then the struggle for cheap labor and minimized environ-
mental legislation, lead to a growing shift from first world to third world in manufacturing. So
the question is: how much action will be taken without outside pressure on the TNCs, which
mean that in the end the responsibility ends up at the consumer.

The distance created between the consumption and production and also between those who
decide about production cost and quality and those who produce causes a lack of influence
for the local society. One NGO resonates about the industrial pollution problem in Tirupur and the
possibilities to influence.

“It is related to that the power is at a different level, in Europe and internationally.
We do not blame the industrialists in Tirupur. We blame the exporters. The people
here cannot do anything about the pollution. It is the responsibility of the European
Union and buyers. Our suppliers cannot go and clear the river.”

The informant also means that the powers of the local society have gone down and they have to
work with other countries and exporters to create a change. If we do not save Tirupur, then the
problem will just repeat itself in some other place in for example China. The cost for proper
treatment should be divided by all actors because the local government only cannot do it, the
informant argues. According to Hayzer NGO nowadays recognize transnational forces as more
powerful than the nation state.

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94 Åker Zeander, 2002: 28
95 Bryant: 1997: 126
96 Åker Zeander, 2002: 29
97 Bryant, 1997: 106
98 Informant: NGO 2
99 Heyzer, 1995: 3
5.6 Actors Local - Global

Now it is time for a return to the picture of the society as a triangle, with the state, the market and the civil society making out its corners. In Tirupur the state fails in fulfilling its duties as a regulator towards the market. If the state does not realize its responsibilities, a crisis of governance arouses and the legitimacy of the state declines. This in turn may lead to a decline in people’s faith and trust in state policies that decreases the will to adhere to these policies. This turn into a vicious circle. Nobody in Tirupur blame the industry for the pollution. In general the people, farmers and the NGOs lack trust in the state and their way to handle the pollution. They mean that not even the result from the PIL gives hope since PCB still is the implementing agency.

In Tirupur the market has power and influence over the functions of the state. Because the lack of social safety net and low wages people can not turn to the state in trust for a better situation which makes them dependent on the market, in this case the textile industry in Tirupur. This lead to the markets power over the people as well as over the state, which in turn makes the civil society weak in confronting the industry and also in putting pressure on the state in enforcing legislation.

If we turn to the global society, the market forces are strong in affecting the situation in Tirupur. But at the global arena the local business of Tirupur and the people depending on it, are easy substituted to other places, and other people. The local business lacks power at the global arena but they get advantages from the national state policies used to attract TNCs. TNCs generally over the world have a big influence on the national political agenda. The dominating way to think about economy becomes: what is good for the market actors, is good for the entire community. But if a country want to have attractive wages, corporate friendly governments and low taxes, mean that less resources are available for the poorer part of the community according to Andersson.

Another actor with international links is the NGOs. Many of the local NGOs in this case study receive funding from international NGOs and they also have cooperation with several first world NGOs. For example one NGO has conducted a study in Tirupur regarding workers situation and pollution in the textile industry for a Dutch NGO. This will be used to inform the consumers in the Netherlands. This NGO feel that it is important both to lobby international and to protest at home. Sheth writes that new movements on local level, that arises as the state do not fulfill its duties, can lead to a deepening in democracy as a result of globalization. For several writers the civil society and its counter globalization is the answer to the today’s domination of the markets globalization.

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100 Tropp, 1998: 70
101 Andersson, 2001: 98
102 Abrahamsson, 2003: 191f
6 Conclusions

The situation in Tirupur cannot exclusively be explained at just one level. Local, national and global politics affect Tirupur. Even if the material contains some contradictions I believe that three main conclusions can be drawn from this analysis:

• A politicized environment characterizes the local situation where proper action against pollution is not taken for the benefit of the powerful. People also lack empowerment to take action because of dependency on the industry.

• At the local level centralization of national policies is a problem in India because it results in difficulties for the civil society and people to reach elected representatives and to influence from the local community. Another problem is the policy maker’s lack of understanding of the local situation.

• Globalization limits the way to handle the pollution because of the global competition and the retreat of the state. But it also gives possibilities for the civil society to grow stronger internationally.

6.1 Who Can Take Action?

According to the analysis of globalization and its impact on Tirupur it might seem like the ones that have to take action are the consumers or the importers in the first world. This lead to a situation where the local society in Tirupur is utterly powerless and just has to sit and wait for better days. But even if the situation in Tirupur is highly globalized it is at the local level the action must be taken. It is there the measures to control the pollution must be installed and controlled in a proper way. Even if the local situation is influenced by globalization the local community also faces problems like clientism that make implementation of environmental policies problematic. It is also at the local level but in another place that people must change their consumptions patterns. Here I will return to Lipschutz that in the introduction made his claim that all environmental politics are local. He bases this on what could be called the agent-structure problem, which is a disconnection between the individualist orientation of capitalism and the structural features of the capitalist political economy. Individual actors are supposed to act but they are limited by the structure of the system. Our everyday choices, for example buying clothes, are made without understanding the linkages to other places. But these choices we make are connected to a structure that affect the environment and has global reach. To change this situation collective political action at the local level is needed. This is why there is a necessity to view all environmental politics as local and to call out for the civil society to change in the localized settings, because it is where praxis is possible and practical. In national and international ones, no one is interested in structural change. Through a globalized civil society the connections between the local communities can be made visible and a change hopefully spread but I believe Tirupur faces a long way before reaching a situation where a real change will take place.

103 Lipschutz, 2004:141
104 Lipschutz, 2004:142
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Appendix 1- Abbreviations

C/ I /ETP  Common/Individual/Effluent Treatment Plant
NGO  Non Governmental Organization
PCB  Pollution Control Board
PIL  Public Interest Litigation
TN/C/S PCB  Tamil Nadu/Central/State Pollution Control Board
TNC  Transnational Company
Appendix 2- Interview Guide

All except doctors
View of the problem with pollution
Experience of protests regarding the pollution
View of and relation to other actors
Problems and limitation s/he face

Business
Why s/he built ETP
Experience of pressure towards her/him
PIL

Elected representatives
How s/he has taken against pollution
Experience of pressure towards her/him
PIL
How the industry affects the society

NGOs
Organization/ activities
PIL
How the industry affects the society

PCB
Pollution control
Experience of pressure towards the board
PIL
How the industry affects the society

Farmers
Organization/ activities
PIL

Tirupur inhabitants
How the industry affects the society

Doctors
Health implications
## Appendix 3- Informants

N= Notes, T= Tape recorder

### Business

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