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Access to Environmental Justice in Bangalore: Legal Gateways in Context

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Access to Environmental Justice in Bangalore: Legal Gateways in Context

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Abbreviations

APCA	Air Pollution Control Area
BCC	Bangalore City Corporation
BDA	Bangalore Development Authority
BET	Bangalore Environment Trust
BMPA	Bangalore Metropolitan Planning Authority (<i>proposed</i>)
BMRDA	Bangalore Metropolitan Region Development Authority
BMRTS	Bangalore Mass Rapid Transport System
BTS	Bangalore Transport System
BWSSA	Bangalore Water Supply and Sewerage Act
BWSSB	Bangalore Water Supply and Sewerage Board
CET	Common Effluent Treatment
CIVIC	Citizen's Voluntary Initiative for the City of Bangalore
CPA	Consumer Protection Act
CPC	Code of Civil Procedure, 1908
CrPC	Code of Criminal Procedure, 1973
ECC	Environment Clearance Committee
EPA	Environment (Protection) Act, 1986
ETI	Environmental Training Institute
FAR	Floor Area Ratio
GEMS	Global Environmental Monitoring System
HUDCO	Housing and Urban Development Corporation
IAS	Indian Administrative Service
IPC	Indian Penal Code, 1860
KEB	Karnataka Electricity Board
KHB	Karnataka Housing Board
KSPCB	Karnataka State Pollution Control Board
KSRTC	Karnataka State Road Transport Corporation
KT&CPA	Karnataka Town and Country Planning Act
KUUCF	Karnataka United Urban Citizens Forum
MINARS	Monitoring of India National Aquatic Resources System
NAAQM	National Ambient Air Quality Monitoring
NGO	Non Governmental Organisation
PIL	Public Interest Litigation
RTO	Regional Transport Office
SAVE	Society for Afforestation and Verdant Earth
TAC	Technical Assistance Committee

I. Introduction

This paper forms part of a larger comparative study on Access to Environmental Justice in Asia and Africa. The project involves a comparison of seven cities (Accra, Bangalore, Cape Town, Karachi, Kuala Lumpur, Tokyo, and Xiamen), with a focus upon the extent to which citizens are able to use law and legal institutions to shape the physical environment in which they live.

The methodology of the research project is summarised elsewhere,¹ but a few points bear mention here. The concept of 'access to justice' derives from an established literature in socio-legal studies,² and refers broadly to access to legal redress for the vindication of legal rights. In the research project generally, and in this paper in particular, there is no normative statement of what 'justice' should entail. Rather, our preferred approach is to identify what types of environmental claims are made by citizens, and evaluate the extent to which those claims may be pursued, and are pursued, in a legal context. Nor do we adopt a restrictive definition of 'environment'. Since we are concerned mainly with the perceptions of activists and citizens's groups, the applicable definition of environment must have a subjective element -- the environment is what people say it is. For the purposes of comparison, there is a commitment to examine at least four areas of concern: 1) land use and functional or public space, 2) quantity and quality of the water supply, 3) the quality of air, and 4) waste and waste disposal. The expression 'environmental justice' inevitably denotes a measure of preoccupation with the human condition -- animals and trees seem of be of importance only insofar as they affect humans. This bias will reveal itself in the paper.

The study of access to environmental justice in Bangalore falls into four distinct phases. First, there is a survey of the legal gateways for making environmental claims in Indian law generally. This survey of 'black-letter' rules governing access to

¹ Hamish Jenkins, 'Access to Environmental Justice in African and Asian Cities: A Comparative Research Methodology' *SOAS Law Department Working Paper No. 7*. London, School of Oriental and African Studies, March 1996.

² The definitive comparative study may be found in Mauro Cappelletti, (ed.) *Access to Justice*, 3 vols. Milan, Sijthoff, 1978-79; see also the journal *Access to Justice*.

institutional remedies has already been published,³ and is supported by a secondary literature on environmental law in India.⁴

The results of the second phase, surveying the environmental issues and institutional setting in Bangalore, is summarised in this paper. Work is underway on the third phase, interviewing activists, NGOs, and other regarding the use of legal gateways in Bangalore. The fourth phase, which will involve comparing the Bangalore experience with that of the other seven cities, is due to be complete by early 1997.

Thus, the purpose of this paper is to examine the context in which the citizens of Bangalore can, and do, seek to use legal gateways to get environmental justice, in order to provide a springboard for further research under the Access to Environmental Justice project. It also offers thoughts on possible avenues for further enhancing access to environmental remedies. The paper does not attempt to give a detailed account of the state of Indian environmental law, nor does it offer an empirical account of how legal gateways are used.

This account is based upon relevant legislation, newspaper accounts, and a series of personal interviews conducted by Amanda Perry in April-June 1995 and Michael Anderson in March 1996. Finally, it should be added that this paper represents a snapshot of work in progress, and that a more detailed set of findings will be published at a later date.

³ Michael R. Anderson, 'Individual Rights to Environmental Protection in India' in A. Boyle & M.R. Anderson, (eds.) *Human Rights Approaches to Environmental Protection* (Oxford, Clarendon Press, 1996), pp. 199-226; see also the usefully concise P.M. Bakshi, *Environmental Law: The Procedural Options* (New Delhi, Indian Law Institute, 1993).

⁴ See, *inter alia*, Michael R. Anderson, 'Public Interest Perspectives on the Bhopal Case: Tort, Crime or Violation of Human Rights?' in D. Robinson & J. Dunkley (eds.) *Public Interest Perspectives in Environmental Law* (London, Wiley Chancery, 1995); A. Rosencranz, S. Divan & M. Noble, *Environmental Law and Policy in India: Cases, Materials and Statutes* (Bombay, Tripathi, 1991); P. Leelakrishnan (ed.) *Law and Environment* (Lucknow, Eastern Book Co, 1992); and G. Singh, K. Anklesaria & C. Gonsalves, *Environmental Activists Handbook* (Bombay, Gonsalves, 1993).

II. The Setting

A. The Garden City or the Silicon Valley of India?

Bangalore, the capital of the southern Indian state of Karnataka, has long been known as the 'Garden City'. It is favoured by the retired for its greenery, cool climate and peaceful atmosphere, and by the young for its cosmopolitan but laid-back lifestyle. Northern Indians have always come to Bangalore from problem spots like the Punjab and Kashmir, in order to experience the "mild and decent nature of the Karnatakans people" (Interview 23/5/95).

The city was superbly planned at its founding in the 1500's, and continued to be orderly and generally well serviced until its industrialisation began in the early 20th century, but the growth of Bangalore in the past few decades has been at an entirely unforeseen pace (Interview 23/5/95). Since the Union Government of India adopted a more liberal approach to foreign direct investment (FDI) in the country, some states have taken a serious interest in encouraging such activity. Karnataka, and in particular, Bangalore, have proved to be very popular FDI destinations (Interview 4/4/95). This has caused an increased rate of growth in both the population and the physical size of Bangalore, putting a strain on infrastructure, and raising domestic and industrial pollution levels in the area (Interview 28/4/95).

An indication of the speed at which Bangalore is expected to grow was given in a report by the Danish government sponsored organisation, DANIDA. The report predicted that in Bangalore, by the year 2000, air pollution caused by large scale industry will have increased ninefold, waste paper will have increased fourfold, hazardous waste will have increased by 14 million tonnes per year, and the fresh water required by the city will have increased from 13 million to 53 million gallons per day (*Times of India*, Bangalore 13/4/95). It is argued by the Director of the International Institute for Sustainable Future, that the increased presence of multi nationals in Bangalore is to blame for the phenomenal pace at which accommodation costs are rising in Bangalore, and that this will "force the common man to either leave the City or shift to slums" (*Indian Express* Bangalore, 29/4/95).

As compared to much of the rest of India, Bangalore continues to be a clean, safe and cool city. But this does not diminish the fact that Bangalore has undergone a marked deterioration in recent times, and will continue to do so.

B. Municipal Government

What follows is a brief outline of the function and composition of the various institutions responsible for governing Bangalore.

1. Bangalore City Corporation

The Bangalore City Corporation (BCC) is generally responsible for running the city's 70-80 geographical divisions.(Interview 22/6/95) It is composed of an elected Mayor, elected Councillors, and a State appointed Commissioner.

The functions and powers of the Corporation are outlined in the Karnataka Municipal Corporations Act, 1976, and the rules created under it. The functions of the Corporation are set out in Chapter V of the Act, and are categorized according to whether they are 'obligatory' or 'discretionary'. Some of the corporation's obligatory functions which are relevant to this study are: to define the limits of the city; to water and clean public streets and places; to collect, remove, treat, compost and/or dispose of sewage, offensive matter and rubbish; to construct, maintain and clean drains of public latrines; to light public streets and areas; to maintain property vested in the Corporation; to name and number streets and places; to regulate and abate offensive and dangerous trades or practices; to destroy animals, birds and vermin causing a nuisance; to reclaim unhealthy localities and generally abate all nuisances; to plant and maintain trees; to build, improve and maintain streets, bridges etc; to prevent and check the spread of disease; to remove dangerous buildings; and to provide parks and open spaces (Section 58). Some relevant discretionary functions are to construct public drinking fountains, and to encourage private tree planting (Section 59).

The democratic validity of the Corporation is regularly called into question. It has been said that the mayor of the city is essentially a figurehead, and that the real power is in the hands of the Commissioner (Interview 22/6/95). Subject to the other sections in the Act, "the executive power for the purpose of carrying out the provisions of this Act and of any other law for the time being in force which imposes any duty or confers any power on the corporation shall vest in the Commissioner" (Section 64(1)). But the Commissioner "usually has little idea of what is going on in the city" (Interview 22/6/95). The powers of the Corporation, an elected body, are also regularly and legally usurped by the State government (Interview 24/6/95). When the term of the elected officials ends, and for some reason an election is not held on the due date, or where the Corporation is guilty of a dereliction of duty, then the mayor and the corporators are disposed of and replaced by an Administrator, appointed from the ranks of the civil service (IAS) (Interview, 24/6/95, and see section 100 of the

Act). The possible term of such an Administrator was unlimited until recently: Sri A.N. Laxman Rao ran the Corporation single handed for some years. However, this period will be limited to a maximum of 6 months under the new Nagarpalika Act (Interview 24/6/95).

The sometimes utterly incestuous and undemocratic nature of Bangalore's municipal government was recently demonstrated by the appointment of the Chairman of the BDA, as the Administrator of the BCC, replacing the Mayor until such time as the Corporation elections were held (*Times of India* Bangalore 29/5/95). The appointment was the subject of a legal action by the Mayor of Bangalore, who alleged that it was contrary to the provisions of the Municipal Corporation Act 1976 (*Times of India* Bangalore 13/5/95). The court granted the Mayor's request that he be allowed to serve him full term (*Times of India* Bangalore 27/5/95). During the period of the beginning of May to late July, 1995, the Corporation was run by the Mayor, the Chairman of the BDA, the Mayor again, the Chairman of the BDA again, the Housing and Urban Development Secretary (who gave up through sheer exhaustion), and finally, the Chairman of the BDA again (who proved equal to his two tasks)(*Times of India* Bangalore on 27/5/95, 29/5/95, 31/5/95 and 23/6/95). It is difficult to see how any constructive work can have gone on during this period.

2. Bangalore Development Authority

The Bangalore Development Authority (BDA) was set up in 1976, to replace the City Improvement Trust Board (Interview 6/5/95). The legislation governing the BDA is the Bangalore Development Authority Act, 1976. The members of the Authority are appointed by the State Government (Interview 6/5/95).

Under section 81(B) of the Karnataka Town and Country Planning Act, 1961, the BDA has become the Local Planning Authority for the whole of Bangalore, for the purposes of that Act (as inserted by the BDA Act section 67). The function of the BDA is to "promote and secure the development of the metropolitan area through building, engineering and other operations" (*Deccan Herald* Bangalore, 29/4/95). For all intents and purposes, the Authority performs the function of the Corporation, and its Chairman assumes the role of the Corporation's Commissioner, in the new areas that the BDA develops (Section 29(1)).

It is clearly stated in section 30 of the BDA Act, that once "any street formed by the Authority has been duly levelled, paved, metalled, flagged, channelled, drained and provided with sewers in the manner provided for in the plans. . . and that such

lamps, lamp posts and other apparatus as are in its opinion necessary . . . have been provided, " then the Government shall declare the street to be a public street, and under the control of the Corporation (Section 30(1)). But, instead of developing and handing over the land, the BDA has taken on the role of a 'real estate agent', maintaining control over the land even after development and improvements, if any, have been completed (Interview 6/5/95). As a result, central 'old' Bangalore is controlled by the elected BCC, while the outer circle of 'new' Bangalore is controlled by the Government appointed BDA (Interview 6/5/95). This has the effect of excluding a large proportion of the population from voting, as only those in BCC areas can vote in Corporation elections (*Deccan Herald* Bangalore, 29/4/95).

3. Bangalore Metropolitan Region Development Authority

The Bangalore Metropolitan Region Development Authority (BMRDA) set up under the Bangalore Metropolitan Region Development Authority Act, 1983. The motive behind the Act was that "there is no proper coordination among the local bodies like the BDA, BWSSB, KSRTC etc. It is necessary to coordinate the activities of these bodies by constituting an Authority" (Sri. A.N. Laxman Rao, making the President's Address at the Karnataka United Urban Citizen's Federation Decennial Anniversary Celebration, 15/7/89). The members of the BMRDA are appointed by the government, and it is headed by a Commissioner, who is an IAS officer (Interview 24/6/95).

It is commonly felt that the BMRDA in fact does absolutely nothing (Interview 6/5/95). A perceived overcrowding of authorities has led to the BMRDA being described as "the fifth wheel on the coach" (*Deccan Herald*, Bangalore, 29/4/95). An ex-IAS officer and Administrator of the Corporation feels that "you cannot have the BDA and the BMRDA. The BMRDA should, in theory, deal with the coordination and mega-planning of the area, with the BDA as its development wing. But to be very frank, the BMRDA has not taken off." (Interview 24/6/95) Generally speaking, it is felt that the BMRDA could be a useful organisation, but concerns were raised that "proliferation of authorities always leads to confusion and lack of coordination. One more body means more people can be accommodated. And of course, once you create a body, it is hard to kill it" (Interview 24/6/95). It should be noted that there are plans to remove the BMRDA and to replace it with the Bangalore Metropolitan Planning Authority (BMPA), which would be elected, and organise the functioning of the BDA, BCC, and the electricity suppliers (Interview 29/5/95).

The problems caused by multi-authority control in Bangalore were illustrated during a gastro-enteritis and cholera outbreak in June, 1995. The outbreak occurred just outside of the Corporation limits. The assistance that the Corporation decided to give to the area was presented as an act of charity rather than duty -- although water was supplied to the area concerned by the Bangalore Water Supply and Sewerage Board, and the outbreak eventually spread to the City itself. The Corporation alleged that those cases in the City were caused by persons who had travelled to the site of the original outbreak (*Times of India*, Bangalore, 23/6/95).

4. Minister of State for Bangalore City Development

The BDA, BCC and BMRDA are all responsible to the state government in general, and the Minister of State for Bangalore City Development, in particular. The municipal authorities have primary responsibility for most matters, but when the cost of a project rises above a certain amount, the sanction of the Minister is required (Interview 24/6/95). The Minister is also empowered to make policy decisions for the area (Interview 24/6/95). Although the bodies are theoretically able to plan their own projects and obtain funding for them, in practice they tend to follow the state government even where they are not compelled to do so (Interview 6/5/95).

5. The Nagarpalika Act

There is currently a move in India towards decentralisation of government. In rural areas, the spirit of the traditional system of local government under panchayats is being revived, and in urban areas, further powers will be given to the people under the Nagarpalika Act, 1993 (74th Amendment to the Indian Constitution). Under the Act, the State Government will no longer be able to suspend the Municipal Authority of a city; cities will be divided into wards for better public access; further powers will be given to municipal authorities to carry out various functions including planning, environmental protection activities and slum improvement; and planning committees will be created to coordinate district and metropolitan level development. The aim is to make Municipal Authorities less like "departments of government" (Interview 24/6/95).

C. The Karnataka State Pollution Control Board

The Karnataka State Pollution Control Board (KSPCB, or the Board) is a major carrier of environmental responsibility in Bangalore. It is convenient to discuss its main features at this stage.

1. Composition and Structure

The Board was constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act 1974. It is made up of members who are nominated or appointed by the State Government, under section 4 of the Act. It has a staff of 203, but is empowered to have a full staff of 358 (Annual Report of the KSPCB 1993-1994, 1).

The Board has eleven Regional Offices, and one Central Office. The Central Office and three Regional Offices have laboratories. Three more Regional Laboratories are planned (Annual Report of the KSPCB 1993-1994, 1). The Board met seven times in the year 1993-1994 (Annual Report of the KSPCB 1993-1994, 3).

The Board has created two committees. Firstly, the Technical Advisory Committee (TAC), which met 12 times in 1993-1994, and has two functions. It gives a technical assessment of the feasibility of pollution control measures proposed by local authorities and industries. It also makes suggestions as to the standards for emissions and effluents which the Board should adopt (Annual Report of the KSPCB 1993-1994, 5). In the year 1993-1994, the TAC recommended that 24 industries should be given consent for establishment. Six were to be locating in Bangalore (Annual Report of the KSPCB 1993-1994, 6). The second committee is the Library and Laboratory Committee, which met twice in 1993-1994. The committee made recommendations regarding the accreditation of laboratories wishing to undertake analysis work for the Board (Annual Report of the KSPCB 1993-1994, 7).

2. Functions

The function of the Board is to enforce the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Water (Prevention and Control of Pollution) Cess Act 1977, and "certain rules of the Environment (Protection) Act 1986, viz., Hazardous Wastes Management and Handling Rules, 1989, and Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989" (Annual Report of the KSPCB 1993-1994, 1).

The Central Office "lays down general policies relating to enforcement of Laws, and carries out general administration and co-ordination with other agencies." It

also undertakes public awareness campaigns in environmental issues (Annual Report of the KSPCB 1993-1994, 1-2). In 1993-1994, the Board organised three public events to raise environmental awareness, including a seminar on "Sewage Treatment and Reuse" and a ceremony giving awards to members of the public for environmental achievements (Annual Report of the KSPCB 1993-1994, 23).

The Regional Offices inspect industries and local bodies and monitor the quality of waste, effluent, ambient air, and stack emissions. A total of 6088 small, medium, large, and 'other' industries were inspected in Karnataka by March, 1994.(Annual Report of the KSPCB 1993-1994, 14) The Offices assess the environmental suitability of proposed industrial sites. They also conduct water testing under Global Environmental Monitoring Systems (GEMS) and the Monitoring of Indian National Aquatic Resources System (MINARS) programmes, and monitor the ambient air quality under the National Ambient Air Quality Monitoring (NAAQM) programme. Guidance is offered by the Regional Offices to industries as to what the statutory provisions are, and how to follow them. A total of 432 samples of river water were taken in 1993-1994 under the GEMS, MINARS and Board's own programmes, from 58 stations (Annual Report of the KSPCB 1993-1994, 9). The ambient air quality of Bangalore is monitored in three spots, twice a week under the NAAQM programme (Annual Report of the KSPCB 1993-1994, 10). Finally, the Regional Offices inform the Central Office of any Consents issued for establishing and operating factories in their area, and any complaints which the Central Office needs to investigate (Annual Report of the KSPCB 1993-1994, 1-2).

The Central laboratory recently acquired 'sophisticated analytical instruments' under the INDO-DUTCH programme. It undertook a total of 6,283 samples of water, waste, air and bacteriological samples by March 1994. The three Regional Laboratories undertook a total of 2,234 such samples in the same period (Annual Report of the KSPCB 1993-1994, 8).

D. Legal Institutions of Bangalore

In examining the legal gateways open to a population, it is important to understand what physical forums for legal action exist in the immediate vicinity.

1. Courts

As the capital of the State (Karnataka), and the capital of a District (Bangalore Urban), Bangalore city has three levels of courts.

At the lowest level, there are Judicial Magistrates courts, which have original jurisdiction for non-serious offenses and civil matters. Magistrates are laymen selected through a common entrance test.

At the next level is a District Court, which is divided into two parts (Civil and Sessions), although the judges sitting on them are the same. The Civil Court deals with civil matters. The Sessions Court deals with criminal matters, and has original jurisdiction for non-cognizable offenses (such as murder, rape and arson), and appeal jurisdiction over cases from the Magistrates courts. Both the Magistrates and District courts have two parts in Bangalore, one with jurisdiction over the cantonment area (Mayo City Hall Unit), and the other with jurisdiction over the rest of the city area of Bangalore Urban District (City Civil Court). Judges of the District Courts are selected from magistrates, or lawyers of many years standing (Interview 31/5/95).

At the apex of the State's court system is the High Court of Karnataka, which has original jurisdiction only in respect of writ petitions, and which has appeal jurisdiction through the Civil and Sessions Courts only. Judges of the High Court are either promoted from the District courts or are selected from lawyers of many years standing. Appeals from the High Court go to the Supreme Court in Delhi (Interview 19/4/95).

The language of legal education and of the courts is English, and translators are provided where necessary. (Interview 19/4/95) Although India is a federal system, and therefore different states do have different procedural and substantive rules, it was consistently maintained by members of the judiciary, lawyers, and academics interviewed that any unusual aspects of Karnataka's law would cause no significant differences in the enforcement of environmental law in the State, especially as the most commonly used tool for enforcement was public interest litigation, the roots of which are constitutional, and therefore uniform (Interviews 31/5/95, 22/6/95, 10/6/95 and 5/6/95).

2. Consumer Fora

The Consumer Protection Act of 1986 (CPA) created a consumer redressal system which is highly innovative. It offers the promise of much enhanced access to legal redress for aggrieved consumers. The new system provides for the resolution of a dispute within ninety days, instead of many years; minimum cost, with no lawyer or court fees required; less complicated rules of evidence; and a validation of the serious

nature of consumer disputes. Karnataka began implementing these rules in 1988 (see Karnataka Consumer Protection Rules, 1988).

Under section 4 of the CPA, a national Central Consumer Council is formed, comprising of the Minister responsible for consumer affairs and other official and non-official members, (Section 4(1) and (2)) and with the aim of promoting and protecting consumer rights (CPA 1986 section 6). Each state has a State Consumer Protection Council, comprising of the State minister in charge of consumer affairs and other official and non-official members, and charged with the same role as the Central Council (CPA Section 7-8).

The Act also calls for what amounts to a separate court system for consumer disputes, including a Consumer Disputes Redressal Forum in each District, a Consumer Disputes Redressal Commission in each State, and a National Consumer Disputes Redressal Commission (CPA Section 9). At each level, the judges are to be taken from a combination of legal and non-legal persons (CPA Sections 10,16 and 20).

In Bangalore, the Bangalore District Consumer Redressal Forum has original jurisdiction over consumer disputes valued up to 5 lakh rupees (CPA Section 11(1)). If a party wishes to appeal a District decision, or if the case is worth between 5 and 20 Lakh rupees, then the matter moves to the Karnataka State Commission (CPA Section 15 and 17). If a party wishes to appeal the decision of the State Commission, or if the dispute is for an amount over 20 lakh rupees, then the National Commission takes over (CPA Sections 19 and 21). The final court of appeal is the Supreme Court (CPA Section 23). Refusal to comply with the ruling of any of these bodies is punishable by imprisonment of a month to three years, and/or a fine (CPA Section 27).

III. Realities and Responsibilities in Bangalore

This part of the paper is designed to illustrate the realities of the current environmental situation in Bangalore, and to assess which government authorities are responsible for its negative features. The discussion is divided into sections looking at the changing nature of land use in Bangalore; the provision of infrastructure to residential areas; the issue of water supply, and the related subjects of disposal of sewage and water pollution control; the problem of air pollution; and finally, the question of solid and hazardous waste disposal.

A. Planning and the Changing Face of Bangalore

According to one leading activist in the city, "the politics of Bangalore is the politics of real estate" (Interview 6/5/95). This section addresses the intensification of land use in Bangalore. Firstly, a guide to the relevant authorities is given. Next the two major ways in which Bangalore's land is being changed and often misused are discussed. The second section tells how parks, tank-beds and agricultural land are being claimed for residential and industrial use. The third section explains how areas which have for some time been residential and commercial land are being packed with high rise buildings. Fourthly, the issues surrounding the location of industrial areas, and finally, the problem of what to do about unauthorised constructions, are addressed.

1. The Planning Authorities

Specific rules for planning and the conversion of land use are found in the Karnataka Town and Country Planning Act, 1961. Under section 81(B) of that Act, the BDA is deemed to be the Planning Authority for Bangalore. The Government of Karnataka has, under the Planning Act, (Karnataka Town and Country Planning Act, 1961 Section 9(3), and Section 19) created the Outline Development Plan, 1972, (Government Order No. PLM 130 GBA 61) and the Comprehensive Development Plan, 1984. The procedures for creating and enforcing Outline and Comprehensive Development Plans are essentially the same (Section 24 Karnataka Town and Country Planning Act, 1961, which declares that the provisions of sections 14, 15 and 16 "shall apply mutatis mutandis to the enforcement of the Comprehensive Development Plan"). An indication of the nature of the system will be given below, through discussing the rules relating to Outline Development Plans.

An authority seeking to create an Outline Development Plan "shall publish in the prescribed manner for inviting suggestions within a period of two months," and any suggestions made shall be considered by the Authority (Section 10, Karnataka Town and Country Planning Act, 1961). This was done by the BDA in 1972. After the Outline Plan comes into effect, "every land use, every change in land use shall conform to the provisions of" the Town and Country Planning Act (Section 14(1) KT&CP Act). Changes in land use can only be made with the written permission of the BDA, contained in a commencement certificate in the form prescribed (Section 14(2)).

Chapter X of the Town and Country Planning Act outlines the penalties for non-compliance with the provisions of the Act. Under section 73, anyone who, inter alia, does work in contravention of section 14, or contravenes any conditions of a commencement certificate, or carries out work despite a refusal to issue a commencement certificate, "shall, on conviction, be punished with fine which may extend to one thousand rupees" and a fifty rupee fine per day for continued breach of the provisions (Section 73 KT&CP Act, 1961).

2. Changes in Land Use

A large proportion of the environment-related wrongs performed in Bangalore involve the misuse of land. In particular, it is alleged that the "government subverts the planning procedure" (Interview 6/5/95). "Charges abound that acres of land initially earmarked for particular purposes have been transformed into something else altogether. . . . How could it take place without at least some violation of rules on the part of the BDA?" (*Deccan Herald*, Bangalore, 29/4/95).

a) Conversion of Parks and the Green Belt

Two categories of Bangalore's green areas are currently under threat: the parks in the city itself and the surrounding green belt. It has already been noted that, under the Planning Act, all land uses must conform to the relevant development plan. In addition, under the BDA Act, "the Authority shall not sell or otherwise dispose if any area reserved for public parks and playgrounds and civic amenities, for any other purpose, and any disposition so made shall be null a void." (Section 38 A, Bangalore Development Authority Act, 1976) But it is alleged that the State Government has "consistently turned a blind eye to the transgressions of the 'Green Belt'" (*The Hindu*, Bangalore 23/8/93) and other green areas.

Under the 1984 Comprehensive Development Plan, 830 square kilometres of Bangalore's total 1,279 square kilometres were to be green belt, and 15% of the land was reserved for "parks and open spaces" ("Real Estate Rules" *India Today* 15/6/95, p 161). However, the CDP was reviewed in January 1994, and it was decided to reduce the green belt areas by 110 square kilometres, in acknowledgement of the illegal development that had occurred there in the interim ("Real Estate Rules" *India Today* 15/6/95, p 161). An official source is quoted as saying that this was necessary because "if Government has to evict the encroachers on the green belt area, then it has to remove the industries started by the Karnataka Industrial Area Developments Boards in these areas" (*Times of India*, Bangalore, 4/2/94). On World Environment Day, the former Chief Minister of Karnataka "regretted that the green belt area earmarked during his tenure" was now merely a theoretical area on a map, "with unauthorised constructions having come up." He also "pointed out that the various rules enacted during his tenure to encourage parks and playgrounds as lung spaces were not being followed" (*Times of India*, Bangalore, 6/6/95). The issue of whether things were better under ex-Chief Minister Ramakrishna Hegde aside, green belt and parks areas in Bangalore have been, and are, definitely decreasing. The result is a reduced number of trees on open spaces to absorb the increasing levels of air pollution in the area.

Furthermore, the agricultural land surrounding Bangalore is being converted for three major uses: tourism, residential buildings, and industrial developments. The Urban Land (Ceiling and Regulation) Act, 1976 seeks to ensure the "equitable distribution amongst the various sections of society" of urban land, and to control the conversion of agricultural land to urban land, and vice versa (Statement of Objects and Reasons, The Urban Land (Ceiling and Regulation) Act, 1976). However, control under either the Urban Land Act or the Planning Act, is almost completely lacking in the expansion of Bangalore. The speed at which the city is growing has led to confusion over the names and locations of the new layouts (*The Times of India*, Bangalore, 30/6/95). The mapping of the various layouts and all their phases, stages, roads and cross roads is a unenviable task awaiting the authorities. The Town Planning member of the BDA confirmed that the Bangalore Metropolitan Area, that is, the area falling into the Bangalore planning area, was 1,279 square kilometres (*Times of India*, Bangalore, 29/4/95).

As Bangalore moves outwards, it is encroaching on agricultural land and the villages of agricultural people. The government recently "appealed to farmers not get carried away with regard to selling land in and around Bangalore" (*Times of India*,

Bangalore, 20/5/95). Particular concern has been raised over the allegation that "investment is causing displacement of traditional agricultural employees to promote tourism and infrastructure development for industry and foreign investors' gain" (Interview 6/5/95). In northern Bangalore, towards the site of the future international airport, twenty kilometres of road side land is being developed into an exclusive area of housing. This has resulted in the displacement of the original agricultural inhabitants. Traditional horticulture in the area was already failing, as a result of water shortages. The plans for the area now include a golf course and grass lawns, which will clearly require more water than the area's proven capacity (Interview 6/5/95).

According an article in *India Today*, Bangalore is set to become a major golfing centre (Rai, *India Today* 31/5/95, 172). There are two existing courses, and three more are planned. An 18 hole course, complete with conference centre, time share villas, a hotel, and a club house, is being planned for a site near Bangalore by Jack Nicklaus II (son of the famous golfer). An academic at the Indian Institute of Management is considering filing a public interest petition against this proposal, on the grounds that the pesticides needed to get the grass growing will pollute the ground water which contributes to Bangalore's water supply (Interview, 10/5/95).

It was suggested by a former administrator of the Corporation that the expansion of Bangalore should be halted, and further growth should instead take place in satellite towns. There exist some towns around Bangalore, such as Kengeri, which are described as satellites, but they lack an economic centre and therefore do not prevent people from continuing to flood into Bangalore, if only during the day (Interview 24/6/95). This idea has been incorporated in the revised Comprehensive Development Plan (*The Deccan Herald*, Bangalore, 29/4/95).

b) Tanks and Tank Beds

In 1988, a Committee for the Preservation of Tanks in Bangalore was constituted by the State Government, under the chairmanship of Mr. A.N. Laxman Rao. Tanks were found to be important to the city because they affect the microclimate of the city, provided ground aquifers, and are good places for research and relaxation (Interview 24/6/95). The Committee recommended that, where tanks were live, they should be preserved and maintained, (Report of the Expert Committee for the Preservation of Tanks in Bangalore, 1985, 79) and that those tanks which were 'disused' should be converted into tree parks (Report of the Expert Committee for the Preservation of Tanks in Bangalore, 1985, 78). The Government Public Works and

Electricity Secretariat claimed to be "pleased to accept the recommendation of the Expert Committee," and issued an order implementing its findings (Government Order No. PWD 82 IMB 85, July 26, 1985).

The recommendations of the report have not been implemented. Live tanks have been allowed to fall to such a state of disrepair, that they are good for nothing but to become fodder for developers. Responsibilities for this trend lie in two corners - with those responsible for the upkeep of the tanks, and with those responsible for ensuring that the CDP is followed, and land is not illegally converted to new uses.

i. Tank Dilapidation

In June 1995 there were major 'fish kill' incidents in two of Bangalore's most valued tanks. The fish in Lalbagh Tank began floating to the surface on June 14th, after an excessive concentration of sewage suffocated them (*Times of India* Bangalore, 15/6/95). The BWSSB had been "taking its own time" to complete work on an alternative route for the sewage, despite several reminders from the horticulture department responsible for the tank (*Times of India* Bangalore, 15/6/95). The incident occurred just three days after the announcement that the hyacinth covering the tank had been partially cleaned up -- a full clean up could not be undertaken because of the sewage outflow in the southern section of the tank. An investigation was ordered into the deaths, (*Times of India* Bangalore, 16/6/95) but another fish kill took place in Sankey Tank on June 23rd.

Seventy percent of the fish were killed in Sankey tank. The Forest Department claimed that the deaths were caused by 'poison' accidentally falling in the water. The fisheries and horticulture departments claimed that the deaths were due to sewage. The BCC, which was said to be responsible for maintaining the tank, claimed that a private fish breeder operating in the tank had caused the tragedy by over breeding. It said that the tank had been cleaned two weeks previously, and therefore sewage could not be the cause. But the fish breeder blamed it on sewage, and therefore the BWSSB. (*Times of India* Bangalore, 24/6/95). Alternative theories circulating in Bangalore are that the disaster was caused by untreated effluent leaked into the tank by the Astra IDL factory, (*Times of India* Bangalore, 1/7/95) or that pesticides have been overused in government programmes in surrounding areas (Interview 24/6/95).

A newspaper article detailing a reporter's attempts to talk to officials about the Sankey fish kill highlights the confusion that exists over who has jurisdiction over which tanks in Bangalore. The reporter was passed from the Forest Department, to the

State Horticulture Department, to the Corporation Horticulture Department, to the Karnataka State Tourism Department Corporation, to the Fisheries department, and back to the Forest Department, which finally acknowledged responsibility for the tank, but had not even heard of the fish kill (*Times of India* Bangalore, 24/6/95). Meetings were held soon after the accident between the State Fisheries Minister, the BWSSB, the KSPCB, and the Corporation, to discuss preventative measures for the future. (*Times of India* Bangalore, 25/6/95).

Bellandur tank has caught the eye of the minister of State for Bangalore as a site for the rowing events of the National Games. It seems that he thinks that this "will restore the tank from its current state of slush, sewage and swarming mosquitoes," but he did not take account of the fact that "the tank is an internationally recognised wetland and bird habitat for migratory waterfowl." According to one activist, his decision was "arrived at with no consideration at all on the ecological importance of the site nor the health of the athletes" (*The Times of India*, Bangalore, 19/5/95).

A government Committee for the Protection of Tanks continues to meet in Bangalore, but its activities require funds which are simply not available. However, this particular excuse is being challenged by Deputy Conservator of Forests and member of the Tank Committee, Mr. Jayaram, who has been praised by government and activists for his efforts to maximize the benefits which a small budget can achieve (Interviews 6/5/95 and 23/5/95). His activities will be discussed further below.

ii. Tank Conversion

Since the Laxman Rao Report, the State Government has been accused of handing tanks over to developers one by one (*The Times of India*, Bangalore, 25/6/95). Of 127 tanks notified by the government as protected areas, 90 have gone to semi permanent residential encroachers, 23 to agriculture, 8 to permanent residences or commercial buildings, and 7 were 'untraceable' (*The Times of India*, Bangalore 25/6/95, quoting a report by ornithologist S. Sridar, for the Centre for Science and Technology). Examples of tank conversions continue to abound.

A major threat to the work of the forest department on tank beds is the encroachment of cultivators (Interview 24/6/95). Many encroachments on all types land are caused by the large number of poorer people coming to Bangalore who establish new areas of slums, for lack of alternatives. The government intends to

introduce identity cards in order to check the flow of such people (*Times of India*, Bangalore 26/5/95).

Three live tanks which are used by wildlife are soon to be covered by a complex for the India Trade Promotion Organisation. The Forest Department, which owns the land in question, had no idea of the decision, which was taken by the Minister for Large and Medium Scale Industries. The residents near one of the condemned tanks had recently invested over 15 lakh rupees to desilt the tank, and had intended to begin boating, and build a children's park and jogging track in the area (*The Times of India*, Bangalore 25/6/95). The story of the Koramangala tank bed, and the National Games Township to be built on it, will be discussed later.

3. Floor Area Ratios and the Division of Plots

Land in Bangalore is over priced, over used, and under serviced. The more over priced it becomes, the more land is overused. The more overused a piece of land becomes, the more its services will be stretched.

Bangalore was once known for its bungalows, which were situated in spacious plots. These plots are now being developed horizontally and vertically. The Chairman of the BDA stated that, "if three houses could be built on a site earmarked for two," then the extreme shortage of housing in Bangalore could be rectified (*Deccan Herald* Bangalore 29/4/95). Previously, buildings in Bangalore were restricted to one storey, 'single dwelling units' -- that is, homes for one family only. In recent years, the ban on multi-storey buildings has been lifted, and single dwelling units have been illegally divided to fit three or four families (Interview 28/4/95). This intensive development has put pressure on services. Overloaded, ancient and rusting water pipes burst daily in Bangalore, causing sewage and drinking water to mix (Interview 28/4/95). To cap it all off, a recent study showed that only 10% of these high rise buildings conform to fire safety regulations. The biggest infringer (and, incidentally, the city's tallest building) is the Public Utility Building, which houses several governmental bodies, including the KSPCB (*Times of India*, Bangalore, 27/5/95).

On a more positive note, when the CDP was revised in 1994, a previous decision to allow the highest rise buildings on, and solely on, the 7 major streets in the city, was reversed. The building heights are restricted using Floor Area Ratios (FAR) - that is the ratio of floor space, divided by the total plot area. As of January 1994, the 7 major streets will have a 50% lower FAR restriction. The reduced FAR is expected

to automatically restrict the madness of the land market, and to bring down prices (*Times of India*, Bangalore, 4/2/94).

4. Planning Industrial Areas

Up to 60% of all Karnataka's industries are located in and around Bangalore (Interview 23/5/95). In 1994, there were 298 medium and large scale industries, and 24,303 small scale industries located in the Bangalore area. In addition, the main industrial estates of at least five of India's biggest public sector companies, including Hindustan Machine Tools and Indian Telephones Industry, have been located in and around Bangalore (*Financial Times*, London, 8/11/94). One third of American companies investing in India are based in Bangalore, and it is favoured over Bombay by Dutch, Middle Eastern and English companies, since the stock exchange bomb blast (Interview 6/5/95). The reasons for the large concentration of industry in Bangalore are found in its pleasant climate and people, its research institutions, its educated work force, its good labour relations, and the Karnataka government's positive attitude to investment (*Financial Times*, London, 8/11/94). The main industries in the area are involved in pulp and paper, sugar, distilleries, cement, engineering, electronics, chemicals and pharmaceuticals, and mining (Annual Report of the KSPCB 1993-1994, 11).

The question of who is responsible for the development of industrial areas is important for two reasons. Firstly, the location of industrial areas needs to be limited to suitable areas so that individuals are not needlessly affected by the pollution that they release. In 1994, the KSPCB acknowledged that there were 85 industries in the State which come under 'category 17' (highly polluting). A total of 474 industries in the State are 'coverable' under the Hazardous Waste (Management and Handling) Rules, 1989. Secondly, the number of industries allowed to locate in a particular area should be controlled to prevent excessive strain being placed on services and infrastructure. It has been said that the economic expansion of Bangalore will be hindered by shortages of power, water, and transport (*Financial Times*, London, 8/11/94).

In an attempt to maintain control and order in the industrial sector, the State Government has created 10 industrial areas covering a total area of 4,842 acres. These areas are selected, acquired and developed by the Karnataka Industrial Area Development Board, under the direction of the Department of Industry and Commerce

(Interview 25/5/95). The Central Pollution Control Board has recently introduced a scheme whereby industries will use a 'zoning atlas' to ensure that they are locating in the proper area (*Times of India*, Bangalore, 17/4/95).

Before an industry is allotted a plot in an industrial area, or is allowed to locate anywhere else, it must get the sanction of the State Government, under the Factories Act, 1948 (Section 6). Two agencies have been created by the Department of Environment in Karnataka, to examine the suitability of particular industries to particular sites (Interview 25/5/95). The Single Window Clearing Agency gives recommendations to the State Cabinet for the location of industries under 50 crore rupees. The High Level Committee gives such recommendations for industries of over 50 crore rupees (Interview 23/5/95). Each committee is composed of representatives from *inter alia*, the Revenue Department, the Department of Environment, and the KSPCB (Interview 23/5/95). They are designed to speed up governmental clearance, by demanding that members of all relevant departments make a decision at the same time. The Cabinet usually upholds the recommendation of the committees (Interview 23/5/95).

Every industry is also screened separately by the Commerce and Industries Directorate, the Chief Inspector of Boilers and Factories and the KSPCB, before it may locate in the State of Karnataka (Annual Report of the Department of Ecology and Environment 1993-1994, 3). The KSPCB uses its Technical Advisory Committee (TAC) at this stage. The TAC is made up of ten people, who specialize in different fields, and conduct an environmental impact analysis for the period of construction and operation of the industry (Interview 25/5/95). The KSPCB gave consent for the establishment of 378 new industries during the year 1993-1994 (Annual Report of the KSPCB 1993-1994, 12). According to the KSPCB, "consent for establishment [of new projects] is being issued only after examining the suitability of the site and scrutiny of the pollution control proposals" (Annual Report of the KSPCB 1993-1994, 12). Establishment consent is not to be confused with emissions consent, which will be discussed later in relation to water and air pollution.

Every industry set up after 1985 must also go through an environmental clearance procedure (Annual Report of the Department of Ecology and Environment 1993-1994, 3). "Being seized of the matter of controlling and abating pollution, in respect of the industries that were established prior to the legislation of pollution control laws on one hand, and on the other the need to assiduously scrutinize the siting of all new developmental projects from the environmental angle through the

enforcement of provisions under the Environment (Protection) Act, 1986; the State Government constituted the Environment Clearance Committee (ECC)" (Annual Report of the Department of Ecology and Environment 1993-1994, 3).

The ECC is chaired by the Special Secretary (Ecology and Environment), and includes representatives from the Departments of Commerce and Industries, and Health and Social Welfare; the Chief Inspector of Factories and Boilers; the Chairman of the KSPCB; and environmental experts (Annual Report of the Department of Ecology and Environment 1993-1994, 3). The ECC "examine, scrutinize and decide the issue of clearance or otherwise to the siting of industries from the environmental angle" (Annual Report of the Department of Ecology and Environment 1993-1994, 3). It looks at the Cabinet's decisions, and the reports of relevant agencies and departments, before making a final decision to give or refuse environmental clearance (Interview 23/5/95).

The special secretary to the Department of Environment exhibited a certain amount of frustration when asked about regulation of industrial pollution in Bangalore. He felt that "industry should be forced to control pollution at the very beginning, that is, through the Commerce and Industries Department, rather than after the event, by the Pollution Control Board." He noted that the Commerce and Industries Department had the advantage of knowing details of water power, land and mineral shortages, and that they were also the department which first undertake and examination of a proposed industrial project. An initial rejection by the Commerce and Industries department on the grounds of shortages of utilities could "save the energy of the Environment Department later" (Interview 23/5/95). He also hinted that Single Window Agencies were responsible for allowing an excessive concentration of industries in the Bangalore area (*Times of India*, Bangalore, 1/7/95). Finally, he declared that, "although the Pollution Control Board has been forced to regulate pollution since 1974, most industries do not have the technology necessary to limit pollution. It should be made mandatory to develop such methods" (Interview 23/5/95).

The relationship between each of these clearance procedures is not entirely clear. The matter of the clearance hierarchy was not clearly explained through interviews or written sources. This issue requires further investigation.

5. Unauthorised Constructions

The question that remains to be discussed here is what is to be done when illegal intensifications or changes in land use occur. How can this be rectified?

Section 32 of the BDA Act states that no building of any kind can be made without the consent of the Authority, and where the land is within the Corporation's domain, then no permission to build shall be given by the Authority until the same has been sanctioned by the Corporation (*V. Lakshmipathy and others v. State of Karnataka and others* AIR 1992 Kant 57). Where work is undertaken to build on a piece of land or change its usage, without the proper consent of the BDA, the BDA can "direct such a person by notice in writing, to stop any such work in progress or discontinue any such use; and may . . . remove or pull down any such work and restore the land to its original condition or, as the case may be, take any measures to stop such use" (Section 15(4) Karnataka Town and Country Planning Act, 1961). For example, a notice appeared in a Bangalore paper in May, 1995, warning the public to avoid purchasing flats from certain developers, whose buildings were likely to be the subject of litigation and/or pulled down (*Times of India* Bangalore, 25/5/95). The offending person is responsible for paying the costs incurred by the BDA in rectifying the damage (Section 15(5) Karnataka Town and Country Planning Act, 1961).

But problems are caused by the fact that "once a building is constructed, it's hard to tear it down, because third party rights will already have been created" (Interview, 10/6/95). As a result, the government usually tends to regularise unauthorised constructions instead, often at the time of elections in order to win votes (Interview 10/6/95). For example, on June 2nd, 1995, the Governor of Karnataka promulgated an ordinance extending the regularisation unauthorised constructions in the green belt area by moving back the date by which constructions should be built in order to qualify, and by providing for multi storey and non-residential buildings to be considered for regularisation (*Times of India*, Bangalore, 3/6/95).

The State and Municipal Authorities are responsible for the removal of unauthorised constructions, to the extent that they cause danger to the health of residents in the area. In the case of *V. Lakshmipathy v. The State of Karnataka and others* (AIR 1992 Kant 57), a PIL action was brought State Government, the Corporation (and its Health Officer in particular), and the BDA on the just these grounds, and a writ of mandamus was issued by the court ordering them to abate the pollution and stop the industry from operating in the residential area. The full details of the case will be dealt with later.

B. Residential Infrastructure

The BDA and the BCC are primarily responsible for creating and maintaining a suitable living environments for Bangaloreans.

1. Development and Maintenance by the BDA

It has already been noted that Section 32 of the BDA Act prohibits the building of any new layouts or extensions without the express sanction, in writing, of the BDA (Section 32(1) Bangalore Development Authority Act, 1976). Also, under section 14 of the BDA Act, the function of the BDA is to "promote and secure the development of the metropolitan area through building, engineering and other operations." They are to do this by planning a new area, acquiring the necessary land, and developing the land, by providing water, roads, electricity and underground drainage. The land is divided into plots, and the BDA will announce an auction in the newspapers (See for example *Times of India*, Bangalore 27/5/95). After the land is sold to members of the public, it is to be handed over to the control of the Corporation (Interview 6/5/95). Until such a time as it hands over an area to the Corporation, the BDA is responsible for "the maintenance, keeping in repair, lighting and cleansing of the streets formed by the Authority" and "the drainage, sanitary arrangements and water supply in respect of" those streets (Bangalore Development Authority Act, 1976, Section 28A).

The Authority is also able to build houses on the land which it has acquired and to allot the buildings to members of the public under the Bangalore Development Authority (Allotment of Buildings under Self-Financing Housing Scheme) Rules, 1982 (Promulgated under Notification No. HUD 99 MNX 82) There is an acute housing shortage in Bangalore, and the "agencies who are entrusted with the responsibility if providing land and housing" like the BDA and the Karnataka Housing Board (KHB) "have been unable to meet even half the demand" (The Hindu Survey of the Environment Sri S. Rangarajan Publishers, (Madras) 1992, 93). The Authority has plans to provide housing rather than allot sites, "but they have yet to come to fruition" (*Deccan Herald*, Bangalore, 29/4/95). In fact the BDA is considering a joint venture with a private Thai company whereby the BDA would purchase land, the private investors would build on it, and then hand it back to the BDA for sale. The housing would be group oriented and a certain percentage would have to be for low income groups. (*Times of India*, Bangalore, 28/5/95) According to the Chairman of the BDA, the fundamental problem "whether in Bangalore or any other city for that matter, is the acute housing and land shortage, in the face of an alarming population rise. From

guardian of the city's upkeep. Dr. Paul's survey found that 5% of respondents were satisfied with the Corporation, while 49% were not (Paul, October 1994, 15). It made an effort to improve things last year by allowing private businesses to take over the maintenance of circles, bus shelters, traffic islands, and junctions, in return for the right to place signs bearing their names in the area. Unfortunately, it seems that there has been a concentration of efforts in the prestigious areas of the city such as MG Road, and a lack of interest in other less high profile areas. For every 'good' road, companies were to take on a 'bad' road. The plan has worked for some companies, and the quality of those roads has improved. However, other companies have simply placed their logo on the railings, and left it at that (*Times of India*, Bangalore, 9/6/95). The Corporation has also been accused of taking up to nine months to give a 'no objections' certificate for companies to take part in the scheme, and many companies simply cannot be bothered to take on the Corporation's bureaucracy for what is essentially a public relations act (*Times of India*, Bangalore, 12/6/95).

In June of 1995, a lawyer brought a public interest petition against the BCC in the High Court. In the resulting judgment the court ordered the BCC to repair and asphalt the roads of an area of the city, on the grounds that the BCC had failed to fulfil its statutory duty to maintain the roads, despite repeated requests by the petitioner (*Times of India*, Bangalore, 7/6/95). The newspapers of Bangalore are littered with complaints about the state of the city. Further details about the state of Bangalore's roads will be given in the section relating to air pollution.

3. Slums

There are over 400 slums in Bangalore, and their inhabitants constitute a fifth of Bangalore's population. (Paul, December 10, 1994, p. 3131). Slums have, by definition, little or no infrastructure. In a second survey conducted by Dr. Paul 1994, it was found that only 22% of the sample of slum dwellers in Bangalore had any contact with public agencies. It was suggested that this was because they often "do not have much confidence in the system and its fairness." "Slum dwellers are less well informed about what to do and are less well endowed with the resources, time and contact required to solve their problems" (Paul, p. 3132) Resources are particularly necessary when dealing with officials in Bangalore. Dr. Paul's slum dweller survey found that 32% of those respondents having contact with the City's public agencies had to pay 'speed money' to get satisfaction. This was by far the worst record of the

three cities surveyed (Paul, 3133). Further inquiries should be made into the possibility that similar barriers exist in interactions with the courts.

It is interesting to note that while 76% of the Bangalore respondents to Dr. Paul's study claimed that street lights were available in their area, only 56% of those people found the facility of any use, probably because the fixtures were there, but they rarely worked. Similar responses were made in relation to water and sanitation services (Paul, 3132).

The Karnataka Slum Clearance Board was created under the Slum Areas (Improvements and Clearance) Act, in order to "eliminate congestion provide basic needs such as streets, water supply an drainage to clear the slums, which are unfit for human habitation" ("Soul is Lost, The City is Alive: Save Bangalore" Karnataka United Urban Citizens Forum, Bangalore, 8). Also, the Act envisaged that slum dwellers should be provided with proper accommodation. This should be undertaken by the KHB under the Karnataka Housing Board Act ("Soul is Lost, The City is Alive: Save Bangalore" Karnataka United Urban Citizens Forum, Bangalore, 9). In 1995, the Minister of State for Bangalore City Development announced the government's intention to "take stringent measures to clear all slums in the city." He hoped to get voluntary agencies to assist in providing drainage facilities to the areas, and declared a need for multi storey accommodation for the poor. A major reason for the need to close the slums was that they "were being converted into a roaring business by slumlords and the connivance of some politicians" (*The Deccan Herald*, Bangalore, 22/6/95). However, while "the Slum Clearance Board has notified certain areas as slums, and has taken up the follow-up action, that is, declaring them as slums, after observing the statutory formalities . . . thereafter not much progress has been made, since it has not been possible to accommodate all slum dwellers in the places where they have been squatting." Therefore, the authorities have needed to find extra land on which to build homes. This requires a degree of coordination which the various authorities are incapable of achieving ("Soul is Lost, The City is Alive: Save Bangalore" Karnataka United Urban Citizens Forum, Bangalore, 9).

The result is that slum dwellers are often the victims Bangalore's manic real estate market. As owners of usually unauthorised constructions, slum dwellers are wide open to official and clandestine harassment, and their homes are sometimes 'cleared' by the most unsavoury methods. It is alleged to be quite a common tactic of developers to set fire to slums in order to frighten the residents into leaving, and then to pass it off as an attempt by slum dwellers to get government compensation for fire

damage (Interview 6/5/95). There were ten fires in the Koramangala slum which was the proposed site of the National Games Housing Complex. Three people were killed (Interview 6/5/95). It was alleged by an activist who works with slum dwellers that the failure of the government to investigate these incidents or to give the dwellers legal rights to the land that they inhabited "makes one believe that the private builders are being supported and encouraged by the government to harass the poor, in view of the proposed National Games Complex" (*The Hindu*, Bangalore, 19/4/95). During the building of a football stadium in Bangalore, there were 415 fires in the adjacent slum, which was given to a developer, in exchange for his building the stadium. The fires, three deaths, and many injuries occurred whilst slum dwellers were waiting for a member of the legislative assembly, who had invited them to meet him there, but had failed to turn up. CIVIC and several other Bangalore groups staged an all day protest (Interview 6/5/95). Such tales are testimony not only to the hardship faced by the poor in Bangalore, but also to the high value of land in Bangalore today, and the bleak prospects for its environmental future.

C. Water and Sanitation

The purpose of this section is to first examine the realities and responsibilities surrounding the supply of water, then to look at the disposal of domestic sewage in Bangalore, and finally to discuss the way in which the pollution of water bodies by industrial effluent is to be prevented and controlled.

1. Water Supply

"It is all very well to crow that the Garden city is poised to become a mega city. But what hits you in the solar plexus is that knowledge that this 'Scientific Capital of India' with a population of 4.5. million does not have an effective, protected water supply" (*Indian Express*, Bangalore, 20/11/93). Bangalore is located on a large area of rock, with its major water source, the Cauvery River, 100 kilometres away. So far three stages of the project for the supply of water from the Cauvery river have been undertaken by the Bangalore Water Supply and Sewerage Board, with funding from the Corporation (*Deccan Herald*, Bangalore, 22/6/95). Even the source of the Cauvery is not necessarily a secure one. A fracas has broken out between the States of Karnataka and Tamil Nadu over the division of rights to the waters of the Cauvery (*Deccan Herald*, Bangalore, 22/6/95).

a) Responsibility for Supply of Water

The Bangalore Water Supply and Sewerage Board (BWSSB) was established in 1964, "charged with the general duty of providing a supply and improving the existing supply of water to the Bangalore Metropolitan Area, and of making adequate provision for the sewerage and the disposal of the sewage" in the Area (Bangalore Water Supply and Sewerage Act 1964, section 15). This duty is only limited by section 55, which states that "the Board shall not be liable to any penalty or damages for cutting off the supply of water, or for not supplying water in the case of *unusual* drought, or other *unavoidable* cause or accident, or the necessity for relaying or repairing pipes" (Section 55, emphasis added). Under the Act, "all public reservoirs, tanks, cisterns, fountains, wells, pumps, pipes, taps, conduits and other works connected with the supply of water" to Bangalore shall be vested in the Board (Section 26).

Specific provisions are made for the supply of water to industry. The Chief Engineer of the Board has the power to, with the sanction of the Board, supply water for non-domestic purposes (Section 35).

There is a good deal of overlapping of responsibility for the supply of water between the BWSSB and other authorities in Bangalore. It was revealed in a Corporation meeting that the third stage of the Cauvery project had "failed as it had not been able to supply the intended quantity of water." This circumstance was blamed upon a failure by the Karnataka Electricity Board (KEB) to provide adequate electricity for pumping (*Indian Express*, Bangalore 1/4/94). The Karnataka Power Corporation is responsible for creating power, and the KEB is responsible for delivering that electricity to Bangaloreans. The BWSSB has often relied upon the fact that there are frequent power cuts as a reason for its many failures to supply water and remove sewage. According to the chairman of the BWSSB, "the city requires 690 million litres of water every day. Due to power shortages, only 460 million litres can be pumped into the city" (*The Sunday Times of India*, Bangalore, 7/5/95). Another conflict of responsibility occurs over who is responsible for service pipes, taps and public fountains. The BWSSB claims that the Corporation is responsible for these, and that their poor quality is often responsible for the undrinkable nature of much of Bangalore's water (*Times of India*, Bangalore, 4/7/95). But the author was assured by an former administrator of the BCC that the BWSSB had full responsibility for water pipes (Interview 24/6/95).

Whatever the responsibilities, the reality is that Bangalore faces two major problems in relation to water. Firstly, water is quite often not supplied to Bangaloreans by the BWSSB. Secondly, when water is supplied, it is usually contaminated.

b) Quantity

In March 1995, the Chief Minister of Karnataka was worried that the current water crisis, which left many areas going without water for over 10 days, would lead to law and order problems (*The Sunday Times of India*, Bangalore 7/5/95). At that time, the BWSSB could meet just 25% of the city's requirements, despite the help of the public works and irrigation departments, as well as private suppliers (*The Sunday Times of India*, Bangalore 7/5/95). In many residential areas of Bangalore, officially supplied water is frequently only available for 3 days in a week (Interview 6/5/95). When water is supplied to homes, it often comes during office hours, when no one is available to collect it (*Times of India*, Bangalore, 2/6/95).

"It appears that Indian citizens have to depend on their survival instincts rather than on state government to avail of some of the bare necessities of modern living" (*Sunday Times of India*, Bangalore, 7/5/95). Many Bangaloreans, unable to rely on public supply, either buy water from private companies or drill bore wells. Ten percent of Bangaloreans rely mostly on borewells for water (*Times of India*, Bangalore, 25/6/95). Even the BWSSB has undertaken to repair or dig a total of 4,150 borewells in the city. This causes a reduction in the water table levels. (*Sunday Times of India*, Bangalore 7/5/95).

Another frequently employed method of obtaining water is to create illegal connections. This is done by poor and rich alike (Interview 10/6/95). In fact, the BWSSB unwittingly encourages it. By November 1993, the number of unauthorised connections in Bangalore was estimated to be around 2,500. But when the BWSSB "decided to 'condone' unauthorised water use for a fee, and asked for voluntary disclosure of unauthorised connections" in December 1993, the number of unauthorised connections suddenly shot up. "Roads everywhere were dug up indiscriminately." This increase in covert withdrawals not only caused the Board to lose revenue, but also interfered with legal supply to others. The Board eventually gave up on its amnesty plan, and returned to ignoring them instead. Minor civil unrest ensued (*Indian Express*, Bangalore 29/4/95). The BWSSB now allows unauthorised connections, and thus foregoes payment from the public for water supplies, as well as

paying effluent penalties to the KSPCB (see section on Sewage), rather than maintaining a decent water supply (*Indian Express*, Bangalore, 13/8/94).

Industry continues to strain the water supply in the area. The KSPCB has recently asked industries to recycle 50% of their water, but that many failed to comply, even after prosecution orders were obtained. The industries merely obtained stay orders instead (Interview 10/6/95).

Among the poorer people of Bangalore, the issue of water scarcity causes serious and damaging arguments between neighbours. It is commonly said that there are more alcohol outlets than water outlets in slums. Water for slums areas is also alleged to be more expensive than that supplied to normal residences (Interview 10/6/95, and see the Revised Water Tariffs in *Times of India*, Bangalore 30/6/95). In 1980, the "Thaner, Thaner" (Water Water) protest took place on the prestigious MG Road. Hundreds of women protested the lack of water, and the failure of the BWSSB to respond to complaints. An NGO called Women's Voice has continually placed water amongst its demands since the protest, but the situation has, if anything, become worse (Interview 10/6/95).

c) Quality

Even where water is actually supplied, it is often so dirty as to be un-potable. In 1981 the Public Health Institute and the Health Officer of the BCC warned the BWSSB that water supplied to Bangalore carried such an "alarming proportion of bacteria and faecal traces" as to be "unfit for consumption" (*Indian Express*, Bangalore, 12/6/81). In 1993, the Environment Department made what was considered to be a conservative estimate that 62% of all ground water in Bangalore was contaminated. Furthermore, a study during the same year showed that all 96 tap water samples and 95.5% of ground water samples, had unacceptable levels of dissolved solids (*Indian Express*, Bangalore, 20/11/95). A 1995 report showed that ground water in Bangalore is still being polluted by industrialisation and urbanization (*Times of India*, Bangalore, 25/6/95).

In June 1995, there was a outbreak of gastro-enteritis in Bangalore and Devarajeevanahalli, an area just outside the Corporation limits, but within the BWSSB supply region. A total of 17 people died by the 27th of June and about 200 were taken ill. Although such outbreaks seem to be almost an annual affair in the area, the number of reported cases was twice as large in 1995. (*Times of India* 27/6/95). The BWSSB denied that any contamination had occurred through sewage as there are no

sewerage pipes in the area, only open drains! However, water taps were placed directly over open sewers, and during heavy rains, the two had become mixed as drains overflowed (*Times of India* 21/6/95). This is in direct contravention of section of the BWSSA, 1964 (section 52(1)). Many of those who suffered from gastro-enteritis also tested positive for cholera (*Times of India*, Bangalore, 24/6/95). The Corporation eventually planned to undertake a massive cleaning of the city, and the originating area (*Times of India*, Bangalore, 25/6/95). Plans for a publicity campaign on the problem fell short of providing full information to journalists, who were unable to get details of the outbreak from officials (*Times of India*, Bangalore, 26/6/95).

Stories such as the appearance of a snakes through a tap, and residents who remained uniformed of the presence of a dog carcass in their water tank, continue to arise, and give credence to the suggestion that once outbreaks of disease are over, officials seem to lose interest in the public health (see for example *Times of India*, Bangalore, 1/5/95) In 1995, the BWSSB set up a telephone line for complaints (*Times of India*, Bangalore, 6/6/95), although it is not clear if this has had a positive impact.

2. Sewage Disposal

Under section 63(1) of the BWSSB Act, "all public sewers, all sewers in, alongside or under any public street" in Bangalore "and all sewage disposal works" are vested in the Board. Under section 65(b), no person shall throw, empty or turn into any Board sewer or into any drain or sewer communicating with a Board sewer . . . any chemical, refuse or waste steam or any liquid of such temperature as may be specified" by the Board, where that substance is "either alone or in combination with the other contents of the sewer, dangerous or the cause of a nuisance or prejudicial to health." Contravention of this provision is punishable with a Rs. 100 (c. £2) fine and a daily fine of Rs. 50 (c. £1) thereafter, until the contravention ceases (Section 85). There are also provisions relating to the type and size of drain that must be built by an owner of a new building, which if broken, will result in a fine of Rs 1000 (Section 68).

The BWSSB has spent upwards of 50 crore rupees on sewage treatment facilities in Bangalore, "but not only do these remain under utilized, the performance of the Board towards maintaining the standards prescribed by the KSPCB has been so dismal that it has been paying penalty amounting to several lakh of rupees to the KSPCB" (*Indian Express*, Bangalore, 13/8/94). Because the quality of effluent released from BWSSB drains into tanks and rivers is so poor, the BWSSB has to pay

the KSPCB one rupee per 1,000 litres of water supplied (*Indian Express*, Bangalore, 13/8/94). It was reported that one of the treatment plants is running at under 50% capacity, and a second remains unfinished (*Indian Express*, Bangalore, 13/8/94). This is denied by BWSSB officials (Interview 6/5/95). However, according to research, of the water supplied to Bangalore, 80% finds its way into the sewage system, but sewage plants only deal with 50% of the total water supplied. "This clearly indicates that much of the sewage is allowed to flow on the roads," often from illegal water connections, which have no corresponding sewage facilities (*Indian Express*, Bangalore, 13/8/94). It is also said that as an alternative, raw sewage is simply diverted into the tanks and lakes of Bangalore, perhaps with the secondary aim of in order of giving the authorities an excuse to fill them in altogether (Interview 28/4/95). In June 1995, the Forest Department appealed to the BWSSB to repair a drain which was taking raw sewage straight into Madiwala tank and threatening "an environment disaster," but no action was taken by the Board (*Times of India*, Bangalore, 26/6/95).

Some years ago, the BWSSB decided to recycle water, by treating it to KSPCB standards, and supplying it to industries. The project was prepared, and HUDCO agreed unconditionally to fund the project. Tenders were called and technical bids were opened in 1992, "but strangely, nothing happened thereafter." (*Indian Express*, Bangalore, 13/8/94) A plant is reclaiming and reusing domestic sewage water in NAL colony, for use in air conditioning, toilets and horticulture. Great savings are being made, (*Indian Express*, Bangalore, 13/8/94) but it is unfortunate that the scheme is not more widely applied.

The state of Bangalore's drains is so perennially poor, that any announcement by the BCC, for example, regarding its intentions to conduct "intensive cleaning of storm water drains," is considered to be a newsworthy event (*Times of India*, Bangalore, 10/5/95 and 8/6/95). The Minister of State for Bangalore City Development is studying a proposal by a private company to totally renovate the city's underground drains. He warned that "unless they are replaced and modernized, there is a possibility of all the drains bursting and sewage water flowing into all the lanes and bylanes of the city in the next two years." (*Times of India*, Bangalore 29/5/95 quoting the Minister of State for Bangalore City Development, M. R. Roshan Baig).

3. Industrial Water Pollution

The procedure for obtaining environmental clearance for the siting of industrial undertakings has been discussed above. It remains to explain the further procedure

which an industry must go through, in order to obtain consent from the KSPCB to emit pollutants into public waters, under the Water (Prevention and Control of Pollution) Act.

a) Consent for Industrial Pollution

Under section 24(1) of the Water Act 1974, there is a general prohibition on the conscious use of streams or wells for disposing of polluting matter. Contravention of this rule is an offence punishable by 18 months to 6 years imprisonment and a fine (Section 43, Water (Prevention and Control of Pollution) Act, 1974). Under section 25 of the Water Act 1974, any person wishing to set up a new, or expand an existing, industry, operation or process, sewage outlet, or treatment and disposal system must first get the permission of the State Board concerned, if their action is likely to cause sewage or effluent to be discharged into streams, wells, sewers, or land. The application must be in a special form, and a fee must be paid (Section 25(2)). The Board may give its consent subject to conditions relating to the point of discharge, nature of the effluent, and the rate at which the effluent is to be released (Section 25(4)(a)(ii-ii)). The consent must be valid for a specific period only. Alternatively, the application for consent can be denied (Section 25(4)(b)). The penalty for failing to apply for consent is 18 months to 6 years imprisonment, and a fine (Section 44). If no consent is sought by the industry, the Board can serve them with notice of the conditions that would have been imposed if they had applied for consent (Section 25(5)). This seems to imply that consent to pollute will usually be given. Further proof of this is that, where no response is given to an application for consent, consent is deemed to be given after 4 months (Section 25(6)). The KSPCB gave 1278 consents to pollute under the Water Act, in the year ending in March, 1994 (Annual Report of the KSPCB 1993-1994, 12).

It has often been said that the Pollution Control Boards of India view themselves as "license giving authorities," rather than monitors and preventers of pollution. They are seen by the public to be remote, and "no one is aware of what they are doing" (Interview 15/5/95). But it is the opinion of the present Chairman, that "the Karnataka Board is one of the best in the country" (Interview 25/5/95). He claims that consents, for both establishment and emissions, are "loaded with conditions" (Interview 25/5/95). The Board's Annual Report claims that "the pollution control laws are being enforced through issue of consents, prescribing the time limits within which pollution control systems shall be completed to meet the standards. The

industries are being vigorously pursued to ensure that the pollution control systems are installed and commissioned within the stipulated time" (Annual Report of the KSPCB 1993-1994, 11). The current Chairman of the KSPCB has added a new condition that industries must, in return for releasing complying pollution over an area, adopt a village and provide it with a park and roads (Interview 25/5/95).

Section 28 of the Water Act 1974 gives a right of appeal to industry against orders given by the Board in pursuance of its powers under sections 25, 26 and 27. An Appellate Authority has been established in Karnataka for the purpose of hearing these appeals. At the end of March, 1994, there were 10 cases pending in the Appellate Authority, and 7 appeals had been disposed of in that year (Annual Report KSPCB 1993-1994, 54).

b) Monitoring and Disposal of Water Pollution

Industries are classified by the Board as Small, Medium and Large industries, and then further divided according to whether they are 'red', causing major pollution, 'orange', causing medium pollution levels, or 'green', causing low level pollution (Interview 25/5/95). It is estimated by one academic that there is a compliance rate of about 40-50% among industries with pollution standards set down by the KSPCB (Interview 26/4/95).

Under section 33(A) of the Water (Prevention and Control of Pollution) Amendment Act 1988, the Board can "issue any directions in writing to any person officer or authority, and such person, officer or authority shall be bound to comply with such directions." For the sake of clarity, the Act outlines the specific power of the Board to give directions for the "closure, prohibition or regulation of any industry, operation or process," or for the "stoppage or regulation of supply of electricity, water or any other service" (Section 33(A), Water (Prevention and Control of Pollution) Act 1974, as amended in 1988). This will usually be done where there has been a contravention of the conditions imposed by the Board in the consent. In the year 1993-1994, the KSPCB successfully used section 33(A) to issue closure orders to 11 water polluting industries in Karnataka, none of which was located in Bangalore (Annual Report of the KSPCB 1993-1994, 3-4).

It appears that although large and medium scale industries are monitored relatively effectively by the pollution control board, it is small industries that cause 60% of the total pollution in Bangalore. While small industries are supported by the

government, it remains difficult to monitor their polluting, because they are spread over a large area, and often locate in and among residential areas. The Department of Forests, Ecology and Environment are making efforts to improve this area by introducing Common Effluent Treatment (CET) programmes. Under a CET, small industries are collected in one area, and are offered a 50% subsidy towards the creation of treatment facilities. The industries contribute pro rata to the costs of the programme, and are better placed for monitoring by the Pollution Control Board. This method has been used effectively with tanneries in some areas of Karnataka, and will soon be introduced in Bangalore (Interview 26/4/95). The chairman of the KSPCB expressed enthusiasm for the project, saying that it was gaining interest from entrepreneurs and the Board. However, he also said that expanding the programme to older industries would be difficult, as they are scattered around, and attempting to relocate them would be costly (Interview 25/5/95).

c) Prosecutions for Water Pollution

Under the BWSSA, 1964, no person shall do any act "whereby the water work is fouled or likely to be fouled (Section 60 (1)(e)). A maximum fine of Rs.100 can be imposed for contravention of this section. (Section 62, Bangalore Water Supply and Sewerage Act, 1964). Industries are more likely to be prosecuted under the more stringent Water Act, for contravention of the general prohibition under section 24(1).

As far as prosecutions for infringement of the Water Act 1974 are concerned, in the year 1993-1994, 87 complaints were been lodged by the KSPCB in the Karnataka courts. Of that number, 44 have been finally resolved in the court. Out of those 44 decisions, 20 were in favour of the Board, but 24 were against the Board. Of those cases which the Board 'won', not one resulted in a conviction order for imprisonment, or fining, or both, of the defendant. Instead, restraint orders were passed against 19 of the industries, and in the remaining case, the industry was given time to comply with pollution control requirements (Annual Report KSPCB 1993-1994, 52).

No separate figures are available for criminal law prosecutions for air pollution, versus water pollution, launched by the Board. However, this is less of a concern than the fact that the KSPCB initiated a grand total of zero prosecutions under section 133 of the Code of Criminal Procedure in the year 1993-1994 (Annual Report KSPCB 1993-1994, 53). Presumably the Board does consider using this avenue, as a space for recording such attempts is kept in the Annual Report.

D. Air Pollution

According to the KSPCB Annual Report, in 1993-1994, 95% of the tests conducted twice weekly on ambient air quality in Bangalore were found to be within the standards prescribed by the Central Pollution Control Board (Annual Report of the KSPCB 1993-1994, 10). This is surprising when placed next to the recent assertion of a former Chief Minister of Karnataka that "Bangalore was now listed amongst the worst polluted cities" (*Times of India*, Bangalore, 6/6/95).

1. Vehicular Pollution

According to the former Chief Minister quoted above, Bangalore's air pollution problem is "not due to factories, but because of the city's ever increasing vehicular population" (*Times of India*, Bangalore, 6/6/95). Whether or not this is the case, vehicular pollution is certainly noticeable in Bangalore.

a) Public Transport

The provision of public transport in Karnataka is the responsibility of the Karnataka State Road Transport Corporation (KSRTC). In the city, the Bangalore Transport System (BTS) is responsible authority for providing a public bus service. The bus network is widely criticised by Bangaloreans as inadequate, and therefore a major contributing factor to the pollution caused by private transport (Interview 6/5/95). The BTS suffers from terrible employer-employee relations, which results in large scale pilferage by employees, and even violence against management (Interview 6/5/95).

There has been discussion for some time now about building the Bangalore Mass Rapid Transport System (BMRTS) in order to alleviate the traffic and pollution problems, but planning in this regard has been haphazard (Interview 6/5/95). A group called CIVIC Bangalore forced a public hearing on the subject of a 1993 proposal for the BMRTS. The group engaged in 3 months of lengthy battles with government officials in order to get full financial details to be released for discussion. At the meeting, it was discovered that the plans for the system were based on financial and demographic data from the 1970's, and were most certainly out of date. As a result of the group's efforts, the government called for a full review and is now in support of a totally revised light rail transport scheme. If the government fails to initiate a public hearing on this new Rs 4,200 million project, which has recently gone out to

international tender, then CIVIC intends to force a hearing under the Town and Country Planning Act through public interest litigation (Interview 6/5/95). A petrol cess within the city is being collected in order to fund the BMRTS (*Times of India*, Bangalore, 29/4/95) but many Bangaloreans are sceptical of the project. As Shiv Shankar Sastry of Basavanagudi put it, "as a Bangalorean, I have become so accustomed to blatant corruption and bribery in all government offices including BDA, RTO, Corporation and Vidhana Soudha, that I find it impossible to believe that the extra tax I pay will really go to the BMRTS" (Letter to *The Times of India*, Bangalore, 12/5/95). The former director general of police raised the point that "potholes and streetlights are more important than flyovers and elevated rail" (*Times of India*, Bangalore, 29/5/95 quoting S.N.S. Murthy at the Save Bangalore Conference).

b) Fuel

A major source of pollution in Bangalore is the large number of two and three wheeled private vehicles upon which many Bangaloreans rely in the absence of a decent public transport system. Apart from being an intrinsically inefficient means of moving large numbers of people, these vehicles are made even more environmentally harmful through the mixing of kerosene with fuel. Under the Public Distribution System, many basic food and living items (including kerosene for cooking stoves) are given at subsidised prices to those in need. Many auto rickshaw drivers and some scooter and motorcycle owners are able through bribes to obtain tokens which can be used to get kerosene at subsidised prices (Interview 28/4/95). The adulterated fuel contributes directly to the emission of higher levels of air pollutants.

The responsibility for initiating the provision of lead free petrol in Bangalore lies with the Union Minister for the Environment, who must put pressure on the Minister for Petroleum to order the provision of lead free petrol. The actual provision of the petrol must be implemented through the Ministry for Surface Transport, which is responsible for monitoring emissions.

It is reported that the lead content in all petrol supplied in India was raised in order to accommodate the introduction of the Maruti, a high performance car. "Thus all cars in the Indian Market which used non-high level lead in the past had to switch over, though their engines were not upgraded correspondingly. The result was increased pollution" (*Indian Express*, Bangalore 24/11/93) The relative merits of diesel and unleaded petrol are also being debated. It is said that diesel gives off more

visible but less harmful emissions (*Sunday Times of India*, Bangalore, 16/4/95). According to Vinay Baindur of SAVE, Bangalore has the highest levels of lead in the air of any Indian city (*Indian Express*, Bangalore 24/11/93).

A Supreme Court ruling recently directed that unleaded fuel must be made available to the four major Indian cities (Bombay, Calcutta, Delhi and Madras) from April 1st, 1995, and all cars built after that date must have a catalytic convertor so that they may take unleaded petrol. However, the supply of unleaded petrol will undoubtedly be difficult as there is at present a total of just 150 pumps carrying unleaded petrol in the four cities and the trunk roads (*The Times of India*, Bangalore, 11/4/95). The Union Minister for the environment, Kamal Nath, promised on August 22, 1994 that the whole of Bangalore city would be supplied with unleaded petrol by 1996 (*The Hindu*, Bangalore, 23/8/93). By March of 1996, nothing had been done in this regard. As a result, an organisation called SAVE, which has been running a lead free petrol campaign since 1992, is preparing a PIL action against the minister to force him to fulfil his promise.

Mr Kamal Nath also requested that the Chief Minister of Karnataka ban the introduction of any new two and three wheeled vehicles to the city as of 1995, as they were unable to use unleaded petrol (*The Hindu*, Bangalore, 23/8/93). There is no evidence to suggest that this rather drastic plan has been implemented. Indeed, it is probably futile and even unfair to suggest such a move until public transport can provide a realistic alternative to the use of two and three wheelers in the city.

c) Emissions Standards

Since 1993, the Motor Vehicles Act 1983 has required vehicles to undergo emissions tests once every 6 months and to carry a "Pollution Under Control" sticker (Draft Annual Plan Karnataka State Government 1995-1996 Volume 1, VIII-F1). Tests for stickers are done at certified sites in Bangalore, usually petrol stations (see for example *Times of India*, Bangalore, 12/5/95). The Transport Department is the authority responsible for monitoring vehicular emissions in Karnataka, through the Regional Transport Offices (Interview 6/5/95). Section 20 of the Air Act 1981 specifies that the State Government shall, in consultation with the KSPCB, give whatever directions it sees fit to the Transport department, in order to see that the directions of the KSPCB regarding standards for air emissions from vehicles are complied with (Section 20). In 1993, the Regional Transport Office and the Pollution Control Board invested heavily in emission testing equipment in the heat of the

moment, and there was a great rush by car owners to have vehicles tested for a emissions sticker. However, enthusiasm has since declined (Interview 6/5/95). Similar apathy was expressed by the Central Pollution Control Board, which ordered Bangalore pollution levels to be monitored at 10 sites, but have now reduced the scheme to three sites -- leaving much of the equipment lying unused (Interview 15/5/95). Some emissions testing of private vehicles is also undertaken, on an "ad hoc and random" basis by the Traffic Police (Interview 15/5/95). An environmental group published a booklet on the subject of air pollution, and in it recommended that where a member of the public comes across any public vehicle or private vehicle emitting excess smoke, they should "write to the Deputy Commissioner of Police (traffic)" giving details of the nuisance with the number and type of the vehicle, and specifying the date, place, and time of the incident ("Sick of Air Pollution? Be Part of the Solution" Bangalore Environment Trust, Bangalore).

Under the previous minister for the environment, utter havoc reigned as spontaneous 'environment days' were announced, and every car in the state was bound to be tested on the same day (Interview 28/4/95). The KSPCB sponsored a free emissions testing session on World Environment Day in 1995 (*Times of India*, Bangalore, 3/5/95). Also, the Minister of State of Environment and Ecology announced that he was "seriously considering the proposal for setting up emissions checking centres at the four entry points to Bangalore city," and he "lambasted the home and transport departments for their failure to curb vehicular pollution." He also mentioned that he had directed those departments to carry out emissions testing campaigns, especially on KSRTC buses (*Times of India*, Bangalore, 27/4/95).

As with other areas of environmental concern, vehicular pollution control seems to be the subject of some jurisdictional clashes. It is apparent that the Environment Department, the Traffic Police, the inspectors of the Bangalore Regional Transport Office, the Central Pollution Control Board, and the Karnataka State Pollution Control Board, all take interest every now and then in emissions control. The KSPCB recently expressed a desire for the Central Pollution Control Board to transfer responsibility for checking the use of adulterated fuel, and for monitoring emissions, from the Traffic Police to the KSPCB (*Times of India*, Bangalore, 24/6/95).

d) Vehicle Standards

An important contributory factor to emissions levels, is the state of the vehicles themselves. Recently, a newspaper reported that "a high-tech vehicle testing system

that can check features ranging from polluting levels to efficacy of brakes has arrived in the city. Bad News: the whole system . . . is likely to remain idle for some time to come for want of a building to keep it in." The equipment was provided free of charge under a central government scheme (*Times of India*, Bangalore, 21/6/95).

A large portion of traffic in India is made up of heavy goods vehicles. Most two axle trucks in India carry a load of at least 15 tonnes -- that is 5 tonnes more than the official permitted capacity (*The Times of India*, Bangalore, 12/5/95). Overloading enhances profit margins, but it reduces the efficiency of the engines and produces a much higher level of vehicular emissions. Modern trucks, which do not allow for overloading, are selling extremely slowly. An official of the Union Surface Transport Ministry recently bemoaned the fact that "enforcement is lax. We send letters to state governments every three months asking for strict enforcement." Although the Motor Vehicles Act has been amended to make penalties stricter, he claimed that the situation had not improved at all (*The Times of India*, Bangalore, 12/5/95). It is possible that recent proposals to limit the prevent trucks passing through the city during the daytime, and to reroute those trucks using Bangalore as a through road, may have some effect on this form of pollution. (*The Times of India*, Bangalore, 21/6/95).

e) Road Surfaces

Another major contributor to fuel consumption, and therefore pollution, is the quality and amount of road surface available to the user. Badly maintained and clogged roads cause 'stop and go traffic' which is extremely inefficient. Responsibility for the roads of Bangalore lies with the BCC and the BDA, depending on the region concerned. The roads in Bangalore, though once extremely good, are now essentially poor, as a result of over use and under maintenance.

The Bangalore Corporation Commissioner recently found that 50-70% of all outgoing expenditure under the category of road maintenance was lost to pilferage. The cause was a loophole in the rules governing the awarding of tenders, whereby those contracts worth under Rs. 9000 are not required to be open to public tender. The result is that repairs of Bangalore's roads takes place in a 'piece work' fashion resulting in minimum quality, and maximum cost and pilferage. The Commissioner was entirely unsuccessful in plugging this leak of public funds (Interview 5/6/95). Finally, further problems are caused by the failure of the BMRDA to manage to coordinate

such things as the cyclical diggings and fillings undertaken by cable layers on the one hand, and road layers on the other (Interview 5/6/95).

2. Industrial Air Pollution

Under the Karnataka Municipal Corporations Act, 1976, if in the opinion of the Commissioner the storage, dumping or deposit in any building or land of "coal, charcoal, ashes, cinders, gunny bags, wool, cotton or any material;" or the burning, shifting, breaking or cutting or other activity in relation to such a substance "causes or is likely to cause nuisance to the inhabitants in the neighbourhood. . . by emanation of dust, floating particles, smoke, unwholesome smell or noise or otherwise," then the Commissioner may "by notice, require the owner or occupier . . . to take such steps as may be specified in the notice for abatement of such nuisance" (Section 334). The application of this section extends to any offender, whether domestic or industrial, and is not restricted to certain industries, as is the Air Act.

Under the Air Act 1981, the State Government can, after consultation with the State Board, declare Air Pollution Control Areas by notification in the Official Gazette (Section 19 (1)). It then becomes illegal to establish or operate certain industrial plants without the consent of the Board in those areas, under section 21(1). The procedure for obtaining consent (under Section 21(2)) is essentially the same as in the case of the Water Act, except that consent is not deemed to be given after 4 months -- it is not clear what happens if the Board is silent for over that period.

Specific conditions of maintenance and provision of pollution control devices with which all industries obtaining consent must comply are listed in section 21(5). In 1993-1994, the KSPCB issued 1145 consents to pollute under the Air Act (Annual Report of the KSPCB 1993-1994, 13). Under section 22, where an industry is operating with the consent of the Board, it must comply with the standards laid down by the Board under section 17(1)(g) regarding emissions levels. Under section 23, when any emission in excess of prescribed standards occurs, or might occur, it must be notified to the Board, which is under a duty to take 'remedial measures' to mitigate the actual or potential damage, at the expense of the polluter (Section 23 (1-3)).

Under Section 31(A) of the Air Act, the Board has exactly the same general power to issue directions as under the Water Act 1988 above, with exactly the same specific powers to order closure, suspension of the supply of utilities etc. In the year of 1993-1994, the KSPCB issued closure orders to seven air polluting industries in

Karnataka, two of which were located in Bangalore urban and rural districts (Annual Report of the KSPCB 1993-1994, 4).

Under Section 37, where an industry either fails to apply for consent, or disregards the conditions of a consent, or fails to comply with a direction for closure, stoppage etc under section 31-A, the penalties for the offender are the same as for the Water Act- imprisonment and fine (Section 37). As of the end of March, 1994, the KSPCB has launched 37 prosecutions for breach of the Air Act 1981. Only 14 of those cases have had a judgment passed on them by the courts. Of these 14 decisions, 3 were in favour of the Board and 11 were given against the Board. Of the cases decided in the Board's favour, one resulted in imprisonment or fine or both, and restraint orders were passed in the other two cases (Annual Report of the KSPCB 1993-1994, 53).

In 1985, the KSPCB attempted to close down an industry on the grounds that it had not applied for consent to operate in an APCA, and that it was not fitted with the proper pollution control devices. The order for closure was purported by the Board to have been issued under its section 23(2) duty to take 'remedial measures' in the event of excessive emissions. The court held that section 23(2) did not give the authority to the Board to order closure, and that the Board should instead have initiated action for punishment by the courts under section 37. (*Chaitanya Pulverising Industry and Another vs. KSPCB and Another* AIR 1987 Kant 82)

Under section 22-A, where it believes that an emission above the standards it has laid down is likely to occur in the near future, the KSPCB can restrain the potential polluter by applying to any court not inferior to the Metropolitan Magistrate. The court "may make such order as it sees fit", including directing the offender to desist, and authorizing the Board to implement the direction if it is not complied with (Section 22-A(2)). This power is given to the Board so that it can prevent excessive emissions before they occur, rather than waiting for an actual infraction, and then relying on section 37. It is not known what action the Board might taken under this provision.

As with water pollution, KSPCB and other authorities can use section 133 of the Code of Criminal Procedure to request the removal of a nuisance by the Metropolitan Magistrate. However, as mentioned above, the Annual Report of the KSPCB does not list any such action, although a separate section in the report is dedicated to recording its use.

E. Solid and Hazardous Waste

The issue of waste collection is extremely important from the perspective of both health and the environment. Not only can rubbish which is left to fester cause outbreaks of disease, it also represents a waste of resources.

1. Collection and disposal

A former Chief Minister of Karnataka stated that "the Indian mentality that 'to dirty is my right as someone else will clean up' must change" (*Times of India*, Bangalore 6/6/95) One activist who desired to remain anonymous put the problem of Indian solid waste as follows: "It is part of the Indian ethos or psyche to take care of their precinct alone. In olden days it was normal to keep your plot spic and span . . . and garbage was merely thrown over the wall at the edge of the compound. This habit has not altogether gone today." Furthermore, "a large amount of money is literally made to go down the drain because it is blocked with rubbish so that it can not carry water for more than three months in as many years" (Interview 13/5/95). However, the same activist noted that "part of the reason for this throwing of rubbish is that civic help is not there" (Interview 13/5/95). This leads to the question of who is responsible for the collection of solid waste in Bangalore.

The collection and disposal of solid waste in Bangalore is the responsibility of the Bangalore City Corporation. However, the Corporation does not provide proper disposal methods for the 2000 tonnes of waste generated in Bangalore (Interview 22/6/95). The great majority of garbage is piled in time honoured places along pavements and roadsides, as there are an inadequate number of corporation public collection points for garbage. Rubbish is also frequently burnt in open fires along the road, "resulting in the spreading of toxic smoke" in residential areas (*Times of India*, Bangalore, 21/4/95). Corruption in the corporation is alleged to be rife, and it is common for waste removal vans to indicate on their time sheets that they have completed their rounds when they have done no such thing (Interview 22/6/95). The public often vent their frustration over the BCC's failures in this area in letters to the local papers (see for example *Times of India*, Bangalore, 23/5/95).

Some progress might be made under a recent order of the BCC. Hotels must now collect their garbage into bags and dump them directly into Corporation vans. Failure to do so would result in cancellation of health licenses, and charges under the Karnataka Municipal Corporation Act (*Times of India*, Bangalore, 30/6/95).

2. Recycling

Industry, as a rule, "do not invest in recycling because it is non-remunerative" (Interview 23/5/95). But waste recycling is "very much in the Indian culture." The Indian home has only recently begun to fall prey to the large amounts of packaging to which other countries have long become accustomed. Even with this new threat to recycling, it is still almost unheard of to find good tins, magazines and newspapers being thrown in with other rubbish. Even when useful objects are thrown away, "there is always someone willing to pick up what is thrown away" (Interview 19/5/95). The bulk of the Corporation's budget for waste collection scheme is spent on formal methods of collection and disposal -- i.e. dumping of rubbish. This ignores the fact that 75% of Bangalore's waste is organic, and can be composted. It also ignores the function of the waste pickers (Interview 19/5/95).

One organisation in Bangalore, Mythri Sarva Seva Samithi, is attempting to make use of the up to 25,000 Bangaloreans, known as waste pickers, who live off the proceeds of recyclable and resalable items collected from rubbish dumps (Interview 19/5/95). Mythri has identified that waste pickers need assistance both for their own welfare, and for the good of the environment. The group has managed to organise groups of pickers to approach residents in particular areas. The residents are asked to separate their rubbish into organic and inorganic waste, thus both simplifying, and rendering more safe and dignified, the task of the waste pickers. The residents pay a small salary directly to the waste pickers who are no longer "dehumanised through the culture of sorting through waste" (Interview 19/5/95).

Residential groups are helped and encouraged by Mythri and other groups to undertake vermi-composting projects, whereby earthworms are used to break down organic waste into compost. While the foreign waste management products which are being advertised in India are totally unsuited to the particular nature of Indian waste, the decentralised form of waste management outlined above are said to be ideal (Interview 19/5/95).

3. Hazardous Waste

Hazardous waste produced by industry, households and hospitals are an even more complicated problem. Under the Environment (Protection) Act 1986, the Central government has the power to make rules and issue directions for the protection of the environment (Sections 6,8, and 25) The two sets of Hazardous Waste Rules were

issued under this power. Under the Manufacture Storage and Import of Hazardous Chemicals Rules 1989, the KSPCB is responsible for inter alia, ensuring that accidents are reported and substances are imported under the correct procedures (Section 3 and Schedule 5). The Hazardous Wastes (Management and Handling) Rules, 1989, specify *inter alia*, that the occupier of land is responsible for hazardous wastes upon it, and that "hazardous wastes shall be collected, treated, stored and disposed of only in such facilities as may be authorized for this purpose" by the State Pollution Control Board (Sections 4 and 5). The Board "entrusted the work of identification and quantification of hazardous waste generation in Karnataka to M/s Omega India, a consultant firm." The firm found that hazardous waste created in Karnataka is concentrated in five districts, including Bangalore, which cause a significant 50% of the State's total (Annual Report of the KSPCB, 1993-1994, 15). The firm then identified sites for the disposal of such waste, with two in Bangalore. They will be subjected to an Environmental Impact Assessment, including the feasibility of reclaiming and recycling some of the waste, before plans are finalized (Annual Report of the KSPCB, 1993-1994, 16).

The KSPCB Chairman recently announced that separate cells had been created for dealing with hazard waste management and health issues (*Times of India*, Bangalore, 24/6/95). Technology is currently being imported from Germany to treat and where possible recycle the thousands of tonnes of solid, semi solid and liquid hazardous waste generated in Karnataka (*Times of India*, Bangalore, 1/7/95).

According to a Ministry of Environment (Government of India) Notification (No. G.S.R. 386(E) of 22/4/93) every person carrying on an industry, operation or process which requires consent or authorization under any or all of the Air, Water and Hazardous Waste Acts had to submit an environmental statement to the KSPCB for that year. Fifty reports were received in 1993-1994 (Annual Report KSPCB 1993-1994, 25-26).

IV. Legal Gateways for Environmental Action

Parts II and III of this paper have focused mainly on the incidence of environmental degradation in Bangalore, and the formal institutions which exist to prevent, abate, or manage environmental change. In this part of the paper we explore how activists and citizens groups have responded to environmental change using legal gateways.

The first section outlines the legal methods which concerned members of the public can use to affect environmental outcomes. The second section gives an overview of the types of activists working in Bangalore. The third section gives some examples of litigation initiated by the public.

A. Legal Gateways

This section will give an outline of some of the legal gateways open to the public for challenging environmental harm. This section does not purport to provide a complete survey of Indian environmental law, for that task has been ably executed elsewhere. Perhaps more importantly, it does not survey the gateways available under the various municipal Acts in Bangalore -- these will be analyzed in the next stage of the research project. The point of this section is to identify the most prominent legal gateways so that the strategies of activists may be placed in an institutional context.

1. Direct Actions Against Polluters

a) Criminal Law Gateways

i. Under the Environment Acts

Sections 43 of the Air Act, 19 of the Environment Act, and 49 of the Water Act establish that no court shall take cognizance of offenses under those Acts, unless a complaint is made either by a member of a Pollution Control Board (Water and Air Acts) or the Central Government (Environment Act), or by a member of the public. In theory, this endows citizens with the right to lodge a complaint in the case of illegal pollution, and thus place a duty upon the relevant pollution control board to commence prosecution. However, a person who wishes to file such a complaint must give sixty days notice to the relevant authority of his or her intention to file the complaint, along with the details of the alleged polluter. The sixty-day notice provision was drafted with a view to allowing the polluting company or government agency to mend its ways, thus promoting amicable dispute resolution rather than

immediate prosecution. However, in practice, the sixty-day requirement has been widely criticised on three grounds. First, it allows the Central Government or the KSPCB to secure the prosecutorial initiative, thereby excluding the concerned public from the process and possibly allowing the authorities to cut a deal with the polluter. Second, it provides the polluter with ample time to conceal polluting activities and destroy evidence of past pollution. Third, it introduces unneeded delay into the process thereby frustrating concerned citizens and robbing the participants of political momentum.

ii. Under the Criminal Codes

The Air Act does not deal directly with public nuisances caused by smoke, smells, and other noxious emissions. Where these are released, it remains open to those who suffer to file a criminal complaint for public nuisance. Under section 268 of the Indian Penal Code (IPC), it is an offence to cause "common injury, danger or annoyance to the public or to people in general," and this crime may be punished with a fine not exceeding Rs 200 under section 290 of the IPC. Offenses under section 290 are non-cognizable, so a police officer may not make an arrest without a warrant issued by a Magistrate. The Code also stipulates that it is a public nuisance to pollute the water of any public spring or reservoir (Sec. 277); this offence is cognizable, so arrest may be made without a warrant. Finally, the IPC makes it an offence to vitiate "the atmosphere in any place so as to make it noxious" to health (Sec 278). This offence is also non-cognizable, but the provision is wider than the corresponding sections of the Air Act (Secs 22, 37), which apply only where offenses are committed within APCAs. To initiate action in the case of public nuisance, the complainant may use one of three main legal gateways.

First, where the pollution has already occurred, a complaint may be lodged with the Police authorities with a request that they conduct inspections and make a report to a Magistrate. Police possess powers to investigate for cognizable offenses such as the pollution of a spring or reservoir (IPC, sec 277), and may proceed directly with the investigation under the provisions of the Code of Criminal Procedure, 1973 (CrPC), sections 154, 156. Once the investigation report is complete, it is to be submitted to the Magistrate for action (CrPC, sec 173).

However, where the offence is non-cognizable, as in the case of air pollution nuisance (IPC, sec 278) or general public nuisance (IPC, secs 168, 190), the complainant must take the second procedural gateway. This second option, which is also available in the case of cognizable offenses, is to submit a complaint, either orally

or in writing, directly to a Magistrate, who is bound to examine the complainant (CrPC, sec 190(1)). The Magistrate may then do one of four things: order a police report (CrPC, sec. 156(3)), issue summons to the accused, order an inquiry (CrPC, sec. 202, or dismiss the complaint due to insufficient grounds for proceeding (CrPC, sec. 203).

The third procedural option applies where a public nuisance is anticipated, and the complainant wishes to secure a Magistrate's order to abate or prevent public nuisance. Section 133 of the CrPC empowers a Magistrate to issue a conditional order for the abatement of nuisance in a specific range of circumstances, including the following: where there is an unlawful obstruction or public nuisance, where the conduct of a trade or occupation, or the keeping of any goods or merchandise, is injurious to the health or physical comfort of the community, or where a dangerous building, dangerous animal, or hazardous area (such as an open tank) may lead to harm. In any of these cases, the Magistrate may issue a conditional order to remove or abate the nuisance. The conditional order will be made absolute if sufficient cause is not shown against it. Since an order under Section 133 may be made against any trade or profession, or in respect of any goods or merchandise, it offers considerable potential for environmentally-related orders. Also, because the Magistrate may summon expert evidence (CrPC, sec 139) in the course of conducting an inquiry, the provision allows for technical expertise to be imported into the proceedings -- an important consideration in environmental matters.

b) Civil Law Gateways

In contrast to criminal procedures which seek to punish, civil law actions seek to provide relief in the form of the payment of money, delivery of property, or the issuance of a declaration or injunction. Civil law gateways are regulated in the main by the Code of Civil Procedure, 1908 (CPC). If a civil right is established, arising from the substantive law of contract or tort, or other source of civil obligation, then a suit to enforce the right can be entertained by the civil courts unless cognizance by the civil courts is expressly or impliedly barred (CPC, Sec 9). It is a cornerstone of Indian jurisprudence that where a person possesses an enforceable right, the civil courts will provide an appropriate remedy. However, under the Indian Evidence Act, 1872 (Sections 101-103) it is for the person bringing the suit to prove the existence of facts on which the right depends. In environmental cases involving technical matters, it is

sometimes difficult or exceedingly costly for an individual to adduce sufficient evidence for the court.

Where a person has suffered injury or damage to property, remedy is normally available under the law of torts. For reasons explained elsewhere, tort remedies in India tend to be confined to injunctions, particularly since suits for damages tend to be slow, costly, and largely ineffective.⁵ While suits for civil injunctions may provide concerned individuals with an effective remedy, they are likely to be slower and less effective than the public law remedies discussed in the next section. For these reasons, civil law gateways are not very attractive to Bangalore's environmental litigants.

The utility of civil remedies is further reduced by a jurisdictional problem. Section 58 of the Water Act and Section 46 of the Air Act contain provisions barring the jurisdiction of civil courts with respect to suits or proceedings under the Acts. Similarly section 22 of the Environment Act bars the jurisdiction of civil courts in respect of any suit, action, order, or direction, under the Act. While these provisions bar jurisdiction in relation to any matter before the Central or State Pollution Control Boards, they do not bar the jurisdiction in respect of other instances of pollution (*Sreenivasa Distilleries v S.R. Thyagarajan* AIR 1986 AP 328). Nevertheless, the provisions have been widely criticised for undermining the authority of the civil courts to provide adequate relief against tortfeasors. This does not exclude the possibility of challenging the procedural propriety of decisions taken by the Boards, but it does reduce the scope for tort actions considerably.

Similarly, other government institutions are protected from unannounced attacks through the legal system. For example, the Bangalore Water Supply and Sewerage Act provides that two months notice must be given to the Board before any suit, except one merely claiming an injunction, can be brought against it. The notice must detail the specific cause of action, the nature of relief sought, the amount claimed, and the complainant's name and address (Section 126(1)).

2. Public Law Gateways

The prominent role of judicial review in general, and of public interest litigation in particular, is the most characteristic feature of Indian environmental law.

⁵ Anderson, 'Individual Rights', 201-202, 207-209.

Since much has been written on this topic,⁶ it remains only to outline the most important features which are relevant for Bangaloreans.

Where officials fail to perform their duty to curb pollution of various kinds, individuals and groups can launch a judicial review of their actions and, if successful, cause the court to issue orders of in the nature of mandamus, prohibition, certiorari etc against the government official or authority concerned. Locus standi has been expanded so that any person acting bona fide may lodge a writ petition, and the even letters will, where appropriate, be converted into petitions by the Court. This will allow the case to be heard directly in the Supreme Court where a breach of a fundamental right is involved (Constitution, Art 32), or to the High Court where any legal right is to be enforced (Constitution, Art 226). These procedural gateways are particularly attractive for environmental matters since a Indian courts have interpreted the right to life guaranteed under Article 21 of the Constitution to include a right to a healthy and pollution-free environment. And the prerogative writs can be used against any government body since the definition of the 'State' under Article 12 of the Constitution has been interpreted widely.

It appears from the KSPCB Annual Report that a combined total of 151 writs were filed involving the KSPCB, in the High Court in 1993-1994. Of the 151, a total of 93 cases remained pending in the court, and 58 cases were decided in that year. The Board won 46 cases, and lost 12 (Annual Report of the KSPCB 1993-1994, 54). As of March 1995, there were over 6,000 cases and 2,500 writ petitions pending against the BDA in Bangalore's High Court, mostly relating to allotments alleged to have been taken over by encroachers (*Deccan Herald*, Bangalore, 29/4/95). An ex administrator of the BCC stated that he had no recollection of any PIL cases being brought against the BDA, the BMRDA, or the BWSSB for failing to execute their duty (Interview Bangalore, 24/6/95). A lawyer for the central government and the BCC feels that "there have been no major cases brought against the BWSSB or the PCB, especially not PIL cases" (Interview Bangalore, 10/6/95). But in 1993-1994, the KSPCB reported that 65 PIL cases involving the Board had been filed, of which 24 had been decided and 41 remained pending. A total of 22 cases had been resolved in favour of the Board and two cases against it (Annual Report of the KSPCB, 1993-1994, 54).

⁶ Apart from Anderson, 'Individual Rights', see also J. Cottrell, 'Courts and Accountability: Public Interest Litigation in the Indian High Courts' *Third World Legal Studies* (1992), and S. Hurra, *Public Interest Litigation*. Ahmedabad, Mishra, 1993.

Also, in June 1995, a PIL petition was launched by individuals against the state government, asking that they be ordered to remove debris dumped in Cubbon Park during the five years which the construction of the High Court has so far taken (*Times of India*, Bangalore, 20/6/95).

3. Consumer Law Actions

India's consumer law system deserves a special mention here, as it offers an entirely separate route for attacking various environmental wrongs. The structure of the system developed in the Consumer Protection Act 1986 for resolving consumer disputes has already been described. It remains to consider which consumer relationships are relevant to this paper, and are covered by the Act.

Civic services, such as water supply, are subject to the CPA. However, as a result of a decision on a case involving free care by a Government doctor, civic services are only covered to the extent that they are "rendered on payment of a specific fee." Under section 2(1)(d) of the CPA, a consumer means anyone who "buys any goods for a consideration" or "hires or avails of any services for a consideration." Therefore, the payment of a fee is the distinction that establishes that the complainant is a consumer, within the meaning of the Act. Fees, charges and rent are all consideration, making the recipient of the service a consumer. Taxes are not (CPA, Sec 2(1)(d)). While fees and charges are raised to cover the specific costs of the service rendered, a tax is a generally raised fund.

According to consumer lawyer Shriram Panchu, this means that electricity, transport and water services are all covered by the Act. But, services like road maintenance, garbage collection and sewage disposal, which are paid for indirectly through taxes, are not subject to the rigors of the CPA. Mr. Panchu's views regarding the inclusion of water supply within the Act are questioned in two cases. In a Tamil Nadu case, (*Salem Nagara Mahendrapuri Kudiyiruppor Sangam v. Executive Officer, Kannankurichi Selection Grade, Panchayat Kannankurichi, Salem* (1991) 2 CPR 415, (417): (1991) 1 MWN (CP) 21 (TN)) the court found that the payment of a charge, fee or rent is a "voluntary payment, and it is open to a person to make payment for hire service or refuse to pay and forego the service." But the payment of a tax to a municipal authority or panchayat was not voluntary or optional. Therefore, the payment of House tax to a panchayat "could not be construed as a consideration for the service of providing roads, water supply and drainage facilities." It could be that the water supply in the area in question was dealt with in a different fashion than in

Bangalore, and that the court would find differently in the case of the BWSSB. Under the Bangalore Water Supply and Sewerage Act 1964, "for all water supplied under this Act, payment shall be made at such rates, and at such times and under such conditions as may be specified by regulations."(Section 31) In Bangalore, water supply is paid for through tariffs based on the amount consumed, and sewage is paid through a 30% sanitation fee (*Times of India*, Bangalore, 30/6/95). The customers of the BWSSB would appear to be strong contenders for consumer status. However, the BCC's expenses are covered by taxes, and the recipient of its services is unlikely to be deemed a consumer.

The question of water supply was specifically addressed in a Madhya Pradesh case, (*Nagar Palika Nigam, Rewa v. Ravikant Pandey* (1991) 2 CPR 171 (174): (1992) 1 CPJ 102 (104)) but whether the water tariff was a tax, fee or charge was not discussed. However, the complainant was found to be a consumer, and it could be assumed that the court viewed the tariff as a fee or a charge, and not a tax. In that case the complainant was trying to establish that he had become ill through consuming water supplied to him. Unfortunately he had failed to collect a sample of the water and the court held that "a bare and bald assertion that drinking water from the tap had caused this illness" was not enough to impose liability on the Water Board.

For larger consumers of water, the Water (Prevention and Control of Pollution) Cess Act 1977, and Rules 1978 apply. These declare that water and sewage facilities will be paid for according to the customer's declared consumption. The water is metered. It would seem that this situation is likely to be viewed as a consumer relationship. In a Madras case, (*Madras Metropolitan Water Supply and Sewerage Board v. Consumers Council of India* 1993 CCJ 21(24,25): (1992) CPR 11 CPJ 532: (1993) 2 CLC 137: (1992) CPC 721 (NC)) the State Commission ordered the Water Supply and Sewerage Board to install, and supply daily with water, a public fountain in every street of a colony built by the State Housing Board where the house water connections were not functioning. However, the court later held that the State Commission had no power to order such a thing under the CPA. Whether government services such as hospitals and municipal services may fall under the CPA continues to be a matter of national debate.

The Bangalore Consumer Disputes Redressal Forum and the Karnataka State Commission have a significant number of cases pending which relate to the inefficiencies of the BDA. There are cases filed by: purchasers who have been unable to move into their new homes for over a year, because no basic amenities have been

provided; victims of double allocations of the same plot; and a customer who was forced to pay Rs 5000 in bribes in order to complete basic administrative steps towards buying a property (*Deccan Herald*, Bangalore, 29/4/95). These cases can be heard by the Consumer Forum, because they relate to the purchase of property, for which the customer pays, rather than the maintenance of infrastructure, which is paid using taxes. The Bangalore District Forum recently forced a cooperative building to return money given to it by a consumer in 1986 for property which he has yet to receive (*Deccan Herald*, Bangalore, 22/6/95). It should be noted that the defendant in this case was a private body, rather than a state body, such as the BDA.

B. The Activists of Bangalore

1. A Culture of Activism

Many of those interviewed in Bangalore suggested that there is a "low perception of environmental problems" in Bangalore, and that "public Interest Litigation only occurs when there is a glaring environmental hazard" (Interview Bangalore, 26/4/95). The "culture of resistance and inquiry are not yet deep rooted [in Bangalore], but it is evolving -- and there are strong reasons for it to do so" (Interview, Bangalore, 5/6/95). One activist, who preferred to remain unidentified, stated that in India, "the sense of cleanliness is a personal cleanliness, not a community cleanliness. . . . It may be possible that the upper strata of society are free from this now, but middle and lower are the same as they always have been" (Interview, Bangalore, 13/5/95). A Supreme Court judge and a member of the Union Lok Sabha both expressed similar views that the masses in India are ignorant, and even uncaring of environmental damage (Interview, Bangalore 7/4/95). One interviewee pointed to the rather common sights of residential gates and ramps extending far into roads, and once public areas fenced off with barbed wire for private use, as evidence of India's lack of community awareness (Interview, Bangalore, 13/5/95). "Many things can be done by individuals taking personal decisions -- cheaply and effectively -- by merely denying yourself unjustified gain" (Interview, Bangalore, 13/5/95).

While there is a strong perception among the educated classes that apathy is widespread, the intensity of engagement among activists and civic organisations suggests that the situation is more complicated.

2. An Overview of the Activists

Over 50 organisations in Bangalore were identified as having some interest in environmental issues. There was no single criterion by which activists were identified. Information about activists was gathered from interviews, telephone calls, and from an unpublished "Survey of NGOs in Bangalore" conducted by Madappa Marketing and Management Pvt. Ltd, on behalf of the Public Affairs Centre, in 1994.

There is a broad range of NGOs and activists operating in Bangalore. In general, it seems that they tend to operate in their own spheres, and to concentrate on their own campaigns, without much interaction (Interview Bangalore, 15/5/95). This observation was born out by both interview replies and observation. It is very difficult to divide voluntary organisations into categories, as there is a great deal of overlap in functions. However, some attempt has been made to separate them.

a) Environment and Animal Welfare Groups

i. Education and Awareness Campaigns

There are many organisations in Bangalore which aim to educate people about environmental matters. Organisations such as SMILE, Merlin, SEEK, the Wildlife Protection Group, and the PUMA Club hold seminars, run nature walks, and otherwise try to spread consciousness among Bangaloreans. The Centre for Environment Education has, with government sponsorship, published leaflets concerning composting and recycling of waste. The Indian Society for Environmental Studies aims to "propagate environmental consciousness among people." (Interview, Bangalore, 22/6/95) They work in cooperation with the Education Department and run rallies, seminars and workshops. The major difficulty that they encounter is in finding interested people to donate their time to the cause. As its chairman said, "our work is not very spectacular. I don't think I've done enough. But we need more people." (Interview, Bangalore, 22/6/95).

It became clear during the course of research that many of the organisations in Bangalore which were identified as being involved in environmental activity are generally aimed at middle and higher income groups. For example, it was felt by one activist that "most respondents are middle class or of an affluent background because the appeal of [our organisation] is more cosmopolitan, and the campaigns are in English." He felt that it was necessary to use English, in order to undertake a national campaign in India- a country of many languages (Interview, Bangalore, 13/5/95).

ii. Action Groups

There are some groups which appear to take a more 'hands on,' as opposed to 'educative' approach to environmental activism. These groups take part in public interest litigation and/or put pressure on government officials directly, rather than activating the public to do so.

The Bangalore Environment Trust (BET) was started in 1987. It has eight trustees and is funded by individual donations. All the workers are volunteers, except for a paid typist, and the membership is largely non-participatory. The aims of the trust are twofold. Firstly, it tries to generate a 'bottom-up' awareness of environmental issues. Secondly, the BET is attempting to force the government to recognise and address the wishes of the people in urban environmental management. The publication of a unique booklet, entitled "Citizen Assistance in Emergency," by the BET is intended to assist citizens in lobbying for change effectively. It is a directory of the responsibilities of government departments. The guide was compiled with no government assistance, and was printed for free by HMT Limited. The BET has been involved in two major PIL cases to date. The first was an action to stay the building of a musical fountain in Cubbon Park. The second is the National Games Township action, which remains in progress. The BET has also held various seminars and demonstrations. A major theme of its activities is the removal of the "one sided and punitive" features of environmental law enforcement. It has attempted to involve the government in a process of self assessment, according to the standards laid down for the public. So for example, the BET has demanded that the motor vehicles of the police, the BTS and other government departments should be tested for emissions, and that the results should be published. Along a similar line, it has been suggested that data should be published in the newspaper concerning accident rates and pollution levels in the city. These requests have been accepted by the Transport Commissioner by May 1995 (Interview, Bangalore, 8/5/95) but had not yet been implemented by March 1996.

The Society for Afforestation and Verdant Earth (SAVE) was established in 1990, and has 120 members. Its action on air pollution and lead free petrol have been discussed above. The focus of the group was originally on tree planting, the preservation of forests, and rural development. After experiencing a lack of success in these fields, SAVE shifted its attention to the environment more generally, and air pollution in particular. SAVE have held a lead free petrol campaign, an anti pollution advertisement campaign, and tree planting campaigns. Funding is project-specific, and raised from corporations and NGOs (Interview, Bangalore, 15/5/95).

b) Social Welfare Activists

Social welfare groups in Bangalore are often indirectly active on environmental issues. Mention has already been made of Mythri and its work for the waste pickers. Another example of a social group which touches on environmental issues is Women's Voice. This organisation focuses its attention on women's issues generally, but works mostly for the poorest of women. A major concentration of the organisation's efforts is on the provision of water to the slums of Bangalore. As the general secretary of the group noted, "everyone thinks that 'women's issues' means domestic violence and equal opportunity. But here it has a lot to do with water" (Interview Bangalore, 10/6/95). Women's Voice have therefore trained several of their members to be a water pump repair team. The women are equipped with a repair kit, and are ready to travel to slums at any time to fix the pumps. The group also regularly lobbies the Government to secure improved water facilities. They have been involved since 1985 in a PIL case against the government concerning the demolition of a slum. They are demanding that those slum dwellers evicted from the site be rehoused and compensated. The case is still pending, because the government has yet to appear at a single hearing (Interview, Bangalore, 10/6/95).

c) Residents' Associations

In certain circumstances, the most effective method of improving one's lot is self help. There are many residential groups in Bangalore which seek to do just that. Jayanagar, RT Nagar, and JP Nagar each have residential welfare groups, and the Karnataka United Urban Citizens Forum (KUUCF) provides a focus for problems experienced by residents throughout the State. The KUUCF was established in 1979. In its ten year anniversary publication of essays on the status of Bangalore, the forum expressed an "earnest desire that this publication would open the eyes of not only citizens, but also the policy makers and administrators, and prevent Bangalore from becoming another Calcutta or Bombay" ("The Soul is Lost, The City is Alive: Save Bangalore", Karnataka United Urban Citizens Forum).

The Bangalore Environment Trust also makes a point of helping those residential groups which wish to help themselves. Street associations are encouraged to contact the BET in order to discover which officials to contact to have services such as telephones, street lights and roads repaired. The BET also advises residents to build dustbins for public use in their streets, and to clean drains themselves -- for which the

BET is willing to procure the necessary tools. Many persons who contact the BET on these matters are keen to have the work done for them by the BET -- in which case they are turned away -- but a number of streets have been cleaned up by the residents themselves, with the BET's help (Interview, Bangalore, 8/5/95).

There are also around 700 autonomous consumer societies in India, mostly in urban areas (*Times of India*, Bangalore, 18/6/95). In Bangalore there exists the Jayanagar Consumers Co-operative Society.

While middle and upper income groups are able to form their own residents associations, slum dwellers are sometimes alleged to fall victim to cynical political ploys in this regard. It is common for politicians to form slum dwellers associations, usually just prior to elections, in order to give the impression of activity and compassion (Interview Bangalore, 13/5/95). For example, the Minister of State for Bangalore City Development, R.Roshan Baig created the Miller Tank Welfare Association, and promised residents protection from land grabbers. The area concerned has no paving, electricity or water (*The Times of India*, Bangalore, 18/4/95). This has been described as "an example of how problems are exploited to make votes without finding solutions. If there were no slums, people would be educated and their judgment would be sharpened. It is not to the advantage of politicians. Therefore slums are maintained with that in mind" (Interview, Bangalore, 13/5/95).

d) Civil Rights Groups

i. CIVIC

The Citizen's Voluntary Initiative for the City of Bangalore (CIVIC) is a network of voluntary workers dedicated to "trying to collect opinion makers from industry, labour, and business to visualise participatory forms of management in Bangalore." They intend to remain avoid creating a more formal organisation, in order to prevent the dissipation of their resources and attention. The group is funded by donations, and recently received a grant from the United Nations under the ESCAP scheme. A major focus of CIVIC in the past few months has been attempting to prevent the building of a housing complex on the Koramangala Tank atchkat (irrigated land surrounding a tank) for the athletes of the next National Games, to be held in Bangalore. The details of the action will be discussed later, but it important to note that public interest litigation was the chosen weapon in this instance. It is the aim of CIVIC that every project should get this type of scrutiny. Civic is also active in

promoting accountability in local government. It has held seminars on the implications of the Nagarpalika Act (discussed below) and has campaigned for alterations in the Act to improve the people's access to government. An indication of CIVIC's standing in Bangalore is to be found in the government's request for a second round of comments from CIVIC on the subject of the Nagarpalika Act. CIVIC is widely regarded as one of the most sophisticated and effective of NGOs working on urban environmental management in Bangalore.

ii. Public Affairs Centre

The Public Affairs Centre is a non-profit organisation, established in 1994. It is "dedicated to the cause of improving the quality of governance in India." Its functions are to support and conduct research into, methods of improving government services, and to use its findings to "inform the public and to encourage and support collective action by citizens groups to improve accountability and performance in government" (Public Affairs Centre information booklet). The Centre has already published, under the authorship of its Director, Samuel Paul, a "Report Card on Public Services" in Pune, Ahmedabad, and Bangalore, which details the feelings of the public concerning (inter alia) the efficiency and honesty of the providers of public services in the cities. The Centre continues to conduct careful empirical research on public services in Bangalore.

e) Service Clubs

Service clubs, such as Lions Club, the Rotary Club, and the YMCA are very active in organizing seminars and conferences on various issues. For example, the YMCA recently organised a conference entitled "Save Bangalore" which brought activists and government officials together to discuss the future of the city. Papers were submitted by various voluntary organisations and these were discussed at the conference. About 120 people attended the conference, including the Governor of the State, the Minister of State for Bangalore City Development, a retired Director General and Inspector General of Police, the Chairman of the KSPCB, and the Minister of State for Environment and Ecology. The big disappointment is that very few NGOs and activists were at the conference (Interview Bangalore, 29/5/95). While service clubs are often viewed as soft options in activism, they do have the power to attract members of the public to a cause. As one activist admitted, they do "help to normalize environmental activism" so that it does not appear to conservative

members of the public and the government to be so radical and unconventional (Interview Bangalore, 15/5/95).

f) Labour Unions

The labour unions representing factory workers can have the potential to influence industrial pollution levels. The most direct way for workers to do so is through bargaining with management.

Thirty years ago, Indian Telephone Industry (ITI) built a sewage treatment plant where before there was none, and began recycling its waste water. The measures were a result of talks held between the union and management. While it cannot be said that the union demanded the measures, "there was some cross fertilization of ideas during the talks" (Interview Bangalore, 13/5/95). Indeed, "it is possible that it has become fashionable for unions to make pollution control demands." However, "it is still not seen as a burning issue." Even after the Bhopal disaster, in which the workers living near to the factory were among the worst affected by the gas leak, unions do not often insist on pollution control measures.

It is also possible for unions to affect the environmental impact of their factories through the legal process, using labour law. Section 14(1) of the Factories Act, 1948 may provide some assistance to unions attempting to reduce pollution, in that they can demand that any substance present in the factory which causes a persistent and discernible risk be eliminated. But, it seems that the general pattern in trade union demands has been, to simply ask for a 'hazardous job allowance', rather than to attempt to remove a hazardous substance from their environment. Management are increasingly opting to move the worker away from the risk, in order to avoid paying hazardous job allowance, and thus continuing to allow hazardous substances to go out to the surrounding area instead.

It is interesting to note that in cases where pollution occurs and it is treatable, it is to the advantage of workers to alert the appropriate authorities to the problem, because jobs will be created in the building and operation of a treatment plant. However, where there is no known method of treatment for a particular type of pollution, it is not to the advantage of a union to publicise the pollution, as the factory might be closed down as a result. The conclusion seems to be that unless the factory workers perceive pollution to be a 'bread and butter' issue, they are unlikely to take any action regarding industrial pollution." This may happen in the course of time, but

at present, trade unions only look at their own precinct" (Interview, Bangalore, 13/5/95).

g) Individuals

One lawyer, Mr. S. Vasudeva, has taken part in at least three PIL actions relating to the planning and infrastructure of Bangalore. He attacked the judiciary for accepting a gift of land from the Judicial Employees Society, although they were not employees, and the BDA for failing to tarmac certain roads. His third PIL action arose when a group of builders, who happened to be friends of the Chief Minister of Karnataka, were given land by the state government, along with an exemption from the restrictions of the urban land and ceiling regulation. Vasudeva challenged the transfer on procedural grounds, and won in the Supreme Court (Interview Bangalore, 10/6/95).

A good example of the power of lobbying can be found in the former Chief Justice of the Karnataka High Court, D.M. Chandrashekar. After retiring in 1982, he began to educate himself on environmental matters, and joined the Indian Society for Environmental Studies. One of his main activities at present is to maintain a watch on the action and inaction of the KSPCB. In July of this year, he noted that the KSPCB had failed to prosecute Harihar Polifibres, a Dharwad company with a long history of pollution. He went to the Chairman of the KSPCB and presented a prima facie case for prosecuting the company. The result of his pressure in this case is not yet known, but he has had success in other instances (Interview, Bangalore, 22/6/95). Indeed, the Chairman of the KSPCB himself volunteered the name of DM Chandrashekar as an example of an activist whose pressures are helpful and positive (Interview, Bangalore, 25/5/95).

Nor are the ordinary citizens of Bangalore trapped in an apathetic paralysis. Many individuals make small contributions to the improvement of their local environment, and these actions often go unnoticed. A particularly generous Bangalorean has taken up the maintenance of a small traffic island near the High Courts. Amongst the plants donated and tended by the covert gardener, is a sign reading "O industrialists and rich persons, if you are loving Bangalore then maintain gardens like this on other traffic islands- from an unknown plant lover." (*Times of India*, Bangalore, 19/6/95)

3. Role of the Press

The success of public interest litigation, and the vibrancy of Indian democracy in general, owes a great deal to an independent press willing to lay claims against local and state governments as well as large businesses. The active press depends in turn upon the freedom of expression guarantees in Art 19 of the Constitution, which have been consistently upheld by the superior courts. Apart from the dozens of weekly, monthly, and quarterly publications, there are a number of daily newspapers, including six in English (the *Bangalore Evening*, *Deccan Herald*, *Economic Times*, *Hindu*, *Indian Express* and the *Times of India*), eight in Kannada (*Adrishta*, *Kannada Prabha*, *Lokavani*, *Nagarasuddhi*, *Prajavani*, *Samyukta Karnataka* and *Sanje Vani*), two in Tamil (*Dina Sudar* and *Dina Tanti*) and three in Urdu (*Daily Pasban*, *Daily Salar* and *Sultan*). Many of these engage in investigative journalism, and most are prepared to run stories of inadequate urban services or poor urban environments.

Credit should also be given to the large number of people who continually write letters to the newspapers pushing, revealing and complaining until something gets done. The writers are so dedicated that they have formed the Karnataka Press Letter Writers Forum. One P.N. Benjamin has been so effective as to have earned himself the title of 'Pain in the Neck Benjy' (*Sunday*, 28 May-3 June 1995, 69).

C. Examples of Legal Activism in Bangalore

1. National Games Township Case

Mention has already been made of CIVIC's attempt to prevent the building of a housing complex on the atchkat of the old Shinivagalu Tank in Koramangala for the National Games athletes. The 57 acre site was designated in the 1984 Comprehensive Development Plan as falling in the "parks and open spaces" category. These spaces are described in Bangalore as 'lungs' and are considered essential to "ease congestion and improve the living environment of Bangaloreans" (*Deccan Herald*, Bangalore, 25/1/95). Furthermore, the area and the nearby Bellandur tank have long been used by various species of bird as a breeding ground and is considered to be an ecologically sensitive area. The forest department has itself classified the land and Bellandur tank as "wetlands" and therefore to be preserved under the Ramsar Conventions. However, others have claimed that it is "nothing but an open air toilet" infested with sewage and scavenging birds. Slum dwellers do indeed use the area as a giant toilet facility, because they have no other option given to them by the BDA. This case is an illustration of the way in which the failure of one body, the BDA, to provide a facility,

opens the door for another body, the State Government, to excuse its own failures. It is also a revealing case study of how planning laws can be flouted with impunity.

CIVIC and five other Bangalore-based groups challenged the legality of the 400 crore rupee proposed development in a public interest petition in early May 1995, on two major grounds.

Firstly, the legality of the acquisition of the land for residential purposes, and the procedures by which the scheme was passed are in question. In particular, it is said that rules concerning the conversion of public parks to other uses, and the proper procedures for public consultation under the Town and Country Planning Act, have been violated. The clearance and initial construction phases of the project were cleared in three months -- an astonishingly short time by ordinary standards (Interview Bangalore, 6/5/95). When the land was classified as park and open space under the CDP, there was a good deal of publicity and the proper procedures of public consultation were undertaken as per the KT&CPA. The public was also involved in the approving the provisionally approved revision of the CDP. But before the provisional revision was implemented, the concerned area was converted to residential use, and this change was not brought to the attention of the public (*Deccan Herald*, Bangalore, 25/1/95). The State Government allowed the BDA to change the land use to 'residential' overnight, and with no warning to the public. But the government claims that under s. 25 and 22(3) of the KT&CPA, it has "inherent" powers to make last minute changes to the CDP as it sees fit (*Deccan Herald*, Bangalore, 25/1/95).

Section 38(A) of the BDA Act "prohibits the BDA from alienating any area reserved for public parks, play grounds and so on" (*Deccan Herald*, Bangalore, 25/1/95). The petitioners also say that the project constitutes a "scheme" within the meaning of s. 2(12) of the KT&CPA, and that therefore under the BDA Act sections 28-34, the BDA is bound to undertake a publication and consultation procedure involving the public (*Deccan Herald*, Bangalore, 25/1/95). But the land concerned was transferred by the State to the Karnataka Housing Board to build the 2800 flats, and the BDA contends that the provisions of the BDA Act do not apply to actions by bodies other than the BDA, such as the KHB. It can be said that "it seems logical to assume that if one legal agency is required to seek the view of the public, the spirit of the law would be that other agencies are also required to do the same," if one is to prevent the BDA from merely transferring development activities to other bodies, and thus creating "an urban nightmare" with impunity. The KHB could easily have built housing for the games on the land that it owns in Kengeri satellite town, instead of

adding to the congestion of Bangalore. Better still it could have used the 2,500 flats which built and empty, and the 8,000 flats which are nearing completion in the city rather than rushing to build what are definitely unnecessary, and are likely to be poor quality, flats (*Deccan Herald*, Bangalore, 25/1/95).

Secondly, the petitioners alleged that the scheme itself violates certain principles of the law relating to housing in Bangalore. The 2800 flats are being built by the KHB, using money lent by the Housing and Urban Development Corporation (HUDCO), an autonomous body created by the central government (*Deccan Herald*, Bangalore, 25/1/95). The flats are to be used by athletes and Games officials for just 11 days. After the Games, half of the flats are to be used to house government officials, and the other half are to be sold off to high income buyers, for a profit. Under s 32(2) of the KHB Act, the KHB is expressly prohibited from making a profit from its activities. The KHB claims that it is merely generating resources for its own use, rather than making a profit (*Deccan Herald*, Bangalore, 25/1/95). Also, the spirit of the Housing Act does not allow for developments set aside for expressly high income use (Interview Bangalore, 6/5/95). But the project has been "termed a special project," in order to relax the KHB rules, and allow it to provide high income housing only (*Deccan Herald*, Bangalore, 25/1/95). The final blow is that, although the project had a massive budget, funds were not made available for the relocating of the slum dwellers living in the area. The three or four hundred families have been rehoused on a garbage dump. When the slum dwellers had applied some time ago to have a small section of the land allotted to them so that they could build proper housing, their request was refused -- on the grounds that they area had been set aside in the CDP as park and open space land! (Interview Bangalore, 6/5/95).

The petitioners in the case are demanding that the land be returned to being parks and open space, and that trees be planted on it (Interview Bangalore, 6/5/95). It is difficult to see how this can be done when the majority of the construction has been completed. As of March 1996, the court has yet to pass judgment.

As a result of the publicity that activists created around the National Games Township, the opposition BJP party has examined the affair and accused the government of escalating the costs of the project through the illegal awarding of contracts for gain. The Estimates Committee of the Karnataka Legislature is now looking into the financial aspects of the project (*The Hindu* 18/4/95). According to the project leader, "the escalation [in price] was because of the short times span of the project." But according to an MLA, "The whole project stinks, it smells of

corruption." Board members of HUDCO are now also questioning the propriety of the scheme (Interview Bangalore, 6/5/95).

2. The Thippagondanahalli Lake Case

In 1992, the Karnataka High Court quashed a government order which permitted a private firm (DLF Universal Ltd) to build a housing development in the catchment area of the Arkavathi River (*Deccan Herald*, Bangalore, 27/4/92). The Arkavathi River feeds water to the Thippagondanahalli (TG Halli) reservoir. The reservoir is owned by the BWSSB, and it is the second major source of water for Bangalore city.

The land concerned was originally designated as agricultural land. It was acquired by a developer, who proposed to build a township in the area, with 275 plots and a central sewage system. The Special Deputy Commissioner of Bangalore Rural District gave express and implied permission to convert the land from agricultural to residential purposes in accordance with section 95 of the Karnataka Land Revenue Act, 1964. The BWSSB challenged the permissions in the Karnataka Revenue Appellate Tribunal, but its action was dismissed on the grounds that it lacked locus standi, and its grievance was, in the opinion of the court, "imaginary".

The Board therefore filed writ petitions in the High Court against the State government and DLF Universal. The grounds of BWSSB's action were twofold. Firstly, the development would adversely affect the quality and quantity of water supplied to Bangalore -- for which the BWSSB had a statutory responsibility. development was originally to be for a residential colony with a central sewage system, but later septic tanks for each house were planned. It was felt by the BWSSB that the sewage contained in these tanks could not fail to contaminate the TG Halli water source. Secondly, the BWSSB attacked the legality of the conversions. It alleged that the deemed permissions for conversion were not valid, as the applicants had not been informed within the statutory time limit of the success or failure of their applications.

The judgment of the Single Judge of the High Court (*Bangalore Water Supply and Sewerage Board vs. Kantha Chandra*, I.L.R. 1987(I) Karnataka 1617) in April 1987, was in favour of the BWSSB. On the question of locus standi, the court held that the BWSSB did have locus standi, on the basis that the deputy commissioner was bound (under section 95(4) of the Act) to refuse conversion, or impose conditions upon permission where the public interest required it. On the question of the legality

of the conversion, it was held that, given the following factors, the Deputy Commissioner had no authority to give permission for conversion. According to the court, before permission to convert land from agricultural to residential use can be given, the State government must first make a formal decision to create a township in that area. If the Government decides to create a township, then it must issue a notification declaring the area a 'Local Planning Area' for the purposes of the Town and Country Planning Act 1961. Only then does the Deputy Commissioner have the power to entertain applications for issuing conversion permission under s. 148(1) of the Land Revenue Act. As a result, the order of the Tribunal was quashed, and the order of the Deputy Commissioner giving permission for conversion was also quashed -- the conversion permissions were thus set aside for the whole of the land concerned. DLF Universal appealed the decision, but it was upheld in the Divisional Court in November 1990.

But DLF Universal was not giving up that easily. They had submitted a revised proposal to the Government in August, 1985. The changes in the plan included the substitution of septic tanks for a central sewage system; a pledge to plant trees; plans for larger sites; a restriction of one house per site; and a commitment to obtain enough water from wells to meet the needs of residents, and to recycle water. In June 1991, the State Government ordered the "*continuance* of the permission granted by the Revenue Department in 1979-1980 for converting these lands to non-agricultural purpose (residential)." At this point a Public Interest Petition was brought against the Government and the company, attacking the Government's order which continued the original conversion permission. The petition attacked both the procedural and substantive validity of the government's order.

The grounds on which the government was attacked, and which the court accepted, centred around three questions. Was the impugned order invalid for trying to continue an order which the court had quashed? Even if the impugned order were deemed valid as a fresh permission, was it invalid on the grounds that the Deputy Commissioner, and not the Government, should have issued such an order? Lastly, did the impugned order give permission for a township, and if yes, then is it invalid for having failed to comply with the Karnataka Land Revenue Act?

As regards the first question, the court found that the State Government had nullified the order impugned in the petitions. The Court observed that this was "the most extraordinary feature disclosed in this case . . . it was beyond our comprehension that the Government had done so" (High Court Judgment, original copy, p. 4) In the

impugned order, the Government covered the matter of the court case by quoting the following statement from the Divisional Bench judgment: "Our judgment will not come in the way of the Government independently considering the matter and coming to any conclusion on its merits" (p. 14). The government took this to mean that they could make another decision on the question of the conversion of the land, regardless of the judgment. The petitioners, and indeed the court, saw the matter differently. What the sentence meant, was that the proper Government officials could reexamine the issue and, following the proper procedure, issue a conversion permission if they saw fit. The Government failed here on two points -- which relate the remaining two legal points identified by the court. First, even if the order could be deemed to be a fresh permission for conversion, the court agreed with the petitioners' claim that the State government is not the proper authority to give such permission. This was the task of the Deputy Commissioner. The government's second mistake was to once again fail to follow the proper procedure of declaring the area a Town Planning Area, before the issue of conversion could arise. The court said that the behaviour of the government was "not only high handed, arbitrary and without jurisdiction, but also amounted to committing contempt of this court," and was unconstitutional (p. 19) It also mentioned the words "amazing . . . most shocking. . . . unfortunate . . . astonishing" to express itself on the matter (pp. 28-29). "To put it in a nutshell, no argument is necessary to make out a case for quashing the impugned order, and no amount of argument can save it" (p. 28)

The petitioners raised several more concerns which the court took to be less central. The petitioners felt, and the BWSSB had agreed, that the implementation of the scheme would "adversely affect the interest of the residents of Bangalore city inasmuch as both the quality, and quantity of water supply will be adversely affected." Not only would construction in the area reduce the amount water allowed to seep into the ground to replenish wells and the Reservoir, but borewells would seriously aggravate the lack of water in the area. The revised plan's substitution of septic tanks for a central sewage system meant that seepage of sewage into the reservoir could be a strong possibility. If the reservoir were polluted then the BWSSB would have to seek all its water from the Cauvery, which costs five times more.

Also the petitioners claimed that the government "yielded to the pressure of [DLF Universal] on extraneous considerations, totally ignoring the interests of the citizens of Bangalore, " and that "the order in question is a result of total non-application of the mind on the part of the Government." The public interest elements

of sections 95(3) and (4) have been described above. The court agreed, stating that the government "acted totally without jurisdiction . . . and had done so only on collateral considerations yielding to the influence brought to bear on it by DLF. (High Court judgment, original copy, p. 18).

The Petitions were allowed, with exemplary costs of Rs.10,000 to be paid to each petitioner, by DLF and the Government, and the impugned order was set aside. The judgment caused quite an impact. There were demands from the opposition members of Karnataka's assemblies for the chief minister to resign (*Times of India*, Bangalore, 26/4/92). Newspapers were highly critical of the government in a series of scathing articles

One striking feature of this litigation is that the petitioners' case was based largely on environmental and health grounds, but the court found in their favour on administrative law grounds. According to one petitioner, this was a great disappointment (Interview, Bangalore, 10/5/95). While it is encouraging that the court saw fit to cause Bangalore's water supply to be protected, a judgment on environmental grounds would have done more to contribute to an emerging environmental jurisprudence.

3. The Cubbon Park Musical Fountain

The Union railways minister, a Bangalorean with a street already bearing his name, wished to build a musical dancing fountain in the city (Interview, Bangalore, 8/8/95). The contract was worth 1 crore rupees and was to be on a build operate transfer basis. As the horticulture representative mentioned at the fountain's inauguration, "the original plan was to set up the fountain at Cubbon park, but due to legal problems we shifted it" (*Indian Express*, Bangalore, 15/5/95). The legal problems were caused by the Bangalore Environment trust, which launched a successful PIL petition in the High Court against the fountain being built in Cubbon Park. The multimedia, programmable, singing and dancing fountain, with four 250 watt speakers, will now be placed in a more suitable spot near the planetarium. The odds are against the fountain ever remaining fully operational, given that only one of Bangalore's many fountains (outside the Corporation) is functional. The rest have been vandalized, have no water supply, are used as urinals, or keep getting hit by trucks trying squeeze by (*Times of India*, Bangalore, 16/6/95).

4. V. Lakshmipathy vs. State of Karnataka

In 1992, a group of residents filed a public interest petition against the State of Karnataka and others, alleging a "gross violation of the provisions of the Karnataka Town and Country Planning Act" (*V. Lakshmi pathy and Other vs. State of Karnataka and Others* AIR 1992 Kant 57). Factories had been allowed to locate in an area designated as residential under the Outline Development Plan. No conversion of land use had been officially made. There was a memorandum issued by the C.I.T.B., purporting to allow for the change from residential to industrial use, but the Court found that it was not only illegal, for failing to follow the procedures and regulations laid down in the Urban Land (Ceilings and Regulation) Act 1976, the Bangalore Development Authority Act 1976, and the Karnataka Municipal Corporations Act 1976, but also seemed to be a "personal favour to the applicants."

The industrial units had managed to acquire full service from the institutions responsible for electricity, water, sewage etc. The area had become "virtually a no man's land because of alleged inaction and abdication of power and control by the development authority, including the erstwhile C.I.T.B., the Bangalore Development Authority, the Corporation of the City of Bangalore and the revenue authorities of the State Government, thereby resulting in betrayal of public interest on account of imperviousness to duty, callousness, nonfeasance and utter lack of supervisory, administrative and regulatory control over the area in question." The Housing and Urban Development Department, the Public Health and Family Welfare Department, the Department of Commerce and Industries and its Director, the Director of Health Services, the Deputy Commissioner of Bangalore District (Urban), the Engineer and Town Planning members of the BDA, and the BWSSB were also subjects of the petition. None of the respondents made any effort to deny or admit the allegations against them. The Court noted that the onus is on the authorities concerned to control and hold pollution within reasonable limits, and that desecrating the environment is impermissible. Concluding, the Court noted that "once an entry is made in the Outline Development Plan earmarking the area for residential purpose or use, the land is bound to be put to such a use only" (*V. Lakshmi pathy and others v. State of Karnataka and others* AIR 1992 Kant 57).

V. Toward Environmental Justice: Pathways and Obstacles

This part of the paper is concerned with identifying the factors which impede or promote ready access to environmental redress for the citizens of Bangalore. It addresses both legal and extra legal systems of environmental protection, with a view to identifying possible areas for future development or reform. As with the rest of the paper, this part represents work in progress, and does not purport to offer a comprehensive or definitive account.

The first section aims to identify some of the major factors which prevent government agencies from fulfilling their duties regarding the environment. Since improved access to justice often involves cajoling the government into doing what it had promised, and understanding of the barriers faced by government is directly relevant. The analysis may also guide future strategies for academics, lawyers, and activists. The second section outlines some elements of the legal system which may require some attention from the public if legal action is to be efficient, effective and fair.

Finally, the third section deals with alternatives to litigation in strategies for environmental redress.

A. Obstacles to Effective Environmental Protection

That government institutions have failed the public in a variety of ways has been shown throughout the preceding sections. The primary failure of the government is in not providing basic services to create and maintain a clean and safe environment. The secondary failure of the institutions is that they are not preventing the infringement of public rights by private and public bodies. Apart from the commonly raised issues of officials following a schedule of "Indian Stretchable Time" (Letter, *Times of India*, Bangalore, 8/5/95) and being generally unavailable, unhelpful and bureaucratic, there are certain more specific themes which run through the government's failures in Bangalore. The government is not fully serving the public, and the public must therefore to an extent, fend for itself. A major option open to the public, is to attempt force the government to do its job. The following are some areas which have been highlighted by Bangaloreans as possible candidates for change.

1. Economic Liberalisation

The "really acute focus on [environment] issues has come only in the last year," when the language of the government has become increasingly investment oriented (Interview, Bangalore, 6/5/95). A number of those interviewed noted a change in the attitudes of both State and City government over the past decade: an emphasis on restrained growth has shifted to an emphasis on promoting foreign investment and fostering economic growth. Inevitably, environmental concerns are given a lower priority under the new regime. It is even felt that it is possible that foreign companies will get special favours in water supplies over domestic residential areas (Interviews, Bangalore, 6/5/95 & 28/4/95). At a recent conference, the Chairman of the KSPCB is quoted as saying that pollution is inevitable, and that instead of limiting industrialisation, efforts should be made to control the use of vehicles and water. "Industrialisation is important. We cannot go back to the Gandhian era" (*Times of India*, Bangalore, 24/6/95).

2. Lack of Resources

The 1992 policy issued by the Minister of environment considered introducing a pollution control tax to be levied upon industries in order to force them to pay for the social costs of pollution. However, it is felt that such a tax might never be introduced, for the simple reason that it would be too difficult to assess the 'social cost' to be repaid. (Interview Bangalore, 26/4/95)

In 1993-1994 the State spent a grand total of Rs.3,025,445.66 lakh. Of that amount, Rs.4959 lakh was spent on forestry and wildlife, Rs. 48 lakh was spent on transportation pollution control, Rs.117.35 lakh was spent on Ecology and Environment, Rs.12702 lakh was spent on water supply and sanitation, and Rs.1621 was spent on urban development. (Draft Annual Plan, Government of Karnataka 1995-1996 Volume 2, F1-F6) It can be said that roughly 6% of the Annual budget was spent on environment related projects in 1993-94.

The Water and Air Acts "are silent about the funds for the Boards, although they are supposed to be autonomous." Some funds are received from State Governments as grants in aid, but these are often irregular and inadequate. The Water (Prevention and Control of Pollution) Cess Act, 1977 was intended to collect a water tax, in order to pay for the various expenses of the Water Act, 1974 (Section 3(1) and (2)), but the costs of collecting have been high, and plants which build effluent treatment sites, whether effective or not, are entitled to a rebate of 70%.

Under the Water (Prevention and Control of Pollution) Cess Act, 1977, a tax is to be collected from "every person carrying on any specified industry and every local authority" (Section 3(1) and (2)). So, for example in Bangalore the cess is collected not only from all industries, but also from the BWSSB, as the local authority responsible for supplying water to the residents of the city (See definitions under Section 2 of the Act). The cess is calculated according to levels of consumption, or the BWSSB's case, amounts supplied through it to domestic users (Section 6). Under section 8, the cess is collected by the State Board, and then sent to the Central Government, where it is placed in the Consolidated Fund of India. The Central Government then may "pay to the Central Board and every State Board from time to time, from out of such proceeds after deducting the expenses on collection, such sums of money as it may think fit." Although the Act does not appear to require it, the Central Government actually passes money to the State Governments for distribution to the Boards. However low levels of payment and chronic delays in payment have left the State Pollution Control Boards with serious resourcing problems.

In the year 1993 to 1994, the KSPCB reports having received Rs. 37,76,404 reimbursement of cess, and grants in aid amounting to Rs. 26,50,000 from the State Government, out of total of Rs. 4,14,16,455 received. Of the amount spent (exactly the total received) Rs. 32,265 was spent on Legal fees and Law Charges but Rs. 7,81,905 was paid out as officers' salary (Annual Report of the KSPCB, 1993-1994, 29-30).

The BWSSB had a budget of Rs 1000 lakhs in 1994, and in 1995-1996 it will have Rs 25 crore. Also, Rs 775 lakhs will be set aside in 1995-1996 for replacing corroded pipes in Bangalore (Draft Annual Report of the State Government of Karnataka, 1995-1996 vol 2, XE-7).

However, it remains the case that "money is not required for many useful things that government institutions could do" in the field of environment (Interview Bangalore, 8/5/95). As Mr Justice DM Chandrashekar put it "voluntary organisations are working with minimum funds -- why not the KSPCB?" (Interview Bangalore, 22/6/95). A particularly keen deputy conservator of forests (green belt division), Mr. C. Jayaram, has been making headlines in Bangalore recently with his least cost methods of cleaning and maintaining tanks. In May, My Jayaram was arranging for a joint venture between businesses and property developers on the one hand, and the forest department on the other. Under the supervision of the Forest department, the private partners were either desilting tanks themselves in order to use the soil, or

lending or donating equipment for desilting of tanks (*Times of India*, Bangalore, 6/5/95). In June, Mr Jayaram introduced a low budget version of an expensive Finnish dewatering machine. The Forest department had hired a private engineer to build a copy, based on a promotional video of the original (*Times of India*, Bangalore, 5/6/95). Later that month, Mr. Jayaram was spotted at the inauguration of boating facilities on Madiwala lake, after dewatering it with the new machine (*Times of India*, Bangalore, 26/6/95). The initiative has been widely welcomed, but personal ingenuity can only fill part of the resource gap. The stark fact remains that if Bangalore's public agencies are to ensure better environmental conditions, they will require an expanded resource base.

3. Inadequate Enforcement Power

The government's lack of power to prevent environmental harm has two forms -- perceived and real. An example of a perceived lack of power on behalf of the government was shown by the following case. A shop owner in the busy Brigade Road shopping area of Bangalore was running a diesel generator during power failures, which caused noise and air pollution. Other people in the area complained to officials repeatedly to no avail for 4 years. They turned to the Bangalore Environment Trust, which complained to the Pollution Control Board. The Board issued a notice which was not complied with, and then did nothing. According to the BET, the PCB wanted to remove the problem, but was afraid to do so because the owner was a private individual. The BET therefore went to the owner directly and resolved the issue in 6 months, with no government involvement (Interview Bangalore, 8/5/95).

Not every institution feels powerless. In fact, the chairman of the KSPCB asserted that the powers of the Board are ample. "In my opinion, they are the strongest in the world, stronger than the US EPA powers" (Interview Bangalore, 25/5/95). As will be shown, many would agree that "the Acts are there, they are just not properly implemented" (Interview, Bangalore, 5/6/95). It is often alleged that the powers available to officials are ample, and the only thing lacking is will power.

4. Fragmented authority

Another limit (real and perceived) on power of government officials is the confusion that exists over delimitations of jurisdiction. To a large extent, this is a symptom of the fragmentation of authority over environmental matters among a large

number of state and local bodies. In the preceding chapter, it was noted that areas such as the management of tanks and responsibility for air pollution monitoring are not clearly defined. "The environmental issues facing the city . . . are strongly inter-linked, but the actions taken are fragmented as each activity is the responsibility of a separate agency." This causes problems for officials who perceive a lack of power, and also must cause difficulties to those members of the public who are keen to push for the accountability of those officials, through PIL, lobbying, etc.

5. Legal Proceedings

According to one academic, the reasons for the lack of enforcement of environmental law are partly to be found in a judicial dominance of the enforcement process, which causes prosecutions to take an inordinate amount of time (Interview, 26/4/95). The fact that the Pollution Control Boards are required, except in the case of an accident or an emergency, to resort to the criminal courts to force industries to stop polluting, "defeats the very purpose" of the Acts, which were "enacted specifically to overcome the procedural delays and technicalities of the regular criminal courts."

The KSPCB is not overly eager to prosecuting industries. Indeed a former Chairman of the Board felt the need to confirm at a recent conference that "the Board was working and was not 'dead'." He defended the Board's poor record of convictions in saying "if the court gives a stay to every other person who violates the law, how will the pollution board function?" (*Times of India*, Bangalore, 24/6/95). However, as Mr Justice D.M. Chandrashekar remonstrated, "at this point, the PCB should move the court to disallow the stay," instead of simply giving up. Yet "it is not clear that their advocates are fast enough to do this" (Interview, Bangalore, 22/6/95). By March of 1993-1994, the KSPCB had issued a total of 39 closure orders against industries in Karnataka. Out of that total, 19 industries were able to obtain stay orders from the courts, and 5 managed to get the closure orders revoked. Only 5 industries actually closed after the order was given. Of the remaining industries, two continued to operate even after the order for closure, a further two industries were shifted, and seven were issued a caveat after failing to comply with the closure order (Annual Report of the KSPCB, 1993-1994, 54).

Perhaps there exists a staffing problem in the KSPCB. Out of 356 sanctioned posts for the KSPCB, only 203 were filled in 1993-1994. There were just five categories of staff, including the superficially essential accounts officer and publicity officer, operating at full strength. There were no Law Officers, although one position

was sanctioned. Of a possible six Law Assistants, there were just two positions filled (Annual Report of the KSPCB, 1993-1994, 31-32). There seems to be rather a dearth of sound legal opinion to be placed at the disposal of the Board.

6. Corruption

Corruption of public officials is notoriously difficult to observe, document, or study. There is a difference between actual corrupt practices on one hand, and on the other hand what may be called the "folklore of corruption" whereby corruption is widely believe to occur, and is frequently invoked as an explanation for events, but where allegations are rarely accompanied by hard evidence. Corruption is a popular explanation for environmental problems in Bangalore. That some officials require "speed money" to fulfil their ordinary duties, or are willing to take bribes in return for inaction, is no doubt true. That corruption is often alleged in the vaguest possible terms, and without any substantiating evidence, is also true. How much explanatory weight may be placed on corruption is difficult to gauge.

As a Bangalore lawyer noted, "the one peculiarity of law here is that you can always find a way to break it" (Interview, Bangalore, 10/6/95). A former Member of the Legislative Assembly said that "corruption seems to have the better of pollution. To say that observance of the law is not up to scratch is an understatement. Laws are made only in order not just to sustain, but to provide for the growth of, corruption." (Interview Bangalore, 13/5/95)

Corruption takes many forms, from massive land rackets to bus drivers who keep do not just keep the change, but keep the fare too (*Times of India*, Bangalore, 8/5/95). Dr. Samuel Paul's report card on Indian cities found that 21% of respondents had paid an average of Rs. 656 in 'speed money' to the Corporation to facilitate transactions. Regional Transport Office Officials demanded an average of Rs. 648 from 33% of the respondents. Officials of the BDA valued themselves more highly, and reportedly demanded an average of Rs. 1850 from 33% of the respondents in exchange for performing their statutory duties. "When asked whether they would officially pay higher charges or fees for public services rather than pay illegally, over 54% of the respondents in Bangalore expressed their willingness to pay" (S. Paul, "Report Card on Public Services in Indian Cities: A View From Below", mss., p. 23-4). A large scale fraud in land allotments was recently discovered involving four officials of the revenue department. The officials had allegedly assisted in the

fraudulent transfer to land developers of land belonging mainly to temples (*Times of India*, Bangalore, 20/5/95).

Even the courts are not free from allegations. A PIL case is currently pending before the high court of Karnataka which involves allegations that judges acquired land by virtue of affidavits and declarations which were falsely made. They have volunteered to cease their official duties for the duration of the legal proceedings (*Times of India*, Bangalore, 1/7/95). A lawyer recently brought what may be a related PIL petition to the High Court alleging that members of the judiciary had acquired land from the Judicial Employees Society, although they are not Judicial employees, and therefore are not eligible. The case is being heard in another jurisdiction, for obvious reasons (Interview, Bangalore, 10/6/95). It can hardly be encouraging for the people of Bangalore to discover that the new Chairman of the BWSSB has had an allegedly shady past. He was suspended from his post by the previous government for his alleged involvement in a scandal known as the 'Classik Computer Case'. (*Times of India*, Bangalore, 10/6/95)

The Minister of State for Bangalore City Development "is only too willing to concede that there has been 'deep rooted corruption' for the past 40 years." But the chairman of the BDA claims that "it might not be 'corruption' so much as 'inefficiency.'" The Chairman of the BDA has gone so far as to suggest that in order to prevent corruption by minor officials, the public should deal only with senior officials (*Deccan Herald*, Bangalore, 29/4/95). The Bangalore police recently uncovered a four year old land racket, involving the illegal sale of 200 sites in the city by corrupt BDA officials (*Times of India*, Bangalore, 17/6/95). As for the Corporation, it has been alleged that its elected members are mostly interested in making money during their term (Interview, Bangalore, 22/6/95). A respected local businessman stated that the "BCC is the worst authority for corruption. From the bottom up you have to pay money" (Interview Bangalore, 3/6/95).

A problem of equal proportion to that of outright bribe taking and favouritism, is political patronage. It is a little disconcerting to discover that one ex Chairman of the KSPCB resigned, when a change of Chief Minister caused him to feel that he should vacate this 'political post' (Interview, Bangalore, 31/5/95). As one judge said, "Ultimately, the persons who spoil the environment are big business, and they can purchase ministers and officials, and even change the rules by getting emissions levels changed through pressure" (Interview Bangalore, 5/6/95). A judge indicated that "sometimes industrialists will use their money and power to prevent effective action.

This will increase as environmental issues become more important" (Interview Bangalore, 22/6/95).

7. Low levels of environmental expertise and interest

The government must be encouraged to have a greater interest in environmental issues generally. As one activist pointed out, although there has been an improvement in the amount of study conducted on pollution and other environmental issues today, "what do you say about the environment minister using 1991-2 studies for briefing Parliament on lead in the air" (*Times of India*, Bangalore, 9/6/95). An interview with the official responsible for providing information to elected representatives in Karnataka revealed that in the 1994-1995 session of the State Legislature, there had been not one request by Members for any information relating to environmental issues (Interview Bangalore, 4/5/95).

The former chairman of the Madhya Pradesh Pollution Control Board "regretted that there was no dedicated effort by the government to control pollution and to protect the environment" (*Times of India*, Bangalore, 3/5/95). As one activist put it, "how do you tackle a government which itself is violating laws?" (Interview Bangalore, 6/5/95) Another interviewee illustrated the point by quoting a Kannada saying "it's like the fence grazing the field" (Interview, Bangalore, 13/5/95). A retired Justice of the Karnataka High Court and Chief Justice of the Punjab High Court said that "the order of decisions is all wrong. Politicians decide on projects and then scientists simply concur. It should be the other way round but no one has the guts to make an independent decision" (Interview, Bangalore, 5/6/95) An academic claimed that administrative authorities, "either out of ignorance or out of callousness, are flouting every law" (Interview Bangalore, 31/5/95).

Another problem in this area is the shuffling of bureaucrats. Bureaucrats are said to be constantly on the verge of, or recovering from, a transfer to another department or district, and doing everything possible to refrain from being transferred to places like Gulbarga and Bidar (*Times of India* Bangalore, 23/6/95). One activist has ceased to attend seminars organised by the government on environmental issues, because by the time a programme is due to be implemented, the official responsible has been transferred and the money goes elsewhere (Interview Bangalore, 8/5/95). Another effect of transfers is that officials have less of a chance to get into the spirit of their more novel positions, such as those with an environmental angle.

On the positive side, an Environment Training Institute (ETI) has been started as a DANIDA (which provides aid from the Danish government to India) and KSPCB joint venture. "The main objective of the training institute is to impart training to the staff of the [KSPCB], industry personnel, Non-Government Organisations and Municipalities in the field of pollution control" (Annual Report of the KSPCB, 1993-1994, 26). Separately, KSPCB officials attended a total of 14 World Bank and other environment training programmes, and two officers were deputed abroad for training in 1993-1994 (Annual Report of the KSPCB 1993-1994, 20-21). Events such as the publication of a book entitled "An Outline Environmental Audit" by the Chairman of the KSPCB, serve as encouraging signs of the growing interest of government officials in the environment (*Times of India*, Bangalore, 6/6/95).

B. Improving Access to Environmental Justice

Where the infraction of environmental law cannot be prevented, and where prosecution by the government of such infractions is either impossible or undesirable, it is necessary for the public to step in.

1. Raising Awareness

A retired Chief Justice of Karnataka said that he could recall "no litigation against the Corporation, ever, for any failure of any kind," and that "this is a little surprising because it means that there is not sufficient awareness or determination to fight" (Interview Bangalore, 22/6/95). Although cases have, in fact, been brought against the BCC, Mr. Justice Chandrashekar's impressions are an important indication of the image of Bangaloreans as placid and inactive. While vehement letters appear weekly in local papers listing a myriad of failures on the part of the authorities, and demanding that 'something be done,' (See for example, *Times of India*, Bangalore, 12/5/95, 16/6/95, 21/4/95 and 30/6/95) it is rarely that the matters are taken to court. According to a lawyer, environmental activists in general do not approach the court either, and while this reticence is understandable in lawyers, NGOs having relevant information should be going to court (Interview Bangalore, 10/6/95).

Some voluntary organisations are trying to reverse this trend. The BET published a booklet on air pollution, which not only detailed the effects of pollution, but also quoted sections of the Air and Environment Acts relating to the responsibilities of various government officials, and gave the names and addresses of 'important persons' to contact ("Sick of Air Pollution? Be Part of the Solution."

Bangalore Environment Trust, Bangalore). Such publications must help to increase the public's awareness of its power.

Where people do bring PIL actions, the courts are sometimes sceptical of the validity of the actions. One lawyer said that, at a conservative estimate, "about 25% of all PIL actions filed are direct personal vendettas" (Interview Bangalore, 10/6/95). However, this allegation was refuted by one judge who claimed that it was not true in Bangalore. "There are very few PIL cases in Bangalore anyway. In my opinion they are valid" (Interview Bangalore, 22/6/95).

An ex-chief justice of the Karnataka High Court expressed the opinion that "people don't go to court for remedies although they could do, because they have no desire to spend the time a money. They are lethargic and there is no hope of a quick solution." However, he also says that Bangalore is probably a little more active than Northern cities on environmental issues (Interview Bangalore, 22/6/95). The special secretary to the Department of Environment was "surprised and pleased by how quickly people reacted" to government campaigns on environmental issues. He added that "once the results are appreciated, the effect will be a snowballing of public interest" (Interview Bangalore, 23/5/95). An academic asserted that "now is the right time to look at people's participation in Bangalore. Ten years back it would have been unthinkable, because people felt that law making and enforcement were the role of the executive, legislature and judiciary" (Interview Bangalore, 31/5/95). But it was often said in the course of interviews that there is little sense of community responsibility in Bangalore, whether as a result of the traditional lifestyle of the residents, (Interview Bangalore, 13/5/95) or of a lack of cohesion among the large number of newcomers and locals (Interview Bangalore, 9/5/95).

It has been suggested that activists in Bangalore sometimes tend to protest both late, and falsely against infractions of environmental law. The implication is that activists protest for publicity, rather than to demonstrate a sense of injustice (Interview Bangalore, 28/4/95). According to a local judge, "some NGOs are really honest. Others are happy if they get the money only" (Interview Bangalore, 5/6/95). A journalist cited the National Games Township case as an example of activists hanging back until the eleventh hour before finally making a now ineffective protest (Interview Bangalore, 28/4/95). Also talking of the National Games case, a government official was quoted as being sceptical of the staying power of Bangaloreans. He said that their protests would soon die down, because they "lack the will power to sustain a campaign" (*Deccan Herald*, Bangalore, 25/1/95). The Chairman of the KSPCB

alleged that "some NGOs have rather negative approach. They have no technical or scientific support." But other NGOs and activists are "quite helpful. They bring issues to the Board's attention and give a true account of the facts" (Interview Bangalore, 25/5/95).

A senior bureaucrat claimed that "a lot of NGOs come up like mushrooms in this country. Some have no idea about environment, ecology -- what it means. They also get foreign funding. They give glossy reports based on our [government] statistics and then wither away" (Interview Bangalore, 17/6/95). The experience of an autonomous organisation which works with the government on rural development (CAPART) has led it to blacklist 564 NGOs for being fakes. It is alleged that "if CAPART had itself been free from corruption there would have been many more NGOs on the black list." There are tens of thousands of NGOs in India, mostly concentrated in fields which promise some sort of government funding -- for example rural development (*Times of India*, Bangalore, 18/6/95). The Consumer Welfare Fund recently set up by the department of consumer affairs provides just such temptation, by offering to fund local consumer groups. Also it has been discovered that a large amount of funds have been "misused by NGOs established under the high sounding programme of 'environmental orientation in school education' under the education department of human resource ministry." As much as 2 crore rupees was spent on NGOs purporting to carry out this innovative programme for childrens' environmental education (*Times of India*, Bangalore, 18/6/95).

2. Freedom of Information and Public Consultation

A researcher into public affairs stated that "Indians have no indigenous mechanism for people's voices to be heard." The country's "patriarchal system of government" leaves a "dichotomy between the values of freedom and the welfare state demands" and "endorses the view that we are schizophrenic" (Interview Bangalore, 1/6/95). This attitude of superiority has been accepted with gusto by the municipal institutions of Bangalore. Dr Samuel Paul found during the course of his research into Bangalore's services that "most of the public agencies that are meant to serve Bangalore citizens are not "citizen friendly". They do not seem to view the citizen as a client to be served." (Paul "Report Card in Public Services in Indian Cities: A View From Below.", 26-27) "A classic case is that of property taxation by the [BCC]. The criteria and methods for the actual determination of this tax are not explicit and are not

known by many tax payers. The Public has accepted it as a negotiable tax with the public exchequer probably losing money. . . . Even the Annual Reports of some of these public agencies are treated as internal documents and are not readily accessible to the public" (Paul "Report Card in Public Services in Indian Cities: A View From Below", p. 26).

It has been said that "the public is definitely more aware [of the environment] but the government has rendered public participation a farce." In particular the requirement, drafted in 1992, for major projects to undergo an Environment Impact Assessment "has been totally diluted." Although the Ministry of Environment and Forests declared that information about the way in which industry will impact upon peoples lives "will be made available if it is a subject of public interest," some activists "would like to know how the public interest is defined" (*Sunday Times of India*, Bangalore, 11/6/95).

A senior bureaucrat stated that "most NGOs think that we are not transparent enough. Most of us are very opaque" (Interview Bangalore, 17/6/95). Activists have experienced varying degrees of difficulty in interacting with government officials responsible for Bangalore, and made the following comments on the subject: "If you know how the government works then you can get things done. It requires a certain amount of follow up" (Interview Bangalore, 15/5/95). "Government officials respond and are pleasant, but they have limitations. They talk a lot" (Interview, Bangalore, 8/5/95). "Access to information is very difficult, Government officials are polite but substantively unhelpful" (Interview Bangalore, 6/5/95). "You have to really bash them" (Interview Bangalore, 10/6/95).

It remains true that "political expediency makes a virtue of secrecy in official information gathering. Accessing the boards' data is difficult as a journalist, let alone as an ordinary citizen" (*Times of India*, Bangalore, 9/6/95). As a result, NGOs undertake small and probably inaccurate studies, such as counting buses, or literally looking at lakes to confirm that they appear polluted. Until information becomes more readily available, much of the discussion surrounding environmental issues will continue to be based on speculation, and activists will continue to be in danger of being misguided in their protests (*Times of India*, Bangalore, 9/6/95). "Under the prevailing special environment enactments, the concerned citizens or activist has no right to information. Thus [s/he] is at the total mercy of the government authorities. Even when the government authorities undertake investigation on a complaint by the concerned citizen or activist, the said activist or citizen does not have the right to the

investigation reports." The Government can declare many relevant documents and places to be 'secret' under section 5 of the Official Secrets Act, and thus preclude public access.

On the other hand, the KSPCB publishes an Annual Report which is clear, comprehensive and is available in both English and Kannada. The reports, which were easily obtained upon request, detail the composition of the Board, its powers, its major achievements and decisions, and expenditures. But an experience of CIVIC gives a different picture as regards public consultation. An Indian-British joint venture intended to build a copper smelting plant on wetlands surrounding Bangalore. The government tried to slip the plans through unnoticed and without going through the proper procedures of public consultation. The KSPCB held a 'public' hearing at which many experts it had collected were present to give evidence, but it tried to prevent environmentalists from finding out about the hearing. The activists found out in time, however, and were able to counter the hired guns of the government with threats of acid rain and ground water depletion. The plant will still be built, but in the state of Gujarat (Interview Bangalore, 6/5/95).

3. Problems in the Legal System

This section is intended to highlight some of the problems identified by interviewees in Bangalore as being of importance, and therefore of particular interest to the Access to Environmental Justice Project.

a) Arrears

"Unfortunately, environment cases don't get special priority in the court lists. They have to wait their turn. This can mean up to 3 years, although stay orders can be obtained more speedily" (Interview Bangalore, 22/6/95). Although "some judges give priority to environmental matters," it remains true that "others do not. Whether the case is heard quickly depends upon whether the judge is environmentally conscious or not" (Interview Bangalore, 5/6/95). The specific number of cases in arrears in the Karnataka legal system appeared to be unknown. However, an estimate of 10-12 lakhs was made. It was said that the speed with which a case was heard depended a lot upon the seniority of the lawyers involved (Interview, Bangalore, 6/5/95). Another activist said that the involvement of the government in PIL actions lead to adjournments and delays (Interview Bangalore, 8/5/95).

b) Costs

It cannot be denied that "public interest litigation requires a lot of money and a lot of effort" (Interview Bangalore, 5/6/95). Although it is reputed to be cheaper and quicker than many forms of litigation, PIL actions still require funds up front before a case can be brought. Funds can be reclaimed as costs, but only in the event that the petitioner wins the case. One activist also described the risks of arrest whilst protesting issues which may become the subject of PIL actions (Interview Bangalore, 6/5/95).

c) Shortage of Environmental Lawyers

Advocates in Bangalore do not generally take up environmental cases on their own initiative. Furthermore, there is an extremely limited supply of lawyers who have either experience or interest in environmental cases at all (Interview Bangalore, 31/5/95). None of the activists interviewed who had taken part in PIL cases or were considering doing so had chosen their lawyer on the grounds of relevant experience. Indeed, "the link between lawyers and NGOs is just not there" (Interview Bangalore, 10/6/95) There was not one lawyer whose name could be given by judges, activists, journalists, academics or scientists as an example of a Bangalorean environmental lawyer similar to the renowned MC Mehta of Delhi.

Generally speaking the role of an advocate is restricted to taking up a case when approached, and charging little or no fee except the costs of expert witnesses (Interview, Bangalore, 22/6/95). According to a lawyer, who himself represented NGOs in a PIL case against a hydroelectricity project in Karnataka, "a lawyer can file any case on the environment, but [s/he] has no time to collect data for the case. If an NGO or public spirited individual takes up an issue and researches it, then the lawyer can pursue it, even without remuneration." but there is always the risk that "the legal profession will not tolerate deviation" and the work of a lawyer will suffer if environmental cases are pursued (Interview Bangalore, 10/6/95). A meeting held in May 1995, which was organised by the Advocates Association, and also imaginatively entitled 'Save Bangalore,' (*Times of India*, Bangalore, 25/5/95) was dismissed by one lawyer as merely for show, and lacking in any true concern for the city (Interview Bangalore, 10/6/95).

A group of students has been organised at the National Law School in Bangalore, in order to help the public with legal claims. Although the focus of the

group is now more towards family law, it did assist SAVE with preparations for a PIL action recently (Interviews Bangalore, 15/5/95 and 31/5/95).

C. Alternatives to Law

1. Consumer Power

The consumer movement has been a main pillar of the environmental movement in developed countries, and with Bangalore's large professional and middle class population, the power of the boycott is potentially great. There are some eco-friendly products already in circulation in the Indian market, and the desire for them is definitely there, if the contents of middle class newspapers and magazines are anything to go by (*Times of India*, Bangalore, 17/6/95).

The consumer movement can wield power in an international context as well. In 1995, the German government imposed a ban on the import of garments manufactured using an 'environment unfriendly' type of dye called azo. The Indian manufacturers reacted quickly by introducing new dyes and even claimed that "the ban has come as a boon" in that it forced India to comply with any possible future regulations (*Times of India*, Bangalore, 18/6/95).

Larger businesses are concerned with managing their environmental image, both at home and abroad. The Taj Group of Hotels, for example, recently advertised for an 'Environmental Coordinator' who would "organise environmental audits" and "undertake projects towards protecting the environment, be it in the area of pollution energy and water conservation etc" (*Times of India*, Bangalore, 7/6/95).

Critics point out that consumer-based movements encourage people to assert their views mainly through purchases rather than through genuine civic engagement through social and political institutions. Whatever role consumer movements do acquire in Bangalore's environmental management, they will not replace legal regulation entirely.

2. Industry Self-Regulation

According to one researcher, "the most important thing is to change the cultural system in which everyone is trying to make money. There is a unique dichotomy in India where companies present an image of concern for social issues, but turn around and pollute for financial gain. The same man has two faces, and the distinction between 'good companies' and 'bad companies' is not as clear as in Africa and Europe"

(Interview Bangalore, 1/6/95). This may soon be an impossible charade, if the new ISO 14000 rules take off.

This voluntary code of practice ensures that companies monitor and minimise their environmental impact, and allows consumers to buy products in the knowledge that they are environmentally friendly. As the international market of consumer goods takes on a more ethical focus, these sorts of "self addressed", "collaborative," people controlled and "proactive" (Interview Bangalore, 1/6/95) methods of environmental protection may prove to be the public interest avenues of the future. The code is currently in draft form, and is due to come into place in mid 1996. The US government announced in May 1995 that it would soon begin to require that manufacturers of goods imported from India prove their compliance with ISO 14000 (*Times of India*, Bangalore, 27/5/95). The Union Minister for the environment recently announced the introduction of an eco-mark for easy identification of environmentally friendly products (*Times of India*, Bangalore, 25/5/95). Such schemes may augment consumer power, particularly on an international scale.