The mismatch between politics, aid and environmental health with particular reference to cholera in Madagascar

Katharine Coit

Katharine Coit is an urban sociologist and former professor at the University of Rouen. She works as a freelance consultant and, over the past 25 years, has undertaken research and consulting on questions relating to housing, development, participation and self-help. She was responsible for the European Union ARCI programme of slum upgrading in Saigon, 1992-95 and managed a UNESCO programme concerned with housing the poor in the Third World during the 1980s.

Address: Mas de Laune, 30570 Valleraugue, France; e-mail: kathcoit@wanadoo.fr

1. http://www.watervision. org

SUMMARY: *This paper discusses the many reasons why environmental health is given too low a priority by governments in Africa, Asia and Latin America, and why limited resources are often used ineffectively. It illustrates this with a case study of the ineffectiveness of government action to control cholera in Madagascar and of the political reasons why the government was unwilling to work with the international agency, Médecins sans Frontières. The paper concludes with a discussion of the institutional, political and economic, technical and socio-cultural hindrances to effective government action and of the research agenda needed to help ensure more effective environmental health.*

I. INTRODUCTION

"Over half the African population lacks access to a safe water supply while nearly two thirds lack adequate sanitation, according to the World Commission on Water for the 21st century. More people are without water and sanitation services than in 1990. Almost half of all Africans suffer from one of the six main water-related diseases." Albert Wright, Africa Vision (text presented at the Africa Vision Conference, Abidjan, February 2000.)[1]

THIS PAPER ADDRESSES the difficulties of governments in the South in promoting environmental policies related to the health of their populations, in particular those of lower income. These problems become particularly evident when Northern NGOs and the international aid organizations attempt to bring aid. The provision of clean water and basic sanitation to all is a service which many (most) governments of the less developed countries, both local and central, have failed to keep up in line with the needs of growing urban populations. By addressing this issue we can elaborate appropriate strategies for encouraging governments to fulfil their responsibilities.

There is a tendency for governments of both the North and the South to relegate policy for environmental health to the bottom of their priority list unless faced with a crisis. This can be seen in the North, for instance, as countries drag their heels before passing strong legislation on air pollution, toxic waste, groundwater pollution, etc. In cities of the lower-income countries of the South , primarily those in Africa and Asia, the provision of water and sanitation services, essential for health, are significantly lacking for the lower-income groups. It is true that international organi-

zations and NGOs have created projects to improve the effectiveness of water and sanitation policies in low- and middle-income countries, with varying degrees of success; yet these projects do not necessarily take into account the fundamental reasons for the lack of concern and under-achievement of existing institutions. The reasons generally given, for example lack of resources, institutional weakness, lack of political will or an uneducated population, need to be much more closely defined and analyzed. For innovative approaches to policy and practice to have any chance of success, it is important to understand why, when the need for water and sanitation services is so serious, there appears to be a lack of concern over the supply of these services.

Development projects brought in from the outside can be like the strong shots of alcohol that used to be administered to people suffering from shock before the medical world understood the complexities of that state of shock. Things look better for a while but the results are often short-lived. The recent issue of *Environment&Urbanization* on "Rethinking aid to urban poverty" (Vol 13, No 1) has already detailed some of the difficulties faced by external aid agencies. When it is a matter of public health, water supply and sanitation, we can find even more constraints of a political and socio-cultural nature. Sanitation is a very sensitive subject. External medical help requires a good knowledge of local customs and taboos and can be resented as it suggests that local professionals are not good enough. Greater participation of local NGOs, CBOs and the local population can increase outsiders' understanding of the local complexities, but more research on the underlying causes of governmental inaction is necessary to be able to judge the political, economic and social viability of new or alternative approaches that best increase access to adequate levels of basic services and healthy living and working conditions for all.

The tripartite relationship between environmental questions, health and poverty needs to be much more widely perceived in the Third World. It is not only a matter of long-term development and the preservation of water resources. It is also a question that affects very directly the everyday lives of low-income populations, with impacts on child mortality, life expectancy and productivity, and on the chances of escaping poverty, improving living conditions and enhancing dignity. Sickness, infirmity or death of the wage earner are some of the main reasons why the poor remain poor or become destitute and, inversely, poverty is a cause of sickness. Frequent death of young children is a cause for high birth rates. The link between a lack of sanitation and potable water and poor health is well documented. A recent detailed study by the World Bank finds that higher child mortality is attributed to "...*inadequate potable water access and sewerage connections; income inequality within a city, lack of government commitment especially at the city level over water services*."[2] In 1998, the World Health Organization reported to the General Assembly of the United Nations that: "*On a world scale, the first victims of diarrhoeal diseases are above all the children of the developing countries and it is estimated that 90 per cent of the cases are linked to environmental factors: unsafe sewage disposal, unclean water and contaminated food.*"[3] More recently, the OECD reports that: "*Around half the urban population in developing countries suffer from one or more of the diseases associated with inadequate provision for water and sanitation.*"[4] However, as far as the burden of disease on the state is concerned, it is only in the last year or two, as a result of the AIDS epidemic, that governments have begun to understand the social and economic costs of illness. What many governments fail to do is calculate the costs of

2. Anquing, Shi (2000), "How access to urban potable water and sewerage connections affects child mortality", Policy Research Working Paper No 2274 , The World Bank, Washington DC, January.

3. WHO (1998), "La salubrité de l'environnement", Special Supplement No 27, extracts from the report presented at the extraordinary General Assembly of the United Nations, "Health and environment in the context of sustainable development", page 4 (translation by the author).

4. "Understanding urban environmental problems", http://www.OECD.org//dac/urbenv/section4.html

improved infrastructure and protection from pollution and compare these to the economic costs of disease.

II. RECENT WORK ON THE SUBJECT

THE SITUATION IS not such that there is no known means for reducing these statistics. Safe water and decent sanitation, which are used correctly by the people, can have a marked effect on improving the health of the population. Environmental health is primarily the responsibility of governments; however, in the poorer countries of the South it is not often given the attention it merits. The links between unhealthy environments and health are rarely emphasized, nor are the links between poverty and environmental health. Recent documents, however, confirm the extent of the problem and the inefficiency or, more often, the neglect of many governments in dealing with environmental health questions and the lack of publicity given to these questions. For instance:

"The quality and extent of provision for safe, sufficient water, sanitation, drainage and health care are probably the most important influences on the severity and relative importance of serious environmental health problems – and the nature of such provision is strongly linked to the quality of governance. …There is often little information on the extent of the main environment-related diseases and injuries and on their health impacts. What is perhaps more worrying is that in the absence of adequate data, the environmental problems that tend to get highlighted are those that are easily measured and those that affect middle- and upper-income groups."[5]

"There is relatively little literature exploring the associations between low incomes and life- and health-threatening living and working environments. There is also relatively little literature on the health burden that those living in such environments suffer and its economic consequences (in terms of work days lost and costs of treatment), although this is likely to be a major cause of urban poverty."[6]

Data is lacking and so is political will and administrative capacity. In a recent work on West Africa, Guène, Touré and Maystre affirm that the lack of political will concerning environmental health results in "*...insufficient human resources, inadequate training and a poor definition of responsibilities.*" Often, several agents are responsible for providing water and sanitation, and interdepartmental rivalries are frequent. Furthermore, local agents are not aware of national policies, and those responsible for national policy are not informed of the reaction of local populations. They mention other obstacles to better performance: the attitude of the populations of centralized regimes that expect the state to take care of questions related to health and the environment, and the incapacity of governments to collect local taxes because of the informal nature of land ownership.[7]

In his study of the African state, Ambe Njoh comes to the conclusion that "*...the state in Africa must be seen as an entity in its own right, with a set of interconnected institutions and interests it seeks to jealously guard.*"[8] His work analyzes the actions of the state in urban development in the Cameroon and presents empirical evidence to show "*...the extent to which such actions are designed to protect the state's interests rather than that of the general public*".[9]

Leitmann, of the World Bank, has made a detailed study in seven cities of environmental hazards or urban vulnerability (defined as risks that are exacerbated by natural events or human activities). Among the conclu-

5. Hardoy, Jorge E, Diana Mitlin and David Satterthwaite (1992), *Environmental Problems in Third World Cities*, Earthscan Publications, London.

6. Nunan, Fiona and David Satterthwaite (1999), "The urban environment", Theme Paper No 6 in *Urban Governance, Partnership and Poverty*, International Development Department, School of Public Policy, University of Birmingham, Birmingham, UK, page 6.

7. Guène, O, C Touré and L Y Maystre (1999), *Promotion de l'hygiène du milieu*, Presses Polytechniques et Universitaires Romandes, Lausanne, Switzerland, page 14.

8. Njoh, Ambe (1999), "The state, urban development policy and society in Cameroon", *Cities* Vol 16, No 2, April, page 121.

9. See reference 8, page 119.

sions, we can read that:

"*In all of the cities, a significant part of water pollution is directly caused by poor management of the sanitation system… Access and affordability of adequate sanitation is a problem for the poor, especially in the lower-income cities. One result of this combination of poor management and a low level of service to the poor is that inadequate sanitation can have negative health effects.*"[10]

In a recent e-conference, Dick de Jong answers the question: "Why is sanitation not popular?" From research on three databases, he concludes that it is not popular:

- for communities – because relieving oneself is a personal affair and is culturally and socially sensitive;
- for engineers – because subjects which include hygiene behaviour are too complicated; water solutions are much more glamorous and rewarding than sanitation solutions; and there are no career possibilities;
- for the politicians – because water systems bring publicity and votes, and sanitation does not except when cholera or plague break out.[11]

Ismail Serageldin, chairman of the World Water Commission, vice-president of the World Bank and chairman of the Global Water Partnership (GWP) recently warned that: "*Water is life. Yet this precious resource is widely mismanaged. Unless we change our ways of managing water, we will face serious crises in the near future.*"[12]

In summary, these authors see as barriers to more effective environmental health policies: questions of governance, political will, poor management, available resources, compartmentalization and inter-agency rivalry, lack of information and poor data collection, equity and popular attitudes. To these, we can add two more which, for reasons of diplomacy, are usually omitted: corruption and authoritarian or irresponsible governments (that is, dictatorships).

III. CHOLERA IN MADAGASCAR AND THE ATTITUDE OF THE GOVERNMENT TO THE AID FROM OUTSIDE EXPERTS (MÉDECINS SANS FRONTIÈRES)[13]

AS THE POLITICAL and sociocultural context in each country and locality is specific, it is not very meaningful to make generalizations about policies and attitudes towards environmental health questions. One can find tendencies which hinder action, and these can be categorized, but we should recognize that they are far from being universal. To illustrate some of the constraints in this field, we have taken an extreme example which shows how difficult cooperation can be between an external aid agency from the North and governments of the South. It concerns the Nobel prize-winning NGO Médecins sans Frontières (MSF) and their relations with the government of Madagascar while trying to help to deal with a cholera epidemic. In this case, it becomes clear that many factors got in the way of effective action: local customs and ignorance about the disease, an inefficient and sometimes corrupt bureaucracy, political manoeuvring, rivalry between different ministries, a will to hide the extent of the epidemic and, above all, the lack of trust between the administration and the foreign aid agency. In one way, this case is not typical of aid projects concerning environmental health in that the aid was the response to a disaster. It is an example of how much antagonism aid from foreign donors can create and, at the same time, exemplifies the difficulties donor

10. Leitmann, J (1995), "A global synthesis of seven urban environmental profiles", *Cities* Vol 12, No 1, pages 23-39.

11. de Jong, Dick (1999), November 3rd contribution to e-conference on "Strategic approaches to urban sanitation provision" organized by the *One World Think Tank* Series, gesi@mailbase.ac.uk [GARNET GHK R&T (Kevin Tayler), IRC (Dick de Jong), One World (Peter Ballantyne), Water Aid (Belinda Calaguas), World Bank (Jennifer Sara)]. His explanation of why sanitation does not get sufficient attention includes the following: lack of political will; low prestige and recognition; poor policy at all levels; poor institutional framework; inadequate and poorly used resources; inappropriate approaches; neglect of consumer preferences; ineffective promotion and low public awareness; women and children last; little effective demand; cultural taboos; and beliefs.

12. Quoted by Dick de Jong, IRC e-mail message 8 March 2000 (IRC site: http://www.IRC.nl).

13. I am indebted for this case study to Médecins sans Frontières (MSF), who allowed me access to the correspondence between the doctors in Madagascar and their headquarters, and other documents concerning their relations with the authorities in Madagascar. I was also able to interview at length Pierre Pascal, who was responsible for the MSF project in Madagascar.

agencies confront and how, despite the best of intentions, things can go wrong.

Until 1999, Madagascar was cholera-free but when the epidemic got underway in March of that year, it spread rapidly to the major cities and towns and also to many rural villages. A year later, it had become endemic on the island, with a fatality rate of at least 5 per cent, whereas it should be less than 1 per cent.[14] Ineffectual strategies to halt the contagion, polluted water, a lack of sanitation, an uneducated population and poverty are the main reasons for the rapid spread. Other causes include the nature of funeral rites in Madagascar and the lack of information and education about cholera. The attitude of the government was a major stumbling block for MSF in attempting to halt the epidemic. The president does not have a reputation for being particularly efficient and he and the prime minister delegated the entire problem to the powerful minister for health. At first, she minimized the seriousness of the epidemic and claimed cholera was the responsibility of the Ministry of Hygiene and Sanitation, which, in turn, claimed that it could do nothing in the short run to treat cholera – but neither did it make any effort at long-term prevention of cholera nor step up the programme for improving sanitation. When the minister for health did take on the responsibility of dealing with the epidemic, she prevented MSF, or the "French doctors" as they are called, from acting efficiently.[15]

The MSF representatives repeatedly found that the number of sick and the number of deaths were deliberately underestimated.[16] Ten months after the outbreak of cholera the *Express de Madagascar* complained of the "...*mountains of garbage piled up in the streets, the open drains which are totally blocked thus flooding the low-lying areas. It is this stagnant water and the garbage that are the first carriers of the virus*."[17] The government is accused of having held back information, of having underestimated the number of cases and of acting too late with too little.

To fight the epidemic efficiently, as prescribed by MSF, a coordinated action within the government and with the NGOs would have been necessary, with hands-on training of doctors and nurses in the hospitals, widespread information campaigns for the population and for the traditional chiefs, and with new structures for caring for the sick. The powerful minister for health ,when she finally responded to the cholera epidemic, took actions that were not always appropriate. For instance, in spite of a recommendation by the WHO against mass vaccination, she set up a *cordon sanitaire* obliging everyone leaving Madagascar to be vaccinated even if this involved a medical risk.[18] This action affected the population least likely to come down with cholera and wasted vaccine that could have been used better elsewhere.

Many parts of the country lack not only clean drinking water and sanitation but also basic health infrastructure. Upon their arrival in a rural district, the French doctors found a "hospital of 50 beds" without beds, only straw mats on the ground, where the rules of hygiene were only superficially applied, where visitors accompanying the sick were not disinfected, the drinking water was not kept clean and where there were nowhere near enough latrines.[19] MSF had to try to prevent the spread of cholera under these sorts of conditions.

The French doctors, skilled in treating cholera but not necessarily in diplomacy, believed it was essential to train the local doctors in the hospital by treating actual cases of cholera; however, the Ministry of Health refused to give them permission either to enter the hospital or to touch

14. Gregory Hertl, quoted in *The Times of India,* 13 March 2000, www.timesof india.com/130300/13hlth4. htm

15. Interview with Pierre Pascal of Médecins sans Frontières, 31 March 2000.

16. E-mail from the local representatives 5 June 1999 and 21 January 2000.

17. *Express de Madagascar* 13 January 2000.

18. It is not recommended that pregnant women be vaccinated.

19. E-mail from local representative of Médecins sans Frontières to headquarters, April 1999.

the patients. This rule, which the French doctors broke whenever they could, caused much bad feeling between MSF and the government. The local personnel who ignored this rule risked losing their jobs. In one case, patients were actually taken off their drips by a medical inspector[20] because of the presence of the French doctors in the hospital. It is understandably very difficult for MSF envoys to accept these rules as being more important than the human lives they had come to save. In one of the worst-hit districts, the authorities' intransigence resulted in the withdrawal of the French doctors from that region.[21]

The Madagascar government's attitude seems to be the result of anti-colonialism, a mistrust of whites and especially of the French. The government continually thought that its authority was being questioned and that the reputation of Madagascar's doctors was at stake. There was a kind of jealousy towards the French doctors. It was thought that the grants the European Union gave to MSF were monies that might otherwise have been given directly to national officials for "their" doctors. The actions of the Ministry of Health were ambiguous; on the one hand, it wanted to prove to the world that it was capable of managing the epidemic yet, on the other, it needed the resources and the expertise of MSF. The handling of the epidemic was highly bureaucratic, lacking the necessary flexibility. Much was planned on paper that proved impossible to put into practice. Furthermore, according to the MSF project director, there is a certain racism or "clanism" present. The ruling élite of Antanarivo has light brown skin and, not only does it have a very negative attitude towards the whites, but it also looks down on the darker-skinned ethnic groups of the coast as being worthless, and treats them as such. Those groups received very little of the foreign aid for improved sanitation. The local authorities who were political opponents of the government, however, were more favourable towards MSF and tended to allow the French doctors to work in the hospitals and treat the sick.[22]

One factor that caused friction between the cholera experts and the local population was the nature of funeral rites. These rites traditionally last several days, with the deceased person being present. There is an important relationship between the living and the dead, with physical contact and a practice of digging up the body to clean out the grave. The villagers were very upset when they received their dead wrapped in plastic, with all the orifices stopped up. It was only in those cases where the chief had been informed and had been able to explain to the villagers the danger of doing otherwise that this practice was accepted. The French doctors were accused of taking out the brains and cutting off the tongues of the dead. These fears led sick people to stay away from the treatment centres, thus infecting others.

Not surprisingly, cholera and the way it has been handled on the island has become a political football. The opposition seized upon the tension between the MSF and the Ministry of Health and upon the ineffectual fight against cholera to attack the government. Other government ministers were very critical of the headstrong minister for health, and both the prime minister and the president have avoided the question of cholera altogether.[23]

The difficulties that MSF ran into in trying to eradicate cholera in Madagascar are an example of a lack of effective communication between an aid agency and the recipient government. This case illustrates some of the barriers to more effective policy mentioned above, namely the compartmentalization of services, the lack of resources, poor management

20. The medical inspector actually tore out the drips of all the cholera patients in the hospital.

21. E-mail from local representative of Médecins sans Frontières to headquarters, October 1999.

22. See reference 15.

23. See reference 15.

and cultural differences . It suggests some causes of the lack of political will – which is also a principal cause of the lack of resources – and for the problems experienced by foreign experts who arrive in the poorer Southern countries to accomplish a technically difficult task. In this case, from their point of view the first priority is to save human lives; other considerations that get in the way are not well received. The minister of health's reluctance to allow the French doctors to deal effectively with the situation shows an ill-placed national pride and anti-colonialism. The blatant attempt to hide the number of sick and dead was counter-productive. We have here an illustration of the complexity of the relationship between modern international aid organizations and the traditional cultures of the South with bureaucratic, slow-moving governments not ready to take advice from foreigners. This case shows how essential it is for foreign aid organizations to be extremely attentive to local situations. On the other hand, it is unfortunate that a humanitarian NGO had to wage a kind of war against the administration in order to do what it knew was the only way to halt the epidemic.

IV. COMMONLY FOUND HINDRANCES TO EFFECTIVE GOVERNMENT ACTION

THIS CASE GIVES some idea of the problems that can arise. However, each case, each country, each region is distinct and the problems will never be identical. The following paragraphs will give a few more examples of the type of hindrances governments and international aid agencies can encounter. They can be grouped into the following categories: institutional, political and economic, technical, and sociocultural.

a. Institutional hindrances

The literature abounds with accounts of the institutional difficulties faced which, as in the case of Madagascar, are attributed to the poor capacity of local government to treat environmental health and to a lack of competent managers, trained technicians and resources. There are also numerous references to the need for better methods to allow the local population to participate and for better lines of communication between the population and the administration. The difficulty of inter-ministerial or inter-agency coordination and the effective definition of responsibilities is also often invoked as a major constraint on more effective government and, interestingly enough, it is a problem not only for governments but also for international organizations, not least the World Bank itself.

In a recent article, James Listorti discussed the lack of consideration given to health and the absence of health professionals in the process of drawing up most development projects.[24] Two recent studies of his provided the evidence. The first, based on an analysis of 400 publications on planning, agriculture, industry, energy and housing, concluded: "*Health repercussions have generally not played an important role in policy decisions outside the health sector.*"[25]

The second study, "Bridging environmental health gaps", on 203 World Bank infrastructure projects concluded that: "*The contribution of infrastructure projects towards poverty alleviation and improvements in living conditions could be significantly enhanced by systematic consideration of opportunities for health improvement and, for a fraction of the cost of health investments, infra-*

24. Listorti, James A (1999), "Is environmental health really a part of economic development – or only an afterthought?", *Environment&Urbanization* Vol 11, No 1, April.

25. Cooper Weil, D E et al. (1990), *The Impact of Development Policies on Health – A Review of the Literature*, World Health Organization, Geneva (cited by Listorti (1999), see reference 24).

structure may be able to relieve up to 44 per cent of the burden of disease as opposed to 32 per cent estimated for the health sector."[26]

The recent article by Listorti showed that, of the 203 projects studied, only two listed a health specialist as having prepared the project and "...*of the 62 completed project reports only one listed a health specialist as having gone on two of the approximately 620 missions.*" He also found that "...*environmental literature shows that health is typically not included as a benefit except for pollution control.*"[27]

If the World Bank has difficulty in coordinating different sectors, it is no wonder that the countries advised by the Bank have the same problem. Furthermore, bureaucratic compartmentalization of responsibilities can cause serious problems. To give one example, we are told that there is poor service delivery in India and a lack of institutional capacity because of a lack of investment; however there is little capacity to manage investments. "*The engineering and the revenue departments function independently of each other, therefore management decisions are also isolated from operations.*"[28]

In spite of all the research that goes into international aid, it too can make important mistakes, caused by a lack of coordination and a compartmentalization of sectors. For instance, during the International Drinking Water and Sanitation Decade, the increased accessibility to water was not coupled with enough concern for sanitation: "*In due course, this water was unfit for human consumption due to contamination with waste.*"[29]

It also happens that governments, both central and local, conceive urban projects without a good knowledge of the local situation and with no participation of the local community, nor with any communication between the conceivers and the receivers. Equipment is provided without provision for maintenance. This is illustrated by an example from a poor neighbourhood in Dakar, where piped water was brought in and standpipes built without making any serious study of how they would be managed. No direct participation was expected of the consumers, as the municipality was to pay for the service. This resulted in large losses due to wastage until, finally, it became obvious that a system of local management for the standpipes was necessary.[30]

Women are often institutionally excluded in many areas of the world, as local governments are set up in a way that makes it very difficult for women to participate in decision making; and yet they are the ones who know the sanitary situation best as they are usually responsible for water and sanitation in the house, and for child care.

b. Political and economic hindrances

In this category, we include poor or negligent political management, lack of provision of resources or an inappropriate use of them, and corruption, all of which are usually termed "lack of political will". As far as health environment goes, "lack of political will" refers to a lack of will to: find sources of financing, halt malpractice, reform the administration, and acknowledge and deal with serious public health problems such as epidemics. In the case of Madagascar, there was a gross underestimation of the number of sick and dead. This was caused no doubt by the desire not to hurt the tourist industry. We can consider that there is a lack of political will in cases where there is total lack of democracy, wide-scale corruption and dictatorial regimes made up of, by and for the dictators and their followers, whose main goals are to obtain total power and enrich themselves. The term can also be used to describe governments that have

26. Listorti, James A (1996), "Bridging environmental health gaps", AFTES Working Papers Nos 20-22, Urban Environmental Management, Africa Technical Department, World Bank, Washington DC, May.

27. See reference 24.

28. Murphy, J P (2000), Ministry of Urban Employment and Poverty Alleviation, Government of India, in February 15th e-conference on "Small towns, water and sanitation", *One World Think Tank* Series Vol 1, No 14, sup@mailbase.ac.uk

29. Morry, Chris (no date), "Vision for water and nature", IUCN, Canada, www.waterandnature.org.iucn.ca

30. See reference 7, page 10.

31. For example, extending their prestige, buying military equipment, making war.

32. Revenga, C et al. (2000), "Pilot analysis of global ecosystems: freshwater systems", World Resources Institute, Washington DC, http://www.wri.org/wri/wr2000/freshwater_page.html; contact Adlai Amor, WRI, fax: 1-202-7297610; e-mail: aamor@wri.org; http://www.wri.org/ (WRI press release 21 October 2000, http://www.wri.org/wri/press/page_water_pr.html).

33. Chaplin, Susan E (1999), "Cities, sewers and poverty: India's politics of sanitation", *Environment&Urbanization* Vol 11, No 1, pages 145-158.

34. See reference 33.

35. Roaf, Virginia (1999), "What is strategic?" October 25th contribution to e-conference on "Strategic approaches to urban sanitation provision" (see reference 11).

other agendas[31] and are not particularly concerned with questions of quality of life, health and welfare of the poor; or where governments are too overwhelmed by immediate problems to go out of their way to make reforms to find the resources necessary to deal with mounting health problems.

One major issue which needs thorough research is the wasteful and inequitable management of water resources throughout the world and the lack of political will in too many countries to change the situation. "*Degradation of the world's freshwater systems threatens their ability to support human, plant and animal life...*", according to a new report by the World Resources Institute (WRI). "*By 2025, at least 3.5 billion people (nearly 50 per cent of the world's population) will face water scarcity... Waterborne diseases from faecal pollution of surface waters continue to be a major cause of illness in the Third World.*"[32] Both the North and the South are using water faster than it is being replenished; however, water consumption per person in the South is way below that in the North. In many cases, it is distributed in an inequitable way, with the poor who are not connected to piped water paying between two and ten times the price paid by those who are connected.

In a recent paper in *Environment&Urbanization*, Susan Chaplin sheds light on why the unsanitary conditions for large masses of the population of India have been so ignored by local and central governments.[33] She contrasts the circumstances in Indian cities today with those which brought about sanitary reform in Great Britain in the nineteenth century. Reform was first opposed by the middle-classes because the benefits were extremely expensive and "*...too abstract, remote and speculative to carry conviction...*" but in the last half of the century, it was helped by advances in technology, rapid economic growth and advocacy by medical practitioners and concerned citizens. In India today, "*...the middle-class is actively participating in the exclusion of large sections of the population from access to basic urban services.*" Three factors prevent a successful sanitation movement which might change the situation:

• The inability of local government to deal with unplanned, haphazard growth; their corruption; their inefficiency; and the lack of finance, all of which prevent the middle classes from having confidence in them.

• The absence of a "threat from below", that is the lack of unions representing the poor, the informal sector, women, children and migrant workers. As Chaplin writes: "*As these workers do not comprise a social group, there is little possibility of collective action so that they are excluded from the resources the state provides for the provision and distribution of basic services.*"[34]

• The development of modern medicine and civil engineering has enabled the middle classes largely to ignore environmental problems and the resulting diseases.

In a recent e-conference, Virginia Roaf, Urban Initiatives coordinator at Water Aid, wrote:

"*What is considered effective strategy by national/regional government can often exclude the poorest of the poor, for the following reasons:*

• *by preventing alternative or non-traditional approaches – and by insisting on unaffordably high standards;*

• *by ignoring or being ignorant of community-managed systems;*

• *for reasons of corruption within government;*

• *by not wishing to provide water and sanitation to people who are occupying land illegally (generally the poorest of the urban poor) as governments fear that they will be seen to be granting a form of tenure.*"[35]

The lack of democratic practices in many Third World countries is not a secret, yet it is a taboo subject. Governments are treated as though they are all equally devoted to the well-being of their populations. One rule of thumb in trying to get an idea of intentions might be to see what percentage of the national budgets are devoted to arms and military forces (or grandiose projects which have no bearing on the welfare of the masses) compared to that devoted to health and the environment. These governments totally lack transparency and accountability. Millions of dollars are accumulated by unscrupulous powerful rulers and their friends, much of which is foreign aid money. Even in semi-democracies where governments change, they often have only "*...civilized the rules of sharing the meagre resources*" or, in other words, there are "*...alternate cycles of looting.*"[36]

Corruption on a world scale encourages corruption on a local scale by creating a political and social climate tolerant of economic crime. Directly and indirectly, corruption in urban management undermines infrastructure projects, efficient administration and equitable distribution. Before Suharto was overturned, Indonesia was one of the most corrupt states in Asia. In Jakarta, the practice of falsifying land titles, of underrating tax objects, and of bribing water-meter readers and sanitation agents resulted in very low municipal revenues. Property taxes reached only 50 per cent of the expected return and sanitation fees met only 8 per cent of the set target.[37] Environmental impact assessments (EIAs) have been introduced but it is common knowledge that "*...any client can obtain a favourable EIA but it depends on how much he is willing to pay.*"[38] In June 1993, it was discovered that approximately US$ 95.8 million (25 per cent of the municipalities' routine budget) had gone on bribes in East Jakarta, thus depriving the city of funds for salaries and for operations and maintenance works.[39] Privatization was introduced as a means of curbing corruption but the way in which the public-private partnerships were arranged made matters even worse, as it was firms with strong political connections which won the contracts. As a result of corruption, two companies, one owned by a business partner of Suharto and the other controlled by Suharto's son, obtained lucrative 25-year concessions to provide water to the city in collaboration with large foreign companies. The result has been a higher cost for water, which has been passed on to the consumers, and poor-quality water.[40] In February 2000, 40 per cent of the water in Jakarta was unsafe for drinking because of pollution. The minister for health wrote: "*High costs and 'low' water tariffs prohibit the construction of adequate treatment facilities.*"[41]

Of course, corruption is found on all continents, and in aid programmes as well as in governments. A recent bribery scandal arose in the context of the Lesotho-South Africa Highlands Water Project. "*An official from the project is presently before the courts in Lesotho, charged with accepting bribes of some US$ 2 million from no fewer than 12 international firms, some of them world leaders in their field.*"[42] Third World corruption is aided and abetted by international firms.

At the local level, consumers are the victims of different types of corruption. Municipal employees who embezzle funds and take bribes or equipment, contractors who bribe local authorities, or users who break down equipment and don't pay, all contribute to costly and inadequate services. To take one example, the state government of Lagos spent 998 million Euros on garbage collection trucks; of the 600 vehicles purchased, there are now only 10 in service. The government suspects the drivers of pillaging the trucks.[43]

Lack of political will can also mean sub-optimal policies. It can mean

36. Akindes, Frances (2000), quoted by Jean-Baptiste Naudet in *Le Monde*, 3 September. With the globalization of finance and electronic communication, corruption too has been globalized and facilitated. Economic criminality around the world is estimated to cost up to 2-5 per cent of the Gross International Product.

37. Server, O B (1996), "Corruption: a major problem for urban management", *Habitat International* Vol 20, No 1, page 29.

38. See reference 37, page 32.

39. See reference 37, page 34.

40. Lippe, M (1999), "Corruption and the environment at the local level", Transparency International Working Paper, www.transparency.org/documents/work-papers/Lippe.htm

41. *Source Weekly* (2000), No 6, February, source-weekly@listserv.antenna.nl

42. Corruption reports from the *World Development Report 1999/2000* of the World Bank, quoted by Transparency International, www.transparancy.de

43. *Source Weekly* (2000), No 4, February, source-weekly@listserv.antenna.nl

not providing sufficient resources for public services or for environmental programmes that are created and voted in by the government. It can mean unpaid bills as, for instance, in Uganda, where the police force, the Ministry of Defence and the Mulongo hospital were allowed to run up water bills of $12 billion before the National Water and Sewerage Company took measures to cut off their water supply.[44]

44. See reference 43.

c. Technical hindrances

The case study of cholera in Madagascar underlines the wide gap between modern medical practices and conditions in the poorer countries of the South. Elsewhere, the rapid growth of urban slums increases health hazards, while techniques for providing clean water and acceptable sanitation systems become exponentially more sophisticated as the population served grows. Governments often lack the necessary managerial and engineering skills, especially at the local level. While community involvement in decision making is slowly being recognized as essential to successful infrastructure improvement, sharing decision-making and responsibility for management requires supportive technical professionals, and these are often lacking. As one source explains, training for engineers is not often geared to community-based approaches, especially for engineers trained in an industrialized country who "...*feel under pressure to demonstrate their superior knowledge and apply the latest (often completely inappropriate) technology. Engineers design what they know and are not prepared to listen to community people*..."[45] and especially not to women. Furthermore, as far as environmental health is concerned, knowledge is not a matter of common sense. The invisibility of bacteria and viruses makes preventive action more difficult to explain and to implement, especially for a non-literate or semi-literate population. According to Dr Kazi Ali Azam in Bangladesh, waterborne diseases claim the lives of nearly 450,000 children each year due to parents' lack of awareness of basic sanitation, especially in rural areas.[46]

45. Muyibi, S A (no date), "Planning water supply and sanitation projects in developing countries", *Journal of Water Resources Planning and Management* Vol 118, No 4, pages 351-355.

46. "The problem of sanitation: a threat to environment", *The Independent*, Dhaka, 31 October 1999.

d. Sociocultural hindrances

Funeral rituals in Madagascar had a disastrous effect on the cholera epidemic and it took a great deal of diplomacy and tact to get the rural people to understand the need to change their practices. Cultural attitudes that are deeply rooted and difficult to transform are a major hindrance to improved sanitation in many cultures. Some cultural groups are very reluctant to have a toilet inside a house. Others insist on waterborne sewage, even when it is unaffordable and where water is scarce. As Isabel Blackett puts it: "*It is not just the pipes and pits; behavioural change is needed if real health improvements are to be achieved…. Some people assume it is 'easy to teach people to wash their hands'. But good hygiene practice is much more than that – that is the real reason it is given so little attention.*"[47] There is not much sense, for instance, in installing a VIP double-pit system if the users are not thoroughly aware of its advantages and of how to use it.

Dick de Jong wrote that one of the barriers to better sanitation was "women and children last".[48] In many countries, women are responsible for the water supply and for children's education and health and, as such, are more directly concerned with water and sanitation programmes. However, often in countries of the South, women are considered inferior and nearly always are less well educated; also, they are politically much

47. Blackett, Isabel (1999), "Where is the health aspect to SSA", October 28th contribution to the e-conference on "Strategic approaches to urban sanitation provision" (see reference 11) by the sanitation adviser in South Africa on a DFID project supporting the South African National Sanitation Programme.

48. See reference 11.

less powerful than men, their voices are not heard and they rarely become engineers or sanitation technicians.

With effort, it is possible to effect changes in people's behaviour. Brian Matthew, working with a DFID (British Aid) water and sanitation programme in Zimbabwe, noted the success of "health clubs" as a method of health education. He writes, "...*these health clubs (of which there were 120) are rather like social clubs that meet on a weekly basis to participate in health education and to follow a course that covers topics from germ theory to water courses/storage, sanitation, use of ORS, soap for hand-washing, HIV/Aids, etc.*" They were very popular with sometimes over 100 people attending. From these clubs has come a demand for VIP latrines.[49]

49. "Sanitation can be popular – the Bikila experience", November 8th contribution to the e-conference on "Strategic approaches to urban sanitation provision" (see reference 11).

V. CONCLUSIONS

THE MAIN CONCLUSION that can be drawn from these numerous hindrances to effective action is that change will only come about if the populations undergoing the hardships are more active in making demands on their politicians and on their administrations – demands for more accountability, more transparency, more democracy and better services. The populations need to be educated, or at least well informed. They need to understand the link between their environment, health and poverty and the link between corruption and poor services. They need to understand that the maintenance of a healthy environment lies within the government's line of duty and is a legitimate demand on their part. The extent of corruption of government officials and the private firms that collaborate with them needs to be exposed, and local populations can be helped by external NGOs and international aid organizations to gain an insight into international corruption. Pressure can be put on Northern governments to stop giving aid to gangster governments. Aid agencies should find channels for giving aid other than through corrupt régimes and they should stimulate governments which lack commitment. They can help develop local capacity for managing local infrastructure and for enhancing local democracy and community organization, rather than work through top-down organizations. In their own countries, they can put greater emphasis on health and healthy environments, on cutting down pollution and on water conservation. Above all, they should understand the cultures they are trying to support.

Rather than draw up a list of what should happen, I would prefer to indicate what kind of research or investigations will help open the way for progress to be made in breaking down these hindrances to healthy and sustainable environments and better governance.

Research programmes are needed to emphasize and illustrate the link between alleviating poverty, the promotion of health, environmental sanitation and women's education. This association needs to become part of conventional planning wisdom.

Other research that is needed, followed up with strategies for applying the research, includes:
• Investigations that expose the extent of corruption of top government officials and the private firms that collaborate with them, in order to put pressure on international organizations and Northern governments so that they refuse to lend to corrupt administrations or give aid that ends up in the pockets of the rich.
• Research on the compartmentalization of bureaucracies and the devel-

opment of strategies to promote concerted action between different sectors and levels of national, regional and local government.

- Research on decentralization of decision making. This involves creating strategies to develop respect by the "top" for the "bottom", by men for women, by the middle classes for the poor and also strategies to develop trust from the "bottom" for the "top" (when they deserve it).
- Research on better types of independent and reliable evaluation of programmes which undertake cross-sectoral studies of the international institutions, foreign aid and government actions.
- Continued research on community organization and participatory action so that they become conventional wisdom, and the development of strategies on how to put into practice all the excellent studies already made on participatory practices.
- Investigations on waste or pollution of essential resources, particularly groundwater.