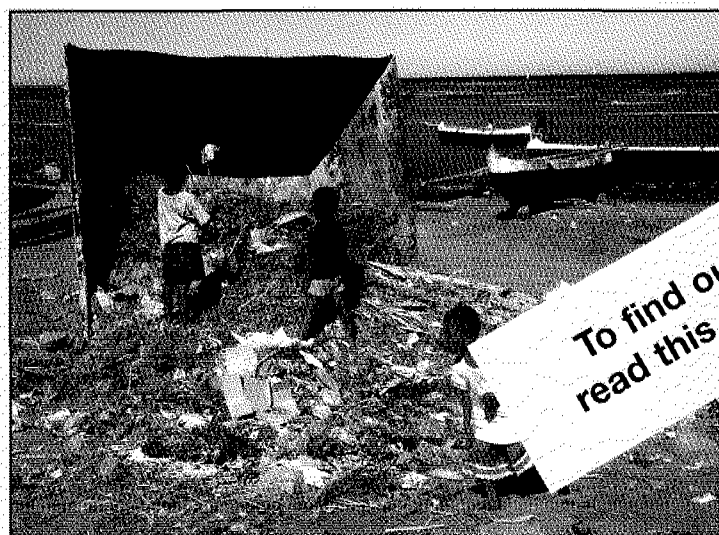


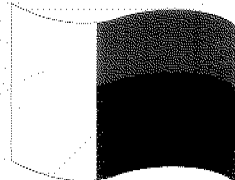
SANITATION: THE CHALLENGE



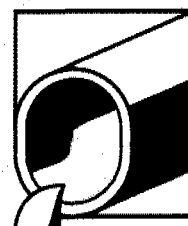
THE IMPACT OF INADEQUATE SANITATION AND HYGIENE IN MADAGASCAR



To find out more,
read this document!



MADAGASCAR



SANITATION: THE CHALLENGE

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PREAMBLE

The Malagasy government has shown its commitment on a number of occasions to undertake concrete actions to reduce poverty and improve living conditions for its population, especially the poorest, and thus develop amongst other things, access to essential basic social services.

Infrastructure for supply of clean drinking water and disposal of domestic sewage and waste water are now considered an integral part of essential basic social services in the water and sanitation sector by the Malagasy government.

It is widely acknowledged that diseases resulting from an unhealthy environment and especially the crying lack of proper sanitation installations are among the principal causes of infantile morbidity and mortality in Madagascar. These diseases do not restrict themselves to children: they also affect the economically active young adult population, i.e. the driving force for the Malagasy economy.

By weakening the active section of the population, these diseases contribute directly to the deterioration of the economy, contributing to increasing poverty which is rooted in the daily lives of the Malagasy population.

The outbreak of cholera in March 1999 in some regions and the rapidity with which it spread across the country, in spite of the drastic measures taken by the authorities to slow its progress, show clearly the perilous state of the existing sanitation installations, both in the cities and the countryside.

Since the first cases of cholera appeared in March 1999 until early 2001, the figures recorded by the Ministry of Health show more than 35 000 cases of persons affected by the epidemic and more than 2300 deaths.

Moreover, the bubonic plague and rabies, which were thought to be definitively eradicated from the entire country have reappeared as endemic diseases, especially during the hot seasons.

It is accepted that the response to this more than worrying situation requires the implementation of adequate measures in the sanitation sector: this is a sector which has unfortunately been too long forgotten and neglected but is of capital importance in the fight against poverty, a strategy which the Malagasy government putting in place.

Political will to improve sanitation is clear in the poverty reduction strategy document (PRSD) and the review of public expenditure¹.

¹“Review of public expenditure and external aid for basic social services” (Update of the 20/20 initiative study, a process in which developing countries and their partners have undertaken a) to increase public aid for development (PAD) to 0.7 % of their GNP and b) to allocate on average 20 % of budget expenditure and 20 % of public aid to develop the funding of essential social services (ESS).

The government has therefore committed itself: in the PRSP, to increase the level of access to domestic sewage disposal systems (latrines) from 25 to 80 % in the countryside and from 62 to 100 % in the cities; in recognition of the fact, as established in the document "Review of public expenditure and external aid for basic social services", that funding allocated to the sanitation sub-sector is low both in terms of public expenditure (0.3 %) and external aid (0.7 %), to increase them to attain the level of 5 % of public expenditure and 5 % of external aid.

It should however be recognised that financial initiatives to promote the sanitation sub-sector are inadequate without an appropriate institutional and organisational framework, another key aspect for the development of this sub-sector.

In fact, the sanitation sub-sector suffers from fragmentation and diffusion of responsibilities across different ministerial departments, thus weakening the desired impacts.

In addition, at the decentralised levels in the country, no institutional structure is responsible for the sanitation sector and those working in the sector have no official voice there.

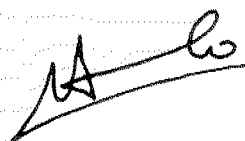
It is therefore high time that things changed, and time that new strategies entered into the dynamics of change which Madagascar has initiated, especially regarding regionalisation and decentralisation.

Against this background, the Government of Madagascar is committed to set in motion all the necessary organisational and legal mechanism to regulate the sanitation sub-sector, especially as regards capacity-building and improving its organisation.

The Ministries are aware that simply prepare legal frameworks is not enough, because their application demands training and putting institutional and organisational frameworks in place. The country also needs financial and technical assistance to create a coordination platform to develop the sub sector of sanitation, essential for its success.

The present document is thus part of an appeal to all interested parties (central government, local government, NGOs, United Nations agencies, cooperative financial partners, communities, users) to combine their efforts and mobilise the means to carry out concrete actions to develop the sanitation sub-sector in an effective and sustainable way.

Heriveló RAKOTONDRAINIBE



National Coordinator of the
AEPSPE Programme

QUESTION TIME

Do you know that in 2002 Madagascar could lose more than 5 million working days because of poor sanitation?

If you want to know more, read on!

Does it matter that Malagasy children may lose 3.5 million school days because of diseases directly linked to poor conditions of sanitation and hygiene and that tens of thousands of these children may die before the end of the year because of these same diseases?

Read this document!

What would you think if you heard that the direct economic losses due to these same diseases may rise to 93 % of the expenditure of the Ministry of Health and exceed public expenditure in the sanitation sector 300-fold?

If you want to read more, read on!

1 – THE COST OF POOR SANITATION

Every year around the world, billions of cases of illness linked to poor hygiene cause the loss of millions of human lives (table). The number of cases could be materially reduced by a good sanitation system. Good sanitation could also prevent the loss of productive working days, school attendance and household income experienced by tens of millions of persons because of these same

diseases. Poor sanitation conditions are also responsible for the transmission of cholera, plague, intestinal worms, skin diseases and many other infectious conditions which affect hundreds of millions of people.

The three major health problems linked to poor sanitation (WHO data)¹

Disease	Morbidity (annual cases)	Mortality (annual cases)
Diarrhoea/dysentery	1.000.000.000	2.200.000
Malaria	400.000.000	1.100.000
Parasitic diseases	200.000.000	64.000

A physician working in the slums of the capital Antananarivo states:
“People never utter a word of protest about having to live in the immediate vicinity of heaps of rubbish, dirty toilets or street corners that surpass all description; people say nothing about stagnant puddles in the middle of the city containing God knows how many disease-bearing microbes and insects...”

Madagascar, a country in which millions of persons live without any kind of sanitation infrastructure is not spared these harsh facts. For example, from March 1999 to June 2001, the Ministry of Health recorded 35 000 cases of cholera including more than 2,300 deaths. Two and a half million Malagasy are affected with schistosomiasis and 4.5 million at risk of the disease. Efforts undertaken to correct this situation tend to be half-hearted. Sanitation projects remain ad hoc and scattered throughout the territory: this has the immediate effect of dispersing efforts and incurring irrational expenses without having any real impact. In addition, the amount of funding is still very low compared to that allocated to other social sectors. Verbal reports gathered by GreCS bear out that this is indeed the case: at the dawn of the third millennium it seems unreal.

2 – OBJECTIVES

This document has a twofold objective:

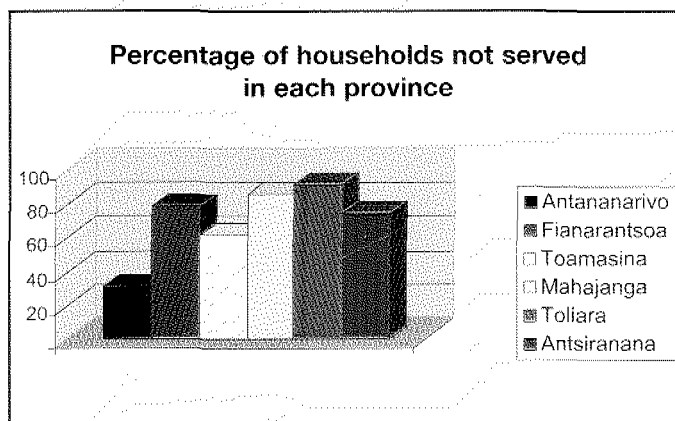
1. To draw the attention of policy-makers to the problems associated with the lack of sanitation in Madagascar and its socio-economic impact.
2. To put forward relevant strategic solutions to the various people professionally involved in this sector.

This document has been produced on the basis of reliable research which clearly and unambiguously reveal the pressures caused by the lack of sanitation on the Malagasy population. Statistical impact studies in four different parts of the country have been followed up by an anthropological study[†].

3 – SITUATIONAL ANALYSIS

3.1. Evacuation of domestic sewage

In Madagascar, the national level of access to acceptable domestic sewage evacuation infrastructures (latrines) is estimated by Rakotoniaina to be 36 %. Almost two-thirds of the population have no access to such services. The situation beggars belief in the squats and shanties, whether rural or urban. Verbal reports from the cities describe well what happens when toilet facilities are non-existent.



“We don’t have a WC and it’s impossible to get the use of one. In the old days, we used to squat down behind the public toilet. That was where we did our business—nothing else was available.”

“What we do is rather embarrassing, but it’s what everyone does, at least everyone who doesn’t have a latrine... If we need to go at night, we relieve ourselves in a slop bucket which gets washed out first thing in the morning. During the day we use plastic bags which are discarded on the railway line just outside our district. That’s where everybody throws their bags away.”

[†] Areas covered by the statistical survey were the cities of Mahajanga and Toamasina, and the rural stations of Toliara and Antalaha. The anthropological survey was conducted in districts in the cities of Antananarivo and Toliara, and in a rural community of Toliara.

WaterAid/Jeremy Horner



*Instead of toilet paper
maize cobs are used
in this quiet spot*

In the countryside the situation is not quite so acute given that the population is less dense. In some areas the infrastructure is very limited indeed, and non-existent in a number of places.

A striking example is provided by one of the rural communities in Toliara II, Miary, where only 4 % of households are equipped with latrines. These latrines are however completely dilapidated and very dirty. Moving down to village level, the situation becomes positively alarming! It is no surprise to observe that a number of villages are without any toilet facilities whatsoever. The coastline and beaches serve as improvised conveniences. And if the sea is not nearby, then the nearest river or thicket serves the same purpose.

In general, local people relieve themselves in the open air or in a forested area to the south or south-east of their village (the direction of evil spirits and nothingness). At the beginning of the year 2000, during the cholera outbreak, local authorities launched awareness-raising

campaigns and instructed people to construct latrines. Sometimes the order was ignored, sometimes it was carried out. In fact, people only went through the motions: fear of punishment compelled them to uphold the order without any genuine sense of conviction. Very few of the households which built latrines ever used them. The latrines has no place in the logic of the local culture.

3.2. Drainage of domestic waste water

“In the evening, when it’s dark, we have a shower behind the house. Afterwards, we sweep the water away so that it dries off easily.”

According to Rakotoniaina, only 15 % of Malagasy households have a system for waste water disposal³. Even among this small group, most people use their toilets or individual sump. A survey carried out in 28 secondary cities and reviewed in the sectoral strategy⁴ reveals that 13 have no infrastructure, 13 have a single network system for waste + rain water (7 of which had operating problems), and 2 cities used sumps or drain tanks.

In Mahavatse, in peri-urban area of Toliara, not a single water outlet had a drainage channel; this explains the very dirty stagnant water around these sites.

A local told us: *“Many pigs wallow and bathe [in the puddles of water around the outlet] and their excrement is scattered everywhere. The space immediately beside the pump has become a dumping site. Even more disgusting and dangerous is the human excrement lying around almost everywhere.”*



WaterAid/GReCS

Mahavatse, Toliara :
everyday problems.

The Vezo families who live on the south-east coast have found a “straightforward” solution. Since their houses are close to the sea, they have turned the beaches into a rubbish tip, toilet and shower. After transporting buckets of water from the closest outlet or spring, they go to the toilet and clean themselves between the log canoes. The high tide then performs the task of cleaning the beach.

3.3. Drainage of rain water

Though one or two cities have evacuation systems for rainwater (always combined rain and domestic waste water disposal systems) their capacities are completely overrun by rapid urbanization in which sanitation aspects are disregarded in the construction of new houses. These problems are most acute in the large conurbations. Examples are manifold and flagrant just a few metres from the centre of Antananarivo: poorly maintained water outlets, drainage channels which are not up to the job or blocked with all kinds of rubbish, stinking smells, puddles of water, etc.: this is the typical scene in the shanty towns, as can be seen in the photo.

“All the waste water from the district ends up in this canal. Before there was a pump which was used to clean it. But it has been broken for ages now and nobody has repaired or replaced it.”



WaterAid/Joe Gomme

The Adriantany canal in Antananarivo: drainage system or rubbish dump?

3.4 Disposal of household rubbish

Quantitative data is almost non-existent. The survey conducted in 28 secondary towns reveals that only 8 towns have a service for collecting household rubbish³. The most common practice is for households to dispose of their rubbish themselves, something which is done with varying degrees of care.

“In Anosibe [district of Tana] household rubbish is collected in a container and someone is paid (400 FMG) to empty these in a large tip... But there are those who burn their rubbish, others who throw it anywhere at all, and others who throw it on the railway line. Vendors leave their rubbish close to the spot where they do their selling or throw it into the canal or even let it collect close to the canal.”

The results are well known...

“It’s not just dirty water that enters the canal, but all kinds of waste product including solids: bottles and plastic bags and other objects which are not biodegradable... there is absolutely no sanitation here at all.”

3.5. Disposal of industrial sewage

Rakotoniaiana’s summary document also reveals that there is no statistical data in Madagascar concerning the disposal of industrial sewage³. It is therefore supposed in the absence of the implementation of any regulations concerning industrial pollution in industrialized areas that chemical waste products are freely dispersed into the surroundings and pollute the environment.

3.6. Initiatives

Projects have been undertaken to address this appalling situation: the government, NGOs and international organizations have been making efforts to remedy it.

In its recent policy initiatives (the Water Code, 20/20 Vision, the poverty reduction strategy document or PRSD), the government has acknowledged its own responsibilities. These include a number of actions, including the PRSP objective of rapid increase in sanitation infrastructure coverage, and the National Health Policy objective of reducing by half the prevalence of diarrhoeal diseases before 2003. Much remains to be done if stated policies and objectives are to become reality.



WaterAid/Jeremy Homer

Thanks to an extensive awareness-raising campaign, these villagers in the deep south have started to construct latrines

There are other projects in existence but it must be said that they represent a drop in the ocean: we are still very far from satisfactorily meeting current requirements.

4 - IMPACT: SUMMARY OF STUDY RESULTS

The impact of this situation on the Malagasy population and on Madagascar is distressing: it causes disease, temporary inability to work or study, financial loss, wasted time, and in many cases death.

4.1. Impact on health

For the Malagasy population, the most direct impact is on health. The list of common diseases (no less dangerous for all that they are considered “normal”) resulting to a large extent from inadequate sanitation is long: diarrhoea, cholera, malaria, scabies, dysentery, trichinosis, schistosomiasis, etc. They tend to affect the weakest most severely: children and old people.

Diseases

The secretary of a 67 hectare fokontany gave us this account which shows how serious the situation is: *“It’s the lack of hygiene (loto) which causes diseases in many (betsaka) children. There are even deaths as a result of these diseases. The most common diseases are respiratory and gastrointestinal problems and fever.”*

According to one mother 3 out of every 10 children aged less than ten years old in the district suffer, several times in the course of the year, from fevers caused by malaria. The number of children affected with diarrhoea is even higher: between 4 to 6 out of every 10. This mother of 2 boys and 4 girls reported that she herself had nursed all of her children several times because of malaria and diarrhoea.

“You stop what you’re doing for 4 days and remain inactive... the diseases are most common in the slums because all the dirty rubbish from the better districts ends up here and contaminates the foodstuff eaten by the poorer people around here who tend to eat whatever they can get, and so they become sick. Many people fall ill...”

WaterAid/Jeremy Horner



The people who spoke to us were most concerned by the fever affecting children and adults, but also mentioned gastrointestinal diseases, especially diarrhoea, followed by skin infestations (scabies particularly), malnutrition and respiratory diseases.

With the canal bank as their playground, how on earth are children going to grow up healthy?

In Toliara, a PHC physician in a unit serving a population of 6,000 persons explained that “Of the children aged less than five years who are brought to see us every month, about 60 have diarrhoea, about 40 have skin complaints and another 40 malaria.”

And the local people are aware that one problem leads to another. A mother in the same town said to us: “When the people stand about in dirty water, they get itchy soles when they go to bed. It is also a worry that dirty water promotes infectious diseases such as cholera.”

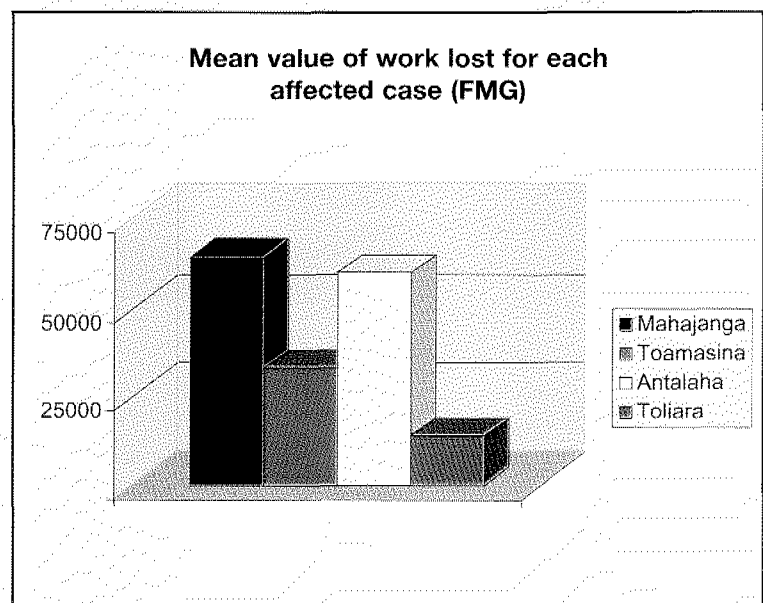
Among the persons surveyed in one of the MADIO project⁷ studies, there was a mean morbidity rate of 6.94 % for four diseases[‡] in the month prior to the survey. If this rate is extrapolated to other regions of the country on an annual basis, it would suggest there are more than 12 million cases of these diseases every year.

Deaths

International studies estimate that 60 % of infantile and juvenile deaths can be attributed to poor sanitation and the resultant poor water quality. If we assume that this figure is representative for Madagascar, it can be calculated that tens of thousands of deaths are caused by poor sanitation every year. The large number of adults dying every year because of malaria, plague and cholera should of course be added to this figure...

4.2. Economic losses

A large number (35 %) of the inhabitants interviewed in the neighbourhoods studied made an unambiguous inference regarding the very close relation between poor hygiene and poverty, and blamed the lack of sanitation for causing diseases and making existing poverty worse. At the end of the day the problem of sanitation is a poor person’s problem — “rahefa mahantra ny olona, dia maloto”: “when people are poor they are also dirty.”



[‡] Four readily identified diseases in which transmission is known to be closely related to poor sanitation were chosen for this survey: diarrhoea, skin diseases, schistosomiasis and intestinal worms. It is therefore apparent that the figures collated are representative only of some of the diseases caused by lack of sanitation.

> **Lost working opportunities**

ruption of work for adults in casual labour or in the informal sector is a disaster for households: entire families depend on the income from work done by hundreds of roadside vendors and day labourers (kibaroa). A stoppage of even a few days is a serious problem since all income ceases and money is needed for necessary (health) treatment.”

“The disease... which most commonly occurs and recurs (several times) is fever, because we’re too close to the Andriantany canal, which is really filthy... The disease has serious consequences because you have to stop (working) for about 4 days. When fever hits you, your body is weak, you tremble all over.”

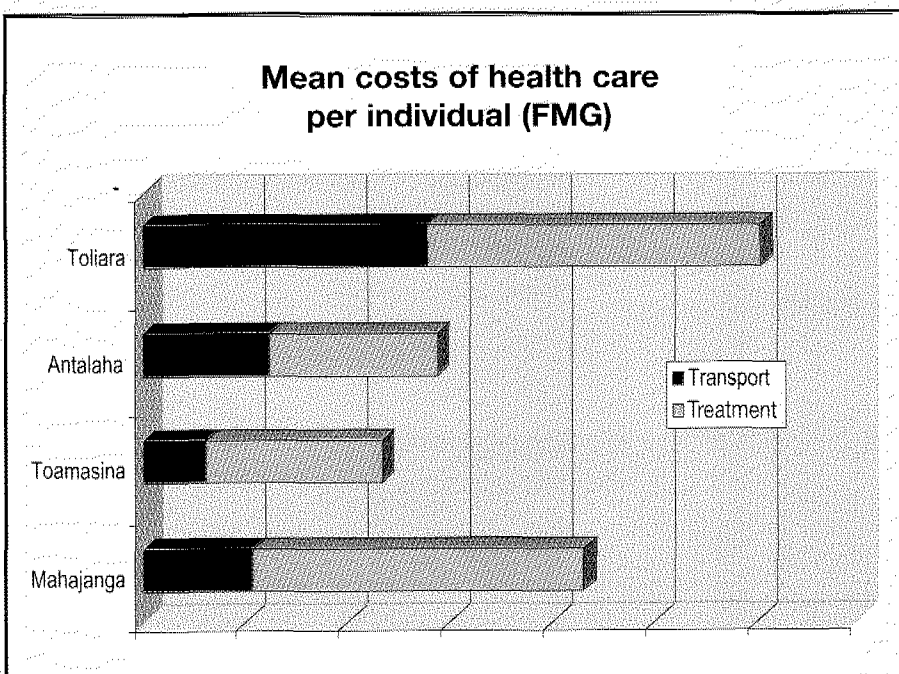
If the mean figures collected in the MADIO survey are extrapolated to the national level, the work lost amounts to more than 5 million days of production. The total value of the lost production is equivalent to 51 billion Francs.

It is not easy to evaluate the impact of the situation on tourism, but epidemic outbreaks such as cholera are responsible for a marked fall in the number of visitors to the main island and in the tonnage of prawns and seafood exported.



*A shit view?
Not for tourists: a glimpse of the beach at Toliara*

> **Traitement de maladies exorbitant**



MADIO project data: in-house calculations

Treatment of diseases is expensive for households living on the breadline: the cost of medications alone, not including the consultation, is often 20 000 to 30 000 fmg for children and 50 000 fmg for adults (see graph). Antibiotics for treating diarrhoeal diseases or scabies cost between 15 000 and 30 000 fmg. Consultation of a private physician in the

neighbourhood costs 10 000 to 20 000 fmg; the attendance fee at a hospital or public health centre is between 2,500 and 5,000 fmg (Anosibe). When people are ill they have to consider whether or not they should seek treatment. The poorest often go without treatment in the hope that they will get better without having to meet the cost of expensive consultations and medications. Nevertheless, statistical studies inform us that in Madagascar a great deal of money is spent on account of diseases linked to poor sanitation. The mean costs of consultation, transport and medications were enumerated by the MADIO project⁷ (see graph on preceding page).

If these expenses are representative of different regions of the island, throughout Madagascar families pay out the annual sum of 200 thousand million fmg to offset the effects of the four diseases investigated.

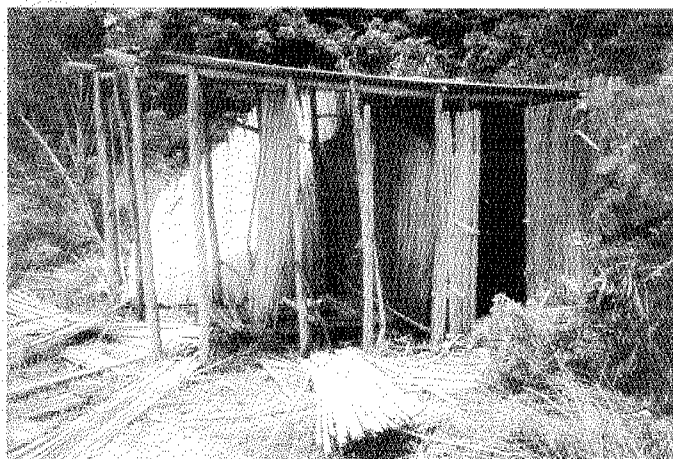
4.3. Poor school performance

According to the estimate provided by the teachers of Isotry (a neighbourhood in the capital), 60 % of the 900 children attending their schools (infant and primary schools of Ampefiloha and Tsaralalàna) are absent for several days at least three times a year because of fever or other diseases. It is clear that the lack of hygiene and sanitation is a significant factor in poor performance at school.

The statistical surveys of the MADIO project⁷ suggest that between 2.2 and 4.6 % of school children missed classes during the month prior to the survey on account of the listed diseases. The mean number of missed days was 2.6, and it may be deduced from this that if the same conditions exist throughout Madagascar a total of three-and-a-half million school days are lost because of these four diseases every year.

According to the verbal reports at Mahavatse II, cases of diarrhoea make children to stay at home for at least three days and malarial fever even longer... When these health conditions recur several times in the year, a child may be off school for several weeks at a time.

When the monsoon rains leave large puddles of stagnant water in the school yard, as occurs with the Mahavatse II fokontany primary school and nursery school which are built next to each other, the school management itself may decide to stop the classes. The problem is that these puddles may persist for 10 days or more before evaporating, provided of course that they are not filled again by a fresh downpour.



WaterAid/Joe Gomme

School latrines in an appalling condition

4.4. Socio-cultural effects

Often overlooked in professional analyses, the socio-cultural effects of poor sanitation are also considerable. At Toamasina, for example, there are many disagreements and altercations between neighbours because of the stench and the scattered waste resulting from the lack of toilets. A woman who recently constructed a hygienic latrine said to us: "Now we won't have any more quarrels with the neighbours because of the foul smell that we used to have." Culturally, being clean and hygienic equates with a sense of purity and pride. When you're dirty, it's not just poverty you suffer from but shame.

During the cholera outbreak, a real psychosis sprang up within Malagasy society. All kinds of rumours and gossip circulated because of the need for strict regulations about how to treat the bodies of dead people. The conflict between these regulations and the traditional funerary rites was acute, and it had an important impact socio-culturally (how can people choose between meeting the demands of community health and respecting the rules established by their ancestors since the beginning of time?)

4.5. The impact of change

Studies on the health impact of improvements in water and sanitation tell us that promoting sanitation and hygiene is even more significant than providing drinking water in bringing about a reduction in diarrhoeal diseases, intestinal worm infestations, skin diseases and eye infections. Research conducted by Esrey^{8,9} shows that more effective elimination of faecal waste can lead to an up to 36 % reduction in infantile diarrhoea. Hygiene (especially hand-washing) led to a 33 % fall in diarrhoea in nursing infants. Improved sanitation also decreased the incidence of other diseases such as schistosomiasis (77 %), ascariasis (29 %) and trachoma (27-50 %). In addition, the severity of the disease was often reduced to a greater extent than either incidence or prevalence, which shows that better sanitation reduces the exposure to pathogenic agents.



WaterAid/Jeremy Horner

This house is typical of the highlands: pigs and children mingle freely... with good hygiene, their children will improve their nutritional status

Various authors, whose work has been collated by Esrey, have suggested that in areas where 75 % of the population practises effective hygiene, the mortality rate of children aged less than 5 reduced by 60 %, mortality due to diarrhoeal diseases falls by as much as 65 % and that there is also a 38 % reduction in severe or moderate nutritional retardation¹⁰.

If sanitation in Madagascar were improved today, the population would enjoy great sanitary, social and economic benefits. Tens of thousands of deaths could be avoided every year[†] and under-five mortality could be reduced from the current rate of 14.2 ‰ to a rate as low as 5.7‰ of live births.

Diseases linked to sanitation would decrease compared to the current rate (Ministry of Health) by more than 33 % in all PHC outpatients. More than 5 millions working days could be saved every years by means of the reduced morbidity resulting from sanitation. Malnutrition levels would fall from 49 to 30 %. Households would be able to save 200 billion Francs every year on costs currently swallowed up by expenditure on curative care. The state could earmark funds for other budget items and release financial resources so that more complex health problems could be dealt with. A growth in the number and improvement in the standards for school toilets would reduce the rate of missed school days and improve school results (especially for girls who have reached puberty). Substantial environmental improvements could be accomplished, especially in urban areas and of water tables. Fish farm production and agriculture and tourism could be developed more effectively. Working together, these improvements would bring about a greater sense of human dignity and a keener sense of national pride. No other intervention could do so much to reduce poverty in Madagascar.

[†] According to demographic surveys, and assuming that 20 % of the population (of a total of 15 million) is less than 5 and that 50 % of deaths could be avoided for a current under-five mortality rate of 14.2 ‰: $15\,000\,000 * 0.20 * 0.50 * 1.142/5 = 42\,600$ deaths annually.

5- STUMBLING BLOCKS: WHY DO WE LIVE LIKE THIS?

5.1. Sanitation and poverty

The bibliographic study of the GReCS sector² brings out the incontrovertible link between drinking water, sanitation and poverty.

The problem of hygiene and sanitation must be seen within the framework of the problem of poverty: the lack of hygiene is in fact one of the worst forms, if not the worst, of poverty. "We're dirty because we're poor." This unambiguous and damning assertion was made so many times in the course of the study. Improving the hygiene and sanitation situation in a given milieu is therefore the prime way to create conditions which are likely to help people work and fight against poverty.

5.2. Words are not enough

Everything has been said and even repeated ad infinitum regarding this fact. Sanitation, hygiene and clean drinking water are the prerequisites for human welfare: their impact on existence is obvious both in terms of health and general socio-economic life. But talking and writing, giving speeches or even defining a problem or devising strategies are not necessarily the same as actions and implementing the envisaged concrete solutions.

Any solutions put forward risk remaining ineffective or futile if cannot be converted into practical realities. The solution thus has to be political in nature. It depends on genuine resolve and an intelligent strategy which necessary for any large-scale action to attain commitment, technical know-how and contact with policy-makers allied with dynamism on the part of companies concerned with carrying out the work.

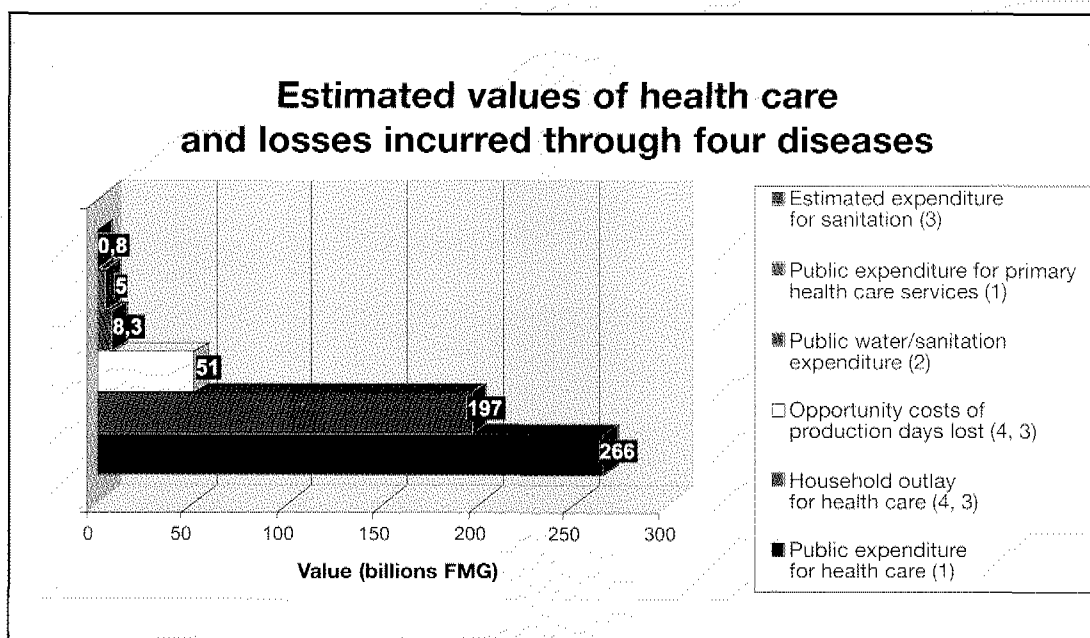
5.3. Scattered nature of responsibilities

At the political level, many parties intervene in the sanitation sector (MINATV, MINSAN, MEM, MEN, MIA, CD)^{*}. This is a key stumbling block which hinders strategic solutions and problem-solving. There is effectively no clear-cut policy or action plan. The sectoral strategy⁴ does not identify the ministerial department with the task of assuming leadership in its implementation. There is a secretariat for sanitation within CNEA[†] but it is unable to fulfil its coordinating role because its members are scattered and it has no proper leadership.

While the bibliographic evidence and field studies both suggest that there is a cause-and-effect as well as a structural relationship between conditions and hygiene and sanitation and the individual and collective health of societies, studies confirm that this relationship does not exist within the public administration. The lack of accurate data and the a designated spokesperson are real hindrances to the development of sanitation.

5.4. Sector funding

The graph below shows current public expenditure in comparison to costs and losses sustained by households on account of the four diseases studied[†]. According to the review published by Rakotondrainibe, in reality 0.3 % of public expenditure is earmarked for the water/sanitation sector, which represents a total amount of several thousand FMG per person per year.



^{*} MINATV: Ministry for Land-Use and Urban Planning; MINSAN: Ministry of Health; MEM: Ministry of Energy and Mines; MEN: Ministry of the Environment; MIA: Ministry of Industry and Trades; CD: Decentralized Communities.

[†] CNEA: National Committee for Water and Sanitation

[‡] The references for these figures are (1) 20/20 Health Study; (2) 20/20 Water/Sanitation Study; (3) our own calculations; (4) MADIO statistical study.

Rakotoniaina further explains that 90 to 95 % of this amount is reserved for clean drinking water³, leaving approximately 500 FMG per person per year for sanitation. What can anyone do with 500 Fmg?

It should also be said that funds provided by financial partners (bilateral, multilateral agencies and NGOs) are also very low in the sanitation sector. (Only 0.7 % of external aid was intended for water and sanitation in 2000.)

At the household level, the small incomes of poor families and the lack of any proper awareness-raising campaign have manifestly reduced any contribution they might make to the sanitation of their environment.

5.5. Culture, mentality, awareness

Ignorance or the lack of awareness is the third stumbling block which prevents problems arising in this sector from being dealt with. In fact, it presents a barrier to the genuine commitment of communities to improve conditions of hygiene and sanitation. This lack of awareness would seem, at some level, to be logical or at least understandable in terms of the lack of interest among policy-makers.

Here the water/hygiene/sanitation/health conundrum is also a problem of culture, education and social relations. People have to be persuaded that hygiene is necessary for health, not forced by cruel words or threats (unfortunately the method frequently chosen during the last cholera epidemic) to build latrines. A well thought out and good informative method of educating is far more likely to win genuine support. It is rare to find this kind of strategy, one which adopts a genuine educational approach, respectful and persuasive, as well as with a conviction that if the historical situation is alive and evolving it ought also to be open to change.

6- WHAT'S TO BE DONE? RECOMMENDED ACTIONS

Confronted with these stumbling blocks, a call to action has been launched. This call is addressed to all parties concerned with an interest in the development of Madagascar.

Government



Frères Saint Gabriel

*With institutional support
and effective IEC poor people are
prepared to take up the challenge.
What about us policy-makers?*

We launch an appeal to government authorities: the sector needs your support. It is essential to put in place a national policy especially for sanitation, which would define both the roles and responsibilities of each authority in the regulation and coordination of the sector at the central, provincial, prefectural and communal levels. In particular this policy must assign leadership in the sector.

Given the known links between hygiene, sanitation and health, a coordinated relationship based on the structural complementarities is also necessary and should be set up between the ministries concerned (health, land-use planning, energy and mines, industry, development, etc.). Water-related problems of hygiene and sanitation fall, to different degrees, under the jurisdiction of these ministries, none of which can act independently of the others...

Financial partners and development

We also launch an appeal to funding bodies and organizations working in the development field. Proper recognition has to be given to the critical role of sanitation in the process of development, and recognition has to be given to the strong links between sanitation and health, between sanitation and drinking water, between sanitation and nutrition, between sanitation and reducing poverty. And if this role is duly recognised, the sector ought to be given priority status in strategies, investment plans and future actions.

➤ **Organizations working in the educational field**

Local people must also commit to the effort. We need to get it across to them, while respecting their traditions and identity, that life in the 21st century must accommodate a host of changes in the world around them which were unknown to their ancestors, but which the ancestors in their wisdom would instruct the people to accept were they alive today. The way people think and act can be changed only if this principle is respected.

NGOs and associations should therefore emphasize this type of IEC within decentralized services when setting up educational teams for the ongoing communication with local people in respect of hygiene and sanitation problems.

➤ **Local communities**

Local communities should also get involved in the campaign. They should join forces and take their responsibilities in hand for effective personal, family and environmental hygiene, to commit to guarantee the effective and rational use of clean drinking water supply systems as well as sanitation facilities, especially for the disposal of excreta, rubbish and domestic waste water, and thus to make a genuine contribution towards the development of the sanitation sector.

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The human ability to resolve problems is almost limitless. By working together, in a spirit of partnership and coordination, humankind is able to construct space stations. That kind of inspiration should make it possible to resolve the problems of sanitation in Madagascar too, and bring about real results hoped for in terms of health, economy, education and culture, and make a major contribution to lasting human development and to the elimination of poverty. The solutions are within our grasp. Is the willingness there too?

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