The Ibadan Comfort Stations Programme: A Case-Study of the Community Development Approach to Environmental Health Improvement

D. Pasteur*

INTRODUCTION

The purpose of this article is to present a case study of an innovative approach to the management of environmental health programmes in a large West African city. The case illustrates an attempt to tackle the problem of environmental health improvement through a process of partnership between public agencies and the community, using an approach which takes account of the distinctive socio-economic characteristics of a 'traditional' city. Environmental health improvement is an important priority in West African cities, and merits discussion in its own right: at the same time it is only one part of a wider problem of upgrading and development which confronts the older parts of these cities. The Comfort Stations programme therefore provides an opportunity to discuss some of the problems that would be associated with a more comprehensive programme of upgrading. Nigerian writers have pointed to the potential of the community development approach to the improvement of Ibadan1. The problems of Ibadan are repeated in other Yoruba towns of South West Nigeria, and with variations, in Nigeria as a whole. Trends in other countries also point towards greater use of a community development approach to upgrading of squatter settlements and slums.

The focus of this study is on the management process rather than on technical problems of health and engineering. The technical aspects of the programme are described as they are of interest to administrators, but they are not evaluated. The issues on which the case-study focuses are ones of administration, organization, and procedures, including those of communication with and participation by the community on the one hand, and wider issues of governmental structure on the

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other. The case-study describes the evolution of the programme from its inception in 1969 to 1977, and presents the situation as at the latter date as a problem for discussion of strategies for the future continuation of the programme.

THE CITY OF IBADAN

Until recently Ibadan was the largest African city south of the Sahara and north of the Zambezi. It has been overtaken by Lagos and Kinshasa, but it still remains the city with the largest traditional or indigenous component. Many writers have described the dual nature of the city with the congested and densely settled 'core area' that grew up from the origins of the city in 1820, surrounded by the much more extensive and less densely settled areas of the modern city surrounding it, which originated during the colonial period.

The 'Inner core' remains in many ways a traditional city both economically, socially and physically with strong links to the rural areas. Economically it is characterised by highly intensive small scale activity, particularly markets, but also small scale manufacturing and service activities; socially it retains the traditional patterns of extended family compounds under the family head or chief (magaaji), with land held by the family and its members under the traditional system of tenure; physically it is highly congested, its expansion is prevented by the encirclement of more modern areas of the city, and development is limited to individual efforts either of incremental improvement of structures, or rebuilding to improved standards or for new land uses. A process of modernization and change is taking place in the inner core in all these dimensions, but it is a spontaneous and organic process of change, and there have effectively been no efforts at planned change, restructuring, or intervention by the public authorities. The area remains from one viewpoint the heart and soul of the city, but from another viewpoint it can be regarded as an anomaly in stark contrast to the modern central business district, industrial areas, government offices, educational institutions and residential layouts which surround the core and which since the oil boom have started to expand rapidly. Planned intervention in the upgrading of the core areas seems inevitable in one form or another. Environmental conditions and the absence in many areas of adequate services and access roads are one reason for this: another reason is the economic inefficiency caused by the congestion in the traffic and markets system which are an essential part of the interaction between the core area and the surrounding city.

The following population estimates were made by consultants (see below) in 1971:

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<tbody>
<tr>
<td>Ibadan City Council Area</td>
<td>630,000</td>
<td>562,474</td>
<td>802,860</td>
<td>1,452,000</td>
</tr>
<tr>
<td>Master Plan Study Area</td>
<td>581,777</td>
<td>501,078</td>
<td>534,483</td>
<td></td>
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</table>

The 1969, 1980 and 2000 figures are for resident population, and it is acknowledged that population in Ibadan is swelled by a large day-time influx and is hence difficult to estimate. The density of population in the inner core in 1969 was estimated at 140 persons per acre as compared to 30 ppa in the high income residential area.

ENVIRONMENTAL HEALTH PROBLEMS IN Ibadan

In 1969 the Federal and Western State Governments with UNDP assistance jointly commissioned a study for the preparation of Master Plans for sewerage, drainage and solid wastes disposal. The study was undertaken for the WHO as executing agency by consultants and completed in 1971, with an interim report submitted in 1970. The study summarised the existing sanitation facilities in the inner core as follows:

a. Provision for the disposal of excreta is by salga facilities (pit latrines), a conservancy service covering only a limited population (20,000 approx.), and to a lesser extent septic tanks and soakaway pits. Pit latrines, while usually well constructed, encounter problems arising from soil conditions and rock, and the need for renewal. Public health and aesthetic problems arise from the practice of desludging old pits by spreading the contents on the ground surface in the immediate vicinity. Considerable health hazards arise from the nature and method of operation of the conservancy service. Septic tank effluent is frequently discharged to adjacent streams.

b. Grey (domestic) waters and industrial waste waters are discharged to the surface drainage system. The separation of domestic waste water from sewage disposal, resulting partly from the limited water supply in the area (consisting in large part of standpipes), both increases the health hazard from sewage, and results in pollution of streams and accumulation of stagnant pools.

c. A number of public facilities exist, consisting of aqua privies, pit latrines, and pail latrines. All pose problems of maintenance and only in the aqua privies can reasonably healthy conditions be expected.

d. It was estimated by the Health Department that about 10% of the population of the Inner Core have no facilities as evidenced by the extensive use of vacant lands and stream banks as latrine areas.

e. Urban stormwater run-off is conveyed in unlined earth surface drains to the many streams and rivers: these are often also used for the disposal of refuse and for the location of communal refuse dumps. These 'receiving waters' are thus heavily polluted which severely limits downstream use of water and causes severe damage to the aesthetic environment. The practice of using streams for emergency drinking water supply constitutes an obvious hazard and even contact with polluted water for bathing and washing is not free of risk.

f. Wells are still in use by some for emergency water supplies, and these run the risk of pollution.


In the newer areas of the city most premises are served by septic tanks and some large institutional, commercial or industrial establishments have their own sewage treatment plants.

The study presented available statistics of diseases such as schistosomiasis, dysentery, typhoid, and of infant mortality. Statistics relating to Ibadan and particularly to the Inner Core were limited, but the study summarised its view as follows:

'While the foregoing data are not definitive, they provide an illustration of the extent and relative importance of diseases associated with sanitation, and the disease on which the provision of improved sanitation facilities will exert a diminishing effect'.

In 1971, there was a cholera epidemic in Ibadan resulting in a number of deaths in areas of the Inner Core, though none in the area of the pilot project, a fact which was put to good effect in subsequent publicity.

THE ORIGIN OF THE COMFORT STATIONS PROGRAMME

The consultants presented an 'immediate measures programme' for sewerage for implementation in 1970-72, followed by first, second, and third stage programmes up to 1980, 1990, and 2000 respectively. The highest priority under immediate measures was given to improving private domestic facilities in the Inner Core, and the method chosen for this was the Comfort Station, 'an essentially private facility, serving a family group of approximately 100 to 300 persons in a compound area'. Other components of the immediate measures programme were improvements to the conservancy service, increased provision of public facilities in places such as markets, and the establishment of a new organisation, the Ibadan Wastes Disposal Board, to undertake the full programme of sewerage, drainage and solid waste disposal. The sewerage programme would consist of a network of sanitary sewers to extend over the city as a whole including the Inner Core. But the conversion of premises in the Inner Core to individual waterborne sanitation and even the elimination of the conservancy service, was to be a long term process, and it was proposed that construction of Comfort Stations should continue through the third stage to the year 2000, subject to their proving themselves in a pilot study.

Following the completion and monitoring of a pilot project in 1970 it was proposed that a further 25 stations be undertaken in 1971-2, and the Master Plan envisaged a total of 2,500 to cover the requirements of the Inner Core up to the year 2000, with 500 of these being built by 1980. The following are the main features of the Comfort Station concept:

a A Comfort Station consists of a block containing toilet, bathing and clothes washing facilities: there are alternative methods of providing each of these, and alternative layouts to suit site or social considerations. Typically each household has its own toilet within the block.

b Initially the aqua privy method of disposal is being used, the block being constructed over a large septic tank: only when the sanitary sewer is both constructed

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and accessible can a waterborne (flush) system be used.
c Land is donated or allocated by the community, which in the Inner Core is to a large extent still organised on the basis of family compounds. Vacant areas of land often exist in the compound for the purpose of refuse disposal. In some cases members of a family have not built on their share of the land.
d Labour is provided either on a self-help basis or by contributions of money in lieu. The public authority contributes the whole cost of the materials and provides technical advice and supervision over the construction process. Experience has however caused this clear division to be modified (see below), as well as the method of construction.
e The most important site requirements are suitable ground conditions, availability of water and electricity supply, and vehicular access to permit desludging where an aqua privy is used.
f In 1970 costs of an aqua privy unit were estimated at N5,200, comprising N2,600 for labour and N2,600 for materials.
g Maintenance is the responsibility of the community group, with the provision of needed public services on payment (such as desludging). Cost elements were estimated at:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost (N)</th>
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<tbody>
<tr>
<td>Salary of attendant</td>
<td>256</td>
</tr>
<tr>
<td>Water</td>
<td>250</td>
</tr>
<tr>
<td>Electricity</td>
<td>100</td>
</tr>
<tr>
<td>Cleaning equipment etc.</td>
<td>40</td>
</tr>
<tr>
<td>Yearly reserve for painting and cleaning of aqua privy</td>
<td>62</td>
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<td></td>
<td>708</td>
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The cost of the attendant is normally eliminated by sharing out the task of maintenance on a communal basis.

THE EVOLUTION OF THE PROGRAMME 1970-77

a The Pilot Project
Concurrently with the conduct of the study by consultants, the WHO Project Staff in conjunction with Nigerian counterpart staff from the State Government, Ministry of Works and Housing, and Ibadan City Council, in 1969 initiated a pilot project, choosing for this an area where there was an established community organisation. The Oke Padi-Oke Seni Community Development Association was established in 1964 covering 21 family compounds with a population of over 6,000 people. The Association had already undertaken a number of improvement projects. Acting through the progressive leadership of the Association, one family compound consisting of eight households and 114 persons was selected for the first Comfort Station.

b Achievements since 1971
By the end of 1972, 24 Comfort Stations had been initiated, ie virtually the
whole target figure, although only three had been completed. By the end of 1975, sixteen had been completed and a further six added to those initiated. By October 1977 the total completed and in use was 24, with a further five completed, eleven under construction, four agreed by the communities and a few more still under discussion. Thus after a promising start the programme by 1977 had fallen well behind target, though it was still alive.

c The Ward Health Council
In 1972 a Ward Health Council was set up in Ward NW3, one of Ibadan’s 47 wards, with a population of some 15,500 in 133 compounds. This Ward embraced the Oke Padi-Oke Seni CD Association and the Council shared some of its leadership. The Council was instrumental in promoting the idea of Comfort Stations and other health measures. Since then one further Council was formed in Ward SW 4/5 with the co-operation of the Regional Health Education Centre, University of Ibadan.

d Project Organisation
In 1973 the WHO Project Staff completed their assignment, and full responsibility for the sewerage programme was assumed by the newly-formed Ibadan Wastes Disposal Board (IWDB) whose staff included a number of the project counterparts and staff transferred from Ibadan City Council. The structure of IWDB and its relationship to other government agencies are shown in Figure 1. The staff included a Community Development Officer, this post being filled by a person who had been most prominent in the leadership of the Oke-Padi-Oke Seni CD Association and the Ward Health Council, and who had in the interim been trained overseas in Community Development. In 1976 he resigned and was replaced by a Health Superintendent from within the IWDB, whose training included health education, and who had considerable familiarity with the Inner Core. The CDO has worked on his own without supporting staff. Technical assistance has been provided by the Design and Construction Division of IWDB.

c Local Government Reform
In late 1976 following the national reform of the local government system in Nigeria, an elected Council was formed for Ibadan to replace the previous appointed Management Board. In October 1977 the Council set up Area Committees in each of its 27 electoral Wards, with the Ward Councillor as Chairman and an appointed membership of local leaders. The Committees are intended to act as a two-way channel of communication with the public, particularly for the formulation of development proposals to be undertaken by the Council, and to provide support for Council policies, especially revenue collection.

Procedures and Problems of the Programme
The following paragraphs will describe the procedures adopted in the Comfort

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"Since the field work for this study was undertaken, the IWDB has been abolished and re-absorbed into the Ministry of Works and Housing."
Stations programme which can be divided into three phases of management. First the introduction of the idea, gaining acceptance in principle and on details such as land and finance: secondly the development phase covering construction: and thirdly the utilization and maintenance phase. An assessment will be made, at a general level, of the main problems encountered at each of these phases which have tended to act as constraints on the programme, and in most cases continue to do so: and the survey will seek to expose the most important management procedures and relationships entailed in the programme, so as to form a basis for discussion of current management issues. This assessment draws on the study undertaken in 1973-75 by the head of the African Regional Health Education Centre at the University of Ibadan,1 and on the opinions of IWDB staff on the problems currently being faced.

THE INTRODUCTION PHASE

a Gaining acceptance, and briefing procedure

The approach adopted has been one of community involvement and participation: it was recognised at the outset that Comfort Stations would not achieve their objectives in health terms nor would they be properly maintained unless the community and individuals within the community felt committed to the idea. The pilot project harnessed the favourable attitudes of an existing community development organisation. Subsequent projects have received encouragement from the early success, some have gained momentum from the work of the Ward Health Council, and others from the publicity arising from the cholera outbreak. The normal procedure has been for the CD worker, first under the WHO project and subsequently in the IWDB, to look out for potential family groups which might be interested in a Comfort Station, and for sites with suitable access. The approach may come either from the family or the CD worker. Once initial interest has been shown a series of meetings will be held, usually in the evening when all members of the group are available. The project will be explained, at first in general terms, and then in detail until agreement is reached. Where there is disagreement within the group eg over the allocation of land, or financial contributions, the CD worker will hope that social pressure will be exerted.

b Land, Access and Siting

While vacant areas of land are available and are often already in use as a communal dumping area for refuse, they may well be the share of family land allocated to one member of the family who is unwilling to see potentially valuable building land turned over to a communal latrine. In the view of the IWDB, land represents the strongest constraint against more rapid progress.

Access is another problem due to the limited number of roads and tracks in the Inner Core, and to the limit of distance from a road that can be reached by the pumping equipment presently available to IWDB.

c Community Contributions
The early projects called for 'self-help' contributions of labour to cover the construction, with the materials being provided by the authorities. For those unable or unwilling to provide labour, it was possible to commute to a financial contribution. It soon became clear that most people preferred to make financial contributions and that the construction process was difficult to manage on this mixed basis, and financial contributions are now the rule, the total required from a family compound being N800 which was the labour cost of the early projects. The same figure has been retained up to 1977 despite significant increases in costs. The IWDB has taken the view that the important thing is to secure commitment rather than to cover costs: an increase in contributions would probably antagonize people who have tended to be very unwilling to part with even small payments to government agencies. The apportionment of contributions within the family group is a matter for them to decide. As soon as the full sum is collected and paid over, the project can go ahead. IWDB requires no further written agreement. The land in any case remains in the family's ownership. For the record a list of the members of the compound is kept by IWDB. A written commitment would only lead to suspicion, eg that the land might be acquired by government.

d Capital Funds
The pilot project was financed by a contribution from USAID. The next 25 Comfort Stations were financed by a loan from UNDP. Since then funds have been included annually in the State Government's Development budget under the allocations for the IWDB. In 1976/7 an allocation of N250,000 was made for 20 units and in 1977/78 an allocation of N130,000 has been made for 10 units. The reduced number is due to the slower rate of progress than expected rather than to shortage of capital funds, but IWDB hopes to be able to accumulate unspent funds from 1976/77 for use when more projects can be initiated.

THE CONSTRUCTION PHASE
a Design
IWDB uses standard designs based on early experience in the programme. The choice of design is only one of layout and size which are dictated by characteristics of the site and population to be served. These are not matters over which the family group can be asked to exercise any choice, nor are there any areas in which the IWDB consider the community can be asked to make decisions.

b Materials Supply
In earlier stages of the programme delays were caused by a shortage of materials such as cement, arising from the nationwide supply situation. This tended to discourage groups which had committed themselves and made their financial contributions.

c Construction
After the abandonment of voluntary labour, construction had been either by contract or direct labour. Current opinion in IWDB is that the contract method is
preferable. Construction costs have risen from N₄,000 approx. in 1971 to N₁₂,000
in 1977. IWDB is capable of providing the technical services for design and
supervision at the present level of the programme and given continuance of the
standard design, but with the shortage of staff currently being experienced would
find it difficult to handle a larger programme, given commitments on other
aspects of the sewerage and drainage programme.

The Utilization and Maintenance Phase
The Ademuwagun Report showed that while in general the idea of Comfort
Stations had been accepted by the family compounds concerned, and the level of
use was reasonable, a number of factors were affecting the level of use and preventing
the programme reaching to full potential.

a Attitudes to Sanitation
There is a tendency for ingrained habits to persist and a failure by some to use
the new facilities. The study found that despite the unsatisfactory environmental
conditions in the city, personal habits of cleanliness were in many respects
satisfactory. On the other hand the majority of people were not accustomed to
linking poor sanitary conditions with their state of personal health.

b Level of Participation
It was found that a significant proportion (about 50%) of adults had not been
involved directly in the planning stage of the projects, and were therefore less
committed to their success. Leadership groups were both more committed, and,
by virtue of better education, better able to absorb the public health implications.

c Public Utility Services
Neither water supply nor electricity supply have been entirely reliable in Ibadan.
Absence of water seriously affects the washing and toilet cleansing facilities,
and power cuts discourage use of the facilities at night.

d Public Utility Costs
One of the most serious problems has been the failure to meet water and electricity
bills, resulting in mounting arrears followed by the cutting off of supply, or
in some cases the closure of the wash-house so as to save water. The study shows
the following position for the pilot project compound:

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<th>Total charges incurred October 1970 to March 1974</th>
<th>Total paid</th>
<th>Outstanding debt</th>
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<tbody>
<tr>
<td>Water</td>
<td>372.53</td>
<td>117.10</td>
<td>255.43</td>
</tr>
<tr>
<td>Electricity</td>
<td>10.00</td>
<td>6.00</td>
<td>4.00</td>
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Two factors have contributed to this situation: first the excessive use of water,
either due to waste or unauthorised use by non-members of the compound:
secondly the cost of utility services, especially water. Water has been supplied
through meters and charged at the metered tariff rate applicable to industrial consumers. Domestic consumers in Ibadan are not metered and are charged on a flat rate system. Tariffs in Ibadan in 1976-77 were as follows:

- Industrial and Commercial supplies (metered) $5.30 per 1000 gallons
- Domestic water rate for standpipe supply (applicable to large areas of Inner Core) $N2 per annum
- Domestic water rate for individual connections (non-metered): charge per family for up to 200 sq ft of floor space $N2 per month

IWDB has approached the Oyo State Water Corporation with a request to modify the tariff so as to reduce the burden of costs, but this has been turned down: one reason given was that a flat rate or subsidised tariff would encourage waste.

Maintenance

The level of maintenance has not always been satisfactory: where this has been shared among members of the community, not all have done their share. Where a paid attendant has been engaged he has not always been paid. There have also been failures to maintain and repair the structures.

Conclusions and the Way Ahead

The position at the end of 1977 regarding the Comfort Stations programme can be summarised as follows. As a method of providing domestic facilities for the Inner Core it has been proved acceptable and appropriate in social terms; it has been proved technically feasible; and it has been proved administratively and financially feasible. At the same time it faces constraints on all these fronts which combine to make it apparently difficult to achieve more. The scale of achievement in the seven years since 1970 falls far short of the needs for the population of the Inner Core. At the present rate the programme will barely realise the 1980 target by the year 2000. Yet its achievements to date indicate that this innovative programme presents an opportunity for a major breakthrough in tackling the problems of the Inner Core. In conclusion this article will examine the constraints faced by the programme, the issues - technical, social, managerial, financial and wider questions of governmental organization and urban policy - which they raise, and some possible solutions.

a Technical Issues

The programme is limited by the need for occasional access by the desludging vehicle to areas close to roads or tracks: that is, unless there is a technical means of extending the distance that can be reached by pumping. Otherwise the programme sooner or later becomes dependent on the extension of roads under a wider upgrading programme.

b Social Issues

So far only persuasion has been used to secure individual surrender of land for the communal purpose. To pursue this more rigorously would require more
effort by community development staff. Incentives such as financial compensation from public funds, or the allocation of a plot elsewhere might speed the process up. It seems most unlikely that compulsory action towards individuals or compound groups would be a productive approach: there must be co-operation and participation. Maintenance is another social issue and is not only dependent on the level of costs, but also on the leadership and organization of the compound group.

c Management Issues
While the sanitation programme as a whole had institutional identity in the IWDB, it is still not much better off for staff than the average Nigerian municipal agency, and within the organization the more prestigious and visible sewerage activities tend to take precedence. The project has established the viability of the community development and partnership approach, but has not attracted the commitment required to make it really successful.

A Comfort Stations project team with clear leadership, an increase in CD staff, and technical staff available on an adequate scale if not full time, would all be helpful in an expanded programme. The success of a programme such as this one, undertaken in a traditional and sensitive social context requires, above all, the deployment of staff with community development skills in addition to technical skills. An increase in the staff of the CD section, whether primarily trained in health inspection or community development, would yield benefits both at the initiating and the maintenance phases of the programme.

d Financial Issues
The compound members are meeting an ever-decreasing proportion of construction costs as these grow with inflation, and if subsidies for water and for electricity charges are to be entertained, the level of subsidy would be even greater. It is often argued that subsidies for the upgrading of urban areas are not justified given even greater priorities for rural development, and that urban communities should pay for what they get. On the other hand the social benefits of sanitation programmes are considerable, not only to the participants, but to the rest of the community through savings in health service costs. There are also considerable potential benefits from the acceptance of upgrading in the health field, as it could open the door to further forms of partnership with public agencies in a comprehensive upgrading programme. There is therefore a strong case for softening the burden of utility charges, particularly water. For the answer to this, one has to turn to the tariff of the Water Corporation.

On the one hand the Corporation accepts the principle of subsidy since the charges for standpipes in the core area are at a low flat-rate level, and the Corporation itself is subsidised by the State Government. On the other hand it is anxious to deter waste from individual taps and wash-houses and has chosen to apply a
metered economic rate to the Comfort Stations. Both economy and subsidy could be achieved in a compromise under which the tariff allowed consumption up to a certain level at a subsidised rate, followed by a progressive charge for larger amounts. The principle of self-sufficiency of urban areas would be preserved by levying higher charges on more wealthy consumers in other parts of the city, whether domestic or industrial.

**Wider Issues of Governmental Organization**

This is a programme which is not reaching its potential. The reason cannot be that there is a shortage of funds, since the amounts required are small in relation to the State’s Development Budget. That the programme has potential is not necessarily the general view, since it lacks visibility, political appeal and professional achievement as compared to larger programmes. The problem is thus partly one of attitudes to this sort of programme in this sort of area and income group. At the same time this type of approach to environmental health is receiving increasing favour internationally, and this could support the local initiative. The case does also draw attention to the question of governmental organization and co-ordination for urban development. Is there a Ministry or co-ordinating body at State level responsible for giving the programme a boost when it flags, and stimulating the Water Corporation for example to be more flexible on its water tariffs: or for engaging the support of political leaders in the Municipal Government and its Area Committees now that they have been established? Finally is the programme’s connection with, and probably also dependence on the wider process of upgrading in the inner core being explored? The introduction of roads and community services will require much more space and hence demolition than Comfort Stations, and will also need to be planned over a larger physical area than that covered by the traditional family compound. Even if the layout of services that would be ‘superimposed’ takes maximum account of existing tracks and open spaces, there will need to be some degree of compulsion in addition to persuasion, social pressure and incentives. Participation and consultation will tend to be with wider representative groups rather than compound communities, though the latter will still be involved at certain points. There will need to be ‘overspill’ areas, presumably some distance away on the edge of the city where those displaced can be resettled in new communities, preferably with income opportunities.

The Comfort Stations programme has something to offer the wider programme in its experience of development partnership, and it establishes the precedent from which a wider programme can be started. At the same time its current administrative, participatory, and financial incentive procedures are not sufficient for a wider programme, nor can it provide ‘overspill’ land. The Comfort Stations programme will thus benefit from the introduction of a full upgrading programme of which in any case it is a part. Perhaps the sooner this is done, the better.