

JOHANNESBURG: AN AFRICAN HEALTHY CITY

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1. INTRODUCTION

Johannesburg was founded in 1886, after the discovery of large gold deposits in the area. Since that time, the city has emerged as the largest urban complex in Southern Africa, and amongst the largest on the African continent. The city offers a wide range of mining, engineering, manufacturing and financial services. Central Johannesburg houses over 2.2 million m² of office space, and over 1 million m² of retail space.

Metropolitan Johannesburg is located around a series of low, rocky ridges that constitute a watershed between the drainages into the Indian and Atlantic

oceans. The urban landscape is dotted with mine dumps, which bear witness to the city's mining origins. Greater Johannesburg covers an area of 1 384km² at an altitude of around 1500 to 1800 metres above sea level. The climate is temperate, with about 8 hours of sunlight per day during both winter and summer, and an average temperature of 22.4°C. Rainfall averages about 710 mm per annum, mainly during the summer, in the form of late-afternoon electrical storms. Total rainfall may vary considerably from year to year, and droughts are common. The climate is unfavourable for dispersion of air pollution, and inversion conditions occur frequently.

In many ways Johannesburg represents a microcosm of the world's urban environmental problems. It exhibits a mix of "green" and "brown" issues associated with a lack of basic environmental health services such as housing, water and sanitation, an increase in chemical contamination of the environment, a lack of open space and green lungs, and a history of inadequate environmental management practices (von Schirnding 1996).

1.1 INITIAL CONCEPTUALISATION

The idea of a Healthy City Project in Johannesburg (von Schirnding and Padayachee 1993) was first highlighted in the 1992 business plan of the Health, Housing and Urbanization Directorate of the Johannesburg City Council. As part of the initial conceptualisation phase, a council-sponsored tour of Healthy City Projects was undertaken by senior city officials and a city politician. Projects in the cities of Copenhagen, Liverpool, Sheffield, Glasgow, London, Liege, and St Petersburg were visited, to learn about experiences of other Healthy City Projects, and to assess the feasibility of establishing a Healthy City Project in Johannesburg. A visit was also made to the headquarters of the World Health Organisation in Geneva, responsible for the world-wide Healthy City network.

A detailed report of the study tour, which was subsequently presented to the Johannesburg City Council, outlined a number of key issues and potential mechanisms for the implementation of a Healthy Cities Project in Johannesburg. It stressed that the peculiar

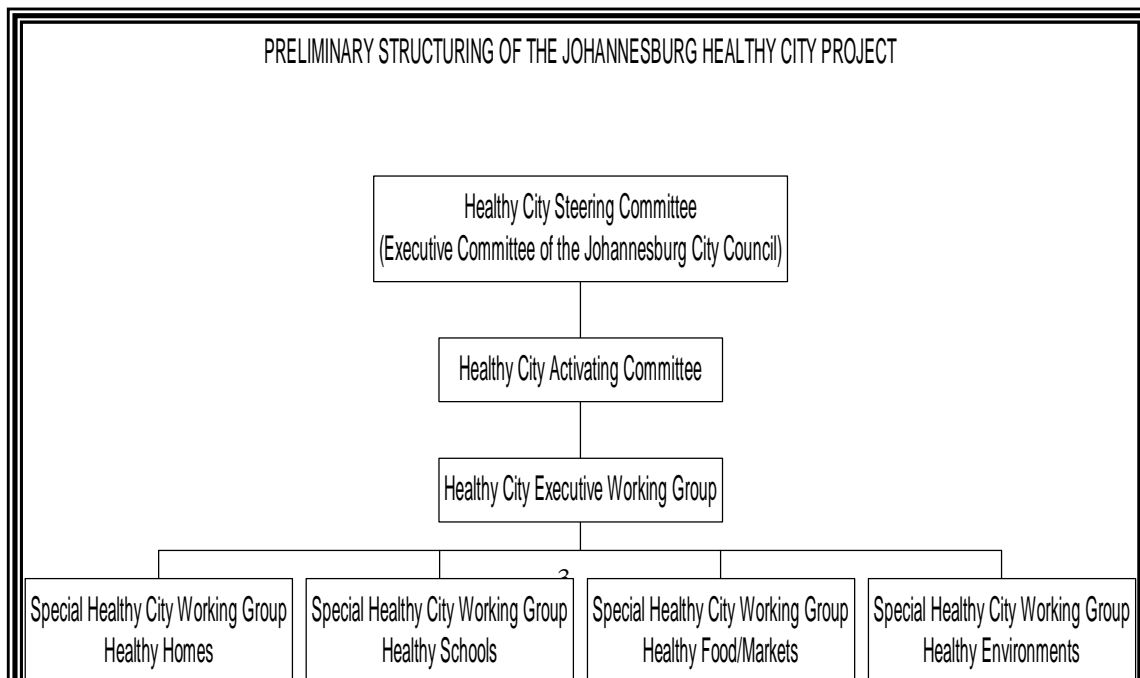
environmental, social, cultural, economic and political circumstances prevailing in Johannesburg would need to be taken account of in the design and implementation of the Johannesburg Healthy City project. It further emphasized the importance of political support for the project, and the need to include, or build on, existing initiatives in the city. Preliminary objectives for the Johannesburg Healthy City Project, and potential focus areas were articulated, and included: (a) the development of the health of urban dwellers, particularly in high density and low income environments; (b) the enhancement of the urban environment; (c) the development of strategies to provide the services required for the achievement of these objectives.

The Johannesburg Healthy City project was firmly located within political developments in South Africa at the time - moving from *apartheid* to democracy. The principles and priorities of the national socioeconomic development plan, the Reconstruction and Development Programme (RDP) (African National Congress 1994), were thus central to the development of the

Johannesburg Healthy City Project (von Schirnding & Dada 1995). Equity, community participation, and community empowerment, were fundamental elements of the Healthy City Project in Johannesburg. A number of Healthy City awareness campaigns were also tied into events unfolding nationally. For example, at the time of South Africa's first ever democratic election, an air quality campaign was implemented, which appealed to the Johannesburg/Soweto public to also "*vote for clean air*" by reporting incidents of air pollution to the local authorities, by planting trees, and through smoking cessation. The Healthy City theme was also widely used in the general elections to encourage citizens to vote for improved housing and basic environmental health services in Johannesburg.

1.2 INTEGRATED APPROACH TO ENVIRONMENT & DEVELOPMENT IN JOHANNESBURG

The City of Johannesburg became involved in the Healthy Cities initiative in the context of the development of new and innovative approaches towards sustainable development. The overall aim was to ensure a holistic, integrated approach to environmental management, development and health. Thus the principles and approaches of the Healthy Cities Project were integrated with various other initiatives such as Agenda 21 and the Model Communities Programme (MCP) of the International Council for Local Environmental Initiatives (ICLEI) (von Schirnding YER 1996).



1.3 GETTING STARTED

Early in 1993, the Management Committee of the Johannesburg City Council considered a report on the preliminary structuring and mechanisms for public involvement in the Healthy Cities Project. The Management Committee was appointed as the overall steering group for the Project, and a Healthy City Activating Committee was formed to direct the initial establishment of the project. Council officials, academics, and non-governmental organizations were amongst those serving on the Activating Committee (von Schirnding 1993).

2. PROJECT LAUNCH

The Johannesburg Healthy City Project was launched through a series of targeted workshops aimed at providing information about the Healthy Cities movement and concepts. The workshops also provided information about proposed arrangements for the Johannesburg Healthy City initiative,

and sought to identify priority environment and health concerns in the city, as well as key stakeholders and individuals or groups who were keen to participate in the initiative.

The workshops were attended by politicians, officials from all levels of government, academics, non-governmental and community-based organizations, community activists, consultants and the media. Participation of the general public was sought through a series of media interviews and press releases (von Schirnding 1994a).

3. MECHANISMS FOR COMMUNITY PARTICIPATION

Three key avenues for public input into the direction and decision-making within the Johannesburg Health Cities Project were developed. The overall direction and priorities of the project were established through a series of public forums, to which a broad cross-section of the Johannesburg public were invited, including council officials, labour representatives, politicians, the media, non-governmental organizations, civic groups, and the business sector. At these meetings there were opportunities to

discuss key issues in plenary sessions, as well as focus on specific aspects in small working groups.

Healthy Cities work was carried out through special working groups (see Section 4.). At this level, interested and affected groups and individuals were identified, and their participation in the planning, development, implementation and evaluation of specific projects and programmes secured through direct participation in working groups, or through surveys and focus group discussions, for example.

The Council Management Committee was appointed as the overall steering and decision-making body in relation to Healthy Cities. The Management Committee regularly reviewed decisions and achievements of the Healthy Cities Project through the presentation of annual and quarterly progress reports.

4. PROJECT THEMES, PROGRAMMES AND PROJECTS

The major portion of Healthy Cities work was planned and implemented through a number of special Healthy City working groups. In the context of a

broad theme related to environment, lifestyles and health, the following four working groups were established (von Schirnding 1994b).:

- Healthy Environments Working Group;
- Healthy Housing Working Group;
- Healthy Schools Working Group, &
- Healthy Foods/Markets Working Group.

An underlying goal for all working groups was to increase public awareness and action in respect of environment, lifestyle and health concerns. A selection of the programmes and projects implemented under the banner of the Johannesburg Healthy City Project, are described below.

3.1 THE HEALTHY SCHOOLS PROGRAMME

Many children, like in other poor countries, are exposed to environmental health hazards in the school setting. Schools are often badly designed, poorly equipped and understaffed. Aspects of the school environment such as ventilation, lighting, access to safe water

and adequate toilet facilities, appropriate waste disposal mechanisms, and the state of buildings, are often neglected, and in this way the school becomes an incubator of a wide range of diseases. The quality of the school environment, and the effects on the health of children, impact directly on their learning ability.

Since the early 1990s, conferences and meetings on health promotion, and "supportive environments" in particular, have emphasized a **settings** approach, encouraging action for the environment and health in places where people live and work. A particular advantage of a settings approach is that it facilitates *integrated, intersectoral* action on a wide range of issues within a narrowly defined field. At a meeting on Supportive Environments for Health held in Kenya in 1993, schools were identified as one of three priority settings for action, as embodied in the Nairobi Statement on Supportive Environments for Health (WHO/UNEP; 1993). It is recognised that schools provide a centre for organizing and providing environmental and health care, for the education of children in healthy living, for community action, and in addition, have a major role to play in

facilitating the socio-economic and human resource development of societies.

The Healthy Cities Project provides an ideal framework for the implementation of school-based environment and health promotion programmes, based on the principles outlined in the Ottawa Charter (WHO et al; 1986). Healthy Schools Projects around the world have examined, amongst other issues, the improvement of the physical environment of the school itself, promotion of education around environmental health, the effects of the environment on children's development and behaviour, the provision of green space, a sense of connectedness with nature, involving children in examining their school environment and programmes, and redesigning schools to be healthier and friendlier to the environment. Partnerships for Healthy Schools projects have included school committees, teachers, parents, non-governmental organisations, local private sector groups and relevant ministries (education, environment, health) (Mathee & von Schirnding 1995).

Integrated Healthy School Programmes

In order to develop integrated approaches to environment and health at the school level, three schools from different areas (an urban township, an informal settlement and an inner city area) were selected to participate in a pilot Johannesburg Healthy Schools programme. At each school, the programme commenced with the formation of a school committee made up of staff of the school and of the Healthy Cities Project. The committee reported to the school governing body, which comprised teachers, parents, and representatives of local civic and business groups. An early activity was an assessment of the perceptions of school students about the state of the environment, and priority areas for action. Information was collected through classroom discussions, a questionnaire survey, and drawing exercises amongst younger children. The findings were collated into a school programme of action, which included the planting of a school food garden, clean-up campaigns at the school and immediate surroundings, enhancement of the school environment through painting of murals and objects

such as wastebins, the collection of old motor vehicle tyres for decoration and use as plant containers, the creation of toys-from-waste, and school greening programmes. Bus shelters and other sites in the township, for example waste deposit sites, were also decorated with murals. At the informal settlement school, the provision of increased sanitation facilities were successfully campaigned for (Mathee & Byrne 1996).

City-wide School Environment and Health Awareness Campaigns

Through a partnership of the Healthy Cities Project and the Tobacco Action Group (which campaigns for a smoke-free South Africa), a competition was launched amongst schoolchildren to design anti-smoking posters. This *"I'm Too Special To Smoke"* poster competition was highly successful and raised awareness amongst Johannesburg and Soweto primary school children of the impact of tobacco smoke on the environment and health. In excess of 10 000 competition entries were received, and prizes in a number of categories awarded to children and schools. Evaluations showed that both children and teachers had found the initiative

highly beneficial, and requests for similar initiatives in respect of other environment and health issues were received.

Handwashing Campaign

Handwashing is important in the prevention of infectious diseases, such as intestinal infections, as well as the ingestion of lead through the hand-to-mouth route. Following observation by Healthy Cities staff of a weak emphasis on handwashing at many Johannesburg schools, a city-wide campaign to encourage appropriate handwashing practices was embarked on. Materials promoting handwashing were developed and distributed to schools, together with teacher information packages in relation to the impact of appropriate handwashing practices on health. Special environment and health seminars were also held for teachers.

3.2 THE HEALTHY HOMES PROGRAMME

Rapid urbanisation, together with inadequate provision of basic environmental health services, has resulted in an extreme housing shortage and poor quality housing in many parts of the city. As a consequence, sprawling

informal settlements now house hundreds of thousands of people, and in inner city areas, overcrowding has become a major concern. In high-rise inner city buildings, developments such as absentee landlords, inadequate building maintenance, an exodus of large numbers of people from the inner city to “garden suburbs”, and over-use or destruction of basic environmental health infrastructure, led to the development of a number of threats to health and safety. One such high-rise, inner city building, about which numerous environmental health complaints had been received, was identified for the implementation of a pilot Healthy Cities “Healthy Homes” project.

Environmental health violations occurring in the building were related to waste removal, general sanitation, hygiene and safety. The building had originally been designed as office accommodation. With increasing perceptions of the inner city as crime-ridden and insanitary, large numbers of companies and residents relocated to the suburbs. Unable to find alternative lessees, landlords used the buildings for

housing groups of people. Offices in the building were sub-divided into 20 rooms, each housing an average of two people, who all made use of a small “staff” kitchen to access water, and a single toilet per floor.

Through the participation of a number of individuals and organisations, such as local civic and housing pressure groups, academics, and council officials in a Healthy Homes working group, a number of different activities were undertaken. These included a survey to obtain socio-demographic and environmental health data, negotiations between landlords and tenants, efforts to improve interaction between residents and environmental health officers and other council officials, and the development of joint strategies for action.

The Healthy Homes Project oversaw the democratic election of a tenants committee to coordinate the collection of rental and service fees, and take building management decisions, with health being placed high on the agenda. Initially, environmental health officers conducted a comprehensive health

education campaign. An early decision by tenants was to address the problem of inadequate waste disposal, which had led to waste being piled high in stairwells and corners, and being cast out of windows onto the adjacent ground outside. Two unemployed residents were appointed to remove garbage from each floor to the designated disposal area. Their wages were paid by the residents. All residents were instructed to bring waste to a common point at specific times, and a roster was prepared to ensure that residents took turns to clean common areas. Flouting of these rules could lead to eviction from the building.

Concerns about shebeens¹, where parties are held and alcohol sold illegally, were expressed as a lapse in security led to a number of strangers entering the building at all hours. Residents proposed that the seven shebeen owners form a cooperative and hire a vacant shop on the ground floor.

Liaison with the Engineering Department at the local university led to the

¹ Shebeens are places where liquor is sold illegally. They have since been legalised.

development of a student project to re-design the building for residential purposes. Further initiatives included a building greening programme with the assistance of the local Parks Department, training programmes for building caretakers by the Housing Department, and litter clean-up campaigns at the local park.

The Healthy Homes Project attracted considerable interest from local politicians and community groups, and environmental health officers started applying the approaches and strategies in buildings with similar concerns in other parts of the city.

3.3 HEALTHY FOOD/ MARKETS

The Johannesburg Healthy Cities Project became involved in the development of a Healthy Food/Markets programme in response to concern about the escalating numbers of street food traders in the city. In 1994, it was reported that more than 15 000 street food traders were operating in the Johannesburg city centre and surrounding suburbs, many of whom were preparing and selling foods under inadequate environmental conditions. Concern was expressed in particular

about prepared foods which could easily support the growth of pathogens, for example meat, chicken and fish dishes with gravies or sauces, accompanying vegetables, rice, potatoes, or maize meal.

The environmental conditions under which street food traders operate are not those perceived to be essential for the hygienic preparation of food. There is often a lack of adequate protection against the elements (wind, rain, direct sunlight, and extremes of temperature), and inadequate access to water supplies and sanitation. Pests such as rodents, birds, insects such as flies, and other animals may be in close proximity, particularly where wastewater and solid waste is discarded into streets. Hand, dish and utensil washing is often done in one or more miscellaneous containers of water, which may then also be used during phases of food preparation. Most importantly, environmental conditions and available facilities do not allow for adequate temperature control of foods. High numbers of pathogens, aerobic mesophiles and indicator organisms had been isolated from food samples taken from street food traders in Egypt, Mexico and Ethiopia.

In consideration of these issues, as well as the World Health Organisation's Hazard Analysis Critical Control Point (HACCP) evaluation approach, the Healthy Cities Project initially implemented a comparative study of environmental conditions, hygiene practices and food quality in the formal and informal sectors of inner city Johannesburg.

Food samples taken from the formal and informal sector practitioners and analysed, did not meet national standards. However, the factors associated with contamination varied between the two groups. Environmental conditions and personal hygiene practices were the main factors associated with contaminated food in the informal sector, while inadequate food storage and heating practices, as well as personal hygiene, were associated with food contamination in the formal sector.

The Healthy Foods/Marketplaces Working Group used the findings of the survey to develop a multi-pronged programme of action in respect of food quality, which was incorporated into the

programmes of the Environmental Health department of the Johannesburg City Council. One element of the food programme was the design and implementation of an education programme for street food traders. A special food quality training course comprising five one-hour-long modules, focussing on basic food microbiology, personal hygiene, environmental hygiene, relevant food legislation, and food handling, preparation and storage, was developed.

Courses were administered to small groups of food traders by environmental health officers at venues in close proximity to where traders were operative. In most instances a mobile education unit (caravan), specially equipped for this purpose with a wide range of educational tools, was utilised. Laminated certificates of participation were awarded to all who completed the entire course. Responses to the course were overwhelming, with requests by street food traders for participation exceeding availability by a factor of four. To support the training course, a highly successful video programme, emphasizing the key issues in food

preparation, was also developed, and used in education initiatives across the city (Mathee et al 1996).

3.4 HEALTHY ENVIRONMENT PROGRAMME

In association with the Johannesburg Healthy City Project, a number of city-wide awareness campaigns, focusing on various aspects of the environment and health were implemented. In general, Healthy City campaigns were either area or issue-specific. Campaigns around general environmental awareness were held in the suburbs of Hillbrow, Riverlea, Bertrams, Denver, and Westbury, whilst issues like air pollution, environmental tobacco smoke, mine dust, greening programmes, environmental lead and child health, transport and urban open space, were also addressed. These are briefly highlighted below.

Mine Dumps and Dust

The City of Johannesburg has its roots in the discovery of gold in the region more than a century ago, and the subsequent growth of the gold mining industry. A legacy of that time, are the mine dumps, which have become synonymous with

the Johannesburg landscape. From the perspective of communities in certain parts of the city, however, the mine dumps are little more than a nuisance, and concerns about health from mine dust in the air, particularly during windy weather, are long-standing concern.

To address community concerns, the Johannesburg Healthy City Project participated in a multi-partner initiative, which included council officials, the mining industry, national government representatives, academics, and community groups, and which led to the establishment of dust monitoring stations, negotiations with the mining industry with a view to rehabilitation and grassing of mine dumps, and the development of community and child education campaigns which focused on mine dumps, health and safety. These campaigns made a key contribution to considerable media coverage of the key issues, and successful action programmes in some of the worst affected areas.

Urban Environmental Lead Exposure and Child Health

Having had only leaded petrol available in South Africa until 1996, there has been long-standing concern about childhood blood lead burdens, particularly in inner city suburbs, and amongst those attending schools along busy roads. Studies previously conducted in the City of Cape Town, had indicated that large proportions of inner city children were at risk of elevated blood lead burdens. Little information was available about the blood lead levels of Johannesburg children however. Under the umbrella of the Johannesburg Healthy City project, a cross-sectional analytical study was conducted to determine the blood lead levels of first grade children attending school in selected suburbs. The results showed that around 80% of Johannesburg children had blood lead levels greater than or equal to the international guideline value of 10:gd/l (Mathee *et al* 1996). The results of the study were distributed to policy and decision-makers, published in journals, and covered by the media (Mathee & von Schirnding 1999).

In order to educate parents, teachers and child minders about the risks of elevated blood lead levels, and steps to reduce exposure, the Healthy City Project

developed information leaflets, and held workshops for teachers, parents and child-minders at schools and other centres across the city.

A Children's Environment and Fun Day at the Zoo

To mark World Environment Day and Child Protection Week, a Children's Day at the Zoo was held, with an emphasis on environment, health and fun. Thus with environment and health themes threaded through the day, children could participate in poster painting, face painting, magician shows, environmental dance workshops, children's theatre, and a petting park. Many other children's activities took place in an open-top bus, decorated with themes from the Healthy City Project. Officers from the Fire Department used a fire engine to teach children about safety issues. In excess of 7 000 people attended the event, which also received widespread media coverage.

4. CONCLUSIONS

From an initial "start small" philosophy within the Activating Committee, and a focus on a few key local and city-wide programmes, the role of the

Johannesburg Healthy Cities Project rapidly expanded, with those involved ultimately playing a pivotal role in ensuring a place for environment, sustainable development and health in planning and negotiations for the transformation of the city management structures.

In 1995 the Johannesburg Local Agenda 21 programme was launched with a series of workshops, consultations and a summit, which involved local stakeholders, as well as participants from the South African cities of Durban and Cape Town, and representatives from participating cities in Tanzania and Uganda. The year 1995 also saw the formation of an inter-sectoral, inter-departmental environmental management committee to coordinate the Agenda 21/Healthy City programme in Johannesburg, and integrate it into the broader environmental management structure of the Council.

With the formal establishment of the new Greater Johannesburg Transitional Metropolitan Council in 1995, a process was put in place to rationalize and streamline the previously cumbersome

committee process. As a result, a new metropolitan committee of Planning, Urbanisation and Environmental Management was formed, to facilitate a more holistic and integrated approach to dealing with problems around urbanization and environment. Three line function convenors were appointed to coordinate the development of policy in relation to Planning, Housing and Urbanisation, and Environmental Management. The advantage of this new approach was seen to be that it would ensure that the principles and approaches of Healthy Cities and Agenda 21 would be fully integrated into broader urban development plans and incorporated into the overall urban management process. Early successes included the approval of guiding principles for an environmental policy, and aspects of an environmental management system and framework for Greater Johannesburg (von Schirnding 1996).

Although no longer existing in its original format as a separate initiative, the legacy of the Johannesburg Healthy City/Agenda 21 programme is evident in the organizational structures of the new

Greater Johannesburg Metropolitan Council, and in the mainstreaming of the approach in all its programmes.

LESSONS LEARNED

While the Healthy Cities Project in Johannesburg was instrumental in facilitating a more integrated approach to addressing health, environment and development issues (in terms of administrative structures put in place to address cross-cutting health, environment and development issues, as well as in developing useful frameworks for broader community participation), and in giving health a more prominent place on the environment/development agenda, there were, nevertheless, a number of difficulties experienced during the various phases of the development and implementation of the project. For example, the Project was housed in the Environmental Health department. Notwithstanding the fact that mechanisms were put in place to ensure the participation of other departments, partners and stakeholders, tensions developed between different departments over the boundaries of the project. In some respects, this posed a constraint, which affected the direction

of the project. Ideally perhaps, the project should have been situated in a more neutral venue, such as the office of the chief executive officer. This may also have had drawbacks however, in that links with operational departments would then have been less direct. In addition, other projects housed in the office of the chief executive officer or mayor, were sometimes regarded as having “favoured status”, and earned a degree of resentment from staff of operational departments.

It took an inordinately long time to agree on the overall focus and modalities of operation of the project. Only when the project started to focus on specific issues, did it really take off. However, there was always the risk that the project would remain issue-focussed, and there was ongoing tension between the balance afforded the operation versus broader policy and planning issues.

Fundamental to the success of the project, was the fact that the chief executive officer was extremely supportive, as were the political leadership. Also of key importance was the fact that the project was part of a

WHO initiative, which gave it international credibility and was useful in terms of getting the necessary support and interest, as well as resources for the project. The opportunity for Johannesburg to network with other cities and international organizations was seen as valuable.

Community participation was always a difficult and thorny issue, particularly given suspicions about the possible hidden agenda of the Council, exacerbated by the *apartheid* years during which there was a virtual absence of participation by communities in decision-making.

With the dissolution of the Johannesburg City Council, as well as 13 other town councils in the area, to form the Greater Johannesburg Metropolitan Council, there were difficulties in ensuring a decentralized, yet coherent city-wide approach.

There was some overlap with a plethora of other similar initiatives, which began to spring up at the time. Many were associated with donors or with United Nations organisations, for example

Agenda 21, Sustainable Cities, Model Communities, and Safe Cities, to mention a few. Simultaneously there were a number of national and local initiatives with which there was also overlap, for example the national Reconstruction and Development Programme, and national initiatives around integrated development planning, and the preparation of local development objectives. At a local level, a number of initiatives emulated the principles, strategies and approaches of the Healthy Cities initiative. For example, the Central Johannesburg partnership was established with a view to developing a vision and putting in place strategies and projects aimed at improving the city environment, and the well-being of the urban population, in a sustainable manner, using approaches that, in many ways, were similar to that of Healthy cities, or other initiatives such as Local Agenda 21 and Sustainable Cities. While these for that matter. These similarities raised questions about the uniqueness of the Healthy Cities Project. However, the experience gained through the Johannesburg Health Cities project was invaluable, and served to inform the newer citywide initiatives.

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