Healthy Cities Initiative in the African Region: EVALUATION MANUAL
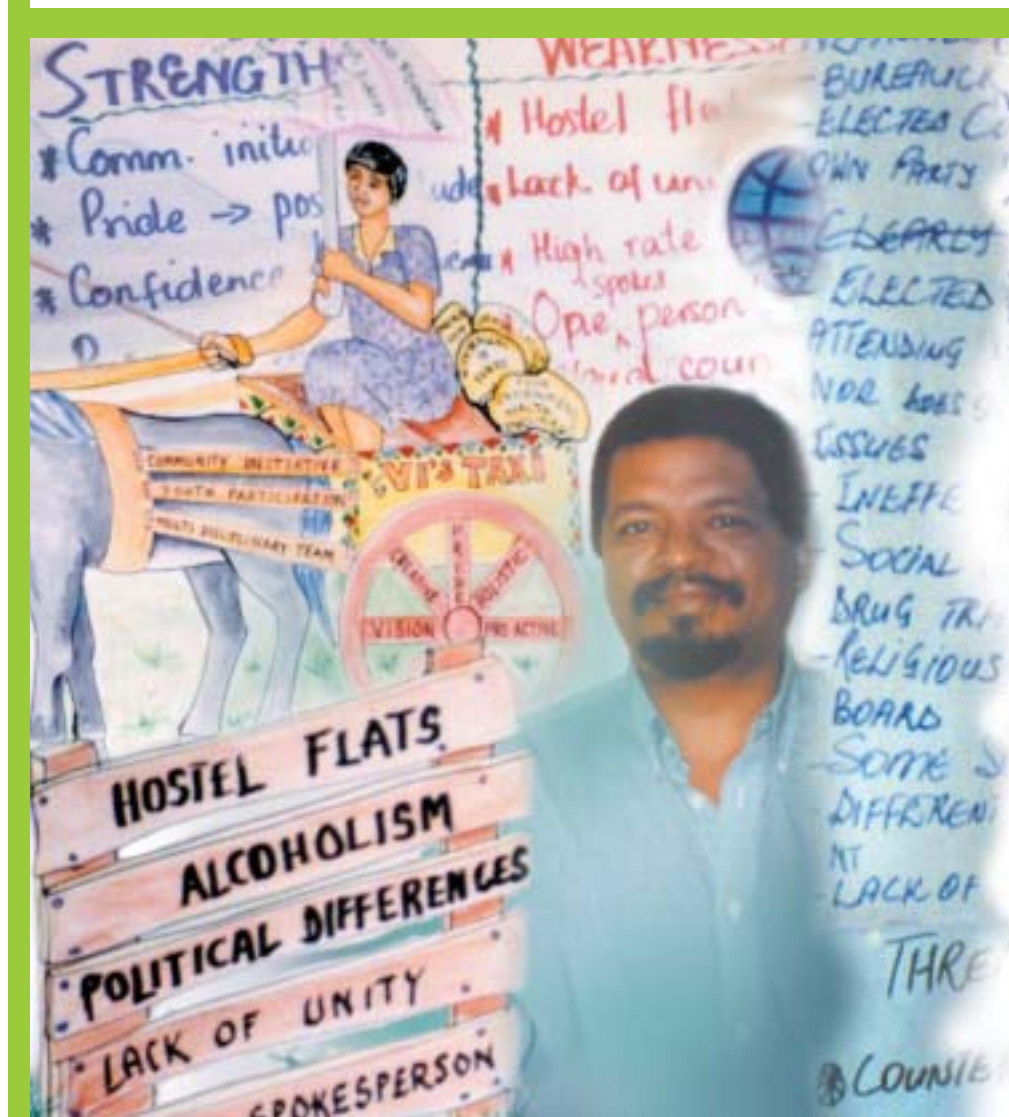
World Health Organization

Regional Office for Africa

BRAZZAVILLE

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Preface

Healthy City Programmes (HCPs) were first set up in the developed countries. Their value is being increasingly recognized, and since the mid-1990s the number of HCPs established in developing countries has increased significantly.

In 1999 the Regional Office for Africa of the World Health Organization (WHO/AFRO) took the initiative of introducing and promoting the Healthy Cities concept. As part of the initial support provided to countries in developing their HCPs, WHO/AFRO commissioned a series of manuals. These include one on the implementation of Healthy City Programmes and this one on how to evaluate Healthy City Programmes.

The commissioning of the Evaluation Manual at the *inception* of projects in Africa is indicative of the importance that the World Health Organization places on incorporating evaluation at an early stage of project development.

This manual forms part of a series of *practical* Healthy City documents for use in Africa and other developing countries. Specialists in evaluation are often in short supply in many developing countries, and there is a tendency for this important function to be overlooked. The principles of evaluation outlined in this book are of a general nature, but have been tailored for the specific circumstances of African cities.

This book describes the principles of evaluation, and aims to provide sufficient examples for Healthy City practitioners to be able to undertake their own evaluations without having to rely too heavily on external agencies. With proper planning, evaluation becomes an invaluable tool for monitoring the progress of Healthy City projects and for fine-tuning them so that they perform better.

The guidelines provided in this booklet should be regarded as work in progress. They will be revised as more experiences in the evaluation of HCPs are accumulated in the future.

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Foreword

The population shift from rural to urban areas is a global phenomenon, and Africa is no exception. People in rural areas look for better economic opportunities, which they hope to find in cities. This has meant a near explosion of population in most cities in Africa.

National governments and civic authorities, already much constrained to provide basic civic amenities, have to cope with an ever-increasing influx of people. Unable to find or afford suitable shelter, migrant populations tend to put up in shantytowns and slums, creating serious health problems for themselves as well as for others. They become the most vulnerable groups, suffering diseases of poverty such as diarrhoeal diseases, parasitic infections, tuberculosis, malaria and sexually transmitted diseases.

Africa already faces a plethora of health challenges, and unhygienic and unsanitary conditions in cities and urban centres are adding enormously to the health problems. Overcrowding, as is happening in cities, gives rise to social and behavioural changes, family disintegration, homelessness and crime. Woman and child abuse, violence and drugs follow in their wake. Addressing these challenges requires a sound approach that would take into account the environmental and socio-economic determinants of health in the context of Agenda 21.

The Healthy Cities concept, which is based on the principles and strategies of Health for All, is central to Agenda 21. It has emerged as an important and effective tool for improving health in cities and urban centres. It provides national governments and local bodies with an effective means of dealing with health-related issues such as poverty, pollution, lifestyle changes, urban planning, transport and the special needs of marginalized and vulnerable groups.

The International Conference on Health and Environment in Africa, held in Pretoria, South Africa, in 1997, emphasized that approaches that had a demonstrated effectiveness in addressing health and environment issues should be adopted. The Healthy Cities/Villages approach was specifically cited, and intersectoral action using this approach as an umbrella concept at local level, was urged for priority action. The World Health Organization Regional Office for Africa was particularly requested to accelerate its implementation.

It is in this context that the World Health Organization has taken the initiative to develop this manual for the evaluation of the Healthy Cities Programme. We will continue to assist member states to introduce and implement the Healthy Cities concept in the African context by preparing further documentation and providing training and opportunities for exchange of information and experience among countries.

The World Health Organization will continue to provide leadership in promoting better approaches to address urban health issues as well as taking a leading role in stimulating networking among countries and cities.

Dr Ebrahim M. Samba
WHO Regional Director for Africa

Acknowledgements

Introduction

The Healthy City initiative, started in 1987 by the World Health Organization (WHO), seeks to put health on the agenda of decision-makers in cities, and to build a strong lobby for public health at the local level.

Healthy City Programmes (HCPs) were first set up in the developed countries. The value of such projects is being increasingly recognized, and since the mid-1990s the number of HCPs established in developing countries has increased significantly. A small number of projects have been implemented in some countries in the African Region.

In 1999 the WHO, Africa Region (WHO/ AFRO), held three workshops to promote the setting up of HCPs in the region. As part of the initial support to the countries in developing their HCPs, WHO/AFRO commissioned a series of manuals, including one on how to set up and implement HCPs, another on collecting baseline information, and another (this booklet) on how to evaluate them.

The commissioning of the Evaluation Manual at the inception of projects in Africa is indicative of the importance that the WHO places on incorporating evaluation at an early stage of project development.

Evaluation has been an important part of the HCP agenda, and a wide range of evaluations of HCPs have been carried out. However, very few of them have been docu-

mented, and few of these evaluations are large in scale or comprehensive. This is because thorough and comprehensive evaluations of complex, long-term initiatives such as HCPs are unlikely to demonstrate short-term results. Evaluations require time and are often costly. Obstacles to HCP evaluation have been identified as lack of resources and of affordable expertise.

The purpose of this manual is to develop the capacity at project and local level to monitor and evaluate HCPs. This manual has been developed to complement the one on implementing HCPs in the WHO African Region.

Monitoring and evaluation should be an integral part of the HCP development and implementation. Incorporating the concept of evaluation from the start of the project helps practitioners to:
- think about what they are trying to achieve before they start implementing the activities;
- identify the most effective ways of achieving aims and objectives;
- detect problems as soon as they arise and take corrective action;
- recognize the mechanisms and circumstances which make the project more successful; and
- achieve the best and most effective outcome.

Evaluations may be done for two key purpos-

es: accountability and learning. This manual is directed towards practitioners and therefore focuses on the *learning* side of evaluation. It provides a background to the concept of evaluation, identifies the importance of good planning, defines the importance of indicators and the role that indicators play in evaluation, and provides key evaluation methods and tools. The list of indicators included in this manual is drawn from those used in other HCPs worldwide.

This evaluation manual is designed for HCP practitioners to monitor and evaluate their work. The purpose of monitoring and evaluation is to check how well activities have been carried out so that they can be made more effective, and to ensure that the resources available to HCPs make positive contributions to the lives of the people for whom the project is developed.

What is evaluation?

The WHO has stated that *evaluation is a systematic way of learning from experience and using the lessons learned to improve current activities and promote better planning by careful selection of alternatives for future action.*

Evaluation is the systematic investigation of the worth or merit of a programme or project. It involves collection of information about the characteristics, activities, processes and outcomes of programmes to enable intended users to reduce uncertainties, improve effectiveness, and make decisions with regard to those programmes.

2.1 Importance of evaluation

Evaluation is important to HCPs because it:
- helps to ensure activities are being implemented according to plan;
- enables practitioners to reflect on what is being implemented;
- helps them to understand how the project operates;
- helps practitioners to learn from their experiences;
- enables them to take timely corrective action;
- provides information on how to improve the project;
- provides a process for involving stakeholders in the project;
- can empower stakeholders;
- demonstrates project effectiveness;
- justifies to funders that their contribu-

tions are being effectively used; and
- can support generation of additional resources for the project.

Although evaluation is an important part of the HCP, only a few evaluation reports have been published. A list of key evaluation texts is provided in the references and recommended further reading on pages 26-28.

2.2 Monitoring is an aspect of evaluation

Monitoring is the systematic and continuous collection and analysis of information about the progress of a piece of work over time. It is a tool for identifying strengths and weaknesses in the project and for providing those that are responsible for implementing the activities with sufficient information to make the right decisions at the right time to improve the project quality.

Monitoring ensures that the Healthy City plan stays on course by checking that activities are implemented, measuring progress towards the objectives, identifying problems as they come up, identifying strengths that can be built on, and adapting to changing circumstances.

In order to monitor the project it is necessary for it to be well-documented. Information about the project needs to be collected and analysed on a continuous basis to ensure that the planned activities are being implemented. The results are fed back into the

planning process and, if necessary, changes are made to the plans.

If the activities are not implemented according to plan it is important to know why, so that the reasons are taken into consideration in the new plan. Monitoring is part of the evaluation process.

2.3 Evaluation and planning

Evaluation is part of the planning process. It is an ongoing process integral to all phases of the project.

Figure 1 shows that evaluation is part of the project cycle - but the HCP cycle is not usually so clear-cut. The project usually involves learning and this results in changes to the project as it evolves and develops. Therefore, it is useful to think of the project cycle as a spiral (Figure 2).

If HCP practitioners are to know whether they are making progress towards achieving

the objectives of the project, it is important that they introduce evaluation in the early stages of the project. Thereafter, project implementation should be monitored on a continuous basis.

Systematic evaluation activities should be carried out at defined intervals in order to determine the effectiveness and efficiency of the project.

Evaluation of HCPs involves describing and explaining the HCP processes in relation to the work that was planned. The plan needs to be determined by the baseline health and environment status, and the identification of problems that need to be addressed by the HCP. A good plan will not only guide the implementation and monitoring of activities, but will also guide the evaluation by facilitating definition, collection and analysis of information.
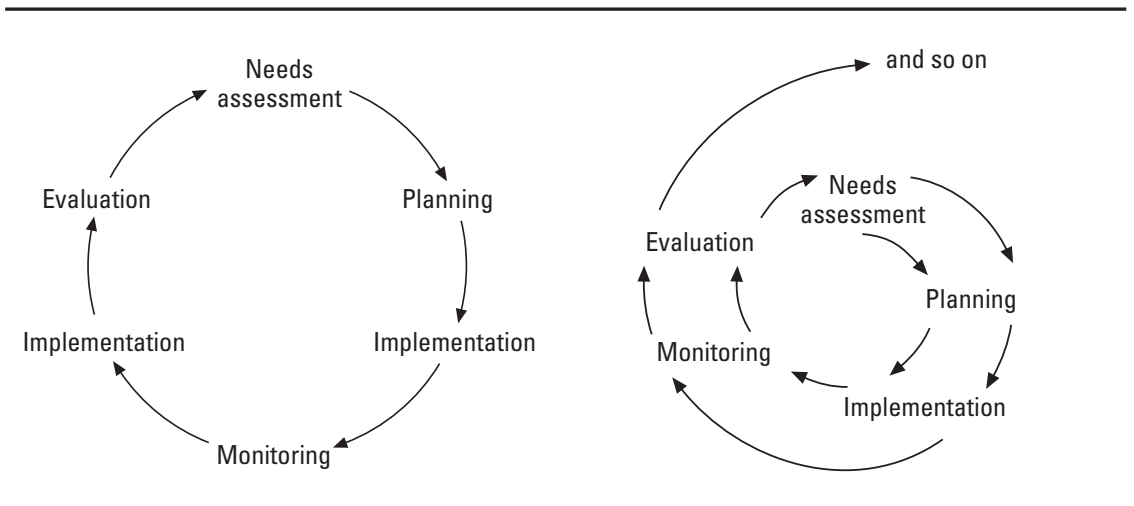

Figure 1. Planning and evaluation cycle.

Figure 2. Planning and evaluation spiral.

Definitions of terms used in planning and evaluation

There are a number of terms used in different parts of the planning and evaluation process. They include 'aim', 'objectives' and 'indicators'. It is important that these terms are clearly understood and used consistently.

3.1 Aim

This is the broad strategic purpose of a programme. For example: '*To improve the health of low-income dwellers, through improved living and environment conditions and better health services*'.

3.2 Objectives

Objectives are more specific than aims. The achievement of objectives will contribute towards the overall aim. For example: '*To increase the awareness of health issues in urban development efforts by municipal and national authorities, including non-health ministries and agencies*'.

Many project managers like to see time-bound objectives, i.e. setting a target which should be achieved by a certain date. City development initiatives almost always take longer than expected, but setting time-bound targets helps to avoid the pitfall of setting up programmes with no measurable milestones.

Setting objectives is a very important part of the planning and evaluation process. Good objectives are '**SMART**', a set of useful rules to follow when setting objectives.

'**SMART**' stands for:

Specific - Concise, linked to the defined problem and not open to different interpretations.

Measurable - Defined in such a way that it is actually measurable and broad enough to allow for changes over time.

Achievable - Possible to achieve and achievable within the defined timeframe.

Reliable - Repeated measurement and measurement by different people will produce the same results.

Time-bound - Tied to a deadline for achievement.

Although not all objectives in HCPs can follow all the rules, they are useful to ensure high-quality objectives.

3.3 Indicators

Indicators are designed to capture a range of information and summarize it in a way that is useful for decision-making.

Measurements produce raw data; data are aggregated and summarized to provide statistics; statistics are analysed and re-expressed in the form of **indicators**; indicators are then fed into the decision-making process.[1]

Indicators have been considered the most important aspect of the evaluation of HCPs, and for this reason a special section on indicators is included below (Chapter 5).

Challenges to HCP evaluation

The growing demand for hard evidence of effectiveness for any health intervention means that Healthy City practitioners frequently face a critical audience. In developing countries scarce resources are unlikely to be allocated to a project unless it is able to provide evidence of its effectiveness. Thus, including evaluation plans from the outset is essential, and appropriate methods must be selected. An inappropriate approach to evaluation can seriously damage an otherwise promising project.

HCPs are typically long-term development initiatives involving a number of activities implemented by a wide range of stakeholders, usually in specific social settings. Two key challenges have been identified in previous attempts to evaluate HCPs.

- **Changes resulting from HCPs do not usually emerge until several years after implementation of the project.** For instance, the true effects of nutrition education activities implemented in the Dar es Salaam HCP, as part of their Healthy School initiative, are not expected to emerge until after the primary school children grow up and have children themselves. Changes in nutrition in primary school girls are expected to affect maternal and infant mortality.

- **HCPs involve strategic change in health systems and contributions involving gov-ernment, non-government organizations, the private sector and the community**. A fundamental problem faced by evaluators is the difficulty of attributing the outcomes to the various inputs. In the Cox's Bazaar HCP, Bangladesh, environmental sanitation services included a combination of activities such as installation of tube wells by the Department of Public Health, construction of drains by the Transport ministry, and public health education by the Ministry of Health, NGOs and the community. Reduction of diarrhoeal diseases in Cox's Bazaar could not, however, be directly attributed to any one of these interventions.

HCPs are not amenable to conventional evaluation techniques such as 'randomised controlled trials' which, in principle, are designed to address these challenges in evaluation. This is because real controls - possible in laboratory settings - are not possible in community settings. It is also unethical, in health and social services, to provide services to 'experimental' groups and not to the 'control' groups.

'Staged interventions' may be acceptable in some circumstances where all participants ultimately benefit from the intervention but do not necessarily receive the intervention at the same time. Staged interventions allow the effects of the intervention to be monitored. However, the long-term nature of

HCPs usually precludes this study design. A key principle of 'Health for All' is equity, and this can be interpreted as equal opportunities for all 'within a reasonable time'.

Since HCPs have improvements in health as their ultimate goal, it is only natural that evaluations tend to focus on public health methodologies. However, it is important to realise that HCPs are more about improving *systems*, of which health is only one, within cities. Systems are more suited to quality assessments than measurements of health outcomes alone.

4.1   Evaluating programmes and projects

A Healthy City initiative may be developed as a project or a programme. In most countries of the world they are being implemented as projects. They are also usually referred to as projects. However, in some cities, such as Chittagong in Bangladesh, they have been started as projects and later changed to programmes. For this reason it is important to distinguish between *projects and programmes* since this will have implications for evaluations.

Projects are specific initiatives. They are defined as planned interventions for achieving one or more objective/s, encompassing a set of interrelated activities using limited resources.

Programmes are less clearly defined and are, in comparison to projects, **more comprehensive, longer term and involve multiple interventions**. A programme may also include projects within it.

Projects usually involve operational planning while programmes include strategic as well as operational planning. For example, a city-wide Healthy City *Programme* such as that of Chittagong may have projects within it, such as a ward sanitation project being implemented as a demonstration or pilot project.

Box 1. Evaluation challenges in the Chittagong HCP

The Chittagong HCP presented many challenges for its evaluation. The concept of Healthy Cities is incorporated into many aspects of the municipal planning process. For instance, inter-sectoral participation in the municipal decision-making process has been a result of the HCP. However, it is difficult to link the value and effect of such participatory strategies to health outcomes in the city.

One of the component projects of the Chittagong HCP (Jamal Khan Healthy Ward Rubbish Collection Scheme) has been evaluated by the project practitioners by observing the ward and other wards, and interviewing residents of the ward and other wards to determine the extent of improvement in cleanliness in the Jamal Khan Ward since the beginning of the project.

4.2 Types of evaluations

Evaluations may be conducted for many purposes. They may be intended to:

- help management to improve a programme;
- support advocacy by supporters or critics;
- gain knowledge about programme effects;
- provide inputs to decisions about programme funding structure or administration; and
- help respond to pressure from political or funding organisations to justify expenditure.

Evaluations can, however, be broadly divided into two main categories, based on purposes:

- evaluations conducted to 'prove' (for accountability purposes) and
- evaluations conducted to 'improve' (for the purpose of learning).

It is important to recognize the main purpose of the evaluation because it is the *purpose that ultimately determines the choice of type of evaluation.*

Accountability evaluations usually ask questions such as:

- Have the objectives been achieved?
- To what extent have the activities impacted on the health of the beneficiaries?

Questions such as these call for ***impact*** evaluations (see 4.2.1), which in the case of HCPs are preferably conducted after several years of implementation.

Learning evaluations can be conducted at any time in the project duration. Such evaluations focus on questions relating to programme processes, context and mecha-

nisms that influence programme operations and (in the short term of the programme) ask questions such as:

- What are the factors that are influencing the smooth operation of the programme?
- Why are certain sectors not involved in the implementation of the programme?

Questions such as these require ***process*** evaluations (see 4.2.2).

4.2.1 Impact evaluation

The basic aim of an impact evaluation is to produce an estimate of the 'net effect' of an intervention. *Impact evaluation examines only the outcomes* and pays little or no attention to the processes by which the HCP achieves its results. It therefore does not have the capacity to produce any explanations for the successes, failures, and changes in a project.

Unless the processes that lead to the outcomes are examined, impact evaluation may be attempting to assess activities that are either not implemented or have been implemented quite independently as a result of another process.

Impact evaluations are often referred to as the 'black box' approach, because such evaluations do not ask why certain effects have resulted from a certain set of inputs (see Figure 3).

Evaluations of HCPs have shown that similar inputs made in different projects, using the same strategies, have resulted in widely different outcomes. This is because project inputs interact differently in different contexts.

4.2.2 Process evaluation

Process evaluations are more appropriate

A. SINGLE INPUT / SINGLE OUTCOME

BLACK BOX

INPUT → → OUTCOME

B. MULTIPLE INPUTS / MULTIPLE OUTCOMES e.g. HCPs

BLACK BOX

INPUTS → → OUTCOMES

C. THE 'BLACK BOX' OPENED

BLACK BOX

INPUTS → → OUTCOMES

1   2
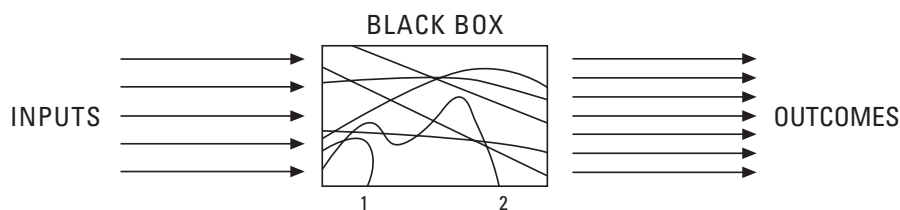
Figure 3: 'Black box' models of input and outcome evaluations.

for HCPs, particularly in the long term. As Figure 3C shows, process evaluation opens the 'black box' to demonstrate the mechanisms by which project inputs lead to certain outcomes.

It is worth noting that 'opening the black box' often reveals some surprises: some inputs have no obvious outcomes (e.g. 1 and 2 in the model above), and inputs may not lead directly to an outcome. Multiple inputs may also combine to produce a single outcome.

In the evaluation of HCPs both process and impact evaluations need to be considered. The choice of process evaluation or both process and impact evaluation depends primarily on the maturity of the project.

Indicators

Indicators are variables that help to directly or indirectly measure changes. An indicator is not the same as the phenomenon of interest, but only an *indicator* of that phenomenon. Indicators can illustrate how far objectives and targets are being achieved. Therefore, indicators should not be confused with objectives and targets. The desired properties of indicators will depend very much on the approach adopted and the nature of the Healthy City project.

There are various classifications of indicators. They have been classified according to the nature of information collected. For instance, there could be indicators of availability, relevance, accessibility, utilisation, coverage, quality, effort, efficiency and impact.

Another classification has been on the basis of whether or not they are applicable at the international or local level. International indicators have been defined as those indicators, which are universally relevant for evaluations across the world. Local indicators are those developed locally to measure specific local situations and can address the unique circumstances or requirements of a particular project.

The most commonly referred to are 'impact' and 'outcome' indicators, which relate to end effects, and 'process' indicators, which relate to how the effect was achieved.

5.1 Impact and outcome indicators

Impact indicators measure the immediate or short-term effect of the work on its target group. For example, '*The increased use of hand-washing facilities by market food handlers*'. Impact indicators relate to the *objectives*.

Outcome indicators measure the longer-term effect of the work on the target population. For example, '*The decreased incidence of diarrhoea*'. Outcome indicators are linked to the *aim*.

5.2 Process indicators

This is a type of indicator that collects data and information on the mechanisms of the work. For example, '*The number of food handlers in the markets who attended the training on hygienic handling and processing of food*'. Process indicators relate to *activities*.

Process indicators measure the extent to which the project is delivering what it has intended to deliver. For example, in a Healthy Market initiative, a process indicator may be the number of toilets installed in the market and the number of food handlers trained in hygienic techniques. In a Healthy School project, process indicators can include the number of children immunized, children's access to safe drinking water and sanitation. Process indicators can also be qualitative measures of issues such as community participation and intersectoral action.

Lists of process indicators and impact indicators are included in this manual but these may or may not be applicable to a particular HCP. *Research into evaluation of HCPs shows that while internationally developed indicators may be used in the evaluation of HCPs, it is important and valuable for HCPs to develop their own indicators locally.* It is also important that local people are involved in the development of indicators. What is indicative of something to one group of people might indicate something different to another group of people. The emphasis will be on the 'process type' indicators as measures of project implementation and effect.

5.3 Developing indicators

Important points to consider in developing indicators at local level include the following:

- Develop indicators in collaboration with the evaluation team.
- Do not overlook the complexity of developing indicators.
- Develop a portfolio of indicators in relation to the evaluation purpose.
- Use subjective as well as objective indicators.
- Consider professional as well as lay perspectives.
- Acknowledge the city's own unique needs.

5.4 Examples of process indicators

The following process indicators have been categorized according to the specific steps (often known as 'the 20 steps for implementing HCPs') which have been identified as necessary components for developing an HCP.

PHASE 1: Getting started
Build the support group

- Is there a support group in existence?

- How was the group formed?
- Are they representative of the different sectors that should be involved?
- To what extent are women represented in the group?
- How often does the group meet to discuss HCP project development?
- Has the group agreed on terms of reference?

Understand the concepts

- To what extent do the group members understand the concept of HCPs?
- To what extent are group members aware of the link between health and environment?
- What activities have the group implemented in order to raise the awareness of the HCP concept?
- To what extent does the project have access to WHO-produced documents on HCPs?
- Has the group identified steps to take the HCP initiative forward?

Know the city

- Has the group identified the stakeholders of the project?
- To what extent are health and environment information available in the city?
- Has a list of basic health status information/data been collected?
- Are the key stakeholders in agreement about the main health and environment related problems affecting the city?
- What are the important health problems in the city?
- Has a profile of the city been developed?
- Has the scale of the project (e.g. city-wide, community-wide) been defined?

Appoint a Steering Committee

- Has an HCP committee been appointed?

- What was the process of appointing the committee?
- Are all the relevant sectors represented in the committee?
- Is the committee representative of all the sectors and local stakeholder groups?
- Does the committee have clear terms of reference?

Prepare a work plan
- Has a detailed proposal been developed?
- Does the proposal have clearly defined objectives and activities?
- Was there enough baseline information to justify the proposal?

Find out stakeholders' needs
- To what extent have the community's views been incorporated in the proposal?
- Have all the stakeholders contributed to objectives and activities?
- How were the priorities identified?

Build the capacity needed to do the job
- What are the existing levels of expertise in the project?
- What opportunities for training has the project provided?
- Who has been trained?
- Who didn't attend the training and why?
- To what extent is the project receiving external support?

Identify funding
- What scale of funds was originally available for initiating the project?
- What are the resources already available?
- Has the group identified possibilities for resource generation?
- To what extent would resources be generated from different local sources?
- What efforts are being made to generate resources needed for the project?
- What processes are used to actively explore new sources of funding?

Get approval
- Have the partners identified and accepted their roles in the Healthy City project?
- Does a memorandum of understanding exist?

PHASE 2: Getting organized
Decide on organizational arrangements
- Where is the project located?
- What are the obstacles to locating the project at the municipal level?
- What factors influenced the location of the project in its current base?
- What processes are used to decide on frequency of meetings?
- Has the project identified a project co-ordinator?
- What proportion of the co-ordinator's time is allocated to the project?

Set up office
- Do the co-ordinator and other staff have the skills and status needed for co-ordinating the project?
- Is the office equipped with the necessary facilities?

Develop a strategic City Health Plan
- How were the priorities for action arrived at?
- Have the objectives and targets been agreed and documented?
- Are all stakeholders aware of the plan?
- Are stakeholders committed to the project strategy?
- Is the strategy documented?
- What processes are in place for review-

ing and revising priorities?

Establish and monitor accountability
- Are there established management structures?
- Are systems of accountability at different levels of the project in place?

PHASE 3: Taking action
Increase health awareness
- What mechanisms are used to promote awareness of health issues among stakeholders?
- What activities have been implemented in order to increase public awareness of health issues?
- Are there systems in place to ensure project learning is disseminated to the public?
- Does the project advocate strategic city planning?
- Have all the sectors contributed to the development of the strategic plan?
- Are the sectors committed to the implementation of the plan?
- Are sectoral plans in line with Healthy City plans?

Advocate strategic city planning
- Is the programme engaging in strategic partnerships with city management?
- Do these partnerships help to ensure optimal health gains from development and planning?

Mobilise intersectoral action
- How does the project involve senior managers and politicians in the initiative?
- Has each sector identified a key person/s to represent the sector in the HCP?
- How does the project ensure that all the key sectors participate in the project?
- What are the individual sectoral contributions to the project?
- What committees or task forces exist that enable intersectoral action?
- Has each of the sectors identified its contribution to the project?
- To what extent do the sectors contribute to the achievement of project objectives?
- How do the sectoral contributions to the project implementation vary?
- What are the factors that influence participation (positive or negative) by other sectors?
- Are there multisectoral task forces?

Encourage community participation
- How does the project ensure that community views are taken into consideration?
- In what ways does the project encourage community contributions?
- Who is involved?
- Do all groups feel they are adequately involved in the project?
- What factors are likely to improve community contributions?

Promote innovation
- To what extent are the activities based on previous evidence of effectiveness?
- What proportion of activities are based on new ideas?

Secure healthy public policy
- What processes are planned and implemented to test effectiveness of project activities?
- What mechanisms exist to ensure mainstreaming and integrating of successful activities?

5.4   Examples of outcome indicators

Mortality
- Crude death rate
- Infant mortality rate
- Life expectancy at age 1

Morbidity
- City-specific disease rate (i.e. AIDS, dengue, diarrhoeal disease, malaria, measles, nutritional deficiencies, and respiratory diseases)
- Number of days in which activities were limited/not limited because of illness or injury

Preventive health care
- Percentage of population fully immunized
- Percentage of population receiving health education
- Number of cigarettes smoked per day
- Rate of drug and alcohol ingestion
- Rate of unsafe sexual encounters

Health services
- Number of people served by each health care facility
- Number of people receiving health care
- Number of doctors per 1000 people

Social security
- Number of burglaries or robberies per 1000 persons
- Homicide rate
- Rate of violent crimes
- Rate of child abuse
- Rate of domestic violence

These indicators should not be considered as exhaustive or final. The diversity of cities in the WHO African Region and the possible diversities that could exist in HCPs mean that the above indicators form a *general common set* which could be used by most cities.

They have been deliberately confined to relatively straightforward issues and ease of collection. Ideally these indicators should be used as a guide for each city to develop its own city-specific indicators. The range of potential indicators is almost endless, and as various issues arise within a given project, highly specific indicators may be used. Annexure I lists indicators which have been used in the Asian Region, and these may be used as a basis for indicators of specific local interest.

One way of developing indicators in HCPs has been in a workshop of project stakeholders where all stakeholder representatives participate in the process. This is particularly useful for helping the stakeholders to understand the value and limitations of a given set of indicators, and to select those which provide them with the specific information which will allow them to take action within their own sphere of influence. For example, an official responsible for solid waste management might want to know how many unofficial garbage dumps exist in the city, whereas a politician might be more interested in gauging how the electorate feels about these garbage dumps.

Evaluation methods

Evaluation literature shows that there is a range of methods that could be used to evaluate HCPs. These methods fall broadly into two categories, namely the experimental and case study approaches.

6.1 The experimental approach

The experimental approach involves a comparison between two identical communities before and after the project is implemented in one of the communities. The other community is used as a control.

This method is the basis of the 'randomized controlled trial', which is considered as the 'gold standard' in epidemiology. However, this approach has limited value for community-based initiatives such as HCPs, because no two communities are identical and even if there were two nearly identical communities, it would not be possible to stop all initiatives in a community so that it could be reliably used as a control. In addition, several identical communities would need to be found in order to have sufficient statistical power for valid comparisons.

When controlled experiments are not possible the next best approach is to do quasi-experiments, one of which is the 'before' and 'after' study in a single community. Baseline data are collected in order to identify the situation before the project. A similar study conducted at a later date is used to identify changes in the situation. In HCPs, however,

the problem is that such changes cannot always be attributed to the project because there are so many other external factors influencing the project community.

Despite their imperfections both of the above approaches have been used to evaluate community-based interventions. As long as the results are interpreted with caution, these approaches can give some useful indications of a project's likely impacts.

6.2 The case study approach

HCPs have been found to be extremely context-specific. When applied in one HCP context, the same strategies do not necessarily evolve in the same way in another HCP context. Therefore, it is important that the evaluation approach is able to take this into consideration. The case study approach is one way of doing this.

A case study is an empirical investigation of a contemporary event within its real-life context. A case study is also appropriate when the boundaries between the initiative and the context are not clear. The case study approach is used when the evaluator deliberately wants to cover contextual conditions. This approach also allows for increased participation in the evaluation by stakeholders (particularly beneficiaries). Stakeholder involvement in evaluation is not only the preferred approach but also contributes to their empowerment.

6.3   Important steps in the evaluation process

Before starting an evaluation those involved should agree on:

- who the evaluation is for;
- which project or programme is being evaluated;
- the type of evaluation;
- who is going to be involved;
- which indicators will be used;
- which method of evaluation will be used; and
- the method of data collection.

Information collection

A range of information collection methods is available to the evaluator wishing to undertake an evaluation of HCPs. They include interviews, questionnaires, focus groups, review of documents and observation. The choice of method or combination of methods is dependant on the context in which the evaluation is conducted, and the evaluation question to be asked. There are no rigid rules that can be provided for making decisions about data collection and methods in evaluation. The art of evaluation involves creating a design and gathering information that is appropriate for a specific situation.[2]

7.1   Interviews

Interviews are one of the most frequently used methods of information collection in the evaluation of HCPs. Typically interviews are carried out with so-called 'key informants', who are people selected for their in-depth knowledge of specific aspects of the project. Interviews may also be conducted with random samples of the general public if one is seeking to gauge broad awareness or effects of the HCP.

The way interviews are conducted can vary between a very structured approach, using a standardized interview schedule, and the more unstructured, unstandardized but focused interview known as the 'focus group' approach. A structured interview relies on a formal questionnaire and does not accommodate the differences in perspec-

tives and opinions between respondents. Since HCP evaluation needs to allow for recording of differences in experiences of various stakeholders, a less rigid form of interview is usually more appropriate.

Focus groups can be used both before and after structured questionnaires. When used before questionnaires, focus groups can help to identify issues that the stakeholders regard as important and that need to be explored in the questionnaire. When used after questionnaires, focus groups are useful for exploring certain issues in greater depth or explaining the results of a quantitative analysis.

The best-designed questionnaires nearly always have a few questions that produce surprising or confusing answers, but these can often be explained by talking to the local stakeholders. A combination of both quantitative and qualitative approaches is usually necessary for an effective evaluation of an HCP.

7.2   Questionnaires

The questionnaire is one of the most frequently used methods of data collection. It can be used to gather a range of information relating to individuals or groups. The type of information gathered will depend on the evaluation question. The most common failing in questionnaire design is to ask *too many* questions. In designing a question-

naire, one should always ensure that *only* the questions that provide information relevant to the evaluation question(s) are included.

- Ask clear and unambiguous questions.
- Ask questions in such a way that there would not be too many possible answers.
- Target the questions to people who are in the best position to answer them.
- Ask questions that are relevant to most respondents.
- It is better to have short questions.
- Collect only the information that will be used.
- Decide on how the responses will be analysed before implementing the questionnaire.

7.3   Review of documents

The use of documentary evidence depends largely on how well and thoroughly the project and events are documented. In HCPs documented information can be obtained from project plans, minutes of committee and task force meetings, newspaper articles, reports to funding organizations and budgetary information. Although less frequently in the case of developing country HCPs, there may also be published documents in journals or on the Internet.

7.4   Observation

In the use of observation as an information collection method, the evaluator becomes the instrument of data collection. Participant observation means that the evaluator enters the world of those engaged in HCP activities in order to provide an account of them.

It is advisable that the observer role of the evaluator is made explicit to the other stakeholders. In learning-oriented evaluations, interpretations of the evaluator's observations are preferably made in consultation with the local stakeholders or the evaluation team. If the evaluators are external to the project, they may need interpretation of what is observed. Observation fieldwork is important to give a description of the project.

Who should carry out the evaluation?

Evaluations that are conducted to prove that the objectives have been achieved are best conducted by *external evaluators* who are likely to be more objective. Evaluations that are conducted to improve programmes can be conducted by practitioners or internal evaluators.

In HCPs it has been proposed that an evaluation team is formed to support the internal evaluator. The evaluation team is particularly important when an external evaluator is conducting a process (learning-oriented) evaluation. The external evaluator who may not be familiar with the project may be supported by the evaluation team.

The main issue in defining the role of the evaluator is the location of the evaluator with respect to the programme. External evaluators are defined as evaluators who have no ongoing position in the HCP being evaluated, and who do not depend on the HCP for their regular employment or career. Internal evaluators are people like the project manager or a member of the Task force who has the skill to conduct evaluation.

8.1 Skills of the evaluator

The evaluator is expected to have a range of diverse skills:

- Social skills: ability to stimulate participation and lead negotiation on evaluation questions.
- Pedagogical skills: ability to transfer knowledge so local learning and change takes place.
- Facilitation skills: to assist the development of aims and objectives and the sharing of agendas.
- Political skills: the ability to gain stakeholders' interest and trust.
- Negotiation skills: the ability to help people achieve consensus.
- Methodological skills: design, data collection and analysis.

External evaluators who have all these skills are still disadvantaged if they are not familiar with what is happening in the project. Thus there is the need for external evaluators to be supported by the evaluation team. In the long term it can be more cost-effective if the skills needed are available at internal project level.

8.2   Advantages and disadvantages of internal and external evaluators

ADVANTAGES	DISADVANTAGES
External evaluators: • Can have an objective and independent view • Are able to take a fresh look at the programme • Have experience of other evaluations for comparison • Are likely to be more skilled in evaluation techniques and methodology • Have no vested interests and can be more straightforward and critical	**External evaluators:** • Require more time to familiarize themselves with the programme • Tend to be more expensive • Are more concerned about the evaluation report than programme improvement • May not know who the stakeholders are and how to involve them • Depend on programme stakeholders for guidance and direction
Internal evaluators: • Have a thorough understanding of the context and mechanisms of programme operation • Know the stakeholders better • Are less costly to employ • Would want to learn about how to improve the programme • Independently lead the evaluation team	**Internal evaluators:** • Have bias towards generating positive outcomes • Will be more subjective • Find it difficult to separate the evaluation question from other broader questions, issues and problems • Are less likely to have specific evaluation training and skills

A framework for evaluation of Healthy City projects

PROJECT FRAMEWORK FOR EVALUATION OF A TYPICAL HEALTHY CITY PROJECT	INDICATORS (examples)	
4. IMPACT / OUTCOME Environmental & health conditions improved	• Mortality & morbidity data • Pollution & natural resource indicators	**I M P A C T**
3. OUTPUTS Awareness of health issues raised | Community participation in design & implementation of city health plan increased | Intersectoral collaboration achieved | Institutional capacity developed	• City health plan activities implemented by all sectors & communities • Environmental & health infrastructure improved	
2. PROCESSES / ACTIVITIES Media/publications Public gatherings & rallies Seminars Campaigns | Workshops Healthy institutions Working parties | Task forces Co-ordinating Council | Training Seminars Study tours	• Activities implemented (No. of seminars, publications, campaigns, workshops, etc.) • No./type of people attending • No. of 'healthy institutions' • No. of meetings of task forces, councils, groups • No./type of collaborative activities implemented	
1. INPUTS Funds Human resources Project management capacity Structures & procedures Legal mandate for the project	• Funds disbursed • Staffing levels • Agreements signed • Project office activities implemented (letters, reports, meetings, etc.) • Funds raised/mobilised	**P R O C E S S**

The evaluation plan

There are many important issues to consider when planning an evaluation:
- Make sure the evaluation is an integral part of the planning phase.
- Make sure money is allocated or available for evaluation.
- Treat evaluation as an ongoing activity and a learning process.
- Consider the timing of evaluation.
- Make sure there are clear goals and objectives and activities and that all who are involved know what is expected.
- Be clear about the purpose of evaluation.
- Involve people: make sure evaluation is participatory.

For evaluation to be *participatory* it is useful to form an evaluation team representing different sectors involved in the Healthy City project.

It is useful to agree on:
- who the evaluation is for;
- the project or the programme that is being evaluated;
- the project objectives and activities;
- who is going to be involved;
- the type of evaluation;
- the method of evaluation;
- the indicators to be used;
- the method of information collection;
- the type of analysis;
- who will write the report;
- how the findings will be shared with other stakeholders; and

- how the findings will be used.

10.1 The importance of participatory evaluation

The Joint Committee on Standards[3] has singled out a number of issues which are sufficiently important to be incorporated into their standards for evaluation. One of these is stakeholder identification.

STAKEHOLDER IDENTIFICATION

Persons involved in or affected by the evaluation should be identified, so that their needs can be addressed.

Joint Committee on Standards (1994)

The potential for bias with internal evaluators is often difficult to overcome. Most people want 'their' project to be seen as a success and many find it difficult to see evaluation as a positive process. More often than not, evaluation is regarded as potentially threatening. However, when those being evaluated become involved in the evaluation and the benefits of evaluation are properly understood, it becomes a valuable tool for promoting the project and collectively finding solutions to problems. Projects which fail to take a critical look at where they are going, on a regular basis, usually get lost.

Since HCPs involve working with many partners, including government organizations, non-government organizations and the community, it is important to involve all the

stakeholders in the evaluation process. Stakeholders in HCPs are all the people who are affected in any way by the project. The most important category of stakeholders is the beneficiaries.

Conducting a **stakeholder analysis** is one of the ways through which participation of stakeholders can be enhanced. A stakeholder analysis should ideally be carried out as part of the initial project planning process. If it has not been carried out it is never too late to do so. It could also be carried out periodically as project components are reviewed and re-planned. Stakeholder analysis could also be carried out prior to evaluation. In evaluation, it acts as a tool for identifying the interests and involvement of the various stakeholders in the project activities, that in turn helps the evaluator/s to involve the stakeholders in appropriate ways.

Stakeholders include funders, WHO, collaborators, managers, implementers and the community. They can broadly be divided into two categories:
- primary stakeholders or beneficiaries (those who should benefit from the project); and
- the secondary stakeholders who facilitate or provide the services.

It may not be possible or necessary to involve all the stakeholder groups to the same extent in any evaluation. The decision about who should participate depends on:
- the evaluation question or questions asked;
- who will be able to provide the answers to the evaluation questions;
- what you want to know from the evaluation;

- who the evaluation is for;
- the purpose of the evaluation;
- who will be expected to act on the evaluation findings; and
- who will use the results of the evaluation.

EVALUATION IMPACT
Evaluations should be planned, conducted, and reported in ways that encourage follow-through by stakeholders, so that the likelihood that the evaluation will be used is increased.
Joint Committee on Standards (1994)

10.2   Evaluation should focus on use
All evaluation efforts must have a purpose. Evaluations are costly and time-consuming. It is therefore important that evaluations are useful and used. The evaluation process can also be used to inform others about project processes and to foster stakeholder participation and involvement.

Research into evaluation of HCPs has shown that many evaluations are not fully used. *Use of evaluation results is hindered by the lack of involvement of local stakeholders in the evaluation process*. When stakeholders get involved in the evaluation process they learn about the project processes, they ensure that evaluations answer their questions and that the evaluation findings are used.

The evaluation report

REPORT CLARITY

Evaluation reports should clearly describe the programme being evaluated, including its context, and the purposes, procedures, and findings of the evaluation, so that essential information is provided and easily understood.

Joint Committee on Standards (1994)

Documenting the evaluation is an important part of the evaluation process. Unless the evaluation is documented, it is difficult to share the findings with a wide group of stakeholders and for them to use the findings.

The evaluation report must have the basic set of information for it to be self-contained. In order for it to be useful, it should be clear enough to be easily understood.

The report should have a description of the project being evaluated, including its objectives and key activities. It must also state:

- the purposes of the evaluation;
- what was evaluated;
- how the evaluation was conducted;
- what information was collected;
- what conclusions were drawn; and
- what recommendations (if any) were made.

Concluding remarks

As noted at the beginning of this document, evaluation is part of a cycle of events. Hence, reaching the end of an evaluation and writing the report should be seen as the beginning of the next phase.

The evaluation should have highlighted strengths and weaknesses of the current project or programme, and these will guide subsequent actions. In due course, the changes that are made will need to be evaluated in their own right, and thus the cycle continues.

The best navigators in the world check where they are at least once a day. The frequency of the checks in a Healthy City project may not be as frequent - but they are no less important.

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Annexure I: Examples of Indicators used in Healthy Cities Programmes.
Adapted from WHO, *Healthy Cities in Asia: A Diagnostic Manual.*

AREA OF CONCERN	CATEGORY	INDICATOR
Indicators for Physical and Emotional Health		
Physical health	Mortality	Crude death rate Infant mortality Life expectancy at age 1
	Morbidity	City-specific disease rate (i.e. AIDS, dengue, diarrhoeal disease, malaria, measles, nutritional deficiencies, and respiratory diseases) Number of days in which activities were limited because of illness or injury Number of days in which activities were not limited because of illness or injury
	Preventative health care	Percentage of population fully immunized Percentage of population receiving health education Amount of time spent each week engaged in cardio-vascular exercise Number of cigarettes smoked per day Rate of drug and alcohol ingestion Rate of unsafe sexual encounters
	Delivery of health	Number of people served by each health care facility Number of people receiving health care Number of doctors per 1000 people
Emotional health	Safety/ Security	Number of burglaries or robberies per 1000 persons Homicide rate Rate of violent crimes Rate of child abuse Rate of domestic violence
	Cultural vitality	Annual number of people attending cultural facilities (i.e. community centres, libraries, museums) Rate of participation in cultural organizations Annual number of community cultural activity

AREA OF CONCERN	CATEGORY	INDICATOR
Indicators for Physical and Emotional Health		
	Cultural vitality continued	Provision of cultural facilities (i.e. community centres, libraries, museums, theatres) (Y/N) Government financial support of cultural activities (festivals, religious holidays) (% of budget) Government financial support of art forms (Y/N)
	Psychological health	Suicide rate Rate of alcohol- or drug- induced injuries and deaths Prevalence of psychosis
	Social support	Percentage of people satisfied with their support networks Percentage of people satisfied with support from their family members Membership rate in community-based organizations Membership rate in religious organizations Percentage of population that is homeless (by age and sex cohort) Number of street children Number of development-oriented grassroots organizations Number of charity-oriented organizations (i.e. shelters for homeless, runaways, battered women, etc.) Number of CBOs by type
	Political efficacy	Adult suffrage rate Percentage of population voting Frequency of elections Multi-party system (Y/N) Number of mass protests Deaths or casualties resulting from public demonstrations Incarcerations resulting from public demonstrations Local government selection process (elected or appointed) Independent judiciary (Y/N) Independent press (Y/N)

AREA OF CONCERN	CATEGORY	INDICATOR
Environmental indicators		
Environmental problems/issues	Air pollution	Sulphur dioxide: total emissions (t) and concentrations ($\mu g/m^3$) Suspended Particulate Matter: total emissions (t) and concentrations ($\mu g/m^3$) Airborne lead residuals in the atmosphere: total emissions (t) and concentrations ($\mu g/m^3$)
	Noise pollution	Percentage of population exposed to traffic and airport noise Number of public complaints regarding noise nuisances Noise levels in housing quarters (dBA)
	Water pollution	Dissolved Oxygen Demand in surface water (mg/l) Biological Oxygen Demand in surface water (mg/l) pH Faecal coliforms in water sources (number/100 ml)
Environmental infrastructure/ services	Transportation	Number of registered motor vehicles (by type) Road network length (in km); type Total fuel consumption by motor vehicles Riders by travel modes (number of people/day) Estimated pollutant emissions created by vehicles (in tons) Number of accidents involving injury to persons Injury rate Road accident mortality rate
	Energy use	Total electricity generated Estimated pollutant emissions by electricity generation (in tons) Industrial energy emissions (by type) and estimated emissions Percentage of households using electricity, gas, coal and firewood
	Water supply	Percentage of population with access to safe drinking water Percentage of population using alternative water sources (open wells, rain and water cisterns, rivers, streams) Percentage of households with safe-water hookups Quality of water for drinking and bathing/washing

AREA OF CONCERN	CATEGORY	INDICATOR
Environmental indicators		
Environmental infrastructure/ services	Sanitation	Percentage of population with access to adequate sanitation services Collection, disposal and treatment of humans excreta Percentage of population covered by centralized sewerage systems
	Waste disposal	Municipal and industrial waste generated (tons/day) Municipal and industrial waste disposed (tons/day) Municipal expenditures for solid waste management Waste water generated (litres/day) Number of municipal waste water treatment plants Industrial effluent treatment (litres/day)
	Housing	Average floor area per person (m^2 per head) Average occupation per room (persons per room) Number of marginal housing units Number of new housing units added annually
	Open space	Area of park and open space per 1000 people (square metres)
Government concern	Air quality related	Are there provisions for reducing traffic congestion? (Y/N) Are there regulations requiring use of unleaded gasoline? (Y/N) Are there vehicle emission control regulations? (Y/N)
	Noise related	Are there regulations concerning noise pollution? (Y/N)
	Energy related	Are there regulations requiring use of cleaner technologies for energy generation? (Y/N) Are there government-sponsored research programmes for alternative energy sources? (Y/N)
	Water supply	Are there programmes for the provision of safe drinking water? Is there adequate regulation of water supply services? (Y/N) Is there any monitoring system for ensuring quality and efficiency of water supply? (Y/N)

AREA OF CONCERN	CATEGORY	INDICATOR
Environmental indicators		
	Waste disposal and sanitation related	Are there any programmes for extending and improving sewerage systems? (Y/N) Are there efforts to improve sanitary services? (Y/N) Are there regulations concerning industrial effluent discharges? (Y/N) Are there regulations for sanitary land-filling? (Y/N) Are there regulations encouraging recycling and reduction of wastes? (Y/N)
	Housing	Are there low-income public housing development programmes? (Y/N) Are there programmes for slum improvements? (Y/N) Are there land-use regulations? (Y/N)

AREA OF CONCERN	CATEGORY	INDICATOR
Socio-economic indicators		
Livelihood	Employment	Percentage of the active labour force that is currently employed (employment rate) Percentage of the active labour force that is currently unemployed (unemployment rate) Percentage of the active labour force that is currently underemployed (underemployment rate) Dependency ratio (youth dependency ratio and old age dependency ratio) Percentage of labour force in the informal sector
	Working conditions	Percentage of the active labour force working more or less than locally accepted standard number of hours Time lost due to work-related injuries (by type of industry and type of injury) Work-related fatalities (by type of industry and type of injury) Work-related illness and disease Subjective measures of worker satisfaction
	Exploitation of workers	Gender inequality in the workplace (ratios of men to women working in low skill occupations, and the ratios of those in management, professional, or technical positions)

AREA OF CONCERN	CATEGORY	INDICATOR
Socio-economic indicators		
Livelihood continued		Number of sex workers Labour force participation rate for children (ages 0-16)
	Education	Percentage of city share of gross domestic product spent by governments on education Number of programmes aimed at raising worker skill levels Literacy rate (by gender) Primary, secondary school enrolment (by gender) Gross/net enrolment rates
Prosperity	Ability to meet basic needs	Poverty incidence rate (percentage of the population having less income than that needed to buy the minimum requirement of calories and protein, shelter, clothing and necessities) Degree of absolute deprivation (percent below Absolute Poverty Line) Consumer buying power (portion of income or hours worked to afford basic need items) Percentage of households owning consumer durables (e.g. electric cookers, refrigerator, televisions, radios, etc.)
	Income distribution	Degree of relative deprivation (Gini coefficient for the difference in consumption between highest and lowest income groups) Wage inequities between men and women (Gini coefficient for the disparity of income between men and women) Share of the sum of disposable income in the hands of the bottom/top 1%, 5% and 20% of the population
	Shelter	Percentage of population in substandard housing (slums) Percentage of population living in squatter or illegal settlements Housing costs (rent as % of budget, households with rent exceeding 20% of income) Quality of household equipment (dwellings with piped in water, electricity and sanitary service) Housing security (the number of forced evictions, the number of dwellings lost to natural disaster or fire)