



Into Evaluation: A Start-Up Resource

For Evaluating Environmental
Education and Training Projects,
Programmes, Resources

2004



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About This Resource

This resource consists of six 'tools' to help you plan and conduct an evaluation, plus case studies which illustrate various aspects of planning and doing 'real life' evaluations.

The resource takes the form of a file, so that users can add further examples of evaluations, including their own, and other useful material they may come across. As a 'start-up' resource it is not comprehensive; it aims to provide just the 'basics' as a starting point. Users are encouraged to expand the resource, thereby also customising it for their own context.

The evaluation resource was commissioned by a local government body, the Environmental Management Department of the City of Cape Town. This Department also led the development of an Environmental Education and Training Strategy for the City of Cape Town. The strategy gave rise to this resource, as it identified the need for evaluation support to City staff and others. We found that City staff involved in environmental education and training often questioned whether their programmes, projects and resources were achieving what they hoped to achieve, and whether they were indeed contributing to better environmental management and decision-making. The staff needed to evaluate their work, but were mostly unsure how to do this.

We also encountered this situation in other contexts of environmental education and training in South Africa and indeed the SADC region. Practitioners in NGOs and higher education institutions were among those who approached us for guidelines on how to do an evaluation. Thus we decided to make the resource available more widely than just to City of Cape Town staff.

The first six case studies in the file are drawn from the operations of the City of Cape Town. Because this local government is involved in a range of environmental education activities, the case studies cover a wide scope, relevant to most other contexts. As practitioners in government bodies, civil society organisations or educational institutions, many of us are involved in once-off presentations (such as those evaluated in Case C1); or the production of educational materials (Case C2); in public awareness programmes (Cases C3 and C6); or programmes for schools (Cases C4 and C5). In community – and organisational development contexts we often aspire to participatory evaluations, such as that described in Case C5.

We hope that you find this *Start-Up Resource* a useful toolkit for your own evaluations. And we welcome any constructive, evaluative feedback in this regard!

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2004



Into Evaluation: A Start-Up Resource

For Evaluating Environmental Education
and Training Projects, Programmes, Resources

TOOL 1: Introductory Concepts

What is evaluation?

Related terminology:

- Appraisals, assessments, etc.
- Baselines and contextual profiles
- Monitoring and evaluation

2004



Introductory Concepts

What Is Evaluation?

Evaluation is often a daunting idea. And yet we all do it. If you're buying something and questioning whether it is worth the price, you're evaluating. If you're choosing between two schools for your children, you're evaluating. Maybe you're considering whether to vote for a certain political party, or not. You're evaluating.

Evaluation is about determining the merit, worth or value of something, and is part of everyday life. (And the examples suggest that even in everyday life, evaluation is not necessarily easy.)

In our work context, evaluation is the process of determining the value, worth or merit of a project, programme or resource, *in a careful and systematic way*.

In this case the value of our own work is the focus of attention, and this is partly why we find evaluations threatening. Through monitoring and evaluation, the democratic state gets citizens to manage and control themselves. There is pressure on us to be scrutinized, and indeed to do the scrutinizing ourselves. Most people tend to agree, however, that this is by and large a good thing.

Another reason why evaluation in the work place is daunting, is that it tends to be the domain of technical experts. These colleagues have developed a vast body of terms which intimidates most practitioners into reaching for the cheque book and handing over the responsibility. And even if practitioners are brave enough to do the evaluating themselves, they face tricky decisions like "How do I know I'm not biased?" or "How many people should we interview?"

This resource aims to show that:

- Evaluating our practice is a good idea, particularly if it is approached *as part of* that practice, rather than an after-thought.
- While 'outsider' evaluators have a fresh perspective to offer, practitioners can do useful evaluations without knowing most of the expert terminology, as long as some key considerations have been given attention.
- These key considerations require a clear understanding of the purpose of the evaluation, of the underlying approach we take to the evaluation, and of some basic ground rules to improve its quality, credibility and validity.

Matters like bias and validity are not clear-cut and we won't promise to show you that evaluation is easy, because it seldom is. Evaluation is not a science, about which one can be exact. It is political, but it is (also) not merely a strategic game. Evaluation is – like education and training processes – a craft that needs ongoing fine-tuning, both by the person practising it, and by society as a whole. On this much there is consensus among the experts who specialise in evaluation. On many other aspects of evaluation, there are conflicting ideas. One should acknowledge this, be clear about one's own decisions in planning and doing an evaluation, and while considering the limitations, aim to do the best job possible!

Related Terminology

Project appraisals, needs assessments and feasibility studies

An appraisal is an overall assessment of the relevance, feasibility and potential sustainability of a project or programme, *prior* to a decision to fund or develop it. In this resource we use the term evaluation to refer to the assessment of *ongoing or completed* activities (projects, programmes, resources), not activities that are still in the planning process. It is very valuable to assess the needs on the ground, and to consider the feasibility of a project before it starts. But these assessments are not usually called evaluation. Rather, they would be called needs assessments, project appraisals, feasibility studies, etc., and they generate information that can be very valuable in evaluations.

Several of the case studies in this resource argue that the evaluation (and the project or programme) would have benefited from an applied risk assessment prior to its onset. (See Cases C4 and C6 in particular.)

The terms appraisals and assessments are also used in relation to *individuals*, e.g. performance appraisals of staff in the work place, and assessment of learners' competencies in schools. These particular types of evaluations are not covered in this resource. This resource focuses on the evaluation of *environmental education and training processes*, in the forms of programmes, projects and resources.

Baseline studies and contextual profiles

A baseline study and a contextual profile are two forms of analysis describing the situation at the start of a programme, against which progress can be assessed or comparisons made during the evaluation.

Baseline studies focus mainly on measurable (quantifiable) indicators (e.g. number of households involved in recycling, number of teachers qualified in environmental education, number of natural disaster victims).

Contextual profiles look at many more contextual factors, and paint a rich picture to help evaluators decide, for example, how relevant a programme is for its context, or to explain contextual reasons why certain intended outcomes could not be achieved.

In Case C3, an audit of electricity and water consumption and waste production provided baseline data against which the impact of the LA21 Households Pilot Project could be assessed. Case C6 argues for the importance of baseline data against which to evaluate project outcomes.

For example, a contextual profile of the situation in South African schools would help to explain why (and perhaps how) the development of environmental education resources for schools must be accompanied by a teacher support strategy, a point that emerged from the evaluation of the City of Cape Town's State of the Environment Schools' Workbook (Case C2).

Monitoring and evaluation

Monitoring is the continuous follow-up of activities and results, in relation to pre-set targets and objectives. It complements evaluation, but is not synonymous with it. The difference between the two is mainly one of analytical depth. Monitoring may be nothing more than a simple recording of activities and results against plans and budgets. Evaluation probes deeper. Monitoring will identify problems which need to be fixed along the way, but won't necessarily be able to explain why

a problem has arisen, or why a desired outcome has failed to occur. In other words, monitoring does not answer questions of cause and effect. To answer such questions, one needs evaluation.

On the other hand, evaluation may need monitoring data. Several case studies illustrate this. In Case C5 the evaluator made use of the nature reserve staff's monthly reports, in which they monitored the number of reserve visitors. If this data had not been available, it would for example, have been difficult to investigate claims that some reserves were over-subscribed and others under-utilised. Case C3 argues for the ongoing collection of information on responses to training sessions, as it is difficult for trainers to recall the outcome of these sessions, when a final evaluation takes place months later.

Successful monitoring across different project nodes requires standardisation. In Case C5 a standard monthly reporting format was proposed, to obtain equivalent data about visitor numbers and trends across the City's nature reserves. This would assist in the successful ongoing evaluation of the overall environmental education programme in these reserves.

Monitoring usually makes use of quantitative methods only; evaluation uses both qualitative and quantitative methods.

Monitoring uses pre-defined indicators of progress, which would be assumed to be appropriate. In evaluation, the validity and relevance of given indicators would be open to question.

Monitoring focuses on intended results; evaluation identifies both intended and unintended results of a programme, project or resource.

Monitoring tracks progress against a small number of pre-defined indicators, while evaluation deals with a wide range of issues.

While monitoring is a valuable component of evaluation, monitoring without evaluation thus provides a limited picture of what is happening in a particular project or programme. (Case C5 argues this point.)

Case C5 argues that a monitoring and evaluation process which only values numbers (in this case, numbers of learners attending education programmes on the reserves) can detract from the quality of such programmes: both because staff who are busy with large groups cannot attend to quality, and because the monitoring and evaluation framework suggests to them that nothing other than numbers is important.

In Case C6 the evaluation questioned the use of numbers of community members trained, as the only indicator of progress in the Fire and Floods Aware and Prepared Project; it suggested that information on the outcomes of training should also have been collected throughout the project.

If monitoring activities are not complemented with a formal evaluation plan, staff often find it difficult to respond to the issues identified through monitoring. For example, in the Fire and Life Safety Education Programme (Case C4), monitoring takes place when fire safety officers write a narrative report after educational presentations to school groups. These reports identify issues that should be responded to, but without a formal education evaluation plan, staff can seldom make the time to attend to this follow-up work.



Into Evaluation: A Start-Up Resource

For Evaluating Environmental Education
and Training Projects, Programmes, Resources

Tool 2: Approaches to Evaluation

Evaluation in Environmental Education
& Training

Different Approaches To Evaluation:

- Experimental and Empiricist Evaluations
- Naturalistic and Constructivist Evaluations
- Pluralist and Pragmatic Evaluations
- Participatory and Critical Evaluations

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Approaches to Evaluation

Evaluation in Environmental Education and Training

There are different approaches to evaluation. Before considering your own approach, consider the nature of the processes which you'll be evaluating: environmental education and training.

The *educational* aspects of environmental management and action differ in important ways from their *technical* aspects.

To illustrate this, we'll start with the technical stuff: Say an environmental manager introduces a new herbicide in an invasive alien plant clearing programme. She wants to see if the new herbicide works better than existing methods. For this technical evaluation, she will establish an experimental plot and a control plot which are similar in all significant ways. Her workers then treat the experimental plot with both manual clearing and the new herbicide. On the control plot they use only manual clearing (or manual clearing and an old herbicide). After a period of time, they check the two plots. If the experimental plot has significantly less re-growth of alien plants, compared to the control plot, they have 'proved' that it works.

(Actually, measuring physical things and making deductions from those measurements are not always simple matters, either. But thank goodness, we don't have to attend to those issues here!)

Our concern is with educational processes, and here we deal with a special set of issues. Education and training processes cannot be based on techniques and formulas, the way we can prepare and apply a herbicide. They involve people, and unlike Port Jacksons and plots of land, people are not easy to subject to change or testing! They are complex, thinking, feeling beings, who are part of complex, dynamic networks and contexts. And, to make matters even more interesting, the 'equipment' for doing the evaluation, is also a person! Evaluators bring their own ideas and values to the evaluation process. This is both a limitation (our 'bias') and a strength: it is our values and our intellect which enable us to perceive, make meaning and judge.

Some evaluators (and some managers and donors) are convinced that the same 'scientific' procedures for evaluating physical phenomena like alien plant invasions, apply to the evaluation of educational processes. We disagree. Environmental educators (and development specialists and social scientists more generally) have made a strong case that we should recognise the social world for what it is, and not treat it as a laboratory or experimental plot, however neat that might be!

This does not mean that all caution must be thrown to the wind when evaluating 'people stuff', or that no standards apply. For a set of quality standards applicable to evaluations of educational processes, see Tool 3.

But note that how we interpret these standards, might be influenced by the particular approach we take to evaluation. In the next section we look at four common sets of approaches to educational evaluations currently in use.

Different Approaches To Evaluation

There are various ways to group evaluations. In this section we classify them based on different approaches to evaluation. These approaches, or frameworks, are informed by distinct assumptions and values. Each approach therefore gives rise to different criteria for decisions, and so it shapes a different kind of evaluation design.

Most evaluation designs, and the decisions that evaluators take, can be traced back to one of these sets of approaches, although they won't always show all of the features we discuss. You'll also note that the divisions between approaches are not neat and tidy. There is some common ground between approaches, particularly between naturalistic and constructivist approaches on the one hand, and critical and participatory approaches on the other hand.

Experimental Evaluations

This is the typical biological or physical science ('scientific') approach to evaluation. The aim here is usually to find out whether or not a particular intervention (programme, project or resource) works. The design is similar to that described above, for evaluating the impact of the herbicide in an alien clearing programme. We measure the difference between Output 1 (O1) in the experimental group which received intervention X, and Output 2 (O2) in the control group, which did not receive the intervention. Or, in the pre-test post-test variation, we measure the difference between O1 and O2 where O1 occurs before intervention X (the introduction of the new herbicide, or a programme, project or resource) and O2 occurs after. In shorthand, the OXO approach.

The important criteria include:

Control of interfering factors: To know whether it is indeed intervention X which causes the difference between O2 and O1, we need to set up a control group, which has not been exposed to intervention X, but which is in every other way (as far as possible) identical to the experimental group.

Alternatively, one tests a large sample (a survey design as opposed to a case study design), in order to minimise the possible influence of interfering variables in individuals.

Control of bias: In this approach it is assumed that the evaluator can be and should be completely neutral and have no influence on the outcomes of the evaluation; various steps are taken in the hope of eliminating the influence of the researcher.

KEYWORDS

control of variables
control of bias
only measurement (quantitative) data

Case C4 features a quasi-experimental design, where learners' knowledge is tested after the intervention, a Fire and Life Safety Education Demonstration at their school. In a true experimental design, the learner's knowledge before the intervention would also have been tested, so that we can be sure that the knowledge they demonstrate, can be attributed to the Fire and Life Safety education intervention (rather than, say, a lesson they had in school the previous year). The evaluator mentions that there have been no interfering variables, such as follow-up messages from the teacher. Because it is so difficult to control for all interfering variables (e.g. TV programmes some learners may have seen, could have boosted or scrambled their knowledge) this type of evaluation usually relies on large samples (a survey design) to minimise the influence of interfering variables. In Case C4 the findings were questioned because only a single class was tested.

Measurement: The outputs need to be measured as precisely as possible, to be able to tell if the difference between O1 and O2 is significant. Because that which can be measured 'empirically' is the only data considered to be unbiased, this type of evaluation is also called 'empiricist'. Decision-making is based on statistical calculations, and the sample size must therefore be determined very precisely.

Predict/Prove: The idea is to prove that a certain intervention works, in order to predict that it will work again in future.

Some of the problems with experimental evaluations are:

- It is hard to control real life. We can never even identify all the possible 'interfering' variables, let alone control them. This ideal is particularly hard to achieve when evaluating programmes that have already been set up, or completed. For this reason, most 'experimental' evaluations are in fact based on quasi-experimental designs, without any control groups, and seldom approximate the ideal laboratory conditions.
- It is probably impossible (and some would say, undesirable) to be completely neutral as an evaluator. The evaluator's 'bias' influences the design of evaluation instruments such as questionnaires, for example. It is also difficult to think of an evaluation process which has absolutely no influence on the situation being evaluated.
- It is hard to measure the things that are the important outcomes in educational processes. We can perhaps 'measure' how much children learned during an outing to a nature reserve, and how much their teachers valued the experience. But can we *measure* whether they have become better ambassadors for biodiversity conservation? Similarly, in Case C6, the evaluation of the educational impact of the LA21 Households Pilot Project proved much harder to evaluate than the logistics.
- By 'standardising' and controlling we take away the context, and context plays an important role in educational outcomes. From the 'context-less' situation set up in an experimental evaluation we can't really generalise to the contexts of the real world. We don't learn what it was in a particular programme's context that made it work (or not work). We don't learn why it worked (or failed to work). So unfortunately, we don't learn very much at all.

For example, in the evaluation of the YES programme (Case C1), the presenters were undoubtedly influenced by the presence of observers – for better or worse. The evaluation of the Local Agenda 21 Households awareness campaign (Case C3) could have influenced the residents who participated in the programme in several ways. The evaluation would have reminded them of the programme and what they've learnt in it; it might have prompted them to take better environmental decisions, or it might have had the opposite effect, and encouraged them to find explanations for why they did not take better environmental decisions following the campaign.

The conclusion: A good idea, but one is unlikely to pull it off, and even if one does get it right, little of actual value will be learned anyway.

Naturalistic and Constructivist Evaluations

This approach involves a number of different evaluation types which have a common concern to get away from the experimental types. They focus on treating people as people rather than things, and they consider that the outcomes of an investigation are ‘constructed’ by the people involved – rather than ‘found’ through scientific procedures. People

are regarded as ‘stakeholders’ and their views are a critical consideration in the evaluation. The evaluator takes the role of a neutral facilitator who is led by the participants in the case being evaluated, to where they think it is important to go!

A key concern is not to impose one’s own view as an evaluator, even about what should be evaluated. Instead of using laboratory type measurements, evaluators use ‘natural’ methods like informal interviews and observations, immersing themselves in the case they want to learn about, over an extended period of time. They try to paint a rich picture of the case being evaluated, in its context, and leave it to readers to decide whether it was a worthwhile project or not. For this reason, the evaluation design usually involves one or a few in-depth case studies, rather than broad surveys.

Some of the problems with this approach:

- To do this kind of evaluation properly, one needs to spend a lot of time getting to know the project or programme being evaluated, and its context.
- It is difficult to draw boundaries, and decide what to exclude from the evaluation. So the evaluation tends to result in a mass of data (or findings, as one would call it here) and it can be difficult to know what to do with it.
- Often one ends up with a mass of information but a limited ability to answer questions. The idea is often to negotiate the main findings and conclusions with the stakeholders. This may be unrealistic in a world where some stakeholders have strongly held and differing opinions. (As was the case, for example, in Case C4.)
- If one only facilitates stakeholders’ existing understandings of a programme or project, one may not come to any new understanding of it.

The conclusion: This group did well to show that there are alternatives to the experimental approach, but they may have swung the pendulum too far to the other extreme. The valuable assumption behind this approach is that data is not found, but constructed. It makes us more humble about conclusions, and helps us to interpret an evaluation in the light of the context in which it took place. However, an evaluator needs to take a somewhat firmer hand in steering an evaluation to answer the question it is meant to address, and come to new insights, and should be more realistic about the possibility of negotiating a conclusion which everyone will agree with.

KEY WORDS

stakeholders
constructing and negotiating meaning
qualitative findings

In Case C5, the evaluation of the education programmes in some of the City of Cape Town’s nature reserves, the evaluator ran the risk of spending a lot of time on all the contextual factors which have an impact on how the reserve staff conduct their programmes. She did well to maintain a focus on the programmes, while highlighting several important contextual factors, such as the lack of job descriptions and professional development opportunities for educational staff.

Pluralist and Pragmatic Evaluations

This group tries to avoid the dilemma of choosing between the two approaches above. The pluralists avoid choosing between the experimental and the constructivist approaches, by borrowing from both. They say there doesn't really have to be a coherent framework for or a consistent approach to the evaluation – one picks methods according to the task at hand. They may therefore combine experiments and narrative interviews, for example. They make use of either broad surveys with large samples, or small samples of in-depth case studies, or combinations of these.

KEY WORDS

expediency – mix and match

The pragmatists say that the kind of approach one chooses should really be determined by the purpose of the evaluation, and that that purpose is above all else, political. Stop being naïve about the scientific weight of an evaluation, they say. If it's numbers that will convince the donors of the worth of a project, give them numbers. If the politicians will be moved by case studies from the township, take lots of photographs and ask the residents to tell their stories in their own words.

While it makes sense to recognise the political (or if you wish, strategic) nature of evaluations, method still matters. In a pluralist approach (a bit of this and a bit of that), the values and ideas involved can be contradictory, and thus not defensible. The pragmatist approach (anything goes as long as the client is happy), too, lacks a coherent framework.

Note that using statistics as part of a suite of methods does not necessarily make an evaluation experimental or empiricist.

However, it is useful to combine various methods (such as interviews, questionnaires, observations and even experiments), if this is done within a coherent framework.

Critical and Participatory Evaluations

This involves a variety of approaches to evaluation which, to a greater or lesser extent, share roots in critical theory and the empowerment of marginalised or oppressed groups and individuals. It includes evaluation through action research, where participants reflect systematically on their practice in progressive cycles. The aim is the empowerment of programme participants and ultimately, the transformation of unjust social relations, through participants' extensive involvement in the evaluation process itself.

KEY WORDS

participation
learning
oppression
empowerment
social transformation

The evaluation is ideally initiated by programme staff and beneficiaries rather than external parties. Any outside evaluator takes on an 'activist' role and works on the side of the programme participants. The evaluation has a strong developmental focus (people learn through doing the evaluation) and the boundaries between evaluation and programme are blurred. Methods are used which encourage interaction and reflection and which enable even illiterate participants to give their views (e.g. participatory community appraisals, which was proposed in Case C6 to assess the impact of the Fire and Floods Aware and Prepared project in informal settlements).

The value of this approach is that it addresses the issue of outsiders initiating and controlling evaluations which may fail to meet programme participants' needs; it addresses social injustices, and it shows that the process of evaluating can be developmental, educational and empowering.

For an example of a participatory evaluation in the context of environmental education staff development see Case C5. This evaluation does not however illustrate an overt critical approach.

The issues associated with this group of evaluations include:

- The evaluator(s) may set out to advocate a fixed view point, which can make it difficult to establish rigour, or to develop new and unexpected insights.
- A narrow focus on oppressive structures may be constraining and too simplistic to capture the complexity of socio-political life and environmental issues.
- These evaluations are also time-consuming, as they require considerable capacity-building among participants, and are best done as an integral part of a programme, rather than an after-thought.

Conclusion: The participatory approach is a valuable dimension to evaluations which have too often been done on people, with little regard of what they could learn from doing the evaluation themselves. Similarly, a way of work which does not distinguish between educational programmes and evaluation is valuable, particularly in endeavours like environmental education. The intention to work directly for social change through our evaluations is also in keeping with strong approaches to environmental education. However, one should keep a sharp eye on the tendency to interpret all situations through narrow 'critical' lenses.



Experimental & Empiricist Evaluations

Focus: Control variables, measurement, prove hypotheses, predict outcomes (O-X-O)

Role of Evaluator: Outsider, scientific expert

Methods: Experiments, quasi-experiments, questionnaire surveys

Value: Power of testing assumptions; convincing

Issues: Complexity of social world; laboratory conditions are unattainable and make predictions context-less

Naturalistic & Constructivist Evaluations

Focus: Stakeholder meaning-making

Role of Evaluator: Outsider, facilitator

Methods: Interviews, (participatory) observations

Value: Recognise that findings are constructed; stakeholders' views; importance of context; rich detail

Issues: Lack of focus, decision-making power, new learning; not every stakeholder can negotiate meaning

Pragmatic & Pluralist Evaluations

Focus: Expediency; a bit of this and a bit of that

Role of Evaluator: Varies

Methods: Whatever is requested, or fits the need

Value: Easier; use strengths of different approaches

Issues: Inconsistencies, no strong framework; lack rigour

Critical & Participatory Evaluations

Focus: Empowerment; emancipation from oppressive structures; social/individual development

Role of Evaluator: Insider, collaborator, activist

Methods: Various, including participatory community appraisals, focus groups

Value: Work on power relations towards social transformation, developmental approach, ongoing reflection in/on action

Issues: Limiting and simplistic focus on oppressive structures, powerful-powerless; lack rigour

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TOOL 3: Quality Standards

Evaluations must be ...

- ✓ Ethical
- ✓ Feasible
- ✓ Useful
- ✓ Accurate

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Quality Standards

Quality Standards for Evaluation in Education

The quality of any evaluation in education can be assessed in relation to four broad sets of quality standards.

Evaluations must be:

- *Ethical* (the propriety principle) with due regard for the welfare of those involved in the evaluation, and those potentially affected by its results
- *Feasible* – do-able, in terms of scope, costs, time, diplomacy, etc.
- *Useful* to all intended users (the utility principle)
- *Accurate* in the information given about the features of the programme being evaluated.

These standards are advocated by the Program Evaluation Standards of the American Joint Committee on Standards for Educational Evaluation (1994), and have been adopted by the African Evaluation Association in 2004. A summary can be downloaded from www.wmich.edu/evalctr/jc

The propriety standards

These ensure that evaluations are ethical and do not harm the rights and welfare of affected people. Before you undertake an evaluation, consider how the process and the findings may affect various parties. Evaluations should be fair and balanced, both during the research phase and during reporting. All relevant stakeholders should be heard and their views should be correctly reported. People have a right not to be misrepresented. People also have a right to adequate information about an evaluation, before they are asked to give information or opinions.

But what does an evaluator do when evaluation findings reflect badly on certain individuals or groups? Programme and project evaluations differ from staff appraisals (for example) in that they focus on the strengths and weaknesses of systems, structures and forms of organisation, rather than on the strengths and weaknesses of individuals. Where a system is being handicapped by a lack of competence on the part of individuals, for example, an evaluation can recommend staff appraisals and better training. Where a programme suffers because of irresponsible management, for example, the programme evaluation could recommend better systems of accountability.

The feasibility standards

These ensure that evaluations are realistic and efficient, and don't waste time or money. The evaluation must be practical, should not unduly disrupt normal activities, and should be planned and conducted in such a way that the key stakeholders will support it. If it is unlikely that such key stakeholders will cooperate in a particular evaluation, you may need to rethink the evaluation.

A further important aspect of feasibility is cost; if the cost of the evaluation cannot be justified by the usefulness of the results to intended users, it should not be undertaken.

Case C4 argues strongly that evaluations are not feasible unless they have the support of key stakeholders, in this case the education staff. In Case C2 the evaluation of the State of the Environment Schools' workbook was almost not feasible, because key stakeholders (teachers who actually used the book) did not want to cooperate. See Tool 4, Design Steps, for more on the early identification and involvement of stakeholders.

The utility standards

These ensure that evaluations serve the needs of their intended users. If the intended users regard an evaluation as irrelevant, all its other merits are wasted. To be useful, evaluations must be:

- *responsive* to the interests, perspectives and values of stakeholders
- *timely* in relation to stakeholders' practical agenda
- *credible* in the eyes of stakeholders; this means the evaluator must be accepted as impartial, as well as technically and culturally competent to deal with the questions raised by the evaluation; and the methods for data collection and analysis must be regarded as appropriate.

It is not always easy to get these matters right. Case Study C4 is only one example of the many evaluations in which different stakeholders have different ideas of what would make the evaluation useful. Stakeholders may also have opposing ideas of what makes appropriate and credible methods for collecting and analysing data, based on different approaches to evaluation (see Case C4, and also Tool 2). The same is true for the next set of standards, the accuracy standards.

The accuracy standards

These must ensure that the information produced by evaluations are factually correct, free of distorting bias, and appropriate to the issues at hand. High standards for accuracy protect the function of evaluation as a means of making sure that plans and expectations are based on reality and not the result of prejudice or wishful thinking.

The question of accuracy, and particularly misrepresentation, may be influenced by the evaluators' particular approach to evaluation. If one conducts an experimental evaluation (see Tool 2), the evaluator must be seen to have no influence whatsoever on the situation being evaluated, and to be entirely neutral or 'objective' (that is, to have no influencing ideas or opinions). In other approaches, it is usually understood that this is impossible. In participatory and some constructivist approaches to evaluation, the concept of 'inter-subjective objectivity' is applied. This is a fancy term for the checks and balances that participants in the evaluation can have on each other. It is applied, for example, when the evaluator sends around a first draft of her analysis and asks programme participants to comment on whether they and the programme have been accurately presented, how valid interpretations are, and so on. Most case studies

in this resource argue that this process is valuable and that adequate arrangements for it should be made in the evaluation plan.

Obviously, regardless of the approach one is taking, one should faithfully check the accuracy of facts and figures, and should avoid lying or misrepresenting situations when conducting and reporting an evaluation.

What does an evaluator do when informants in the evaluation mis-present a situation? This happens commonly, as we all, from time to time, distort information or situations, either intentionally or unintentionally. One can identify such misrepresentations by using multiple sources of information: ask more than one person, particularly people with diverse roles in the programme being evaluated, people from different contexts and people at different levels in an organisation. Also use more than one method to collect the information. Case C5 illustrates the value of using more than one method (staff interviews and statistics from monthly reports) to collect information on, in this case, visitor patterns to the reserve centres. It is particularly useful to complement narrative data (from interviews, for example) with quantitative data, but figures should be carefully examined, for although they may be 'accurate' in one sense, they can also be misleading.

How one deals with misrepresentations or distortions of facts in an evaluation, will depend on one's approach to the evaluation. In an experimental or empiricist evaluation, such data will be thrown out as 'false'. In a constructivist evaluation, it will be presented as some stakeholders' view or construction, and one would perhaps explore why this person holds this particular view. In a critical participatory evaluation, the misrepresentation will be brought into the open to be challenged and discussed, in the interest of a more accurate understanding of the situation being evaluated.



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TOOL 4: Design Steps

Answer the following questions through careful deliberation with stakeholders, after which you'll have an evaluation plan:

Q1: Why do we need this evaluation?

Q2: When should we do the evaluation?

Q3: Who should do it?

Q4: What is the aim of the evaluation?

Q5: What should we ask to achieve this aim?

Q6: How do we get the information we need?

Q7: How should we share the findings?



Design Steps

Q1: Why do we need this evaluation?

Before you can plan an evaluation, you need to agree with all the main role players on why it is needed, and define its purpose.

Consult with all the main role players, e.g. project executants, managers, field staff, funders, and don't forget those who are supposed to benefit from the initiative you want to evaluate. If the role players differ on the purpose of the evaluation, look for common ground. Otherwise, a lack of focus or conflict can be expected later on (as illustrated in Case C4, for example).

Good answers to the 'why' question would start with "We want to find out ..." for example:

"We want to find out if we should continue with this programme"

"We want to find out how to improve this resource"

"We want to find out to what extent the aims of this project have been achieved".

You're off to a bad start if the answer to this question is:

"We want to prove through this evaluation" or

"We want to close down (or fire somebody) through this evaluation".

In such a case, try to re-orient the reasons for the evaluation.

As you consult with role players (or stakeholders, as they are also called), you'll probably find that some of them do not support the idea of an evaluation. Now is the time to canvass support by finding out what their needs and concerns are, and see if an evaluation can be designed that they would value as well. An evaluation which does not have the support of key role players, is likely to experience problems: people may participate reluctantly (a problem experienced in Case C2), or (as in Case C4), they may feel that this is 'not their evaluation' and may therefore be less likely to use it.

The reason why an evaluation is done, will determine when it is done, and what shape it takes.

Q2: When should we do this evaluation?

Timing is critical. This is a point made by several case studies in this resource (see Cases C2, C3, C4). For various reasons, the evaluators who conducted these case studies advise that we think carefully about when to do an evaluation:

We learn that an evaluation that is conducted *too late* (too long after a resource was introduced, as in C2, or too long after training workshops were completed, as in C3) is likely to be poorly supported by key role players, such as the teachers who used the resource, or the trainers who conducted the workshops.

We also learn (in Case C4) that an evaluation that is conducted *too early* in the life of a programme may also not enjoy the support of programme staff, particularly if the purpose of the evaluation is more summative than formative (see below).

If one needs an evaluation to inform the life of a programme on an ongoing basis (for example Case C1), or the roll-out of a pilot project (as in Cases C3 and C6), the evaluation is *formative* and needs to happen along with the programme. If an evaluation needs to establish the final outcomes and impacts of an initiative, it is a *summative* evaluation and needs to be done at an appropriate time towards the end of the project. Many evaluations are *both* formative and summative.

If the purpose is to inform the development of a *new* project or programme, one may need a contextual assessment, needs analysis or contextual profile (See Tool 1), and this is best done before the project starts.

In *all* instances, the provisions for the evaluation (e.g. identifying what information will be needed, and putting systems and resources in place to collect this information) must be made *at the start of the initiative* that is to be evaluated. This is one of the key lessons shared in several case studies. Otherwise, one finds that critical data is: missing (for example, in Case C6, where baseline data of disaster incidences in informal settlements would have been valuable for comparative purposes); partially collected (as in Case C3, where trainers stopped reporting half-way through the project); or recorded in different ways across different project sites (as in the different nature reserves evaluated in Case C5).

Other practical considerations related to when to conduct the evaluation, including particularly busy or particularly quiet periods: In the case of the SoE Schools' Resource (Case C2), the evaluation coincided with a busy period in schools (exams) followed by a holiday, when it was difficult to contact schools and teachers.

Q3: Who should do the evaluation?

A next step would be to decide who should do the evaluation. It can be done by one person or – perhaps ideally – by a team; by someone from inside the organisation or someone from outside the organisation. Often the distinction between ‘outsiders’ and ‘insiders’ is not all that clear-cut. For example in Case C3, the contracted evaluator of the LA21 Pilot Project also conducted audits which were an integral part of the project, and played a role similar to that of other ‘insider’ project team members.

A combination of ‘insiders’ and ‘outsiders’ can work well, especially where there is general agreement on key matters, as well as opportunities for ‘outsiders’ to help ‘insiders’ to extend and deepen their understanding of the initiative being evaluated. Both parties must be able to challenge closely-held ideas where necessary.

The YES presentations were evaluated by a team of observers, led by one independent consultant. The YES coordinator joined the team of observers. The team agreed that the YES presentations should be evaluated because we needed to find out whether the YES Programme was a good environmental education opportunity. This was a somewhat broader reason for doing the evaluation, which incorporated the project coordinator's motivation (see Case C1).

In the past it was common for the people whose work was being evaluated (e.g. education staff) to not participate in the planning and execution of the evaluation. But people can fruitfully evaluate their own work, especially in partnership with others who can help them look with fresh eyes at something which is very close to them. The current trend is to involve those whose work would be evaluated in both the planning and doing of evaluations.

Similarly, communities who are at the receiving end of projects (e.g. teachers, trainees or informal settlement dwellers) can also be involved in the planning and doing of the evaluation (as opposed to simply answering questions once the evaluation has been planned by others). This gives them a say in deciding what is important to evaluate. People can participate to differing degrees and at various levels in such participatory evaluations. (See also Tool 2, on different approaches to evaluation.)

For example, programme staff participated in the evaluation of the City of Cape Town's nature reserve environmental education programmes (Case C5). This evaluation had a developmental orientation, and the education officers used the evaluation to articulate some of their problems in the work place, but also to address them. In this way the evaluation aimed to be empowering, rather than threatening.

Imagine, for example, that the evaluation of the YES presentations (Case C1) was done in a participatory manner, by including the presenters in the planning and doing of the evaluation. How would this have influenced the evaluation design and process?

Q4: What is the aim of the evaluation?

This is the 'compass' question. Its answer will guide you throughout the evaluation. Always come back to it when you lose your way!

It can be useful to state the aim in the form of an overall question that the evaluation must answer. For example, the aim of the evaluation in Case C1 was to find out:

"Is the YES programme a good environmental education opportunity?"

Work carefully on the wording of this question, to make sure that it reflects the intentions in the evaluation, fully and accurately. To do this, the aim is usually stated quite broadly, and it needs to be broken down into further, more specific components. That is the task of the next step (see Q5).

Evaluation goals can be action-oriented or audit-centred; focussed on processes or on outcomes. Some evaluations seem to have dual aims, e.g. to find out whether a programme is worthwhile, and to build the programme staff's capacity at the same time (e.g. their capacity to continue conducting their own evaluations, as in Case C5). Since it is easier to work with a single overall aim, it is often best in these cases to see the second part of the aim as a principle which guides a way of work. In this case it may lead to a participatory evaluation (see Tool 3) with many opportunities to discuss methods and findings.

Evaluations which focus on outcomes, usually include some of the following criteria as part of their aims:

- *Effectiveness*: the extent to which a programme, project or resource has achieved its stated objectives, taking their relative importance into account.
- *Impact*: The totality of the effects of a project, programme or resource, both positive and negative, intended and unintended.
- *Relevance*: The extent to which a programme, project or resource conforms to the needs and priorities of the people for whom it is intended.
- *Sustainability*: The continuation or longevity of the benefits from a project, programme or resource.
- *Efficiency*: The extent to which the costs of a programme, project or resource can be justified by its results, taking alternatives into account.

Finally, consider finances when you decide how broad and how in-depth you make the aim of the evaluation. If your budget is tight, you may have to decrease the scope and/or limit the depth of the evaluation (as the evaluators in Case C6 had to do). If you set the scope quite wide at the start (in the form of several evaluation aims, e.g. impact, relevance, efficiency and sustainability) this may require more funding. Financial considerations will be part of every subsequent design step. It may even determine who can be involved in the evaluation, as we saw above when noting the cost of consultants' time and expertise.

Q5: What should we ask?

In this step one identifies sub-questions that must be answered, in order to answer the overall evaluation question, and thus to achieve the aim of the evaluation. Answering these questions would be the objectives (sub-aims) of the evaluation.

In order to answer these questions, they are usually broken down further, into 'smaller' questions. Do this along with deciding what methods you will use to gather the necessary information (the next step, outlined in Q6).

Tool 5 is a table which shows the links between the aims and objectives of the evaluation, the methods chosen, and the actual questions the evaluators will end up asking in the interviews, focus groups, etc. The value of this tool is that it helps one to remember that there must be a connection between the aim of the evaluation, and the eventual questions asked (or observations made). It is easy to lose sight of this connection and to end up with data that is difficult to analyse, because it has no clear relevance to the aim of the evaluation. Worse still, one may find that very little of one's data actually throws light on the overall evaluation question, because one failed to ask the right questions when collecting information.

For example, to answer the overall evaluation question: "Is the YES programme a good environmental education opportunity?" the evaluators in Case C1 identified three sub-questions:

- *Are the learners likely to learn something from the presentations?*
- *Are they likely to learn a clear environmental lesson?*
- *Can the teachers learn more about environmental education, from these presentations?*

This is particularly the case when exploring the more intangible aspects of education and training projects. In the evaluation of the LA21 Households Pilot Project (Case C3), we found that the questions asked in interviews and e-mailed questionnaires were useful in throwing light on the management, structure and logistics of the Pilot Project, but were less effective in probing the actual impacts of the project.

Q6: How do we get the information we need?

There are a number of methods for generating data, that is, coming up with new information in order to answer evaluation questions. Among them are the following:

- **Interviews** – formal conversations with various parties, that are structured to a greater or lesser degree
- **Questionnaires** – structured sets of questions that people read and answer themselves, or which are read out to them
- **Observations** – watching what's happening and recording what you see, as an outsider or as a participant in the activities being evaluated
- **Document analysis** – studying organisational reports, records, policies, correspondence, etc.

- **Participatory appraisals** – a variety of techniques which help illiterate and partially literate people to share their views on complex matters
- **Focus groups** – group discussions on a particular focus topic
- **Workshops** to work on a particular topic or product, which can also be used as methods to generate evaluation data.

Each method has strengths and limitations (see Tool 6), and it is wise to use them in combination, to overcome limitations and strengthen the evaluation.

This illustrates that more than one method (e.g. interviews and document analysis) can be used to answer one of the sub-questions identified in Q5. Similarly, one method can be used to answer one or more of the sub-questions.

For example, in Case C5 the evaluator used document analysis of monthly staff reports, but found that the figures in the reports told a limited story. She complemented this method with staff interviews, which added other insights to the story. Similarly, careful scrutiny of the figures in the documents helped her to interpret some of the statements made by the staff in the interviews, workshops, etc.

Once you've decided which methods to use, you then need to develop the 'smaller' questions with which you'll be answering the sub-questions (or achieve the objectives of the evaluation). What will you ask in the interviews? In the questionnaires? In the focus group discussions? What will you look for when you analyse documents? Or when you observe what is happening?

These questions are critical and the following must be kept in mind:

1. Each of these questions must have a place in the overall evaluation. You should be able to trace it back to a bigger question that it is trying to answer, and that bigger question should be traced back to the overall aim of the evaluation. (Refer to Tool 5.) If you find that you are asking a question at this level, which does not relate clearly to the overall aim, you need to either let go of the question, or, if it seems important, re-define the aim of the evaluation.
2. There are some basic rules for asking questions. (See Tool 6.) The best way to craft good questions is to try them out beforehand, and then refine them.

Now is also the time to plan your sampling. That is, decide whom you should select to answer your questions or choose the activities which you will observe. It is usually impractical to interview all the people who've benefited from a project, or even to send questionnaires to all of them. It may also be impractical to observe all the activities that make up a particular programme. For more on sampling, see Tool 6.

When choosing data generating methods, don't forget to consider their impact on your budget.

For example, in Case C1, the evaluator forgot to budget for the cost to team members of travelling to the various sites where they needed to do their observations. In the particular year of the evaluation, some of these sites were far away from the central programme being evaluated (YES 2004). This meant that the cost of travel became a significant budget item.

Also consider that people questioned in the evaluation may expect payment for their time and the information they're giving. This situation should not arise in an evaluation which is regarded by the participants as "our evaluation" (a participatory approach to evaluation, as outlined in Tool 2). If you plan to use workshops or community appraisals, remember that refreshments at such gatherings are a common South African courtesy, and include them in the budget!

One also has to weigh up costs against effectiveness. A cheaper method may not give you the information you need.

Consider the value of making use of existing studies and research, previous evaluation reports and other documents. These can provide you with much of the background and even some of the information you need. This can save a lot of time and money, and make maximum use of the work that others have already done. Just bear in mind the context in and purpose for which those studies had been done. They may have influenced the documents and even their findings in such a way, that they have limited value for your particular evaluation. Also, always acknowledge your sources!

It is often useful to combine the fact-finding activities of an evaluation with things that are already part of everyday work programmes. For example, one could include a questionnaire to staff in an existing staff newsletter, or interview parents at a parent-staff meeting. Just remember that this may influence your sampling, e.g. you will only reach those people who bother to read the newsletter, or who attend parent-staff meetings. Decide whether this sample is adequate for the purposes of the evaluation, or if you should also seek out those who couldn't be bothered with these things. It is often necessary to do so!

Sometimes it may be necessary to schedule specific opportunities to collect information that you cannot otherwise obtain.

Now is also the time to consider who the best people are to pose your questions to. In Step 3 you have decided who should actually conduct or do the evaluation. Some of the people who can answer the evaluation questions, will already be involved in conducting the evaluation, but you may also need to look for additional 'experts'. Different people (or documents) are 'experts' about different things. For example, senior disaster and emergency service personnel might be the experts on the frequency and types of disasters that hit Cape Town. But ordinary people on the ground are experts on how such disasters affect their lives. You have by now decided what kinds of information you need, and so you can now also identify the types of 'experts' you need to consult. Often a combination of expertise, at various levels and in various contexts, is most useful. Do the same with document sources of information.

Put in place a plan to reach these experts or document sources. The process of 'gaining access' can be very difficult and time-consuming, so don't underestimate it in your planning. Firstly, you need to locate your sources. In the case of people, you need to give them full information on what

For example, in Case C3 the evaluators used a cost-effective method for distributing their questions, namely e-mail. However, they found that the response to the electronic questions was poor and required repeated follow-ups. While face-to-face interviews by appointment were time-consuming and therefore more expensive, this method was in the long run more efficient as it did not require follow-ups.

For example, in the YES evaluation we could only observe presentations during the actual YES programme, which takes place during World Environment Week in June. This fixed date determined when the observation sheets had to be prepared. We used an existing teachers' workshop to discuss the observation sheet with teachers (important stakeholders in the YES programme). We also used an existing presenters' de-briefing meeting to give feedback afterwards. This was an opportunity to share lessons learnt with presenters, and to invite them to request individual feedback.

For example, in the case of the SoE Schools' Resource evaluation, one of the few teachers who had actually worked with the resource was reluctant to provide comments for the evaluation, perhaps because she believed that the process would be a judgement of her teaching. This illustrates the importance of being very clear with potential sources of information about the purpose and aims of the evaluation, and of re-assuring them where appropriate.

the evaluation is about, and an opportunity to consider whether they want to participate in it. For various reasons, people are often reluctant to do so.

Once you've decided how and when to collect information, and from whom or where, draw up a schedule for your evaluation activities. Tool 5 is an example of a simple schedule that can help you to stay on track.

Also plan a format for recording your data. Such pro formas can range from checklists for observation data (see Appendix C1.1 of Case C1 for an example) to narrative reports with summary sheets (for interview and focus group data, etc.) and spread sheets for quantitative data. Consider a format that is suitable for the kind of information that you want to collect, and that will facilitate analysis. For example, the evaluators in Case C3 found spread sheets proved unsuitable for extensive qualitative data.

Q7: How should we share the findings?

This question appears last in our evaluation planning procedure, but should definitely be considered before one starts evaluating.

Identify the intended users for an evaluation: the education staff? their managers? the funders? the communities at the receiving end of the project or programme? All of the above, and more?

Then consider that different users may need to receive the evaluation findings in different formats. For example:

- funders may want a detailed written report with facts and figures
- new Councillors may need a Power Point presentation with pictures so they can get a sense of what the project is about, as they hear the evaluation findings
- residents may prefer a talk at a block committee or residents' association meeting
- education staff may benefit most from a written report accompanied by a workshop in which they can brainstorm ways to implement the findings of the evaluation.

In Case C5 evaluation findings were refined and used during a staff development workshop.

Planning for the dissemination of findings from the start, means having a good idea of how to prepare and present the findings, and if necessary, setting aside funds for dissemination as part of the overall evaluation budget.

While this is not an encouraging thought, the evaluation planners also need to agree on what to do if some parties disagree with the findings of the evaluation. This does happen, and in such cases it is usually critical to have an evaluation steering committee or reference group in place, which can act as an arbiter. The members of this steering committee or reference group must be approved by all key stakeholders.

Also consider an evaluation of the evaluation. This can be especially important in formative or ongoing evaluations, or where conclusions are contested. See Appendix C5.3 (Case C5) for a simple tool that participants in an evaluation can use to reflect on the experience.

This is the format of a typical formal evaluation report:

- Executive Summary (especially useful if the report is long)
- Introduction
- The Programme/Project/Resource That Was Evaluated
- Findings (may require sub-headings or more than one chapter)
- Conclusions (about the Programme)
- Lessons Learned (applicable in broader contexts)
- Recommendations (to various intended users)
- Appendices or Annexes (e.g. Terms of Reference, Methodology for Data Development and Analysis, References, Budget)

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TOOL 5: Planning Table

This table shows the links between the aims and objectives of the evaluation, the sources of information, the methods chosen, and the questions that will be asked of these sources, while using these methods. It is a tool for making sure that there is a strong connection between the evaluation activities, and the aim of the evaluation. If one loses sight of this connection, one could end up with data which throws little light on the overall evaluation question.

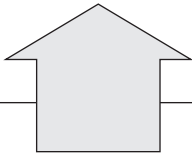
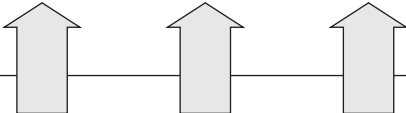
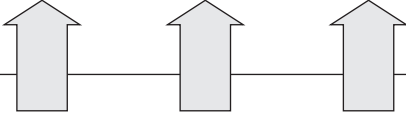
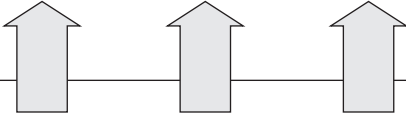
Practically, the table provides a schedule of activities to keep an evaluation on track. Columns can be added as needed, for example a column for "Whose responsibility" can be used to allocate tasks among members of an evaluation team.



2004



TOOL 5: Evaluation Planning Table

WHAT is the aim of the evaluation?	WHAT do we need to answer? Objectives	WHO to ask? Sources	HOW to ask? Methods and specific questions	WHEN? Time Schedule
				

For a worked-out example, see the next page.

WHAT is the aim of the evaluation?	WHAT do we need to answer? Objectives	WHO to ask? Sources	HOW to ask? Methods and specific questions	WHEN? Time Schedule
Establish whether the City's SoE Schools' Workbook is a useful environmental education resource	Have intended teachers received the resource?	Principals and FP teachers at a sample of schools to whom book was mailed	Telephonic survey: Do you recall receiving the book? If yes, can we interview you?	February 10- 14
	Have teachers found the resource useful for environmental education in the new curriculum?	Sample of FP teachers who have received the book and used it, or failed to use it	Interviews: Have you used the book? If no, why not? Please provide detail. If yes, have you found it useful? Please provide detail.	February 10- 14
	Are there ways in which the workbook can be improved?		Workshop: Suggest ways to improve the book?	March 20-24

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TOOL 6: METHODS

Table of Methods:

- Observations
- Workshops & Focus Groups
- Questionnaires
- Interviews
- Tests
- Activities
- Document Analysis
- Participatory Appraisals

Asking Questions

Sampling

Case Studies and Surveys

Types of Data

2004



TABLE 6: Methods Suitable For Generating Evaluation Information

METHODS	EXAMPLES	LIMITATIONS	STRENGTHS
Observations	Observing topic presenters in action during the Youth Environmental School (as in Case C1).	It can be difficult to interpret what you see (for example, are the children learning through fun, or are they distracted?)	One can see what actually happens, rather than rely on reports of what happens.
Workshops & focus groups	Workshops with teachers to find out how a teaching resource can be improved; focus group discussions with trainers on their training methods.	It can be difficult to focus these meetings and they tend to generate a lot of information, which must be accurately and adequately recorded before analysing or interpreting it.	Participants know what you're after and can assist you in finding answers to the evaluation questions; a joint exploration.
Questionnaires	Questionnaires to teachers who bring school groups to nature reserves, to find out their views on the environmental education programmes offered (as in Case C5).	People are often reluctant to complete questionnaires (see e.g. the LA21 Household Survey). Respondents interpret questions in different ways, and the information obtained can be limited and hard to interpret.	One can reach a large number of people quickly and if questions are well designed, with space for people to add anything they wish, one can learn a lot.
Interviews	Interviews with education staff, to find out their views and theories about their own programmes (as in Case C4 and C5).	More time-consuming than questionnaires. If interviewees are polite, the situation may encourage them to simply say what they think you want to hear.	You have a chance to build a relationship, explain questions, and check your interpretation of the answers.
Tests	With trainees, to check what they have learnt during training; in C4 a multiple choice test was combined with a mock demonstration, for children to show what they have learnt about fire safety.	Tests are often intimidating. It takes time to design them well. They usually test only factual recall.	One can check for specific existing knowledge on specific topics, so tests are useful for planning new activities which address areas of limited knowledge or misunderstandings.

Activities	With learners while attending a YES presentation on hygiene, to teach them something while finding out what they have learnt so far.	Activities take careful planning and can be time-consuming. They should be designed so as to ascertain more than mere recall.	Activities are usually not as intimidating as tests and can be part of the learning, while evaluating the learning.
Document Analysis	Analysis of visitor numbers recorded in staff reports; review of strategy documents to find evaluation criteria (Case C5 has examples of both).	The information is only as good as those who compiled the document; the original purpose and contexts of the document may limit its value if your purposes are different.	Often a quick way to access a lot of information, including historical facts which people may have forgotten. Useful for establishing trends and contextual profiles/overviews.
Participatory Appraisals	Transect walks with shack dwellers through their informal settlement, stopping every 100 metres to appraise the surroundings, problems and possible solutions.	Participatory appraisals may set up 'artificial' situations, or create unrealistic expectations of changes in local conditions. Strong individuals speaking on behalf of others in the 'community' may mis-represent others' views.	A wide range of people is given a chance to have their say, in a non-threatening setting. More formal consultations are often experienced as intimidating.

Which Method?

Table 6.1 lists some of the more common methods used for generating or collecting the information that helps one to answer evaluation questions.

The choice of method will be determined by:

- what you want to find out
- the kinds of sources you have (documents or people, for example)
- budget and time constraints.

Also consider a suite of methods which complement each other. Each method has strengths and limitations, and a variety of methods strengthens an evaluation.

Case C3 illustrates how a limitation of audit data was overcome with interview data: Audits of resource use in the LA21 Households Pilot Project showed an increase in water consumption among some households, after they had participated in a project on sustainable resource use! The audit figures are unable to explain the reason for this worrying trend. However, interview data explained that it was due to the introduction of food gardens, rather than increasingly wasteful consumption.

Asking Questions

Most of the methods in Table 6 involve asking questions. There are some basic rules for phrasing questions. These rules are particularly important in questionnaires, because you don't have the opportunity to explain to people what your question means.

Good questions are not:

- double-barrelled (e.g. "Do you find the reserve's education programmes good and affordable?" is asking two questions in one)
- vague (e.g. "Do you often use the education centre?" – "often" should be made more precise, e.g. "once a term, more than once a term, once a year")
- ambivalent (with a double meaning, e.g. "Do you think this project is a good initiative?" One may think that it is a good idea to have the project, but not necessarily that the project itself is good)
- sensitive (e.g. "What do you think of your manager?" may be an insensitive question to a junior staff member; also be sensitive to how people from different backgrounds may perceive questions)
- leading (e.g. "Do you believe our environmental education work is good?" Research shows that many people find it hard to say "No" to questions asked in this way)
- unnecessary (should people state their sex and marital status on a questionnaire that deals with unrelated matters?).

Pilot your questions

The best way to craft good questions is to try them out beforehand with people similar to those whom you plan to interview or survey with your questionnaire – or observe a similar situation. Use the experience to refine your questions. If you can't pilot your questions, at least get feedback from colleagues: Do they understand the questions in the same way you do? Would they be able to answer them?

Sampling

Who should you ask? What should you observe? Sampling is about deciding whom you should select to answer your questions, or selecting the activities which you will observe. It is usually impractical to interview all the people who've benefited from a project, or even to send questionnaires to all of them. It may also be impractical to observe all the activities that make up a particular programme. It is important to choose well. In Case C4, programme staff believed that the observations done at a particular school constituted an inappropriate sample, because the activities at this school were not *representative* of the programme as a whole.

There are broadly two types of sampling procedures: random and selective. The kind of sample one looks for, is determined by your approach to evaluation, the aims of the evaluation, and the questions you want to answer.

In an experimental type evaluation (see Tool 2), you want your sample to be as free as possible from any interfering variables or biases, and you need a statistically random sample of a big enough size. You put this together by identifying all possible members of the relevant population, numbering them, and drawing numbers from a hat, or some other 'fair' procedure that will give each individual an equal chance to be selected (like a lottery draw). The sample size is determined by the specific statistical procedures you choose to use, but is usually dependent on the size of the total relevant population – the smaller this population, the bigger the sample must be, for it to be 'representative' of that population.

In other cases we rather want to select specific individuals or situations because they have specific experiences, circumstances, information, etc. that put them in a position to answer our questions better.

For example, when we wanted to find out what teachers thought about the State of the Environment Schools' Workbook, we wanted to hear from teachers who had actually tried to use the resource. (See Case C2.)

Case Studies and Surveys

These are two broad types of evaluation designs.

In a case study design, the evaluation is based on the *in-depth* study of a *single* case (or perhaps a few). An example would be the in-depth evaluation of the education programmes in four of the City of Cape Town's nature reserves (Case C5). A lot of questions are asked (or observations made), about several different aspects of the case and its context (for example: the content of the programmes at the reserves; the methods and resources used by the staff; staff skills; management and professional development). The analysis is mostly qualitative, although quantitative data can add further detail to the picture. The aim is to obtain as *rich* a picture as possible of the case.

In surveys, the evaluation is based on a much *more superficial* look at a *larger number* of instances. An example would be a survey of the 200+ schools on the mailing list for a particular resource (as in the telephonic interview survey in Case C2). Surveys are usually based on questionnaires or brief interviews; the data is usually mainly quantitative, and the analysis often involves statistics. A survey aims to provide a *representative* overview of a large group, covering a limited number of factors.

Many evaluations combine case study and survey elements (e.g. Case C5, which used both case studies of the education programmes in the reserves, and a small-scale survey). It is not possible to make one design type do the job of the other, though. If one wants to generalise about a large programme with

many different sites, a single case study at one site won't allow you to do so. Looking for rich data using a large-scale survey is also looking for trouble, as you may end up with a lot of information!

Types of Data: Qualitative and Quantitative

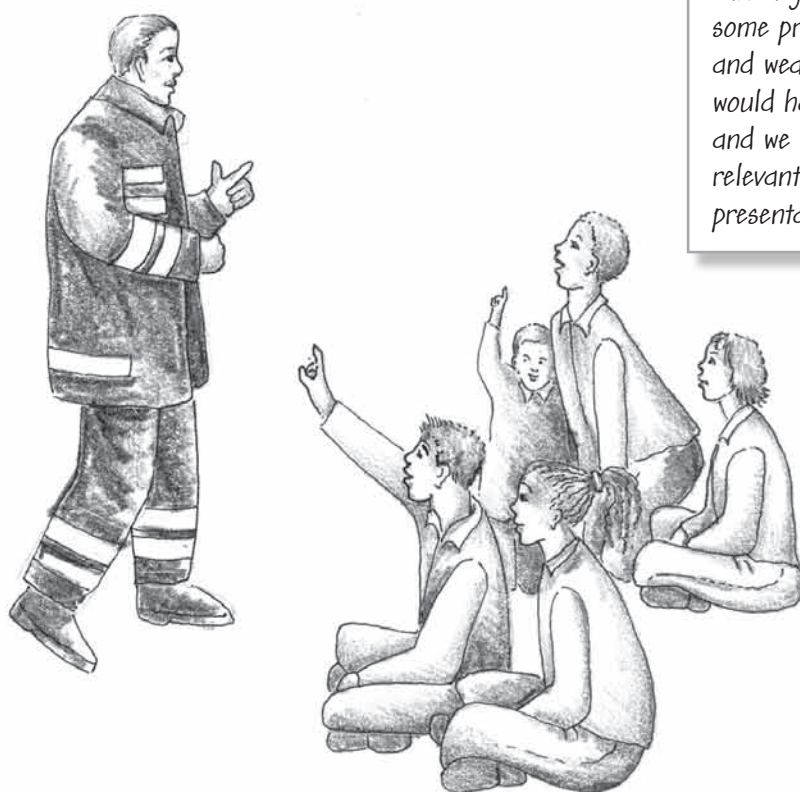
Quantitative data involves numbers, e.g. the amount of electricity (in kilowatt) or water (in kilolitres) consumed by a household per month; or the average score trainees give a training programme (say a score of 1-2-3-4-5 out of 5). Not all quantitative data are true numerical data and you need to consider this if you choose to do a statistical analysis.

Quantitative data lend themselves to statistical analysis and firm statements about projects, programmes and resources. For example, it allows one to state that "86% of learners were able to demonstrate a fire safety procedure after participating in the programme only once". Many decision-makers find it easy to interpret this kind of statement and it is good for newspaper headlines! However, quantitative data also has limitations. They don't tell 'the story behind the story'.

For example, one can say that "15 000 learners visited this education centre last year", but this tells one nothing about the kind of experience the learners had – whether positive or negative.

Qualitative data (narratives, conversations, etc.) fill in the details and helps one to explain the trends observed in quantitative data (as in the water audits in Case C3, mentioned above). With qualitative or 'wordy' data it is however more difficult to find an 'average' position and make a single, firm statement about the initiative that you've evaluated.

For example, in the evaluation of the YES 2004 presentations (Case C1), we used observations that generated qualitative data. We could not come up with an average score for an individual presenter, or with an average score for the presentations overall. In this case this was appropriate, however, because the quality of presentations varied greatly between presenters, and some presenters had both strengths and weaknesses. An 'average' score would have hidden these differences and we would have learnt nothing relevant towards improving individual presentations.



Into Evaluation: A Start-Up Resource

For Evaluating Environmental Education
and Training Projects, Programmes, Resources

The Case Studies

This *Start-Up Resource* starts with six case studies of 'real life' evaluations that were undertaken in a local government agency, the City of Cape Town. The case studies were written by the evaluators themselves, at times in collaboration with other researchers, and edited by Dr. Eureka Rosenberg.

The case studies tell the stories of actual evaluations, 'warts and all'. They describe the planning processes and methods, and share lessons learnt. They do not focus so much on the findings regarding the projects, programmes or resources which have been evaluated. These findings are captured more fully in the evaluation reports. Should you be interested in the evaluation reports, contact the manager of the *Evaluation Start-Up Resource* project, Lindie Buirski, of the City of Cape Town's Environmental Management Department (address below).

The plan is to place the *Resource* on the City's website and, in time, to add further case studies, including evaluations done in other organisations and contexts.

Case Study Contributors

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2004



C1: Youth Environmental School (YES) Evaluation

1. What programme was evaluated in this case?

This case study reviews the evaluation of the presentations made by presenters during the City of Cape Town's 2004 Youth Environmental School (YES). YES is an annual five-day event which coincides with World Environment Week. School groups from around Cape Town are bussed to a central venue, or satellite venues, where they attend one or more presentations on various topics, selected by their teachers. The 'presentations' vary from Power Point presentations, videos and lectures to workshops, games, walks and other activities. They are hosted by various organisations, including various departments from the City of Cape Town, other government agencies, para – and non-governmental organisations and individuals.

2. Why was an evaluation required?

In 2003, the City of Cape Town adopted its Environmental Education and Training Strategy. This Strategy pointed out the need for evaluation in the organisation, as a way of finding out whether projects are achieving what we want them to achieve, and documenting what we can learn from them.

The YES programme coordinator managed the development of the Strategy and wanted to implement its recommendations. She also wanted to know whether the YES programme – her biggest investment in terms of time, effort and money – was achieving what it was meant to achieve. A particular concern was the presentations which form the heart of the YES programme. She had the sense – but no evidence – that some presentations were not appropriate; she wondered if "they get the right message across". This motivated this first evaluation of the YES programme, and our focus on the presentations.

3. When did the evaluation take place?

During the YES programme 31 May – 4 June 2004. YES has been running for six years, and has become known as a flagship environmental education programme of the City. This was the first time that any of its elements was evaluated. Since it is an annual programme, this evaluation can inform the 2005 programme.

4. Who planned and actually conducted the evaluation?

The evaluation was commissioned by the coordinator of the YES programme (who is also its main planner and implementer). She appointed me – an independent consultant, who also assisted the City in the development of the Strategy – as a continuation of the Strategy development work. I am a specialist

in environmental education and research. The programme coordinator and I also chose a team of researchers to conduct the observations which formed the main source of data for the evaluation. This team of observers were specialists in environmental education. Their expertise included formal and non-formal education, science education, teacher education, participatory learning, and environmental risk mitigation. A group of teachers who planned to take their learners to the YES programme, made an input into what aspects of the presentations should be observed. All decisions (what should be observed, which presentations should be observed, how findings should be communicated, etc.) were taken in consultation with the programme coordinator and, in most cases, also with the other members of the observation team.

We did not, however, include presenters in these consultations.

5. What was the aim of the evaluation?

The programme coordinator wanted us to evaluate the quality of the presentations. But against what? To decide what makes a good presentation, we needed a broader framework. Our framework was the YES programme *as an environmental education opportunity*. So we stated the aim of the evaluation as:

To evaluate if the YES programme is a good environmental education opportunity.

From this we derived three objectives or sub-questions for the evaluation. How would we know if the presentations constituted a good environmental education opportunity? We decided that this required evaluating the following:

- Are learners likely to learn something from the presentations?
- Are learners likely to learn an appropriate environmental lesson from the presentations?
- Are teachers likely to learn something of benefit to their environmental education practice, from the presentations?

6. How was the evaluation planned and conducted?

Initially the details of the evaluation were decided in discussions with the programme coordinator, when we met for other business, on the phone and on the e-mail. The programme coordinator already had some specific ideas of what she needed, and we worked from those. We also put a budget together. The available funds determined the size the evaluation, notably the number of paid evaluators we could involve in the team, the amount of time we could expect from them, and the depth of the evaluation report (more depth requires more time and therefore more money).

As noted in Tool 4 – Design Steps – funding must be considered right at the start of planning an evaluation.

Putting the team together: The programme coordinator contacted a team of observers to assist me with the observations. Two people could not make it and had to be replaced, in one case 10 days before the observations were due to start. Fortunately an experienced environmental educator who had recently moved to Cape Town was willing to help out on short notice. Including the lead consultant and the programme coordinator, who both also conducted observations, there were six team members. The programme coordinator also asked a volunteer to assist with additional observations. Her findings had to be interpreted in the light of the fact that she was not as qualified for the job as the formal team, and she was also not present at the briefing meeting (see below).

Designing the evaluation tools: As lead consultant I conceptualised and drafted the aim and objectives of the evaluation and the observation schedule. I based the objectives and questions for observation on my understanding, informed by the literature, of processes that support environmental learning, for example active interaction between teacher and learners. I also took account of the ideas on good environmental education which guided the YES programme, and broadened them where necessary.

I circulated the drafted materials to the members of the observation team on e-mail, but received no comment. I also attended a pre-YES teachers' workshop and discussed the forthcoming evaluation with teachers. I asked them what they regarded as a good presentation, and what they would like us to look for. I worked their comments into the observation schedule, but by and large they were happy with what I had already drafted. One aspect which I had missed was that many teachers regarded the fun element of presentations as important; YES is meant as a treat for their learners. The discussion with teachers also allowed me to confirm a hunch that there were differing needs regarding whether presentations link closely to the school curriculum, or not.

I then held a briefing meeting for the observation team. We chose the presentations we would observe, and discussed the observation schedule: the why behind each item, and how we would interpret it. The team briefing was very valuable, because:

- I was able to confirm in person that members were available for the evaluation.
- The team suggested useful changes, e.g. that we use a scale on the observation schedule, rather than a simple YES or NO tick. (The final version of the observation schedule can be found in Appendix C1.1).
- I was able to explain that observers could ask questions of teachers and others at the presentations, if they wanted to clarify something.
- Team members raised useful broader points about the YES programme, which strengthened my analysis of the findings.

The final observation schedule was circulated to presenters about a week before the YES programme started (see cover letter in Appendix C1.1). They had been informed about the evaluation and what it would cover, at the presenters' briefing meeting three weeks earlier. If one had the opportunity to do so, it could have been valuable to include the presenters in the drafting of the observation schedule. Such a process (particularly if it was done in a workshop) could have encouraged presenters to think through their presentations and what they should ideally achieve, and would probably have been a valuable contribution to improving the quality of presentations.

Sampling: We did not choose a statistically representative sample, as we did not want a statistical analysis of the findings. I asked each observer to observe five presentations, as I thought that the number that could be reasonably done in a day. This meant that we would cover $6 \times 5 = 30$ of the presenters – 39% of the total number. (The programme is made up of repeat presentations from 77 presenters.)

I identified presentations from certain organisations on which the coordinator wanted feedback (there were few of those). The team then identified presentations that would broaden out the diversity of the sample, e.g. presentations from inside and outside the City of Cape Town; from other government agencies, NGOs and independent individuals; scientific and non-scientific presentations, on ecological and social topics, and advertising different types of methodologies e.g. videos, interactive games; etc. For the remainder, team members chose presentations that they thought they would find particularly interesting.

In practice, some team members could only observe four presenters, because scheduled school groups did not arrive for presentations. A volunteer who assisted in the YES programme, did the remaining observations, for a total of 30.

Data collection: Team members sat in on the presentations allocated to them, and completed a copy of the 3-page observation schedule. They also wrote notes to explain or add to their observations, and informally asked unstructured questions of teachers and presenters.

Analysis: I collected the completed observation schedules and read them carefully. Where necessary, I contacted team members to discuss their observations. I made a skeleton summary of the main points which came through. I then read through the observation schedules again, and added to the skeleton summary where appropriate. After that, I summarised observations and made a recommendation for each presentation that we observed. I then added the 'flesh' to the skeleton summary and added this to the evaluation report, with some overall recommendations.

7. What did the evaluation reveal about the programme that was evaluated?

The evaluation showed that there were some excellent presentations, some really poor ones, and many that had both strengths and weaknesses. Where weaknesses were identified, it was often because presenters, while passionate and knowledgeable, lacked the insight and skills for sharing knowledge.

Most presenters were very well prepared. Some were however unable to successfully adapt the prepared presentation if an unexpected group arrived for their session (e.g. a younger group or one not fluent in a particular language). This situation, and the fact that some presenters could not relate to some of the groups, meant that several presentations seemed to leave learners completely in the dark.

From informal questions and observations (which were not listed on the observation schedule) we learnt that many schools go to great lengths to attend the YES programme. We saw that presenters had an equally great responsibility to present something of value to these learners and teachers. There was a need for a greater understanding among some presenters of their audiences, and greater flexibility, so that they could engage any group who might attend their presentations, in a meaningful way.

8. How were the findings of the evaluation shared?

A week after the YES Programme a de-briefing meeting was held between organisers and presenters. This was a good opportunity to share the findings with presenters. However, I did not look forward to it! I have had little time to do a thorough analysis, and I was nervous about presenting the more negative findings. I decided to structure my feedback around recommendations for improvement, and just referred to actual observations to illustrate a point. This also made it possible to give something of value to the whole group, which was not easy, given the diversity in the quality of presentations.

Fortunately the presenters were not defensive, and interested in the findings and recommendations. They even suggested that the evaluation should be repeated next year! I was greatly relieved that the evaluation was of value to presenters. There seemed to be agreement with the main finding, that some of them lacked pedagogical skills. They asked the programme coordinator to organise a session, in preparation of YES 2005, where presenters can present some of their planned sessions to each other, for feedback and improvement.

I invited presenters to phone me for individual feedback, and several have taken up the offer. I also wrote a report for the person who commissioned the evaluation, the programme coordinator. She received this a month after the YES programme. Beforehand, I consulted her about the kinds of comments that she would find useful. She required the findings on individual presentations. She noted that the programme

was over-subscribed with presenters and that they needed to use the evaluation to make an informed decision on whom to invite to present at YES 2005. This meant that I was indirectly determining who would get a chance to present in the programme. I saw this not as discriminating against individual presenters, but rather as an opportunity to help ensure that schools which make the efforts to attend the programme, have a greater chance of a fun, high quality environmental learning experience.

9. What does this case teach us about planning and doing evaluations?

I was fortunate that my evaluation team worked with great enthusiasm. I highly recommend that one selects team members on whose commitment one can count.

When working with a team, it is essential to meet, even if people are busy. I found that e-mail is fine for interacting with most individuals on a one on one basis, but with the group only meetings yielded anything useful. Meeting allows one to make sure 'everyone is on the same page', which is essential for the validity/quality of eventual findings. It also generates valuable inputs that improve the evaluation design and enrich the analysis.

The opportunity to provide additional comments on the observation schedule seems essential; it helped in particular where the team were unsure of their observations, or thought I needed to understand why they made a particular choice. One of the limitations of a structured observation schedule is that one is forced to make a choice, even when you feel you can't really do so! The choices are inevitably limited. The space for additional comments helps to address these limitations. A follow-up discussion with the observers was also important in most cases, as it helped me to interpret their findings. Observation schedules are useful to focus the attention of the observer on the sorts of things that you'd like them to look out for, but the explanations and further observations of the human observer (if this is a skilled and informed person) are invaluable. When it comes to observations, keep your eyes and ears wide open, beyond what is listed on the observation schedule, but informed by the overall goal behind the questions on it.



My 'Best Lesson Learnt' from this evaluation is the importance of reporting back on the evaluation, soon after it was completed, to the people who were evaluated. This

- was an opportunity to address concerns about being evaluated
- gave those who had been evaluated, something useful in return
- motivated improvements in practice, and
- generated ideas on how the evaluation could be taken further.

Appendix C1.1 Observation Schedule and Cover Letter for the YES Evaluation

City of Cape Town
Youth Environmental School (YES)
Evaluation of YES Presentations

Purpose:

To evaluate the quality of the presentations at the Youth Environmental School, in terms of their environmental education value.

Note to presenters:

This year, a sample of YES presentations will be observed for the purposes of evaluation. YES is one of the City of Cape Town's biggest environmental education initiatives, and the City needs to be sure that it is a worthwhile environmental education experience. Observers will sit in on some sessions (the choice of sessions will be aimed at as wide a spread of presentations as possible) and observe presentations, according to the criteria over the page.

NB: This will be *an evaluation of the presentation* which the learners and teachers receive on the day. It is not an evaluation of you, your programme, or your environmental education initiatives in general. We know that there are limits to what can be done in the setting of the YES, and the available time. We realise that presenters might have done things differently, if they were able to change these limitations. The evaluation takes this into account.

Central question:

Is the YOUTH ENVIRONMENTAL SCHOOL a good environmental education opportunity?

What do we mean by good environmental education opportunity?

1. Learners must be able to learn from it:

- Good teaching methodology, e.g. mix of methods, dialogue, encounter, reflection; basic communication criteria are met
- Learners' particular needs (language, learning style, age, physical comfort, concentration, etc) are being addressed

2. There is an environmental lesson - learners can learn about:

- environment & related issues – social-ecological aspects
- environmental care/management,
- environmental rights & responsibilities - taking collective action
- all of these, in relation to each other
- a clear message or learning points

3. Teachers can learn from it:

- Environmental learning (as above)
- Environmental education learning!(curriculum, content, methods, resource persons)

OBSERVATION SCHEDULE FOR PRESENTATIONS: YES 2004

Session:

Presenter:

Date:

Time:

Observer:

1. IS THIS PRESENTATION LIKELY TO BE UNDERSTOOD BY THE LEARNERS?

a) *Children are sufficiently settled*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

b) *Presenter can be heard by everyone*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

c) *Pitched appropriately for their age*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

d) *Appropriate language use (home language or not?)*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

e) *Terms likely to be unfamiliar, are explained*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

f) *Verbal explanations are complemented with other, e.g. experiential*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

2. IS THE PRESENTATION LIKELY TO RESULT IN ENVIRONMENTAL LEARNING?

- a) *Uses engaging methods (e.g. show & tell, activities, interact, dialogue, questions for reflection)*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

- b) *There is a clear environmental lesson*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

- c) *Encourages commitment to & presents options for environmental care*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

- d) *Ecological focus includes connections to the social*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

- e) *Social focus includes connections to the ecological*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

- f) *Encourages rights as well as responsibilities*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

- g) *Notes individual responsibility as well as collective responsibilities*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

3. IS TEACHERS' CAPACITY FOR ENVIRONMENTAL EDUCATION LIKELY TO BENEFIT FROM THIS PRESENTATION?

a) *There is a clear environmental lesson*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

b) *Ecological focus includes connections to the social*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

c) *Social focus includes connections to the ecological*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

d) *Encourages rights as well as responsibilities*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

e) *Notes individual responsibility as well as collective responsibilities*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

f) *Curriculum links are evident or can be deduced*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

g) *The presentation illustrates good teaching skills*

Excellent ☐ Good ☐ To some extent ☐ Not at all ☐

4. WOULD YOU RECOMMEND THAT THIS PRESENTATION BE REPEATED NEXT YEAR?

Yes: ☐ No: ☐

Explain your answer:

C2: State Of The Environment Schools' Resource

1. What resource was evaluated in this case?

The resource evaluated is the City of Cape Town's *State of the Environment Schools' Resource*, and its use by teachers. The resource was mailed to all schools in the Cape Town metropole, in August 2003. The resource was sent to the principals of approximately 479 primary schools, with a request to pass it on to their Foundation Phase teachers. It was intended as a support to teachers who were preparing to implement environmental learning in the new curriculum, the Revised National Curriculum Statement (RNCS), for Foundation Phase learners (Grades R-3), in 2004.

The *State of the Environment Schools' Resource* consists of a workbook and various complementary source materials, packed in an A4 envelope for easy mailing. The workbook includes three lesson plan exemplars around three themes: water, waste and conservation. Related teaching and learning support materials accompanied the lesson plan exemplars in the workbook. The workbook also refers the teacher to various complementary source materials in the pack, with notes on how these can be used to support lesson plans.

Included in the workbook was an evaluation form with a request to teachers to complete and return it to the coordinator of the project at the City of Cape Town (Appendix C2.1).

2. Why was the evaluation required?

The 2003 *State of the Environment Schools' Resource* for the Foundation Phase was to be followed by a resource for the Intermediate Phase, in 2004, and one for the Senior Phase, in 2005. Conscious of the financial resources invested in the development and distribution of these resources, the project coordinator in the Department of Environmental Management wanted to evaluate the use of the 2003 resource. As she started preparing for the evaluation, she noted that none of the evaluation forms in the workbook (noted above) had been returned. She thus became concerned that the resources were not being used at all, and had perhaps not even reached the intended teachers. This aspect thus became a particular focus in the next 'phase' of the evaluation, which was commissioned to follow up on the first – unsuccessful – phase of evaluation.

The findings of the evaluation would also be used to inform planning for and the development of a resource pack for the Senior Phase in 2005, to support the implementation of the RNCS in this phase in 2006.

3. When did the evaluation take place?

The resource was mailed to schools in August 2003, at a time when Foundation Phase teachers were participating in training to implement the RNCS. The evaluation was commissioned for July 2004.

The evaluation was summative with regards to the Foundation Phase resource, but would inform further development and distribution of resources by the City of Cape Town (and others). Thus it also had a formative dimension.

The evaluation was undertaken during June – July 2004. Unfortunately, this is a period of school holidays, preceded by examinations. This meant that teachers were preoccupied and I effectively had four weeks within which to conduct the evaluation. Some of the work ran over into the first week of August 2004.

4. Who planned and actually conducted the evaluation?

The project coordinator in the Environmental Management Department of the City of Cape Town (who initiated and coordinated the development of the resource) commissioned the evaluation. I was appointed as an independent consultant to plan and conduct the evaluation, with some support from an assistant in the Department.

Prior to contact with schools, I met with the project coordinator to establish how the resource was distributed and what the first phase of the evaluation had shown. This meeting also gave me the necessary background to the project and the resource pack.

A colleague, the Provincial Co-ordinator for Environmental Education in the Western Cape Education Department, assisted with some of the data collection. He introduced the resource to teachers with whom he conducted curriculum training. He collected their feedback using the interview schedule I had designed (Appendix C2.4).

5. What was the aim of the evaluation?

The aim of the evaluation was twofold:

- to assess the use and value of the resource in supporting lesson planning and teaching for environmental learning in the Foundation Phase (the original aim)
- to assess whether schools had in fact received the resource and whether any of the teachers were using them (the emergent aim).

More specifically, the evaluation was to establish:

- whether schools had in fact received the resource, if not what the mail distribution channels are that hampered this
- if the resources had been received, by whom and how were they being used
- the appropriateness and usefulness of the resources in supporting environmental learning in the Foundation Phase.

6. How was the evaluation planned and conducted?

This case study provides a good example of a changing evaluation plan. I initially conceptualised the evaluation plan based on my assumptions about the project. However, as I started work on the evaluation, the plan had to be changed as my initial assumptions were challenged.

The original evaluation plan: As noted before, when the resource was produced, an evaluation form was included in the workbook, with a request to teachers to complete and return it (Appendix C2.1). The project coordinator's name and fax number was listed on the form. As noted, there were no responses to this request for evaluative comments.

The changed evaluation plan: Given the failure of this initial evaluation strategy, I developed an extended evaluation plan, which I discussed with the project coordinator. This plan included:

1. An interview with the project coordinator (schedule in Appendix C2.2), to learn what prompted the development of the resource; how it was distributed and to whom; whether any teacher support followed the distribution of the resource; and what feedback there was from the initial evaluation. This interview was also used to share and refine the evaluation plan with the project coordinator.
2. An interview with the Western Cape Education Department Environmental Education Coordinator (schedule in Appendix C2.3), to learn how he had distributed and used the resource and to find out how the teachers he worked with, were using the resource. (These teachers were at schools that would not have received the resource, in Malmesbury, Caledon and Worcester). However, when I called him to set up the interview, I learnt that he had in fact not yet used the resource and that the teachers he worked with were unlikely to use it in the classroom in the near future. He was planning to introduce teachers to the resource and to encourage them to use it in planning a lesson as a training exercise. So these teachers would only be able to assess the resource based on its perceived value and usefulness in lesson planning. They would not be able to report on the actual use of the resource in the classroom.
3. Interviews with teachers, to get a sense of how they used the resource in their lesson planning and classroom (Appendix C2.4).

Initial sampling: As a first step towards the latter interviews, I needed to identify a sample of teachers who could discuss the resource. To do this, I phoned schools to establish whether they had received the resource and whether any teachers had been using it. I selected schools clustered in three regions in the metropole, to make travelling easier, given the time and budgetary constraints within which the evaluation had to be conducted. Of the 30 schools that I called (10 schools in three regions), none had any knowledge of receiving or using the resource.

Follow up: At this point I realised that there might be significant issues related to the distribution of the resource, and again revised the evaluation plan. I needed to broaden the sample, in case there were distribution issues particular to the regions I had selected. An assistant from the Environmental Management Department was brought in to help, given that I had time constraints. She called 15 schools, five in each of three other regions. In addition to describing the resource pack to the secretary at the school and finding out if they had received and used the resource, she also probed the schools' distribution systems for post received. None of the schools contacted in the second round had any knowledge of the resource, either. All schools reported that they had systems in place for passing post on to relevant teachers.

Persevering: Since we were having no luck finding schools that had knowledge of the resource, I decided to focus on the one school we knew of which had received the resource. A member of the Management Team from this school had contacted the project coordinator shortly after the mail-out of the resource in 2003. She had invited the project coordinator to the school, to introduce her colleagues to the resource and to share with them ways in which to use it.

I thus contacted the member of the School Management Team. She was very keen that I visit the school and talk with the Foundation Phase teachers who had used the resource, as she felt this visit might encourage them in their work related to the new curriculum. She asked one of the teachers to call me to set up an appointment. This teacher did call, but seemed very reluctant to participate in the evaluation. Her reluctance seemed to stem from the fact that she had used the resource not in relation to the new curriculum, but rather in an extramural programme. This I was able to establish telephonically, and I told her that it would still be useful to learn how the resource had been used. She agreed to consult her colleagues about an interview date, but never phoned back.

Given the teacher's reluctance to talk about how she had used the resource, and the numerous times I tried to set up an appointment, I did not pursue this further.

When those who are best placed to provide information in an evaluation, choose not to participate, this can really limit the enquiry. See Tool 6 on obtaining access to informants.

A glimmer of hope: The resource had also been distributed by the Western Cape Education Department's Environmental Education Coordinator, to the teachers with whom he conducted curriculum training as part of the National Environmental Education Project. In a workshop on lesson plan design in the new curriculum, he introduced teachers to the lesson plan exemplars in the resource. They could use these examples and other resources in the pack to design their lesson plans. Using the interview schedule in Appendix C2.4, he obtained verbal feedback from teachers on using the resource in this activity. He shared the findings with me via e-mail.

Teachers generally found the resource useful; they found the lesson plan exemplars useful in designing their own lesson plans. They did however feel that they needed more time to engage with the resource, and they also indicated the need for more support in understanding the *State of the Environment* themes to which the lessons related (being water, waste and conservation).

In conclusion: Though the evaluation did not go according to plan, good insights were developed into the issue of distributing resources to schools through the post; the value and use of the resource; and processes of evaluation. These are shared below.

When evaluating environmental education resource materials, one often exposes a range of issues related to the broader context in which the materials are to be used. In this case, the finding that teachers needed help with using materials related to basic curriculum-related topics, before they can successfully use a resource, reflects less on the actual resource, and more on the ways in which resources are to be introduced into schools, which may require a much broader systemic approach.

7. What did the evaluation reveal about the project?

- Teachers found the lesson plan exemplars useful as a guide to developing their own lesson plans for environmental learning. One teacher found that the resource helped her to understand planning for active learning, an approach encouraged through the NEEP, and how to integrate this approach into her own lesson plans.
- The resource contains various pictures for learners, related to the themes of the lesson plans. Teachers thought these pictures were useful and could be used for different purposes in diverse learning programmes. They noted that the pictures were easy to photocopy and thus made for a good resource to use on an ongoing basis.
- Teachers needed more support in understanding the themes on which the lesson plans had been based. They felt that this would help them in developing other lesson plans on these themes.
- The Coordinator felt that was crucial to introduce teachers to the resource in a supportive process such as a workshop, otherwise teachers tend to use only resources with which they are more familiar.

Recommendations regarding the distribution of resources to schools included:

- Posting resources to schools is not the ideal distribution mechanism; this could be done through personal contact with teachers, for example in a workshop.
- Resources ideally need to be distributed to specific teachers (rather than schools or principals) to ensure that they reach intended users.
- The distribution of resources to schools ideally needs to be coupled to interactive sessions through which teachers are introduced to the resource and are supported to explore ways of using these resources.
- The receipt and use of the resource must be monitored shortly after distribution. This might also help to ascertain the nature of support that teachers need to use the resource.
- The *State of the Environment* workbook was distributed together with a collection of complementary source materials for the teacher and learner. This might have given teachers difficulty in identifying the main resource, which would have provided them with an orientation to the rest. The number of additional support materials should be limited, or the materials packaged in such a way that teachers are able to identify the central resource.

8. How were the findings of the evaluation shared?

The findings of the evaluation were shared via a draft evaluation report submitted to the project coordinator and reworked based on comments received.

9. What does this case teach us about planning and conducting evaluations?

Though the evaluation process needed to be revised at various stages and I experienced many challenges to find teachers who could participate in the evaluation, this particular evaluation revealed a lot, not only about the resource, but also the means of distribution that emerged as an additional focus of the evaluation. In addition, useful insights were developed with respect to the evaluation of resources in the school context.

- Though an evaluation plan is crucial to guide the evaluation, be open to emergent aims and areas for exploration throughout the evaluation, as this can enrich insights gained and focus your attention where it is most needed.
- The evaluation methods should be carefully considered. In this evaluation the initial method relied on teachers to complete a questionnaire and fax it to the co-ordinator. Teachers very often are preoccupied and the questionnaire might well have been seen as an added extra of which they are unlikely to derive any direct benefit. This method was clearly less suited to this group.
- Timing of the evaluation needs to be carefully considered. This evaluation was conducted 10 months after the initial mail-out, at which point very few people recalled anything about the resource. The evaluation might have been better supported if the schools had been contacted earlier to ascertain whether they had received the resource.
- Planning of the evaluation should ideally happen during the planning of the actual project. An evaluation which starts early in the lifespan of a project, can provide insights which can inform further evaluation processes. If this evaluation had been planned prior to the development and distribution of the resource, a sample of teachers could have been invited to participate in the evaluation. This would have given one insight into how teachers were using the resource (for example, we would have learnt that some of them were using it for 'extra-curricular' activities, rather than the curriculum support it was aimed at) and this would have informed the further focus of the evaluation.
- Check all the assumptions on which you base the evaluation. For example, I had assumed at the outset that schools had in fact received the resource and that teachers would be using them. If I had anticipated the possibility of schools not having received the resource and teachers not using it, the evaluation plan could have accommodated this.
- Ensure that all potential participants in the evaluation are clear on its purpose. In this evaluation I encountered some resistance from a teacher, which prevented me from collecting data from the only people who might have used the resource at the time. I believe that the teacher was concerned that they had not used the resource as intended and was reluctant to reveal this; she might have thought that I was doing a check on her teaching. The aims of evaluations are very often misinterpreted, and it is important to make adequate time to clarify them with prospective participants.



Appendix C2.1 *State of the Environment* Schools' Workbook (Foundation Phase) Evaluation Form

1. Did you use any of the SoE Lesson Plans with your learners? _____ • If yes, which one(s) and how? _____ • If not, why not? _____ 2. Could you incorporate any of the other themes in the SoE Summary Report in your teaching? _____ • If yes which themes? _____ 3. How can the Workbook or Lesson Plans be improved? _____ _____ 4. Is the resource pack an appropriate resource for the Foundation Phase? _____ 5. Any other comments: _____ _____
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Appendix C2.2 Interview Schedule – Project Coordinator

CITY OF CAPE TOWN: ENVIRONMENTAL MANAGEMENT DIVISION

STATE OF THE ENVIRONMENT SCHOOL RESOURCE

Interview with Lindie

1. What motivated the development of the SoE school resource?

2. How did you initially intend to distribute the resource and how did this distribution plan play out?

3. What was the scope of distribution? (Here could you give me a list of the schools / teachers to whom it has been distributed)

4. Was there any intention to support the use of the resource? What was the nature of this support and how did it play out?

5. Who are the partners who have used the resource? (eg. Ruben in the NEEP – GET context, any other)

6. What has been the feedback received on the resource?

7. Have any teachers provided input into the evaluation of the resource?

8. Do you have any specific questions that you have with respect to the evaluation that you would want me to explore?

Appendix C2.3 Interview Schedule – Western Cape Environmental Education Coordinator

CITY OF CAPE TOWN: ENVIRONMENTAL MANAGEMENT DIVISION

STATE OF THE ENVIRONMENT SCHOOL RESOURCE

Interview with Reuben Snyders (NEEP –GET)

1. How broadly did you intend for the resource to be used in your work with teachers?

2. How was the resource to be used amongst teachers and how did this play out?

3. Do you have any insight into the scope of teachers who have in fact used the resource? (Could you provide me with a list of teachers to whom the resource has been distributed)

4. Were you able to receive any feedback from teachers on the use of this resource and what was the nature of this feedback?

5. Have any teachers completed the attached evaluation form to the resource? (Could I have copies of these evaluation sheets)

6. Are there any specific questions that you think would be worth exploring in this evaluation of the SoE school resource?

Appendix C2.4 Interview Schedule – Teachers

CITY OF CAPE TOWN: ENVIRONMENTAL MANAGEMENT DIVISION

STATE OF THE ENVIRONMENT SCHOOL RESOURCE

Questionnaire for teachers who have used the resource

1. Have you been able to use any of the resources, or some of the lesson plans in your classroom context?

a) If no, what are some of the reasons that hindered the use of the resource?

- b) If yes, which ones have you used and how have you used these in your classroom context?

- c) How did you experience using these?

- d) How did your learners find participation in these activities?

2. Did you use any of the learner support materials in the resource (eg. colouring in books, directory, etc.)?

- a) If not, what are the reasons?

- b) If yes, which ones have you used and how did you use these?

3. Did you use any of the teacher support materials (SoE Summary Report, Environmental Directory, Enviro Fact Sheets, etc.)?

- a) If not, why?

- b) If so, how have you used these teacher support materials?

4. Did you find the resource to be an appropriate resource for the Foundation Phase? Give reasons for your answer.

5. What recommendations can you make to improve the resource and its use in schools.

6. Do you have any other general comments for improving the resource and its use.

C3: The LA 21 Households Pilot Project Evaluation

1. What project was evaluated in this case?

The project evaluated in this case is the LA21 Households Pilot Project, which was located in the City of Cape Town's Local Agenda 21 Office.

Following on the implementation of a similar project in Aachen, Germany, and through a Local Agenda 21 partnership between the City of Aachen and the City of Cape Town, this project was initiated in three communities in Cape Town. Twenty-one households from Wynberg, Khayelitsha and Manenberg participated in it, over a period of eight months.

The aim of the project was to expose members of these households to the principles of Agenda 21 in a very practical way, with the intention of encouraging an understanding of these principles, and more broadly, to encourage people to live and act in more sustainable ways. The specific objectives were:

- Promoting the concepts and principles of sustainable development at a household level, to develop a better understanding of sustainable development in a practical way
- Capacitating the residents about the principles of Agenda 21, through interactive workshops, excursions and practical examples, with the aim of encouraging the development of more sustainable living practices
- Promoting communication and interaction between different structures (NGOs, municipality and communities) and different groups within community structures.

Each month, households participated in a workshop and an outing structured around a specific theme. The themes included water, waste, energy, food gardening, transport, and safety around the home. Outings demonstrated examples of principles in practice, and examples of our environmental impacts.

2. Why was the evaluation required?

This was a pilot project and its evaluation was commissioned by the project manager at the City of Cape Town's Local Agenda 21 Office, in order to inform the planned roll-out of the project into other areas. More specifically, the evaluation was to assess the extent to which this project has achieved its objectives. It was also important to look at what lessons were learnt and what should be changed during the further roll-out of the project.

3. When did the evaluation take place?

The evaluation took place after the completion of the project in July 2003. Although the evaluation was proposed to take place over a short period, it actually took six months – considerably longer than anticipated. A draft evaluation report was submitted in November 2003 and the final project evaluation report was submitted in February 2004. Between the draft and final report, the project co-ordinator was given time to comment on the report and a further follow-up was done on outstanding questionnaires.

4. Who planned and actually conducted the evaluation?

A team of consultants, working with the project co-ordinator, planned and conducted the evaluation. The team consisted of a principal evaluation consultant and two student research assistants. They received assistance from a household participant from Manenberg, and a development worker from a local NGO (who coordinated a project workshop) assisted with selecting households and conducting interviews in Khayelitsha.

5. What was the aim of the evaluation?

The aims of the evaluation were to assess the impact of the project on the lifestyles and actions of the participants, and to assess the strengths and challenges emerging from the project, to inform the planned roll-out of the project. More specifically, the evaluation aimed to assess the following:

- How has the project shaped perceptions of sustainable development?
- Were there any changes in the lifestyles and actions of members of the participating households?
- How do these changes relate to the principles of sustainability to which they had been introduced through the project?
- What were the strengths and challenges emerging from the pilot project?

6. How was the evaluation planned and conducted?

The evaluation comprised of semi-structured interviews with members of the participating households, workshop (theme) presenters and members of the project team. In addition, the evaluation could draw on quantitative data from audits on household resource consumption, which were done as part of the project itself.

Planning the evaluation tools: Interview schedules were developed through a brainstorming session involving the principal evaluation consultant, the project co-ordinator and the research students. They brainstormed what information was needed from the various project participants. The project coordinator was asked to look at an initial draft of the interview schedules, to ensure that all significant aspects of the project were captured, particularly information relevant to the future roll-out of the project. These interview schedules are attached as Appendix C3.1 (participating households); Appendix C3.2 (presenters) and Appendix C3.3 (project team).

Data collection: Using the appended interview schedules, data was collected through:

- Personal interviews with participating households who were available for these interviews
- Electronic circulation of the interview schedules (now used as questionnaires) to presenters and partners who were not available for personal interviews, including the German volunteers and other project team members and
- Telephonic interviews with some of the households who had initially participated in the project, but subsequently discontinued their participation.

Personal interviews were conducted with participating households from Khayelitsha, Manenberg and Wynberg, at community centres or at participants' homes. Of the initial 21 households who participated in the project, 13 were interviewed.

All the theme presenters received the interview schedule electronically. Feedback on this electronic version of the interview was however poor, to the extent that it delayed the completion of the evaluation.

An electronic version of the interview schedule was also sent to all project team members, including the German volunteers, who were involved in planning and implementing the project. They gave valuable recommendations via e-mail.

Telephonic interviews were conducted with households from Wynberg who discontinued their participation before the end of the project. This was an informal interview to determine reasons for the discontinuation, as these reasons were important in informing the future roll-out of the project.

The personal interviews, although time consuming to set up, actually proved to be more time efficient in the long run. Where participants were e-mailed the interview schedule, very few responded quickly. Most needed repeated follow-up, and after the completion of the report, some participants had still not responded. The quality of the personal interviews was also much richer, as participants were able to express themselves better in the one-to-one interaction.

Additional data: As part of the project, two sets of audits were conducted which measured the participating households' energy usage and consumption, water usage and consumption, and waste production (amount and composition). The first set of audits was done prior to the first project workshop, and in addition to creating a baseline, the data was used as a discussion point in the first three workshops. The audits were repeated a year later (Oct 2003), after the completion of the project. The comparison between the two audits served to determine the impact of the project on consumption patterns.

The audit was done by the principal evaluation consultant, with the assistance of the project team. It did not, however, form part of the commissioned evaluation, and although it provided valuable information related to the evaluation's aims, the findings were not related to the interview data, or integrated into the evaluation report.

Findings, analysis and verifications: An analysis of the responses of the various households, theme presenters and project team members was then undertaken.

A spreadsheet was compiled for the purpose of analysing the interview data. The spreadsheet was designed around the frameworks of the interview schedules for the different participants. While interviews were conducted, the evaluation team noted the responses to the different questions; these responses were then processed and collated into the data-spreadsheet. The spreadsheet, while a useful tool for analysis of yes/no answers, was not particularly useful where comments or suggestions were given. It became too cumbersome and large once comments were listed.

On completion of the data processing into the spreadsheets, the evaluation team met to discuss responses and identify key issues emerging from the data, and to formulate recommendations.

Conclusions and proposals: The principal evaluation consultant compiled the evaluation report, incorporating comments from the participating households, theme presenters and project team. The report provides a description of the project and an overview of the various themes explored. Comments received during the evaluation were integrated into this discussion. This is followed by an overview of the evaluation process. The report concludes with recommendations for the way forward in the further implementation of the project.

7. What did the evaluation reveal about the project?

As noted before, the evaluation intended to gain insight into the impact of the project on the lifestyles and actions of participants through exposure to the principles of sustainability outlined in Agenda 21. A further aim of the evaluation was to assess the running of the project, to inform future project implementation.

The interview data tends to focus on the latter aim of the evaluation, but other data sources also shed light on the first aim:

Learning About Sustainability and Lifestyle Changes

The evaluation revealed a greater awareness amongst participating households of issues around resource consumption and the impacts of lifestyles on the environment. Several members of participating households for example reflect a better understanding of their water bill and the quantities of water consumed over a period of time.

Regarding lifestyle changes, many households reported during the final wrap-up session of the project that this was for them a life-changing initiative in terms of exposure to alternative lifestyles and actions. There is evidence that the project had an impact on some individual's lifestyles. As a result of participation in the project, some households had started food gardens. Others had developed systems of recycling waste in their homes. Some started re-using waste material to make crafts that are now on sale.

The audit did not reveal any significant reductions in resource consumption. On the contrary, several of the participating households showed an increase in the quantity of water consumed. This was however due to the development of food gardens. This is significant in relation to analysing data. It was necessary to establish the reasons for the increased water consumption from other sources, rather than simply assume a link between increased water consumption and less sustainable lifestyles.

It is interesting to note that although the third objective of the LA21 Pilot Project, to improve communication and interaction between various groups, was not included in the aims of the evaluation, the evaluation did generate useful findings in this regard. Many of the findings regarding project implementation were on issues regarding cross-cultural interactions (and therefore, communication between various community groups). It seems that, comparatively, less was said by project participants about the aims of improving households' understanding and application of the principles of environmental sustainability. Since this was a particular aim of the evaluation, it may be a more difficult area to probe and reflect on in interviews. See Tool 5, on ensuring adequate links between interview (etc.) questions and evaluation aims.

It should be noted, however, that many of the findings regarding the impact of the project on participants' lifestyles emerged informally, rather than through the interviews. The interviews yielded mostly information regarding project management, logistics, content and strategy (see next).

Project Planning and Implementation

The partners indicated that they found it useful to locate their themes within and as part of a bigger picture and not just an isolated event. They also appreciated the networking opportunity with council officials. There were suggestions regarding the production and translation of newsletters.

Cultural sensitivity emerged as an issue, for example the cultural sensitivity of catering arrangements. It was recommended that a cultural monitor/mediator be appointed.

Households from Wynberg indicated that they did not benefit as much as households from Khayelitsha and Manenberg, as the project focussed more on these 'disadvantaged' areas. A need to contextualise the project to different socio-economic situations was also identified. Some approaches, relevant in some areas, had little relevance for households in other areas, and this could account for the development of a disinterest and consequent discontinuation. The evaluation report thus recommended parallel projects within different socio-economic and cultural contexts with specific cross-cultural events.

The themes of the workshops were however generally regarded as useful, though some respondents felt that some themes needed revision in terms of scope and detail. For example, some respondents felt that the finance and conflict resolution themes should be separated. Other suggested that the transport theme be extended beyond bicycles.

Various issues and suggestions also emerged with respect to more effective transport arrangements for the project, workshop planning and timing.

Several recommendations were made for more effective project management, including:

- Appoint an events coordinator for all logistical arrangements, and budget for this function
- Formalise the function of the advisory committee; this similarly should be a budget item
- Ensure ongoing monitoring and evaluation of the project, through a more formalised and standardised reporting system for all participating partners and theme presenters.

The auditing process could be improved through the following:

- Contract a local resident per area and train them to conduct the audits. The environmental consultant involved should still write the reports.
- All water and electricity data should be collected prior to the audits being carried out.
- The waste separation concept (dry and wet waste) should be carefully and timeously explained to participating households.
- All participating households should be determined prior to the commencement of the project.
- Audit reports should be explained to participating households, which implies a second visit.

The contracted local resident could fulfil this role.

8. How were the findings of the evaluation shared?

The findings were compiled into a draft evaluation report. This was submitted to the project co-ordinator for comment and then developed into a final evaluation report. The report included various photos to illustrate different components of the project, and a comprehensive list of appendices.

The report was distributed via Compact Disc to project partners and funders. A Power Point presentation was also compiled for the project coordinator.

Many of the findings were incorporated into the development and implementation of the Wolfgat 21 Households Project, which started in mid-2004.

9. What does this case teach us about planning and conducting evaluations?

- Methods must be carefully constructed in order to achieve all the aims of an evaluation. In this case the main method (interviews), yielded useful findings regarding project planning, implementation and management. The interview questions were less successful in probing participants' understandings of sustainable living, and the project's possible impact on lifestyle changes. While some insights emerged in this regard, they tended to come from outside the formal evaluation.
- The resource-use audits were a useful source of data related to the project's impact on participants' lifestyles and actions, but were not used in the report, because they were not conducted as part of the formal evaluation. This was ironic, since both the formal evaluation and the audits were conducted by the same consultant. It reflects usefully on the roles of evaluators – both as insiders to a project (conducting the audits as part of the project) and as outsiders (conducting a formal evaluation after the completion of the project). Such different vantage points – in- and outside a project – can usefully inform each other.
- Data should be carefully interpreted, and one may need additional data to do so. In this case the audits showed that water consumption increased in some households after the introduction of the project. This could be interpreted as a lack of concern about sustainability on the part of participants – until one considers additional data that shows that during the project, these households started gardens for food security.
- Evaluation should ideally be integrated into the planning of the project. In this way, one can plan for the on-going collection of data to inform the evaluation. For example, regular and thorough reporting by theme presenters, after each workshop and outing, could have recorded useful evaluation data. These reports were submitted after the first three themes, but were then discontinued.
- It was valuable to interview households who discontinued participation in the project. Very often evaluations focus only on those who have been involved to the end. We learnt that some drop-outs are related to project features, while others are not. One person for example, left the project as a result of finding employment that did not allow him the time to participate. In another example, the more affluent households found some project content to be irrelevant to their context and lost interest. This finding usefully informs the roll-out of the project.
- When planning an evaluation, allow time for contingencies and delays. In this case, delays were caused by slow responses from participants consulted by e-mail.
- Evaluations should ideally follow promptly on the project aspects that they focus on, to ensure that respondents are interested enough to provide feedback, and that they have adequate recollection. In this case the poor response to the electronic interviews might have been a result of presenters being asked to assess their inputs, long after these inputs had been made.
- Circulating reports for comment is a crucial phase in the evaluation. This may highlight further issues that need to be explored, and strengthens the recommendations. It should therefore be factored into the evaluation plan and time frame.

Appendix C3.1 Households Interview Schedule

What comes to mind when you hear “sustainable development”?

What motivated you to attend this workshop?

How did you feel when the project started? (Were you positive or negative inclined etc.)

After completion of the workshops, how do you feel now?

From what you can remember, what do you consider the most important and worthwhile content of the workshops?

What content needed greater attention, clearer explanation or more practice in application?

Which kinds of theme presentations, outings and/or activities did you find most effective and enriching? Why?

Which kinds of theme presentations, outings and/or activities did you find least effective and enriching? Why?

Would you say that everyone, including you, had the opportunity to participate?

☐

YES

☐

NO

10. Do you have additional comments or questions about any aspects of the workshops?

11. Do you use the materials and resources you received?

☐ YES

☐ NO

IF YES,

Which of the materials and resources you received seem most useful and why?

12. Please comment on the following aspects of the workshops:

Announcement of workshops, selection, and registration process

Insufficient sufficient very sufficient

Communication with organizers (project team) and preliminary information

bad acceptable very good

Transportation Arrangements

bad acceptable very good

Food or Refreshments

bad acceptable very good

Meeting spaces/Venues

Unsuitable

adequate

very suitable

- Time Allocation for outing

Too short

adequate

Too Long

- Time Allocation for Presentation

Too short

adequate

Too Long

13. Can you apply/use the information and knowledge gained from the workshops?

☐

YES

☐

NO

If YES,

Explain how you use it/plan to use it?

14. Would you say that you now feel differently about the aspects of sustainable development? (water usage, waste removal, energy usage etc.)

15. If this workshop were offered again, would you recommend it to others?

☐

YES

☐

NO

Why?

Appendix C3.2 Theme Presenters Evaluation Interview Schedule

1. What would you say is the importance of your theme regarding Sustainable development?

2. Did you have specific objectives and outcomes regarding your theme?

☐ YES

☐ NO

If YES, were your objectives met and outcomes reached?

Do you feel that the time allocation for your theme presentation was sufficient?

☐ YES

☐ NO

If NO, Why not?

Was the financing for your particular theme sufficient?

☐ YES

☐ NO

If NO, Why not?

What is your views regarding the organization (meetings etc.) of the 21 Households project?

What are your views regarding the support you received from the project team and the support you needed?

What are your views regarding the level of communication between you as Facilitator and the participants during the project?

Would you say that the level of literacy was in any way a problem during the presentation of your theme?

Was your participation asked in the initial planning of the 21 Households Project?

What is your view regarding the level of participation of the participants:



Unsatisfactory

Fair

Good

What in your mind were the successes and failures of your specific theme? (What worked well, what didn't work well)

What important insights did you gain from this workshop?

What changes/suggestions would you recommend for future 21 Households workshops?

Any other comments?

Appendix C3.3 Project Team Evaluation Interview Schedule

Did you have specific objectives and outcomes regarding the 21 Households project?

☐ YES

☐ NO

If YES, what were they and would you say they were attained?

What was your role and responsibility as part of the project team?

How would you rate the workshop overall in relation to structure and content?



Unsatisfactory
Good

Fair

Were you satisfied with the duration of the workshop?

☐ YES

☐ NO

IF NO, why not?

What is your view regarding the amount of funding received for the 21 Households project?

What are the major outstanding (financial) support needs?

What were the main problems encountered during the planning and implementation of the 21 Households project?

How would you assess the quantity of training material and documentation prepared for the various workshops?

How would you assess the quality of the training material and documentation?

Which other subject areas (if dealt with) would have made this workshop more useful, relevant and complete?

On what criteria was the selection of the 21 households based?

Did you experience any difficulties in the recruitment of the 21 households?

☐ YES

☐ NO

IF YES, why do you think so?

What is your view regarding the participation of the households throughout the project?



Bad

Acceptable

Very good

Why do you say so?

What would you say were the level of interest of the participants (households) at the start of the workshops?



Bad

Acceptable

Very Good

What would you say were the level of interest of the participants (households) at the end of the workshops?



Bad

Acceptable

Very Good

What would you say are the successes and failures of the 21 Households project?

What indicators are used to measure the successes?

How did you identify these indicators?

What changes and suggestions would you recommend for future workshops?

C4: Ukuvuka/Fire and Life Safety Programme Evaluation

1. What programme was evaluated in this case?

This case study examines Ukuvuka's 2002 evaluation of the Fire and Life Safety Programme of the City of Cape Town's Fire and Emergency Services. The programme is offered by fire fighters who volunteer time to conduct it. It started in 2001 and teaches primary school children life safety skills, with an emphasis on fire injury and prevention awareness. This is done through interactive demonstrations at schools and other venues, and through resource materials which teachers can use in the classroom to reinforce the learning. The Fire and Life Safety Programme received funding from the Santam Cape Argus Ukuvuka Operation Firestop Campaign (Ukuvuka).

2. Why was the evaluation conducted?

In 2002, Ukuvuka undertook an evaluation of a selection of programmes which they had been funding, including the Fire and Life Safety (FLS) Programme. At that time, the FLS programme had been in operation for almost a year.

The evaluation's Terms of Reference specified the following intended users (and purposes of the evaluation):

- Campaign team and governance structures, who would use the insights and feedback to support the design, delivery and monitoring of the campaign's activities
- Future groups wishing to replicate aspects of the campaign, who would gain indicators of effective delivery and recommendations on how to implement them
- Sponsors and partners, who would have conceptual frameworks and data through which to evaluate the return on their investment/ involvement in the campaign
- Other interested parties (citizens of the campaign area/ participants of the World Summit on Sustainable Development), who would be informed about the case studies and the best practices that they represent
- Those communicating about the campaign, who would have an objective evaluation to use as the basis for the messages that they send to their various target audiences.

Note that the FLS staff were not originally seen as intended users of the evaluation. The evaluators subsequently directed the evaluation to be more formative and responsive to the programme's needs, and as a result, perhaps less responsive to the needs indicated in the Terms of Reference. Meeting diverse needs requires careful crafting of an evaluation design and may not always be possible.

The decision to evaluate the FLS programme was taken solely by Ukuvuka. The FLS coordinators were informed of the evaluation only once the Terms of Reference had been drafted. At this point it became clear that the FLS staff had different ideas of what the evaluation should achieve. They sought a more formative evaluation to inform further programme implementation, whilst Ukuvuka was primarily interested

in quantifiable indicators of programme effectiveness. Because these differing expectations from different programme stakeholders were not clarified and addressed early on, meeting them became a challenge to the evaluators.

It is important to note that the 2002 evaluation was conducted prior to any evaluation training on the part of Ukuvuka staff, who subsequently underwent training with the American evaluation expert, Michael Quinn Patton. This explains why the need to involve key stakeholders early on in an evaluation, was overlooked in this case.

3. When did the evaluation take place?

The evaluation was conducted in April 2002, when the FLS programme had been in operation for almost a year. Monitoring and evaluation had been built into the FLS programme design, but it had not been formally evaluated by then. The FLS staff felt that Ukuvuka evaluation came too early. They were concerned that the programme had not yet been implemented in the preferred manner, due to financial and other constraints, and that an evaluation at this point would not be a fair reflection of the programme's effectiveness, specifically in terms of learners' ability to retain fire and life safety messages and skills. For example, on completion of the FLS programme at a school, the FLS educators would ideally leave posters and booklets so that teachers can reinforce messages in the classroom. At this time however, no such materials were being left.

4. Who planned and actually conducted the evaluation?

The sponsor, Ukuvuka, appointed the Disaster Mitigation for Sustainable Livelihoods Programme (DiMP), at the University of Cape Town, as an external evaluator. DiMP has expertise in education and training, research and advocacy in the field of disaster mitigation and prevention. As the Disaster Risk Research Coordinator, Helen's role was to coordinate and conduct the evaluation.

The planning phase involved primarily Ukuvuka and a reference group, which was appointed to oversee the evaluation. The involvement of the FLS programme was limited to a representative from the Fire and Emergency Services. The limited participation of the FLS programme staff in this stage had implications in terms of the drafting of the Terms of Reference, appointing the external evaluator, and determining the scope, focus and overall design of the evaluation. A consultative workshop to negotiate the purposes of the evaluation would have been useful in the planning phases of the evaluation.

The FLS programme staff, who were in fact supportive of the idea of an evaluation, did however assist the DiMP team with several aspects of the evaluation, such as facilitating volunteers to assist, and conducting the mock test and demonstration. Several hours were also spent conducting interviews with the FLS staff.

To ensure transparency around the findings, the individuals interviewed were asked to review their transcripts. Several drafts of the report were also reviewed and commented on by FLS and Ukuvuka staff. These were useful informal feedback processes, which should ideally be complemented with a more formal feedback process, possibly in the form of a presentation to all end users.

5. What was the aim of the evaluation?

The primary aim of the evaluation was to assess the efficiency and effectiveness of the FLS programme, in three domains, namely:

- Ability to promote learning
- Impact of training on both school children and FLS educators
- Sustainability of the programme.

These three core aims were developed in consultation with the FLS and Ukuvuka staff, but the FLS staff did not agree on all of them. As mentioned, the FLS staff were skeptical about assessing the impact of training on school children, as they believed that the programme had not been in operation for long enough.

6. How was the evaluation planned and conducted?

DiMP met with Ukuvuka and the reference group to discuss the evaluation design. At this initial meeting, the reference group gave DiMP feedback on the proposed methodology for the evaluation, and we defined indicators of efficacy and effectiveness.

The DiMP evaluation team then organised a workshop with the FLS programme staff to plan the evaluation in more detail. However, as the evaluation aims and objectives had already been defined by the donor, substantial issues now arose around the validity of the evaluation, with concerns about timing, sampling and methods (see below). The FLS team were supportive of the evaluation and in subsequent meetings we further refined the methodology. Unfortunately, Ukuvuka was not invited to these meetings and so issues around the original planning of the evaluation were not discussed. As a result, DiMP was responsible for liaising between the two parties. This way of work created conflicting perceptions about the ultimate end users of the evaluation and its guiding purpose.

A number of methods were used to collect data:

- **Semi-structured interviews with relevant stakeholders**

Interviews were conducted with relevant stakeholders: FLS staff and volunteers, Fire and Emergency Service Managers, Ukuvuka staff, school teachers and a professional educator. A semi-structured interview schedule was used, as it allowed the informants flexibility to introduce, discuss and highlight issues pertaining to the approach and context of the programme.

- **Focus group discussions with fire fighters, working as FLS educators**

Due to time constraints on the part of the fire fighters and the evaluation team, focus group discussions were conducted. A semi-structured questionnaire was used to guide the focus group.

- **Focus group discussion with teachers of Ferndale Primary School**

A focus group discussion was held with four teachers from Ferndale Primary, whose classes had been exposed to the programme over the past year. This method was chosen (instead of one-on-one interviews) due to time constraints of the teachers. A semi-structured questionnaire was used to guide the focus group.

- **Observations of FLS programme at Ferndale Primary School**

The evaluation team observed the FLS programme with a class of Grade 5s at Ferndale Primary School. The team focused on the teaching methods of the FLS staff and their interactions with the learners.

This is an example of a pre-test post-test evaluation design, typical of the experimental approach to evaluation, discussed in Tool 2.

- **Observations of FLS programme at Youth Environmental School (YES) 2002**

The evaluation team observed the FLS programme at YES 2002. Again, they focused on the teaching methods of the FLS staff and their interactions with the learners, this time outside a classroom environment.

- **Mock test and demonstration at Ferndale Primary School**

This involved a class of Grade 4 pupils. These learners had attended a FLS programme session eight months earlier. Since then, there had been no reinforcement of the lesson, by either their teacher or the Fire Services. From the evaluators' point of view, the situation was therefore ideal to test what the children had learnt and remembered as a result of the programme.

The mock test consisted of a multiple choice questionnaire of 10 questions, relating to the messages "Stop, Drop and Roll", "Crawl low under smoke" and "Dial 107 in an emergency". In the demonstration the learners were asked to demonstrate what to do if their clothes caught on fire. The class evaluation was conducted by the DiMP team and two FLS educators. However, the FLS team questioned the validity of the mock demonstration, and therefore the validity of the evaluation findings (even though these were very positive).

- **Literature review**

A review of educational literature was conducted, as a basis from which to assess the educational philosophy of the programme within the context of international best practice.

Sampling

From the FLS staff's point of view, the choice of the school where observations took place was a poor one, because this school did not receive a 'true' programme: the training session was part of the FLS educators' training programme, and no follow-up materials were left for teachers to use in the classroom. The school did however meet a number of the donor's criteria. This again demonstrates the value of reaching consensus among key stakeholders in an evaluation, and in fact designing the methodology in consultation with the various end users.

Case Study versus Survey

The above methodology represents a case study of the programme's ('imperfect') implementation at one school. An alternative methodology would have been to survey a much broader sample of schools and other venues where the FLS programme had been implemented. Such a survey would have generated statistical results which might have carried greater weight in demonstrating the effectiveness of the FLS programme.

However, many of the schools where the FLS programme had been introduced, did not fall in the geographical area in which Ukuvuka operated, and including them in the sample would have made the evaluation less useful from the donor's point of view. And, since the FLS programme had not been running for an extensive period of time, there were not that many schools to include in a survey.

A more qualitative, in-depth evaluation in the form of a case study was therefore chosen. It had the added advantage that one could observe the teaching methodology used in the programme in more depth, with technical insight given by teachers and education specialists – something which would not have been possible in a survey involving a large number of schools.

Unfortunately, the case study method (with its small sample size) left some stakeholders with a high degree of skepticism about the validity of the findings.

Also see Tool 6, for more on Case Studies versus Surveys.

7. What did the evaluation reveal about the programme that was evaluated?

The programme uses participatory teaching styles that actively involve children in the learning process. In the literature on international best practice, this teaching style is highly espoused for promoting learning. The programme's effectiveness in promoting learning was indicated in the learners' responses: 91.5% were able to remember what to do when their clothes caught on fire. Minor discrepancies in the demonstration and the mock test were attributed to peer pressure in the classroom environment. Eight months after the demonstration, 80% of the learners sampled at Ferndale Primary were able to demonstrate the "Stop Drop and Roll" technique physically. This is a very positive finding, given that the learners received only a once-off lesson, which the FLS staff did not regard very highly. This finding suggests that the programme teaches actual skills and not mere recall. So, despite the skepticism about the validity of the mock test and demonstration, the findings were generally very positive.

We learnt that 63% of learners remembered to cover their face while demonstrating the "Stop drop and roll" technique for escaping fire damage. This part of the drill was not given specific attention in the programme, although the FLS staff regard it as important; they therefore found this a particularly encouraging finding.

The extent of the programme's impact was indicated in the 10 000 children who had attended presentations over a year. However, only 1 000 of those children were taught in the classroom environment, which is the FLS staff's preferred strategy. The remaining learners were taught at four large education events. The numbers of learners involved in presentation also do not reflect the programme's limited capacity (in terms of manpower and other resources) that subsequently resulted in a shift in orientation, from working with learners in schools, to training Fire and Life Safety educators.

8. How were the findings of the evaluation shared?

DiMP wrote a report which was sent to the donor and from there to the Fire and Emergency Services. The FLS staff only reviewed the report six months after the evaluation was completed. The report may have remained with senior management in the Fire and Emergency Services, before it was passed on to the programme staff.

This served to reinforce the lack of ownership of the evaluation experienced and demonstrated by the FLS staff. This lack of ownership – reflected in their view that the report was “Ukuvuka’s document” – undermined the use of the evaluation by the FLS staff. When they did look at the report, it served as an affirmation that they were on the ‘right track’, and gave them some useful insights. However, they regarded the test-based figures as invalid and were therefore cautious of sharing the findings more widely.

The report reflects the philosophy of the programme and comments on why this is a useful approach. Parts of it would therefore be useful in FLS training courses and other training programmes, and for other municipalities interested in setting up similar programmes. The report not been used for educational or advocacy purposes, however.

9. What does this case teach us about planning and doing evaluations?

One of the key lessons is that the purpose of an evaluation needs to be negotiated between the key stakeholders, who should also be involved in the design, planning and implementation of the evaluation. This would ensure that the evaluation is tailored to meet the needs of the end users, and that they all ‘own’ the evaluation. Such early consultations would have an impact on methodological decisions, from timing to scoping and the definition of indicators, to analysis (qualitative, quantitative) and reporting.

It is important to highlight that despite the FLS programme’s staff not being involved in the planning phases, they were actively involved in conducting the evaluation. Without their support, the evaluation would have not been possible. To promote a supportive evaluation process, transparency and accountability are critical.

Do not assume that education staff will receive evaluation reports after they had been submitted to sponsors, superiors, etc. We recommend that the evaluator takes responsibility for ensuring that all end users receive a final copy of the evaluation. A presentation of the key evaluation findings with the FLS programme staff, the Fire and Emergency Services and Ukuvuka could have helped to increase ownership of the evaluation. Such a presentation should take place before the report is finalised, to note areas of disagreement and decide how to deal with them.

When assessing the effectiveness of a programme, identify an appropriate sample, which would be reflective of the programme as a whole. Make the relationship between the case(s) sampled and the overall programme clear in the evaluation report.

It is useful to have baseline data against which to judge programme effectiveness. Such data can be collected through an applied risk assessment *before* the programme is introduced (which will have additional benefits in terms of programme design).

There are different perspectives on the validity of evaluation findings. This needs to be acknowledged and discussed in the evaluation process and final report.

C5: City of Cape Town Nature Reserves – Environmental Education Evaluation

1. What programme was evaluated in this case?

Environmental education programmes offered in four of the nature reserves managed by the City of Cape Town: Helderberg, Rondevlei, Tygerberg and Zandvlei Nature Reserves.

2. Why was an evaluation required?

In 2002, the then Manager of Nature Conservation in City of Cape Town identified that the environmental education programmes in the City's nature reserves should be evaluated. Reasons included:

- with the creation of the Cape Town Unicity, some standardisation of activities and procedures in previously separate administrations was required
- to ensure the quality and effectiveness of programmes
- to find out if education programmes for schools were in line with the Revised National Curriculum Statement.

At the time however, no funding was allocated for the evaluation. When the City of Cape Town's Environmental Education and Training Strategy was published later that year, the importance of evaluation was reiterated. The City's Environmental Management Department raised funding for the development of an evaluation resource with illustrative case studies. The evaluation of environmental education at the City's nature reserves was selected as one of these case studies. Thus, this evaluation is also a response to the City's strategic imperative to evaluate its environmental education programmes.

When the evaluation was first mooted, I met with the education officers from the four nature reserves to discuss what they hoped the evaluation would achieve. Together we formulated the evaluation aim and outputs, which informed the design of the evaluation (see Section 5). We shared sufficient common ground in terms of our expectations to enable us to develop an evaluation plan that responded to all our needs and interests. It was here that we decided to take a developmental approach to the evaluation: In addition to identifying strengths and weaknesses, we included time to respond to the findings of the evaluation, by developing more effective systems and approaches.

This case study provides an example of a participatory evaluation with a strong developmental (but not critical) focus. See Tool 3, on Approaches to Evaluation.

3. When did the evaluation take place?

In August 2003 I met with the reserves' education officers to clarify the aims and objectives of the evaluation, to get an initial overview of the four programmes, and to establish a Terms of Reference for my work as a consultant on the evaluation. When sufficient funding was not forthcoming, I was asked to simply develop a questionnaire for teachers who bring school groups to the reserves. The education officers handed out the questionnaire during the last two terms of 2003, and I did an initial analysis of the responses. The Manager of Nature Conservation then resigned, bringing the evaluation to a temporary halt.

The reserves' education staff were keen for the evaluation to continue, so I approached the education coordinator in the Environmental Management Department about the possibility of funding. She raised the funding as described above, in the first term of 2004, and the rest of the evaluation took place from April – June 2004.

4. Who planned and actually conducted the evaluation?

The former Manager of Nature Conservation initially invited me to undertake the evaluation and outlined some of the aspects he wanted me to consider. When the City of Cape Town appointed me as consultant, I took responsibility to plan and conduct the evaluation, in collaboration with members of the team responsible for compiling this *Evaluation Start-Up Resource*, and the education officers and reserve managers from the participating four nature reserves.

My experience includes developing, managing and evaluating environmental education programmes, particularly in natural areas; and developing and evaluating environmental education resource materials, often related to the formal school curriculum. I drew on this experience to plan and conduct the evaluation.

It was important that the education officers should be actively involved in the evaluation process. Firstly, I believe that evaluation as a participatory, professional development process is less threatening and more useful than a judgemental intervention done to 'subjects' by an

These are relevant features of participatory and developmental evaluations.

external evaluator. Secondly, the City's Environmental Education and Training Strategy recommends that departments undertake *ongoing* monitoring and evaluation. By involving the education officers in planning and conducting the evaluation, I hoped that monitoring and evaluation might be sustained after the formal evaluation was completed.

5. What was the aim of the evaluation?

The aim of the evaluation was to assess the needs, strengths and weaknesses relating to environmental education projects in the City of Cape Town's nature reserves, with the aim of improving the quality of services offered and enhancing the effectiveness of the programme. The related evaluation outputs are listed in Table C5.1.

6. How was the evaluation planned and conducted?

Determining the Aim, Outputs and Scope of the Evaluation

In order to determine the aim and outputs of the evaluation, I drew on my initial discussions with the Manager of Nature Conservation and held planning meetings with the education officers, one prior to each of the two phases of the research. To plan the evaluation processes, I drew on my own experience of environmental education and evaluation, and an early, incomplete draft of this *Evaluation Start-Up Resource*. The scope of the evaluation was determined by the aim and outputs we developed, and by limitations of time and budget.

Steps in the Evaluation Process

The evaluation included the following steps:

- Initial meeting with education officers to scope and plan the evaluation (August 2003)
- Development, administration and analysis of teachers' questionnaire (Third & Fourth Terms 2003)
- Follow-up meeting to confirm the aims and outputs of the evaluation, and to plan site visits, interviews and the draft Educators' Week programme (April 2004)
- At least two site visits per reserve to observe programmes and facilities, interview staff and stakeholders, and review documents (e.g. educational materials, administrative records) (Second Term 2004)
- Telephonic interviews with stakeholders (managers, members of Friends groups and volunteers)
- Preliminary analysis of evaluation findings and presentation to participants (June 2004)
- Educators' Week workshop to address evaluation findings (June 2004)
- Preparation of final evaluation report (July 2004).

Evaluation Methods

Prior to conducting the evaluation, it was essential to understand the scope of environmental education in the City's nature reserves. At our first meeting in August 2003, I asked the education officers to describe their programmes and facilities, guided by the headings listed below:

- **Staff / volunteers:** numbers, level of support, management responsibilities
- **Infrastructure:** venues, vehicles, equipment, display materials, campsites
- **User groups:** types of groups, areas served, numbers, on-/off-site
- **Programmes / materials:** guided / self-guided, formal / non-formal, topics, curriculum-links, responsive or prescriptive
- **Other responsibilities:** percentage of time spent on education, examples of other responsibilities.

To select appropriate evaluation methods, I started with the aim and intended outputs of the evaluation (Table C5.1). The outputs represent the improvements that the education officers hoped would result from the evaluation process, hence the many references to Educators' Week. This workshop was planned so that we could respond to needs identified during the evaluation.

Evaluation Outputs	Evaluation Methods
Evaluate existing education programmes, materials and facilities, and propose improvements	Scoping meeting; Site visits; Observation schedule; Semi-structured interviews (education officers & other stakeholders); SWOT Analysis (peer evaluation); Document analysis; Teachers' questionnaires; Educators' Week workshop
Decide on the most appropriate and effective educational approaches	Observation schedule; Teachers' questionnaires; Educators' Week workshop
Define clearly the responsibilities of the education officers	Site visits; Document analysis; Discussions with education officers & managers; Educators' Week workshop
Develop uniform, streamlined and efficient administrative and communication systems to support the education programmes	Document analysis; Discussions with education officers & managers; Educators' Week workshop
Develop a common mission and vision for the education programme	Document analysis; Educators' Week workshop

Table C5.1: Methods used during the evaluation process

To start with, some of the evaluation methods were fairly open-ended, e.g. general observations during site visits, and informal discussions with participants and other stakeholders. This provided me with a general overview and helped me to identify issues that could be probed in greater detail later.

However, without any structure it is easy to get sidetracked and overlook important information. I therefore used two simple tools to remind me of things to ask:

- A 'Five W's and an H' mind-map to remind me to ask Who, What, Where, When, Why and How questions about each programme;
- A SWOT Analysis sheet to remind me to ask about Strengths, Weaknesses, Opportunities and Threats during semi-structured interviews with education officers and other stakeholders. I also gave the education officers SWOT Analysis sheets to encourage peer evaluation during their Educators' Week presentations.

One of the most important aims was to evaluate the education programmes being presented in the reserves. From my experience in the field, I had in mind certain criteria that I felt were necessary to include in tools such as the teachers' questionnaire (Appendix C5.1) and the observation schedule (Appendix C5.2). These included programme organisation, presentation – and group management skills, appropriate teaching and learning methods (e.g. active – and cooperative learning processes), and relevance to the formal school curriculum. I also drew on the Environmental Education Unit Standards, which outline the competences of environmental educators.

Finally, I wanted to know how the education officers had found the evaluation process, so I produced a simple reflection sheet which they filled in at the end of the evaluation, during Educators' Week (Appendix C5.3).

Sampling

The four reserves evaluated were those the Manager of Nature Conservation had originally identified. The sampling criteria were unclear as these are not the only City reserves in which education is taking place. In order to broaden participation in the evaluation, I invited staff from other reserves to attend some of the Educators' Week sessions. I was surprised by the large number of people who wanted to participate.

Data Collection

As outlined above, I collected information from informal discussions, semi-structured interviews, meetings, and workshops with the education officers and other stakeholders. The education officers distributed questionnaires to teachers, and I visited the nature reserves to gather data on staffing, programmes, facilities, resources and systems. I also collected evaluation sheets completed by the education officers during Educators' Week and two observation schedules completed during YES 2004 (see Case Study C1).

Data collection involved mainly narrative information, although some numerical data such as school visit statistics were collected and analysed. I found that only two of the four nature reserves had existing tables of monthly statistics. One of the reserves presented their figures in a clear, concise format, which I circulated to the other reserves as an example. The evaluation was thus a useful opportunity to standardise programme monitoring. The recording of detailed statistics was essential in order to discern visitor trends and patterns.

See Tool 1 for notes on monitoring and its relationship to evaluation.

Analysis

Analysis involved reading carefully through my notes, observation sheets, SWOT analyses, and copies of documents and questionnaires; writing summaries, looking for trends and emerging issues, and developing a logical framework for reporting. The aim and outputs of the evaluation helped to structure the analysis. The City's *Environmental Education and Training Strategy* proved to be valuable, its aims and strategic approaches providing criteria to guide the interpretation and analysis of data.

Analysis took place in two stages. I analysed preliminary findings in order to report back to participants at the Educators' Week workshop. This allowed me to raise issues emerging from the evaluation in time for us to respond to them during the workshop. It also gave stakeholders the opportunity to comment on, refine and, if necessary, revise the preliminary report. The second stage of the analysis took place after Educators' Week, and incorporated the discussions and evaluations from that week.

The analysis was predominantly qualitative and sought to illuminate general trends, issues and opportunities to improve the quality and effectiveness of the programmes and systems. As mentioned, I also analysed monthly visitor statistics in order to identify and compare trends in the different reserves (e.g. grades, numbers, topics). (See Appendix C5.4.)

Based on the analysis of the data, and informed by principles of environmental education and the national curriculum, as well as my experience in the field, I made recommendations in the provisional and final reports. Provisional recommendations helped to inform the planning of the Educators' Week programme.

7. What did the evaluation reveal about the programme that was evaluated?

The evaluation set out to identify how to improve the *quality and effectiveness* of education programmes in the City's nature reserves. While we focused to a large extent on the education programmes themselves, it was also necessary to consider the organisational context of the programmes. The evaluation findings therefore relate to the following headings:

- Education programmes and resources
- Overall programme management
- Staffing
- Partnerships
- Programme coordination and internal communication.

Education Programmes and Resources

All the nature reserves evaluated offer guided school visits. Primary schools are by far the largest user group (Appendix C5.4) and most programmes have a clear biodiversity / conservation focus. This is significant in terms of the objective of the City's *Biodiversity Strategy*. The education officers are very well informed. They are keen to share what they know about the environment in general and their reserves in particular, and to be a positive influence for conservation. Programmes are very popular, and in some cases over-subscribed. However, although most programmes are free or extremely inexpensive, few township schools are visiting the reserves.

During Educators' Week there was some debate as to whether it was more appropriate to offer schools guided programmes or to focus on helping teachers to run their own programmes. As the evaluator, I found it necessary to point out why both approaches were valid and necessary. This instance illustrates that the person managing a participatory evaluation process sometimes needs to play the role of mediator, encouraging evaluation participants to acknowledge and accommodate one another's opinions.

The reserves are exceptionally rich learning environments. The natural ecosystems, excellent displays and exhibitions, printed and audiovisual materials and the education officers themselves are all valuable resources for learning. However, there were a few aspects of the programme that I felt needed to be strengthened (see Key Recommendation*, below). During Educators' Week we started to address these professional development needs.

Key Recommendation*

Strengthen Education Processes

- Strengthen the curriculum relevance of school visit programmes
- Strengthen active – & co-operative learning approaches
- Support teachers to play a more active role in programmes
- Make programmes more accessible to township schools.

(*Note: This is one of several sets of recommendations in the Evaluation Report)

Overall Programme Management

The City's nature reserves are making a vital contribution to environmental education, particularly in local schools. However, the evaluation also identified certain limitations in terms of overall programme management, including the need to develop a more strategic approach, and to appoint an environmental education manager. During Educators' Week we developed proposals to improve overall programme

management, including a vision and goals for an integrated environmental education programme in the City's nature reserves.

Management tends to put pressure on the education officers to show ever-increasing numbers of visitors. Indeed, it appears that numbers are the only recognized indicator of success. The City requires its education officers to report on monthly statistics only and not on the details of their programmes. An over-emphasis on quantity can detract from the provision of high quality programmes and leave the education staff feeling, as one described, like sausage machines.

Another observation relating to statistics was that, although this was the only information that the City required its education officers to provide on a regular basis, these statistics were used very superficially. In one report, total annual figures for the various reserves over a four-year period were compared. However, there was no analysis of patterns or trends, such as who was or was not visiting the reserves, and what types of programmes were being offered. When statistics are not subjected to analysis, they can easily be manipulated or misinterpreted.

Staffing

The reserves are seriously understaffed. Visitor statistics suggest that one education officer can provide guided school visits for approximately 4 000 learners per year, while at the same time attending to their other functions. Should the City wish to increase education visitor numbers, more education staff would be needed.

The evaluation also identified a lack of standardisation in terms of post levels, conditions of service and lines of reporting applying to education officers. At Educators' Week we drafted a generic job description that the education officers could adapt to suit their particular situations.

The evaluation further highlighted a number of professional development needs in environmental education and outcomes-based education, and we started responding to these needs during Educators' Week.

Partnerships

The need for partnerships between the City of Cape Town and other providers is well recognised. The evaluation revealed a need for the City to adequately recognise the contribution of partners like the Friends groups and Trusts that ensure that environmental education takes place in the reserves.

At Educators' Week, the education officers shared their ideas and experiences of productive partnerships. They came away with a number of further avenues to explore.

Programme Coordination and Internal Communication

The formation of the Unicity provided the impetus for the education officers in the City's reserves to start working together as part of a consolidated education *programme* rather than as separate *projects*. Previously the education officers mainly worked in isolation. Although they wanted to work together more closely, it was not seen as a priority and they did not manage to set time aside to do so. The *Environmental Education and Training Strategy* identifies internal collaboration as a strategic approach. This helped the education officers to realise that making time to meet with colleagues to share good practice was a priority. Educators' Week provided the first opportunity for the education officers to work on a common vision and goals based on City policies and strategies, and unifying frameworks such as report formats.

Sharing ideas proved to be inspiring and encouraging. The education officers recognised one another's strengths and realised that they could benefit from the experiences and resources of the group. In order to provide further opportunities for professional development, sharing good practice, and monitoring and evaluation, at Educators' Week the education officers established a City Nature Reserves' Environmental

Education Forum. They proposed holding quarterly workshops and one annual Educators' Week. They also appointed a coordinator to organise the forum.

The evaluation revealed that senior managers and councilors are poorly informed about the environmental education programme. We developed a monthly report template to help staff present comprehensive reports in a common format (Appendix C5.5). I encouraged the education officers to see regular reporting as a means of "writing the history" of their programme, and as a tool for ongoing monitoring and evaluation, in addition to a means of accounting to management and keeping colleagues informed.

8. How were the findings of the evaluation shared?

Preliminary findings from the evaluation were presented in the form of a Power Point presentation to participants in the first session of Educators' Week. The photographs I had taken at the reserves illustrated some of the points in a more graphic and personal way than a stark verbal report-back could have done. They also enabled me to share and celebrate examples of good practice, and to give credit to the efforts of the education officers and their colleagues.

Sharing the preliminary findings at the start of Educators' Week focused our attention on the specific issues we needed to address. We were able to work together during the week to improve programmes and systems.

Two final evaluation reports were produced. This Case Study focuses on *how* the evaluation was conducted, and provides only a brief account of the findings and recommendations. A more detailed report on findings and recommendations was compiled and circulated to the key stakeholders of the evaluation, namely the education officers, their managers on the reserves, and the Environmental Management Department. I also intend presenting this report verbally to the senior management of the Directorate: Open Space and Nature Conservation.

9. What does this case teach us about planning and doing evaluations?

This case illustrates evaluation as an essential part of ongoing programme development, as well as the professional development of staff.

One of the most important things I learnt from this project was the importance of creating an opportunity to respond immediately to the evaluation findings. I would not have felt happy to conclude the evaluation at the stage of the preliminary report. Because the education officers do not have a supervisor with professional educational expertise, it was essential to see the evaluation as a *developmental process* and not just as the production of a report of findings. Educators' Week was key to this developmental approach to evaluation. Without a mediated process that could help the education officers to *respond* to the findings, they might have been left in a worse position after the evaluation than before – knowing that some areas needed to be addressed, but not knowing how to do so.

*See Tool 2, where a developmental approach is linked to participatory approaches to evaluation. This Case shares some elements of participatory evaluations, such as the involvement of the staff who run the programmes being evaluated, in the setting of evaluation goals and outputs, as well as the efforts to bring about change **during** the evaluation process. It does not, however, share the critical approach associated with some participatory evaluations.*

It was a relief to work with people who seemed very positive about the evaluation process. At no time did I sense that they felt threatened; indeed they seemed disappointed when we had to postpone the process. Partly because they had been working on their own for so long, they were very keen for feedback on their programmes. It also helped that we decided on the aims and approaches of the evaluation together – it was definitely *our* evaluation and not just *my* evaluation.

The creation of the Unicity provided the impetus for the nature reserves to start working together more closely. So, in addition to reflecting on the strengths and weaknesses of the individual programmes, the evaluation could also be seen as a “formative evaluation”, helping us to shape the way forward for a more strategic and consolidated education programme.

The publication of the City's *Environmental Education and Training Strategy* and *Biodiversity Strategy* a few months before provided us with a clear strategic framework. Without these documents we might have found it more difficult to develop a vision that was clearly in line with City policy.

When I presented the preliminary findings at Educators' Week, the information was not actually new to the education officers. We had discussed my observations individually during the site visits, and in most cases my observation simply confirmed things the education officers already knew, but in many cases didn't know how to address. I think it was important that the report presented no surprises but confirmed and responded to needs that had already been expressed. The Power Point presentation summarised what we needed to address, and was thus a starting point for action during Educators' Week.

I also learnt that one needs both qualitative and quantitative data when trying to reflect a fair and accurate picture of a programme. Trying to interpret numerical data without the rich descriptions and insights generated through interviews and observations can be fairly superficial, as one lacks understanding of the particular contexts. However, it is also essential to analyse numerical data like visitor statistics as these records provide a reality check that temper both exaggerated claims and cases of under-reporting.

Finally, one of the most helpful steps in the evaluation was setting a clear aim and outputs with the education officers. Throughout the evaluation, we could check that we were on track by referring to those points. The aims and outputs informed the choice of evaluation methods, the analysis of data, and the design of the Educators' Week programme. Because the outputs encapsulated what the education officers wanted to achieve, the evaluation process was both useful and productive.



Appendix C5.1 Teachers' Questionnaire

Evaluation of the _____ Nature Reserve's Environmental Education Programme:

A: PERSONAL DETAILS OF RESPONDENT

Name: _____

Organisation / School / Club: _____

Address:

_____ Code: _____

Telephone: (____) _____ Fax: (____) _____

e-mail: _____

B: EVALUATION

1 How did you hear about the environmental education programme at
_____ Nature Reserve? (Tick the correct box/es.)

- ☐ Local knowledge
- ☐ Word of mouth
- ☐ Flyer sent to our school / organisation / club
- ☐ Media (Please specify: Newspaper, Magazine, Radio, Television, Internet)
- ☐ Other (Please specify): _____

2 For how many years has your school / organisation / club been using our
environmental education programmes / facilities?

- ☐ This year only
- ☐ Between one and five years
- ☐ More than five years

3 Services *[Please adapt this table to reflect the programmes you offer]*

3.1 Which of our environmental education services / facilities have you used? (Tick the correct box/es.)

3.2 On average, how many times do you use each service / facility during a year?

Services / Facilities (tick relevant boxes)	Times per year	Comments
☐ Guided educational outings (youth / adults)		
☐ Educational workshops for teachers		
☐ Holiday programmes		
☐ Advice / materials to support self-guided programmes		
☐ Resource centre / reference materials for own research		
☐ Talks / displays / exhibitions		
☐ Advice on / support for environmental projects		
☐ Private use of education centre / facilities		
☐ Programmes at the Youth Environmental School		
☐ Other : Please specify		

3.3 Before seeing the table above, were you aware that our Centre offered this range of programmes / services? (Tick the correct response.)

YES / NO

3.4 What services / facilities NOT currently offered would you like us to provide?

4 Do you know who manages the Environmental Education Programme at _____ Nature Reserve? (Tick the correct box.)

- ☐ South African National Parks
- ☐ Western Cape Nature Conservation Board
- ☐ The City of Cape Town
- ☐ Friends of the _____ Nature Reserve (Volunteer group)
- ☐ The Wildlife & Environment Society of South Africa (WESSA)

- 5 Please rate and comment on the following aspects of the Environmental Education Programme.** Use the following key: ☺ = good; ☹ = average; ☹ = needs improvement.

Aspect of the EE Programme	☺	☹	☹	Comments
▪ How effective is communication with the EE Centre (e.g. phone, pre-visit correspondence)?				
▪ Do you / your group feel welcome at our Centre?				
▪ How do you rate the education officer's environmental knowledge?				
▪ How do you rate the education officer's knowledge of the curriculum?				
▪ How effective are the educational methods and approaches used during programmes?				
▪ How appropriate are our educational programmes / materials (e.g. age, learner's context, curriculum)?				
▪ How effectively are we publicising our programmes?				
▪ Does the Centre provide you with meaningful opportunities to evaluate its programmes?				
▪ Are our facilities / programmes affordable?				
▪ Are our facilities / programmes accessible?				

- 6 Please comment on how the _____ Centre could improve the service it offers.** Consider the scope, content, presentation and impact of our educational programmes, course administration, communication with the public and quality of our facilities.

- 7 Does your school or organisation need assistance with any practical environmental projects? Please specify.**

Many thanks for taking time to complete this questionnaire!

Appendix C5.2 Observation Schedule

Date: _____ Educator: _____
 Group: _____ Grade: _____
 Focus: _____ Numbers: _____
 Venue: _____ Times: _____

Presenter:

Aspect	Observations & Comments
Relationship with group	
Planning / Organisation	
Group management	
Knowledge	
Communication skills	

Programme:

Aspect	Observations & Comments
Outcomes	
Structure / Pace	
Relevance to group	
Relevance to Venue / City	
Welcome / Introduction	
Ice-breaker	
Main focus	
Consolidation / Links to home	
Evaluation / Reflection	

Methods / Approaches:

Aspect	Observations & Comments
Educational methods used	
Competence	
Curriculum focus	
Teacher / Learner centered	

Learning Support Materials:

Aspect	Observations & Comments
Displays / equipment	
Reference material	
Worksheets / Task cards	

Response:

Aspect	Observations & Comments
Participation	
Enjoyment	
Learning	
Effect	

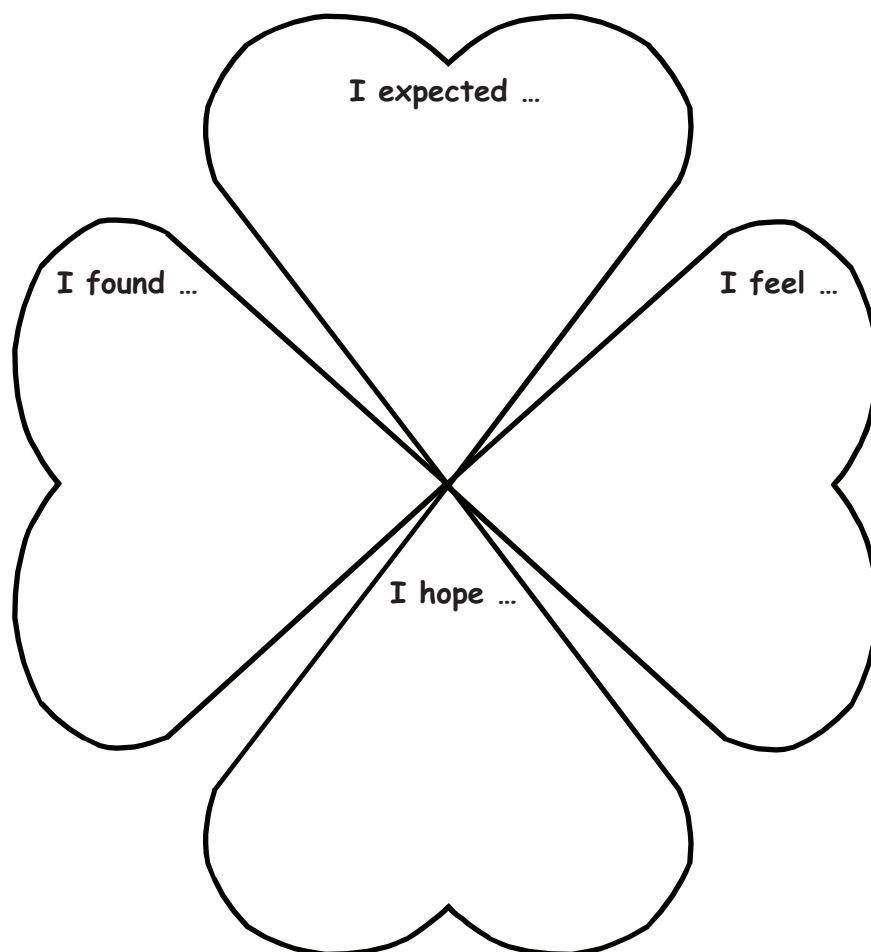
Appendix C5.3 Reflection Sheet

Environmental Education in the City's Nature Reserves

Evaluating the Evaluation ...

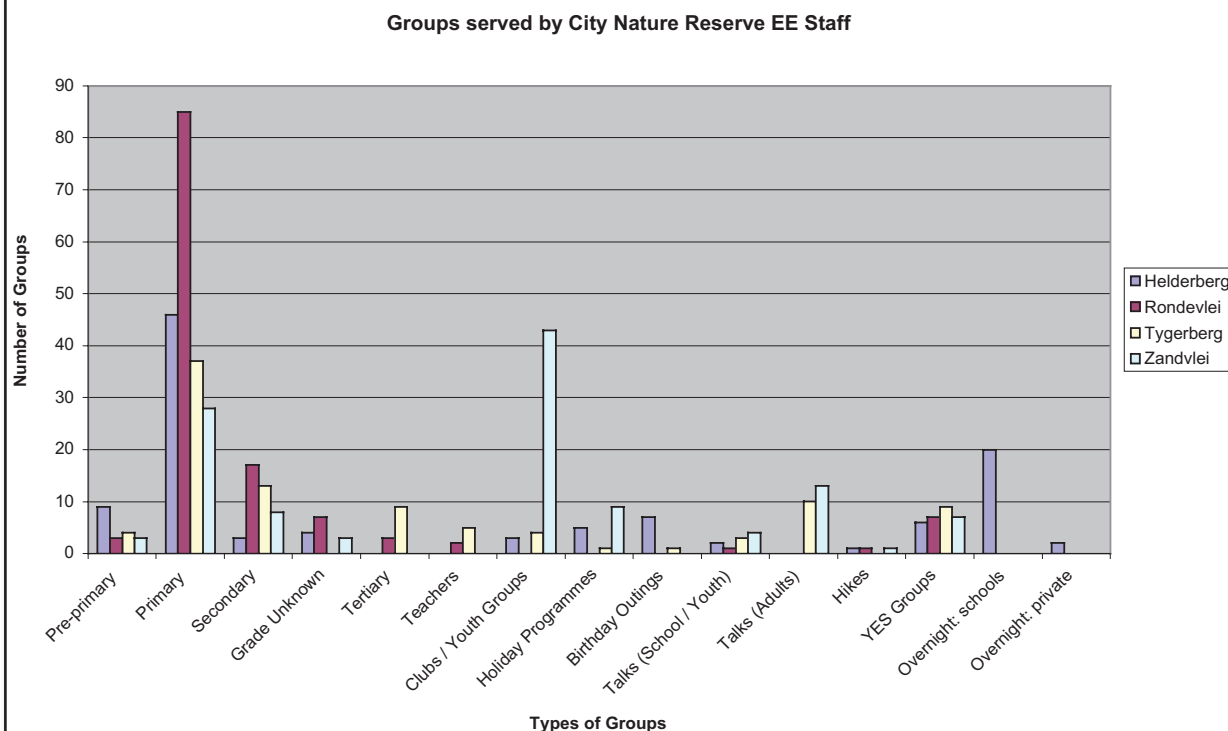
Name: _____

Sit on your own in a quiet place and reflect on the process of the evaluation in general, and Educators' Week in particular. Record your feelings in the Evaluation Clover below.



Appendix C5.4 Numbers of Groups Served by Environmental Education Programmes in the City of Cape Town's Nature Reserves (2003)

Groups served by City Nature Reserve EE Staff				
	Helderberg	Rondevlei	Tygerberg	Zandvlei
Pre-primary	9	3	4	3
Primary	46	85	37	28
Secondary	3	17	13	8
Grade Unknown	4	7	0	3
Tertiary	0	3	9	0
Teachers	0	2	5	0
Clubs / Youth Groups	3	0	4	43
Holiday Programmes	5	0	1	9
Birthday Outings	7	0	1	0
Talks (School / Youth)	2	1	3	4
Talks (Adults)		0	10	13
Hikes	1	1	0	1
YES Groups	6	7	9	7
Overnight: schools	20	0	0	0
Overnight: private	2	0	0	0
Total	108	126	96	119



Appendix C5.4 Monthly Report Template

This format relates closely to Job Description categories.

Reserve / Centre:

Month:

Total number of users:

User Group	Total Numbers
Formal education groups (pre-primary to tertiary)	
Clubs / holiday programmes / hikes, etc	
Teacher workshops / meetings	
General adult education	
Presentations / exhibitions	
Resource centre use	
Centre bookings (e.g. Meetings, Cape for Kids, Friends)	
Overall total for [MONTH]	

Details provided in Appendices 1 & 2

Education Programme management & development:

- Programme highlights (e.g. special programmes, exhibitions, teacher workshops, noteworthy experiences)
- New programmes / materials developed
- Programme monitoring and evaluation
- Outreach initiatives (e.g. funded visits)
- Programme needs / issues

Environmental training & professional development:

- Training for City staff / students
- Professional development for self, e.g. training courses, conferences attended
- Professional development needs / issues

Networking and communication:

- City Nature Reserves' EE Forum
- Networking with other organisations, e.g. meetings attended
- Programme publicity (e.g. articles, pamphlets, presentations)

Centre management & programme administration:

- Highlights relating to Centre management, use, etc.
- Centre maintenance and repairs
- Furniture, equipment and materials acquired (purchased / donated)
- Occupational health & safety
- Administrative developments / issues
- Financial planning / issues / donations
- Documents prepared, e.g. fundraising documents, operational plans
- Important correspondence
- Centre and programme issues and needs

Forward planning: Highlights anticipated in the following month, e.g. meetings, special events, centre developments, programme development

Appendix 1: Monthly programme statistics. *Provide a detailed breakdown giving:*
Date, Name of Group, Grade/Age, Programme focus (topic), Type of programme (school visit, exhibition, presentation, club, etc), Venue (on- or off-site), Presenter, Numbers

Appendix 2: Use of facilities. Date, Name of Group, Type of programme (e.g. private, training, conference), Numbers, Income

C6: Aware and Prepared Project Evaluation

1. What project was evaluated in this case?

This case is an evaluation of the Fire and Flood Awareness and Preparedness Project in selected informal settlements in the Western Cape.

The project was initiated following a Disaster Management Summit convened by Western Province Social Services and Poverty Alleviation, in response to the increasing incidence and severity of fire and floods in informal settlements in the province. An outcome of this summit was the proposal for the Fire and Flood Awareness and Preparedness Project (hereafter referred to as the Aware and Prepared Project). The aim of the project was to increase the awareness and levels of preparedness of informal settlement residents to fires and floods, and in so doing to attempt to reduce the disaster losses to life and property. A further aim of the project was to strengthen the role of communities and NGOs in risk reduction.

The project was implemented through three NGOs, namely SANZAF, Red Cross and Salvation Army, supported with funding from Provincial Social Services and Poverty Alleviation. In collaboration with City of Cape Town's Disaster Management Department, a set of resource materials was developed. The materials consisted of a pamphlet and poster dealing with causes of fires and floods, means of minimising risk, and ways of dealing with these risks in the community. These materials were used by the three NGOs to train volunteers in informal settlements, who would in turn train fellow residents in their homes, in the streets and at community centres, relief centres, clinics, schools and churches. Provincial Social Services and Poverty Alleviation identified communities at high fire and flood risk in consultation with the NGOs, who were given preference in working in those areas where they already had a presence.

All three NGOs had considerable experience in co-ordinating relief efforts in informal settlements, and as such a framework for guiding the implementation of the training initiative was not developed. Implementing training strategies differed amongst the three NGOs. One of the models used was a cascading approach through which a core team of trained volunteers then trained other volunteers in three communities. (This NGO reports that 17 000 volunteers had been trained through this cascading approach.) The second NGO worked with a core of three lecturers and 20 volunteers who in turn conducted lectures at day hospitals, clinics and schools. (An estimated 24 677 adults and youths were trained by this NGO.) The third NGO worked with a core of 20 volunteers and estimates that they trained approximately 100 000 volunteers. The resource material developed was used as the basis for this training and in some cases was accompanied by a poster put up in various places to encourage awareness and preparation for dealing with fire and flood disasters.

2. Why was the evaluation required?

The Environmental Education Co-ordinator at City of Cape Town's Environmental Management Department commissioned this evaluation to provide one of the case studies in the *Evaluation Start-Up Resource*, intended to support the ongoing monitoring and evaluation of environmental education projects and programmes in the City. This case would illustrate the evaluation of a project in an informal settlement.

Being developed in the context of the *Evaluation Start-Up Resource*, this evaluation was able to draw on its framework in designing and undertaking the evaluation.

3. When did the evaluation take place?

The commissioning of the evaluation (in April 2004, for June 2004) came at a very opportune time in the life of the project. Approximately one year after the inception of the project (August 2003), plans were being made for its extension. This evaluation could therefore inform this further roll-out, at a time when project planners would be most likely to consider its recommendations.

The evaluation was undertaken over a period of one month, during effectively five working days. The budgetary framework of the evaluation defined this time frame, which limited the scope of the evaluation considerably. (See below.)

4. Who planned and actually conducted the evaluation?

The evaluation was primarily planned by two consultants commissioned by the City of Cape Town. Their expertise lie in disaster mitigation and environmental education, respectively, and as such they were able to complement each other in this evaluation of an initiative which is an education project in the context of communities at risk.

In order to encourage a participatory approach to the evaluation, after initial planning, project stakeholders were invited to a consultative workshop which formed the heart of the evaluation. Unfortunately the primary beneficiaries of the project, residents of the informal settlements where the project took place, were not involved in this workshop.

5. What was the aim of the evaluation?

The primary aim of the evaluation was to inform the future design and roll-out of the Aware and Prepared project. This was the aim with which the consultants approached the consultative workshop. However, at this workshop, key stakeholders identified various other evaluation needs, namely to:

- assess the relevance of the training resource materials
- assess the effectiveness of the training approaches, methods and resource materials
- assess the sustainability of the project
- identify key lessons learnt in implementing the project.

At the consultative workshop it was noted that a thorough evaluation of the project would integrate an assessment of the effectiveness of the training approaches used in the project, to reduce risks and prepare residents to better respond to risks. Most participants felt that this element of the evaluation was crucial to inform the future design and roll-out of the project. However, within the given time and budget constraints this aim could not be integrated into the initial evaluation. We therefore proposed the

development of a well-planned evaluation framework which would integrate this broader aim into the future design and roll-out of the project.

6. How was the evaluation planned and conducted?

Planning the evaluation. The two consultants planned the process. To encourage a participatory approach, a consultative workshop was decided on as the primary evaluation method. It would be complemented with a review of documents and a process of follow-up with various project stakeholders, to verify findings emerging from the workshop. The workshop programme was planned drawing on a draft of the City's *Evaluation Start-Up Resource*.

Inviting participation. Various stakeholders were invited to participate in the workshop. Invitations were sent out to the three implementing NGOs, representatives from Disaster Management at City of Cape Town and representatives from Provincial Social Services and Poverty Alleviation. This invitation was sent out approximately two weeks before the workshop.

Conducting the evaluation. The following methods were used:

- **Document review:** Reports from two of the NGOs were made available to the evaluation team for review. These reports provided insight into the strategy of implementation, namely the training programmes of the two NGOs. Disaster Management undertook interviews with the various participating NGOs throughout the project. The transcripts of these interviews were also available for analysis.
- **The consultative workshop:** This was convened on 29 June by one of the consultants. It involved Disaster Management (City of Cape Town), Provincial Government and the three implementing NGOs. Representatives from Provincial Social Services and Poverty Alleviation were unable to attend this workshop. All discussions were captured. The workshop programme included:
 - a brief discussion of the aims of the evaluation
 - an overview of the implementation processes of the three NGOs
 - a plenary discussion of the need for the evaluation, the aims of the evaluation and the development of questions that would achieve the specified aims for the evaluation
 - two focus groups to discuss the aims and approaches within the project, training methods and materials used, and any monitoring and evaluation that had been undertaken in the context of the project
 - a presentation and plenary discussion of the evaluation findings.
- **Telephonic interviews:** These were conducted with some of the key stakeholders in the project after the consultative workshop. The aim of these interviews was to verify workshop findings and to ensure that these were accurately and appropriately reported.

7. What did the evaluation reveal about the project?

From the evaluation various challenges emerged with which the implementing NGOs were confronted. These include:

- The time of training which was often during weekdays and meant that employed individuals and older school going children were not exposed to the training. One of the NGOs also noted that the time frame of three days for training per informal settlement site was not sufficient to raise the necessary awareness and encourage a preparedness for fire and floods. A recommendation was made for the training time to be extended to five days.

- In some cases a lack of support from local councillors and community leaders meant limited access to some community institutions, specific zones in these areas and ultimately to some residents. This affected the work plans of some of the implementing agents who in some cases did not have access to some residents. Ultimately this appears to have implications for the ongoing sustainability of the project in some of these regions.
- The central co-ordination of the project and subsequent reporting systems and structures were not clearly defined and all three implementing NGOs found that they were often unclear as to which lines of communication needed to be used for reporting. The consequence was that few reports were centrally received and collated.
- Ongoing training in communities required the support of volunteer trainers who are often unemployed. The evaluation reflects the value of some form of incentive for these volunteers to ensure their ongoing commitment to the project. In all cases, volunteers were provided with a food parcel on completion of training. In the case of one NGO, volunteers were provided with a certificate of participation, which appears to have improved their 'status' as a trainer in the community.
- Monitoring and evaluation needs to be built into the project design, to not only ensure that the methods are effective during implementation, but to evaluate the project in relation to the key aims and objectives, on an ongoing basis. Some of the recommended evaluation tools would be ongoing risk assessments to establish the incidence of fire and floods in communities, extent of loss due to these and responses to these disasters.

The evaluation similarly revealed some insights into the use of the resource materials in the training. These being:

- The resource materials were useful in providing a standardised framework around which the training could be structured.
- Some contextual issues perhaps need to be considered in the rework of these materials. For example, alcohol abuse is seen as quite a common cause of fires in informal settlements. Such issues were not covered in the materials, though in some cases trainers often included them in their training. In this sense, the NGOs' experience in the informal settlement helped to contextualise the training in relation to local issues. Some recommendations around this finding was to include in the initial training a focus on contextualising training to local issues and to draw on risk assessments in that community to inform training.
- Some further recommendations were made around training methodologies used, for example to encourage more interactive processes and encourage more participation in training processes.
- Other recommendations included the increase in the size of the training pamphlet to poster size so that these could be displayed in strategic places in the community; and the increase in the quantity of resource materials for various communities.

Recommendations that inform the future design and roll-out of the project include:

- Develop a guiding framework to inform the project implementation in future
- Conduct a community based risk assessment to identify key factors increasing fire and flood risk so that these can be integrated into the materials and / or training processes
- Build monitoring and evaluation into the project design to ensure the ongoing generation of data and the improvement of future training interventions
- Ensure that local institutions are actively involved in the design and implementation of the project, to address issues of sustainability of the project
- Develop clear training guidelines to support training processes in communities
- Certify volunteer trainers as an incentive for ongoing support of the programme

- Implement the training processes in evenings and weekends to include participation of employed members of the community and school-going children
- Formalize the coordination role of Disaster Management to clarify management, communication and reporting structures in the project
- Establish fire marshals in each informal settlement to support training around risk reduction of fires and responses to fires
- Enlarge the resource materials to poster size so they can be displayed in strategic public places.

One of the shortcomings of the evaluation recognised by all participants in the consultative workshop was the evaluation of the effectiveness of the training intervention. All recognised that this process would need to be undertaken within a much longer time frame with more intensive data collection methods, such as interviews with community members and a thorough analysis of risk assessment statistics. These ideas have been noted and recommended for inclusion in the monitoring and evaluation processes proposed for the future roll-out of the project.

8. How were the findings of the evaluation shared?

The evaluation report was prepared in draft format by one of the consultants and sent out for comment to all partners (except the volunteer trainers and other informal settlement residents). Comments received will be used to inform the final report, which will be distributed in electronic format to the main project partners. Findings will also be discussed in forthcoming meetings to plan the next phase of the project.

9. What does this case teach us about planning and conducting evaluations?

This evaluation was limited in a number of ways:

- Participation was limited to representatives from key stakeholders, excluding residents of the informal settlements in which the project had been operating. It was recognised that these important project partners and intended beneficiaries were a key stakeholder group which could not be included in this small, short evaluation.
- The scope was limited to aims which could be addressed in a short time; critical aims such as an investigation of the effectiveness of the training approaches and materials could not be addressed in this evaluation.

These limitations were due to the budget and time frame for the evaluation, but also by the Aware and Prepared project design, which had not built monitoring and evaluation into the project. The only indicators of delivery were the number of trainers trained, and when.

Any evaluation is designed within a particular budgetary framework, and all have to draw boundaries around the scope of issues that can be addressed. However, the available time and funding should ideally be determined by a plan for the evaluation which is informed primarily by the need for and aims of the evaluation. In this case a crucial need, to evaluate the effectiveness and impact of the intervention, could not be addressed. If this need was identified beforehand, time and budgetary allocations could have been made relative to the aims and required methods.

For example, risk assessments to establish the incidence of fires and floods and the extent of loss associated with these disasters, as well as how people responded to them, could have been conducted, and would have informed an evaluation of the impact of the training. Such risk assessments would involve

the keeping and analysis of records of disasters from, for example, Disaster Management, and possible interviews with community members affected by disasters. These methods require a substantial amount of time, and must therefore be included in project (evaluation) planning and budgeting.

Monitoring and evaluation should be built into the project design to ensure the ongoing generation of data. In this case for example, it might have been possible to do an analysis of fire and flood incidences before and after the introduction of the project, to gain insight into its effectiveness. Pertinent data to inform this correlation was however unavailable.

Participatory processes of evaluation, such as the consultative workshop we held, are useful for encouraging the sharing of perspectives and experiences amongst project participants, and the future use of the evaluation. Many participants however, felt that participation should have included residents from the areas where the training had been done. To ensure that such participation is meaningful, rather than a token consultation, and widely representative, one again needs adequate planning, time and financial resources.

It is useful to similarly involve project participants as much as possible in the design of the evaluation plan. In this case the workshop participants had good insight into the challenges that confronted them in implementing the project. They raised issues like the contextualisation of training to focus on local issues, which suggested a focus on relevance in future evaluations.

Sharing interim evaluation results is useful for clarifying findings and assessing the accuracy and appropriateness of reporting these. It can also broaden participation in the evaluation (for example to those unable to attend the consultative workshop). However, it is important that sufficient time is given to (busy) stakeholders to respond. We have found telephonic follow-ups to electronically circulated draft reports, to be a useful strategy.

