

FRAMEWORK FOR EVALUATING THE EXPANDED PUBLIC WORKS PROGRAMME

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April 2004



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EXECUTIVE SUMMARY

1. INTRODUCTION

The purpose of this report is to set out a framework for evaluating the impact of the EPWP. The monitoring framework is provided in a separate document. It is important to highlight, at the outset, that the development of a monitoring and evaluation framework for the EPWP prior to its implementation represents best practice both internationally and within national government.

The report provides a comprehensive and integrated approach to evaluating the impact of the EPWP on employment, poverty and service delivery. The research methodology included a review of domestic and international literature and close interactions with government departments tasked with implementing the various programmes that comprise the EPWP.

2. CONTEXT: THE EPWP AS A POLICY INSTRUMENT TO REDUCE UNEMPLOYMENT

Given that the EPWP represents government's most direct policy instrument tackle unemployment, it is imperative that its evaluation as a short to medium-term measure to mitigate the adverse social, political and economic consequences of high and growing levels of unemployment is located within an understanding of the magnitude and nature the unemployment crisis.

2.1 The Nature and Magnitude of South Africa's Unemployment Crisis

The magnitude of South Africa's unemployment crisis is such that in September 2003, 4.6 million people were unemployed in terms of the strict definition and 8.3 million in terms of the broad definition. To reach government's target of halving unemployment by 2014 (i.e. reducing the unemployment rate from 30% to 15%) 546,000 new jobs would have to be created each year – 276,000 more than has hitherto been the case.

The EPWP is an important means of providing exposure to the world of work in a context where a very high proportion of the unemployed have never worked. Indeed, in the 16 - 34 age group (which constitutes the "youth" category in terms of the Youth Commission's definition) 70% report never having worked, while 59% of all unemployed people have never worked.

2.2 The Role of the EPWP in Redressing Unemployment

The causes of unemployment in South Africa are manifold and complex. While a discussion of the research and debates in this area lies beyond the scope of this report, it is important to note that there is substantial agreement that the cause of unemployment is structural rather than cyclical. While the EPWP provides an important avenue for labour absorption and income transfers to poor households in

the short to medium-term, it is not designed as a policy instrument to address the structural nature of the unemployment crisis. Moreover, it is merely one element within a broader government strategy to reduce poverty through the alleviation and reduction of unemployment.

The world over, public works programmes are seen as a short-term measure to alleviate poverty and unemployment. They are an important means of creating a high volume of employment in the short-term in a context of chronic unemployment that is a consequence of acute social and political crises. They are also appropriate policy interventions where marginalized groups that have difficulty accessing labour market opportunities are identified – often the youth, disabled, retrenched, or long term unemployed. Given the magnitude of South Africa's unemployment crisis, the EPWP represents an appropriate short-to-medium term policy response.

The EPWP must be evaluated in terms of the objectives it has set for itself. These objectives must, however, be tempered with realism, to ensure that they are evaluated within the limitations imposed by the scope and scale of the programme.

As regards the objective of **drawing significant numbers of the unemployed into productive work, the target** of 1 million job opportunities over the 5 year period would account for about 20% to 25% of the net new jobs required to enable the reaching of an interim target unemployment rate of about 23% (from the strict definition) or 32% (by the broad definition), assuming a labour force growth rate of about 2.2%. This is clearly a significant contribution to redressing unemployment from the perspective of providing the long-term unemployed with exposure to the world of work. However, these are short-term jobs and will therefore not be sustained.

In terms of **providing unemployed people with education and skills**, the provision of two days of training per month worked on the EPWP is unlikely to have a dramatic impact on the skill composition of the labour force and should not be measured on those terms. Rather, it is the nature and quality of the training, the socialisation imparted and its impact on the future employment prospects of the beneficiaries that is the appropriate framework for evaluating its impact.

As regards **ensuring that beneficiaries of the EPWP are either enabled to set up their own business/ service or become employed once they exit the programme**, this outcome will depend on both the magnitude of demand for the categories of labour targeted by the EPWP in the broader economy and the support provided to such beneficiaries within specific programmes. Clearly, government only has control over the latter within the framework of the policy instruments available to the EPWP and it would therefore be the appropriate area to evaluate.

The objective of **utilising public sector budgets to reduce and alleviate unemployment** will be evaluated against the quantum of resources applied to the EPWP and the efficacy of the various programmes in creating employment. Indeed, the monitoring framework will quantify the cost to the fiscus per employment opportunity and person-year of employment created on an ongoing basis. In addition to the amounts budgeted for the EPWP (which are small in relation to aggregate government expenditure), the matching up of other budgets, the possible extension

of labour intensive methods to new construction line items and the concurrent expansion of social sector programmes will bolster government's performance in this area.

The mechanisms through which the EPWP will **alleviate poverty** is through both the income earned by beneficiaries in the form of wages and the assets and services provided to poor communities. The ability of the EPWP to target beneficiaries from the poorest households will be a key marker of its impact on poverty.

3. SCOPE OF THE EVALUATION FRAMEWORK

The scope of the evaluation framework is informed by international experience, the policy objectives the EPWP has set for itself and the specific programmes that comprise it. Ultimately, the identification of the programme impacts that require evaluation are guided by the central objectives of redressing unemployment and poverty. They are summarised in table 1.

Table 1: EPWP Objectives to be Evaluated

Objective	Measure
Short-term job opportunities for the target group	Number of job opportunities, poverty profile of beneficiaries, income transferred to beneficiaries, duration of job opportunities and compliance with Code of Good Practice for SPWPs.
Skill Formation	Nature and quality of the training provided and the extent to which it enhances the employability and income-generating capacity of beneficiaries in the broader economy.
Long-term job opportunities through self-employment and absorption elsewhere in the economy	The proportion of beneficiaries that find employment or become self-employed once they exit the programme.
Poverty alleviation	The extent to which the income transferred to beneficiaries and the assets and services provided alleviate poverty at the household level.
Provision of high-quality assets and social services	The quality and economic and social value of the assets and services.
Efficient use of public resources	The design and implementation of specific programmes and their cost to the fiscus in relation to the benefits they yield in the form of job opportunities, assets and services.

The criteria against which these objectives are evaluated will vary within sectors and programmes and must therefore be located within the specificities of each programme. For example, the social sector is expected to yield a much higher level of skill formation than the other two sectors as it has a much more ambitious training programme. In the same vein, the assets created by the infrastructure programme

will have a much higher social and economic value than the removal of alien vegetation that is the *raison d'être* of the working for water programme.

4. PROPOSED EVALUATION FRAMEWORK

The development of the evaluation programme for the EPWP has been guided by three factors: international best practice in the evaluation of public works programmes, the areas to be evaluated, and the cost associated with different evaluation techniques. The research team sought to find a balance between the three that would yield an effective and affordable evaluation framework.

The proposed framework is summarised in table 2, which indicates the various evaluation techniques against the specific areas that they will measure. It includes a variety of techniques that will jointly yield the quantitative and qualitative information required to evaluate the various facets of the programme outlined in table 1.

Table 2: Summary of Evaluation Techniques

Technique	Implementation	Areas Measured	Timeframes
Cross-sectional Surveys	Surveys of contractors/ implementing agents, beneficiaries, communities & government departments	Profile of beneficiaries & their households; impact of income transfers; impact of assets created; relevance & quality of training, role of contractor (targeting, training etc.); community perceptions of the benefit of the project; efficacy of design & implementation	Years 1 - 5, surveys to be conducted at the end of the project cycle
Longitudinal Surveys	Surveys of beneficiaries 6 months after exiting the EPWP & 6 months thereafter	Whether employment or self-employment occurs after exiting the EPWP; Longer-term impact of income transfers & training; Offsetting effects (displacement and substitution).	Years 1 - 5, surveys to be conducted 6 months after beneficiaries exit the EPWP & 6 months thereafter
Case Studies	In-depth studies of 8 projects by Senior Researchers, spread across sectors and provinces	All measurement areas excluding employment prospects of beneficiaries after exiting the EPWP.	Years 1 - 5
Poverty Impact Analysis	Secondary data & data derived from surveys utilised	Impact of income, assets and services transferred to poor households on poverty & vulnerability	Years 3 & 5
Aggregate Impact Analysis	Utilise a computable general equilibrium (CGE) model to measure broader impacts	Linkages between EPWP and broader macroeconomic variables such as aggregate demand, net jobs created, income redistribution and inflation	Years 3 & 5

Assessment of Quality of assets and services	Evaluation of the quality of infrastructure and services against accepted benchmarks	All forms of infrastructure and services	Line departments implementing the programmes to commission independent experts to undertake these evaluations.

These techniques and measures will be implemented at different stages as the EPWP is rolled out. While the cross-sectional and longitudinal surveys will be ongoing and commence once the initial projects near completion, the poverty impact analysis and aggregate impact analysis will take place twice over the 5-year period, in years 3 and 5.

It is necessary to highlight the fact that if EPWP beneficiaries can be identified in Stats SA's Labour Force Survey (LFS) and questions specific to employment on the programme could be included, it will be an extremely cost-effective way of collecting detailed information about the beneficiaries and their households.

If it is assumed that approximately 800 000 people will work on the EPWP at some point during the 5 year period of the programme, it can be expected that 1800 of them will be included in the LFS sample. This is a sufficiently large sample to permit analysis of the impact of the EPWP on employability, as well as to provide information about the household income and structure of beneficiaries.

It is therefore important that the EPWP office arranges to meet with Stats SA as a matter of urgency in order to motivate for the inclusion of questions in the survey.

The cost of implementing the evaluation framework is R29.9 million over the five-year period if 1% of the beneficiaries are interviewed using cross-sectional surveys and 0.5% is interviewed twice after exiting the programme through longitudinal surveys. The proportion of beneficiaries was calculated on the basis of the confidence intervals that would confer scientific validity to the evaluation.

The surveys alone account for R21.2 million and the analytical work for the balance. Hence an alternative budget – where the number of beneficiaries interviewed through cross-sectional surveys is reduced to 0.5% and those tracked through longitudinal surveys to 0.25% - was prepared. It reduces the total cost to R19,3 million.

5. IMPLEMENTATION OF THE EVALUATION FRAMEWORK

The following actions are required to implement the evaluation framework:

- **Putting it out to tender.** It is recommended that the entire framework is awarded to a single institution or consortium to ensure that there is overall management of the research and reporting in order to safeguard against a

fragmented approach that fails to yield a comprehensive and integrated evaluation.

- **Developing processes to evaluate the quality of goods and services provided within the framework of the EPWP.** The various implementing departments must be persuaded to put in place structures to develop benchmarks against which the quality of the assets and services provided within the framework of the EPWP can be assessed. The social sector has identified this as a priority. In the infrastructure sector, such structures and benchmarks are already in place. If quality assessments are to be objectively undertaken, external sector experts will have to be appointed, which will have budgetary implications.
- **Capturing beneficiaries in the Labour Force Survey.** It is vital that the EPWP office meets with Stats SA as a matter of urgency to ascertain whether they can include questions on the EPWP in their Labour Force Surveys, commencing in September 2004.
- **Establishing an interdepartmental steering committee** to serve as a one-stop channel of communication between the researchers and government departments.

6. CONCLUSION

Undoubtedly, a number of additional considerations and areas that require evaluation will come to light as the EPWP is rolled out. It is therefore essential that the approach to the framework is flexible to allow for their inclusion.

FRAMEWORK FOR EVALUATING THE EXPANDED PUBLIC WORKS PROGRAMME

1. INTRODUCTION

The purpose of this report is to set out a framework for evaluating the impact of the EPWP. The mechanisms for monitoring the programme are outlined in a separate document because they involve a different set of considerations and issues that are of a more technical nature, such as the data to be collected, the software to be used for capturing and summarising it and how it is to be reported to Cabinet.

It is important to highlight, at the outset, that the development of a monitoring and evaluation framework for the EPWP *prior* to its implementation represents best-practice within similar programmes and across government departments. Indeed, it is generally the practice to commission programme evaluations after they have been rolled out over a number of years. The common refrain in such evaluation reports is that the collection and analysis of information was not adequately provided for in the programme design and implementation. In contrast, the programmes that comprise the EPWP will be readily monitored and evaluated, as the information required to do so was developed during the process of designing them.

A consequence of the decision to develop the monitoring and evaluation framework prior to the EPWP's implementation has, however, meant that it has been developed without full information about the scale and scope of the programmes that fall within its framework. This is both because the sector plans were being developed at the same time as the monitoring and evaluation framework and definitive information about the number of projects will only be known once implementation is rolled out over the 2004/05 financial year.

Within these parameters, this report provides a comprehensive and integrated approach to evaluating the impact of the EPWP on employment, poverty and service delivery. The terms of reference for the study are attached as appendix A. The research methodology included a review of domestic and international literature and close interactions with government departments tasked with implementing the various programmes that comprise the EPWP.

Section 2 provides a context within which to evaluate the EPWP by locating it within the framework of South Africa's unemployment crisis and analysing its impact from a theoretical perspective. In section 3, the scope of the evaluation framework is outlined in terms of both the areas to be evaluated and the sector-specific considerations that it must incorporate. Section 4 sets out the techniques for evaluating the programme over a five-year period and outlines the costs and timeframes associated with the evaluation exercise. In part 5, issues pertaining to the implementation of the framework are highlighted.

2. CONTEXT: THE EPWP AS A POLICY INSTRUMENT TO ALLEVIATE UNEMPLOYMENT

Unemployment is the prime cause of the deepening poverty that has characterised the post-apartheid era. It is not surprising that employment creation has become a priority for all tiers of government. The EPWP represents a key policy instrument at the national level to directly tackle unemployment.

It is therefore imperative that the evaluation of the EPWP as a short to medium-term measure to mitigate the adverse social, political and economic consequences of high and growing levels of unemployment is located within an understanding of the magnitude and nature of the unemployment crisis.

2.1 The Nature and Magnitude of South Africa's Unemployment Crisis

High and growing rates of unemployment are a consequence of dynamics on both the demand and supply sides of the labour market. On the supply-side, increasing rates of labour force participation has significantly expanded the number of job seekers. This is explained by the freedom of movement to urban areas following the demise of apartheid, increased hopefulness and increased female participation (Altman, 2002). Between 1997 and 2000, female participation rates increased by 15.1%, while male participation rates increased by 8%. These increases in the supply of labour have contributed to high and growing unemployment rates, although they have stabilised between 2000 and 2003.

On the demand side, there has been some growth of employment between 1995 and 2002, but it has not been sufficient to absorb new labour market entrants. Hence the unemployment rate has been growing by 1% to 2% per annum, reaching 30.7% by September 2002. The average number of jobs created per annum varies considerably depending on the years chosen for comparison, as seen in the table below. This is due to changes in both the structural character of the SA economy, but also measurement changes by Statistics SA.

Table 1: Net Employment Creation in South African Economy ('000s)

<i>Jobs created in:</i>	Between 1997 - 2002		Between 1995 - 2002	
	Total	Per annum	Total	Per annum
Formal sector	1,039	208	- 294	-42
Informal sector	779	156	1,574	225
Total	1,818	364	1,280	183

Source: Stats SA, October Household Surveys (1995- 1999), Labour Force Surveys (Sept 2000 – 2002)

Notes: Numbers have been rounded.

The table above shows that net job creation is estimated at about 180,000 to 360,000 per annum. Over this period, the informal and formal sector play a very

different role, with the informal sector contributing to net job creation in the 1990s, but stagnating since 2000. The formal sector has created jobs in most years since 1997. At the same time, there are about 350,000 to 500,000 net new entrants to the labour market each year. On average the economy therefore needs to create approximately 298,000 jobs just to contain the unemployment rate at 30%. There is currently an estimated shortfall of about 32,000 jobs per annum, which may not sound like much – but it means that it adds to the shortfall to the equivalent about 7.5% of these net new entrants – which explains why unemployment edges up each year.

This must be further contextualised within the ANC's and Government's stated objective of halving unemployment to about 15% by 2014. If the labour force grows at 2.2% per annum, then approximately 420,000 net new jobs would need to be created each year to reach this target¹.

These previous figures refer only to the strict or official definitions of the labour force and unemployment. The EPWP will likely focus on both young entrants, but also "discouraged workers" – those who would like to work, but have been looking for so long that they have lost hope and have stopped searching. By this definition, the unemployment rate reached about 42.7% by September 2002. If we include 'discouraged' work seekers², the labour force grows by about 775,000 net new entrants per year. Maintaining the broad unemployment rate at about 43% would require the creation of 442,000 net new jobs. Halving broad unemployment to about 21% would necessitate the creation of about 546,000 net new jobs each year – so the shortfall now becomes 172,000 new jobs per annum if unemployment is not to get worse, and about 276,000 net new jobs if the ANC's targets are reached by 2014. When we refer to net new jobs per annum, we mean on an additive basis – in other words, the jobs created in year 2 add to the jobs created in year 1, and so on. This is a critical point when evaluating the macro impact of the EPWP in terms of Government's job creation targets.

Although the strict definitions are used by Government, the importance of incorporating the broad definitions into the EPWP evaluation are highlighted below. There is an important skills, age, gender and racial dynamic associated with discouragement. The most recent employment statistics (LFS, September 2003) identify the following salient characteristics of the unemployed (in terms of the broad definition):

- 71% are youth (i.e. 18 – 35);
- 57% are female;

¹ While previous projections put labour force growth as falling to below 1% due to AIDS, the 2001 census showed that population and labour force growth has not varied as expected and labour force growth continues to grow in the 2% range. As Government rolls out its anti-retrovirals there is more expectation that labour force growth may not diminish as previously expected.

² A person is regarded as strictly unemployed if he/she did not work in the previous week, wants to work, is available to begin work within a week and has taken active steps to look for employment or self-employment in the previous 4 weeks. A person is regarded as broadly unemployed if he/she did not work in the previous week, wants to work and is available.

- 44% reside in rural areas;
- 29% have an educational attainment of grade 7 or below;
- 89% are African; and
- 59% have never worked

Critically, the EPWP will be an important means of providing exposure to the world of work in a context where a very high proportion of the unemployed have never worked. Indeed, in the 18 - 35 age group (which constitutes the “youth” category in terms of the Youth Commission’s definition) 70% report never having worked.

2.2 The Role of the EPWP in Redressing Unemployment

The causes of unemployment in South Africa are manifold and complex. While a discussion of the research and debates in this area lies beyond the scope of this report, it is important to note that there is substantial agreement that the cause of unemployment is structural rather than cyclical. In particular, the skill composition of the labour force, the capital-intensive nature of the South Africa’s development trajectory, and the rapid loss of lower skill mining and agriculture jobs in the 1990s have reinforced the inability of the economy to absorb unskilled and semi-skilled labour, which account for the vast majority of the unemployed.

It is essential that the EPWP is evaluated against this backdrop. Critically, while it provides an important avenue for labour absorption and income payment to poor households in the short to medium-term, the EPWP is not designed to be a policy instrument to address the structural nature of the unemployment crisis. That would require a more forceful and sustainable intervention to place the economy on a labour-absorbing development path.

The world over, public works programmes are seen as a short-term measure to alleviate poverty and unemployment. Stated differently, the objective is not to create sustainable employment opportunities. Rather, public works programmes are a means of creating a high volume of employment in the short-term in a context of chronic unemployment that is a consequence of natural disasters (such as drought and famine) and acute social and political crises (Derjadin, 1996). It is also appropriate where marginalized groups that have difficulty accessing labour market opportunities are identified – often the youth, disabled, retrenched, or long term unemployed. Given the magnitude of South Africa’s unemployment crisis, the EPWP represents an appropriate short-to-medium term policy response.

It is also imperative that the evaluation framework situates the EPWP within the broader spectrum of government interventions to alleviate unemployment. Critically, the evaluation must be framed in a way that takes cognisance of the fact that it is merely one element within a broader government strategy to alleviate poverty through the alleviation of unemployment. Government’s medium-to-long term policy approach to halving unemployment by 2014 includes an array of measures to increase economic growth, improve skills levels through education and training, and improve the environment for business, particularly through the microeconomic reform strategy.

The EPWP's targets are set for the 2004/05 – 2008/09 financial years, although the programme is not by definition a five-year programme. It is defined as a nation-wide programme to draw significant numbers of the unemployed into productive work accompanied by training so that they increase their capacity to earn an income. The overarching objective is to create 1 million short-term job opportunities for the unskilled unemployed over the next 5 years. In order to create jobs in a short period of time, the approach is to expand both existing best-practice PWP's that are labour-intensive and to introduce labour-intensive production techniques by, for example, replacing machines with labour in civil construction.

The EPWP comprises four sectors: infrastructure, environmental, social and economic³. Each of the sectoral programmes are focused on unemployed, under-skilled and under-qualified persons. The key objectives of the programme are to:

- Draw significant numbers of the unemployed into productive work to enable them to earn an income.
- Provide unemployed people with education and skills.
- Ensure that beneficiaries of the EPWP are either enabled to set up their own business/ service or become employed once they exit the programme.
- Utilise public sector budgets to alleviate unemployment.

A further objective is to create social and economic infrastructure and provide social services as a means of meeting basic needs. This is a critical objective from the perspective of evaluating the programme's impact. This is because it would be cheaper to simply transfer income to beneficiaries and therefore the assets and services must be of economic and social value to justify the cost of the programme. Moreover, these assets and services are an important mechanism for alleviating poverty.

The overarching objective is clearly to alleviate the deepening poverty that has characterised the past decade. The creation of job opportunities is a means to that end. This is because poverty and unemployment are inextricably linked. Woolard (2002) and Samson *et al* (2002) show that the unemployment rate in poor households is almost twice as high as for the overall population. In addition, labour force participation is lower in poor than in households that are not poor. Consequently, more than half of the working-age poor are outside of the labour market.

Woolard (2002) finds that only 29% of the working age poor are employed, compared with 48% of the non-poor. High unemployment rates among the poor and the finding that the majority of poor households have no members in employment (Samson *et al*, 2002.), leads to the conclusion that most poor households are poor a result of the absence of wage income. In this context the EPWP is designed as an instrument to alleviate poverty insofar as it is a mechanism to generate wage income to poor households.

Against the background of South Africa's deepening unemployment crisis, the EPWP must be evaluated in terms of the objectives it has set for itself. These objectives must, however be tempered with realism, to ensure that they are evaluated within the limitations imposed by the scope and scale of the programme.

³ The economic sector is not considered in this report as a sector plan had not been produced at the time of writing.

While PWP's are often criticised for their short duration, a percentage of those deemed employed by the Labour Force Survey are actually only marginally employed. *The official statistics deem a person to be employed if they were engaged in any kind of economic activity for at least one hour in the previous week. This includes unpaid family workers and subsistence farmers.* It is possible to take issue with the loose manner in which employment is defined nationally, but this is not the appropriate avenue. To enable an evaluation of the effect of the EPWP on national employment, it will therefore be necessary to use definitions that are consistent.

As regards the objective of **drawing significant numbers of the unemployed into productive work**, the target of 1 million job opportunities over the 5 year period would account for about 7% to 9% of the net new jobs required to enable the reaching of an interim target unemployment rate of about 23% (from the strict definition) or 32% (by the broad definition), assuming a labour force growth rate of about 2%. Note that this contribution refers only to *additional* opportunities created. The contribution would be less if the million jobs also includes existing programmes that are simply grouped under the EPWP.

This is clearly a significant contribution to redressing unemployment from the perspective of providing the long-term unemployed with exposure to the world of work. However, these are short-term jobs. Their effect persists only if:

- The programme continues at the same scale
- The programmes have a multiplier effect
- The programme has a positive effect on the employability of its participants, insofar as there is a labour market mismatch related to skills or information.

If the EPWP's impact on unemployment is measured from the perspective of the person-years of work it intends to create, the impact is much more muted. Person-years of work is a useful measure when comparing programmes (to enable equivalents), but not necessarily a realistic measure when comparing to national employment statistics.

In terms of **providing unemployed people with education and skills**, the provision of two days of training per month worked on the EPWP is unlikely to have a dramatic impact on the skill composition of the labour force and should not be measured on those terms⁴. Rather, it is the nature and quality of the training, the socialisation imparted and its impact on the future employment prospects of the beneficiaries that is the appropriate framework for evaluating its impact. Only in the case of the social sector, where the objective is to provide care workers with accredited and relatively high-level training, will there be a marked impact on skill formation, which is likely to greatly enhance the quality of these services.

⁴ Although supervisory and managerial staff are not included in the evaluation framework, significant skills will be transferred to this group and some of these beneficiaries will have been unemployed when their training commences.

As regards **ensuring that beneficiaries of the EPWP are either enabled to set up their own business/ service or become employed once they exit the programme**, this outcome will depend on both the magnitude of demand for the categories of labour targeted by the EPWP in the broader economy and the support provided to such beneficiaries within specific programmes. Clearly, government only has control over the latter within the framework of the policy instruments available to the EPWP.

Unless government puts in place measures to stimulate labour-intensive sectors in a sustained manner – a policy measure that lies beyond the scope of the EPWP – there are unlikely to be employment opportunities for those that exit the programme. The expansion of programmes and budgets falls squarely into the mandates of line departments and Treasury. The infrastructure budgets are expanding so substantially, that new opportunities will arise around the country, especially if the labour intensive methods are increasingly adopted in urban and regional projects.

This is not necessarily the case in the environmental and social sector projects. If these budgets are not expanded, it is possible that EPWP beneficiaries that do find work may be substituting other workers – thereby not leading to net job creation. The jobs created in the social sector are only likely to be sustainable if budgets expand for Home Community Based Care and Early Childhood Development in a continuous manner, as the demand for labour in this sector will be created and supported by Government for some time. In short, the long-term solution to South Africa's unemployment crisis lies in increasing the demand for unskilled and semi-skilled labour. As the EPWP is not designed to do this, it cannot be evaluated as a means of creating sustainable employment opportunities.

Rather, the extent to which the programme contributes to longer-term employment and other income-generating activities must be evaluated against the following areas that are central to its design and implementation:

- The relevance and quality of the training it provides;
- Access to or provision of job search training,
- Access to or provision of job placement services,
- Information about how to acquire further training;
- Access to micro-finance and other support services to facilitate self-employment.

The objective of **utilising public sector budgets to alleviate unemployment** will be evaluated against the resources applied to the EPWP and the efficacy of the various programmes in creating employment. Indeed, the monitoring framework will quantify the cost to the fiscus per employment opportunity and person-year of employment created on an ongoing basis. The planned budgetary allocation for the EPWP over the next 5 years (R15 billion for the infrastructure sector over 5 years, d R2.7 billion for the environmental sector over the next 3 years, R600 million to the social sector over the next 5 years and with no budgets yet allocated to the economic sectors) is small in relation to aggregate government expenditure. The

matching up of other budgets, the possible extension of labour intensive methods to new construction line items and the concurrent expansion of social sector programmes will be the elements required to ensure the ambitiousness of the EPWP.

Finally, the overarching objective of **poverty alleviation** must be framed within the broader policy framework for redressing poverty, including social grants. The EPWP redresses poverty at the household level through both the income paid to beneficiaries in the form of wages and the assets and services provided to poor communities. The ability of the EPWP to target beneficiaries from the poorest households will be a key marker of its impact on poverty.

This programme's impact on poverty must, however, be framed in a context where the international and national evidence demonstrates that public works programmes "...do not necessarily move participants out of poverty, but offer a temporary respite, reducing the depth of poverty during the period of employment..." (McCord, 2003:5)

As the programme evolves and its impact is better understood, it is likely that the parameters within which it is being implemented will change. This will influence the objectives against which it is evaluated and the scale at which it is able to redress unemployment and poverty. It is therefore important that the criteria against which it is evaluated are revised on a periodic basis.

These are some of the broader considerations and dilemmas that will have to be taken into consideration in formulating evaluation criteria, so that the EPWP is fairly judged against reasonable targets.

3. SCOPE OF THE EVALUATION FRAMEWORK

The scope of the evaluation framework is informed by international experience, the policy objectives it has set for itself and the specific programmes that comprise the EPWP. Ultimately, the identification of the programme impacts that require evaluation is guided by the central objectives of redressing unemployment and poverty.

The review of international literature (attached as Appendix B) revealed that public works programmes serve two distinct policy objectives: to alleviate unemployment and poverty. The former tends to be the primary objective in high-income economies that have substantial unemployment benefits, while the latter is the prime objective in developing economies, where the social welfare net is not adequate to support the unemployed. Both approaches are relevant in the South African context.

In the OECD countries, and particularly in a number of Western European countries, public works programmes are seen as active labour market policies whose objective is to redress long-term unemployment by stimulating the demand for labour. The core objective is to expose the long-term unemployed to the world of work in order to enhance their opportunities of finding employment once they exit the programmes.

In the context of these economies, the need to stimulate public sector demand for the target group is driven by the desire to redress the negative perceptions of employers with respect to the long-term unemployed, rather than the need to stimulate deficient demand for labour. Such interventions generally form one

component of a broad array of active labour market interventions, including vocational training, job brokerage and placement services, job search training and career counselling.

This approach resonates with the design and policy objectives of the EPWP, which is located within a broader array of supply-side measures to create employment. The key difference is that PWP in high-income economies aim to give people who have been unemployed for a long period of time exposure to the world of work in order to substitute unemployment benefits with wage income. Essentially, it is a means of overcoming the psychological obstacles confronting the long-term unemployed and the way in which potential employers perceive them.

In the South African context, the issue is more complex for two reasons. There are 2 main contexts for public works programmes: to absorb labour during temporary downturns or crises (for example in a cyclical downturn, or after a natural disaster), or alternatively, when there is some structural mismatch – so that the public works programme acts as an ‘active labour market policy’. A structural mismatch can mean that jobs exist, but the group of work seekers may not have appropriate skills or networks to access them. But it can also mean that there are too many work seekers compared to available vacancies. South Africa has all of these problems – having gone through substantial economic restructuring; many workers in resource based industries lost their jobs in the 1990s, substantially adding to the pool of long-term unemployed.

There is also a skills and information mismatch, as the demand for lower skill workers has fallen. But there is also deficient demand – due to SA’s economic growth path that has been more capital absorbing. Although more people are employed each year, and the skills mismatch means that there are vacancies, the absolute number of vacancies is simply not sufficient to absorb a minimum number of work seekers to start bringing unemployment rates down.

Although not explicitly stated as such, the EPWP programme is clearly part of an active labour market policy to promote economic participation amongst marginalized work seekers. Many of those targeted by the EPWP will be categorised as ‘long-term unemployed’ – this is probable as evidenced by the fact that in 2003, 59% of the unemployed had never worked, with this indicator increasing to 70% for those in the 18 – 34 age group (Stats SA, 2003). Hence the EPWP does aim to provide beneficiaries with exposure to the world of work as a means of enhancing their prospects for finding employment once they exit these programmes. This is underpinned by the training that each beneficiary is entitled to receive.

Second, the overwhelming majority of the unemployed are not supported by a social welfare net as they do not qualify for benefits in terms of the Unemployment Insurance Fund (UIF), which is itself limited in scale and scope. Hence a key objective of the EPWP is to alleviate poverty by providing beneficiaries with some income, albeit for a relatively limited period of time. As is the case in other developing economies, the extent to which the EPWP alleviates poverty both through the income it pays to beneficiaries and the assets and services it provides to the poor becomes a key area of evaluation. In particular, the extent to which the most vulnerable are targeted and the impact of the income, assets and services they receive on the poverty profile of households is a key area to be evaluated.

In this regard it is worth noting that research has demonstrated that income earned by women is more likely to alleviate household poverty than income earned by men. For example, in the case of pension income, a recent study found that the relationship between transfer receipt and a reduction in child malnutrition is particularly strong where the pension recipient is female, but almost negligible where the recipient is male (Duflo, 1999).

This suggests that targeting women as the beneficiaries of employment creation initiatives may be the most effective way of improving household welfare. The primary mechanisms by which these positive changes are achieved are improved nutrition, improved sanitation, and the reduction of psychosocial stress associated with extreme poverty (Case, 2001). Clearly, as the EPWP is rolled out the relationship between the characteristics of beneficiaries and the impact of the income paid on household poverty will have to be measured in order to evaluate its impact on poverty alleviation.

A further critical area that requires evaluation is the impact of the asset created or service provided by PWP. As empirically demonstrated by Adato and Haddad (2002) in an analysis of the impact of public works programmes in the Western Cape province on household poverty, the higher the proportion of the asset created or service provided that is consumed by the poor, rather than the non-poor, the greater the impact of PWP on poverty alleviation. Indeed, McCord (2003) argues that it would be incorrect to assume that assets created under PWP contribute to poverty alleviation unless they are strategically selected for their benefits to the poor and are of an acceptable quality. It is therefore essential that both the quality of the assets and services provided within the framework of the EPWP and the extent to which they benefit the poor is evaluated.

Together with the objectives the EPWP has set for itself, these are the broad parameters that determine the scope of the evaluation framework, which is summarised in table 2.

Table 2: EPWP Objectives to be Evaluated

Objective	Measure
Short-term job opportunities for the target group	Number of job opportunities, poverty profile of beneficiaries, income paid to beneficiaries, duration of job opportunities and compliance with Code of Good Practice for SPWPs.
Skill Formation	Nature and quality of the training provided and the extent to which it enhances the employability and income-generating capacity of beneficiaries in the broader economy.
Long-term job opportunities through self-employment and absorption elsewhere in the economy	The proportion of beneficiaries that find employment or become self-employed once they exit the programme.
Poverty alleviation	The extent to which the income paid to beneficiaries and the assets and services provided alleviate poverty at the household level.

Provision of high-quality assets and social services	The quality and economic and social value of the assets and services.
Efficient use of public resources	The design and implementation of specific programmes and their cost to the fiscus in relation to the benefits they yield in the form of job opportunities, assets and services.

The criteria against which these objectives are evaluated will vary within sectors and programmes and must therefore be located within the specificities of each programme. For example, the social sector is expected to yield a much higher level of skill formation than the other two sectors as it has a much more ambitious training programme. In the same vein, the assets created by the infrastructure programme will have a much higher social and economic value than the removal of alien vegetation that is the *raison d'être* of the working for water programme.

Indeed, the evaluation of programmes that operated within the framework of the Special Poverty Relief Allocation commissioned by National Treasury, forcefully made the point that "... a one size fits all monitoring and evaluation system can be inflexible and mechanistic. Monitoring and evaluation systems should be tailored to the particular objectives and activities of each activity stream, while at the same time being able to provide overarching generic information for comparative purposes" (National Treasury, 2004:44). Indeed, the discussion of evaluation techniques that follows treats the sectors and programmes within sectors differently and the surveys will utilise different questionnaires for each sectors.

For this reason, the scope of the programmes that fall within the 3 broad sectors is outlined below in order to identify the specific challenges and issues that each will confront in relation to the policy objectives to be evaluated. In this regard, it is important to note that the sector plans were evolving *in tandem* with the development of this evaluation framework and many areas are likely to undergo further refinement and elaboration. The approach to the evaluation of specific sectors should therefore be revisited to incorporate such changes once the evaluation exercise commences.

3.1 Infrastructure Sector

The infrastructure sector has been identified as the largest employment generator within the EPWP, targeting the creation of 900,000 jobs over the next 5 years. Government has already committed itself to a massive expansion in its capital budget, from about R 58 billion in 2002/3 to R 74 billion in 2003/4, and maintaining that level in real terms over the MTEF. Approximately R 28 billion more will be spent in *real terms* over the 3 year period between 2003/4 – 2005/6, than was spent between 2000/1 – 2002/3 – this is 30% increase (see Altman and Mayer 2003). A large portion of this increase will be allocated to civil construction, which is typically capital intensive. So it is anticipated that this spending, in combination with a programme to intensify labour use should together have an important impact on employment. There are two key challenges faced by government in maximising the impact of its infrastructure spending on employment. The first relates to its ability to spend its budget. For example, a survey by Eskom of local government found that in 2001, only 71.5% of local government's capital budgets were actually spent (Altman and

Mayer, 2004). A second challenge relates to how widely the labour intensive methods programme is promoted.

Given that government's aggregate infrastructure budget has been expanded significantly since 2001, the means by which employment will be created is through shifting from machine-intensive to labour-intensive construction techniques in the construction, rehabilitation and maintenance of public infrastructure and not necessarily by further increasing budgetary allocations.

Low-volume roads, trenching, storm water drains and sidewalks have been identified as areas where labour-intensive methods are to be applied. The use of labour-intensive techniques is also encouraged in the construction, maintenance and rehabilitation of other forms of infrastructure. The majority of job opportunities will be created within the framework of the provincial and municipal infrastructure grants (PIG and MIG) to which specific conditions will be attached. Within these conditional grants, an amount of R15 billion has been earmarked for labour-intensive projects.

Table 3 summarises the targets that have been set in terms of the quantity of infrastructure to be constructed over the next 5 years. It is against these targets that the infrastructure sector EPWP will be evaluated. Given that labour-intensive methods are to replace machine-intensive methods at an unprecedented scale, it is essential that the quality of the infrastructure is evaluated to ensure that it is up to standard.

Table 3: Targets for infrastructure under EPWP to be constructed over the next 5 years

Targeted Categories of Infrastructure (Outputs-Kms)	2004/5	2005/6	2006/7	2007/8	2008/9	Total
Provincial Roads (Km) (Regravelling, light seals)	4300	4800	5300	6000	6400	26800
Municipal Roads (Km) (Regravelling, Light Seals and Roads < 500 vpd) (Km)	1600	1900	2100	2300	2500	10400
Water Reticulation (Pipelines) (Km)	4100	4800	5400	5800	6300	26400
Sanitation (Pipelines)	850	990	1000	1000	1100	5240
Storm water (Km)	230	270	300	320	350	1470
Pavements (Km)	20	25	30	30	35	150

Table 4 provides a summary of the targets set for job opportunities to be created within the framework of the MIG and PIG. **The number of jobs created by the programme will be net of the baseline of the number of jobs that would have been created if machine-intensive methods were used.** It is important to note that although 735,620 job opportunities are to be provided, they will account for 250,000 person-years of work. The infrastructure EPWP programme will emphasize the creation of short-term job opportunities - with each person receiving an opportunity for about 6 months of a year.

Table 4: Targets for EPWP employment opportunities through the Provincial and Municipal Infrastructure grants over the next 5 financial years.

Targeted Categories of Infrastructure	2004/5	2005/6	2006/7	2007/8	2008/9	Total
Provincial Roads (Regravelling, light seals)	18400	61400	73600	73600	73600	300600
Municipal Roads (Regravelling, Light Seals and Roads < 500 vpd)	10400	34700	41600	41600	41600	169900
Water Reticulation (Pipelines)	11400	37900	45400	45400	45400	196900
Sanitation (Pipelines)	2700	8900	10700	10700	10700	43700
Storm water	2100	7000	8400	8400	8400	34300
Pavements	100	320	400	400	400	1620
Total	45100	150220	180100	180100	180100	735620

In addition to the MIG and PIG, the infrastructure sector has targeted the **maintenance of public buildings** as a means of creating 150,000 jobs over the next five years. The number of work opportunities is based on an annual budget of R 200 million, representing 20% of the total maintenance budget for National and Provincial Public Works Departments, so adding an additional R1 billion to the infrastructure sector's budget for the EPWP. The Independent Development Trust (IDT) will act as the Programme Implementing Agent for the National and Provincial Departments of Public Works.

Finally, civil works through the Department of Housing, trenching in electrification projects through Eskom, and some remaining CMIP projects have been identified as areas where labour-intensive methods can be applied. However, targets have not yet been set and it is anticipated that these will become known once the planning of these projects is at a more advanced stage.

From the perspective of evaluating the infrastructure programmes, it is important to note that the success of the infrastructure sector plan rests upon two critical factors: the ability to capacitate the construction industry to utilise labour-intensive construction techniques and the capacity of provincial and local governments to implement the PIG and MIG.

As regards the former, DPW has identified the need for training in labour intensive construction at all levels and has therefore developed NQF accredited training at levels 2, 4, 5, 6 and 7. Consultants and contractors working on labour-intensive infrastructure projects will be required to take the relevant training courses if they are to be eligible to win tenders.

In addition, DPW will work with the CETA to capacitate training providers in order to ensure that training is provided on the scale required by the EPWP. In a further initiative, DPW and NDOT, together with DST, the Umsobomvu Youth Fund and LITE (a training NGO) are in the process of finalising a Memorandum of Understanding that will lead to the establishment of a National Training College for Labour Intensive Construction.

The critical issue is whether consultants and contractors will be able to complete the training at a sufficiently fast pace to develop the supply capacity necessary to take the programme to scale. A related issue is whether the scope and level of the training is adequate to ensure that infrastructure constructed, maintained and rehabilitated using labour-intensive techniques is of an acceptable quality.

As regards public management capacity, while the MIG and PIG are designed in a way that places the bulk of the responsibility for implementation on the private sector, through the key roles played by consulting engineers and contractors, provincial governments and municipalities nevertheless have a key role to play. In order to enhance their capacity to implement the programmes, DPW had developed guidelines for implementing labour-intensive infrastructure projects and is training municipalities in the use of these guidelines. In addition, DPLG intends to establish a dedicated Project Management Unit to assist municipalities to implement the MIG.

In evaluating the efficacy of programme implementation, it will be important to recognise that the management capacity of provincial governments remains uneven, while the substantial transformation that local government has recently undergone means that the capacity of this tier of government is untested and is likely to be uneven across the country. This could compromise the extent to which projects are implemented in the poorest regions, as capacity is likely to be more limited there.

It will therefore be important to identify capacity constraints at second and third tier government as the EPWP is rolled out, in order to guard against a situation where the lack of public management capacity acts as a constraint to the programme being rolled out in specific geographic areas. This would clearly be inimical to targeting the poor and would result in inequitable outcomes across geographical areas.

A further pertinent issue is to ensure that 'fiscal dumping' does not take place as the infrastructure sector EPWP is rolled out. This problem arose within the context of the infrastructure projects that were implemented within the framework of the Special Poverty Relief Allocation because unplanned and unbudgeted ongoing operating and maintenance costs were shifted onto local and provincial governments.

3.2 Environment and Culture Sector

This sector is coordinated by DEAT and involves DWAF, NDA, DST and DAC. Unlike the infrastructure and social sectors, the programmes that comprise this sector have been implemented in the past within the framework of the Special Poverty Relief Allocation. Hence they are unlikely to experience the initial implementation problems that are expected in the case of the other sectors.

The overarching objective of this sector is to **create 200,000 job opportunities during the 2004/05 to 2006/07 financial years** while at the same time generating

useful outputs in the areas of environment, heritage, biodiversity and land care. In addition, the programmes support the creation of land-based livelihoods and community-based natural resource management. If the number of jobs is **projected for the full 5 year period**, it is reasonable to expect that something in the order of **330,000 job opportunities** will be created. As these jobs would not exist in the absence of the programme, unlike the infrastructure sector a baseline is not available against which to evaluate net employment creation. Some consideration should therefore be given to constructing a hypothetical baseline (for example, the number jobs created if the financial resources were to be allocated to other government programmes) when the programme is comprehensively evaluated.

In addition to the creation of job opportunities and the training of beneficiaries, the sector has set the following objectives for itself:

- Linking people in the marginalised “second economy” with opportunities and resources to enable their participation in the developed “first economy”.
- Integrating sustainable rural development and urban renewal
- Creating land-based livelihoods
- Promoting community-based natural resource management
- Developing natural resources and cultural heritage
- Rehabilitation of natural resources and protection of biodiversity
- Promoting tourism

A comprehensive evaluation of these objectives will be complex and extremely costly given the large number of programmes that fall within this sector. While the evaluation techniques proposed in section 4 will capture information on the extent to which these objectives are being met, the less quantifiable objectives such as linking the “second” and “first” economies are unlikely to be comprehensively evaluated. Although case studies will yield in-depth information about qualitative aspects of the programme, budget constraints will not permit case studies of each specific programme and the findings will not be generalisable.

Notably, a recent evaluation of the programmes within this sector that are evaluated by DEAT, highlighted the fact that that specific targets or time bound activities against which to measure the success of projects have not been established (Sibanda & Huggins, 2004). This suggests that benchmarks need to be developed as a matter of urgency if the value of the projects and their quality is to be properly assessed.

The programmes that will form part of the EPWP, as well as the budgetary allocations over the MTEF and the jobs to be created are summarised in table 4. At present, implementation takes place primarily at the level of provincial government although national departments play an important role in the selection of eligible projects.

Table 5: Core Environmental Sector Programmes, to be transferred under the EPWP umbrella

Core Programme	Description	Planned Expenditure: 2004/5 – 2006/7, R' Million	Jobs	Person Years	Training Days

Core Programme	Description	Planned Expenditure: 2004/5 – 2006/7, R' Million	Jobs	Person Years	Training Days
Sustainable Land Based Livelihoods	Working for the Land, Working for Water, Working for Wetlands, Working on Fire, removal of alien vegetation, the application of science and technology to create high value commodities, and measures to combat desertification	R 1,649.50	145 252	72 626	1 597 768
Working for the Coast	Uses the resources of SA's coast for the development of coastal communities, while protecting and rehabilitating these resources.	R 119.20	17 740	8 870	195 136
People and Parks	Involve communities in conservation, and maximise the benefits to communities of SA's parks and protected areas.	R 254.10	9 391	4 696	103 303
Working for Tourism	Uses the rapidly growing eco-tourism sector to generate revenue for local communities and to involve them in the tourism economy.	R 627.50	20 452	10 226	224 968
Working on Waste	Uses waste management and recycling as entry points for building SMME's and creating local jobs	R 72.90	8 869	4 435	97 651
TOTAL		R 2,723.20	201 703	100 852	2 218 735

Expenditure targets, disaggregated by department, are summarised in table 6. DWAF and DEAT account for the highest proportion of the budget of R2.7 billion over the MTEF. In real terms the budgetary allocation for this sector has not increased relative to what was spent over the 2001/02 – 2003/04 financial years, when it formed part of the Special Poverty Relief Allocation. So, effectively, this is a transfer of reporting and monitoring of programmes from the Poverty Relief Programme to the EPWP “umbrella”.

Table 6: Expenditure by Department, R' Million

YEARS	NDA	DEAT	DWAF	DAC	TOTAL
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2004 / 5	R 60 m	R 350.5 m	R 370 m	R 75 m	R 855.5
2005 / 6	R 64 m	R 369.1 m	R 391 m	R 83 m	R 907.1
2006/ 7	R 68 m	R 388.6 m	R 413 m	R 91 m	R 960.6
TOTAL	R 192 m	R 1,108.2 m	R 1,174.0 m	R 249 m	R 2723.2

The sector plan explicitly acknowledges the need to look beyond the MTEF poverty relief allocation and identify additional programmes and projects that lend themselves to EPWP principles. To that end, the following areas have been identified for potential expansion:

- Integration of a greening programmes with housing programmes.
- Landscape rehabilitation integrated with community nurseries.
- Assessment of non-endemic species invasion in catchment areas to aid long range planning and quantification of the problem to support sustainable roll-out of an invasive species control programme.
- Developing a scientific base and development of SMMEs in the area of freshwater fisheries alongside with mariculture.
- Establishment of municipal waste programmes linked to SMME development.
- Community benefit sharing models and BEE equity acquisition in the areas of hospitality services in and around protected areas.
- BEE acquisition through high value tourism products and SMME development.
- Tourism route development

Once implementation plans have been developed for these areas, they should be incorporated in the evaluation framework.

3.3 Social Sector

The objective of the social sector is to create employment within the framework of 2 programmes: Home Community Based Care (HCBC) for people infected with HIV/AIDS and Early Childhood Development (ECD) for children in the 0 –6 age group. The Departments of Social Development and Health are responsible for implementing the former and the Departments of Education and Social Development the latter.

The available evidence suggests that demand for both services vastly exceeds their provision, largely because poor households cannot afford to pay for them and state subsidies are inadequate to meet this unmonetised demand. While a range of private

and public agents provide these services, poor households access them primarily through NGOs and CBOs, which rely on public subsidies and volunteers.

There is still considerable work required to actually design the EPWP social sector programmes, if the training opportunities are to translate in subsequent employment opportunities. The infrastructure and environmental projects already have large budgets and programmes attached, and so are ready to be implemented. This is not the case for the social programmes. Given the huge unmet demand for these services, they represent an opportunity for employment creation if the programmes are taken to scale. But taking the programmes to scale will require substantial investigation into programme design, the extent of the need for the services, community reception, appropriate financial arrangements, institutional accreditation mechanisms, and procurement difficulties.

At the time of writing, a number of targets were set by the social sector for rolling out the HCBC and ECD programmes. However, a detailed implementation strategy has not been finalised and a number of elaborations and refinements are being explored. Hence for the purpose of providing a framework for evaluating the sector programme, this report relies on the rather limited information that is currently available.

As is the case with the environment and culture sector, the jobs created by this programme would not exist in the absence of the programme. Hence a baseline is not available against which to evaluate net employment creation. Some consideration should therefore be given to constructing a hypothetical baseline (for example, the number jobs created if the financial resources were to be allocated to other government programmes) when the programme is comprehensively evaluated.

3.3.1 Home Community Based Care

At present, the target is to create **120,000 work opportunities, 17,000 of which will be through learnerships, over the next five years**. These work opportunities are to be created through three initiatives:

1. Drawing **20,000** existing volunteers who receive no remuneration at all into paid work opportunities by paying them a stipend. These volunteers will also receive accredited training and will work full time.
2. A further **90,000** jobs will be created by expanding the pool of employed volunteers. This will be done by rolling out a bridging programme to the CHW programme and working in partnership with Umsobomvu to create 17,400 learnerships.
3. Expanding the programme beyond the current HCBC sites with the establishment of 300 new sites per annum and 3000 HCBC work opportunities to create a further **12,000** job opportunities.

In contrast to the infrastructure and environmental programmes, these job opportunities will be provided for relatively long periods, ranging from 12 to 24

months. Hence a high number of person years (170,000) will be created from the 120,000 work opportunities.

From the evaluation will need to pay special attention to certain aspects of the social sector programmes, due to certain characteristics that are specific to them, such as:

1. The programme will be implemented by a large number of non-profit organisations scattered across the country and spanning urban and rural areas. This makes the evaluation of the programme a particular challenge.
2. More clarity will be required in respect of the distribution of job opportunities across the 9 provinces.
3. The capacity of non-profit organisations to expand their services is unclear. Their managerial capability and job creation potential is still not well understood and is therefore untested.
4. The capacity to provide the training and learnerships, to a required standard is not fully understood. A considerable portion of current training is non-formal offered by small NGOs, CBOs and FBOs.
5. The character of volunteerism, and its interplay with the emergence of paid work will pose a particular challenge. Presumably, there is an intention to maintain some system of voluntarism, so the approach to identifying beneficiaries of this programme will need to be carefully and explicitly expressed.
6. Given the nature of the service provided, it will be particularly challenging to assess quality and develop appropriate benchmarks. The social sector delivery, especially in home and community based care, is particularly nuanced. This will require careful programme design by relevant departments, experts and stakeholders.

Given the high employment coefficients associated with this sector⁵, if successfully implemented it is likely to yield the highest number of employment opportunities per rand of expenditure. Moreover, in contrast to the other sectors, if the programme is taken to scale through the provision of additional government grants, the jobs created are likely to be sustainable.

From the perspective of timing it is important to note that implementation of the programme is unlikely to commence in the first two quarters of the 2004-05 financial year. Given that the minimum period of the job opportunities is 12 months, project sampling through surveys and case studies are likely to commence only in 2005-06.

⁵ This sector generates 46 jobs per million rand of expenditure and hence has the highest employment coefficient in the SA economy (Lewis, 2001).

3.3.2 Early Childhood Development

There is clearly an enormous unmet need for ECD services for poor and vulnerable children in the 0 –6 age group. This age group is targeted because older groups are catered for through the expansion of these services for Grade R by the Department of Education and the schooling system.

The aim of the ECD programme is to create 60,000 job opportunities over 5 years. In particular, the following initiatives have been proposed by the social sector to generate job opportunities within the framework of the ECD programme:

1. **Learnerships.** In partnership with the EDTP SETA, **6,500 NQF level 1** and **9,000 learnerships at NQF level 4** are planned. In addition there is a plan to train **4,500 grade R teachers** under the DoE.
2. **Job opportunities** for **9,000** unemployed people accompanied by a skills programme in sites receiving the DSD indigent subsidy. A further **14,000** job opportunities in the remaining ECD sites in poor areas through additional subsidies.
3. **'Parents Informing Parents (PIP).** The creation of 3 month employment opportunities for **3,000 unemployed parents** through existing schools and local authorities.
4. **ECD support staff.** This entails the creation of **4,000** job opportunities for gardeners, cooks and administrators in 4 000 target schools.

From the perspective of evaluating the programme, the following points are worth noting:

1. An integrated plan for ECD, for children aged 1-6, must still be formulated. The EPWP monitoring and evaluation will have to be framed with realistic targets in mind. As a reference point, one can take cognisance of the time and resources involved in designing the ECD - Grade R programme. Some of the design elements will include:
 - a. The extent of the need, by province
 - b. Acceptable models of delivery, balancing cost and quality
 - c. The cost of providing such a service
 - d. The current and required capacity of delivery agents. There is evidence to show that many lack the managerial capacity to even register their organisations in order to access grants.
 - e. The capacity and quality of training delivery agents
2. As with the infrastructure and the environmental programmes, a decision will be required as to whether previously designed and planned programmes, namely the training of 4,500 Grade R teachers, will form part of the social sector EPWP targets, or whether they will be reported on through separate mechanisms.

3. As is the case with HCBC, the nature of the service provided and the uneven capacity of service providers renders an evaluation of the quality of the service provided complex and costly.

If the programme is effectively implemented, however, it will create a significant number of sustainable job opportunities, alleviate poverty by meeting a critical basic need of poor households and contribute to social and economic development by developing the nation's children. Some consideration will be required to determine whether the social sector EPWP programme is synonymous with social welfare programmes, and whether EPWP expands the anticipated expansions in those programmes. This would require continuous updating of the evaluation framework, as the targets would shift as the programmes grow.

4. PROPOSED EVALUATION FRAMEWORK

The development of the evaluation programme for the EPWP has been guided by three factors: international best practice in the evaluation of public works programmes, the areas to be evaluated, and the cost associated with different evaluation techniques. The research team sought to find a balance between the three that would yield an effective and affordable evaluation framework.

As regards international experience in evaluating active labour market policies (outlined in some detail in the literature review, appended as annexure A), and public works programmes in particular, best practice is situated in the OECD countries and is concentrated in those countries that have substantial and comprehensive active labour market policies. While such best practice is useful backdrop for framing the evaluation framework for the EPWP, most of the elements are either not relevant to the policy instrument we are evaluating, or are too costly and complex.

From a broad conceptual perspective, international best practice is to use *target-oriented*, rather than *programme-oriented* evaluation techniques. While programme-oriented approaches measure the impacts of a particular programme along the dimensions of its immediate pre-specified objectives, the target-oriented approach takes as its point of departure broadly defined policy goals or targets. Hence the latter approach analyses which policies and policy combinations are most appropriate for achieving pre-defined policy objectives under different socio-economic conditions and within different policy regimes (Schmid *et al*, 1996).

In practice, however, there are few studies the world over that embody this ideal approach of target-oriented evaluation (Meager & Evans, 1997). This is because such an approach is extremely complex and often unwieldy. In the case of the EPWP, a programme-oriented approach will be adopted as the objective is to understand the impact of the programme itself, rather than to locate such impact within the context of other policy interventions.

Two broad categories of evaluation studies can be identified. The first are microeconomic studies, which try to evaluate the impact of a programme on the participants. The second are macroeconomic studies, which evaluate the aggregate impact of programs on, for example, unemployment or earnings (Fay: 1996, Martin: 1998).

The central area of impact that the combination of microeconomic and macroeconomic evaluation techniques endeavour to assess is the number of jobs created by a policy intervention net of offsetting impacts, as illustrated in the box below.

$$\text{Net Impact (i.e. Net Jobs Created)} = \text{Gross Jobs Created} - \text{Deadweight} - \text{Substitution Effects} - \text{Displacement Effects}$$

The three major potential major offsetting impacts are defined as follows:

- **Deadweight** refers to a situation where the impact would happen without the policy intervention anyway. Consequently, the human and financial resources utilised to implement the intervention are a deadweight loss to society. An example would be when an unemployed person entering employment after participating in a programme or undergoing training would have found the same job without these interventions anyway.
- The **substitution effect** occurs when the effect of a measure is at the expense of a non-target group. For example, a participant in a programme gets a job that would have otherwise gone to another person.
- The **displacement effect** refers to a situation where the programme's effect is to displace non-participants because it creates market distortions. For example, where concessionary finance is provided to create an SMME, which then leads to the closure of another enterprise in the same industry and consequently job losses.

Not surprisingly, these offsetting impacts are difficult to measure. The most widely used technique is a combination of micro and macro-level studies. The macro studies, because they measure the aggregate impact of a programme, are able to quantify offsetting effects by contrasting gross and net employment impacts. As they are unable to explain which of the three offsetting effects account for the difference between gross and net employment, qualitative micro-level studies in the form of surveys and case studies are necessary to evaluate the relative weight of the three effects.

In the case of the EPWP, there is little reason to believe that there will be substantial offsetting impacts in relation to the short-term job opportunities created, as most of these jobs would simply not have existed in the absence of the programme. It is once beneficiaries exit the programmes and either enter formal employment or become self-employed that these effects are likely to become relevant. Although it is complex and costly to measure them at that stage, the longitudinal studies proposed below will pick up some of these effects, as will the aggregate impact analysis.

A critical area of evaluation that is not explored in the context of the OECD countries - largely because they provide relatively generous unemployment benefits - is the impact of public works programmes on poverty alleviation. As alluded to earlier, this

is their central objective in developing countries and South Africa is no exception. A recent analysis of the efficiency with which public works programmes generate income and assets to the poor in the Western Cape (Haddad and Adato, 2001), provides an important framework for evaluating the impact of the EPWP on poverty.

The EPWP addresses poverty through two mechanisms: a cash payment to participants and the provision of assets and services, which have indirect effects on household and community well-being. In the case of income paid, beneficiaries of the EPWP will earn wages that flow into households and affect the poverty status of the household. In addition, the payment of a known monthly income (albeit for a short period) induces a stabilization effect by enabling household consumption smoothing and reducing vulnerability to shocks.

In addition, to accurately capture the full impact of the EPWP on poverty alleviation, it is vital to evaluate the dynamic poverty impact by examining the participating households' ability to manage risk and move out of poverty over time.

Against this background, the proposed framework for evaluating the EPWP is summarised in table 7, which indicates the various evaluation techniques against the specific areas that they will measure. It includes a variety of techniques that will jointly yield the quantitative and qualitative information required to evaluate the various facets of the programme outlined in table 2 (EPWP objectives to be evaluated).

Table 7: Summary of Evaluation Techniques

Technique	Implementation	Areas Measured	Timeframes
Cross-sectional Surveys	Surveys of contractors/ implementing agents, beneficiaries, communities & government departments	Profile of beneficiaries & their households; impact of income paid; impact of assets created; relevance & quality of training, role of contractor (targeting, training etc.); community perceptions of the benefit of the project; efficacy of design & implementation	Years 1 - 5, surveys to be conducted at the end of the project cycle
Longitudinal Surveys	Surveys of beneficiaries 6 months after exiting the EPWP & 6 months thereafter	Whether employment or self-employment occurs after exiting the EPWP; Longer-term impact of income paid & training; Offsetting effects (displacement and substitution).	Years 1 - 5, surveys to be conducted 6 months after beneficiaries exit the EPWP & 6 months thereafter
Case Studies	In-depth studies of 8 projects by Senior Researchers, spread across sectors and provinces	All measurement areas excluding employment prospects of beneficiaries after exiting the EPWP.	Years 1 - 5

Poverty Impact Analysis	Secondary data & data derived from surveys utilised	Impact of income, assets and services to poor households	Years 3 & 5
Aggregate Impact Analysis	Utilise a compatible general equilibrium (CAGE) model to measure broader impacts	Linkages between EPWP and broader macroeconomic variables such as aggregate demand, net jobs created and inflation	Years 3 & 5
Assessment of Quality of assets and services	Evaluation of the quality of infrastructure and services against accepted benchmarks	All forms of infrastructure and services	Line departments implementing the programmes to commission independent experts to undertake these evaluations.

These techniques and measures will be implemented at different stages as the EPWP is rolled out. While the cross-sectional and longitudinal surveys will be ongoing and commence once the initial projects near completion, the poverty impact analysis and aggregate impact analysis will take place twice over the 5-year period, in years 3 and 5. A more detailed account of the various techniques, their cost implications and application to the EPWP is provided below

4.1 The Labour Force Survey

Before outlining the various methodologies proposed for evaluating the EPWP, it is necessary to indicate that the possibility of identifying beneficiaries in Stats SA's Labour Force Survey (LFS) and including questions specific to employment on the programme must be explored.

The LFS sample includes roughly 30 000 households and their members and is conducted twice a year: in March and September. In the September 2002 LFS approximately 62 000 people of working age (16-65) were interviewed. This represents 0,23% of South Africans in this age group – i.e. approximately 1 in 400 people are interviewed as part of the six-monthly LFS.

If it is assumed that approximately 800 000 people will work on the EPWP at some point during the 5 year period of the programme, it can be expected that 1800 of them will be included in the LFS sample. This is a sufficiently large sample to permit analysis of the impact of the EPWP on employability, as well as to provide information about the household income and structure of beneficiaries. It should be noted that deep analysis of the programmes will not be possible through the LFS, as the survey is not geared to that purpose. It will enable high level, macro-impact analysis.

Not only will the inclusion of employment on EPWP projects in the LFS enable users of this data to clearly identify this category of employment, thereby preventing distortions of time series data, it will also be a cheap method of collecting information

about the beneficiaries of EPWP projects and their households. Ultimately, once the scope and coverage of data collected in this way is assessed, it may be possible to reduce the scope of the other evaluation techniques, or even replace them with data from the LFS.

It is therefore important that the EPWP office arranges to meet with Stats SA as a matter of urgency in order to motivate for the inclusion of questions in the survey.

4.2 Cross-sectional and Longitudinal Surveys

Cross-sectional and longitudinal surveys are the principal evaluation techniques used to evaluate public works programmes the world over. Surveys can be classified into two broad categories: *descriptive* and *explanatory*. Descriptive surveys focus on determining the status of a defined population with respect to certain variables, while explanatory surveys are a form of causal-comparative research that goes beyond merely describing the variables and attempts to determine the existence and strength of relationships among variables.

The surveys proposed for evaluating the EPWP will contain elements of both approaches. The descriptive approach will be used to gather information related to the stated objectives of the study, while the explanatory approach will be used to investigate the nature and extent of the relationship between the programme and specific outcomes such as the probability of obtaining employment after exiting the EPWP and its impact on poverty at the household level.

The purpose of the cross-sectional surveys is two-fold: to provide **a sample of project level information for detailed monitoring** of the EPWP as well as to provide information that will contribute to the evaluation of the programmes impacts. The former is deemed necessary because only a small number of key indicators will be collected on an ongoing basis for the purpose of monitoring the EPWP. The principal purpose of the longitudinal surveys is to access information about the employment prospects of beneficiaries once they exit the EPWP.

The cross-sectional surveys should be based on the random selection of primary sampling units (which in the case of the EPWP are mainly projects), to obtain a representative sample of the population of interest. In the case of sectors where project parameters (i.e. number to be implemented, spatial location and type of project) are currently unknown, the primary sampling units will be selected systematically.

The surveys will be conducted towards the end of the project cycle in order to obtain optimum information about the project and its impacts. Before the final questionnaire is administered in the main survey, a *pilot study* will be conducted to test the validity of the research tool and identify areas that can be improved for the main survey.

The estimated sample sizes for the cross-sectional surveys are presented below, as these will determine the cost implications for this aspect of the evaluation framework. It must be emphasized that they are based on the limited information in the sector plans. Moreover, with the exception of the environmental sector (which has been in existence under the auspices of the Special Poverty Relief Allocation for some years), the sample population will only be known once implementation commences.

Against the background of the detailed discussion of the sector plans presented in section 3, the proposed sample size and sampling approach is presented in the next sections for the cross-sectional and longitudinal surveys. As some proportion of the beneficiaries interviewed in the cross-sectional surveys will be the subjects of the longitudinal surveys, the approach to sampling is spelt out only for the former.

4.2.1 Cross-sectional Surveys

The first issue to be addressed is the approach to sampling. The target population is the entire population of projects, from which a sample of projects or individuals will be drawn. The infrastructure and social sectors are particularly complex because the population of projects to be sampled and their key characteristics (which determine the sample stratification) will remain unknown until implementation commences. Therefore an orthodox approach to sampling is ruled out.

Consequently, projects will be stratified by key variables such as **type**, **geographical location** and **size**. A proportionate stratified sampling technique will be used to ensure that the projects selected are representative of these characteristics. The sampling will be done systematically. This entails, for example selecting every twentieth project that is implemented within the selected strata, if a 5% sample is required.

It is essential that the following information is available for sampling:

- The number of projects
- The size of the projects
- The location of the projects
- The types of projects

As projects commence and the information is registered at the EPWP office, it is possible to systematically identify those projects that will be sampled on a representative basis. Given the complexity of sampling, many of the projects reflected on in the annual evaluation report will not have been completed.

In practical terms, the sampling and surveying process will unfold as projects are implemented. Until the end of the fiscal year, the difference between the hypothetical and actual sample frame will not be known. The survey results will be weighted to the total population of projects registered for the fiscal year. The weighting, calculation of standard error and of confidence intervals will be conducted once the data from the survey is captured and cleaned.

In order to capture the information required for evaluation purposes, the following categories of people will be interviewed in each project:

- Beneficiaries
- Implementing agents;

- The community in which the project is located, or from which it draws beneficiaries; and
- The provincial or local government officials responsible implementing the project;

The specificities associated with each of the three sectors, as well as the budgetary implications of the cross-sectional surveys are outlined below.

4.1.1.1 Infrastructure Sector

Given that the implementation of labour-intensive methods in civil construction is a completely new programme at the level of national government, little is known of the number of projects to be implemented and how they will be stratified across provinces and type of infrastructure. Hence the sample frame (for MIG, PIG and the maintenance of public buildings) has been calculated on the basis of the need to sample at least 1% of the beneficiaries. The required sample size is then estimated on the assumption that 10 beneficiaries will be sampled per project. The sample frame is illustrated in table 8.

Table 8: Sample Frame for the Infrastructure Sector

Programme	04/05	05/06	06/07	07/08	08/09
PIG & MIG – beneficiaries	45000	150000	180000	180000	180000
Sample @ 1%	450	1500	1800	1800	1800
No. Projects	45	150	180	180	180
Maintenance of Public Buildings – beneficiaries	7000	17000	42000	42000	42000
Sample @ 1%	70	170	420	420	420
No. Projects	7	17	42	42	42

The estimated budget required for the cross-sectional surveys for this sector – on the assumption that 1% of beneficiaries are surveyed for the entire 5 year period are presented in section table 9.

Table 9: Estimated Budget for Infrastructure Sector Cross-sectional Surveys

	2004/05	2005/06	2006/07	2007/08	2008/09	Total - 5 Years
No. Projects	79	184	214	214	110	
No. Surveys	15	15	15	15	15	
Total Surveys	1185	2760	3210	3210	1650	

	2004/05	2005/06	2006/07	2007/08	2008/09	Total - 5 Years
Cost per Survey*	500	500	500	500	500	
Total Cost of Surveys	R 592,500	R 1,380,000	R 1,605,000	R 1,605,000	R 825,000	
Questionnaire Design	R 27,200	R 27,200	R 27,200	R 27,200	R 27,200	
Analysis & Report	R 110,400	R 110,400	R 110,400	R 110,400	R 110,400	
<i>Sub-total</i>	<i>R 730,100</i>	<i>R 1,517,600</i>	<i>R 1,742,600</i>	<i>R 1,742,600</i>	<i>R 962,600</i>	
VAT	R 102,214	R 212,464	R 243,964	R 243,964	R 134,764	
Total	R 832,314	R 1,730,064	R 1,986,564	R 1,986,564	R 1,097,364	R 7,632,870

These estimates are based on the further assumptions that each survey will cost R500 to undertake and that 15 beneficiaries will be interviewed at each project site and will comprise the following:

- 9 beneficiaries;
- 2 community members in which the project is located or from which the beneficiaries are derived;
- 1 site staff who has completed CETA-accredited unit standards training;
- 1 contractor;
- 1 consultant; and
- 1 provincial or local government official.

4.1.1.2 Environmental Sector

The determination of a sample frame for the environmental projects is disaggregated by implementing department – i.e. DEAT, DWAF and NDA – as this is the primary level for stratifying them. Given the small contribution made by DAC projects to employment creation and the complexity associated with surveying them, it is recommended that these programmes are not subjected to surveys.

Department of Environment & Tourism (DEAT)

The DEAT estimates that there will be a total of about 700 projects during the 2004/05 fiscal year. The 700 projects constitute the population of projects from which to sample. The sample size calculation approach will be based on assuming a 20% success rate (i.e. 20% of the projects meet *all* the objectives outlined in section 3) and a 20% margin of error. The margin of error is relatively large due to budgetary constraints that make it necessary to contain the number of projects to be surveyed. The results of the final sample will enable us to report findings within a 95% confidence interval and significance levels of 5%.

This yields a **sample size of 14 projects** for the 2004/05 financial year. It is assumed that the same number of projects will be sampled for subsequent years for

the purpose of costing the surveys, although it is likely that the sample size will be altered annually as the programme evolves and changes.

The final sample size will be allocated across provinces and specific project types to ensure that the various strata within the population are proportionally represented.

National Department of Agriculture (NDA)

The total estimated number of projects is 166 for the 2004/05 fiscal year. Applying the same criteria as for the DEAT projects (i.e. a 20% success rate and 20% margin of error) yields a **total sample of 8 projects**. The projects will be proportionately distributed over all provinces based on the total number of anticipated projects within each province. The sample size will be sufficient to report the results at 95% confidence limits.

Department of Water Affairs and Forestry

The total estimated number of projects is 278 for the 2004/05 fiscal year. Applying the same criteria as for the DEAT projects (i.e. a 20% success rate and 20% margin of error) yields a **total sample of 12 projects**. The 12 projects will be proportionately distributed over all provinces based on the total number of anticipated projects within each province. The sample size will be sufficient to report the results at 95% confidence limits.

It is assumed that the sample size will remain the same for the environmental sector over the 5-year period. The estimated budget for the cross-sectional surveys for all departments is summarised in table 10, on the assumption that 1% of beneficiaries are interviewed.

Table 10: Estimated Budget for Environmental Sector Cross-sectional Surveys

	2004/05	2005/06/	2006/07	2007/08	2008/09	Total - 5 Years
No. Projects	35	35	35	35	35	
No. Surveys	14	14	14	14	14	
Total Surveys	490	490	490	490	490	
Cost per Survey*	500	500	500	500	500	
Total Cost of Surveys	R 245,000	R 245,000	R 245,000	R 245,000	R 245,000	
Questionnaire Design	R 27,200	R 27,200	R 27,200	R 27,200	R 27,200	
Analysis & Report	R 110,400	R 110,400	R 110,400	R 110,400	R 110,400	
<i>Sub-total</i>	<i>R 382,600</i>	<i>R 382,600</i>	<i>R 382,600</i>	<i>R 382,600</i>	<i>R 382,600</i>	
VAT	R 53,564	R 53,564	R 53,564	R 53,564	R 53,564	

	2004/05	2005/06/	2006/07	2007/08	2008/09	Total - 5 Years
Total	R 436,164	R 436,164	R 436,164	R 436,164	R 436,164	R 2,180,820

These estimates are based on the further assumptions that each survey will cost R500 to undertake and that 14 beneficiaries will be interviewed at each project site and will comprise the following:

- 10 beneficiaries;
- 2 community members in which the project is located or from which the beneficiaries are derived;
- 1 implementing agent; and
- 1 provincial or local government official.

4.1.1.3 Social Sector

Within the social sector there are two types of projects: *early childhood development* and *home community based care*. In contrast to the infrastructure and environmental sectors, where *projects* will be sampled, in the social sector, *individuals* associated with the projects will be randomly selected and this will determine the sites to be sampled. This is the case because with a few exceptions, beneficiaries will be attached to existing NGOs and CBOs providing these services.

Home Community Based Care

The HCBC sample will be stratified by implementing department or institution. These are the Departments of Social Development and Health and the Umsobomvu Youth Fund. The estimated number of beneficiaries associated with these strata are 4 280, 9 000 and 3 000 respectively. Within each stratum, a 1% sample of beneficiaries will be randomly selected. Table 11 illustrates the estimated sample size for those individuals that will enter these job opportunities in the 2004/05 financial year. It is, however, unlikely that the majority will be surveyed during that year, as they would not have been on the programmes for a sufficiently long period of time to elicit optimum information from them. This is reflected in the budget presented in section 5.

Table 11: Estimated Sample Size for the HCBC Programme.

	Plan A: Current plan	Plan B: Short term expansion	Plan C: Medium term expansion
NQF LVL 1	60		
DoSD		43	
DoH		90	
Umsobomvu		30	

NQF LVL 4		5	
NQF LVL 1 & 3			0
TOTAL	60	168	0

The sampling will take place at the implementing agencies (NGOs and CBOs) at which the beneficiaries are based. For purposes of costing it is assumed that 5 beneficiaries are based at any specific site.

Early Childhood Development

As is the case with HCBC, the sampling element will also be beneficiaries rather than projects. These individuals will be surveyed at the sites to which they are attached. A 1% sample of individuals will be drawn from each Stratum, i.e. the four plans: Current plan, Short-term expansion, medium-term expansion and long-term expansion. The proposed sample is illustrated in table 12.

Table 12: Estimated Sample Size for the ECD Programme

	Plan A: Current plan	Plan B: Short term	Plan C: Medium term	Plan C; Long term
ECD basic certificate				
ECD National certificate	45			
ECD Diploma				
ECD skills program NQF 1-3		4		
ECD Skills program				
ECD support staff & PIP				
TOTAL	45	4	0	0

Unlike HCBC, in most cases a maximum of 2 beneficiaries will be based at each site. Hence more sites will be sampled, but less surveys will be conducted per site.

The estimated budget for the cross-sectional surveys for both programmes is summarised in table 12, on the assumption that 1% of beneficiaries will be interviewed. The cost estimates are based on the assumption that each survey will cost R500 and that 9 surveys per site will be conducted for the HCBC programme (i.e. 5 beneficiaries, the implementing agent, 1 provincial government official and 2 community members) and 6 survey per site will be conducted for the ECD programme (i.e. 2 beneficiaries, the implementing agent, 1 provincial government official and 2 community members).

Table 13: Estimated Budget for Social Sector Cross-sectional Surveys

HCBC	2004/05	2005/06	2006/07	2007/08	2008/09	TOTAL
No. Projects	10	29	20	20	22	
No. Surveys	9	9	9	9	9	
Total Surveys	90	261	180	180	198	
Cost per Survey*	500	500	500	500	500	
Total Cost of Surveys	R 45,000	R 130,500	R 90,000	R 90,000	R 99,000	
Questionnaire Design	R 27,200	R 27,200	R 27,200	R 27,200	R 27,200	
Analysis & Report	R 110,400	R 110,400	R 110,400	R 110,400	R 110,400	
<i>Sub-total</i>	<i>R 182,600</i>	<i>R 268,100</i>	<i>R 227,600</i>	<i>R 227,600</i>	<i>R 236,600</i>	
VAT	R 25,564	R 37,534	R 31,864	R 31,864	R 33,124	
Total	R 208,164	R 305,634	R 259,464	R 259,464	R 269,724	R 1,302,450
ECD	2004/05	2005/06	2006/07	2007/08	2008/09	TOTAL
No. Projects	5	29	13	18	20	
No. Surveys	6	6	6	6	6	
Total Surveys	30	174	78	108	120	
Cost per Survey*	500	500	500	500	500	
Total Cost of Surveys	R 15,000	R 87,000	R 39,000	R 54,000	R 60,000	
Questionnaire Design	R 27,200	R 27,200	R 27,200	R 27,200	R 27,200	
Analysis & Report	R 110,400	R 110,400	R 110,400	R 110,400	R 110,400	
<i>Sub-total</i>	<i>R 152,600</i>	<i>R 224,600</i>	<i>R 176,600</i>	<i>R 191,600</i>	<i>R 197,600</i>	
VAT	R 21,364	R 31,444	R 24,724	R 26,824	R 27,664	
Total	R 173,964	R 256,044	R 201,324	R 218,424	R 225,264	R 1,075,020

4.2.2 Longitudinal Surveys

The only technique available to ascertain the employment or self-employment prospects of beneficiaries once they exit the EPWP is longitudinal surveys. In terms of this technique, individuals form the sampling units and are followed over time in order to ascertain the long-term impact of a policy intervention.

In the case of the EPWP, the sample will be drawn from beneficiaries surveyed in the cross-sectional surveys. This cohort will be surveyed 6 months after exiting the programme and a further 6 months thereafter. These timeframes are based on the theoretical assumption that if beneficiaries are not in employment or self-employment 12 months after exiting the programme, their participation in the EPWP is unlikely to influence their employment prospects in subsequent periods.

The main complexity associated with longitudinal surveys is tracing the beneficiaries in order to interview them after they have exited the programme. Many will move to other areas in search of jobs. Indeed, given that many of the EPWP projects will be based in rural areas, it is very likely that many of those that find employment upon exiting the programme will have moved from the area in which the project was located.

As conventional tracing techniques are extremely costly it is recommended that when the beneficiaries are interviewed within the framework of the cross-sectional surveys they are issued with a self-addressed postcard on which they indicate their physical location and contact details. They will then be asked to post it after exiting the programme so that they can be readily traced. They will be incentivised to do so by offering them R100 when the first post-exit survey is conducted. They will then be issued with a second postcard and the same procedure will apply for the second post-exit interview. The HSRC's experience in conducting longitudinal surveys suggests that the incentive provided to beneficiaries will prove far less costly than conventional tracing techniques. For those beneficiaries that fail to complete the postcards, tracing will be conducted using conventional methods.

To properly assess the impact of the EPWP a control group is required. Given the expense and complexity associated with using the experimental and quasi-experimental methods (discussed in some detail in the literature review), and the high risk of contamination (i.e. that some members of the control group become EPWP beneficiaries during the period in which the surveys are conducted), the control group will be drawn from secondary data, in particular, the Labour Force Survey conducted twice a year by Stats SA.

The cost associated with the longitudinal surveys for the entire five year period are summarised in table 13. Given the long duration of social sector projects and the fact that for the environmental and infrastructure sector projects it is unlikely that 6 months would have elapsed after exiting the programmes in 2004/05, it is anticipated that few longitudinal surveys will be conducted in the first year.

Table 14: Cost Estimate for the Longitudinal Surveys, 2004/05 – 2008/09

Sector	Sample	No. Surveys	Cost per survey	Total Cost
Infrastructure	4525	9050	R 700.00	R 6,335,000.00
Environmental	915	1830	R 700.00	R 1,281,000.00
Social	1680	3360	R 700.00	R 2,352,000.00
Sub-total				R 9,968,000.00

VAT				R 1,395,520.00
Total				R 11,363,520.00

The cost estimates therefore assume that 0.5% of beneficiaries will form part of the sample and each will be surveyed twice over the 2004/05 to 2008/09 period. A further assumption is that the cost per survey will be R700, inclusive of the incentive provided to the interviewees.

4.3 Case Studies

In order to properly evaluate the impact of the EPWP from the perspective of policy design and implementation and the alleviation of poverty, it is necessary to undertake select case studies, as this technique will provide in-depth information and analysis that is not accessible through surveys.

Case studies are defined as “the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances” (Gray, 2003). They are deemed essential to capture the complexity of underlying social processes associated with policy implementation. They are distinguished from other research techniques by their focus on one or a few selected cases – rather than a representative sample - in order to build an in-depth understanding of the impacts and the factors that underpin them.

It is in combination with the other research techniques proposed that the case studies will prove to be a valuable instrument to evaluate the EPWP. In particular, they will serve to verify and validate the findings of the surveys and other techniques, while at the same time yielding information that cannot be accessed through the other methods. A good example is the problems with programme design and implementation that pose an obstacle to achieving its stated objectives.

The value of case studies lies in their ability to capture “how” and “who” questions in an integrated manner. In the case of the EPWP, senior researchers will access in-depth information across actors (i.e. government departments, beneficiaries, implementing agents and communities) in real life settings at the selected project sites.

The disadvantage generally associated with case studies is that they are context-bound and therefore not generalisable. They are also said to be more vulnerable to bias and subjectivity. In the case of the evaluation framework for the EPWP, this will not be pertinent as they are but one of a variety of techniques.

The case studies will be selected on the basis of their representativity in terms of sectors and geographical location. Within the time and budgetary constraints of the evaluation framework, it is proposed that 8 case studies are conducted annually over the 5-year period. Clearly, as the EPWP is rolled out it may be deemed necessary to expand this number.

The following categories of case studies are proposed:

- 3 for the infrastructure sector: 1 provincial roads project, 1 municipal roads project and 1 water reticulation project;
- 3 for the environmental sector: 1 administered by DEAT, 1 administered by DWAF and 1 administered by NDA⁶.
- 2 for the social sector: 1 HCBC site and 1 ECD site.

The estimated cost of the case studies is summarised in table 14.

Table 15: Estimated Annual Budget for Case Studies

Item	Rands
Field Work	R 80,000.00
Report	R 20,000.00
Sub-total	R 100,000.00
VAT	R 14,000.00
Subsistence & Travel	R 30,000.00
Sub- total: 1 case study	R 144,000.00
Sub-total: 8 case studies	R 1,152,000.00
TOTAL – 5 years (40 case studies)	R5,760,000.00

4.4 Poverty Impact Analysis

The central objective of the EPWP is to alleviate poverty. The creation of short-term job opportunities through the provision of assets and services is a means to that end. The evaluation would therefore be meaningless without an analysis of the impact the programme has on the poor.

The EPWP addresses poverty through two mechanisms: a cash payment to participants and the provision of assets and services, which have indirect effects on household and community well being. Given that the beneficiaries are members of households that at least partially share risk and resources, it is important that the poverty impact analysis be conducted at the household level.

In the case of income paid, beneficiaries of the EPWP will earn wages that flow into households and affect the (money-metric) poverty status of the household. In

⁶ Given the small contribution made by DAC projects to employment creation and their complexity, these programmes will not be subjected to either case studies or surveys

addition, the receipt of a known monthly income (albeit for a short period) induces a stabilization effect by enabling household consumption smoothing and reducing vulnerability to stochastic shocks.

The technique for measuring the direct and indirect impact of the EPWP on poverty is drawn from a recent study of public works programmes in the Western Cape (Haddad and Adato, 2001), as it is an example of international best practice and has been tested in the South African context. The analytical frame is summarised in Box 1 below.

Box 1: Analytical Framework for Measuring Poverty Impact of the EPWP

Variables:

G = government spending on public works,

W = wage bill to poor workers on public works project,

L = wage bill leaked to nonpoor workers on project,

IB = nontransfer or indirect benefits to the poor, and

IBNP = nontransfer or indirect benefits to the nonpoor.

P* = the probability of the poor worker getting a job, in absence of project,

P = the probability of a poor worker finding work while working on the project, and

W* = the wage rate of poor workers in the absence of the project.

The wages earned by poor workers in the absence of the project are P^*W^* . In the presence of the project, poor workers earn $(1-P)W + PW^*$.

The **net wage gain to the poor**, NW , is

$$(1-P)W + PW^* - P^*W^*$$

or

$$(1-P)W - (P^* - P)W^* .$$

The total benefits to the poor, B , become $NW + IB$, and the total nontransfer or indirect benefits, $SB = IB + IBNP$.

Using these components, we can define

$$\text{labor intensity} = (W + L)/G$$

$$\text{percent of earnings to poor} = W/(W + L),$$

$$\text{the benefit to cost ratio} = SB/G, \text{ and}$$

$$\text{the rands (from government) cost per unit of rand benefit to poor} = G/B.$$

The lower the G/B , the more efficient transfer mechanism the public works project is for the

poor, at least in terms of government outlays. In general, one might expect G/B to decline with (1) increased labor intensity (high $(W + L)/G$), (2) improved targeting performance (high $W/(W + L)$), (3) large new wage gains (large NW/W), (4) a large proportion of the indirect benefits to the poor (large IB/SB)

The model essentially tests the efficiency of public works programmes in generating income and assets to the poor. It does this by assessing the net wage (i.e. net of opportunity costs) and assets generated for the poor. The ratio of government expenditure to the benefits transferred to the poor is then the measure of efficiency.

In addition to measuring the anti-poverty impact of the programme in terms of this model, the dynamic poverty impact should also be assessed by examination of participating households' ability to manage risk and move out of poverty over time.

Socio-economic profiling of EPWP participant households through ongoing survey work would enable the household and community impact of the programme to be modelled, to complement the cost effectiveness analysis.

Table 15 summarises the information required to conduct the poverty impact analysis and indicates where it will be sourced.

Table 16: Information and Sources for Poverty Impact Analysis

Information Required	Measures	Sources
Demographic composition of households	Age, gender and race composition of household and household structure	<ul style="list-style-type: none"> ▪ Cross-sectional and longitudinal surveys ▪ LFS for control group
Employment status of household members	Full-time/ part-time, self-employed, formal/informal, unemployed, length of time unemployed.	<ul style="list-style-type: none"> ▪ Cross-sectional and longitudinal surveys ▪ LFS for control group
Levels and sources of household income	Wage income, remittances, grants, capital income, subsistence farming.	<ul style="list-style-type: none"> ▪ Cross-sectional and longitudinal surveys ▪ Income and Expenditure Survey (IES) for control group
Expenditure patterns of households*	Perceived changes in consumption of goods and services	<ul style="list-style-type: none"> ▪ Cross-sectional and longitudinal surveys ▪ Income and Expenditure Survey (IES) for control group
Health status of households	Perceptions of health changes before and after the intervention	<ul style="list-style-type: none"> ▪ Cross-sectional and longitudinal surveys
Nutritional and educational status of children in households	School attendance before and after the intervention and the incidence of going hungry before and after the intervention.	<ul style="list-style-type: none"> ▪ Cross-sectional and longitudinal surveys
Households' ability to manage poverty and	Whether access to credit and	<ul style="list-style-type: none"> ▪ Cross-sectional and

risk over time	financial services has changed as a consequence of the intervention and acquisition of assets	longitudinal surveys
Correlation with other income generating or subsistence activities	Whether beneficiaries or other household members enter employment or self-employment after exiting the programme.	<ul style="list-style-type: none"> ▪ Longitudinal surveys

*Note: this information will be more qualitative (i.e. based on perceptions) than quantitative, since the household's expenditure patterns cannot be observed before the intervention.

The budget for this aspect of the evaluation is summarised in table 17.

Table 17: Estimated Cost of a Poverty Impact Analysis

Activity	Cost
Creation of merged dataset (i.e. from surveys, LFS & IES)	R 48,000.00
Development of Analytical Frame	R 54,400.00
Analysis of data	R 64,000.00
Report	R 81,600.00
<i>Sub-total</i>	<i>R 248,000.00</i>
VAT	R 34,720.00
Total	R 282,720.00

It is recommended that the poverty impact analysis is conducted twice over the next five-year term of government: in years 3 and 5. This will ensure that the critical mass of data required to adequately perform this analysis is available, as well as providing information to policy-makers.

4.5 Aggregate Impact Analysis

The orthodox Keynesian rationale for implementing public works programmes is that their impact is much greater than the government expenditure used to implement them, as a result of the multiplier effects that are generated. Indeed, it is often the multipliers and not the initial expenditure that has the greatest impact. It is therefore important to know the nature and magnitude of the multipliers in order to evaluate the second round effects of the EPWP.

From a theoretical perspective it is therefore reasonable to expect that the implementation of the EPWP would have a positive impact on South Africa's macro economy and growth path. The main mechanism through which increased demand for unskilled labour would impact on national economic growth would be the stimulation of aggregate demand. This is particularly important in the South African

context given the identification of constrained domestic demand as a key factor underlying low levels of investment and poor economic growth (Lewis, 2001).

In addition, it has been argued (Samson et al, 2002) that stimulating demand among the poor would shift the composition of demand towards labour-absorbing sectors of the economy. This would be the case if increased consumption by the poor increases demand for basic consumer durables and agricultural products - goods which tend to be produced domestically, and absorb a greater proportion of labour in their production, compared to goods consumed by the rich. In this way the stimulus of increased demand would promote second round labour demand multipliers.

Against this background, it is essential to assess:

- the impact of increased demand on employment and output;
- whether increased consumption demands can be met without the risk of negative inflationary pressures;
- the impact of the EPWP on the distribution of income and concomitant measures of poverty and income inequality.

The impact of public works on various sectors of the economy has not been formally assessed, but could be modelled using an economy-wide model such as the HSRC's Computable General Equilibrium (CGE) model⁷. Such an approach would facilitate a national assessment of the net economic benefits of investing in public works schemes. It would utilise secondary data, as well as data that is accessed from the surveys. The estimated cost of conducting such an analysis is summarised in table 18.

Table 18: Estimated Cost of an Aggregate Impact Analysis

Activity	Total
Adapting HSRC model & database to incorporate EPWP activities	R 112,000
Creating a consistent database	R 112,000
Report	R 56,000
Sub-total	R 280,000
VAT	R 39,200
TOTAL	R 319,200

⁷ This is the only South African economy-wide model which attempts to model the labour market in any detail. This does not preclude a model being adapted for the purpose of measuring the aggregate impact of the EPWP.

It is recommended that the aggregate impact analysis is undertaken twice over the 5 years that the EPWP is being rolled out: in years 3 and 5. This is because the impacts are unlikely to change significantly on a year-on-year basis, and yet it is important to get a sense of their magnitude midway through the programme, as well as at the end of the five-year period. However, if budget constraints are a consideration, one assessment at the end of the five-year period will suffice.

4.6 Assessment of the Quality of Assets and Services Provided

The final distinct evaluation technique required to accurately assess the impact of the EPWP is an assessment of the quality of assets and services it provides. For the infrastructure sector this is perhaps the simplest part of the evaluation exercise because contracts specify technical standards, which are relatively simple to assess. Moreover, the institutional framework for doing so is firmly established. For the other sectors, this is perhaps a more complex exercise as objective benchmarks against which to evaluate the quality of assets and services have not yet been developed.

Given that most departments that will be involved in implementing the EPWP already have in place mechanisms for ensuring that assets and services comply with some quality standard (including the contractual commitments of implementing agents), it is suggested that these records are used as a basis for quality assessment. A verification exercise, targeting a sample of projects across provinces will then be required. In some cases (for example, National Treasury in relation to the PIG) such verification mechanisms are already in place. Where they are not in place, it is recommended that they are established as a matter of urgency and that budgetary allocations are made to finance the involvement of external sector/programme experts.

With the exception of the infrastructure sector, a more difficult exercise involves setting benchmarks against which to assess the quality of assets and services. For the social sector, standards of service for home community based care and early childhood development services will have to be defined as precisely as possible in order to serve as benchmarks. In the case of the environmental sector, a recent evaluation of programmes administered by DEAT (Sibanda & Huggins, 2004) finds that specific environmental targets or time bound activities against which success could be measured were not set as a benchmark against which to evaluate them.

4.7 Summary of Timeframes and Costs

It must be acknowledged, at the outset, that given the uncertainties associated with the rollout of the EPWP, including the timing and scale of implementation across the different sectors, the timeframes and costs presented here are merely indicative.

The timeframes for the implementation of the various evaluation techniques are summarised in table 19. They are based on the following assumptions:

- Cross-sectional surveys of the infrastructure sector will commence in the third quarter of 2004/05 at the earliest, given that sampling will take place towards to end of the project cycle and that the average duration of projects is expected to be 6 months;

- Cross-sectional surveys of the environmental sector will commence in the second quarter of 2004/05, as they are already being implemented and the tendering process for a service provider is unlikely to be completed before then;
- Cross-sectional surveys for the social sector will commence in the fourth quarter of 2004/05, at the earliest, given the long duration of the job opportunities and the need to conduct the interviews towards the end;
- The bulk of the longitudinal surveys conducted in 2004/05 will be for environmental sector projects, as there are unlikely to be many beneficiaries for whom 6 months has elapsed after exiting the programmes in the infrastructure and social sectors;
- Case studies will commence in the third quarter of the 2004/05 financial year, as there should be projects in place across all sectors by that time; and
- The poverty impact analysis and aggregate impact analysis will be undertaken in years 3 and 5.

Table 19: Estimated Timeframes for the implementation of the evaluation techniques

	2004-2005				2005-2006				2006-2007				2007 - 2008				2008 - 2009			
<i>Evaluation Techniques</i>	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CROSS-SECTIONAL SURVEYS																				
Infrastructure																				
Environmental																				
Social																				
LONGITUDINAL SURVEYS																				
Infrastructure																				
Environmental																				
Social																				
CASE STUDIES																				
POVERTY IMPACT ANALYSIS																				
AGGREGATE IMPACT ANALYSIS																				
Annual Evaluation Reports																				
Comprehensive 5 year Report																				

The budget associated with the different streams of work over the 2004/05 to 2008/09 period is summarised in tables 19 and 20. Two scenarios are provided:

- A sample of 1% of beneficiaries are interviewed within the framework of the cross-sectional surveys and 0.5% within the framework of the longitudinal surveys.
- A sample of 0.5% of beneficiaries are interviewed within the framework of the cross-sectional surveys and 0.25% within the framework of the longitudinal surveys.

The purpose for providing both scenarios is that although it is the HSRC's view that the first represents the minimum number of beneficiaries to be sampled, it is expensive and hence an alternative that would have much larger confidence intervals is proposed (i.e. it will be less representative and will therefore offer a less accurate picture).

The budget is based on the typical cost to the HSRC (which is not-for-profit) of undertaking such a project and uses the charge out rates of researchers at different levels within the organisation, based on the requirements of different aspects of the work. It is therefore indicative rather than definitive.

It should be noted that the cost quoted for the cross-sectional surveys includes piloting them, capturing the data and weighing the data. The same is true of the longitudinal surveys, although the cost is higher due to the R100 incentive to be paid to interviewees and the cost associated with tracing and interviewing beneficiaries in their homes, rather than at the workplace.

The following assumptions are made in relation to the cross-sectional surveys:

- There will be very few for the social sector in 2004/05 (as only the job opportunities of a 12 month duration will be sampled and only if they've been in place for at least 6 months);
- The number for the infrastructure sector remains uncertain, but is based on the sample frame discussed in section 4.1; and
- The full sample frame for the environmental sector will be subjected to surveys in 2004/05 as they will all be implemented during this period, given that it is not a new programme.

Critically, while it is essential that 1% of beneficiaries are interviewed over the 5 year period that the EPWP is being rolled out, it is difficult to determine when the interviews will take place as the pace at which the roll-out occurs cannot be known with any certainty at this stage. The same is true of the longitudinal surveys. It is therefore recommended that the **surveys** are treated as a **variable cost** and the **analytical work** as a **fixed cost** in terms of the contractual conditions and payment of the service provider.

Table 20: Summary of Cost Estimates for the Evaluation Framework, Assuming that 1% of Beneficiaries are Interviewed in the Cross-sectional Survey and 0.5% in the Longitudinal Surveys

	2004/05	2005/06	2006/07	2007/08	2008/09	TOTAL
Cross-sectional Surveys						
Infrastructure	R 592,500	R 1,380,000	R 1,605,000	R 1,605,000	R 825,000	R 6,007,500
Environmental	R 245,000	R 245,000	R 245,000	R 245,000	R 245,000	R 1,225,000
Social	R 120,000	R 430,500	R 258,000	R 285,000	R 315,000	R 1,408,500
Longitudinal Surveys						
Infrastructure	R 633,500	R 1,267,000	R 1,900,500	R 1,583,750	R 950,250	R 6,335,000
Environmental	R 256,200	R 256,200	R 256,200	R 256,200	R 256,200	R 1,281,000
Social	R 0	R 352,800	R 588,000	R 823,200	R 588,000	R 2,352,000
<i>Sub-total Surveys</i>	<i>R 1,847,200</i>	<i>R 3,931,500</i>	<i>R 4,852,700</i>	<i>R 4,798,150</i>	<i>R 3,179,450</i>	<i>R 18,609,000</i>
VAT	R 258,608	R 550,410	R 679,378	R 671,741	R 445,123	R 2,605,260
TOTAL VARIABLE COSTS	R 2,105,808	R 4,481,910	R 5,532,078	R 5,469,891	R 3,624,573	R 21,214,260
Analytical Component of Surveys						
Questionnaire Design x 4	R 168,000	R 0	R 0	R 0	R 0	R 168,000
Analysis of Data - per sector & integrated	R 224,000	R 224,000	R 224,000	R 224,000	R 224,000	R 1,120,000
Report - 1 x per sector & 1 x integrated	R 448,000	R 448,000	R 448,000	R 448,000	R 448,000	R 2,240,000
Case Studies						
Infrastructure	R 220,056	R 220,056	R 220,056	R 220,056	R 220,056	R 1,100,280
Environmental	R 220,056	R 220,056	R 220,056	R 220,056	R 220,056	R 1,100,280
Social	R 146,704	R 146,704	R 146,704	R 146,704	R 146,704	R 733,520
Poverty Impact Analysis			R 282,720		R 282,720	R 565,440
Aggregate Impact Analysis			R 319,200		R 319,200	R 638,400
<i>Sub-total Fixed Costs</i>	<i>R 1,426,816</i>	<i>R 1,258,816</i>	<i>R 1,860,736</i>	<i>R 1,258,816</i>	<i>R 1,860,736</i>	<i>R 7,665,920</i>
VAT	R 199,754	R 176,234	R 260,503	R 176,234	R 260,503	R 1,073,229
TOTAL FIXED COSTS	R 1,626,570	R 1,435,050	R 2,121,239	R 1,435,050	R 2,121,239	R 8,739,149
TOTAL (VARIABLE + FIXED)	R 3,732,378	R 5,916,960	R 7,653,317	R 6,904,941	R 5,745,812	R 29,953,409

Table 21: Summary of Cost Estimates for the Evaluation Framework, Assuming that 0.5% of Beneficiaries are Interviewed in the Cross-sectional Survey and 0.25% in the Longitudinal Surveys

	2004/05	2005/06	2006/07	2007/08	2008/09	TOTAL
Cross-sectional Surveys						
Infrastructure	R 300,000	R 690,000	R 802,500	R 802,500	R 412,500	R 3,007,500
Environmental	R 126,000	R 126,000	R 126,000	R 126,000	R 126,000	R 630,000
Social	R 60,000	R 217,500	R 129,000	R 144,000	R 159,000	R 709,500
Longitudinal Surveys						
Infrastructure	R 316,820	R 633,640	R 950,460	R 792,050	R 475,230	R 3,168,200
Environmental	R 128,240	R 128,240	R 128,240	R 128,240	R 128,240	R 641,200
Social	R 0	R 176,400	R 294,000	R 411,600	R 294,000	R 1,176,000
<i>Sub-total Surveys</i>	<i>R 931,060</i>	<i>R 1,971,780</i>	<i>R 2,430,200</i>	<i>R 2,404,390</i>	<i>R 1,594,970</i>	<i>R 9,332,400</i>
VAT	R 130,348	R 276,049	R 340,228	R 336,615	R 223,296	R 1,306,536
TOTAL VARIABLE COSTS	R 1,061,408	R 2,247,829	R 2,770,428	R 2,741,005	R 1,818,266	R 10,638,936
Analytical Component of Surveys						
Questionnaire Design x 4	R 168,000	R 0	R 0	R 0	R 0	R 168,000
Analysis of Data - per sector & integrated	R 224,000	R 224,000	R 224,000	R 224,000	R 224,000	R 1,120,000
Report - 1 x per sector & 1 x integrated	R 448,000	R 448,000	R 448,000	R 448,000	R 448,000	R 2,240,000
Case Studies						
Infrastructure	R 220,056	R 220,056	R 220,056	R 220,056	R 220,056	R 1,100,280
Environmental	R 220,056	R 220,056	R 220,056	R 220,056	R 220,056	R 1,100,280
Social	R 146,704	R 146,704	R 146,704	R 146,704	R 146,704	R 733,520
Poverty Impact Analysis			R 282,720		R 282,720	R 565,440
Aggregate Impact Analysis			R 319,200		R 319,200	R 638,400
<i>Sub-total Fixed Costs</i>	<i>R 1,426,816</i>	<i>R 1,258,816</i>	<i>R 1,860,736</i>	<i>R 1,258,816</i>	<i>R 1,860,736</i>	<i>R 7,665,920</i>
VAT	R 199,754	R 176,234	R 260,503	R 176,234	R 260,503	R 1,073,229
TOTAL FIXED COSTS	R 1,626,570	R 1,435,050	R 2,121,239	R 1,435,050	R 2,121,239	R 8,739,149
TOTAL (VARIABLE + FIXED)	R 2,687,979	R 3,682,879	R 4,891,667	R 4,176,055	R 3,939,505	R 19,378,085

5. IMPLEMENTATION OF THE EVALUATION FRAMEWORK

Given the scale and complexity of the EPWP and the fact that implementation commenced in April 2004, it is essential that arrangements are made forthwith to contract a service provider to undertake the evaluation.

It is recommended that the EPWP office puts the implementation phase out to tender as a matter of urgency. It is further recommended that the entire framework is awarded to a single institution or consortium to ensure that there is overall management of the research and reporting in order to safeguard against a fragmented approach that fails to yield a comprehensive and integrated evaluation. Critically, the framework is designed to yield an integrated and in-depth valuation by combining elements of the various techniques in the different evaluation categories and measures. The risk of a biased or technically flawed evaluation associated with a single service provider could be mitigated by putting in place a highly competent reference group that includes sector experts, employment experts and monitoring and evaluation experts.

As the costs will depend substantially on the number of surveys to be conducted, which at present cannot be known with any degree of certainty, it is recommended that while the contract is awarded to a single institution or consortium for the full period (i.e. 5 years) that the budget is allocated on an annual basis so that it can accommodate changes in the implementation strategies of the different sectors as the EPWP is rolled out. Notably, the economic sector has not been included as the sector plan was not anywhere close to completion at the time of writing.

Furthermore, if the EPWP is to effectively manage the budget for the evaluation process without compromising its quality, it is recommended that the number of surveys conducted is treated as a variable cost and the preparation of questionnaires, analysis of data and writing of reports as a fixed cost.

It is imperative that the various implementing departments agree to put in place structures to develop benchmarks against which the quality of the assets and services provided within the framework of the EPWP can be assessed. The social sector has identified this as a priority, but no mention is made of it in the other sector plans. If quality assessments are to be objectively undertaken, external sector experts will have to be appointed, which will have budgetary implications.

It is also vital that the EPWP office meets with Stats SA as a matter of urgency to ascertain whether they can include questions on the EPWP in their Labour Force Surveys, commencing in September 2004.

Finally, in terms of the process of implementing the evaluation framework it is recommended that an interdepartmental forum is established to serve as a one-stop channel of communication between the researchers and government departments. This will serve to streamline the consultation process and ensure that all relevant departments are informed of activities in the sphere of evaluation.

6. CONCLUSION

This document has outlined a comprehensive and integrated framework for evaluating the economic impact of the EPWP on employment and poverty. In order

to assess its efficacy as a policy instrument to alleviate unemployment and poverty, it is essential that it is implemented within the first quarter of the 2004/05 financial year.

Undoubtedly, a number of additional consideration and areas that require evaluation will come to light as the EPWP is rolled out. It is therefore essential that the approach to the framework is flexible to allow for their inclusion. Critically, the need for the various aspects of the framework should be re-evaluated once the possibility of capturing beneficiaries of the EPWP through the labour force survey is ascertained and the extent to which they are captured is verified.

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APPENDIX A: TERMS OF REFERENCE FOR THE STUDY

1. OBJECTIVES AND SCOPE OF THE PROJECT

The EPWP is defined as a nation-wide programme that will draw significant numbers of the unemployed into productive work, so that workers gain skills while they work, and increase their capacity to earn an income. The overarching objective of the project is therefore to develop a framework to assess whether these broad targets are met as the programme is rolled out over the next five years.

Given the complex institutional framework within which the EPWP will be implemented and the broad spectrum of targets, the initial objective is to develop a *framework* for monitoring and evaluating the programme. This will include an assessment of the frequency with which the programme should be evaluated. Later phases will involve the actual monitoring (which will take place on an ongoing basis) and evaluation (which will take place on a periodic basis, probably annually).

Given that the ultimate objective of the EPWP is to alleviate household poverty by providing short-term job opportunities to a target group, the scope of the monitoring framework will include:

- The number of jobs created and the characteristics (race, gender, age, spatial location and educational attainment) of the beneficiaries;
- The adequacy of budgetary allocations made to this programme and whether they are being spent, which will be sourced from National Treasury, who collect this information on an ongoing basis;
- Whether training is being provided and the nature of such training;
- Whether the Code of Good Practice for Special Public Works Programmes is being adhered to; and
- The quality and cost of the goods and services provided.

While the framework for monitoring the EPWP will focus on the extent to which the programme is being rolled out in line with the targets set by government, the scope of the *evaluation* framework will be designed to assess the broader social and economic impact of the EPWP. The following are examples of the kind of indicators that will be developed to evaluate the programme:

- An evaluation of the 'target group' as defined by Government and whether it should be expanded or more narrowly defined;
- An assessment of the extent to which the job opportunities alleviate and alleviate household poverty and vulnerability;

- An assessment of the skills acquired by beneficiaries and their orientation to the world of work;
- An evaluation of the training modules provided, in particular, whether they enhance entry into the mainstream labour market once beneficiaries exit the programmes;
- An assessment of the extent to which beneficiaries are absorbed into employment once they exit the programmes;
- An evaluation of the capacity of the 3 tiers of government to meet the targets set at the national level;
- An evaluation of the multiplier effects arising from the procurement of goods and services essential to implement the programmes (such as materials, machinery and training providers) and the income transferred to the beneficiaries;
- An assessment of the quality and cost-effectiveness of the infrastructure and services provided by the EPWP, including the extent to which they target priority areas in relation to basic needs;
- An evaluation of the cost to government per job created, disaggregated by programme, which will be benchmarked against national and international best practice; and
- The impact of the EPWP as a policy response to South Africa's unemployment crisis.

Ultimately, the monitoring and evaluation framework should be able to identify constraints to implementation and errors in the design of the EPWP so that they can rapidly be addressed as the programme is rolled out.

2. METHODOLOGY

The methodology for developing a monitoring and evaluation framework essentially entails the identification of indicators and the design of systems to capture information that can then be subjected to more in-depth analysis. Developing this framework will entail 4 phases, which are outlined below.

Phase 1: Review of Secondary Data and Literature

During this phase local and international data and literature will be reviewed. The objective is two-fold: to identify international best practice and benchmarks and to assess current practice in South Africa. The latter will focus on monitoring and evaluation practices in existing PWPs in order to assess the capacity of the 3 tiers of government and the systems currently in place for undertaking monitoring and evaluation.

Phase 2: Development of a Monitoring and Evaluation Framework

This phase will involve the development of practical and cost-effective processes to facilitate the ongoing monitoring and evaluation of the EPWP.

A system for information gathering to underpin the monitoring of the EPWP will be developed in consultation with relevant government departments. The guiding principles will be simplicity, flexibility and, as far as possible, the utilisation of systems that are already in place across the implementing bodies. In order to canvass the views of those that will be responsible for monitoring the programme and collecting data for the purpose of evaluation, DPW will facilitate a workshop with representatives from the following government departments:

- Department of Public Works
- National Treasury
- Department of Labour
- Department of Environmental Affairs and Tourism
- Department of Transport
- Department of Water Affairs and Forestry
- Department of Provincial and Local Government
- Department of Agriculture
- Department Trade and Industry
- Department of Health

In addition, a few select personal interviews will be conducted with experts in order to assist in the design of a cost-effective and practical framework that is aligned to existing information management systems within the various tiers of government.

As the evaluation of the programme should be independent of the implementing institutions, the instruments that will be used to evaluate the EPWP will also be designed in this phase. They will include surveys, case studies and a conceptual framework for the analysis of data and information collected by the various government institutions.

APPENDIX B

THE EVALUATION OF PUBLIC WORKS PROGRAMMES: A LITERATURE REVIEW

This paper reviews domestic and international literature on evaluating public works programmes, from both a conceptual and practical perspective. Its purpose is to provide a background, and identify international best practice, for the evaluation framework developed for the EPWP.

The paper is divided into two distinct parts. Part 1 focuses on the origins, context and objectives of public works programmes, while part 2 examines different evaluation methodologies and techniques to measure the performance and impact of public works programmes.

PART 1: CONTEXT AND OBJECTIVES OF PUBLIC WORKS PROGRAMMES

1. Introduction

This part comprises six sections. Section 2 examines the role of public works programmes as policy instruments to achieve different outcomes in different contexts. In section 3 the role of public works programmes as an element of active labour market policy is explored. Section 4 then highlights the key objectives of public works programmes. Programme design and implementation are discussed in section 5. The expanded public works programme (EPWP) is then located within international literature in section 6.

2. Public Works Programmes as Policy Instruments

Public works programmes have long been in existence in both developed and developing countries. They were initially introduced as intervention strategies in crisis situations such as famine and drought. Indeed, in the UK, they were commonly known as anti-famine programmes. Their main aim was to mitigate the consequences of the famine. "Large-scale works, including soil erosion, irrigation and afforestation were undertaken in the United States, the UK and continental Europe. In Germany, the construction of 'Autobahns' was initiated as anti-cyclical public works" (Keddeman 1998:3). The Inca Temples in Latin America and the pyramids in Egypt were among the first public works programmes.

In most parts of the world, particularly in OECD countries, interest in public works programmes was renewed during the Great Depression of the 1930s. During this period, public works programmes were seen as key policy instruments to revive and accelerate the recovery of the market-based and transition economies. In the 1950s and 1960s, most public works programmes were facilitated by the International Labour Office (ILO) and the Washington-based institutions, the International Monetary Fund (IMF) and the World Bank, as development strategies to deal with both the adverse consequences of structural adjustment and the transition of centrally planned economies to market-based economies. Consequently, ILO and World Bank-sponsored public works programmes have been widely implemented in

developing countries, particularly in sub-Saharan and Southern Africa, as poverty alleviation measures.

The purpose, scope, content, design and implementation of public works programmes vary from country to country and are highly context-specific. In developed economies, public works programmes are more geared to the most vulnerable groups in the labour market, the long-term unemployed. In these economies, public works programmes have been viewed and designed as an appropriate policy tool redress long-term unemployment. In contrast, in developing countries, the central objective of public works programmes is to alleviate poverty by creating direct employment for the poor. (Derjadin 1996; Meager and Evans 1997; Keddeman 1998; Chapple 1999; Pierre 1999; Larsen 2000; Gaude *et al.* 1984; Gaude *et al.* 1987; Chirwa *et al.* 2002).

It was in the 1970s that public works programmes in developing countries, in Africa and Asia in particular, were firmly integrated into mainstream policy instruments (Derjadin 1996). Special public works programmes undertaken in the rural settings of the developing countries included implementation of labour-intensive employment projects in the following manner (Gaude *et al.* 1984:203):

- Soil conservation: reforestation, other forest protection works – such as village demonstration woodlots – and erosion control;
- Roads: construction, repair and maintenance of village access and feeder roads and similar structures such as bridges and submersible rafts;
- Irrigation and water supply: land development (for example, earthworks, clearance), small irrigation canals, small hillside dams, flood control and land reclamation in swamp areas, spring catchments, wells, storage, etc.;
- Social infrastructure: low cost rural housing, dispensaries and schools.

During the late 1980s and mid-1990s, developing countries in sub-Saharan and Southern Africa including Zimbabwe, Botswana, South Africa, Burkina Faso, Burundi, Rwanda, Malawi, Cape Verde, Ghana, Mali, Ethiopia, Uganda, Nepal and the United Republic of Tanzania implemented most of these types of special public works schemes as policy measures to alleviate poverty (Gaude *et al.* 1987; Keddeman 1999; Pierre 1999; McCutcheon 2001; Chirwa *et al.* 2002; Adato and Haddad 2002; McCord 2003).

3. Public Works Programmes and Active Labour Market Policy (ALMP)

It is necessary, at the outset, to locate public works programmes within an array of passive and active labour market policies. Active labour market policy (ALMP) is an important complement to passive labour market policy in redressing unemployment in developed economies.

It is argued that the increasing levels of unemployment in the 1970s and 1980s have led both the public and academic debates to focus largely on passive labour market measures. During this period, most OECD countries recorded low levels of economic growth leading to massive unemployment. Consequently, the focus of debate was on unemployment benefits as an appropriate intervention strategy. However, this approach has been criticised on the grounds that it discourages the unemployed

from actively searching for employment. It is said that unemployment benefits increase voluntary unemployment as the unemployed decide to be more selective, frequently rejecting job offers or not searching at all. Consequently, active labour market measures have become central to the reduction of long-term unemployment in the OECD countries (Kraft 1998).

Unlike passive labour market policy, active labour market policy is a deliberate policy intervention that induces labour market participation for the most disadvantaged and excluded segments of the population, particularly the long-term unemployed. This form of labour market measure improves the prospects of employment for disadvantaged people through the provision of wage subsidies to employers, training programmes and other policy measures such as public works programmes that geared to employment creation. (Keddeman 1998; Kraft 1998; Chapple 1999; Pierre 1999; McCutcheon 2001, Adato and Haddad 2002; McCord 2003).

Public works programmes are therefore one category of policy intervention measures within a framework of active labour market policy (ALMP). The main aim of ALMP is to address the social and economic exclusion of the long-term unemployed in the labour market. In addition to public works programmes, there are four broad categories of ALMP that aim to improve the functioning of the labour market (Chapple 1999; Pierre 1999):

- Vocational/labour market training
- Direct job creation
- Job brokerage/placement services
- Job search and career counseling

Table 1 categorises these ALMPS as demand-side and supply-side labour market interventions.

Table 1: Active Labour Market Policies – Measures and Role Players

Measures	DEMAND-SIDE		SUPPLY-SIDE		
	DIRECT CREATION	JOB WORKS	JOB BROKERAGE/ PLACEMENT SERVICES	VOCATIONAL/ LABOUR MARKET TRAINING	JOB TRAINING AND CAREER COUNSELING
Instruments	1.Public Works Programmes 2. Wage Subsidies		1. Public employment services 2.Private employment agencies 3. Placement Centres at Universities, Technical Colleges and Secondary Schools	1. Skills development programmes	1.Public Labour Centres (DoL) 2. Career guidance at schools 3. Student counselling services at tertiary educational institutions.

In OECD and transition economies, ALMPs are the principal means of dealing with unemployment, particularly the long-term unemployed. In the US and Britain, ALMPs have generally been referred to as welfare to work and work programmes. In developed countries, ALMPs have become a dominant strategy to enhance the prospects of employment of long-term unemployed people by stimulating the demand for the labour of such disadvantaged groups. In addition to direct job creation, the long-term unemployed's prospects of finding work in the labour market are enhanced by the provision of labour market training. Labour market training supplies and equips the long-term unemployed with the appropriate skills which then increase their participation, productivity and prospects of finding employment.

ALMP measures ameliorate the social and economic situation of the marginalised long-term unemployed by integrating them into the mainstream labour market economy. In short, ALMP aims to make unemployment a less difficult experience for the long-term unemployed (Derjadin 1996; Meager and Evans 1997; Pierre 1998; Keddeman 1999; Chapple 1999; Ravallion 1999; Adato and Haddad 2002; McCord 2003).

The success of ALMP in alleviating unemployment is contingent on the effective interplay between demand-side and supply-side policies. Evaluation studies of the performance ALMP indicate that if the supply of labour exceeds demand, competition is created in the labour market. It is also argued that job subsidy schemes aimed at the most disadvantaged groups in the labour market may at times have particular complex and contradictory effects on the rest of the population (Pierre 1998; Chapple 1999; McCord 2003). These include deadweight loss, substitution effects and displacement effects (Pierre 1998:4):

- *Deadweight loss*: this loss exists because a certain proportion of the hiring that takes place under the programme would have taken place anyway.

- *Substitution effect*: jobs created as a consequence of an ALMP may replace jobs for other categories of workers. These problems are present when the additional principle (any created job should be a new one) is not imposed.
- *Displacement effect*: firms which benefit from an ALMP measure subsidies may gain competitive advantage in the product market and increase their share of the market at expense of other firms which may have to dismiss workers.

These offsetting impacts are discussed in some detail in part 2. They are a critical conceptual framework for measuring the impact of ALMPs as they directly address the market distortions which such measures may cause.

4. Objectives of Public Works Programmes

Public works programmes encompass multiple objectives. However, as noted earlier, employment creation and poverty alleviation are central objectives. These programmes “can act as a shock treatment, creating a substantial number of mainly unskilled jobs for the totally unemployed or those underemployed part of the year. These programmes assist populations to cope with emergency situations such as in times of disasters (floods, drought) and acute political and social crises” (Derjadin 1996:2). Four main objectives of public works programmes are identified. These include job creation, poverty alleviation, skill formation and asset creation.

4.1 Job creation

As alluded to earlier, direct employment creation is the central and immediate objective of public works programmes the world over. It is the target group that differs across developed and developing countries. The jobs are typically created through labour-intensive production techniques. Direct job creation schemes of public works programmes provide the targeted groups with some form of direct wage employment. Labour-based employment creation is usually generated through the implementation of public works projects in (among others) infrastructure, environmental and agricultural sectors (Gaude *et al.* 1984; Derjadin 1996). Derjadin (1996) argues that infrastructure is a major economic sector in least developed countries, where it accounts for a high proportion of donor funding, government expenditure and GDP. This consequently enhances the capacity and potential of labour-intensive public works projects as an employment/income-generating or poverty alleviating strategy.

4.2 Poverty alleviation

Public works programmes alleviate poverty by means of direct and indirect transfers. Direct transfers are in the form of wages transferred to the programme participants. Direct income is said to improve the consumption levels and the quality of life of the participants thus alleviating poverty. Evaluation studies of the performance of public works programmes indicate that two South Asian countries, India and Bangladesh, are widely viewed to have been successful in implementing poverty alleviation schemes that benefit the poor.

India's Maharashtra Employment Guarantee Scheme (EGS) was implemented in the mid-1970s as a statutory programme and is by far the single largest poverty alleviation programme ever designed by any state in India. This programme "provides unskilled labour on small scale rural public works projects, such as roads, irrigation facilities and re-forestation, at wage rates which are on a par with prevailing agricultural wages" (Ravallion 1990:22).

The EGS is an example of best practice in the use of public works programmes to create employment for disadvantaged segments of the population. This is evidenced by the fact that within seven years of its inception, the scheme rapidly extended to comprise 750 000 persons over the period 1977 to 1983. In 1984 to 1985, it made significant contribution in the alleviation of rural unemployment – gross employment amounting to nearly 180 million person days, representing 3% of total rural employment. By the 1990s, the scheme's capacity to absorb the total unemployed workdays grew tremendously to levels between 10 and 30% (Acharya and Panwalkar 1988; Ravallion 1990; McCord 2003).

Bangladesh's public works programmes (called poverty alleviation schemes) were initially implemented as a response to the 1974 famine. A rural Works Programme (RWP) has, however, been in existence since the 1960s. The assessment of the performance of Bangladesh's Food for Work Programme (FFWP) has also shown that the scheme was able to effectively reach the poor. An evaluation study conducted by the Bangladesh Institute of Development Studies (BIDS) and the International Food Policy Research Institute (IFPRI) found that almost all (96%) of FFWP participants in the sample "had a household income per person below Taka 2500 per year, for which 70% of the rural population would be deemed poor" (Ravallion 1990:25). In this poverty alleviation programme, participants are paid in kind for construction and maintenance of irrigation, drainage and embankment projects.

The impact of wage levels of public works programmes on poverty alleviation has been critically debated. McCord (2003) argues that for the wage level to make a significant impact on household livelihoods, it needs to not only satisfy the basic consumption needs of the poor but also provide a surplus for productive investments. The basic consumption needs would include, for example, food and clothes. Productive investment would include, for example, education, health and social capital. It is argued that the short-term nature and low value transfers of public works programmes tend to only relieve poverty for only short periods of time. Serious attention has to be paid to improving tiny transfers to moderate transfers and to increasing the length of employment. However, precautionary measures must be considered given that the payment of a wage above the prevailing market wage may encourage leakage to the non-poor, thus reducing the impact on poverty alleviation.

Employment insurance and increasing the length of employment for public works programme participants have been identified as important devices to enable the poor to deal with the income shock the wages may induce. However, employment or social insurance can only work if the programme participants have long-term regular employment. In response to the short-term nature of public works projects, it is argued that the standard of living of the poor can be stabilised and improved by

means of seasonal provision of employment. This form of intervention can be short-term, but is counter-cyclical in terms of local labour demand when households are most vulnerable (Devereux 2000; Adato and Haddad 2002; McCord 2003).

4.3 Training and skill formation

One of the goals of public works programmes is to provide the unemployed with formal training and experiential skills. The objective of such training is to enhance their prospects of finding jobs. However, evaluation studies of the performance of public works programmes in South Africa reveal that the impact of training on the livelihoods of participants depends on the following (Bhorat 2001, McCord 2003):

the market demand for skills;
the ability of participants to fund their job search;
mobility and access to capital; and
relevance to self-employment.

The main issue is quality, design and appropriateness of training. It is argued that “the youth are likely to have many decades as labour market participants ahead of them and the mobility to relocate in search of employment thereby increasing potential returns from skills-based training, while for rural, non-mobile female household heads, an identical training investment may be less productive” (McCord 2003:34).

In the long-term, the provision of training is likely to enhance the productivity and economic capacity of disadvantaged communities, thereby enabling them to administer and manage the assets created by public works programmes effectively. The benefits of training does not only accrue to communities, there are also second round benefits to programme participants by, for example, increasing their bargaining power over wages in the labour market. The bargaining power of participants over wages is enhanced by virtue of the minimum direct income, training and experiential skills gained from participating in a public works project (Ravallion 1990; McCord 2003).

4.4 Asset creation

In addition to job creation, poverty alleviation, training and skill formation, the purpose of public works programmes is to (McCord 2003:8):

- Create, rehabilitate and maintain physical assets that serve the basic needs of poor communities and promote broader economic activity; and
- Build the capacity of communities to manage their own affairs, strengthening local government and other community-based institutions and generating sustainable economic development.

Opportunities arising from the creation community assets are usually realised in the long-term. These spin-offs are called indirect or second-round transfers. The issue here is that asset creation will generate multiplier effects which link the poor communities to other markets and amenities. For example, the construction of road

and irrigation schemes can link the remote rural areas with markets for agricultural products.

The rural poor may also decide to take business initiatives that promote community livelihoods as a result of the creation of assets and services. Asset creation in the infrastructure sector can stimulate demand for local labour. Infrastructure projects require ongoing maintenance, which may be executed by creating labour-intensive jobs.

5. Programme design and implementation

Targeting and community participation are identified in the literature as the two most critical aspects in the design and implementation of public works programmes (Gaude 1984; Derrier 1985; Gaude *et al.* 1987; Ravallion 1990; Derjadin 1996; Kraus *et al.* 1998; Larsen *et al.* 2000; McCutcheon 2001; Chirwa *et al.* 2002; Adato and Haddad 2002; Benson 2002; McCord 2003).

5.1 Targeting

Evaluation studies conducted in the OECD countries reveal that some of the public works programmes could not achieve the central objective of creating jobs for the most disadvantaged jobless people because of poor targeting. This was the case in East Germany, where an evaluation study of the effectiveness of public works programmes in increasing the re-employment prospects for programme participants yielded disappointing results.

The programme was introduced in the early 1990s, in order to redress the high levels of unemployment that were a consequence of a profound economic restructuring following unification. The assessment of the impact of these public works programmes found that it did not enhance the employment prospects for programme participants. Instead, the unemployed non-programme participants were more successful in finding regular employment than participants of public works programmes. This was the case because the programme participants were not searching as actively for regular employment as the non-programme participants. The root of the problem seemed to have been the fact that there was no special targeting mechanism to screen the disadvantaged groups.

An evaluation study of South Africa's Western Cape Province Community-Based Public Works Programmes (CBPWPs) conducted by Adato and Haddad (2002) also points to the problem of poor targeting of programme participants. The study found that targeting becomes a problem if the programme has multiple objectives. It was reported that these programmes were not well targeted geographically with regard to the incidence of poverty, unemployment or infrastructure needs. This resulted in a situation where the programme did not benefit the poorest of the poor, despite the fact that jobs were indeed created for the poor and unemployed and even reached women despite local gender bias. This clearly shows how crucial targeting is if public works programmes are to make a significant impact on the quality of life of the intended groups.

Where there has been empirical evidence of effective targeting and successful and impressive poverty-alleviating results in the design and implementation of public works programmes was in two South Asian countries, namely: India and Bangladesh. India's Maharashtra Employment Guarantee Scheme (EGS) proved successful in targeting the poor rural villages and the poor below the poverty line eligible for participating in direct poverty alleviation schemes. Maharashtra EGS' rural poverty alleviation projects were effective in screening the poor even in the richer village where the risk of leakage is large (Ravallion 1990; Bhende *et al.* 1990).

Evaluation studies on the performance of public works programmes indicate that the issue of targeting is still a contested terrain. However, self-targeting has been the most advocated strategy for screening the poor. Self-targeting involves setting the minimum wage below the prevailing market wage level in such a way that the non-poor are discouraged from participating in a public works scheme. In other words, self-targeting may prevent leakage of jobs created to the non-poor. Setting of the minimum wage ensures rationing of employment creation to the targeted groups.

However, the level at which the minimum wage is set has generated debate regarding the impact such a wage level can make on the livelihoods of the programme participants. As noted earlier, the general view is that 'tiny transfers make tiny impacts'. Some commentators on the subject of public works programmes argue that low wage levels tend to limit the poor's spending pattern to consumption needs such as food and clothes than to productive investment in agriculture, social capital (including financial assistance to relatives), education and acquisition of productive assets (Ravallion 1990; Devereux 2000).

The literature points to the fact that relying on the wage as the only mechanism for targeting the poor is inadequate. In certain circumstances, setting the minimum wage rate below that prevailing in a particular locality cannot prevent leakage of jobs to the non-poor. This is particularly the case in a situation where there are high levels of unemployment affecting both the poor and the non- or not-so-poor.

It is argued that in the context of South Africa's unemployment crisis self-targeting on the basis of setting a minimum wage rate is not an adequate mechanism to bring the intended groups within the framework of the EPWP. Therefore, the formulation of a clear policy guideline is necessary if poverty alleviation programmes are indeed to benefit the intended groups. Such a policy guideline may be crucial particularly in the prevention of local corruption, nepotism and lottery methods (Ravallion 1990; Devereux 2000; McCutcheon 2001; Adato and Haddad 2002; McCord 2003).

The efficiency of public works programmes does not only depend on the manner in which such a direct employment creation policy is formulated by policy-makers. The manner in which intended programme participants are represented and given a voice in the programme design and implementation is also critical to the success of public works programmes.

5.2 Community participation

The performance of public works programmes is also dependent on the social and political support gained from the community participants. Grassroot participation in

project design may enhance the targeting mechanism. It can also ensure the sustainability of assets created by public works projects. Consulting intended communities at each and every stage of project design by giving autonomy to local authorities can make programme participants identify assets that may have significant impact on their livelihoods.

Indeed, community participation in processes of project selection and worker selection allows programme participants to develop vested interests and to take ownership of public works projects.

Evidence from an evaluation study of a particular UNDP/ILO-sponsored labour-intensive special public work programme conducted in Rwanda highlights the danger of overlooking community dynamics in the design and implementation of programmes. This Rwandan special public works project neglected community participation in the design of the programme. This rendered the implementation of the project by the central administration ineffective as it met mixed reaction from local populations and their representatives (Derrier 1985:613):

- They found nothing of direct interest to them in works such as the re-forestation of state lands, erosion control and the construction of a dyke across a marsh;
- Apart from the technical difficulties in carrying them out, the planned hydro-agricultural works were viewed with a number of reservations by the waterside communities because of previous failures and the agricultural and land problems they raised;
- While recognising the utility of the road projects, the communities concerned were anxious to know how much they would have to contribute to the works themselves and what their future commitments regarding upkeep would be.

The case of Tshitwe Road-upgrading Project in the Limpopo Province of South Africa also confirms the importance of community involvement in programme design and implementation. This public works programme project did not yield the intended results. “The failure of the programme to produce economic benefits for the participants was attributed to the lack of genuine participation of local communities in selecting assets and priorities for the programme” (McCord 2003:36).

Community participation has also been viewed as a vehicle with which to resolve the problem of gender bias that at times characterises some of the poverty alleviation and employment creation schemes. It is argued that the design and planning of public works schemes, particularly in the infrastructure sector, tend to marginalise women’s interests. Women have been victims of inherent biases in development programmes resulting from social, cultural and economic constraints that characterise gender relations in a society. These are social barriers that prevent women from participating significantly in public works projects.

The manner in which gender differences may be addressed in poverty alleviation schemes is by broadening the scope of women participation in programme design, planning and implementation. This point is of particular relevance in the design of labour-intensive employment in the construction sector where the type of work

created is physically demanding. Physically demanding jobs have generally been thought of as most suited for men than women (Ravallion 1990; Derjadin 1996).

Critical consideration of gender bias in public works programmes is also supported by empirical evidence from a public works evaluation study conducted in the Limpopo Province of South Africa (Duflo 1999). The findings of the study reveal that women tend to spend their income in significant ways that benefit the household than men. In this study it was found that “public works wage transfers received by youth and men had a more limited impact on household welfare than those received by women” (McCord 2003:31).

Grassroots participation may also enhance the quality, appropriateness and design of training provided for programme participants. For example, as noted earlier, the type of training given to youth might not be of significant value to rural female household heads because their training needs are different (Bhorat 2001; McCord 2003).

In addition, the literature demonstrates that the success of public works programmes is to some extent dependent on the manner in which communities are consulted about the projects and supervised. Their participation is important in building rapport between project administrators and local authorities representing the interests of the community as well as ensuring the sustainability of projects.

The argument here is that grassroot participation can shed light on the integration of public works programmes with local development plans/programmes of districts/villages and thus make the activities more permanent. This is to say that district/village development plans (especially rural infrastructure development and housing for the poor) need to include earmarked activities to be undertaken through public works programme. In this way, productive assets created under such programmes will be maintained, thus contributing to the benefits to the community. (Derrier 1985; Gaude *et al.* 1987; Derjadin 1996; Adato and Haddad 2002; Chirwa *et al.* 2002; Benson 2002; Mashiri and Mahapa 2002).

6. South Africa’s Expanded Public Works Programme (EPWPs)

The previous sections have presented the synthesis of the origins, context and purpose of public works programmes. This section locates the EPWP within this discourse. In order to understand the origin of EPWP it is necessary to locate it in a historical context.

The scant literature on the evaluation of public works programmes in South Africa indicates that the implementation of public works programmes has been in existence since the 1980s. Between 1980 and 1994, the success of public works programmes in creating sustainable jobs and alleviating poverty was impeded by unsystematic and uncoordinated programme design and implementation. “Very little sustainable employment was created. The assets constructed were not cost-effective, were of doubtful value and were poorly maintained, and often the end results have disappeared” (McCutcheon 2001:277).

The following are identified as the main causes of failure of such programmes:

- The national, provincial and local institutional capacity building was limited;
- Internal planning, data collection, monitoring and control were severely lacking;
- Independent evaluation was noticeable by its absence;
- Much of the expenditure failed to reach the main target group: the poor;
- Individual skills were not improved; and
- Training, where present, was not appropriate or focused.

In short, between 1980 and 1994, public works programmes did not yield the intended results because of the lack of institutional and management capacity to design and implement them effectively.

In the early 1990's, the creation of labour-intensive employment was firmly endorsed in the election manifesto of the African National Congress (ANC): the Reconstruction and Development Programme (RDP), which embraced participatory and sustainable development to redressing apartheid-created disparities. The purpose of the RDP was to link reconstruction and development through a coordinated national public works programmes (Wohlmuth 1996; McCutcheon 2001; Bhorat *et al.* 2001; Adato and Haddad 2002; McCord 2003).

Following the establishment of the National Economic Forum (NEF) in 1994, the National Public Works Programme (NPWP) set out the following objectives as key to combating structural unemployment and poverty in South Africa (McCutcheon 2001; Adato and Haddad 2002; McCord 2003):

- Alleviate unemployment through the creation of productive labour-absorbing jobs and opportunities for local contractors, through labour-intensive approaches;
- Educate and train those on the programme as a means of economic empowerment;
- Create, rehabilitate and maintain physical assets, clinics, schools, crèches and roads, which serve to meet the basic needs of poor communities and promote broader economic activity; and
- Build the capacity of communities to manage their own affairs, strengthen the local government and other institutions and generate sustainable economic development.

Since the mid-1990s, a number of special public works programmes (SPWPs) have been introduced and piloted in the poor rural and urban communities of South Africa. These included, as set out under Ministerial Determination of 2002: Working for Water, Coastal Care, Sustainable Rural Development, Land Care, Community Water and Sanitation, and Arts and Culture Poverty Relief Projects. These were largely community-based public works programmes financially sponsored by government.

In 2002, following the ANC policy conference in Stellenbosch in the Western Cape Province, in his State of Nation Address in February 2003, President Thabo Mbeki announced the Expanded Public Works Programme (EPWP). Cabinet later approved the conceptual framework of the programme in November 2003 (Philips, 2003).

Like other types of public works programmes, the EPWP is a short to medium-term programme covering all spheres of government and state-owned enterprises. Government's medium to long-term programmes that address unemployment include the following:

- Increasing economic growth;
- Improving skills through education and training; and
- Improving the enabling environment for industry to flourish.

The EPWP will continue to exist until these medium to long-term programmes are successful in alleviating unemployment. The programme involves re-orienting line function budgets and conditional grants in such a way that government expenditure generates more work opportunities for the disadvantaged groups: the unskilled and the poor. EPWP will be funded through a normal budgetary process through the budgets of line function departments, province and municipalities (Social Sector EPWP 2004:10-11).

The EPWP is targeting unemployed, under-skilled and under-qualified people, especially women, youth and the disabled, and aims to provide an opportunity:

- To draw significant numbers of the unemployed into productive work to enable them to earn an income within the first five years of the programme;
- To provide unemployed people with education and skills within the first five years of the programme;
- To ensure that participants in the EPWP are able to translate the experience and either set up their own business/service or become employed; and
- Utilise public sector budgets to alleviate unemployment.

Caution must, however, be exercised to ensure that the EPWP does not displace existing workers and contracts as has happened with other active labour market policy measures in some of the OECD countries.

The EPWP programme aims to create employment in the following four identified sectors:

- Infrastructure sector
- Environmental sector
- Social sector
- Economic sector

Initially, the programme focused mainly on infrastructure and environmentally related work opportunities, but it is now being expanded to the social and economic sectors.

The design and implementation of the various programmes that comprise the EPWP should take cognisance of the experience of similar programmes. Evaluation studies conducted on the performance of community-based public works programmes (CBPWP), reveal that these programmes, have to a large extent, failed to generate

sustainable labour-intensive jobs and to alleviate poverty for the poor because of the following constraints (McCutcheon 2001; Adato and Haddad 2002; McCord 2003):

- Institutional capacity and project management skills at government and community levels;
- Incentives for provincial ministries to use labour-intensive techniques; and
- Skills in the construction industry in labour-intensive techniques.

In the public sector and within communities, the specific key institutional constraints identified include the following (McCutcheon 2001; Adato and Haddad 2002; McCord 2003):

- Lack of project management
- Lack of norms for processes or procedures;
- Inconsistencies between projects (wage, terms of employment, etc.)
- Duplication of effort by different line ministries
- Lack of efficiencies of scale;
- Lack of social development expertise;
- Limited community participation; and the
- Lack of credible Integrated Development Plans to guide asset selection.

7. Conclusion

In conclusion, it is clear from the international literature evaluating the performance of public works programmes that the extent to which public work schemes improve the standard of living of the disadvantaged segments of the population depends on a variety of complex factors arising from the objectives, design and implementation of the programme. To avoid the mistakes of the past, the success of South Africa's EPWP in the creation of sustainable jobs and poverty alleviation for the poor communities will only take place if (McCord 2003):

- A substantially increased proportion of government expenditure is allocated to the programme;
- The institutional constraints in both the public and private sectors are addressed.

The ability of EPWP to achieve its overall objectives will be evaluated as it is rolled out over the next 5 years. Several evaluation studies on the performance of public works programmes have been conducted in different countries worldwide. In such studies, different evaluation methodologies are used. These evaluation methodologies are discussed in the following section of the paper.

PART 2: METHODOLOGIES AND TECHNIQUES FOR EVALUATING PUBLIC WORKS PROGRAMMES

1. Introduction

The previous section provided a background on public works programs, what they are, their purpose, objectives and international experience in designing and

implementing them. This section examines how their impact is assessed or how they are evaluated. It therefore focuses on the methods used to assess or evaluate the impact of public works programmes, particularly on poverty and unemployment. It must be mentioned that internationally there are differences in terms of what evaluation studies assess. This largely depends on what the priority issues are for a particular country but the pattern in differences is also noted broadly between developed and developing countries.

Many public works programs in developing countries have been initiated by the International Labour Organisation (ILO) and often concentrate largely on impacts on poverty and sometimes famine. This is not surprising given the high levels of poverty in many developing countries. In contrast, in many European countries and the US, evaluation studies focus on employment and unemployment given that they are conceived as active labour market policies in a context where unemployment benefits are generous and therefore poverty alleviation does not feature as a policy objective. For example, Martin (1998) identifies unemployment as the major stumbling block in the growth of most Organisation for Economic Co-operation and Development (OECD) economies. For this reason many active labour market policies such as public work programmes are focused on getting the unemployed into the labour market.

It must be noted that employment creation and poverty alleviation are not the only impacts that are the subject of evaluations of public works programmes. Keddeman (1998) also mentions the quality of the assets that are created through public works, development, environmental protection, promoting local level participation and worker's organisations. Indeed, these are principles promoted by the ILO. Another variable frequently evaluated is the relationship between the amount of public expenditure on labour market policies and their success, although this type of evaluation is conducted mainly in OECD countries (Martin: 1998).

This section reviews methodologies used in the literature on evaluation studies in both the developed and developing countries. It commences with a differentiation between micro and macro economic studies and between programme and target oriented evaluation research to provide a perspective of the range of evaluation methodologies used around the world. Surveys, longitudinal studies, case studies and aggregate impact analysis are then discussed in some detail as evaluation techniques.

2. Types of Evaluation Studies

The purpose of any evaluation study is to assess the impact of a policy measure on one or a number of objectives. In the case of the EPWP, the purpose is to measure its impact on employment and poverty. There are different methods which have been employed to evaluate the impact of public works programs. Two broad categories of evaluation studies are identified in the literature. The first are microeconomic studies which try to evaluate the impact of a programme on the individual⁸. The second are

⁸ For example Kraus et al (1998) assessed the re-employment probabilities of participants following a program into the East German labour market. The second example is provided by Fay (1996) on a

macroeconomic studies which evaluate the aggregate impact of programs on unemployment and earnings (Fay: 1996, Martin: 1998). These studies therefore measure the net-impact of a programme on employment or earnings. This is done by estimating deadweight loss, substitution and displacement effects.

Net impact = gross impact – deadweight loss – substitution effect – displacement effect.

Deadweight refers to a situation where the impact would happen without the program intervention anyway. An example would be whether an unemployed person entering employment after participating in a programme or undergoing training would have found the same job without these interventions anyway.

The **substitution effect** on the other hand takes place when the effect of a measure is at the expense of a non-target group. For example, a participant in a programme finds employment which would have otherwise been found by another person. The

Displacement effect refers to a situation where the programme's effect displaces non-participants in the market i.e. distorts the market. For example, employment of a program participant leads to a job loss of a non-programme participant elsewhere. Another example could be where the establishment of a subsidised firm leads to the closure of a competing non-subsidised firm in the market.

Another way in which evaluation studies are differentiated is between programme and target oriented evaluation studies. Programme oriented evaluations try to measure the impact of a single policy instrument or programmes against set objectives (Evans and Meager: 1997). This approach has been criticised for being expert driven and top down, in a sense that it does not consider impact from the view of those affected. An example of this approach would be a study conducted in Sweden which examined the impact of vocational training on employment probability after programme participation (Fay: 1996).

Target oriented evaluation studies, on the other hand, attempt to measure the impact of a number of policies on particular targets. In other words they evaluate a combination of different policy interventions and how they impact on those who participate in them. This approach evaluates policy impacts from the viewpoint of agents, that is, it is a bottom-up approach. A good example of this approach is again in Sweden which examined the types of active labour market programmes best suited to increase an individual's potential employment opportunities (Agell: 1995). Four labour market programmes were evaluated within this framework including training, replacement schemes, job introduction projects and relief work.

study in Norway which examined the probability of those in training getting a job approximately one year later after following participation in a program.

3. Evaluation Techniques

In the context developing an evaluation framework for the EPWP, evaluation techniques should be identified on the basis of their efficacy in measuring its impact on alleviating unemployment and poverty. The literature demonstrates that different techniques are utilised to evaluate different programs depending on the context and a variety of other factors including costs and institutional capacity.

3.1 Surveys

The most common surveys used in evaluation studies are participant surveys. They can be administered to implementing agents of programmes, employers or contractors, workers, community organisations and government officials. Participant surveys cover a number of general issues including programme costs, the infrastructure needs of the community in which the programme is implemented, employment and unemployment, sources of income, education, healthcare and other related issues.

These surveys are often useful in collecting data on large or many projects in a particular area or country. The World Bank used a survey in its study assessing the impact of rural roads projects in Vietnam. Similarly in Bangladesh surveys were used to assess the impact of several projects including Kutcha roads project, derelict tanks, irrigation channels and culverts project (Hossain and Asaduzzaman: 1983). Participant surveys can be undertaken before and or after programme implementation.

One of the disadvantages of surveys is that they do not allow for an understanding of the three major offsetting impacts discussed earlier including deadweight, substitution and displacement effects. Their main disadvantage though is that they are limited because they do not have non-programme participants and non-programme areas to compare with participants or participating areas to evaluate programme impact. Longitudinal surveys incorporate this element and they are discussed in the next section.

3.2 Longitudinal studies

The purpose of longitudinal studies is to track participants of a programme over time in order to measure the long-term impact of the policy intervention. In the case of active labour market policies, the extent to which programme participants find employment after exiting the programme is the key area that is evaluated. In order to effectively measure the impact of the policy intervention on the employment prospects of participants, they are typically compared to a control group that did not participate in the programme.

There are two types of longitudinal methodologies used in evaluation studies. They differ in the way in which the control group is selected. The first are 'pure random assignment experiments' in which individuals who would like to participate in a program are randomly allocated into a "treatment" group or group that is selected to participate in a program. The second group is allocated into a "control" group or non-

participants in a program. These methods are also known as control group experiments. The second method is quasi-experimental or matched comparison method which is similar to random assignment experiment except that the evaluation takes place ex-post (Meager and Evans: 1998). This means that it also involves a treatment and control group but the control group is created after the program takes place using various data sources⁹.

In the earliest stages of the ILO's public works programmes the most dominant method used was the quasi-experimental approach (Keddeman: 1998). It was recognised among other reasons that the absence of a control group was a shortcoming in evaluation studies. For this reason, there was a shift in the ILO on the methodological approach to impact evaluation studies to pure random assignment experiments which have been dominant since the early 1980s. These methods have, however, been combined in some evaluation studies.

There are also problems with pure random assignment experiments particularly with regard to ethical considerations, their high cost and the potential for bias. These methods are nevertheless still widely used in the USA and Canada but not common in European countries. In Ghana in the Feeder roads improvements study the 'control' roads where no improvement work would be done were dropped (Keddeman: 1998). This was mainly because it would have been unethical to select roads on which no improvement would be undertaken and also that it would not have been practical to expect that no improvements would be undertaken on the control roads for the sake of research.

Tables 2 and 3 provide summaries of the advantages and disadvantages associated with random assignment experiments and quasi experiments respectively

Table 2: Advantages and Disadvantages of Pure Random Assignment Experiments

Advantages

- They are simple to interpret and simple to understand.
- They are relatively accurate in their measure of program impact.
- They are free of selection bias

⁹ A World Bank study used this method to assess the impact of rural roads on poverty in Vietnam (World Bank Case studies: no date).

Disadvantages

- They are costly both because they are time consuming and expensive to implement.
- If opposed they may be difficult to implement especially for political reasons.
- Randomisation bias: when the participant in a program is different from the type of a person who would participate in a program.
- The existence of the experiments itself may influence behaviour as people may wait to seek employment elsewhere until they are eligible for inclusion into the treatment group. They may even seek employment elsewhere as a result that they were not included in the treatment group.
- Substitution bias: when the control group access and participates in a similar program to that of a treatment group.
- Cross over bias: When the control group participants cross over to the treatment group.

Source: Fay (1996: 47)

Table 3: Advantages and Disadvantages of Quasi-experiments

Advantages

- They are typically less costly than random assignment experiments because they use existing data; they only become costly if evaluation has to create a new dataset.
- Unlike random assignment it can measure the mean differences in outcomes and the distribution of outcomes.

Disadvantages

- Provision of numerous estimates from econometric procedures can be confusing to policy-makers hence they can find them difficult to interpret and not easy to understand.
- Comparison group problems: Estimates will be sensitive to how the control group is selected and how closely they match the treatment group. Getting a good comparison may be difficult from general surveys.
- Contamination bias: If for example a comparison group is created from the labour force survey it is difficult to know if the individual underwent training or not (unobservable characteristic) during the program duration.

- Using various datasets to create a control group which must be adapted to the evaluation may be time consuming, costly and not necessarily successful.

Source: Burtless (1993, 1995); Heckman (1993) and Heckman and Smith (1995); OECD (1991) cited in Fay (1996:48).

3.3 Aggregate Impact Studies

The methods used in aggregate impact studies attempt to determine the macroeconomic impact of programmes with the use of general equilibrium models. They use econometric estimates to establish the statistical relationship between the measure's introduction and observed developments in aggregate employment or earnings in a model that allows for the impact evaluation of other variables (Meager and Evans: 1998). This approach can also be used to analyse the macroeconomic impact of active labour market policies such as the inflation – unemployment trade-off. This method is applicable to large-scale programmes. It is the third most popular method in evaluation studies after 'pure' and quasi-experiments methods and has been widely used since the early 1990s¹⁰.

The advantage of this technique is that insofar as reliable aggregate data exist, and the measure is of sufficient scale and duration for the econometric estimations to be meaningful, it arrives at estimates of the full net effects of the programmes. They therefore provide an important complement to the micro-level evaluations, which often exaggerate the impact of active labour market policies because they are unable to adequately assess the impact of deadweight loss, substitution and displacement.

The disadvantage of this approach is that the process by which the policy or programme affects employment remains unknown and the deadweight, substitution and displacement effects cannot be disaggregated. Hence they have to be combined with micro-level evaluation methods.

3.4 Poverty impact analysis

The purpose of this technique is to measure the impact of public works programmes on poverty at the household level. Both the cost-effectiveness of the programmes, in terms of the cost of transferring assets and income to the poor and the dynamic impacts (i.e. the extent to which the programme enables households to move out of poverty over time) are typically evaluated.

In poverty impact analysis a local level questionnaire is typically designed to capture the characteristics of the programme participants and programme characteristics

¹⁰ An example of such a study would be one that estimated the effects of active labour market policies on the job-matching process in the Czech Republic by Boeri and Burdu (1996).

themselves. The data derived from these questionnaires is often merged with household survey data which is used to map out the characteristics of the community or district in which the programmes are implemented. In evaluation studies they will include unemployment levels, household poverty and infrastructure capacity.

A useful technique for measuring the direct and indirect impact of public works programmes on poverty is drawn from a recent study of public works programmes in the Western Cape (Haddad and Adato, 2001), as it is an example of international best practice and has been tested in the South African context. The analytical frame is summarised in Box 1 below.

Box 1: Analytical Framework for Measuring Poverty Impact of the EPWP

Variables:

G = government spending on public works,

W = wage bill to poor workers on public works project,

L = wage bill leaked to nonpoor workers on project,

IB = nontransfer or indirect benefits to the poor, and

$IBNP$ = nontransfer or indirect benefits to the nonpoor.

P^* = the probability of the poor worker getting a job, in absence of project,

P = the probability of a poor worker finding work while working on the project, and

W^* = the wage rate of poor workers in the absence of the project.

The wages earned by poor workers in the absence of the project are P^*W^* . In the presence of the project, poor workers earn $(1-P)W + PW^*$.

The net wage gain to the poor, NW , is

$$(1-P)W + PW^* - P^*W^*$$

or

$$(1-P)W - (P^* - P)W^* .$$

The total benefits to the poor, B , become $NW + IB$, and the total nontransfer or indirect benefits, $SB = IB + IBNP$.

Using these components, we can define

$$\text{labor intensity} = (W + L)/G$$

$$\text{percent of earnings to poor} = W/(W + L),$$

$$\text{the benefit to cost ratio} = SB/G, \text{ and}$$

$$\text{the rands (from government) cost per unit of rand benefit to poor} = G/B.$$

The lower the G/B , the more efficient transfer mechanism the public works project is for the poor, at least in terms of government outlays. In general, one might expect G/B to decline with (1) increased labor intensity (high $(W + L)/G$), (2) improved targeting performance (high $W/(W + L)$), (3) large new wage gains (large NW/W), (4) a large proportion of the indirect benefits to the poor (large IB/SB)

The model essentially tests the efficiency of public works programmes in generating income and assets to the poor. It does this by assessing the net wage (i.e. net of opportunity costs) and assets generated for the poor. The ratio of government expenditure to the benefits transferred to the poor is then the measure of efficiency.

3.5 Case studies

Case study methodology is defined as a method used when examining current events or issues within their real-life contexts where the investigator has little or no

control over the issues being investigated (Yin: 1994). They are a very useful methodology for an in-depth evaluation of the impact of policy measures.

Typically, the researcher conducting the case study will spend extended periods of time with the key actors associated with a programme in order to get insights about whether or not the programme had the desired impact. The second equally important objective is to ascertain why specific programmes failed to have the desired impact.

The disadvantage generally associated with case studies is that they are context-bound and therefore not generalisable. They are also said to be more vulnerable to bias and subjectivity.

4. Conclusion

The central lesson that emerges from the review of international practice with respect to evaluation techniques is that none of the five discussed here adequately capture the full impact of public works programmes alone. Depending on the scale and context of the public works programmes to be evaluated, it is a combination of the techniques that yields a comprehensive evaluation framework. Indeed, in practice a variety of techniques are typically combined and this approach is recommended for the EPWP.

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