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EXECUTIVE SUMMARY

INTRODUCTION

The Department of Finance, with the support of the United Nations Development Programme, commissioned the Phase II of the Development Co-Operation Study involving sector-specific studies and sub-projects. The findings of this study are based on information obtained from primary and secondary research.

FINDINGS

Infrastructure development in context

Most participants in the development field believe they know what infrastructure is. Responses, in line with RDP documents, include: 'investment in social and economic infrastructure: education, health, housing, transport, etc'. It is the 'etcetera' that highlights the problems of definition and perceptions of infrastructure, which differed widely between stakeholders. As a result, government and different donors approach the concept differently – this has consequences for the supply of ODA and the measurement of its impact as expanded upon in the report.

The government recipients of ODA generally view infrastructure as 'hard infrastructure' – the fixed asset or permanent facility ('bricks and mortar'). New schools or classrooms, rural roads, and water pumps are all examples.

Many donors' definition of infrastructure also embraced 'soft infrastructure'. These are the complimentary processes and activities related to infrastructure development, including technical assistance, skills development and training. Such infrastructure-linked activities are very difficult to separate from wider sectoral packages of assistance. This dichotomy proved to be one of the abiding features of the study, and meant that the researchers could only broadly estimate the amount of ODA applied to infrastructure. Clearly then, infrastructure is not a discrete sector but rather a critical component of other sectors.

The type of infrastructure product as an input requirement to meet the ultimate goal of the service to be provided can also vary extensively. Specifications (designs and materials), form, shape and size could differ between infrastructure products servicing the same purpose.

Materials availability, intended (design) life span and technical capacity of future operations of the infrastructure product influence variations in specifications, form and nature of the product. However, the most predominant influences are financial considerations: capital versus maintenance costs; and affordability versus cost recovery.

Infrastructure development is characterised by a number of construction 'unknowns' or risks such as inclement weather, unforeseen geo-technical or ground conditions, and/or structural failure during construction.

This means construction contracts are typified as 're-measurable' as, generally, the extent and ultimate form of the finished product may differ slightly to that originally designed (in theory) and indicated on plans and drawings. Thus, not only may the product and extent/scope of work vary, but also the ultimate cost of such construction contract.

Quantitative assessment of ODA

ODA for infrastructure is generally a component of ODA for a particular sector. Thus, ODA in the health sector is generally for a wide range of activities, of which a small component may include some infrastructure projects such as clinic upgrading. The targeted sector outputs, as opposed to distinct inputs and activities, carry greater importance and are thus far more closely monitored. Detailed information and monitoring of ODA at a particular infrastructure project level within sectors is secondary, thus very little information is available.

Where donors have provided significant focussed aid the form of block grants or loans available for infrastructure (for a particular sector) this aid has used to contribute to larger government funded programmes.

Without detailed tracer studies, it is very difficult to track and monitor how much of this aid has been disbursed into loans, what type of loans and from these, whether the projects (infrastructure) for which some loans have been provided have been implemented and their impact.

Donors have also provided aid to smaller-scale specific infrastructure projects. Such projects, although generally implemented by other agencies (often government departments), are only funded by the aid provided and are thus 'divorced' from broader government funded infrastructure programmes.

Micro-projects are also a standard feature of the EU's programme to promote a people-driven development process. Information and monitoring of these small-scale specific projects is far more extensive. As a consequence of infrastructure definitions and perceptions of infrastructure in the South African context, the focus of most donors is in providing aid in soft infrastructure.

Based on the information available for overall ODA committed to South Africa, the sectors covered by all, or the majority of donors, comprised of education (about 17% of total ODA), SMME/private sector development (about 10%) and good governance/democracy/human rights (about 12%).

These sectors also accounted for a large share of ODA. Other sectors focussed on by at least half the donors included health (about 4% of total ODA), housing and social services (about 8%) and water and sanitation (about 9%).

ODA into hard infrastructure did not follow the same trend. Only a few donors, most notably the EU, UK, USAID and Sweden, indicated that they had provided ODA into hard infrastructure. It could not be determined whether 'hard'

infrastructure aid to such sectors as business, transport and storage, or communications has been made.

The types of aid given to 'hard infrastructure' includes: grants, capital grants and/or soft loans to selected government agencies or departments as 'budgetary support'; revolving/non-repayable loans to parastatals, NGOs and private sector institutions for social projects; and loan guarantees to identified intermediaries, such as financial institutions and NGOs.

Information on the geographical distribution of aid is based purely on secondary research. This research has been questioned and criticised by both donors and government, in terms of the quantification of ODA.

Alignment of ODA to SA priorities

ODA in infrastructure is aligned with government policy because it is by nature supportive of other activities in other sectors. The impact of ODA in infrastructure is influenced by other factors such as the tension between local political imperatives/wishes versus rational allocation of funds to infrastructure projects and hence ODA to these infrastructure projects.

Investment in infrastructure, particularly addressing backlogs in previously disadvantaged areas, is still a priority for government and is deemed crucial for the achievement of its reconstruction and development aims.

The MTEF to year 2000 reflects lower capital spending to accommodate rising pressures on current spending within the provincial budgets. A major influencing factor is public private partnership projects and capital programmes of parastatals are increasingly replacing the direct spending on infrastructure on government budgets.

The trend is to reduce direct government capital investment into infrastructure, but this is compensated by an anticipated increase in private sector investment. To promote an even spread of infrastructure development to address, not only backlogs on economic growth, but poverty alleviation as a whole, a programme of focussed Spatial Development Initiatives (SDI) is now being undertaken by government.

The SDI's, driven by the Departments of Trade and Industry and Transport, address the spatial distortions of the apartheid era. With the economy moving to an export orientation from the import substitution phase, expanded and new investments were more likely to occur at the coast. Infrastructure and human resources and communications had to be improved.

There are four main SDI objectives:

- ◆ Export orientation and earning foreign exchange
- ◆ Sustainable job creation
- ◆ Better utilisation of existing infrastructure and resources
- ◆ Broadening the ownership base of the economy to small and medium entrepreneurs, farmers and fisher folk

Thus, the trends in infrastructure investment by government are converging, as opposed to diverging, to the broader development approach adopted by donors. This is evidenced in the recent re-alignment of the Community Based Public Works Programme undertaken by the Department of Public works.

The major policy shift in the realigned CBPWP was to move from working through provinces as implementation agents to using district councils. Communities are encouraged to identify projects.

An area of concern that emerged from interviews, particularly with government recipients of ODA, is that of technical assistance. Government arguments against technical assistance are that:

- ◆ The current technical capacity in the private sector in South Africa is sufficient, thus not necessitating technical assistance from donor countries.
- ◆ The beneficiaries of the technical assistance, generally government appointed counterpart, are either ill-equipped or are not appointed at all by government.

Given the nature and practices that exist in infrastructure development at a project level, particularly tensions between sector aims and practitioner imperatives, far more focus and attention to such areas at a project level is required. An argument thus exists that perceptions of problems exist in technical assistance provided by donors may be attributable to how and where such technical assistance is applied as opposed to it not being necessary. A NEDLAC evaluation of the CBPWP identified a number of 'capacity shortcomings':

- ◆ Lack of co-ordination among different departments involved in infrastructure delivery.
- ◆ Monitoring was the weakest aspect of the programme.
- ◆ Lack of capacity of provinces to implement projects and monitor at the same time (provincial departments at this stage were implementing agents).
- ◆ Limited instances of financial mismanagement.

Equity and impact of ODA

It is generally accepted that economic spin-offs (multipliers) emerge from infrastructure investment. Many international studies indicate that a strong association exists between the availability of certain infrastructure – telecommunications (in particular), power, paved roads and access to safe water – and per capita GDP.

Based on the following two global indicators, the tremendous efforts by government and donors alike has not resulted, as yet, in a significant positive impact on equity and poverty alleviation in the country.

- ◆ South Africa's current Gini co-efficient (indication of unequal distribution of income) still ranks as one of the highest in the world.
- ◆ Only small improvements in the poverty rates of some of the poorer Provinces, being Free State, Kwa-Zulu Natal, North-West and Mpumalanga, have been achieved.

The consequential disappointing impact of infrastructure development (whether as a direct result of ODA or government intervention), based on global indicators in the country on poverty can well be attributable to:

- ◆ The lack of a coherent national planning urbanisation policy in all tiers of government, to adequately address historical spatial inequalities.
- ◆ The consequence of no planning is the lack of a clearly defined monitoring process.
- ◆ Until two years ago few government line departments or provincial government departments had considered the *spatial implications* of large investments in housing, in land reform, in provision of water supply schemes or health and education facilities. None had mapped where their interventions fell in space.

Infrastructure development, at a project level, has tangible and immediate positive impacts with regard to employment/job creation and local multiplier effect. The duration of these jobs is temporary, usually for the duration of the construction project. Different types of infrastructure have differing impacts on jobs and job creation.

Based on differing assumptions about the ratio of materials to labour, BIFSA generated scenarios about the components of construction that relate to differential skills. By weighting skills, BIFSA conclude that 27,6 jobs are created for every R1 million spent in the construction industry.

Assuming that the ODA into infrastructure development for the period 1994 to 1999 is around R1,6 billion (see section 3.2) then based on BIFSA's indicators, some 8 500 jobs (for five years) have been created. Given than BIFSA's indicators are not linked to man-days, it is possible to interpret the above investment as resulting in about 44 000 new jobs for limited duration.

In addition to construction related job creation, economic multipliers (at a project level) to be considered are small business promotion (SMME's), training (capacity building) and direct environmental implications.

The problems encountered with the definition of infrastructure mean there is no basis upon which to assess the impact of ODA in infrastructure. Infrastructure ODA is disbursed in various ways through government controlled programmes and projects or donor supported pilot projects undertaken by other implementing agencies. It is thus extremely difficult to extract or identify the specific ODA components of such programmes or projects.

For instance, it can be established that ODA (from the EU) of about R27 million was committed directly to the CBPWP. However, the EU also committed about R197 million to the National Development Agency and R29 million for the support, planning and monitoring of RDP projects. The latter two overlap, to some extent, in activities either undertaken as part of or separately of the CBPWP. Thus, the proportion of total aid to the CBPWP is not easily determined. But the impact of ODA has been positive in respect of:

- ◆ **Short term job creation:** The CBPWP has created almost 150 000 days of employment to 1999 through a total of 1 112 projects. Proportionally, ODA would account for about 15% of this.

- ◆ **Training:** About 23 000 people received training through the projects (40% were women and 17% youth).

A recent evolution of the CBPWP estimated that, in the first two years of existence (1995-97), the programme reached 515 000 households, with roughly 4,5 million people benefiting from the structures which were created.

Sustainability

Sustainability of ODA infrastructure projects underway or completed during the investigation period has been analysed in terms of technical and financial sustainability.

From particularly primary research, technical sustainability is generally considered to be that of:

- ◆ Infrastructure serves a functional purpose.
- ◆ The implementators or operators of such infrastructure have the technical capacity to perform such operations.
- ◆ Technical capacity of operators to maintain the infrastructure.

The Community Based Public Works Programme (CBPWP) is an illustrative example. Until 1998, schools, pre-schools and community halls accounted for over 68% of all projects. Water supply accounted for 13%, roads (in rural areas) 12%, mixed projects 6% and sanitation 1%. Priority was given to fast-tracking projects, and projects easily implemented were favoured. Thus, for the first few years, projects were not really considered in terms of the functions they were expected to serve:

- ◆ roads for improved accessibility and terms of trade;
- ◆ labour saving (water supply);
- ◆ improved human capital (schools);
- ◆ meeting specific basic needs (eg a school in an area where there is a shortage of schools).

All infrastructure projects, one would argue, should be financially sustainable if the end product performs its functional use and makes its anticipated impact on the target community. A significant lack of internal monitoring and evaluation of such infrastructure projects/physical assets by respective government line departments and donors means it is difficult to assess the financial sustainability of infrastructure projects.

The following items in respect of financial sustainability must be mainstreamed into infrastructure project packaging, design and structuring:

- ◆ escalation capital versus maintenance costs (a simple comparison of cost of finance versus required annual maintenance costs for the life of the project);
- ◆ short, medium and long-term capacity requirements versus cost of finance, and short, medium and long-term maintenance requirements;
- ◆ cost recovery mechanisms and affordability versus the physical asset.

Institutional appraisal

Although alignment of ODA in infrastructure, in general, is consistent with government priorities, it appears institutional arrangements are problematic. Problems include:

- ◆ Donors claim government intends to 'control' ODA at a national level and allow the aid flows to form part of the respective intergovernmental transfers.
- ◆ Donors inability to engage government as a co-ordinated entity.
- ◆ The establishment of dual institutional arrangements, to accommodate the wishes of government and donors alike.
- ◆ Difficulty government has in achieving co-ordinated and integrated initiatives between its respective tiers and departments.

It is often the case that a particular donor's initiative, agreed at national government (Department of Finance) but implemented at a particular local government (city or town) is significantly 'diluted' once it 'reaches' its target beneficiary.

As donors engage with government in an unco-ordinated manner, the outcome, in many instances, in respect of infrastructure projects and possibly overall donor initiatives are twofold:

- ◆ some donors pursue isolated pilot projects with communities but without the full support of the relative implementing government agencies;
- ◆ duplication by, or competition between, donors operating in the same sector and area arises.

Provinces do not have significant economic powers but they do control some 70% of the national budget for delivery of services. To avoid inter-provincial competition, the Finance and Fiscal Commission introduced the Constitutional concept of 'co-operative governance'. However, until the establishment and acceptance of the National Spatial Development Framework in 1997, the launch of the SDI's and the first MTEF budget of 1999, co-operative governance was not really exercised.

RECOMMENDATIONS

Recommendations for consideration by the Department of Finance and donors, in respect of the above six items, are summarised below.

Infrastructure as a component of all sectors

- ◆ Donors and government should develop a consistent definition of what constitutes infrastructure, and consequent approaches to infrastructure funding.
- ◆ Any ODA programme design that includes an element of hard or soft infrastructure support should separate those components from each other, and from other activities in the programme.
- ◆ The tensions inherent in infrastructure development between clients' ultimate needs and goals and implementation practices and imperatives need to be

carefully managed to ensure implementation capacity is available but broader client needs effectively serviced.

Qualitative assessment of ODA

A consistent definition of infrastructure and classification of types of funding would result in better tracking of ODA funds. Infrastructure development should comprise three distinct components within the realms of a spatial framework.

1. Infrastructure development for economic growth:
 - ◆ transportation
 - ◆ electricity
 - ◆ telecommunications
 - ◆ commercial and industrial production facilities
 - ◆ agricultural infrastructure
2. Infrastructure development for meeting basic human needs:
 - ◆ water
 - ◆ sanitation
 - ◆ housing (although an area of debate)
3. Infrastructure development for poverty alleviation. This includes:
 - ◆ all the above in a) and b)
 - ◆ health infrastructure
 - ◆ educational infrastructure
 - ◆ social facilities

Appropriate methods of monitoring ODA funds committed to government infrastructure programmes or directly to projects must be developed:

- ◆ Project approval should be dependent on clearly verifiable indicators
- ◆ Tracer studies should be used to track how much ODA or ODA-supported finance has actually been applied in projects
- ◆ Regular field surveys should be undertaken to appraise quality and impact of hard infrastructure ODA
- ◆ Baselines should be established in programmes of soft infrastructure ODA to check whether capacity and skills have actually been built among recipients.

Alignment of ODA for infrastructure

- ◆ The provision of ODA for infrastructure should be linked to specific infrastructure projects. Commitment of aid to such projects should be subject to clearly defined project performance indicators.
- ◆ Technical assistance programmes should be developed to enhance recipients' capacity to structure and manage infrastructure projects during the design, construction and management stages.
- ◆ Technical assistance programmes should be developed jointly between donors and government counterparts (at implementing level) and the following agreed to prior to implementation:
 - type of technical assistance to be provided;

- entry level skills base of counterpart required;
- reporting structures.

Equity and impact of ODA

- ◆ ODA programmes should consider including a local-level project-specific component, as well as broader programme support. These projects should be designed to meet specific qualifying criteria and be recorded for future impact evaluations.
- ◆ Direct impact indicators: These indicators and a monitoring system should be put in place before any project starts. They include:
 - jobs created,
 - small businesses created,
 - number of labourers trained during construction,
 - type of training,
 - type of vegetation removed/replaced and water-courses diverted, to assess direct environmental impact.

Sustainability

The following items for financial sustainability must still be mainstreamed into infrastructure project packaging, design and structuring:

- ◆ escalation capital versus maintenance costs (a simple comparison of cost of finance versus required annual maintenance costs for the life of the project);
- ◆ short, medium and long-term capacity requirements versus cost of finance, and short, medium and long-term maintenance requirements;
- ◆ cost recovery mechanisms and affordability versus the physical asset.

Institutional arrangements

- ◆ Since infrastructure is a component of all sectors and integrated infrastructure development is required to have an impact on poverty alleviation, SDI initiatives being pursued by government are appropriate vehicles for ODA alignment and funding flows.
- ◆ ODA should endeavour to support the monitoring processes, at infrastructure project level, that add significant costs to address tensions between product delivery and capacity building. This would allow a cost-based product, but technical assistance, monitoring, product design (all value based) could be funded by aid.

1 INTRODUCTION

The South African Department of Finance (DoF), with the support of a range of donors, is producing a Development Co-Operation Report (DCR) to evaluate donor assistance in South Africa during the period 1994-1999. The International Development Co-Operation Directorate (IDC) of DoF defined the following key objectives of the DCR:

- ◆ Enhance SA ownership of Official Development Assistance (ODA).
- ◆ Assist in the compilation of an ODA database for the study period (1994 - 1999).
- ◆ Compile a bibliography and critique of impact assessment studies for the period.
- ◆ Undertake impact assessment studies in selected sectors.
- ◆ Produce a generic monitory and evaluation framework.
- ◆ Recommend institutional and structural changes to improve ODA management.

Phase I of the DCR report was completed in May 1999. Phase II of the DCR, involving sector specific studies and sub-projects in more comprehensive detail was completed in June 2000. This study addressed the impact of ODA on infrastructure development in a number of sample sectoral areas such as health, education, and public works. The study was intended to specifically address five key issues:

- ◆ **Quantitative picture of the amount of ODA, in terms of sectoral spend and geographical spread:** The extent and nature of ODA to SA over the period 1994 – and 1999. This information to be dis-aggregated in terms of: the sectors to which infrastructure development aid was given; types of ODA, ie in terms of grants, loans, loan guarantees, technical assistance and bursaries; and aid flows in relation to geographical distribution across the country.
- ◆ **Qualitative assessment of the alignment of ODA in relation to SA priorities:** Consideration of the alignment of ODA in this area (infrastructure development) in relation to the SA government's reconstruction and development priorities, as articulated through explicit policy instruments such as the MTEF.
- ◆ **Equity and impact on poverty:** The developmental consequences of the infrastructure development financed by external ODA, with respect to the benefits to previously disadvantaged communities and the impact on poverty.
- ◆ **Sustainability:** An assessment of the technical and economic sustainability of these infrastructure investments.
- ◆ **Institutional appraisal:** Comparative evaluation of strengths and weaknesses of institutional arrangements relating to ODA in the various sectors and geographical areas, with a summary of examples of replicable models of good practice.

2 METHODOLOGY

The scope of this assignment was clearly defined in the terms of reference. The issues are addressed in more or less detail, and depended on budgetary, time and practical constraints.

2.1 REVIEW OF OTHER RELEVANT LITERATURE

'Infrastructure' cuts across a number of sectors where a myriad of policy documentation and other literature exists. The authors undertook a review of a range of available literature and supplementary information, in an attempt to address and substantiate the quantitative, qualitative and appraisal aspects of the study.

We discovered that in many cases, appropriate, specific quantitative and qualitative information on ODA was not available from the relevant participants (donors, IDC, implementers). This was an important characteristic of the exercise, and relates to the way in which 'infrastructure' is perceived, defined and implemented.

2.2 A REPRESENTATIVE SAMPLE OF STAKEHOLDERS

Two options existed in establishing the extent to which consultations/meetings with all stakeholders. The first option was, interacting with stakeholders over the full spectrum of the various sectors and infrastructure sub-sectors in say one, or two, geographical regions/Provinces. The second option was interacting with stakeholders in the same sector/infrastructure sub-sector but in different regions/Provinces. Both options had certain advantages and disadvantages, specifically in respect of comparative evaluations or institutional arrangements relating to ODA in the various sectors and geographical areas. Option 1 lent itself to the former while option 2 lent itself to the latter. In practice, a wide range of donors were interviewed, a few national government departments, as well as provincial government departments in Mpumalanga, Northern Province and Eastern Cape. These provinces were selected on the perception, gained from the DCR I Report, that they received the greater share of ODA in infrastructure.

2.3 DEFINING AND RINGFENCING ODA

'Infrastructure' was one of the specific sectors identified for closer investigation under DCR II, and was the first time in South Africa that this sector had been selected for an in-depth evaluation in relation to ODA impact. The water and sanitation sector was the subject of a separate report. The housing sector was omitted from DCR II due to lack of resources. The basic approach for the study was that the infrastructure sector comprised essentially of 'hard bricks and mortar' infrastructure and would cross-cut a number of the other sectors, notably:

- ◆ Education (construction of learning facilities)
- ◆ Health (construction of health facilities)

- ◆ SMME (construction of business/production facilities)
- ◆ Water and sanitation (construction of water and sanitation facilities)

ODA investment into 'soft infrastructure' – infrastructure-linked technical assistance and training – was taken to be covered, by and large, by the specific sector studies themselves, as well as the capacity building sector study.

2.4 INFRASTRUCTURE PROJECT BENEFICIARIES

The degree to which the consulting team interacted and consulted with all stakeholders, especially 'project beneficiaries' depended on the amount of time and effort needed to collect relevant information. The availability and collection of source information from primary research proved disappointing. Extensive use of secondary research, as well as the team's own experiences, was thus needed.

3 INFRASTRUCTURE DEVELOPMENT IN CONTEXT

3.1 DEFINING INFRASTRUCTURE

The inequalities in South Africa, and the legacy of apartheid, are well known. The Reconstruction and Development Programme launched a massive national effort to, *inter alia*, address backlogs in service provision, boost the economy and meet the basic needs of the majority population. The provision of basic infrastructure was seen as a key component of the programme, with the potential to reduce inequalities, provide opportunities for employment, and improve overall quality of life.

Everyone in the development field believes they know what infrastructure is. Usually backed up by quotes from the RDP document, responses will include: 'investment in social and economic infrastructure: education, health, housing, transport etc.' It is the 'etcetera' that highlights the problems of definition.

The study team found that perceptions and definitions of infrastructure and infrastructure development are wide and varied within the development aid field. There appears to be no consistent definition of what constitutes infrastructure both between donors and government, and between different donors. As a result, government and different donors approach the concept very differently – this has consequences for the supply of ODA and the measurement of its impact.

The government recipients of ODA generally view infrastructure as 'hard infrastructure' being the fixed asset or permanent facility ('bricks and mortar'). New schools or classrooms, rural roads, and water pumps are all good examples. Many donors on the other hand, indicated that their definition of infrastructure also embraced 'soft infrastructure'. These are the complimentary processes and activities related to infrastructure development, including technical assistance, skills development and training. Such infrastructure-linked activities are very difficult to separate from wider sectoral packages of assistance. This dichotomy proved to be one of the abiding features of the

study, and meant that the Team is at best only in a position to estimate the amount of ODA applied to infrastructure.

Clearly, infrastructure is a vital component or input of development programmes in discrete sectors, for example health, education or transport.

For example, in the health sector, a reasonable aim could well be the provision of health services in a particular village. A number of inputs and activities would be required. These would include medicine and doctors, but also infrastructure, ie hospital or clinic (facility) where such health care could be carried out.

Other, non-infrastructure activities and inputs in the example above could possibly be defined as soft infrastructure. For example, does the health sector have the necessary systems, curricula, expertise, etc, to enable doctors to be trained and thus actually perform or make use of the hard infrastructure (hospital) to carry out health care services.

There is another issue linked to these differing perceptions of infrastructure development. In terms of income per capita, South Africa is defined as a 'middle income' country, and middle and upper income countries have better developed infrastructure. It is true that the road, port and telecommunications network matches many countries of the Northern hemisphere. It is true that the financial systems here generally function well. While this gives South Africa a more developed infrastructure framework compared to say Mali or Somalia, it also leads to a perception that the provision of basic hard infrastructure is not a priority for ODA.

As a result, many donors have indicated that South Africa may not be in need of 'hard infrastructure' funding. However, the key developmental issue with infrastructure is one of equality. As with the immense gap between rich and poor in South Africa, so it is with access to social and economic infrastructure. People who live in rural areas are not only likely to be poor, they will have further to travel to health or education facilities, and have lower standard supplies of water, electricity or telecommunications.

In conclusion:

- ◆ Infrastructure is not a discrete sector.
- ◆ It is interstitial and is an input or component of other activities within defined sectors.
- ◆ It supports other activities in different sectors.
- ◆ In the South African context, huge disparities exist in access to well developed social and economic infrastructure with poorer communities being marginalised.

3.2 THE NATURE OF INFRASTRUCTURE

Infrastructure services such as communications, power, transportation, provision of water and sanitation are central to both the activities of households and a nation's economic production. Communications, energy and water are used in the production process of nearly every sector of the economy, while transport is an input in every commodity. The same services are at the core of

all households' daily survival needs. Providing these services to meet the demands of all households, the business sector and civil society, is one of the major challenges of economic development and growth.

Thus, considering the example given above, a hospital is required for health services in particular village. The functioning of this hospital and provision of effective health services would, however, be severely compromised if, for instance, transport infrastructure (access roads) to the clinic did not exist. Provision of the necessary medical supplies from the manufacturers/distributors would not be easily possible.

The type of infrastructure product as an input requirement to meet the ultimate goal of the service to be provided can also vary extensively. Specifications (designs and materials), form, shape and size could differ between infrastructure products servicing the same purpose.

For example, residential housing units built mainly of timber are common in Canada. In South Africa, however, conventional housing units comprise of brick and mortar. Although key differences in building materials exist, both forms of houses serve, by and large, the same function and purpose.

Materials availability, intended (design) life span and technical capacity of future operations of the infrastructure product influence variations in specifications, form and nature of the product. However, the most predominant influences are financial considerations:

- ◆ capital versus maintenance costs;
- ◆ affordability of those receiving the ultimate services through the infrastructure products versus cost recovery mechanisms.

In conclusion:

- ◆ Alternative infrastructure exists for a particular function or sector.
- ◆ Infrastructure could be multi-functional or multi-faceted fulfilling necessary inputs for more than one sector.
- ◆ Hard infrastructure development, irrespective of sectors it serves, generally requires significant capital investment before it is functional.

3.3 INFRASTRUCTURE CONSTRUCTION AND PRACTICES

Infrastructure development is characterised by a number of construction 'unknowns' or risk such as:

- ◆ inclement weather with possible consequential delays and damage to works;
- ◆ unforeseen geo-technical or ground conditions, eg excessive underground rock requiring additional rock excavation;
- ◆ structural failure during construction before the infrastructure product reaches its end design state of completion;
- ◆ potential time delays due to labour or community issues.

This means construction contracts are 're-measurable' because the extent and ultimate form of the finished product may differ from the original design indicated on plans and drawings. Thus, not only may the product and

extent/scope of work vary, but also the ultimate cost of the construction contract. Also, projects generally depend on the sound co-ordination and performance of a number of different participants:

- ◆ the client/employer (eg Department of Public Works);
- ◆ the engineer (eg appointed by Department of Public Works to do the designs and oversee construction);
- ◆ the contractor and possibly specialist sub-contractors (eg installation of air conditioning units and ducts in an office block or commercial building).

Under-provision of building quantities (eg number of bricks required) by the engineer would have adverse financial consequences to the employer. Provisions/contingencies for such variations are unfortunately subject to abuse.

A further aspect has been the prevailing cost-based as opposed to value-added approach by practitioners in the construction industry. Consultants and contractors, correctly, argue that large infrastructure project yield 'economies of scale'.

A public sector funded water reservoir and tower to service the planned expansion of the Mangaung/Kagisanong township outside Bloemfontein in the Free State is a case in point. It has a capacity to cater for some 15 000 housing units, although two years after it was built only 1 000 housing units were developed. At this rate, it will only operate at capacity after many years. A smaller, or modular system would have been more appropriate to cater for housing growth as it happens

The water reservoir is a good example of short-term high job creation. In turn, this supports contractor imperatives of fast turnaround/economies of scale to derive most value quickly. Once the project is completed, however, labour is no longer required, resulting in job losses and increased burden on unemployment funds. In addition, from a government/client perspective, the under-utilisation of the infrastructure results in comparatively higher operational/maintenance costs and these costs have to be carried by fewer recipients of the service.

In conclusion:

- ◆ Infrastructure projects are characterised by numerous construction 'unknowns' or 'risks'.
- ◆ Construction practices account for such risks with contingencies, provisions and 're-measurable' contracts, all of which may be subject to abuse.
- ◆ Tensions exist between value-added aspects (empowerment, training, employment creation, poverty alleviation) and practitioner imperatives/cost-based aspects (economies of scale, fast turn-around).

3.4 RECOMMENDATIONS

Arising from the above, the following recommendations can be made:

- ◆ A consistent definition of what constitutes infrastructure by donors and government, with consequential approaches to infrastructure funding, should be developed.

- ◆ Any ODA programme design that includes an element of hard or soft infrastructure support should separate clearly those components from each other, and from other activities in the programme.
- ◆ The tensions inherent in infrastructure development between clients' ultimate needs and goals and implementation practices and imperatives need to be carefully managed to ensure implementation capacity is available but broader needs of client effectively serviced.

4 QUANTITATIVE ASSESSMENT OF ODA

4.1 ODA FOR INFRASTRUCTURE IN CONTEXT

A reasonably accurate quantification of ODA for infrastructure could not be determined. Because of differing perceptions and definitions of infrastructure, the following problematic areas emerged:

- ◆ No available specific project information, including project types, operation, construction, programme/progress and budgets (refer to the interview checklist attached as Annexure 1).
- ◆ None of the donors considered infrastructure as a discrete sector. Any infrastructure ODA is related to a donor or government defined sector, eg health, housing, etc.
- ◆ Funding flows of infrastructure ODA, within sectoral ODA, is not generally de-segregated.
- ◆ Funding flows of infrastructure ODA from donors to intermediaries to implementors to beneficiaries is not closely monitored.

ODA for infrastructure is generally a component of ODA for a particular sector. Thus, ODA in the health sector is generally for a wide range of activities, of which a small component may include some infrastructure projects such as clinic upgrading. The targeted sector outputs, as opposed to distinct inputs and activities, carry greater importance and are thus far more closely monitored. Detailed information and monitoring of ODA at a particular infrastructure project level within sectors is secondary, thus very little information is available.

4.1.1 'Block' amounts of ODA

Where donors have provided significant focussed aid the form of block grants or loans available for infrastructure (for a particular sector) this aid has used to contribute to larger government funded programmes.

For instance, USAID committed US \$450 million in the form of loan guarantees to Nedbank, FNB and INCA to support housing and municipal infrastructure developments. The intermediary is thus the 'banking sector' which would utilise the funds in the form of loan to predominantly local authorities (recipients) to upgrade/install municipal infrastructure for the future use by business, households, etc (beneficiaries).

Further, the aid could also be used by the banking sector to supplement end-user home loans to households. Such households would thus be both recipients and beneficiaries of such aid. The aid provided is thus:

- ◆ a component of other funding provided by the banking sector (its own funds);
- ◆ has more than one use (infrastructure loans to local authorities and end-user loans to households);
- ◆ has more than one intermediary, recipient/implementor and beneficiary.

Without detailed tracer studies, it is very difficult to track and monitor how much of this aid has been disbursed into loans, what type of loans and from these, whether the projects (infrastructure) for which some loans have been provided have been implemented and their impact.

For instance, a variety of government agencies are implementing the RDP. In 1998 the EU established the Technical Assistance Team to support the planning, implementation and monitoring of RDP Projects (TAT Project). Its objective is to facilitate more rapid and effective implementation of RDP-type donor and government projects through project management capacity and skills transfer inputs into various government departments.

The Department of State Expenditure is the implementing institution for the TAT Project. This department will establish a Technical Assistance Team to assist government implementing departments. In 1998 government funding complemented the first EU commitment of 4,4 million ECU. Tracing the activities of the TAT in supporting Public Works, for example, in implementing the CBPWP, or other ministries in implementing RDP projects, is thus very difficult.

Further, in 1998 the EU committed 4,1 million ECU to the Department of Public Works to manage community-based public works programmes at national and provincial level. The emphasis is on the delivery of projects in three key provinces (Northern Province, KwaZulu Natal and Eastern Cape). It is thus provincially, as opposed to project, orientated. How these funds were proportioned to the three provinces and how the provinces, in turn, utilized the funds, is difficult to determine.

4.1.2 Project-specific ODA

Donors have also, on an *ad-hoc* basis, provided aid to smaller-scale specific infrastructure projects. These projects, although generally implemented by other agencies (often government departments), are only funded by the aid provided and are thus 'divorced' from broader government funded infrastructure programmes.

For instance, SIDA has funded specific kinds of infrastructure projects (meeting points, greening, street and area lighting) in targeted areas within particular towns. Details of the amount of aid, project type, specific location of the projects and status of the projects was readily provided. These projects commenced in 1997 and include:

Port Elizabeth:

- ◆ Greening points R 11 million
- ◆ Construction of meeting places R 1 million
- ◆ Housing pilot projects R 5 million
- ◆ Housing revolving credit fund R 10 million
- ◆ Street and area lighting R 12 million

Kimberley:

- ◆ Meeting points R 4 million
- ◆ Greening and street lighting R 20 million
- ◆ Housing pilots R 5 million
- ◆ Housing revolving credit fund R 15 million
- ◆ Bicycle lanes and access for disabled R 4 million

King William's Town:

- ◆ As above, R 4 million

Micro-projects are also a standard feature of the EU's development co-operation. By channeling resources directly to poor communities to meet their development priority needs, the EU programme seeks to promote a people-driven development process.

The EU Micro Projects Programme was initiated in South Africa as a pilot-scheme in June 1992 (Contract No. 92-75070-344), when the EU, under the former Special Programme, pledged an amount of R14 million, through a contract with Kagiso Trust, to the Micro-projects Programme.

The Eastern Cape was chosen as the site for the first pilot project for the following reasons:

- ◆ It is one of the largest provinces and incorporates a cross-section of the demographic and economic conditions that are found across the country;
- ◆ The Eastern Cape has experienced particularly severe declines in output and employment as a result of successive droughts in the area and the effects of the 1980's recession in the South African manufacturing sector;
- ◆ The province includes the former 'homelands' of the Transkei and Ciskei, and consequently reflects some of the worst effects of forced removals and rural poverty.

A second contract (Contract No. 94-75070-049) between Kagiso Trust and the EU was signed in December 1994. This disbursed another R4 million for micro projects in the Eastern Cape (Micro-projects Programme Pilot Schemes [ECU 937,326] funded under the 32nd Train of Projects). 198 projects totaling ECU 4,1 million were funded between 1992 and 1995.

The pressing needs of the people in this province coupled with the success of the micro projects programme to effectively address these needs were the major considerations in the EU's decision to make a third grant available to the Micro-projects Programme Trust (MPT).

The signing ceremony for the third phase of the programme, which involves a direct contract between the EU and the MPT, took place in East London on 6 December 1995. The third grant which has been made available under the EPRD has a total value of ECU 12,6 million (approximately R60,5 million). This grant allows for the continuation and expansion of the Micro-projects Programme into remote areas of the Eastern Cape between 1996 and 1998 with a wind-down phase in 1999 (Project No. 95-75070-005). The work-plan has been submitted and the first installment disbursed by the Commission.

In the framework of the EPRD, a Technical Assistant was appointed in October 1992 on a two-year contract and acted as programme director. In May 1995, a second Technical Assistant was appointed for a two-year period. Between May and July 1995 he fulfilled the position of director until a South African director was nominated. In May 1997, the Technical Assistance contract expired and has not been renewed. The programme was evaluated during the months of November and December 1998.

The mid-term evaluation revealed that the MPT, the implementing agency, has developed from a pilot project to a recognised development organisation operating throughout the Eastern Cape Province. This resulted in a revised logical framework, reflecting a stronger emphasis on capacity building of community based organisations in order to increase the sustainability of the micro-projects. To reinforce its capacity building component, the MPT employed five project facilitators.

Although below the original targets of the 1998 work-plan, progress generally has been satisfactory during the year. In this report period, 34 projects have been completed for a total amount of R18 million. Among others, the projects dealt with community requests related to the building of classrooms, educare centres, community resource centres, access roads, agricultural projects and sports facilities.

This year also a lot of attention was paid to the improvement of co-operation with other development actors in the province. A liaison officer was appointed and contracts with provincial government departments like the Department of Welfare, the Department of Agriculture, the Department of Economic Affairs and the Department of Housing were strengthened. MPT produced and distributed brochures, a newsletter and a 1997 annual report to inform other actors about the activities of the Trust.

Information and monitoring, certainly from a funds disbursement perspective, of these small-scale specific projects is far more extensive. Many of the projects are, however, undertaken as pilot projects, which might explain the greater level of information available and monitoring efforts. In respect of infrastructure, pilot projects generally serve as small-scale prototypes of larger-scale facilities and test the suitability and applicability of innovations or theoretical policies within manageable financial limitations.

Although the benefits of pilot projects in respect of testing new ideas but with limited financial exposure, these could be offset by negative impacts in pilots not being replicated, such as:

- ◆ enhanced expectations created in local communities;

- ◆ efforts expended in them may not justify longer-term benefits.

In conclusion:

- ◆ Mechanisms and funding flows of ODA for infrastructure are inconsistent.
- ◆ Methods of monitoring ODA funds to accommodate the differing funding mechanisms and flows have not been universally established.
- ◆ Accurate quantification of ODA applied to (hard) infrastructure projects is difficult to determine.

4.2 SECTORAL SPREAD OF ODA FOR INFRASTRUCTURE

As a consequence of infrastructure definitions, and perceptions of infrastructure in the South African context, most donors focus on providing aid in soft infrastructure: technical assistance and capacity building of personnel in government agencies that are, or may be, related to infrastructure development. ODA investment into hard infrastructure is not significant.

Quantifying hard infrastructure is difficult, if it also covers investment projects comprising schemes to increase and/or improve the recipients' stock of physical capital and to finance the supply of services in support of such schemes. This ODA amount however, is significantly less than the 32% (a third) of total overall ODA into South Africa as given in the preliminary findings of the DCR I Report. The EU is the largest donor in this area. Analysing its commitments and the nature of its projects, only about 10% to 15% were made for investment/infrastructure projects.

From the DCR II ODA database exercise, (and assuming ODA in the form of loans is primarily for investment projects), then it appears that possibly a maximum of about 20% of all ODA to South Africa is used for infrastructure. Based on the information available for overall ODA committed to South Africa, the sectors covered by all, or the majority of donors, comprised of education (about 17% of total ODA), SMME/private sector development (about 10%) and good governance/democracy/human rights (about 12%).

These sectors also accounted for a large share of ODA. Other sectors focussed on by at least half the donors included health (about 4% of total ODA), housing and social services (about 8%) and water and sanitation (about 9%).

ODA into hard infrastructure did, however, not really follow the same trend as, based on interviews with donor representatives, only a few donors, most notably the EU, UK, USAID and Sweden, indicated that they had provided ODA into hard infrastructure.

It could not be determined whether 'hard' infrastructure aid to such sectors as business, transport and storage, or communications has been made.

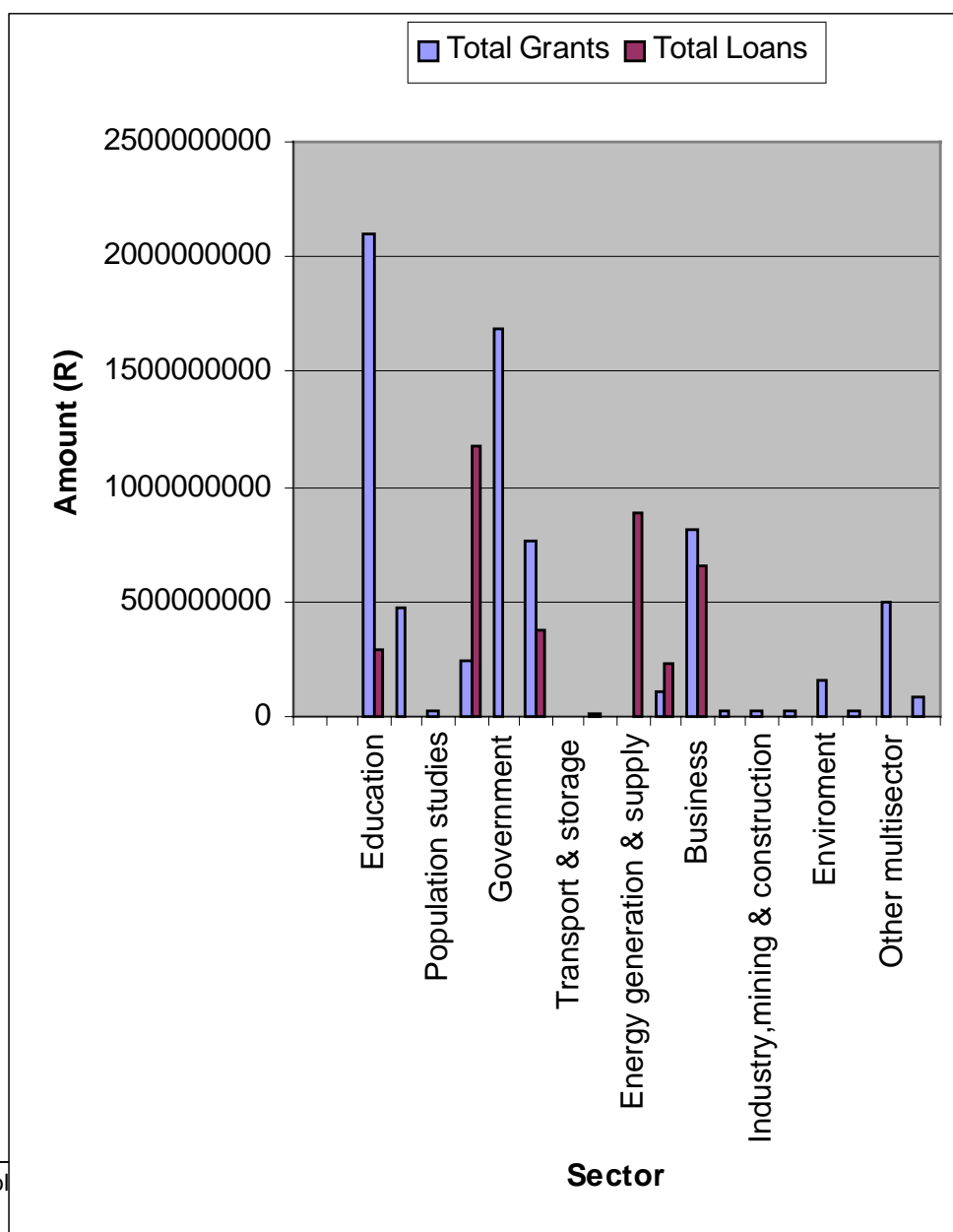
4.3 TYPES OF ODA FOR INFRASTRUCTURE

In those instances where hard infrastructure aid could be determined, the type of aid varied and comprised all forms:

- ◆ grants, specifically for pilot projects such as the upgrading and construction of schools required to support a localised education pilot programme initiated by donors;
- ◆ capital grants and/or soft loans to selected government agencies/departments as ‘budgetary support’ for national programmes such as the CMIP programme (municipal infrastructure);
- ◆ revolving/non-repayable loans to parastatals, NGOs and private sector institutions to help finance housing and social services projects;
- ◆ loan guarantees to identified intermediaries, such as financial institutions and NGOs.

In conclusion:

- ◆ The chart below indicates loans and grants determined from data made available from the data collection team provides a graphical presentation of where overall ODA, in the form of loans as opposed to grants, has been provided. In essence, grants comprise some 65% of total ODA. There is no discrete ‘infrastructure’ sector for ODA.

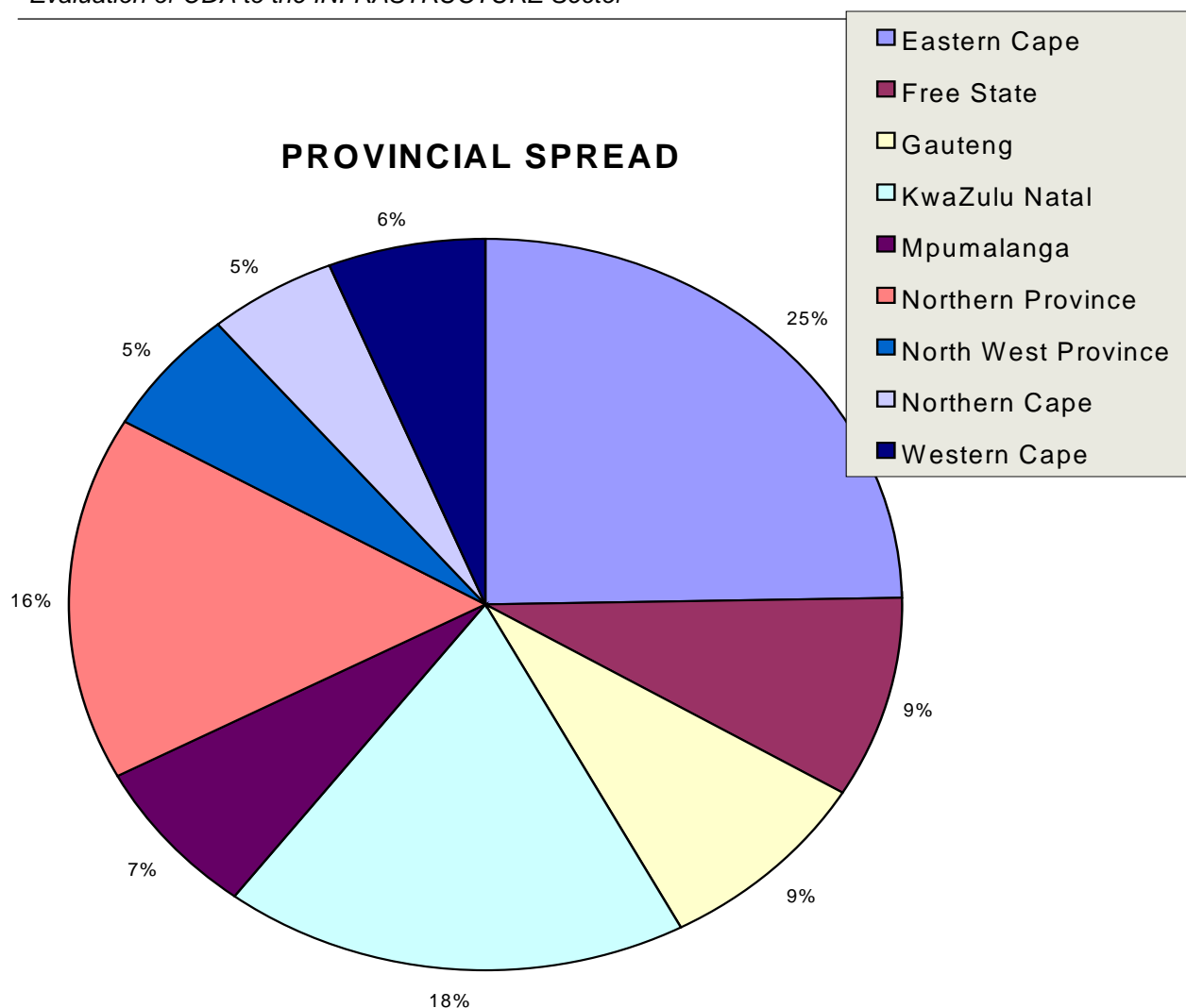


4.4 GEOGRAPHICAL SPREAD OF ODA FOR INFRASTRUCTURE

Information about aid flows to different regions is based purely on secondary research. This research has been questioned and, in some instances, severely criticised by both donors and government representatives alike. Criticism was generally to do with quantification of ODA. In the absence of other findings, geographic aid flows are derived from the 'infrastructure sectors' determined by the data collection team.

In conclusion:

- ◆ **Chart 2 indicates the relative** percentage spread of overall ODA for all sectors (no infrastructure sector) across the provinces.
- ◆ ODA for energy generation and supply is contained to those provinces of Gauteng, KwaZulu Natal, Mpumalanga, Northern Province and North-West Province.
- ◆ Water and sanitation is spread across all provinces as well as social services and infrastructure.
- ◆ ODA, whether generally or for infrastructure thus does not necessarily focus on the poorer provinces or poorer rural areas.
- ◆ Some donors 'pilot' small infrastructure projects in selected areas: eg GTZ in small towns in the Free State and Eastern Cape (housing) and SIDA in towns in the Eastern and Northern Cape (housing and community halls). Apart from this, the geographical spread of ODA into infrastructure is often determined by national government or recipient agencies, eg DWAF, Mvula Trust, Department of Provincial and Local Government.



4.5 RECOMMENDATIONS

- ◆ Given the differing definitions and perceptions of infrastructure and differences between programmes and projects, in order to accurately assess the qualitative amount of ODA in infrastructure, the following recommendations are made:
- ◆ De-segregation of ODA funding to ringfence ODA. This may be achieved by determining a consistent definition of infrastructure and classification of types of funding leading to better tracking of its application. Infrastructure development for future definition purposes should comprise 3 distinct components within the realms of a spatial framework.
- ◆ Infrastructure development for economic growth:
 - transportation
 - electricity
 - telecommunications
 - commercial and industrial production facilities
 - agricultural infrastructure
- ◆ Infrastructure development for meeting basic human needs:

- water
- sanitation
- housing (although an area of debate)
- ◆ Infrastructure development for poverty alleviation:
In order to ensure economic growth is consistent with poverty alleviation, 'all inclusive' infrastructure needs to be developed and extended to 'all sectors' of the population within a targeted region or spatial area. Such infrastructure thus includes:
 - all the above in a) and b)
 - health infrastructure
 - educational infrastructure
 - social facilities
- ◆ Appropriate methods of monitoring ODA funds committed either to government infrastructure programmes or to projects directly need to be developed. For example:
 - Project approval should be dependent on have in place clearly verifiable indicators
 - Tracer studies should be used to track how much ODA or ODA-supported finance has actually been applied in projects
 - Regular field surveys should be undertaken to appraise quality and impact of hard infrastructure ODA
 - Baselines should be established in programmes of soft infrastructure ODA to check whether capacity and skills have actually been built among recipients.

5 ALIGNMENT OF ODA TO SA PRIORITIES

5.1 GOVERNMENT PRIORITIES (1994 TO 1999)

From a broad perspective, government's overall priorities (1994 to 1999) comprised the following:

- ◆ Correct the huge disparities in wealth and income between, predominantly, white and blacks. Initiatives to address these include:
 - amended or new legislation (Labour Act, Employment Equity Act)
 - redistribution of taxation and public sector/government programmes, such as the employee training levies and Land and Redistribution programme
 - public sector tendering processes providing for 'Affirmative/Black Enterprises' priority
- ◆ Address the basic infrastructure and access to social services 'backlogs' in townships and rural areas, which include water and sanitation, health and educational facilities and housing. The government's original initiative to address these was the Reconstruction and Development Programme (RDP), launched in 1994 under an exclusive ministry (the RDP Ministry headed by Minister Jay Naidoo). The RDP had a five-year plan which included the

construction of 1 million houses, potable water and sanitation services to deprived areas, universal health care, a ten-year compulsory education cycle and a national public works and employment programme. The RDP and its goals became the main framework for government policy.

- ◆ In addition to the above, in 1996 the government also adopted a macro-economic strategy called Growth, Employment and Redistribution (GEAR). Its aims are export-led growth, GDP growth (between 3% and 6% per annum), fiscal constraints, labour market flexibility and prioritisation.
- ◆ Subsequent to the above, the government's initiative to 'take the RDP into the 21st Century' comprised of MTEF commencing with the 1998 Budget in terms of the policy framework outlined above.

Average annual capital expenditure (fixed domestic investment) between 1994 and 1998 by government increased from about R12 billion in 1994 to R15 billion in 1997. This was a significant increase in capital expenditure/infrastructure investment by government when compared to that of below R5 billion annually prior to 1994.

Capital expenditure/infrastructure investment financed by government has increased from about R14,3 billion in 1998 to a projected amount of about R16,3 billion in 2000. The 1998/99 Budget included an additional R300 million for infrastructure development, to be allocated once project proposals were considered.

5.2 ALIGNMENT OF ODA TO GOVERNMENT PRIORITIES

ODA in infrastructure is aligned with government policy because it is by nature supportive of other activities in other sectors.

The extent of ODA in infrastructure and its impact is, however, influenced by other factors such as the tension between local political imperatives/wishes versus rational allocation of funds to infrastructure projects and hence ODA to these infrastructure projects.

Substantial capital investment into new infrastructure with short-term spin-offs is politically more desirable than long-term planning with longer lead time to infrastructure projects. The latter would, however, address general concerns of donors and the government at large in respect of ensuring cost recovery and sustainable utilisation of such infrastructure projects.

In launching the RDP, the government adopted a two-pronged approach:

- ◆ An extensive capital projects programme that focussed exclusively on services backlogs in deprived areas. This programme was implemented initially through the Presidential Lead Projects undertaken nationwide.
- ◆ A concurrent policy formulation programme that embraced integrated planning and the foundation for such policies as the MTEF and CMIP grant and Spatial Development Initiatives (SDI) programmes. These programmes are now being implemented.

The rationale for such an approach was to achieve a balance with easily determined 'political measurables'. These were delivery on the ground and

enhanced job opportunities in the short term. At the same time, those taking this approach hoped to create a long term legislative framework for good governance, meeting social needs, economic growth and prosperity for all citizens.

Investment in infrastructure, particularly addressing backlogs in previously disadvantaged areas, is still a priority for government and is deemed crucial for the achievement of its reconstruction and development aims. Indeed, government committed substantial amounts to a number of infrastructure development programmes over the following three years.

The MTEF to year 2000 reflects lower capital spending to accommodate rising pressures on current spending within the provincial budgets. A major influencing factor is public private partnership projects and capital programmes of parastatals are increasingly replacing the direct spending on infrastructure on government budgets.

Thus, although the trend is to reduce direct capital investment into infrastructure by government, this is compensated by an anticipated increase in private sector investment into infrastructure. To promote an even spread of infrastructure development to address, not only backlogs on economic growth, but poverty alleviation as a whole, a programme of focussed Spatial Development Initiatives is now being undertaken by government.

The SDI's, driven by the Departments of Trade and Industry and Transport, began to address the spatial distortions of the apartheid era. With the economy moving to an export orientation from the import substitution phase, expanded and new investments were more likely to occur at the coast. Infrastructure and human resources had to be improved. Ports had to be upgraded, communications enhanced and transport tariffs restructured as a matter of urgency.

Lessons of regional development in the European Community were taken seriously:

- concentrate effort;
- ensure excellent infrastructure and communications;
- involve the private sector and the social partners;
- built equity between the equivalent of member states : the provinces and regions.

The concern to maintain environmental quality was also strong. Cabinet was persuaded and embarked on a short-term fast track programme of SDI's to kickstart economic growth.

Some might see the SDI's as a 'trickle down' approach, but in the light of scarce resources, very little capacity within the state, particularly at the provincial level, this strategy was really the only option. The SDI's are as much an attempt to demonstrate to different spheres of government and line functions that a fast track, integrated approach which focuses on unblocking potential is viable, as it is intended to leverage in private sector investment to catalyse growth.

Furthermore, if some of the SDI areas perform well economically, the population would spread itself, not necessarily to the metropolitan areas, which has always

been the great fear in South Africa, but to the demonstrably viable regions. This is one way of redressing the skewed space economy inherited from apartheid. In the light of South Africa's history of migration, much of the population (black and white) is willing to be mobile in pursuit of employment. Housing for middle and higher income earners is available at a price. Lower income earners and the unemployed build in informal settlements until housing becomes available.

There are four main SDI objectives

5.2.1 Export orientation and earning foreign exchange

The government prioritises transforming the overprotected South African economy, which suffers the classic symptoms of import substitution worldwide, into a globally competitive one. South Africa has the raw materials, a strategic location at the southern tip of Africa and the human resources to be a global player. In true colonial tradition, the bulk of raw materials are still exported unprocessed. Thus, one of the objectives of the SDI's is to scope potential projects for mineral beneficiation, for agri-processing and for tourism in order to earn foreign exchange.

5.2.2 Sustainable job creation

Clearly, job creation is a top priority for government. As a result of the Bantu education system in which black people were educated 'to minister to the needs of the white man', as HF Verwoerd put it, there is a major shortage of skilled (black) people and an oversupply of unskilled labour. There is a shortage of appropriately skilled labour.

5.2.3 Better utilisation of existing infrastructure and resources

Over the past twenty to thirty years, much high quality infrastructure has been built in the country, sometimes in inappropriate places for market driven economic growth. The National Party (NP) government wasted billions of Rands, firstly building extravagant trappings for bantustan governments, which they hoped might take 'independence' and be recognised by the international community. Secondly, they spent vast amounts on defense infrastructure, including highways and airports, which can now be used for economic purposes. Likewise, human resources are under-utilised, particularly in regions undergoing economic restructuring, where people with industrial experience become unemployed. They form potential pools of skilled labour.

5.2.4 Broadening the ownership base of the economy to small and medium entrepreneurs, farmers and fisher folk

Since soon after the discovery of diamonds and gold, large conglomerates have tightly controlled the South African economy. Not only did the Anglo American Corporation and de Beers Consolidated grow, but Afrikaner capital was built explicitly and strategically after the Second World War. Today, with a new government, which represents different interests, there is a concerted effort to

broaden the base of economic ownership, and black economic empowerment is priority.

As far as the SDI's are concerned, bringing the formerly disadvantaged farmers, fisher folk, the aspirant entrepreneurs and newly qualified black professionals is critical to South Africa's economic growth and for household sustainability in the long run.

The SDI's identified in terms of these four objectives, are:

- the Maputo Development Corridor,
- the Lubombo tourism and agri-industry SDI involving Mozambique, Swaziland and Northern KwaZulu Natal,
- the Wild Coast (formerly Transkei) tourism SDI,
- the Fish River (Eastern Cape) industrial SDI and
- the West Coast Investment Initiative north west of Cape Town, which involves mining, industry, agri-processing, fishing, mariculture and tourism.
- The Coast-to-Coast SDI, which stretches from Walvis Bay through Windhoek and the Namibian and Botswana desert in the west, through the Platinum Corridor to Johannesburg/Pretoria and links to the Maputo Corridor in the east. This is mainly a transport corridor with potential for coast-to-coast tourism.

Despite their protestations, not all the provinces have SDI's. Other development strategies are required for them, if the objectives of the SDI's are to be kept intact.

Once those areas that can best fulfill the objectives have been identified as SDI's, they are allocated budgets. A political 'champion' and a project manager are appointed for each. Up to a year may then be taken to appraise the potential, scope projects and launch the area in the public investment arena, usually through an international investor's conference.

Thus, the trends in infrastructure investment by government are converging, as opposed to diverging, to the broader development approach adopted by donors. This is evidenced in the recent re-alignment of the Community Based Public Works Programme undertaken by the Department of Public works.

5.2.5 The Community Based Public Works Programme

The major policy shift in the realigned CBPWP was to move from working through provinces as implementation agents to using district councils. In the realigned programme, the National Director of the programme signs a Programme Implementing Agency (PIA) contract with a district council. Financial allocation is done on the basis of a targeting exercise designed by a PITT member, which analyses poverty at district council level. After both parties approve the contract, the department appoints development planners who work closely with the district councils.

The process should culminate in a report that identifies possible development nodes where clusters of projects could have maximum impact. Communities are encouraged to identify projects.

The programme has adopted the contractor approach. The Programme Implementing Agency identifies local contractors who will be responsible for employing local labour. The realigned programme requires that CBPWP workers sign employment contracts, which specify terms and conditions of employment.

Having experienced some problems with underqualified contractors during the pilot phase, the DPW introduced training programmes for local contractors in conjunction with the Department of Labour. The DBPWP is also linked to the Emerging Contractor Development Programme (also managed by the DPW).

As the department is now working with the district councils in delivery, the programme is using existing tender facilities in district councils instead of national or provincial tender boards. The programme has also requested flexibility in the duration of tender periods and tenders may now be approved in two weeks, helping speed up the delivery process. The programme has also improved on co-ordination between different line departments involved in infrastructure delivery and the CBPP's.

One of the key findings of the evaluation was that the single asset approach was less effective than an approach which provided a 'cluster' of assets to communities situated in key development nodes. Sustainable economic activity was more likely to be achieved by multiple asset provision – say, a road and a taxi rank and a market – than a single asset per community. The programme has five categories of asset.

The realigned programme does not include school buildings as options for communities, since these were available under other government delivery programmes. The new approach also aims to give the department more influence over the choice of assets to ensure that they all, in some way, aim for sustainable economic activity.

Since some elements of the 1998/99 programme were slow to get off the ground, the 1998/99 and 1999/2000 programmes now run parallel. Since realignment, the programme has been allocated R736 million. The Eastern Cape, KwaZulu-Natal and Northern Province were only beneficiaries in the period 1997/98 to 1998/99. The R373 million allocated for the 1999/2000 financial year is expected to create around 66 000 jobs for the year.

Funding for technical co-operation or assistance – the provision of experts to development programmes – is very largely spent in OECD donor countries. It is one indicator of the extent of donor – as opposed to developing country – management of ODA. Globally, over the past four years, as total aid has fallen, technical co-operation has increased its share from a fifth to a quarter of all aid disbursements.

An area of concern that emerged from interviews, particularly with government recipients of ODA, is that of technical assistance. Arguments against technical assistance put forward by government agencies include:

- ◆ The current technical capacity in the private sector in South Africa is sufficient, thus not necessitating technical assistance from donor countries.

- ◆ The beneficiaries of the technical assistance, generally government appointed counterpart, are either ill-equipped or are not appointed at all by government.

Although ill-equipped counterparts should be those receiving technical assistance to improve their skills, the entry levels for such counterparts have not been clearly defined. The counterparts (specifically officials) for such technical assistance are generally assigned by the respective government departments and not selected/nominated by donors. It appears that relatively junior officials with little/no qualifications could be nominated. For instance, DFID technical support programme for the MDC identified technical assistance and training at four levels:

- at communities (presumably low skills based assistance);
- at general officials to demonstrate 'new approaches' (skills base entry level not stipulated);
- at SADC level (to experience projects);
- at private sector (specific support requirements).

In respect of counterparts not appointed, some technical assistance programmes necessitate the 'full-time' participation of an official. Government agencies argue that all officials are 'too busy'.

- ◆ Technical assistance is generally focussed on programmes and has very little to do with projects.

Given the nature and practices that exist in infrastructure development at a project level, particularly tensions between sector aims and practitioner imperatives, far more focus and attention to such areas at a project level is required. An argument thus exists that perceptions of problems exist in technical assistance provided by donors may be attributable to how and where such technical assistance is applied as opposed to it not being necessary. For instance, a NEDLAC evaluation of the CBPWP identified the following 'capacity shortcomings':

- ◆ Lack of co-ordination among different departments involved in infrastructure delivery.
- ◆ Monitoring was the weakest aspect of the programme.
- ◆ Lack of capacity of provinces to implement projects and monitor at the same time (provincial departments at this stage were implementing agents).
- ◆ Limited instances of financial mismanagement.
- ◆ The problems of the single-asset approach were clearly reflected by the evaluation. It was considered to be an inadequate response to the challenge of triggering sustainable socio-economic activity in poor areas.
- ◆ The problems of disputes and wage differentials were also highlighted as impacting negatively in the delivery of infrastructure. There were no employment contracts or terms and conditions of employment for CBPWP workers.

In conclusion:

- ◆ ODA in infrastructure, by the supportive nature, is aligned to government priorities.

- ◆ Input of government agencies into the formulation of technical assistance programmes appears inadequate.

5.3 RECOMMENDATIONS

The following recommendations in respect of ODA for infrastructure are thus made:

- ◆ The provision of ODA for infrastructure should be linked to specific infrastructure projects. Commitment of aid to such projects should be subject to clearly defined project inputs and outputs (performance indicators to enable future monitoring of impact of ODA).
- ◆ Technical assistance programmes should be developed to enhance donor recipients' capacity to effectively structure and manage infrastructure projects during the design and construction stages, as well as at programme management level.
- ◆ Technical assistance programmes should be developed and formulated jointly between donors and the government counterparts (at the implementing level) and the following by aspects agreed to prior to implementation:
 - type of technical assistance to be provided;
 - entry level skills base of counterpart required;
 - reporting structures.

6 EQUITY AND THE IMPACT OF ODA

6.1 GLOBAL INDICATORS

It is generally accepted that economic spin-offs (multipliers) emerge from infrastructure investment. Many international studies indicate that a strong association exists between the availability of certain infrastructure – telecommunications (in particular), power, paved roads and access to safe water – and per capita GDP.

An analysis of the value of infrastructure stocks indicates that their composition changes significantly as income rises. There are otherwise no specific global indicators other than whether the sector, eg economics, health, etc, as a whole is enhanced, which would indicate that the appropriate infrastructure is in place and functioning.

Based on the following two global indicators, the tremendous efforts by government and donors alike has not resulted, as yet, in a significant positive impact on equity and poverty alleviation in the country.

- ◆ South Africa's current Gini co-efficient (indication of unequal distribution of income) still ranks as one of the highest in the world. The poorest 40% of households, equivalent to about 50% of the population, account for only about 11% of total income. According to the Department of Central

Statistics, however, the average per capita income has increased (actual values of increase still awaited).

- ◆ Only small improvements in the poverty rates of some of the poorer Provinces, being Free State, Kwa-Zulu Natal, North-West and Mpumalanga, have been achieved. Some of this could be attributable to rapid urbanisation both within the Provinces as well as migration to urban centres in Gauteng and Western Cape. It is also reasonable to accept that it is also attributable to slightly improved equity in access to reasonable standard social and economic infrastructure recently developed under the RDP.

Although definite links between basic human needs, poverty and economic growth and infrastructure exist, in South Africa these links are not easy to define. Lack of access to one utility does not mean the lack of access to a combination of others. Further, extreme differences in the 'levels of services' between historically black townships and white suburbs exist.

Overall, inter and intra-regional disparities in the linkages basic human needs, poverty, economic growth and infrastructure exist in South Africa. Space and spatial development was central, and should continue to be, in the development of South Africa from a 'third world' to 'first world' county. The Apartheid State, unfortunately, used space strategically to separate people and created a shared spatial economy marginalising predominantly the black population.

The consequential disappointing impact of infrastructure development (whether as a direct result of ODA or government intervention), based on global indicators in the country on poverty can well be attributable to:

- ◆ The lack of a coherent national planning urbanisation policy, to be adopted by all tiers of government, to adequately address, in an integrated manner, historical spatial inequalities.
- ◆ Lack of coherent planning means there are no clearly defined monitoring processes.
- ◆ Until two years ago few government line departments or provincial government departments had considered the *spatial implications* of large investments in housing, in land reform, in provision of water supply schemes or health and education facilities. None had mapped where their interventions fell in space. As a result:
 - infrastructure projects of different provinces or line departments were scattered and often did not complement each other;
 - some regional infrastructure projects were duplicated by provinces;
 - some projects effectively extended apartheid planning as opposed to rectifying it.

Examples in housing include a myriad of Greenfield housing projects on preferred 'cheap' agricultural land far from where roads were being upgraded or areas of factories. Further, investment in municipal infrastructure was often steered by low-income/subsidised housing project requirements.

Many of the water supply projects were to areas where water is a scarce commodity, only very small 'subsistence-eco' communities or clans choose to

live due to traditional, as opposed to economic or environmental, reasons and where, until recently, conventional local government did not exist.

Most projects were undertaken by DWAF. However getting the water to these areas often necessitated other services, such as electricity. Often these other services did not exist and no provision for them was made by the relevant service providers.

6.2 PROJECT INDICATORS

Infrastructure development, at a project level, has tangible and immediate positive impacts with regard to employment/job creation and local multiplier effect. The duration of the above is, however, temporary in nature, usually being the duration of the construction project. Different types of infrastructure have differing impacts on the above.

BIFSA's (Building Industries Federation of South Africa) estimates for employment creation through construction are 27,6 jobs for every million Rand spent. The method used to arrive at this figure is – using Receiver of Revenue statistics of total turnover in the construction industry (R18 billion) – to extrapolate based on assumptions regarding the ratio of materials to labour (at specified levels of wages).

Although the informal sector is not explicitly included in this methodology, total turnover does include building materials purchased from formal sector suppliers, which in turn lends itself to some measure of informal building activity, albeit indirect.

Based on differing assumptions about ratio of materials to labour, BIFSA generated scenarios about the components of construction that relate to differential skills. Drawn from industry data, the most common scenario for the components of construction work is the following:

- ◆ 26% semi skilled workers @ R72 per day
- ◆ 19% skilled workers @ R120 per day
- ◆ 50% unskilled workers @ R45 per day
- ◆ 5% supervisory staff @ R160 per day

The apparently low daily wage for un- and semi skilled workers takes into account the irregular nature of employment for workers in this industry, especially those in the informal sector who are usually laid off between contracts. By weighting skills in this way, BIFSA conclude that 27,6 jobs are created for every R1 million spent in the construction industry.

Assuming that the ODA into infrastructure development for the period 1994 to 1999 is around R1,6 billion (see section 3.2) then based on BIFSA's indicators, some 8 500 jobs (for five years) have been created. Given than BIFSA's indicators are not linked to man-days, it is possible to interpret the above investment as resulting in about 44 000 new jobs for limited duration.

In addition to construction related job creation, economic multipliers (at a project level) to be considered are small business promotion (SMME's), training (capacity building) and direct environmental implications. However, due to the

complex nature of the sector, and as shown below, it is not possible to take this analysis further into an estimate of the impact of ODA in these fields.

The growth of Small, Medium and Micro Enterprises (SMME's) may be hampered at the outset if access to water and electricity is not ensured. Such access comes initially through home-based activities, so a full supply of services (not limited, for example, to a single yard tap or small-voltage electricity meter) to residences can also be seen as an investment in an environment that support Local Economic Development.

In a Department of Local Government policy document, it was given that one new small business can be created for every ten electricity connections, and that during the next ten years, an additional R8 billion will be spent on appliances from electrification (at existing rates of expansion). But measuring the impact of infrastructure on SMME's is difficult.

The document goes on to state that it is notoriously difficult to quantify the multiplier effects of electrification. Econometric studies of electrification have generated estimates of up to 1 000 000 new jobs created during the first ten years of the programme, with an 11% cumulative increase in GDP. More accurate analysis based on recent experience with electrification suggests that for every 100 households which are connected, between 10 and 20 new economic activities are started.

Small traders often acquire electrical fridges to store drinks and perishable goods. The Department of Local Government cites a survey done in one rural KwaZulu Natal town. Of 23 enterprises 21 required electrical refrigeration to store produce, meat and drinks for sale. The benefits of moving from very low electricity supplies (5-8 Amps) to an intermediate (20A) supply are particularly large given the need to operate appliances such as refrigerators and small motors. For enterprises involved in welding or carpentry, higher levels of service are required.

On-the-job training is a tried and tested means of enhancing one's skills. Construction work generally lends itself to a large component of low-skilled labour. But it still requires the use of un-mechanised implements and input of semi-skilled and skilled activities. Due to the physical and occasionally hazardous nature, eg construction of extremely high viaducts/bridges, safety procedures and practices are important. Employment entry barriers are low in the construction industry and this provides job opportunities to a wider range of job seekers. The nature of the work lends itself to skills training on the job.

6.3 ENVIRONMENTAL INDICATORS

Infrastructure often has widespread direct and indirect impacts, which can be beneficial or harmful – frequently to the environment. Irrigation infrastructure can reduce pressure on land resources by permitting greater intensity of cultivation on existing plots, but it can also promote excessive water usage, resulting in groundwater salinisation and land subsidence.

Environmental sustainability involves innovation in technology and organisation, as well as improved efficiency in the use of infrastructure services through

pricing and regulation. For example, at present it is envisioned that, based on national resources allocated (regarding both capital and recurrent expenses), lowest income households will receive:

- ◆ a minimum 'basic' package of a Ventilated Improved Pit (VIP) latrine,
- ◆ yard standpipes for urban residents
- ◆ taps only within 200 metres of rural homes, and
- ◆ open urban stormwater drainage.

Municipalities are then given the responsibility of deriving the additional resources required to improve standards in low-income areas.

Such infrastructure and service standard improvement should be feasible if the environmental externalities associated with lower standards are considered. It is the environment that pays when pit latrines leak pollutants into groundwater, when sewage systems fail, or when improper drainage leads to flooding, erosion and the washing of human waste into surface water.

The above failures generally occur when the infrastructure is completed. During construction, direct impacts on the environment can include the removal of trees, (affecting bird life), diverting water-courses (even temporarily, this disturbs the natural habitat), etc.

In conclusion:

- ◆ Infrastructure development has both short term direct and long term indirect economic and social multiplier impacts.
- ◆ Specific global indicators to accurately measure such impact are limited.
- ◆ Impact of construction projects, in terms of the number of jobs created for the duration of the project, emerging businesses established, number of labour trained and immediate environmental impact can generally be ascertained.

6.4 THE IMPACT OF ODA IN INFRASTRUCTURE

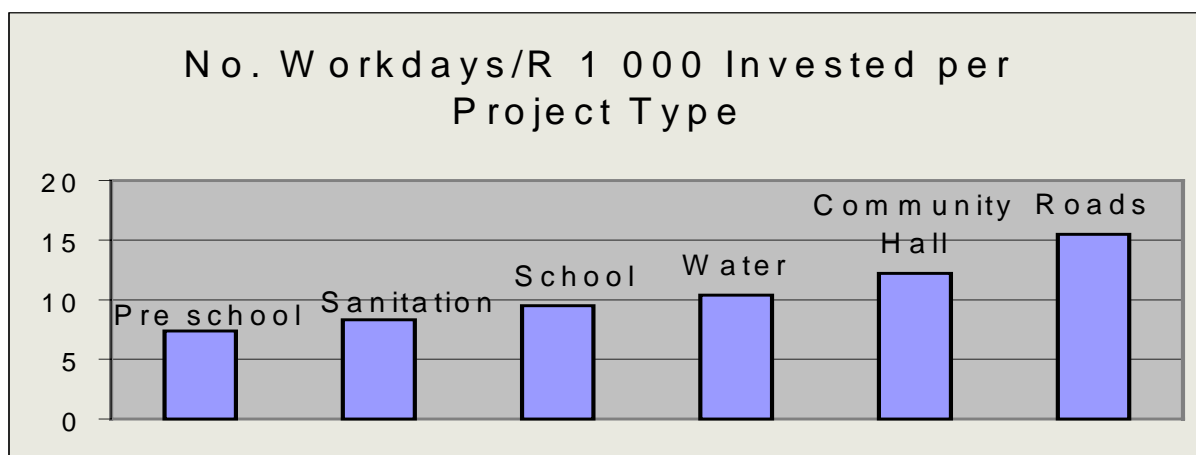
The problems encountered with the definition of infrastructure provide no basis upon which to assess the impact of ODA in this sector. These problems include lack of project specific information (particularly project criteria imposed or evaluation reports), the different funding flows of ODA for infrastructure, either separately or part of a specific sector.

The infrastructure ODA is disbursed in various ways through either various government controlled programmes and projects or donor supported pilot projects generally undertaken by other implementing agencies. It is thus extremely difficult to extract or identify the specific ODA components of such programmes or projects.

For instance, it can be established that ODA (from the EU) of about R27 million was committed directly to the CBPWP. However, the EU also committed about R197 million to the National Development Agency and R29 million for the support, planning and monitoring of RDP projects. The latter 2 overlap, to some extent, in activities either undertaken as part of or separately of the CBPWP. Thus, the proportion of total aid, in this instance, to the CBPWP is not easily

determined. Notwithstanding, a brief assessment of the impact of the CBPWP is given below.

- ◆ The amount of employment generated has been sharply affected by the types of projects undertaken. Fig 4 shows the variation in workdays of employment created per unit expenditure for different categories of project. Roads are clearly twice as powerful as pre-schools in terms of generating employment opportunities.



An internal evaluation reported on the range of equivalent monthly wages paid – from a low of about R176 to more than R750. Within this range, 45% of both men and women were paid the monthly equivalent of between R450 and R750. Using aggregate data on total employment, total expenditure and the share of expenditure on labour (with associated caveats), the equivalent average monthly wage derived in 1997 was R520.

In the provincial component, there has been considerable variation between wages offered and prevailing rates for similar work in local labour markets. CBPWP wages in five provinces have been below the local market rate. In Gauteng, average wages have been about 30% lower while in KwaZulu-Natal, they have been as low as almost half the going rate. In the remaining four provinces, CBPWP workers seem to have been paid somewhat more than the market rate for similar work. Because CBPWP employment is only temporary in each place, the issue is to ensure that it does not attract labour away from ongoing jobs. Only 8% of the workers interviewed in 1997 had been engaged for more than eight months.

The 41% share of women reported earlier is a positive finding, though giving scope for raising it in view of the prevalence of poverty among women. Less positive is the finding that women have also generally been paid less than men. The proportion of women (18%) paid less than the monthly equivalent of R250 was nearly double that of men (10%).

At the upper end of the wage spectrum, the proportion of men (19%) paid more than the equivalent of R751 per month was more than six times greater than that of women (3%). The explanation is largely cultural. The work done by

women was reportedly 'less demanding' (physically) than work done by men. Fetching and carrying and 'helping men' were among the most commonly reported types of work done by women.

The impact of equity and empowerment of this programme is more difficult to determine.

The problems of the single-asset approach were clearly reflected by the evaluation. It was considered to be an inadequate response to the challenge of triggering sustainable socio-economic activity in poor areas.

The problems of disputes and wage differentials were also highlighted as impacting negatively in the delivery of infrastructure. There were no employment contracts or terms and conditions of employment for CBPWP workers.

Having experienced some problems with underqualified contractors during the pilot phase, the DPW introduced training programmes for local contractors in conjunction with the Department of Labour. The CBPWP is also linked to the Emerging Contractor Development Programme (also managed by the DPW), but funded through the education and training sector.

Practical programmes and methods to ensure the equitable participation of the marginalised in implementation of infrastructure projects were not developed. Often empowerment has, in effect, been the payment of short-term wages (for the duration of a project) to a selected few community 'gate keepers'. Training of, say, grader operators, has comprised of taking a favoured community person and placing him/her on the grader next to the operator for the duration of the project. The impact of knowledge transfer has been minimal as the trainer is never allowed to actually operate the grader and is laid off at the end of the project with no new skills.

The technical inability of the line department staff to structure the projects and contracts to address all the above is evident. And the inherent tension/contradiction between project delivery (in the conventional sense) versus project delivery with all the 'nice to haves' in respect of equity, empowerment, training, etc, exacerbates the above problems.

Based on known figures and assuming a minor proportion of ODA in other programmes that either support or are linked to the CBPWP, the impact of ODA has been positive in respect of:

- ◆ **Short term job creation:** The CBPWP has created almost 150 000 days of employment to 1999 through a total of 1 112 projects. Proportionally, ODA would account for about 15% of this.
- ◆ **Training:** About 23 000 people received training through the projects (40% were women and 17% youth).

A recent evolution of the CBPWP estimated that, in the first two years of existence (1995-97), the programme reached 515 000 households, with roughly 4,5 million people benefiting from the structures which were created.

In conclusion:

- ◆ The impact of ODA in infrastructure is largely dependent on the impact of broader infrastructure development programmes undertaken by government.
- ◆ Based on global indicators for poverty, the impact of efforts made by government and donors has been low.
- ◆ The direct impact of ODA, as well as government investment into infrastructure for job creation (mostly temporary jobs), has been more positive, based on the results of the CBPWP.
- ◆ The more subtle, indirect impacts of ODA, either in infrastructure or the sectors, is positive. This is borne out by the influence education/training and capacity building sector programmes have had on the CBPWP and its more positive realignment.

6.5 RECOMMENDATIONS

The following recommendations are made:

- ◆ ODA programmes should consider including a local-level project-specific component, as well for broader programme support. These projects should be designed to meet specific qualifying criteria and be recorded in order for future impact evaluations to be made.
- ◆ Infrastructure project direct impact indicators that should be readily used include jobs created, small businesses created, number of labourers trained during construction (and type of training) and type of vegetation removed/replaced and water courses diverted, to assess direct environmental impact. These indicators and a monitoring system should be put in place before any project starts.

7 SUSTAINABILITY

7.1 GENERAL CONTEXT

The assessment of the technical and economical sustainability of infrastructure development is complex, for they both entail direct and indirect 'benefits and costs' to be considered. Such direct and indirect influences may be short term or long term or, for that matter, 'short term benefits/sustainability but long term costs' (not necessarily direct financial costs, but say, environmental damage with consequential costs).

For instance, the effects of higher electricity service levels include economic multiplier benefits (economically sustainable) and other indirect benefits, such as reduced air pollution from coal and wood. On the other hand, increased electricity use will cause additional environmental damage and costs through the generation of electricity by the country's coal and power stations. It is extremely difficult to quantify or compare the economic and other gains against these consequential costs at any one point in time.

Sustainability of ODA related infrastructure project underway or completed during the investigation period has been analysed in the form of the following components:

- ◆ technical sustainability
- ◆ financial sustainability

7.2 TECHNICAL SUSTAINABILITY

As alluded to above, technical, as well as economic, sustainability of the infrastructure development is extremely difficult to assess without reducing the assessment to a number of narrow perspectives.

From particularly primary research, technical sustainability is generally considered to be that of:

- ◆ Infrastructure development functional purpose.
- ◆ The implementors or operators of such infrastructure have the technical capacity to perform such operations.
- ◆ Technical capacity of operators to maintain the infrastructure.

The Community Based Public Works Programme (CBPWP) was used as an illustrative example. Until 1998, the CBPWP was dominated by building. Schools, pre-schools and community halls accounted for over 68% of all projects. Water supply accounted for 13%, roads (in rural areas) 12%, mixed projects 6% and sanitation 1%. Priority was given to easily implemented, fast-track projects. Thus, for the first few years, projects were not really considered in terms of the functions they were expected to serve, for example:

- ◆ roads for improved accessibility and terms of trade;
- ◆ labour saving (water supply);
- ◆ improved human capital (schools);
- ◆ meeting specific basic needs (eg a school in an area where there is a shortage of schools).

For example, it was found that two new schools were built about 100m from each other. They are needed both schools, but they would have been best placed about 3,5km apart. The result was that the one school is used more for community purposes (it has empty classrooms) as children from 3,5km prefer to still attend their nearby overcrowded school. In another example, a new road of some 5km in a remote rural area in the Transkei serviced only the local chief's residence, and did little else to enhance the easier movement of trade and goods.

In terms of the CBPWP, the implementors have essentially been 'local committees' and workers. Although the project designs may have been technically correct, a common problem was that working drawings were not presented in sufficient detail and with sufficient clarity for inexperienced community committee members and workers to understand. For instance, roads were constructed with incorrect cross-fill, causing damming, as opposed to shedding of rainfall and stormwater run-off. Maintenance of infrastructure under this programme has, by and large, not been an issue as most facilities have been taken over by other line government departments.

7.3 FINANCIAL SUSTAINABILITY

All infrastructure projects, one would argue, should be financially sustainable if the end product is value for money, of appropriate technology, performs its functional use and meets its anticipated impact on the targeted community. Due to a significant lack of internal monitoring and evaluation of such infrastructure projects/physical assets by respective government line departments and donors, it is difficult to assess the financial sustainability of infrastructure projects overall under the period of review.

What is evident, however, is the overwhelming preference by most agencies, specifically local government, to specify high specification/low maintenance infrastructure products. Given the comparatively prevailing high cost of finance versus inflation, as well as the reduced job opportunities for maintenance, such preference by these agencies may be questionable. Often high specification infrastructure products require, when necessary, specialist maintenance services due to their very technological nature, that preclude any opportunity for smaller less sheltered emerging businesses.

A further aspect has been the prevailing cost-based as opposed to value-added approval by practitioners in the construction industry. Consultants and contractors, correctly, argue that large infrastructure project should yield 'economies of scale'.

Overall, it is apparent that the following items in respect of financial sustainability still need to be mainstreamed into infrastructure project packaging, design and structuring by the relevant agencies and practitioners in the construction industry:

- ◆ escalation capital versus maintenance costs (a simple comparison of cost of finance versus required annual maintenance costs for the life of the project);
- ◆ short, medium and long-term capacity requirements versus cost of finance, and short, medium and long-term maintenance requirements;
- ◆ cost recovery mechanisms and affordability versus the physical asset.

8 INSTITUTIONAL APPRAISAL

8.1 CURRENT INSTITUTIONAL ARRANGEMENTS

Although alignment of ODA in infrastructure, in general, is consistent with government priorities, it appears structures and institutional arrangements and frameworks for mutually rewarding interventions is problematic.

Key factors attributable to these problematic areas include:

- ◆ Donors ascertain that government intends to 'control' ODA at a national level and allow the aid flows to form part of the respective intergovernmental transfers and funding flows.
- ◆ Donors inability, amongst themselves, to engage government as one co-ordinated entity.

- ◆ The establishment of dual institutional arrangements, to accommodate the above wishes of government and donors alike that, in practice is not readily integrated into the different departments and tiers of government implementing agencies.
- ◆ Difficulties that government itself has in attaining co-ordinated and integrated initiatives between its respective tiers and departments.

Thus, in the first instance, it is possible that a particular donors initiative, agreed at national government (Department of Finance) but implemented at a particular local Government (city or town) is, due to general government and donor institutional arrangements, significantly 'diluted' once it 'reaches' its target beneficiary.

'Dilution' is applied in respect of impetus, focus and acceptance of such a particular initiative. A 'schematic' trail of a donor initiative is simplistically illustrated in the diagram overleaf. This simplistic illustration may well also be applied to national government initiatives and priorities.

Secondly, as donors engage with government in an unco-ordinated manner, the outcome in infrastructure projects and possibly overall donor initiatives, are twofold:

- ◆ some donors pursue isolated pilot projects with communities but without the full support of the relative implementing government agencies;
- ◆ duplication by, or competition between, donors operating in the same sector and area arises.

Thirdly, dual institutional arrangements are established to accommodate national government's agreement of a donor initiative but with little interest by the agencies, specifically where the agency is inundated by a myriad of programmes.

A town clerk of a Free State town lamented *'I've got to fulfil my local government obligations as well as engage Province for best possible budget allocations. I do not have time to also sit on a Steering Committee, established by the National Department of Housing and (a donor) in order to pursue the donor's programme where the donor's financial commitment has very little bearing on my town's budget'*. As a consequence, the town clerk never attended the Steering Committee meetings. The donor then sought national government intervention to ensure required political buy-in for the donor's initiative.

Lastly, Provinces do not have significant economic powers but they do control some 70% of the national budget for delivery of services. The Constitution states that South Africa is one economy and that in whichever province South African's live, they should have equitable spending on health, education, social benefits, etc. To avoid inter-provincial competition, the Finance and Fiscal Commission introduced the Constitutional concept of 'co-operative governance'.

However, until the establishment and acceptance of the National Spatial Development Framework in 1997, the launch of the SDI's and the first MTEF budget of 1999, co-operative governance was not really exercised. Provincial strategies for budgetary allocations were embraced with rhetoric and reflected a

shallow understanding or willingness of co-operative governance for regional growth and development. Large infrastructure projects were done independently, let alone between provinces, but also between provincial line departments themselves and local authorities. The ability of donors to see their support or initiatives correctly co-ordinated was further jeopardised.

In conclusion:

- ◆ Current institutional arrangements vary between national government and different donors with generally adverse consequences at different (lower) spheres of government being the ultimate recipients of the aid.
- ◆ Different donor preferences to specific sectors within specific areas exacerbate overall co-ordination problems with consequential ad hoc and diluted monitoring/co-ordination systems at implementation level.

8.2 RECOMMENDATIONS

In considering the institutional appraisal above as well as all the aspects related to infrastructure and ODA for infrastructure, the following recommendations are made:

- ◆ Since infrastructure is a component of all sectors and integrated infrastructure development is required to have an impact on poverty alleviation, SDI initiatives being pursued by government are appropriate vehicles for ODA alignment and funding flows.
- ◆ ODA should endeavour to support the monitoring processes, at infrastructure project level, that add significant costs to address tensions between product delivery and capacity building. This would allow a cost-based product, but technical assistance, monitoring, product design (all value based) could be funded by aid.