The devil is in the detail – an analysis of the DBSA's 'Access to Sanitation' indicator

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Abstract: When using indicator values to measure change over an interval of time, the general understanding of the factor being analysed may have been modified during the period under review. Altered definitions of 'urban', or 'poverty', provide common instances of this phenomenon. This article outlines a similar situation with respect to the 'access to sanitation' indicator as it features in the Development Bank of Southern Africa's series of Development Reports. These publications are often referred to as a ready source of useful information. It is shown how an altered understanding of what constituted 'sanitation' in South Africa came to influence the relevant indicator values. This change, if not taken into account, could result in planning calculations yielding invalid conclusions. The article deals with the casual use of ready-to-hand indicators by non-specialist practitioners, and about how easy it is to be misled on occasion.

Keywords: Indicators; sanitation; DBSA; sanitation backlog; pit toilets; flush toilets.
Disciplines: Public Administration; Development Studies; Environmental Studies; Statistics.

1. Introduction

This article will focus on a single indicator - *Access to Sanitation*, as provided in a series of Development Bank of Southern Africa (DBSA) development reports. The object is to demonstrate how the casual enquirer may be led unwittingly astray by what, on the face of it, is the most elementary of indicators taken in conjunction with the most basic of datasets. This apparent bedevilment is not, however, the product of any negligence but is instead attributable to an environment where policies, paradigms and definitions are all in a state of flux, such as has been the case in South Africa since 1994.

Sanitation provision is of particular salience on at least two counts. While an acceptable standard of sanitation is a *sine qua non* for improving public health, the type of sanitation system provided is an issue that resonates strongly with the unprecedented surge in concern over climate change that emerged early in 2007 (Stern, 2007; TLS, 2007). This revival of interest was triggered by the so-called *Stern Review* (Stern,

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2007), contentious books and films by high profile scholars and public figures (Gore, 2007; Lovelock, 2006; Martin, 2006; Monbiot, 2006; Ruddiman, 2005), and the ferment surrounding the release of the *Fourth Assessment Report* from the International Panel for Climate Change (IPCC, 2007). The IPCC's *Summary for Policymakers* report confirms the long-term 'drying up' of southern Africa (IPCC, 2007: 6), although of course these impacts will not be uniform across the region and some areas may continue not to be water-stressed. But the primary trend will be one of reduced rainfall (Stern, 2007: 62). In fact "southern Africa will be most seriously affected, experiencing the most extreme temperature rises [worldwide] coupled with severe reductions in rainfall" [own emphasis] (*Independent London*, 2006). It is within such a context that the mode of sanitation delivery, and especially the prospects for dry sanitation, acquire resonance. Sanitation indicators are already being referred to with renewed interest by the planning fraternity who are looking to monitor the effects of climate change in South Africa's arid regions.

In order to obviate misunderstandings right at the outset, it must be stressed that this paper is not primarily about sanitation provision. It is an article about the caution one should bring to bear on the use of indicators. The use of the sanitation indicator to illustrate the article's main thesis is therefore contingent – it might just as well have been some other indicator. The discussion does not aim to analyse the extent or nature of South Africa's sanitation backlog. There is no attempt to 'triangulate' the DBSA data sets with others that may be available. This is also not a paper about the comparability of pre- and post-apartheid datasets in general. The focus is purely on the access to sanitation indicators, considered as they actually appear in the oft-cited Development Bank reports, and quite irrespective of outputs produced by other institutions, such as the World Bank or the UNDP, which might produce similar statistics.

2. Methodology and conceptualisation

A pair of very basic sets of data that make up a 'time-series', will be interpreted in order to 'unpack' an 'access to sanitation' indicator. These datasets are derived from the Development Bank of Southern Africa's (DBSA) *Development Reports* for 1998 and 2000 respectively. Other sources and references will be kept to a bare minimum in order to maintain a tight focus and so as not to introduce needless complexities into the analysis. The relevant data are as follows:

- Table 1 reflects the percentage of *houses* with access to sanitation in 1993.
- Table 2 shows the percentage of *households* with access to sanitation in 1996.
- Table 3 gives the total number of the different types of toilet *by household* for 1996. This table will be used to shed some light on Table 2.
- Figure 1 provides an overview of the percentage of *population* with access to sanitation in selected Southern African countries. This figure is drawn from the DBSA 1998 report and appears unchanged in the 2000 report.

The object of this exercise is to draw attention to the ambiguities that may infect certain socio-economic indicators, and not to interrogate the actual values provided by way of discussing the sanitation backlog as such. For this reason, the age of the time-series is, strictly speaking, immaterial. As it so happens though,

the arguments presented here would, appropriately modified, still apply to the 2001 data supplied within the DBSA's 2005 development report (DBSA, 2005: 173) where significant progress with the delivery of housing did not see a commensurate improvement as regards 'access to sanitation'. What is important in this enquiry, however, is to register the conceptual thinking and the policy context within which each of the 1993 to 1996 time series 'nodes' was embedded.

The interrogation of the data will be conducted from two perspectives: from the point of view of an *outsider* (perhaps a researcher who needs, via recourse to an authoritative source, to form a quick judgement regarding sanitation provision in South Africa) and an *insider* (envisaged as a practitioner working in the field of sanitation in South Africa). The outsider's knowledge is strictly limited to that which appears within the DBSA reports (Tables 1 and 2). These are used by the hypothetical enquirer in order to ensure consistency across sources. He or she has no other source of information. The insider by contrast, has access to the SA Stats data (Table 3) and practical experience gained from extensive field work.

As the data consists of two 'snapshots', one from 1993 and the other from 1996, two distinct bureaucratic paradigms vis-à-vis sanitation will also feature. The 1993 paradigm represents the erstwhile Nationalist government's way of thinking, and the 1996 one, the ANC government's approach as informed by its Reconstruction and Development Programme. These differences are dealt with in more detail in the following section.

The discussion will later turn to an examination of the indicator qua indicator, and without reference to any data. This section will also focus on the glossaries and the 'small print' that accompany the data provided in the Tables.

3. Access to sanitation

This section will try to provide some background on what happened with regards to sanitation policy and its implementation in the period between 1993 and 1996. This background was more true of some provinces than of others. For example DWAF in the Northern Cape enthusiastically embraced the concept of dry sanitation (*Kleinhuis Koerant*, 2000) whereas lobbies in other provinces (Bond, 1999 for example) were less enamoured of the idea.

3.1 State of the art - 1993

Table 1 reveals that, on the face of it, 46 percent of houses in South Africa had access to sanitation in 1993. There is a huge discrepancy between the urban access of 81 percent and that of the rural areas, where a mere six percent had access to sanitation.

Table 1: Percentage of houses with access to sanitation (1993)[1]

Province	Total	Urban	Rural
Western Cape	88	98	27
Northern Cape	64	87	24
Free State	47	72	10
Eastern Cape	29	75	3
KwaZulu-Natal	37	78	4
Mpumalanga	26	73	7
Limpopo	11	69	4
Gauteng	78	80	12
North West	27	72	6
Total SA	46	81	6

Unless this is a typographical error, it must be objected that houses do not have access to sanitation. Households do, or people do. The concept of 'house' as a unit of analysis is a deeply problematical one although it might seem at first glance that nothing could be easier to define. The DBSA did not define 'houses' in its 1998 report glossary. So-called 'traditional' structures of raw earth blocks tended to be regarded as 'houses' by the old dispensation but not by the new (CSIR, 2000). Conversely, the new dispensation has been readier to confer 'house' status on certain informal dwellings that the previous government might have been hesitant to endorse in this way. The conceptual difficulties are well illustrated by the title of a Council for Scientific and Industrial Research (CSIR) publication – *Housing is not about Houses – the BOUTEK Experience* (CSIR, 2000) where 'housing' is treated as an holistic set of inter-related processes straddling a number of disciplines. Whatever the case, it is no surprise to see that the DBSA substituted the marginally less problematical 'households' for 'houses' in its 2000 report.

The distinction between 'urban' and 'rural' is still a contested one with many people dubious about the StatsSA formulation that was used in the 2001 census (StatsSA, 2001). Given the subjective, 'intuitive' nature of the distinction, this uneasiness in certain quarters is probably inevitable. Is a densely populated area such as Qwa-Qwa in the Free State urban or rural? It seems that one person's urban is often another person's rural, and vice versa. To add to the complexity, the South African census definition changed quite significantly between the 1996 and the 2001 censuses. Up until 1996, urban areas were defined as "areas with local authorities", regardless of their spatial features. Since 2001, the definition has been based on spatial form and land use. This means that smallholdings, mining towns and residential peri-urban areas came to be reclassified as urban. In traditional areas, villages were still regarded as rural, but the larger towns were reclassified as urban. Consequently, a proportion of the population was, by definitional fiat, reclassified as urban. This could lead to inaccuracies if 1996 and 2001 figures are compared, without taking these changes into account. The finer details of this particular reclassification are not really germane to the present discussion, but what is important to bear in mind is the concept of definitional shift - and the urban/rural distinction provides a striking example of this.

Working backwards from Table 1's overall figure of 46 percent access (given the urban and rural values), it can be calculated that an urban-rural weighting of 53 to 47 percent respectively was applied for

1. Source: Adapted from DBSA 1998:204.

the DBSA's 1993 figures. This would have reflected the previous government's thinking about what constituted 'urban'. Quibbles over small margins of error, in this regard, need not detain us here, but it should be noted that the urban/rural ratio has implications at the macro-planning level. In the first place, South Africa is still very much an urbanising country, and secondly, so-called 'dry' sanitation tends to be better suited to relatively sparsely populated rural environments, and unsuitable for urban areas where 'densification', typified by high-rise living, has occurred (Bond, 1999; CSIR, 2000; CSIR, 2003; George, 2008). Mvula Trust (2001) however provide an interesting case study of an indoor dry sanitation system in Johannesburg's Bellevue East suburb.

This brings us to the point where the low six percent figure for the rural areas can be accounted for. In a sense there is no such thing as not having access to sanitation – human beings improvise, and shift for themselves. What is at issue, and this is crucial for an understanding of the sanitation indicator, is the kind of sanitation. In 1993, anything less than a flush toilet was not regarded as qualifying as 'sanitation'. This is referred to as a 'high level definition' of sanitation and it reflects a country which thinks of itself as being First World. The 'high' in 'high level' is understood by the advocates of waterborne sewerage as referring to its superiority, whereas the detractors of flush systems, equate the 'high' with 'high cost', 'high maintenance' – in short 'highly problematical'. The 1993 mindset created the perception that dry sanitation was in some way inferior to flush, that it was the second-best option (Howard et al., 2001: 22), and the Department of Water Affairs and Forestry (DWAF), along with Non-Governmental Organisations (NGOs) such as the Mvula Trust, laboured for many years, none too successfully, to change this perception (*Kleinhuis Koerant*, 2000; 2001; 2002).

The dominant, pre-1994 elections, 'flush' paradigm was shortly to undergo a major assault from the 'dry sanitation' lobby, with the accession to power of a new government, and this will be discussed in more detail below.

3.2 The 1993 to 1996 sanitation paradigm shift

Again on the face of it (Table 2), the 1996 figures reflect that there was massive sanitation provision that occurred over the 1993 to 1996 period. Access to sanitation was up to 82.5 percent in just three years – an advance of some 79 percent over the 1993 value.

Table 2: Percentage households with access to sanitation (1996)[2]

Province	Percentage
Western Cape	90.5
Northern Cape	70.9
Free State	70.3
Eastern Cape	64.2
KwaZulu-Natal	83.3
Mpumalanga	87.1
Limpopo	77.8
Gauteng	94.5
North West	86.7
Total SA	82.5

2. Source: Adapted from DBSA, 2000: 181.

As it so happens, nothing could be further from the truth. DBSA's 1996 figures were derived directly from the 1996 census, as is not too readily apparent from a comparison between Table 2 and Table 3.

Table 3: Toilet facilities by province, 1996 (number of households)[3]

Province	Flush or chemical	Pit latrine	Bucket latrine	None of these	Unspecified or other	Total
Eastern Cape	407 358	447 273	83 058	385 656	9 004	1 332 348
Free State	282 116	157 183	128 890	55 018	1 804	625 011
Gauteng	1 627 791	228 236	48 696	48 363	11 083	1 964 168
KwaZulu-Natal	693 130	690 560	15 713	250 956	10 575	1 660 934
Mpumalanga	228 158	298 340	21 864	5 225	3 423	604 010
Northern Cape	111 327	21 266	33 896	19 923	571	186 984
Limpopo	129 075	635 462	4 534	207 097	6 289	982 457
North West	230 697	394 471	46 483	46 028	2 964	720 643
Western Cape	843 202	46 803	37 051	52 865	3 094	983 015
Total SA	4 552 854	2 919 594	420 185	1 118 132	48 807	9 059 571

StatsSA (2002) reflects 'toilet facilities' (by household it should be emphasised) in various categories. If the totals for 'flush toilet' and 'pit latrine' are added together, and the resultant 7 472 448 is divided by the grand total of 9 059 571 households, a figure of 82.48 percent is obtained (cf. the DBSA figure of 82.5 percent in Table 2). Thus the 1996 figure has been very significantly distorted by a change in the definition of 'sanitation' to *include* pit toilets.

At first glance this appears to have been in line with the 1995 Draft White Paper on Sanitation Policy and the Reconstruction and Development Programmes' (RDP) stipulations that anything 'less than' a Ventilated Improved Pit (VIP) toilet did not constitute adequate sanitation (CSIR, 2003: 10.1; DWAF, 2001: 4; Howard et al., 2001: 23). But what in effect happened during the 1996 census is that all pit toilets were counted as meeting RDP standards. The enumerators' failure to distinguish between *improved*-pits and *unimproved*-pits created enormous headaches, which continue to this day, for planners, bureaucrats and researchers charged with drawing up plans for addressing the sanitation backlog and making budgetary allocations. The planners have had to deal with a 'grey area' of almost three million pits. While it was easily estimated that the bulk of these were unimproved, the extent was not known.

To equate a properly constructed VIP toilet with an unimproved pit toilet is to commit a category mistake – it is a bit like classing tricycles with Harley Davidsons simply because both have wheels. There is an elegant simplicity to the principle of air-flow which is integral to the VIP toilet's functioning, and in certain 'pro-green' European societies, most especially in Scandinavia, the VIP is the 'toilet of choice', notwithstanding the ready availability of flush systems. Although these toilets are easy to build, and can withstand robust usage, for their proper functioning they are nonetheless dependent on their component

3. Source: *StatsSA*, 2002: 82.

parts being fairly finely related to one another. A shoddily built VIP, or one with some vital component incorrectly installed, is no better than an unimproved pit toilet.

In essence the VIP consists of a lined pit covered by a concrete slab to prevent the ingress of rainwater. A black air vent, the dimensions and positioning of which are critical, serves to help 'ventilate' the system. The trajectory of insects, most especially flies, is dictated by the natural lighting within the system, and flies are trapped by a fly-screen. The positioning of the superstructure, with respect to the prevailing winds, has a direct bearing on the control of odours. The pit is either emptied after some years of usage, or it is covered over and the superstructure moved to a new pit. A well-built, properly maintained VIP system is in no respects inferior to conventional waterborne sewerage systems, and is more sustainable environmentally, financially, administratively and operationally.

But while the functioning of VIP and unimproved ('long-drop') pit toilets is poles apart, in their physical manifestations they are all but indistinguishable to the untrained eye. One cannot expect of census enumerators to perform the sort of site audit needed to differentiate between the two types of toilet and thus, in the future, this data should ideally not be derived from the census, but rather supplied 'bottom-up' from the Local Authorities (LAs) themselves. This can only happen, however, once the LAs start to implement their Integrated Development Plans (IDPs) with all the diligence that this planning instrument calls for. That process in turn is dependent upon costly, and lengthy, needs assessments being performed. In an environment of rapid in-migration to the urban nodes and small towns (Atkinson, 2007), sanitation backlogs are a perpetually shifting target and the anecdotal evidence is widespread that sanitation backlogs, as they feature in IDPs, are often little more than 'thumbsucks'. It is also the case that many municipal officials, even technical staff, cannot readily distinguish between the two types of pit toilet. The upshot of this is that South Africa's 'access to sanitation' figures may contain quite a significant margin of error and this is likely to persist for the foreseeable future. The percentage of pit toilets that are in fact 'improved' will, for the time being, probably have to continue to be estimated.

3.3 Policy and paradigm shifts

The RDP policy was formed in response to a paradigm shift which said that waterborne sewerage was an unsustainable option for a developing country like South Africa with its constraints on water supply, and finances. The arguments for dry sanitation, and its manifest sustainability, are detailed and compelling but beyond the scope of this paper. Suffice it to say that the 'new' paradigm is well illustrated by the following:

> "Conventional sanitation technologies… are predicated on the notion of human excreta as an unpleasant, dangerous waste product necessitating disposal. However, alternative technologies, such as urine diversion, regard human excreta as a resource" (CSIR, 2000: 79).

The above formulation is not the prevailing orthodoxy but it succinctly captures the direction in which government policy was moving in the 1990s. It is necessary to point out that, in terms of current RDP-

informed policy, the 1993 figures for sanitation access were *understated* (VIP toilets were *excluded*) while in 1996 they were *overstated* (unimproved pit toilets were *included*). The DBSA tables referred to do not reflect the pronounced shifts in paradigm and policy that informed the numbers and are therefore misleading.

A ranking of provinces between 1993 and 1996 (cf. Tables 1 and 2 above) would show Mpumalanga as having ascended from 8th position (out of nine) to 3rd. The implication is that Mpumalanga embarked on a massive (and successful) drive to eliminate its sanitation backlog.

It should be borne in mind that as of 1993 the current nine provinces had not come into existence yet and so there must be a margin of error in these provincial allocations. Nevertheless, the fact was that by 1996 not that much had been achieved by way of sanitation provision in any of the provinces. In the light of the foregoing, however, we know that what this leap up the rankings really means is that Mpumalanga has (or had) a relatively much higher preponderance of pit toilets than did the other provinces. How many of these were VIP toilets we cannot of course tell from the StatsSA numbers.

3.4 Read the small print

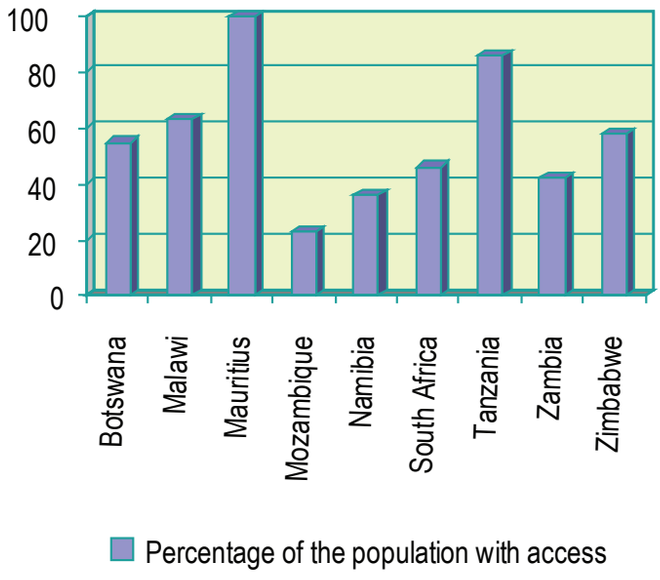
The small print attached to the table (StatsSA 2002:82) from which Table 3 is drawn, reveals that these values are to be read as "Excluding institutions and hostels". This is a crucial qualifier. For one, the provision of sanitation to schools is something of a sub-discipline in itself. The same applies to hospitals and clinics. Human beings spend a very considerable amount of their time, away from the domain of the household, in public spaces, or in institutions such as the workplace, hospitals, places of learning, prisons and so forth. Sanitation provision in these instances (public facilities, facilities at sportsgrounds, school hostels, migrant worker facilities, etc.) is of critical importance but this backlog is not reflected in the DBSA figures (derived from StatsSA) although it forms a crucial component of urban planning and of the state's 'sanitation backlog'.

3.5 The regional/international perspective

This section serves to illustrate Sachs's (1995: 2) contention that, "as regards international comparisons, it must be said straightaway that they have a far more limited informative value than longitudinal comparisons for one and the same country. At bottom, what needs to be analysed is the way one economy or society develops". Ravallion, Chen and Sangraula (2007: 667-676) also draw attention, in the context of urban and rural poverty lines, to the incompatibilities that have to be catered for when comparing the findings of country-specific studies with one another.

Figure 1 (to follow) suggests that South Africa was well behind even Malawi, Tanzania and Zimbabwe in the provision of sanitation in 1995.

Figure 1: Southern Africa regional access to sanitation, 1993-1995[4]



As was shown in Table 3 South Africa's value in Figure 1 is expressed in terms of 'flush or chemical' toilets. It is highly unlikely that poor countries like Malawi and Tanzania, with predominantly rural populations, would have conceptualised 'access to sanitation' similarly. Indeed the African Development Bank, from where these values were sourced, points out that "applications of these [access to sanitation] definitions may vary from one country to another, and comparisons can therefore be inappropriate" (African Development Bank, 2002: 252). Treatment of sewage is prohibitively expensive for poor countries, as is the maintenance of the bulk infrastructure. The sanitation levels for some of the SADC countries in Figure 1 include 'low level' options such as basic 'pit privies' and are thus not comparable to the South African percentage.

3.6 Cross-checking and verification

When engaging in precautionary verification one should also not relax one's vigilance concerning what the data might be masking. Nafziger (1997: 36) says, quite rightly, that, "infant mortality is a good indication of the availability of sanitation". Provision of acceptable sanitation in South Africa proceeded apace in the period from 1995 to 1998 and one might have hoped to see this reflected in a declining infant mortality rate, the more so given the policy shift in the direction of Primary Health Care (PHC).

The sad reality was that the infant mortality rate actually rose from 42 (per thousand live births) in 1995 (DBSA, 1998: 206) to 45 in 1998 (HST, 2002: 297). This probably reflects the impact of the HIV/AIDS pandemic on this 'verificatory' indicator.

4. Source: Adapted from DBSA 1998:202-203

4. Unpackling the DBSA's 'Access to Sanition' indicator

In South Africa the emphasis is on delivering 'units' to households and the thorny question of 'access' may be said to be lying dormant. As RDP targets come to be met however (in 2001 the target for the elimination of the sanitation backlog was set for March 2010 - DWAF, 2001: 18), and once the RDP's sanitation standard has been properly incorporated into the indicator, the focus will shift to 'access'.

Does a 'household' toilet shared by 20 people constitute 'access'? If so does it matter that it is situated 100 metres from the homestead? What is the ideal number of public toilets that should be made available in a city or in a small town? Should dysfunctional flush systems (such as may be found at schools where the toilets have been blocked for months) still constitute theoretical access? One could go on at length in this vein but the point is obvious – at some stage what is understood by 'access' is going to have to be spelt out with the kind of precision the RDP has applied to the differing gradations of 'sanitation'. 'Access' will need to be amplified to incorporate issues of management and maintenance and it will need to be subjected to regular monitoring and evaluation. At present the term is too susceptible to subjective interpretation to be really useful.

The question of *what entity*, or *who exactly* it is, that is deemed to have access has already been touched upon. It is now necessary briefly to examine the underlying assumptions contained within the DBSA glossary of 'access to sanitation' descriptions. These evade the 'access' question (perhaps wisely so) and focus on 'sanitation'.

The 1998 report has just one gloss: "*Percentage of population with access to sanitation* – The share of the population with at least adequate excreta sanitation disposal facilities that can effectively prevent human, animal, and insect contact with excreta" (DBSA, 1998: 218).

As already indicated, in the South African context, this formulation reflects the old paradigm and is meant to describe waterborne sanitation. As such it reflects a number of fundamental misconceptions. The implication is that flush systems are healthier than dry systems, and that flush systems effectively prevent contamination of the environment.

On the first count it has now been recognised that what is important is not so much the *fact* of excreta's being whisked off into who-knows-what dark realms, as that people should wash their hands after having been to the toilet. This was reflected in the United Nations' WASH campaign which was endorsed on national television by ex-President Nelson Mandela. Whether users are using dry or 'wet' sanitation systems is thus irrelevant from a health perspective.

On the second count, the 'out of sight, out of mind' aspect of flush sanitation has increasingly been recognised as a dangerous illusion. Massive damage is done to the environment by poorly managed treatment works. "It assumes fresh water as an unlimited resource... It is further blithely assumed that, at the end of the pipe, sewage is treated whereas in fact a negligible amount of Third World sewage is treated… all over the world natural ecosystems are being destroyed by the discharge of untreated or

partially treated sewage" (CSIR, 2000: 79). These reservations about the wisdom of advocating waterborne sanitation systems have unfortunately proved to be prescient. An infrastructure survey conducted by the South African Institute of Civil Engineers (SAICE) in 2006 found that there were very serious problems with the maintenance of treatment works and with the condition of sanitation infrastructure installed post-1994 (Fourie, 2008).

The health hazards attendant upon this state of affairs ought not to need spelling out (DWAF, 2001). The point that needs to be made is that faeces mixed with water and urine becomes a *dangerous* substance, the more so where control over it is at some point released. As the CSIR (2000: 79) points out, "The human body does not produce 'sewage'. Sewage is the product of a particular technology". What is at issue then is the level of *control* exercised over the eventual fate of the faeces. This level of control is much greater with a VIP system, and even greater with any one of the plethora of new technologies that has been brought to market in South Africa such as the Urine Diversion System (UDS), and the 'Enviro-Loo'. The 'dry paradigm' would ideally like to see people engage constructively with faeces, not to put too fine a point on it, especially in a desiccated or composted form (CSIR, 2000: 78-83). Human excreta need not be regarded as a waste product. Be that as it may, the DBSA gloss fails to capture the innovative thinking that sometimes informs sanitation provision in South Africa.

The DBSA's 2000 Development Report repeats the 1998 definition for 'population' access but adds the following one:

> "*Percentage of households with access to sanitation* – Households that have access to a flush toilet, a chemical toilet or a pit latrine". (DBSA, 2000: 191)

This captures the RDP thinking except that, as already pointed out, it crucially fudges the distinction between improved and unimproved pits ("or a pit latrine" does not specify *what kind* of pit latrine). The former constitutes 'sanitation' but the latter not, in the South African context. Thus an indicator that does not cater for this distinction is defective from a South African perspective.

It is only with the 2005 Development Report that 'access to sanitation', as it relates to the 2001 census, is overtly stated to include pit latrines "with ventilation (VIP)" and pit latrines "without ventilation" (DBSA, 2005: 151). This does at least draw the necessary distinction between the two types of pit latrine although they are still lumped together in the counting.

It must be remarked, very briefly, that the 'access to sanitation' indicator measures an assumed level of deprivation from, say, a Eurocentric perspective that does not necessarily find its echo 'on the ground'. As such it is something of a 'weak and paternalistic' indicator following Wisner (in Sachs, 1995: 5). It is for example not unheard of to find residents converting their sturdily constructed VIP structures into storage sheds (the recipients' real felt need was a lack of secure storage as opposed to improved sanitation), or communities resisting the upgrading of unimproved pits because they would rather the funds were applied to something else that is considered more pressing. The need for decent sanitation as a rule follows on from a fair degree of health education, and it must be borne in mind that, while the selected indicator would be suitable to measure deprivation from the vantage point of government, it might be less effective as a mirror of deprivation as experienced by ordinary people.

5. Conclusion

The point of this discussion was not to cast doubts upon the competence of bureaucrats; census enumerators; or sanitation workers. Neither was it the intention to cast aspersions on the integrity and authoritativeness of the DBSA's invaluable Development Reports. Nor, for that matter, was it meant to disparage what is in fact an important, useful indicator.

The intent has been merely to show that, using the DBSA's access to sanitation indicator as an *illustrative example*, indicators should be handled with care, especially when they are used to yield meaningful information over a span of time. It may sometimes be necessary to take crucial shifts in definitional and conceptual distinctions into account, as well as the extraneous dynamics that prevailed during the period under review.

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