

EVIDENCE-BASED POLICY ANALYSIS IN SOUTH AFRICA: CRITICAL ASSESSMENT OF THE EMERGING GOVERNMENT-WIDE MONITORING AND EVALUATION SYSTEM

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ABSTRACT

The paradigm of evidence-based policy analysis is an increasingly popular paradigm for public policy analysis. It is still in an emerging state in South Africa. Until recently, no coherent system of systematic policy monitoring and evaluation existed in the South African Public Service. This, state of affairs, however, changed in 2006. The Presidency is currently co-ordinating the implementation of a massive implementation programme known as the Government-wide Monitoring and Evaluation System (GWM&ES). This programme is intended to establish a uniform system of monitoring and evaluation across all spheres of government, as well as including the business and voluntary sectors of South African society. If the implementation of this programme is successful it will have huge potential for the improvement of public policy outcomes and impacts in this country. Successful policy implementation, however, depends on doing the right things right. The article firstly summarises the evidence-based approach to M&E, and then assesses the nature of M&E as a higher order management function. It then summarises the emerging properties of the GWM&ES as a complex adaptive system (CAS) and critically assesses the emerging GWM&ES. Positive and negative trends in the development of the GWM&ES are also identified and assessed. The paper concludes with a summary of recommended strategies for optimal implementation of the GWM&ES in order to achieve maximum efficiency and effectiveness for purposes of evidence-based policy assessment.

The paradigm of evidence-based policy analysis is an increasingly popular paradigm for public policy analysis. It is still in an emerging state in South Africa. The main problem with this statement, however, is that effective evidence-based assessment of governance necessitates the existence of effective public policy planning and, until recently, no coherent system of systematic policy monitoring and evaluation existed in the South African Public Service. This state of affairs, however, changed in 2005. The Presidency is currently co-ordinating the roll-out of a massive implementation programme known as the Government-wide Monitoring and Evaluation System (GWM&ES). This programme is intended to establish a uniform system of monitoring and evaluation across all spheres of government including the business and voluntary sectors of South African society. If the implementation of this programme is successful it will have huge potential for the improvement of public policy outcomes and impacts in this country. Successful policy implementation, however, depends on doing the right things right.

The paper firstly summarises the evidence-based approach to M&E, and then analyses the nature of M&E as a higher order management function. It then summarises the emerging properties of the GWM&ES as a complex adaptive system (CAS) and critically assesses the emerging GWM&ES. Positive and negative trends in the development of the GWM&ES are also identified and assessed. The paper concludes with a summary of recommended strategies for optimal implementation of the GWM&ES in order to achieve maximum efficiency and effectiveness for purposes of evidence-based policy assessment.

EVIDENCE-BASED POLICY ANALYSIS

The advent of the information society in the early 1980s with the development of increasingly powerful and affordable computer systems with data-processing powers that have doubled every 18 months since then, for the first time in history, made it possible and practical to compile, store, process and assess comprehensive databases on virtually any issue imaginable. These databases can contain both numeric and alphanumeric (or narrative, textual data). This development has led to more rigorous approaches to research, has enabled better informed decision-making, and has brought about a revolution in policy analysis that has become known as evidence-based policy analysis. There is, however, still no definitive causal linkage that has been established between the availability of better information for decision purposes and better quality decisions and outcomes: the so-called utilisation problem (e.g. Bamberger, 2008:120). Nevertheless, evidence-based policy analysis and assessment have the potential to improve the quality of policy decisions, actions and consequences (Bamberger, 2008:128), and is fast emerging as the prevailing international paradigm for policy analysis and management.

Policy refers to a programme of action to give effect to specific goals and objectives aimed at changing (and preferably improving) an existing unsatisfactory situation. Evidence-based policy is an approach to policy analysis and management that *helps people make well informed decisions about policies, programmes and projects by putting*

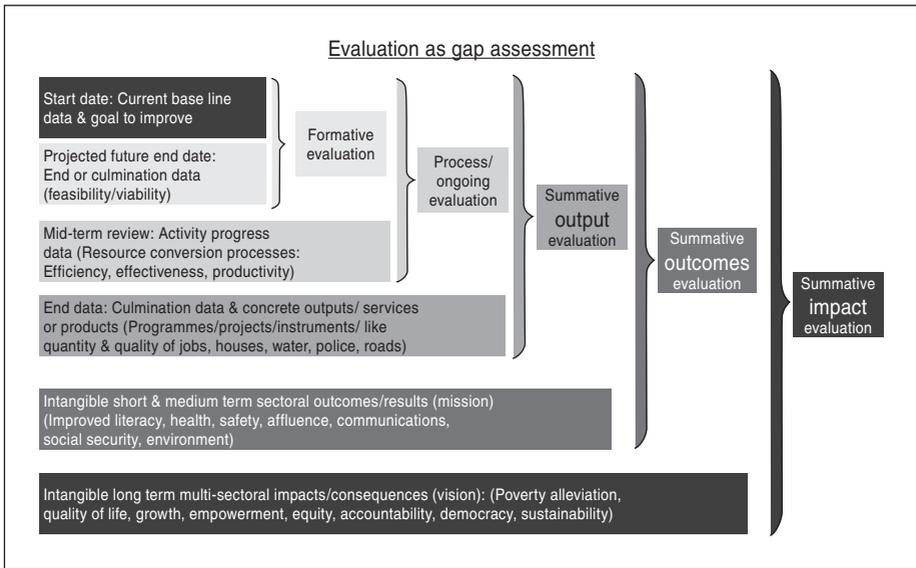
the best available evidence at the heart of policy development and implementation (Segone, 2008: 27, quoting Davies. See also Boaz, Ashby & Young 2002, Davies, Nutley & Smith 2000, Radaelli 1995 and the research undertaken by CE&P). Marco Segone, a senior monitoring and evaluation advisor to the UN and other regional development organisations, distinguish evidence-based policy practices from what he calls traditional opinion-based policy practice, *which relies heavily on either the selective use of evidence (e.g. on single studies irrespective of quality) or on the untested views of individuals or groups, often inspired by ideological standpoints, prejudices, or speculative conjecture* (2008:27). The evidence-based approach to policy analysis is still an emerging approach, because the computer tools needed for effective application of this approach are also still developing and empirical research methodologies still suffer from *unclear objectives; poor design; methodological weaknesses; inadequate statistical reporting and analysis; selective use of data; and, conclusions which are not supported by the data provided* (Segone, 2008:27, referring to the conclusions of Davies, Nutley and Smith, 2000). Segone also identified a current trend away from opinion-based to evidence influenced policy practices that might hopefully result in the end in fully-fledged evidence-based policy practices (2008:27).

The compilation and assessment of evidence for policy analysis purposes is an applied research activity, utilising different research methodologies that are the most appropriate for the specific type of analysis and assessment required. Policy research therefore refers to a systematic and scientifically valid collection, analysis and assessment of data about a specific situation in order to describe, explain and/or predict relationships among variables influencing the nature of the situation concerned, frequently with the intention to reduce or resolve a perceived problem. This applied utilisation focus of policy research is an important factor that distinguishes policy evaluation from some academic social sciences research activities that sometimes have a basic or pure theoretical focus with little relevance for or relationship to real life events and problems.

MONITORING AND EVALUATION AS HIGHER ORDER MANAGEMENT FUNCTIONS

Systematic monitoring and evaluation is the main tool to achieve effective evidence-based policy analysis goals. *Policy monitoring* is the regular, systematic collection of data on the basis of specified indicators to determine levels of progress and achievement of goals and objectives. This is normally a very important project implementation and management tool, but has over time been linked to the concept of evaluation. The results of the monitoring process are normally regularly reported in prescribed standardised formats. In contrast to monitoring, *policy evaluation* is a systematic judgement or assessment of policy programmes. It can include a systematic assessment of resources, organisational processes to convert such resources into policy outputs or products, and the extent to which these policy programmes have the intended results in the form of outputs, outcomes or impacts, measured against envisaged goals and objectives. Systematic, evidence-based assessment can only be undertaken if the evidence

Figure 1: Evaluation as gap assessment



is available to assess. The evidence is collected, stored and processed through systematic, rigorous monitoring and reporting processes. This establishes the link between these processes that has over time become known as monitoring and evaluation (M&E).

M&E are therefore normal management processes that are imperative to undertake in order to achieve policy success. M&E are higher order management processes that rely on the existence of prior decisions and actions that can be monitored and evaluated. Different types of M&E can be undertaken at different stages of the policy cycle. In all cases, however, the activities that are undertaken are similar. Specific issues, processes or products are assessed on the basis of data that exists about those issues, processes or products. These different applications and foci of evaluation activities can be summarised as follows (Cloete, 2006a):

Formative evaluation is frequently required at a very early stage in the policy planning process to undertake a formal assessment of (or appraise) the feasibility of the different policy options that one can choose from. Policy *planning* consists of a range of systematic activities aimed at developing a policy programme, including problem identification, problem structuring, prioritisation, policy objective-setting, options analysis and assessment, resource availability and utilisation, implementation and the evaluation of results. This includes identifying the potential costs, benefits, constraints and generally the potential impacts that different policies may have on an existing policy issue, in order to decide the course of action to take. Feasibility studies can focus on the feasibility of the proposed project or programme in different policy sectors e.g. political, institutional, social, economic, and technological. They are undertaken using statistical and other trend projection techniques e.g. modelling, scenario building, cost-benefit analyses. This type

of evaluation then has a formative influence on the policy process, and focuses on the feasibility of specific desired policy objectives (Cloete, 2006a).

Ongoing or process performance evaluation is done when a policy project or programme is being implemented. Progress must be monitored in order to keep track of the time frame, the spending programme, the progress towards objectives and the quality and quantity of outputs. Monitoring of the policy implementation schedule is undertaken through project management techniques. This type of evaluation focuses primarily on the effectiveness, efficiency and levels of public participation in the implementation process (Cloete, 2006a).

Summative evaluation takes place after the completion of the policy project or programme (e.g. at the end of the financial year or the term for which the policy was planned), evaluations are done to assess either the progress made towards achieving policy objectives if those objectives can be determined, or to assess the general results of the policy. These results include any positive or negative changes to the *status quo* before the policy was implemented, if any. After changes have been identified, it is important to determine what caused those changes because they may not necessarily have been caused by the policy. They may have been brought about as a result of other policies or developments outside the control of the policy makers. Summative evaluation therefore focuses on the short term end products (outputs) as well as on the medium term sectoral outcomes or long term inter-sectoral impacts or changes that the product brought about to real-life conditions in which it was applied (Cloete, 2006a).

It is clear from the above summary of formative, ongoing and summative evaluations that alternative evaluation approaches, designs and/or methodologies can be selected to achieve evaluation goals in the most effective and efficient way (Stufflebeam & Shinkfield, 2007:131, Bamberger, Rugh & Mabry 2006, Wholey, Hatry & Newcomer 2004, Scriven 1991, 2003/4). Evaluations can also, for example, take an inductive approach to determine descriptive facts, figures and relationships that have been brought about by a specific policy project or programme, or it can take the form of a deductive exercise to test a specific model, theory or methodology. Evaluation approaches or designs can also be mixed, depending on what is regarded as the most appropriate for a specific purpose (e.g. Stufflebeam & Shinkfield 2007:188, Davidson 2005, Chen, 2005, Rossi, Lipsey & Freeman, 2004).

The applied research nature of evaluation implies a significant degree of systematic and rigorous scientific approaches, designs and methodologies that frequently require high levels of impartiality, knowledge, research skills and resources to execute. These requirements and conditions are not always present in policy management practices, and are frequent reasons why evaluations are not undertaken or are undertaken in superficial ways (Cloete, 2006a).

THE EMERGING GWM&ES IN SA

Until 2005, only individual staff performance evaluations were institutionalised and regularly and systematically carried out in the South African government. Policy programme monitoring and evaluation, however, were not undertaken, managed

and coordinated systematically in the South African Public Service. These activities were undertaken sporadically by line function departments for purposes of their annual departmental reports. Some departments were more rigorous than others in this process, while the *Public Service Commission* undertook to monitor and evaluate the South Africa government's adherence to a restricted number of principles of good governance that the PSC derived from the *Constitution, 1996* (see Cloete, 2006b for a more comprehensive assessment of the situation up to 2003).

The following considerations *inter alia* motivated a Cabinet decision in 2005 to develop the GWM&ES:

- a need for regular national government report-backs to the International UN Millennium Goals Initiative on the progress with halving poverty in South Africa by 2014 (e.g. UNDP 2005);
- the fact that South Africa was the host of the World Summit on Sustainable Development in 2002 and at that time did not have any national M&E system to assess sustainable development as required by the Rio Convention of 1992 and reiterated at the Johannesburg Summit where South Africa was the host country;
- the undertaking by the South Africa president to regularly inform citizens about progress with the Government's National Programme of Action (POA) (<http://www.info.gov.za/aboutgovt/poa/index.html>);
- the fact that donors are increasingly requiring systematic M&E of projects and programmes that they fund, in order to protect their investments; and
- the fact that institutionalising national M&E systems has for the reasons summarised above, proved to be an international good governance practice.

The above (as well as a number of other) considerations stimulated awareness in government that the state of monitoring and evaluation of governmental activities in South Africa can and should be managed better. In July 2005, the South Africa Cabinet therefore adopted a strategy to establish a Government-wide Monitoring and Evaluation System (GWM&ES) over a period of Two years (Presidency, 2005). The GWM&ES is intended to co-ordinate a systematic programme of policy monitoring and evaluation throughout the public sector in South Africa. This programme is aimed at improving general public management in the country and will be the vehicle for reporting in 2014 on the implementation of the UN Millennium goals and targets to halve poverty according to a set of common indicators. In 2007 the initial GWM&ES proposal was revised and updated, mainly because the time frames specified in the original proposal were too optimistic and because more clarity about how the system should be implemented, had by then started to emerge (Presidency, 2007a and 2007b).

This revised M&E system will not only monitor internal governmental performance processes but is also aimed at determining the nature of external governmental outcomes and impacts on South African society. It is therefore also aimed at determining the eventual longer term results of policy and service delivery interventions or a lack thereof. An important departure point of the GWM&ES is that existing monitoring and evaluation capacities and programmes in line function departments should as far as possible be

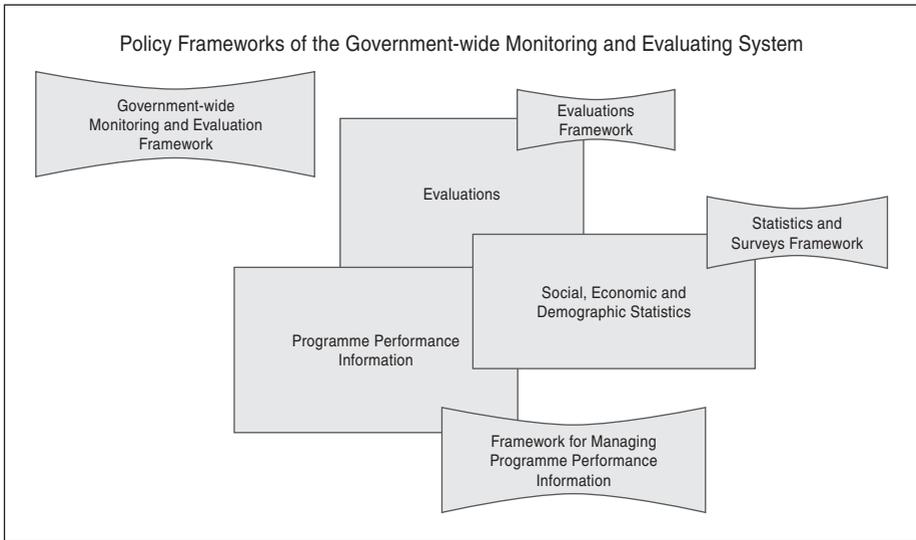
retained, linked and synchronised within the framework of the GWM&S (Presidency, 2007a:19).

The GWM&ES is managed from the Policy Co-ordination and Advisory Services Unit in the Presidency. It is a secondary data assessment system that will not undertake primary research or data collection itself. It will rather draw on information gained from the above and other agencies, and interpret this data in the context of the national government's strategic Programme of Action, in order to assess progress towards those strategic goals. The updated GWM&ES implementation plan still contains no detailed implementation strategy and no time frames to fully establish the system in South Africa has yet been determined. It does, however, spell out the roles and responsibilities of the various stakeholders and an agency involved in this programme (Cloete, 2006b) summarises and assesses the roles of the main stakeholders). These institutional stakeholders include:

- The National Treasury responsible for measuring the *value for money* aspects of governmental policy programmes (National Treasury, 2007);
- the DPSA who is responsible for staff performance evaluations;
- StatsSA who is responsible for data collection, storage and quality control (StatsSA 2007);
- the PSC who is responsible for interdepartmental evaluations of those few constitutional process principles that the PSC has decided to measure, and who has published a set of guidelines about M&E in an attempt to synchronise the different perspectives of all the main governmental agencies involved in this venture (PSC 2008);
- DPLG who is responsible for assessing the policy programme performances of provinces and local authorities;
- DEAT who is responsible for assessing the state of the environment and sustainable development, (<http://soer.deat.gov.za/frontpage.aspx?m=2>);
- other line function departments who are responsible to assess their own line function activities and report back through the channels established by the GWM&ES;
- businesses, NGOs and CBOs who receive funding from the state and who have to report on their activities enabled by such public funding; and
- PALAMA, who will be responsible for monitoring and evaluating capacity-building through so-called *massified* training exercises to improve M&E skills among thousands of officials who will be responsible for the implementation of the system (SAMDI 2007).

The envisaged structures and operations of the GWM&ES are at this stage explained in a series of separate policy documents drafted by the respective stakeholders alluded to, each establishing one or more components of a comprehensive emerging regulatory framework that forms the backbone of the system. There is no integrated hierarchical structure and no indication of lines of authority and interlinking processes available yet. It seems as if the GWM&ES has more of an emerging network nature at the moment (see Klijn, 2003, Niemi-Ilahti, 2003, Pierre & Peters, 2005 on the attributes of networks). The closest to a visual depiction of the future structure of the GWM&ES is this graphic representation of the various structural components of the system:

Figure 2: Structural Components of the GWM&ES



Source: National Treasury 2007: 3, PSC 2008:12

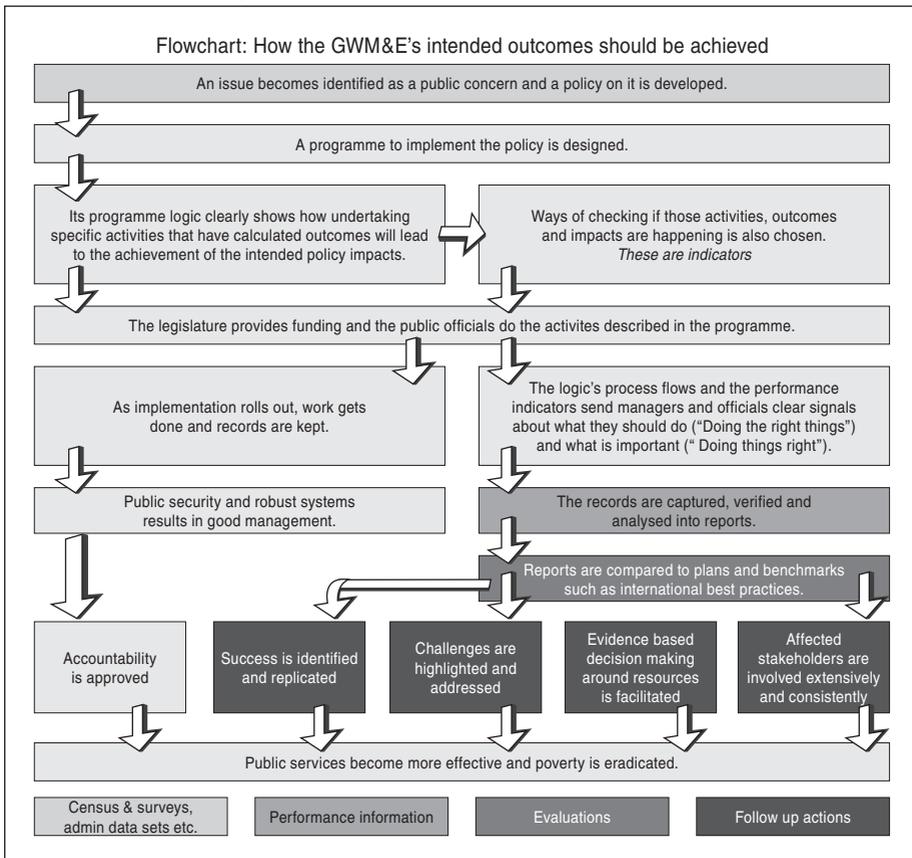
Figure 3 contains the Presidency's depiction of the envisaged operations in the GWM&ES. This flow model explains the different roles of the various stakeholders in the GWM&ES. It describes the generic policy planning, implementation and assessment processes in government.

The Presidency has also established, in consultation with StatsSA, a National Indicator Initiative (NII) that is still in progress. A series of 72 preliminary generic policy assessment indicators was published in 2007, in the form of a Framework of Mid-term Development Indicators for SA. The second version of this indicator framework has recently been published, with slight adaptations to the first version. It now contains 76 indicators covering the following sectors (Presidency 2008):

- economic growth and transformation
- employment
- poverty and inequality
- household and community assets
- health
- education
- social cohesion
- safety and security
- international relations
- good governance

It is significant that these sectors exclude the environment, and that the institutional and organisational indicators are minimal. The revised list of indicators now contains only one

Figure 3: GWM&ES processes



Source: Presidency 2007a:6

indicator related to the environment, referring to green house gas emissions in the good governance category. This is probably because DEAT has compiled an extensive list of environmental indicators in its State of the Environment Report (see <http://soer.deat.gov.za/frontpage.aspx?m=2>), but the problem with this situation is that these indicators are not yet integrated into the main set of indicators of the Presidency.

The role of StatsSA in the GWM&ES is probably going to be one of the most crucial roles of all stakeholders. They are supposed to co-ordinate the quality of data used for M&E purposes in the system. Statistics are eligible for designation as *official statistics* subject to periodic reviews by the Statistician General in consultation of the head of the producing agency. SASQAF requires that three criteria need to be met prior to assessment of the data:

- the producing agency should be a member of the NSS;
- the statistics should meet user needs beyond those specific and internal to the producing agency; and

- the statistics produced should be part of a sustainable series, not a once off collection.

The assessment is conducted by a Data Quality Assessment team established by the Statistician-General. This team evaluates the statistics under review against the pre-requisites and the eight dimensions of quality. The pre-requisites would include factors such as the legal and institutional environment, privacy and confidentiality. The eight quality dimensions include: relevance, accuracy, timeliness, accessibility, interpretability, coherence, methodological soundness and integrity. On the basis of these criteria, the statistic is classified as (Presidency 2007b, StatsSA 2007).

- quality statistics,
- acceptable statistics,
- questionable statistics
- poor statistics

The data quality framework of StatsSA is highly problematical, because the requirements for quality statistics are set extremely high and it is doubtful whether these requirements will be fully met by stakeholders in the foreseeable future.

The GWM&ES will also be extended to provincial and local spheres of government, and will inevitably have to be synchronised with the current performance management provisions contained in the *Municipal Structures Act, 1998* and *Municipal Systems Act, 2000*. The indicators used in the GWM&ES will have to be synchronised across all governmental spheres as well as across the public, private and voluntary sectors in SA.

ASSESSMENT OF THE GWM&ES

Governments across the world have specialised institutionalised monitoring an evaluation system for a variety of reasons (Cloete 2006a). The envisaged establishment of a dedicated GWM&ES in South Africa based in the Presidency and operating in an integrated way across the various governmental spheres in the country is therefore in principle in line with international good practices in this regard (e.g. OECD 1999, UNDP 1997 & 2003, UNICEF 1991, UNESCO 2006, MacKay 2007, Kusek & Rist 2004). It is, however, difficult to compare the GWM&ES in more detail with other systems, because it is still a developing system that has not really taken root as it is supposed to do. The broad outlines of the system are not yet clear enough to make such (evidence-based) assessments.

The GWM&ES in its current form is, therefore, nothing more than an emerging M&E framework based on a collection of disparate documents published by different departments, each from its own line function perspective. The Presidency's Framework document (Presidency, 2007a) is a summary of the different structures and processes that need to be put in place in order to co-ordinate and manage the compilation of information for purposes of assessment at different levels in the system. It is not prescriptive, and accepts that each line function department has the discretion to institutionalise an

M&E function that will be compatible with the broad framework of the GWM&ES. It suggests minimum uniform structures and processes in order to ensure a minimum compatibility of data in the different spheres of government (Presidency, 2007b). It has not been enforced yet and the original time frames for its implementation have already been exceeded. It therefore accepts as a departure point that there are divergent and unequal M&E capacities in government at the moment, and undertakes to minimally restructure and synchronise the current practices in different spheres, in order not to generate unnecessary resistance from non-complying or diverging agencies. There is still insufficient clarity whether the GWM&ES will be transformed through legislation into an enforceable regulatory system, and whether it will remain a recommended policy regime to be implemented only through voluntary compliance and co-operation of agencies at different governmental spheres.

The most serious weakness of the current emerging GWM&ES framework is that it does not contain any suggestion of the focus or contents of *what* needs to be monitored and evaluated. The framework currently only focuses on *how* monitoring and evaluation activities in government and in other supplementary agencies could be structured. In the National Treasury's documentation a useful model is included of the various possible elements of programme evaluation (inputs, resource conversion processes, outputs, outcomes and impacts) (National Treasury, 2007), while the PSC has suggested a number of different approaches and perspectives that might be considered for evaluation purposes (PSC, 2008). The framework itself, however, does not take a position on what M&E approach(es) should be used. For example it does not take a position towards the African Evaluation Guidelines that is currently the most authoritative operation M&E framework on the African continent (Afree, 2002). This lack of operational detail constitutes a major obstacle in the effective implementation of the system, because it is still unclear exactly what the overall strategic vision and priorities of the national government are, and what criteria and procedures are to be followed in order to achieve these goals (see also SAMEA, 2007). The core of the problem is that if one does not know what to evaluate, it is virtually impossible to decide how to do it.

Each line function department currently has its own strategic vision and action plans, but they are in many cases in conflict with one another, and there has not been any attempt to synchronise these individual plans in a single coherent national vision (e.g. the short term focus of AsgiSA vs. the long term focus of the NFSD, and the controversial arms procurement expenditure vs. the equally controversial basic income grant). The 2003 TYR report of the Presidency acknowledged this gap, and undertook to fill it in future (Presidency, 2003). Five years down the line, however, there is no sign of any progress. The current political turmoil in the governing party with a transfer of power to a new set of governing elites will also probably put such project on the backburner, until the new incoming political regime has consolidated its support and power. It was concluded in the GWM&ES that the focus of M&E activities in government was still too strong on output evaluation, and that it should in future be refocused on outcomes evaluation (Presidency, 2007a). It is, however, still unclear how this statement of intent will be implemented by the GWM&ES. The current POA identifies a number of strategic

governmental programmes, but they are *ad hoc* programmes that are not subsumed coherently into an integrated, conceptual national vision, and are still assessed on outputs rather than on outcomes.

There is still unnecessary organisational conflict among the main stakeholders in this venture. The Public Service Commission (PSC) is for example generally not regarded as a primary stakeholder in the GWM&ES, but only as a peripheral advisory agency in government without any line function implementation responsibility, despite the fact that it has probably produced the most substantial M&E outputs of all governmental agencies so far. The PSC also produced a useful conceptual guide to M&E that contains a much more coherent set of alternative approaches to M&E in South Africa (including what and how to do it), than any other agency involved in this exercise (PSC, 2008). A second example of the turf battles in government that detrimentally affect M&E in SA is the fact that Cabinet mandated the Department of Environmental Affairs and Tourism (DEAT) in 2006 as the lead department to develop a new National Framework on Sustainable Development (NFSD). This framework was adopted by Cabinet in 2008, but without any coherent action plan for implementation or integration of the framework with other governmental programmes (e.g. AsgiSA and JIPSA). The semi-final draft of the NFSD also contained a series of sustainability indicators, which were deleted from the final draft (see Cloete, 2005, DEAT, 2008). The revised set of 76 provisional policy indicators published recently by the Presidency, contains a mixture of output and outcome indicators that can also be better distinguished and systematised (Presidency, 2008). Given the absence of an integrated set of environmental and sustainability indicators, there is clearly some refinement still to be done to the official policy indicator set before it is acceptable in terms of international benchmarks (Cloete, 2005).

The GWM&ES has not yet been formally implemented by provincial and municipalities, because of serious capacity constraints in the Presidency which is the co-ordinating agency. The system has also not yet been launched and marketed formally, and a serious knowledge and communications gap currently exist within and among different government departments about the nature, goals, content, processes and time frames of the GWM&ES. It is, therefore, clear that the implementation time frames are going to be further delayed, and it is difficult to predict when the system will finally be fully up and running and implemented across all governmental, business and community spheres.

GENERAL PUBLIC POLICY SYSTEM AND THE GWM&ES AS EMERGING COMPLEX ADAPTIVE SYSTEMS

Governmental management systems are generally acknowledged to be complex systems, to be distinguished from so-called simple or complicated systems. Cilliers distinguishes these different types of systems as follows (1998:3):

- *Simple*: consisting of a few variables with linear relationships that can be described, explained and predicted with great accuracy;

- *Complicated*: consisting of many variables in a closed system with linear & non-linear relationships that can be described, explained and predicted with great accuracy; and
- *Complex*: consisting of many variables in an open system with non-linear relationships that cannot all be described, explained and predicted with accuracy.

Cilliers (1998:3) summarises the characteristics of complex systems as follows:

- it contains many elements that defy full understanding of the system;
- a dynamic interaction of elements, transferring information (self-organisation);
- the nature of the interaction of elements of the system is rich and multi-dimensional;
- interactions are non-linear and short-range: small actions can cause large reactions (non-local causation);
- recurrent positive or negative feed-back loops exist in the system, providing opportunities for maintaining identity but learning lessons to improve that identity – autopoiesis, dissipative structures and self-organisation);
- complex systems are normally open systems influenced by their environments and observers (framing);
- they operate as far-from-equilibrium systems with constant energy flow inputs in order to survive (equilibrium means stagnation and death);
- history is important, complex systems do not exist in isolation; and
- the elements of the system are normally simple; the complex nature of the system is as a result of the nature of the interactions of its elements.

Cooksey defines complexity in organisation and management as a non-linear systems-oriented perspective that attempts to conceptualise, understand and intervene in organisational systems at multiple levels in full recognition of the dynamic linkages and influences that operate within and among aspects of those system levels through time and space (2001:78). He then identifies the characteristics of the complexity approach as guiding instead of prescribing, adapting instead of formalising, learning instead of defending, complexifying instead of simplifying and including instead of excluding (Cooksey, 2001:77/8).

Some scholars tend to use the term complex adaptive systems to refer to a system of individual agents, who have the freedom to act in ways that are not always totally predictable, and whose actions are interconnected such that one agent's actions change the context for other agents (Zimmerman, *et al.*, in Praught, 2002). A complex adaptive system continually adapts to its environment, including re-forming, ever-changing, self-organising interactive patterns among its constituent components through symmetry breaks.

The following sectoral policy sub-systems can also be regarded as examples of complex adaptive systems on their own: management systems, economic systems, welfare systems, educational systems, health systems, legal systems, political systems, environmental systems, development systems and knowledge systems (Cloete, 2006c lists a series of sources that provide detailed justification for this conclusion).

The complex nature of policy processes is evident in the statement by Van Buuren & Gerits (2008: 382) that

(e)very decision can be regarded as a temporarily stable state of equilibrium in which streams of negotiation, deliberation and fact-finding are connected stepping stones in an ongoing policy process which at the same time is influenced by parallel policy processes competing for the same resources (attention, money, legitimacy, support). Decisions that are made persist until a sufficient amount of system pressure (internal or external) destabilises the policy system towards a new state of equilibrium.

Klijn suggests that if the events in a social system are seen as a range of mutual influencing interactions, where choices and events shape new situations and the positions of actors (the fitness landscape), then the task of the manager is to be aware of the opportunities in that landscape, as well as the positions of the actors, and use them to realise interesting policy proposals or to adapt proposals and actor coalitions, in such a way that they fit the landscape. (2008:314). The concept of a fitness landscape for complex policy processes is a way of conceptualising the context in which agents pursue their agendas, interact and achieve different outcomes according to their own actions and the possibilities inherent in the landscape itself (Rhodes, 2008:362-3).

Teisman & Klijn take this argument further by concluding that it is known that managers are not the rational beings presented in many managerial handbooks and that they try to avoid choices or act according to the circumstances. The complexity theory provides a different image of the manager as someone who is trying to survive in the *fitness landscape* that he is creating jointly with other agents, by slightly amending and changing the conditions and using the moments and possibilities perceived. This will, almost certainly, also provide different prescriptions for these managers. (2008b:297. See also Teisman, 2008a).

Haynes concludes in his recent essay on the evaluation of complex systems (Haynes, 2008:404):

- Complex policy systems are not easily regulated by simple legal and managerial devices, but have a complex evolving, self-regulatory control mechanism that is related to the interaction and feedback within the system. This self-regulation in policy systems may evolve around dominant logics and values (attractors) that are constantly being reinterpreted and redefined: for example marketisation.
- Complex policy systems are always trying to reinterpret historical and current data in the light of emerging events and this forms part of the feedback and interactive process within the system.
- Complex systems comprise interplay between instability and stability. Instability can lead to exponential change that result from small initial changes. But not all change in a complex system is unstable.

Complexity approaches to policy systems provide more accurate insights into the nature and operations of public sector organisations than many other approaches. There is

no doubt that the South African policy system is, like all its counterparts elsewhere in especially established democracies, also a complex adaptive system. Against the background of this conclusion, it is argued that the GWM&ES is in itself also an emerging complex adaptive system. It complies with the criteria for such systems (e.g. the many simple variables/components of an open system subject to external influences, interacting with each other in a dynamic, rich historically determined and non-linear manner, defying full understanding, operating far from equilibrium but surviving and expanding in a self-learning and self-regulatory manner). Despite the serious shortcomings of the system it not only maintains itself but is expanding as knowledge about its nature, goals, structures and processes spread. The main reasons for its success so far probably include the incremental nature and implementation of the system, and the fact that its time has come as a result of the internationally emerging evidence-based paradigm of policy management that relies on the existence of an effective M&E system, as a result of the reporting requirements of the POA and the UN.

CONCLUSION AND RECOMMENDATIONS

Policy systems can be regarded as complex adaptive systems in society, because they are open systems with many variables subject to external environmental influences that interact in non-linear ways that defy full understanding. These systems tend to operate *on the edge of chaos* and they have inherent self-regulatory attributes ensuring their adaptation to changing circumstances, eventually ensuring their survival, even against huge odds. The emerging evidence-based paradigm of policy analysis has to factor in the complex nature of policy systems and adduce evidence of how such systems operate, in order to draw conclusions about how to improve policy effectiveness, efficiency, outputs, outcomes and impacts. Evidence-based policy assessment relies on the existence of an effective M&E capacity in public organisations. M&E as a higher order management function in an organisation is in turn a normal part of main-stream management processes in that organisation. As such M&E systems are in themselves complex adaptive sub-systems that operate on the same principles as any other complex adaptive system.

The GWM&ES in South Africa is an emerging complex adaptive sub-system that has survived so far as a result of the complex attributes of the system. It operates incomprehensibly and indeed at the edge of chaos. It does not have a formal hierarchical structure, but operates in the form of a loose network of autonomous agencies periodically interacting with one another. There is no clear line of authority in the system, and frequent turf battles cause confusion and conflict among stakeholders. The system is still evolving, as new rules of the game are being formulated or clarified, changing power and authority relationships among the main stakeholders. The system seems to have an inherent survival capability, despite these obstacles that it regularly faces. If the GWM&ES can continue to learn lessons from past experiences and implement those lessons in a self-regulatory manner, it will be a further illustration of the complex nature of the system, and will contribute to its survival and consolidation. The complex nature of the system justifies the decentralised implementation approach which is necessary to provide sub-

units within the system a sufficiently large degree of autonomy to pursue their own goals while simultaneously trying to comply with a minimum of uniform requirements of higher level agencies in the system. An optimal balance between centrifugal and centripetal forces in the system is essential for success.

The establishment of the GWM&ES in 2005 was a major step forward for good governance in South Africa. It created the outline for a co-ordinating framework of systematic M&E activities that will, over the next few years, be institutionalised as mainstream components of public administration and management processes in the South African public sector. These developments are in line with international good governance processes, and have interesting potential for improving the quality of governmental decision and implementation outcomes and impacts in this country. The chances of not only the survival, but the success of the GWM&ES will further be enhanced if the following operational improvements can be made as soon as possible to its structure and operations:

- Government should adopt as a matter of urgency a coherent and feasible, integrated and holistic national vision that will be able to guide the content of M&E activities;
- Sectoral integration of policy indicators should be undertaken to accommodate also explicitly environmental and sustainability indicators, and to explicitly distinguish output from outcome and impact indicators.
- The implementation of the system to provincial and local government spheres should be fast-tracked and better co-ordinated within explicit realistic time frames to enable effective project management of the system.
- The capacity of the M&E Co-ordinating Unit in the Presidency should be urgently improved to implement these recommendations.
- More effective communication and marketing programmes should be devised and implemented for the GWM&ES.
- The internal turf battles and overlapping M&E mandates among its main stakeholders should be reduced, in order to vest single point management responsibility, while an organisation culture of network co-operation rather than hierarchical competition should be actively implemented and promoted.

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