

HSRC RESEARCH OUTPUTS

3629

**DEFINITIONS OF THE PERFORMANCE MEASURES/INDICATORS
FOR THE STRATEGIC PLAN OF THE
NATIONAL DEPARTMENT OF AGRICULTURE**

~~FINAL DRAFT~~

HUMAN SCIENCES RESEARCH COUNCIL

14 November 2005

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Report for the Department of Agriculture.

1 Introduction

1.1 The brief

The Department of Agriculture is seeking to develop a comprehensive Monitoring & Evaluation (M&E) system through which to measure and track its progress in respect of its vision and mission. As an intermediate step in this large task, the Department is seeking to define performance measures/indicators linked to objectives as set out in its *2005 Strategic Plan for the Department of Agriculture*. The Department invited the Human Sciences Research Council (HSRC) to assist in this regard as a service provider.

The *Strategic Plan* sets out 32 Key Result Areas (KRAs). Of these, six are over-arching KRAs that relate to broad ambitions for the Department. The other 26 KRAs are defined in respect of the functions of different 'subprograms' (directorates) within the Department. The *Strategic Plan* sets out not only these KRAs, but also, typically, measures or indicators through which the achievement of the KRAs can be gauged, and targets against which these achievements can be judged. (Note: one of the 26 directorates reflected in the Strategic Plan no longer exists, namely 'Office of the Registrar of Cooperatives'.)

The main objectives of the present exercise are to:

- Ensure that the measures/indicators identified meet the criteria for appropriate/suitable/functional indicators
- Provide precise, clear definitions of the indicators that are ultimately identified
- Identify the information sources that will be necessary to give content to the identified measures/indicators; where feasible, indicate the values for the indicators as they are at the present time, and where not feasible, indicate the process for acquiring the necessary information in the future
- Comment on the logic pertaining to the stated targets, with a view to ensuring that the targets are properly grounded.

1.2 Approach and revisions to the approach

The approach for the present exercise has shifted during the course of the work. Initially, there were two main elements.

The first element was to go to each directorate in order to explore the contents of the *Strategic Plan* relevant to that directorate. Where possible, interviews were conducted with senior managers, but where senior managers were not available, deputies were interviewed in their place. The interviews focused on four simple questions:

- 1) What does this sub-programme/directorate do? What are its main objectives?
- 2) Do you set yourself targets? What are they? What are they based on?
- 3) How do you know if you're achieving your targets?
- 4) Where does the information come from – or would it come from – to allow you to measure your achievements in respect of your indicators?

empowerment, etc., even though obviously this is also related to how well directorates perform their functions. At present, Monitoring and Evaluation does very little of this, but in future it hopes to do more, particularly in support of, or in partnership with, other directorates.

A theme running through this report is how and in what way 'internal M&E' and 'external M&E' either complement one another or work at cross-purposes.

We offer four main observations about these performance measures:

First, there is an absence of specific targets (e.g. *how great* a percentage reduction in the number of food insecure households is meant to be achieved by 2010?). We will momentarily argue that perhaps the lack of targets related to these performance measures is just as well, but for the time being it is merely important to note their absence.

Second, there is an absence of precise definitions that would be necessary to enable measurement of performance relative to target (e.g. what constitutes a "food insecure household"?). There are in fact systemic reasons why such definitions require much thought and study to operationalise, and which – as with the case of absent targets mentioned above – suggests a need to amend the approach as put forward in the *Strategic Plan*.

Third, there is sometimes a poor or unclear conceptual link between the performance measure and the stated strategic objective (e.g. the strategic objective of KRA 1 is that the Department 'provides leadership in the implementation of the integrated food security and nutrition strategy,' so technically one might expect the performance measure to relate to the extent to which this leadership is provided).

And fourth, and most centrally, most of the performance measures relate to sweeping socio-economic changes over which the Department of Agriculture has limited direct control (e.g. given the complex economic factors that govern patterns and trends in poverty, can the Department of Agriculture really bear responsibility for ensuring that the incidence of food insecure households declines?). This third point can be illustrated by means of the contrast with those performance measures that are more closely related to the Department's immediate sphere of influence, a good example of which is one of the performance measures related to KRA 3, which reads, "% increase in effective training and technical support to African countries by 2010." Apart from the issue of how one will determine whether the training and technical support are "effective," this performance measure is more closely and visibly connected to the Department's own activities. In other words, it is related to an *output* as opposed to an outcome or impact.

One could argue, in fact, that most of the performance measures relate to such grand ambitions – outcomes and/or impacts – that the Department of Agriculture would actually be unwise to specify targets against which it would later be judged. Similarly, it is probably unwise to suggest that these medium-term objectives of the Department should be regarded as performance measures, since it has such limited control over their realisation. These concerns are directly addressed by the logframe approach. Before proceeding to the logframe (Section 4), we present the directorate-by-directorate analysis, which ultimately contributes to the logframe.

the Department's directorates are vital to the continued prosperity of South Africa's agricultural sector and, indeed, the nation's economy.

For the purposes of a 'strategic plan,' a focus on 'strategic initiatives' might well make sense, but it again raises the issue whether the *Strategic Plan* does or could serve the purpose of 'supporting' an M&E framework.

3.2.2 Measures/indicators

There are two main issues that emerge in respect of the performance measures/indicators identified by the various directorates.

The first issue is that the indicators in the 2005 *Strategic Plan* are very much a mix of output/input indicators on the one hand, and outcome indicators on the other hand. Although the difference is clearly articulated in the Department's *Strategic and Operational Framework*, the fact that there is such a mix in the *Strategic Plan* is cause for concern. Outcome indicators are typically much more difficult to measure. Typically, an intensive research process all its own is required to establish i) to what extent an outcome has materialised, and ii) what accounts for that outcome, i.e. to isolate the impact of, say, a particular intervention of the Department of Agriculture, from other influences. Such research processes are very valuable, but they are not generally appropriate for purposes of organizational management. It is therefore recommended that the performance measures/indicators used for producing the organizational performance assessment reports are easily observed output/input measures.

Having said that, some output/input measures are also problematic, though for a different reason. For example, a directorate might state as its objective to introduce a new piece of legislation or amendments to a piece of legislation. Whether or not a piece of legislation is easily observed, however this is a risky objective in the sense that the senior manager herself has only partial control over the process according to which new legislation is introduced: the Minister, the Cabinet, parliamentary portfolio committees, and the public, also play an important role, and one that is generally unpredictable. Thus the second general recommendation in respect of performance measures/indicators is that, where possible, output indicators are rethought or refined such that they relate to achievements that are more within the control of that particular directorate. Thus to carry on with the same example, a directorate cannot be held accountable for ensuring that a piece of legislation passes, but it can identify as a goal producing a draft bill or draft amendments.

The second main issue in respect of performance measures/indicators is that some are too vague. This is essentially the same point that was made in respect of some of the six main KRAs in Part Three of the *Strategic Plan*. It is understandable that definitions of terms were not necessarily printed in the *Strategic Plan*, however they must be stated somewhere in order for many of the performance measures to be meaningful. Particular suggestions are made below.

3.2.3 Targets

There is not a great deal to be said about targets. One must acknowledge that targets are inevitably somewhat arbitrary. However, one curious, if not worrying, trend was apparent from the interviews. When asked why they proposed the targets they did, some senior managers indicated that they had learned from experience that it was preferable to propose something that they knew

3.3.1 Farmer Settlement

The key adjective in the existing output, indicators and target for Farmer Settlement is "viability." However, viability is a difficult characteristic to measure. According to one of the interviews, viability is achieved when the beneficiary is not behind in loan repayments, which is problematic because loan servicing could of course be thanks to off-farm income rather than revenues related to the project. Another definition offered was that the beneficiary is viable when he/she can compete with commercial farmers. HSRC has done a fair amount of research on LRAD, and would sadly suggest that very few LRAD beneficiaries are viable in this sense. In other words, the 70% target does not appear to relate to a benchmark as to what one could reasonably expect, but it is also doubtful that the performance measure is appropriate in terms of measurement.

The recommendation would be that the 'output' be redefined as that which the Department actually does or provides, i.e. true *outputs* rather than what is essentially an outcome. The measures and indicators would be revised accordingly, as in the proposal below. Viability of LRAD beneficiaries' agricultural enterprises would better be established through 'external M&E.' This could consist of a pared down version of the DLA's 'Quality of Life Survey.'

The two proposals below relate to extension support, whether through DoA or PDA extension officers, and capital support through the Comprehensive Agricultural Support Programme (CASP). These are identified as appropriate outputs because they are believed by the Department to be key interventions in supporting LRAD beneficiaries, and because they can be readily measured. (Of course, extension officer visits can vary in terms of usefulness – some could even be devoid of any real attempt to assist the beneficiaries – but a rather different form of evaluation would be required to assess the impact of these visits.) The source of information would be the Directorate: Farmer Settlement in conjunction with the PDAs, which should maintain records of visits to LRAD projects as well as CASP expenditures on LRAD projects.

	Output	Measure/Indicators	Target
Original	Viable farm businesses	Proportion of viable farm businesses	x% of beneficiaries of land reform have viable farm businesses by March 2006
Proposed 1	Increased extension support to LRAD beneficiaries	Proportion of LRAD projects visited by an agricultural extension agent three or more times in a 12 month period	y% of LRAD beneficiaries to be visited by an agricultural extension agent three or more times in the 12 months ending March 2006
Proposed 2	Improved on-farm infrastructure support to LRAD beneficiaries	Number of LRAD beneficiaries receiving infrastructure support through the Comprehensive Agricultural Support Programme	z% of LRAD beneficiaries receiving infrastructure support through the Comprehensive Agricultural Support Programme by March 2006

3.3.4 Agricultural Risk and Disaster Management

The functions of this Directorate are unusually difficult to encapsulate in terms of measurable targets, such that assessment of this Directorate's performance is especially contingent upon careful and rigorous 'external M&E.' In fact, quantitative targets can even be perverse, since the fact of reaching more farmers through rehabilitation could well relate to more or worse disasters in the present or previous year, rather than to the Directorate's performance. (It may also depend on the readiness of Treasury to allocate relief funds, as well as the performance of provincial agriculture departments and other institutions in spending.) Having as an output the 'number of advisories issued' would be similarly problematic.

The proposal therefore is that stated outputs should be clarified in respect of two discrete areas of the Directorate's responsibility, namely: 1) the issuing of advisories to the important target group of LRAD beneficiaries, and 2) the extension of the firebreak system which seeks to limit the damage due to veld fires.

Focusing on information provision to LRAD beneficiaries has the virtue of identified a well-defined target group, in a way that does penalise the Directorate if for example there are fewer rather than more advisories issued during the year. The information source for this indicator and target would have to be extension agents who serve LRAD beneficiaries.

The rationale for the second proposal is that one cannot make the Directorate responsible for the number of veld fires or the number of fire-ravaged hectares, since it has very partial control over these things; rather the idea is to focus on one concrete measure over which the Directorate has a relatively high degree of influence. Information for this indicator and target would have to come through the provincial agriculture departments.

	Output	Measure/Indicators	Target
Original	Agricultural risk and disaster management measures	Increase the percentage of farmers reached	20% increase in farmers reached annually
Proposed 1	Improved accessibility of advisories	<ul style="list-style-type: none"> • % of advisories available in five or more official languages • % of LRAD beneficiaries provided with copies of advisories 	<ul style="list-style-type: none"> • 75% of advisories issued in 2005/06 made available in five or more official languages • 90% of LRAD beneficiaries provided with copies of advisories issued in 2005/06
Proposed 2	Extension of firebreak system	Kilometres of firebreak in place	Increase in extent of firebreaks by x% by March 2006

3.3.7 Marketing

This Directorate's target was deliberately set to be modest, and has been greatly surpassed already. Thus the target must be amended to be more in line with what is actually being achieved, or perhaps higher. The target should go not just beyond the three nodes mentioned, but beyond LRAD. To its credit, the Directorate already occasionally engages in 'external M&E' by means of commissioning external service providers to undertake 'perception studies' to ascertain how people find its information leaflets. This could probably be expanded to determine whether and how those receiving these leaflets actually benefit, e.g. change their behaviour, are able to market more effectively, etc.

The Directorate also performs other critical functions – especially 'routine' functions such as issuing of permits – that might also be reflected somehow. A good way of measuring performance in respect of the responsibility of issuing permits is the percentage of permit applications that are dealt with within the time stipulated in the relevant legislation and regulations. This information is readily available within the Directorate.

To determine how well it is performing in respect of its existing target, the Directorate relies mainly on reports from extension agents who disseminate the marketing information to LRAD beneficiaries, who must request additional Info-Paks when their supplies run out. This system is potentially flawed – how does one know that the Info-Paks are actually getting to the farmers – but it is certainly the most cost efficient, and should be maintained for the proposed expanded target of getting information to black farmers in general. As for determining the denominator of the ratio (how many black farmers there are in a node), that can be estimated at provincial or national level using various issues of the *Labour Force Survey*, and at district municipality level using the most recent *Labour Force Survey*. In fact having a sense of the number of black farmers in a given area is something generally important for improving service delivery, but it also requires the Department to come to grips with a tricky issue, namely what constitutes a 'farmer'?

	Output	Measure/Indicators	Target
Original	Marketing information	Farmers in rural development nodes reached by Dept.'s marketing information	The majority of LRAD farmers in three ISRDP nodes by 2006
Proposed 1	Improved flow of marketing information to black farmers	Percentage of black farmers in rural development nodes reached by DoA's marketing information	Ninety percent of LRAD farmers, and x% of other black farmers, receive marketing information in all ISRDP nodes by March 2006
Proposed 2	Efficient administration of issuing of export and import permits	Percentage of permit applications dealt with within the time stipulated by law	96% for the financial year.

	Output	Measure/Indicators	Target
Original	Systems for improving animal and agricultural production	Functional milk recording scheme, goat milk production models and poultry programmes	By March 2006
Proposed	Create and promote systems for improving animal and agricultural production among small-scale farmers	<ul style="list-style-type: none"> Establish functional milk recording scheme, goat milk production models and poultry programmes Increase the number of small-scale farmers utilising these systems 	<ul style="list-style-type: none"> Introduce these schemes/systems by March 2006 Involve x small-scale farmers in these schemes/systems by November 2006

3.3.11 Plant Production

The only suggestion offered in respect of this Directorate is that possibly it could be clarified that the publication of guidelines is meant mainly for the benefit of LRAD beneficiaries, though in principle also other black farmers and even non-previously-disadvantaged commercial farmers. In addition, one could specify what share of LRAD beneficiaries actually access one or more of the publications. Whether this should link to the rural development nodes (as with Directorate: Marketing) is an open question.

	Output	Measure/Indicators	Target
Original	Production guidelines, programmes and projects	Publication of product-specific production guidelines, programmes and projects	For grain, fruit and industrial crops by March 2006
Proposed	Production guidelines, programmes and projects to assist LRAD beneficiaries	<ul style="list-style-type: none"> Publication of product-specific production guidelines % of publications available in five or more official languages Percentage of LRAD beneficiaries (in rural development nodes?) receiving publications in appropriate languages 	<ul style="list-style-type: none"> Publications produced for grain, fruit and industrial crops by March 2006 100% of new publications available in five or more official languages by March 2007 Percentage of LRAD beneficiaries (in rural development nodes?) receiving publications in appropriate languages by March 2007

3.3.14 Water Use and Irrigation Development

The output identified for this directorate represents important groundwork for what will eventually be a cornerstone of the Department's overall monitoring and evaluation infrastructure. This therefore relates to the discussion in Section 4 regarding the Indicator for KRA 4. In principle an additional output could be the system the Directorate is busy establishing in order to monitor the quality of rivers, e.g. the sediment load, which has consequences for the capacity of the country's reservoirs. However, the target date for this goes beyond the March 2006 deadline that appears to be the convention among outputs identified in the *Strategic Plan*.

	Output	Measure/Indicators	Target
Original	Ground water atlas	Fixed point monitoring in all 19 quaternary catchments	By March 2006
No alternatives or additions proposed			

3.3.15 Land Use and Soil Management

The output, indicators and target are clear and appropriate. As with the previous directorate, the output identified for this directorate is vital to the eventual creation of Department's overall monitoring and evaluation infrastructure.

As with a number of other directorates, the main issue is that this Directorate is responsible for diverse important activities which are not reflected here, e.g. the LandCare programme and migratory pest control.

	Output	Measure/Indicators	Target
Original	Soil loss map	Fixed point monitoring in all provinces	2000 sites by March 2006
Proposed in addition	LandCare	Number of soil erosion sites addressed through the LandCare programme	x sites during 2005/06

3.3.16 Food Safety and Quality Assurance

The output, indicator and target are fine as is, although the Senior Manager indicated that the reference should be to the 'Food Control System' rather than to 'Food Control Legislation.'

	Output	Measure/Indicators	Target
Original	Food control legislation	Approved draft Food Control Act	By March 2006

	Output	Measure/Indicators	Target
Original	Coordinated animal health system	Improvement in animal disease reporting	By March 2006
Proposed	Improved animal health system	% increase in the numbers of livestock tested	x% increase in the number of livestock tested by March 2006

3.3.19 South African Agricultural Food, Quarantine and Inspection Services

The output and measure/indicator are rather vague. If the Directorate wanted to pursue this tack, it would be better to offer clearer means – even if only by way of example – of gauging the ‘level of service delivery.’ However, it must be acknowledged that this is particularly difficult to do, because by definition the Directorate has no measure of the number of times materials or animals evade its systems, while the number of times materials or animals are intercepted could be a function of either more effective screening or more people trying to bring such materials/animals into the country. What the Directorate can say instead is what measures have been introduced that should in principle improve its performance.

	Output	Measure/Indicators	Target
Original	Effective and improved border control, national plant and plant product inspections services and plant & animal quarantine	Improvement in level of service delivery	By the end of March 2006
Proposed	Effective and improved border control, national plant and plant product inspections services and plant & animal quarantine	Sniffer-dog services introduced	Sniffer-dog services introduced in x sites by the end of March 2006

3.3.20 Agricultural Information Services

The main issue with a directorate such as this is that it is engaged in such a large variety of activities/services, that any one or two output measures are a poor reflection of what it really does. Also, as with the other information-intensive directorates, there will be a strong need for ‘external M&E,’ though some of this may have been accomplished through the Department’s recent client survey. What is proposed below is a more or less cosmetic change to what was there previously.

	Output	Measure/Indicators	Target
Original	Information in a range of mediums	Number of publications Frequency of website updates	Twelve issues of AgriNews. 12 issues of agricultural information packs. Monthly updates

3.3.23 Grootfontein Agricultural Development Institute

The output, indicators and target are appropriate and well-specified. For sake of transparency, the target could be qualified to indicate that the trainees are almost entirely from only two provinces. Also, there is no reason in principle why one could not include an additional output relating to the three-year diploma programme.

	Output	Measure/Indicators	Target
Original	Trained emerging farmers	Number of emerging farmers trained successfully	200 emerging farmers with 75% pass rate
Proposed variation	Trained emerging farmers in Eastern Cape and Northern Cape	Number of emerging farmers trained successfully	200 emerging farmers with 75% pass rate
Proposed in addition	Provision of advanced training in agriculture to previously disadvantaged individuals	Number of graduates of three-year diploma in agriculture	x graduates during 2005/06

3.3.24 Programme Planning

The output, indicators and target are appropriate and well-specified.

	Output	Measure/Indicators	Target
Original	Project management framework	Number of directorates using management-by-project approach	25 directorates using management-by-project approach by march 2006
No alternatives or additions proposed			

3.3.25 Monitoring and Evaluation

Output, goal and indicators are appropriate, although what is missing perhaps is a reference to building up support for 'external M&E'

	Output	Measure/Indicators	Target
Original	Organisational performance assessment report	Frequency of organisational performance assessment	Quarterly reports available by end March 2006

4 A logframe analysis situating M&E within the Department

The purpose of this penultimate section is to offer a vision of: 1) how the Department's overarching KRAs build upon the various activities pursued by the directorates; and thus 2) how M&E can play a role in understanding whether and why these KRAs are or are not being achieved. As mentioned above (see 1.3), logframe analysis was adopted rather belatedly for this exercise. The virtue of a logframe analysis is that it forces one to consider the logical chain that connects the Department's ultimate goals to what units within the Department are busy with on a day-to-day basis, and then identifies the indicators, M&E mechanisms, and Information sources that allow one to determine whether the logic is working in practice.

There are an infinite number of variations of logframe analysis. The approach applied here is a slightly modified version of the logframe approach used by IFAD. The modification is that whereas the IFAD logframe includes a column indicating 'assumptions' (most logframes in fact have some version of this, e.g. 'risks,' 'constraints,' etc.), for the purposes of this exercise this column was substituted with a column on the definitions of the proposed indicators.

The first step in conducting the logframe is to clarify the distinctions between the overarching 'goal,' the 'component purposes,' the 'outputs,' and the 'activities' (which are akin to 'inputs'). Put simply, the goal is the broader, long-term aim; component purposes are the desired specific outcomes that the Department wishes to achieve in the shorter-term; the 'outputs' are the deliverables that should contribute to the achievement of the 'purposes,' and the 'activities' are the actions taken that lead to the 'outputs.'

For purposes of this exercise, the 'goal' is taken to be the vision of the Department, namely to foster 'a united and prosperous agricultural sector.' The 'component purposes' are taken to be the six overarching KRAs (though in practice we will say little about KRA 5, which has mainly to do with internal governance). Skipping momentarily to 'activities,' these are by and large what in the *Strategic Plan* are referred to as the directorates' 'outputs.' The tricky part for our purposes is in identifying the 'outputs' in the logframe sense of the word. The reason this is tricky is that the *Strategic Plan* does not spell these out very clearly. To some extent, the handful of "key objectives" listed under each main KRA on pages 31-32 are at the right level, but in practice these are overlapping and/or repetitive. Thus to a large degree, these 'missing links' were contrived for the purposes of this report, based on a logical interpolation between the KRAs and the actual activities.

Figure 1 below gives an overview, whereby the goal is supported by the six main KRAs, and each KRA is supported by a number of outputs. (For lack of space, the figure does not show the activities informing the outputs, however these are part and parcel of the logframe tables that follow.)

The next step is to formulate the higher-level logframe (see Table 2), which spells out how the achievement of the KRAs can be ascertained and summarised. This logframe simply proposes one or two indicators for each of the KRAs (some of which are the 'performance measures' from the table on pages 33-34 of the *Strategic Plan*), and then offers definitions of these indicators, and describes how they can be measured in practice. The table encapsulates a central tension. On the one hand, it is useful to have a small number of indicators that can be readily measured. On the other hand, to understand what truly accounts for a change in an indicator over time, and more importantly to what extent that change can be traced to the Department's efforts, requires a well developed and targeted M&E initiative. (Note: see also the appendix, which provides a similar high-level logframe, but according to the original layout developed as background to the *Strategic Plan*.)

Table 2: High-level logframe – KRAs, indicators, definitions and information sources

To foster a united and prosperous agricultural sector			
KRA1: Ensuring access to sufficient, safe and nutritious food	Number of food insecure households	There are literally hundreds of definitions of 'food insecurity' used internationally. Even the FIVIMS pilot did not result in a clear, unambiguous proposal as to a single suitable definition for the South African context. The suggestion would be that, for the purposes of an outcome indicator, the subjective measures of food deficit used in Stats SA's <i>General Household Survey</i> and sometimes the <i>Labour Force Survey</i> would be suitable. The main question in the <i>GHS</i> reads 'In the past 12 months, did any adult... in this household go hungry because there wasn't enough food?'	<p>The virtue of using this definition is that it then implies one can rely on the <i>GHS</i> for the data, rather than launching an entirely separate exercise just to assign a value to the indicator. However, some sort of additional exercise will still be necessary to really understand the causes of food insecurity and the efficacy of policy interventions. The <i>GHS</i> is conducted annually with a sample size of over 20 000 black households.</p> <p>The need for M&E in this area will be more than adequately catered for through the FIVIMS initiative, especially assuming that FIVIMS II will likely lead to a lower cost monitoring initiative that can eventually be applied nationally.</p>
KRA 2: Eliminating skewed participation and inequity in the sector	Number of commercially active land reform beneficiaries and number of other black commercial farmers	The <i>Strategic Plan</i> speaks of 'viable farm businesses' (p.48). Any definition of a 'viable black commercial farmer' must address two issues: what is 'commercial' and what is 'viable.' Taking the second part first, of course one wants black commercial farmers to be viable, but for purposes of an easily, objectively observable indicator, it is better to drop the 'viable' part of the indicator. It is suggested rather that one speak of 'active,' which would usefully and easily distinguish land reform beneficiaries who are using the land commercially at least to some extent from those who are not. This leaves the question of 'commercial,' about which there	<p>The number of land reform beneficiaries is a matter of record, however the number of commercially active land reform beneficiaries can only be estimated by means of surveys, for instance the DLA's 'Quality of Life' survey.</p> <p>As for 'other black commercial farmers,' the numbers who qualify in terms of both definitions proposed at left can readily be monitored by means of the <i>Labour Force Survey</i>. In particular, the <i>LFS</i> contains the following question: 'Did ___ grow or help to grow any produce, e.g. maize or other crops, vegetables or fruit, or keep, or help to keep, any stock, e.g. cattle, sheep, goats, horses, even chickens, for sale or for household use during the last 12 months?' This is followed by, 'Why does ___ grow or help in growing farm produce or keep stock</p>

	Agricultural productivity	The Monitoring agricultural productivity can be done using simple quantitative techniques, of which the obvious one is the Tornquist-Theil Index of total factor productivity. This index can in turn be related to various interventions or trends by means of parametric or non-parametric methods.	Agricultural productivity trends can be established based on aggregate input and output data that the DoA already collects in the course of compiling the <i>Abstract of Agricultural Statistics</i> . However, for the rest of Africa, data can be very time consuming to assemble. The best single source is undoubtedly the FAO, all of which can be accessed via the internet, however the quality is variable, especially for inputs. Treatment of capital inputs requires some sophistication.
	Number of people employed in agriculture	Employment must include both trends in permanent/regular agricultural employment and casual/seasonal/contractual employment, measured in the number of employment opportunities per year.	Agricultural employment is best followed using the <i>LFS</i> , mindful of the fact that due to large year-on-year fluctuations, trends in agricultural employment take a while to establish. Also, the <i>LFS</i> has shortcomings when it comes to measuring seasonal employment, which must be acknowledged even if they cannot be remedied.
	Agricultural trade between SA and other African countries	The level and trends in agricultural trade with specific trading partners is best summarised by inflation-adjusted financial aggregates, i.e. imports, exports, and net exports.	Data on agricultural trade is collated by <i>Agricultural Statistics</i> on a regular basis. The data ultimately originate with Customs and Excise. This type of analysis is routinely done by International Trade.
KRA 4: Enhancing the sustainable management of natural agricultural resources and ecological systems	Quality of land and water resources improved	<p>The indicators for this KRA cannot at present be identified or defined. This is so for two reasons: first, because the systems by which land and water quality will be monitored are still being developed (see next column); and second, because at this stage it does not appear that water or land quality are amenable to nationally representative summary measures. In all likelihood then, the status of this KRA will have to be summarised by a simple qualitative assessment (e.g. 'water quality improved/stayed same/worsened') backed up by detailed data and rigorous analysis.</p> <p>Arguably a more serious problem is that, at least to the non-specialist, it would seem that there are not sufficient activities in place to warrant belief that the quality of land and water resources will indeed improve, even through one applauds the efforts to ensure at least that a monitoring system will be put in place. In a similar vein, the view was expressed by one official that there is a misperception in some parts of the DoA as to what governs changes in e.g. soil</p>	The DoA is busy establishing three monitoring systems to track agricultural resource quality, namely a point monitoring system for land, a point monitoring system to track the quality of groundwater, and a system to measure sediment load and other concerns related to rivers. There already exist various satellite imagery-based systems for ascertaining land degradation (one operated by CSIR, and two by ARC), the limited accuracy of which will be enhanced by the 'ground-truthing' that the point monitoring systems will enable.

Table 3: Lower-level logframe – indicators, definitions and information sources for KRA 1

Output 1.1 Increased agricultural activity among resource-poor households	Decline in the extent of land underutilisation in former homeland areas	Land underutilisation is notoriously difficult to identify objectively (e.g. how to distinguish underutilisation from fallow?). Probably the best approach is simply by asking those who own/access the land, as was done in the <i>Rural Survey</i> (1997) or by HSRC (2005).	Regular household surveys are vital to provide a better understanding of what governs land use trends, e.g. in former homeland areas, as well as the influence on those trends of government interventions such as CASP, MAFISA, starter packs, etc.
Activity 1.1.1 Comprehensive Agricultural Support Programme (CASP) [Farmer Settlement]	Number of households receiving direct support via the CASP (including agricultural starter packs)	Self-explanatory.	Implementors' reports.
Activity 1.1.2 MAFISA [Agric Finance and Co-op Devt]	Number of provinces in which households borrowing funds through MAFISA; and Total number of households holding active loans through MAFISA.	Self-explanatory.	Implementors' reports. Implementors' reports and/or records of financial intermediaries.
Activity 1.1.3 Marketing and technical information dissemination [various directorates in partnership with Agric Info Services]	Number of households receiving Info-Paks.	Self-explanatory.	Implementors' reports, possibly corroborated by the household survey mentioned above.
Output 1.2 Ensure a safety net for households otherwise unable to provide for their food needs	% of vulnerable households receiving targeted food security assistance.	This indicator will rely critically on the working definition of 'vulnerable' provided by FIVIMS, preferably for the area under consideration. The problem with this output however is that it is not just the DoA that provides 'targeted food security assistance.'	FIVIMS is an ideal monitoring mechanism for this indicator, but it is not available in all or even most areas.
Activity 1.2.1 FIVIMS [Food Security and Rural Devt]	FIVIMS conducted in x nodes.	Self-explanatory.	Implementors' reports.
Activity 1.2.2 Development of municipality-based soup kitchen system [Food Security and Rural Devt]	Number of municipalities running soup kitchens	Self-explanatory.	Quarterly IFSNP reports.
Output 1.3 Increasing the production,	Total number of households	One might also be	The same household survey

Activity 2.1.3 Increased on-farm infrastructure support to LRAD beneficiaries [Farmer Settlement]	Number of LRAD projects receiving infrastructure support through CASP.	household. Self-explanatory.	Implementors' records. However, the importance of this infrastructure must also be studied. This can be done through the land reform M&E, e.g. the DLA's 'Quality of Life' survey.
Activity 2.1.4 Agricultural co-operatives developed [Agric Finance and Co-op Devt]	Number of black agricultural co-operatives developed in the past 12 months having one or more black members; and Number of black members of agricultural co-operatives.	Self-explanatory.	Implementors' records as well as the DTI's registrar of co-operatives. As elsewhere, the value of these co-operatives can be ascertained through the household survey, provided of course that there are enough of them. Failing that, a specialised evaluation effort would be required.
Activity 2.1.5 Develop appropriate systems for animal and agricultural production among LRAD beneficiaries and other black farmers [Plant Production, and Animal and Aqua Production]	Number of black farmers making use of developed systems; and Refinements of systems based on examination of uptake and adaptation among target farmers.	Some nuance may need to be provided for in so far as some beneficiaries may adopt only parts of the systems developed. The second proposed indicator assumes a best practice model of developing and disseminating technology; it does not lend itself to a quantifiable indicator, but it can nonetheless be substantiated qualitatively.	Implementors' records together with household survey. Implementors' records.
Activity 2.1.6 Marketing and technical information dissemination to LRAD beneficiaries and other black farmers [Various directorates in partnership with Agric Info Services]	Number of LRAD projects and other black farmers receiving Info-Paks.	Self-explanatory.	Implementors' records.
Activity 2.1.7 Improved accessibility of weather/disaster advisories [Agric Risk and Disaster Mgt]	Advisories available in x or more official languages; and Proportion of LRAD beneficiaries provided with copies of advisories.	Self-explanatory.	DoA records. Implementors' records.
Output 2.2 Participation of blacks in agribusiness in various capacities	Fulfilment of targets as set out in the AgriBEE charter.	See discussion in Table 2 above.	See discussion in Table 2 above.
Activity 2.2.1 Increased agricultural human resources in South Africa [Education and Training]	Number of bursaries supported by or thanks to the DoA;	Self-explanatory.	DoA records together with those of training institutions.

Table 5: Lower-level logframe – indicators, definitions and information sources for KRA 3

Output 3.1 Increase market access for South African and African agricultural products	Export volumes of agricultural products from South Africa and Africa; and Number of trade agreements involving South Africa and Africa.	Inflation-adjusted financial aggregates. Self-explanatory.	The Directorate: International Trade already monitors trade flows, based on data from Customs and Excise.
Activity 3.1.1 Negotiating positions and plans [International Trade]	Number of issue-based positions developed.	Self-explanatory.	DoA records.
Activity 3.1.2 Monitoring of trading partners' compliance with existing trade agreements [International Trade]	Number of reports summarising compliance of trading partners with trade agreements.	Self-explanatory.	The information upon which these reports would be based could be obtained from the agriculture or trade ministries of the respective trading partners.
Activity 3.1.3 Efficient and fair administration of issuing of export and import permits [Marketing]	Number of complaints received from actual or would-be importers and exporters per year	Self-explanatory.	It is assumed that there exists some mechanism, however formal or informal, whereby these are routed to the Directorate: Marketing.
Output 3.2 Increase remunerative opportunities in the agricultural supply chain	Unclear.	Unclear.	Unclear.
Activity 3.2.1 <i>Note: although Output 3.2 is a stated 'key objective' for KRA 3 in the SP (p.31), it is not clear to the service provider whether the DoA has any relevant activities, apart from the development of 'Commodity action plans' (Activity 2.2.2), which appears to relate more to KRA 2.</i>			
Output 3.3 Promote increased agricultural productivity and profitability in South African and African agriculture	Increase in total factor productivity (see Table 2); and Performance per commodity/sub-sector.	See discussion in Table 2. Commodity-specific analysis showing trends over time.	See discussion in Table 2. Various reports produced by Directorate: Production and Resource Economics (see Activity 3.3.3).
Activity 3.3.1 Policy and programme on agricultural advisory	Programme on agricultural advisory services running in	Self-explanatory.	Whether such programmes exist is obviously known to the DoA

			not measuring the activities/inputs, but ascertaining their impact. For a variety of reasons, this would likely be extremely difficult to do with any rigour. Occasional ad hoc assessments would probably be the only sensible approach.
Output 3.4 Reduce the levels of risk associated with diseases, pests and natural disasters	The number of incidents of economically significant animal, plant or food borne illness.	'Economically significant' does not have a widely accepted definition, thus one can propose what seems to be appropriate for South African conditions, e.g. an economically significant illness episode is one which results in collective financial losses of R500 000 or more, or negatively affects 200 or more producers.	Maintaining an awareness of actual or possible outbreaks is one of the main functions of the directorates responsible for this output, thus an additional data collection system is not necessary.
Activity 3.4.1 Increased public awareness of plant health issues and of the role of government [Plant Health]	Number of information brochures disseminated to the public; and Number of contacts received from the public regarding possible plant disease problems	Self-explanatory. Self-explanatory.	Implementors' records. Implementors' records.
Activity 3.4.2 Improved animal health system [Animal Health]	Numbers of livestock tested annually.	Self-explanatory.	Implementors' records.
Activity 3.4.3 Provide effective and improved border control, national plant and plant product inspections services and plant & animal quarantine [SAAFQIS]	Sniffer-dog services introduced at key border control points.	Yes / no type indicator.	The choice of this indicator is not as a summary of everything the directorate in question does, but as an indication of an important strategic new direction, not least because this function is difficult to encapsulate in finite indicators.
Activity 3.4.4 Effective disaster management capacity in place [Agric Risk and Disaster Mgt]	NA. See right-hand column.	NA. See right-hand column.	This can only be established through occasional assessments conducted by experts in the field. Alternatively, a few incidental indicators can be identified, but they could not begin to capture the complexity of these functions.

			information to track trends in land degradation due to erosion.
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Department of Agriculture is whether the internal M&E function could exist to the detriment of the external M&E function.

Presently, a fair number of the Department's directorates conduct small monitoring and evaluation exercises of their own. For example, a number of directorates that are in the business of information provision, occasionally commission client perception studies. In principle, the nascent Monitoring and Evaluation directorate could serve an important role in assisting directorates conduct these exercises. However, to the extent the directorate plays what is perceived to be a referee or watchdog role, the demand for its services in respect of external M&E may end up being less than it should be. Thus the recommendation of the service provider is that the Monitoring and Evaluation directorate is very careful to minimise the perception that it is indeed functioning as a referee. This would argue in favour, for example, of focusing the internal M&E on outputs that can be easily measured by the directorates themselves, and reported through their line functions.

The second main recommendation is that an 'external M&E' framework be developed and that it is organised more or less according to the Department's six main KRAs. The main logic of this approach is that there would be a gain in economies of scale if, for example, all of the necessary M&E functions related to the same or similar units of analysis were grouped together.

And third and final main recommendation is that the logframe analysis begun here is further developed by the Department, not least to allow further refinement and development of the M&E framework that is beginning to take shape.

<p>KRA 3: Optimising growth, remunerative job opportunities and income in agriculture</p>	<p>Increase agricultural productivity and profitability in SA, SADC and Africa</p>	<p>CASP</p>	<p>Improve productivity among beneficiaries of land and agrarian reform</p>	<p>% increase incomes, employment and food security and rural agricultural areas by 2010</p>	<p>Gross agricultural product is the equivalent of GDP for the agricultural sector, and conveys a sense of the contribution of the agricultural sector to the domestic economy. Gross and net farm income relate more specifically to farmers themselves.</p> <p>An index of the aggregate volume of agricultural production is a value-weighted index. This index can be established for aggregates such as SADC and all of Africa, for main agricultural categories such as grains and livestock.</p> <p>The Monitoring agricultural productivity can be done using simple quantitative techniques, of which the obvious one is the Tornquist-Theil index of total factor productivity. This index can in turn be related to various</p>	<p>Gross agricultural product, gross farm income, and net farm items in the DoA's <i>Abstract of Agricultural Statistics</i>. To allow for inter-temporal comparisons, the only adjustment required is to adjust for inflation.</p> <p>For SADC and Africa, establishing accurate time series of these will be extremely difficult, thus it is suggested that the production index be used instead. This can be obtained from the <i>FAO agricultural database</i>, including aggregated indices for SADC, Africa, and sub-Saharan Africa.</p> <p>Agricultural productivity trends can be established based on aggregate input and output data that the DoA already collects in the course of compiling the <i>Abstract of Agricultural Statistics</i>. However, for the rest of Africa,</p>
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<p>KRA 4: Enhancing the sustainable management of natural agricultural resources and ecological systems</p>	<p>Ensure the management of the agricultural indigenous genetic resources, land and water</p>	<p>Natural Resource Management</p>	<p>Promote the sustainable management of agricultural land and water resources in agriculture</p>	<p>Extent of the improvement in the quality of land and water resources by 2010</p>	<p>with specific trading partners is best summarised by Inflation-adjusted financial aggregates, i.e. imports, exports, and net exports.</p>	<p>Agricultural Statistics on a regular basis. The data ultimately originate with Customs and Excise. This type of analysis is routinely done by International Trade.</p>
				<p>The indicators for this KRA cannot at present be identified or defined. This is so for two reasons: first, because the systems by which land and water quality will be monitored are still being developed (see next column); and second, because at this stage it does not appear that water or land quality are amenable to simple, nationally representative summary measures. In all likelihood then, the status of this KRA will have to be summarised by a simple qualitative assessment (e.g. 'water quality improved/stayed same/worsened') backed up by detailed data and rigorous analysis.</p>		<p>The DoA is busy establishing three monitoring systems to track agricultural resource quality, namely a point monitoring system for land, a point monitoring system to track the quality of groundwater, and a system to measure sediment load and other concerns related to rivers. There already exist various satellite imagery-based systems for ascertaining land degradation (one operated by CSIR, and two by ARC), the limited accuracy of which will be enhanced by the 'ground-truthing' that the point monitoring systems will enable.</p>

