

Scientific decision-making in Government and Public Administration across Africa How can the Commission For Africa help?

Document submitted to the Commission For Africa (CFA) as a "Direct Submission"

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Preamble

Many people dismiss the CFA as being yet again another talking shop about Africa and hence do not expect much to come out of it. Addressing this criticism is in itself a major challenge for the CFA who needs to come up with *original* and *concrete* ideas and recommendations for the development of Africa at the next G8 summit (we believe that this present submission presents the CFA with such an opportunity and could help defeat the above criticism). We therefore praise Mr Tony Blair for his courage and bravery in setting up the CFA and in trying to give Africa a high priority as part of the UK's presidency of the 2005 G8 summit and the European Union Presidency starting in 2005.

Context

In response to the invitation from the Commission For Africa, we have written the following document. While many submissions submitted to the CFA are proposing ideas for the development of Africa, this submission is concerned with an idea that is **already being implemented** (see <http://www.euro-online.org/africanOR/orpa2005> for further details)

Aim of this document

The aim of this document is two-fold

- bring to the attention of the CFA the recent effort by the international civil society to establish the Operational Research Practice in Africa (ORPA) initiative
- in order to identify opportunities for further collaboration with the CFA on a number of specific issues (see page 3).

Scientific decision-making and the ORPA initiative

ORPA is an initiative of the international civil society that has been recently established to help promote the use of scientific decision-making in government and industry across Africa.

Scientific decision making - also known as Operational Research (OR) in the scientific community - consists of a range of analytical (typically quantitative) models and methods employed to support effective decision-making. ORPA advocates for the use of scientific decision-making to analyse, investigate and recommend cost-effective solutions to real-world problems arising in government, NGO's and the private sector across Africa. The aims of ORPA are very far-reaching (see web site for further details) and include

promoting the use of scientific analysis to support decision-making in government and public administration, a point which was also recommended at the 2002 World Summit on Sustainable Development in Johannesburg. African governments, (and any government for that matter), make decisions which will have an impact on the country's resources, its culture, its economic growth, its territorial integrity, its population development, the environment, its industries, its wealth, its infrastructures, its budget, its strategic position in the world, etc.

Such decisions should be backed by sound science and analytical reasoning which allow for an objective and independent assessment of possible impacts.

Examples of decision issues that a government has to deal with:

- How many schools / hospitals, should we build, where should these be located?
- Where should we build/extend our railway and road networks? Which parts of the countries should we concentrate more on? Why? How?
- Public expenditure: Which government departments should receive more money this year?
- What is the estimated Return On Investment in each sector of the economy, in each government ministry?
- What performance measures are available? Are these really suitable? Do they give us an accurate measure of the impact of our policies?
- Do we really need to increase the budget for awareness-raising campaigns about HIV/AIDS, or would we be better off putting that money elsewhere in the fight against HIV/AIDS (e.g. increasing volume of drugs to be purchased or increasing government subsidy)?
- Can we quantify the impact of corruption? What does it tell us about the way we should fight it?

- Humanitarian aid
It is essential to deliver relief to those who are forced to flee their home as a result of natural and man-made disasters. Questions such as what is needed? Where is it needed and how to get there cannot be answered properly without thorough scientific analysis.

- Investment and aid management
Aid, and investment are often regarded as a panacea for Africa's development. One thing is to make aid and investment available for Africa but another is to manage this efficiently. Just doubling investment and aid will not necessarily cut problems in half. Relationships are quite complex and without a scientific analysis of portfolio construction, portfolio management and portfolio optimization, aid and investment has been, sadly, wasted over the years in Africa.

ORPA and the CFA

The CFA can help the ORPA initiative by using its influence and contacts to harness political energy in Africa (AU, NEPAD and individual governments) and in collaboration with Africa's development partners (World Bank, IMF, Development banks in Africa, the EU, the G8, UN agencies such as UNDP, FAO, UNESCO, UNHCR, etc.) so as to help promote the use of scientific decision-making in government and public administration across Africa. The CFA's assistance on this matter will help achieve the following.

- *Awareness raising at decision-maker level*: Decision makers (i.e. ministers, permanent secretaries, government advisors, senior civil servants, directors, managers, and other executives working in government and government agencies) need to understand *how* and *when* analytical approaches are useful (we are not saying that they need to learn to use these methods – that is the job of an OR specialist!)

- *Promoting cultural change*: good governance includes making sure that institutions are as effective as they can. The need to encourage a “scientific” culture at government level so that, when important decisions are being considered, scientific decision-aiding is called upon. This can be achieved or enforced by government self-regulations (or even appropriate legislation if necessary); For example, requiring that any project worth x thousands of dollars or more (or likely to impact more than x percent of the population or a section of the community, or any other sensible criteria) must undergo some sort of “scientific” due diligence (i.e. scientific decision-making)

How can the CFA assist ORPA in this?

- A CFA commissioner to deliver a speech at the official opening of ORPA 2005 in Ouagadougou (the authorities of Burkina Faso are already informed of ORPA) about the importance of scientific decision-making in government and public administration. **This would carry a lot of weight.**
- advertise the ORPA 2005 conference on the CFA's web site
- A CFA commissioner to sit in the International Steering Committee of ORPA so that ORPA may benefit from the experience (and influence) of the CFA in trying to promote the use of scientific decision-making in government and public administration across Africa. **This, again, would carry a lot of weight.**

Remarks

1- The idea of promoting the use of scientific knowledge to underpin decision-making in government and public administration across Africa is not unrealistic. This is already happening in Namibia. In effect, in his State of the Nation Address in 2001, his Excellency the President of Namibia announced that as a crucial part of the development of Namibia, the budget process will shift “*away from a focus on input needs and towards allocations based on what we get for our money. To change the budgetary debate from how many millions of dollars each Ministry should get; and more towards the benefits that will accrue to our citizens as a result of outcome focused resource allocation...*” Nowadays each Ministry in the Namibian government is required to motivate its plan on the above basis. Government expenditure is managed more efficiently within the Medium Term Expenditure Framework. The debate in Namibia is now changing from Namibian

dollars to socio-economic data and in-depth analysis of the effectiveness of activities undertaken by Ministries (source: Namibian Ministry of Finance).

This cultural change has also brought about better accountability of ministers to Parliament. This is the sort of “cultural” change that needs to develop alongside the development of OR in African governments, that is, the use of scientific decision-making approaches in government.

2- Of course, some sorts of scientific decision-making techniques are already (albeit on a small scale and just on a limited number of occasions) employed in government and public administration. But these techniques are often obsolete and (mis)used by people who trained as economists and are not always – and should not be expected to be - aware of the latest technology in stochastic optimization, neural networks, genetic algorithms, ant colony optimization, evolutionary computation, case-based reasoning, meta-heuristics, combinatorial optimization, problem structuring methods, systems dynamics, etc.

Some compelling facts about scientific decision-making

With the risk of being regarded as naïve, we believe that Tony Blair (who initiated the CFA) was and is really genuine about trying to make a difference for Africa.

1- The same Tony Blair set up in June 2001 within the UK government a Prime Minister Delivery Unit, whose work involves scientific decision-making, that is, the use of analytical methods to support policy making / policy analysis in Government. **OR analysts at PMDU often brief the Prime Minister on a weekly basis.** This shows Tony Blair’s real leadership, his ability to *realise* the importance of bringing scientific knowledge to bear on policy setting / policy analysis / decision making¹. African leaders should follow this example.

2- OR itself was actually pioneered in the UK (less than half a century ago) and the UK OR Society is the oldest and longest-established OR society in the world..

3- The UK government is a heavy user of scientific-decision making. It has its own Government Operational Research Services (GORS) made of about 300 scientific decision-making professionals and another 250 professionals working for the MoD (within DSTL). It is therefore natural that the CFA, under the leadership of the UK Prime Minister should support the ORPA initiative.

4- The US government is also a heavy user of scientific decision-making. Indeed, although pioneered in the UK, OR is developed in the USA more than in any other country in the world.

These are just a couple of compelling facts which indicate the importance and value of scientific decision-making at government level in some of the most advanced economies in the world. The difference between these countries and African countries is that leaders

¹ Considering that Tony Blair’s educational background is in Law, I am personally impressed by his lucidity and his ability to appreciate that sound science can help support decision-making.

of the developed countries (or at least their advisors) have a good awareness of the need to back important decisions (e.g. policy setting / making) with scientific knowledge, whereas in Africa this is not always the case. This is where the CFA can lend its support to the ORPA initiative by helping us reach out to African decision makers in government. It is about time our resources (natural, human, material, financial, etc.) are allocated optimally for “*a strong and prosperous Africa*”!

Appendix

Some practical points to consider when promoting scientific decision-making in government and public administration

Data gathering: building a database

A first step in any scientific study is the gathering of data for the problem at hand (if data is not yet available). It would therefore be necessary to build a database on schools, pupils, hospitals, nurses, doctors, roads, etc (i.e. the input for the scientific model).

Scientific process:

Once data is made available the following steps may be followed:

- 1- Turn data into information
- 2- Turn information into knowledge
- 3- Turn knowledge into insights
- 4- Finally make recommendations to the decision maker.

Some notes of precautions / difficulties:

- Data may be inexistent or incomplete: but recent advances in OR decision-making technology provide us with the necessary tools and models tackle problems where input data is only partially available (e.g. using statistical models, artificial intelligence, etc.)

- Incremental approach: perhaps an initial study can be limited to a specific sector of the economy (e.g. agriculture) or a specific government department (e.g. health)

- Ownership of data: This will need to be addressed. Is the data well maintained? Who is responsible for managing and updating it?

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ORPA 2005 General Chair

ORPA International Steering Committee Chair

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