The Republic of Rwanda

NATIONAL INSTITUTE OF STATISTICS OF RWANDA

Organizational Development Strategy

CELEBRATING
2005
NISR'S 10 YEARS OF POLICY SUPPORT
2015
ANNIVERSARY

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National Institute of Statistics of Rwanda

Executive Summary

This report reviews the current relationship between National Institute for Statistics Rwanda (NISR) and other constituent parts of the National Statistical System (NSS) and sets out measures for the strengthening of the framework in Rwanda for the co-ordination of official statistics.

Based upon the UN Fundamental Principles of Official Statistics it proposes an Act of Parliament which would establish a Rwandan National Statistics Board (RNSB) served by NISR:

"*to develop the framework under which the collaborative development of the National Statistical System shall take place*";

"*to co-ordinate and regulate a single system of National Statistics: strengthening the National Statistical System by:*

- *convening Committees to review the statistical programs of Ministries and of NISR;*

- *setting quality standards for statistical outputs and their analyses;*

- *developing a system for the accreditation of all published official statistics;*

- *developing a Code of Best Practice;*

- *making agreements in the form of memoranda of understanding between Ministries and NISR relating to delivery of NSDS objectives, accessibility of data, the uses to which data may be put*

- *developing a cadre of high calibre statisticians* "

The functions of the Board of Directors of NISR would transfer to the RNSB. The functions of NISR as laid out in the 2013 Statistics Law would be retained in the new Act.

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Chapter 1: The current status of the NISR

1.1. Organizational Structure including the role of the Board of Directors

The NISR was created in October 2005 by Organic Law No 9/2005 of 17/7/2005. Prior to 2005 the functions now in NISR were executed by a Department of Statistics in the Ministry of Finance and Economic Planning.

NISR is the central statistical organization within the NSS. It provides the major statistical infrastructure for official statistics within the Country and is responsible for producing a range of key national statistics whilst in addition providing leadership, policy direction and forward planning. NISR has within the Law-the responsibility for co-ordinating statistical activities carried out by those Ministries, Departments and Agencies which are also contributors to the overall Rwandan National Statistical Service.

The organizational structure of NISR is shown in the following diagram.

The Board of Directors – currently chaired by Dr Monique Nsanzabaganwa (Vice Governor of the National Bank of Rwanda) - oversees the management of the NISR and

is the governing and decision making organ of NISR. There are seven Board members each of whom I believe are specialists in statistics, ICT, economics or other related fields and are knowledgeable about the uses of and demands for official statistics and are experienced public servants.

The Board of Directors, and indeed the Director General and the Deputy Director General and Head of Corporate Services, are appointed by Presidential Orders.

NISR produces and publishes statistics derived from:

a) Triennial EICV and quinquennial Demographic Health Surveys
b) National seasonal Agricultural Surveys
c) Decennial Population & Housing Censuses and inter-census surveys
d) Quarterly National Accounts
e) Monthly consumer price indices and a range of quarterly producer price indices
f) Quarterly trade statistics
g) Etc

Rwanda is one of the many countries conforming to the international standards set out by the IMF in the General Data Dissemination System. Moreover NISR is now close to achieving the much more rigorous standards set in the IMF's Special Data Dissemination System. SDDS conformity would indicate that Rwanda meets the test of "good statistical citizenship."

To repeat and emphasize the conclusions drawn in the latest National Strategy for the Development of Statistics (NSDS2)

a) collaboration between NISR and its strategic partners is generally good
b) stakeholders expect NISR to deliver on its vision, mission and work program
c) NISR's public image has steadily improved and the importance of statistics is now highly regarded, especially in supporting efforts to fight poverty.
d) The NISR is considered to be well led and well managed with a positive organizational culture which strongly inspires results.
e) NISR encourages and facilitates knowledge sharing within the organization, supported by ICT.

f) NISR is continuously improving its management systems. NISR is increasingly using new technologies in its work and the quality of its surveys and censuses is reinforced greatly through the use of ICT.

There is clear and effective work-planning and performance-based staff assessment is used. NISR staff members are generally well motivated and strive to contribute to NISR meeting its objectives and to achieving their full potential. Both NISR and individual staff members are high performers, but staff turnover could be a risk. NISR has a five year capacity development plan to enhance staff skills and knowledge. However as observed in NSDS2 - NISR needs additional staff, and some functions require more emphasis in order to match its mandate and the division of responsibilities.

1.2. Role within Government

NISR within the framework set by its Board of Directors is effectively an independent institution despite it connection with the MINECOFIN for financial provision and its adherence with public sector rules of personnel management, finance, procurement.

Its outputs are vital for Government as illustrated by the strategic objectives set out in EDPRS2.

- Economic transformation for accelerated economic restructuring and growth striving for middle income country status;
- Rural development to address the needs of the vast majority of the population and ensure sustainable poverty reduction and rural livelihoods;
- Productivity and Youth Employment to ensure that growth and rural development are underpinned by appropriate skills and productive employment, especially for the growing cohort of youth;
- Accountable Governance, to underpin improved service delivery and citizen participation in the development process.

Within the EDPRS2 there are 21 direct references to NISR and countless references to individual NISR outputs thus confirming the central role that NISR plays in informing policy development and monitoring progress in these key areas of Government.

The ongoing relevance of NISR's programme is established by the statistical assessments of the Sector Strategic Plans of the 14 sectors (Agriculture, Health, Education, Transport, etc.) from which the priorities set out in NSDS2 have been refined.

It is evident, from discussions that I have had during my visit, that NISR's role within Government as champion, advocate, source of expertise of statistical professionalism and probity has been consolidated.

1.3. Legal Status

The Law relating to statistics has hitherto been sufficient to allow and enable the successful development of NISR within the NSS of Rwanda.

It places NISR in a key role as provider and co-ordinator of Rwandan official statistics. The articles contained within the Law in general and broad terms lay down many of the powers and responsibilities that one would expect to see in statistical legislation.

The members of the Board of Directors and its Chairperson are appointed by order of the President as are members of the general directorate of NISR.

Article 4 of the Law describing the supervising authority of NISR states that "A Prime Minister's Order shall determine the supervising authority of NISR and its category" and "There shall be concluded between the supervising authority of NISR and its decision making organ a performance contract indicating competences, rights and obligations of each party in order for NISR to fulfil its mission."

The absence of clauses explicitly in the statistics Law setting out the powers and responsibilities of the Board of Directors of NISR is not a significant issue. But these are issues which could be taken into account in the future if there were to be an opportunity to improve the legislative basis under which NISR and NSS might operate.

I will discuss possible amendments later in this paper when I have addressed the more practical issues relating to strengthening the National Statistical System.

1.4. The National Strategy for the Development of Statistics (NSDS) framework

NSDS2 provides Rwanda with a strategy for developing statistical capacity across the entire National Statistical System (NSS). NSDS2 provides a vision for where the NSS should be in five to ten years and sets short and medium term milestones for getting there. It presents a comprehensive and unified framework for continual assessment of evolving user needs and priorities for statistics and for building the capacity needed to meet these needs in a more coordinated and efficient manner. It provides a framework for mobilizing and leveraging resources.

Senior management in NISR are looking beyond NSDS2 and I am guided to make recommendations which may form part of the basis for NSDS3.

NSDS2 also is the ideal framework and foundation upon which to build further strategic directions for the NSS and it is therefore to NSDS2 that I have looked for guidance about the difficulties currently facing NSS and these will be the starting point in my analysis of options for strengthening the NSS.

Chapter 2: The program as set out in NSDS2 in so far as it touches on the organisation of the NSS

NSDS2 includes very many observations which have a bearing on difficulties currently facing NISR in its attempts to fulfill its remit to co-ordinate activities across the NSS.

For example it states that although effective coordination mechanisms for NSDS1 have been established within NISR, and between NISR and other NSS institutions, the coordination efforts within the sectors are still lacking, mainly due to the lack of capacity and absence of statistics units within member institutions of NSS. Overall it states that, within NSS, coordination is still a challenge.

Within NSS, the NSDS2 identifies that a gap in terms of statistical capacity still exists, pointing particularly to the limited number of professional statisticians both at NISR and within other NSS institutions.

NSDS2 also pinpoints the need for the NSS to develop administrative record systems, including the civil registration system, to provide much-needed data, including vital statistics, to complement the census and survey data. Further improvements are needed in the quality and timeliness of statistics across the NSS. In a SWOT analysis a number of further NSS weaknesses are identified.

    a)   Administrative data in general still fall short of expectations.

    b)   Some areas of statistics, such as environmental statistics, are not well covered in terms of availability,

    c)   Quality and timeliness: Information sharing within NSS (for learning and sharing of skills and experience) is not yet effective.

    d)   Lack of appropriate facilities such as a well-equipped training centre in NSS hinders the development of skills and knowledge in NSS.

    e)   Coordination and collaboration among NSS institutions are still weak.

f)   There is weak statistical literacy among the majority of the population.

g)   NSS is not well staffed to meet the growing demand for official statistics and to develop adequately capacities within NSS.

h)   Data dissemination by NSS constituents is still weak.

i)   Lack of institutional arrangements such as dedicated departments of statistics and very low numbers of statistical staff may jeopardize the overall objective of a well-coordinated statistical system.

j)   High turnover rates among the statisticians within government institutions pose a threat to continuous learning and capacity transfer within NSS.

NSDS2 calls for the strengthening of co-ordination of NSS with all sectors interacting effectively with NISR and with each other as illustrated by this chart reproduced from NSDS2.

Chapter 3: The current status of the NSS

3.1. Definition of the NSS

The **OECD** offers a generic definition of an NSS as an "ensemble of statistical organizations and units within a country that jointly collect, process and disseminate official statistics on behalf of national government"

The UK Statistics Authority defines it as follows (in a UK context) as follows:
The UK statistical system is defined as all the organizations and persons responsible for producing official statistics in the UK. The key components of the statistical system are:

- the Board of the UK Statistics Authority, who are responsible for promoting and safeguarding the production and publication of all UK official statistics, to ensure they serve the public good.
- the Office for National Statistics, which is the executive office of the UK Statistics Authority and the UK's National Statistical Institute.
- the Government Statistical Service, which is the community of all those involved in the production of official statistics in the UK. Led by the National Statistician, it is a flexible and diverse network of people across many different organisations, including government departments, agencies and the devolved administrations. It includes statisticians and others providing high quality information, analysis and advice to decision makers.

In Rwanda, currently, the NSS is

- the NISR (overseen by its Board of Directors),
- the MDAs which each provide statistics to NISR and/or publish statistics in their own right,

- the National Bank of Rwanda which produces financial statistics, balance of payment statistics and contributes to the price statistics,
- the academic institutions which provide training for staff in NISR and the MDAs and
- a range of private sector consultancy companies that engage in statistically based research projects and in many instances liaise with NISR to obtain consent to conduct surveys and who provide access to data thereby gained

In Rwanda, currently and to my knowledge, there are no circumstances - other than in the case of the financial statistics and balance of payment statistics collected by the National Bank of Rwanda - where an institution other than NISR conducts **regular** statistical surveys, and I imagine that in the case of the NBR the financial and balance of payments statistics are summaries obtained from management information systems and not the product of sample surveys. There are of course examples of MDAs commissioning ad hoc one off household surveys through the NISR Visa system.

If there were to be circumstances where an MDA or the NBR wanted to conduct a **regular** business survey, a household survey, or a price survey then there would be a strong argument for that survey to be a core part of the work program of NISR.

The justification for centralization in the above circumstances is a mixture of advantages accruing from:

a) synergies being exploited through process of integration
b) efficiencies of scale
c) reductions in inadvertent overlaps and gaps when different organisations use non mutually consistent sampling frames

By way of example as Director of Business Surveys in the UK Office for National Statistics, and in collaboration with the Head of Methodology in ONS (Tim Jones), I was involved in several such centralizing projects:

d) combining two business registers – one based on PAYE and employee number data, the other based on VAT output data – with consequent

improvements arising from the ability double check if there were inconsistencies in the auxiliary data

e) the merging of business surveys previously conducted in the Department of Employment and by the Department with responsibility for the Construction Sector

The outcome:

a. a single far more authoritative business register combining both PAYE and VAT data and

b. integrated business inquiries with substantial reductions in costs and improvements in coverage, accuracy and compatibility.

Within the UK there remains only one non-centralized organization conducting business surveys and that is in Northern Ireland where there are very sensitive political issues regarding devolution of power and a history of severe civil unrest. However the Northern Ireland Statistics and Research Agency does use the ONS business register as the sample frame for its business inquiries.

3.2. An assessment of the quality of outputs

Again I have not been able to make my own assessment of the quality of the statistics produced and published by MDAs.

These statistics are generically described as "administrative statistics" and are complementary to those produced by NISR using business and household survey methodologies.

Administrative statistics have inherent strengths and weaknesses. They are normally produced as a by-product of internal sector management information systems designed in Ministries to describe the effective delivery of services, to monitor staffing levels, and as part of the audit chain for ensuring value for money in major social policy programmes. On the positive side they tend to be comprehensive in their coverage of the programme, results are timely and they provide small area geographical information which (the Census apart) is not available from household or business surveys. On the negative side they tend to be primarily focused on their rôle of

providing management information within their Ministries, and there is, therefore, a risk that issues of classification which are important from a statistical perspective are seen as secondary issues within the Ministries. As they are used to judge the effective delivery of service their accuracy can be jeopardized.

I am reminded of some statistics in the health service in the UK which measured the length of time patients experienced waiting for in-patient treatment in hospitals. Patients were classified as being "urgent" and "non-urgent" and the Health Service had set targets for their waiting times with "urgent" patients having a shorter target waiting time. Sadly the hospitals chose to adjust the way in which they classified patients in order to help meet the targets!

There can also be definitional changes arising from changing political decisions. For example at one stage a UK government decided to offer those over 57 who were unemployed the option to take early retirement and receive their state pension earlier than they had otherwise expected. The consequence was to reduce the numbers of job seekers as recorded in administrative job-centre data and therefore to make it seem that the employment prospects for citizens had increased!

The outcome in the UK is that both job –centre administrative data are published but the definitive statistic for the unemployment rate derives from a household labour force survey.

Notwithstanding these inherent difficulties administrative statistics are a very valuable source of National Statistics and this is recognised in the prioritisation in the NSDS2.

I will return to the question of quality and its assessment and accreditation when I discuss recommendations for strengthening the NSS.

3.3. Obstacles faced by MDAs in improving their outputs

It is clear that both NISR and MDAs share a desire to improve the quality of management information systems, but often priorities may be slightly different. In the one case where I have been able to make more detailed enquiries – the Ministry of

Health – the Ministry's priority is for an improved HMIS whereas NISR (whilst clearly supportive of that objective) is keen to have access to individual episode data requiring a change in management direction of staff at Village and District levels.

I think that the Ministry of Health is a good example to explore mechanisms for strengthening of the NSS and as with legal status and quality assessment I will return to the question of overcoming the obstacles faced in MDAs when discussing organizational development later in this strategy.

Chapter 4: A discussion of the various models for NSS in different parts of the World

Whatever the degree of centralization, the important underlying principles for Official Statistics as set out by the UN in 1994 should form the basis for the organization of National Statistical Systems and these should be set out explicitly in statistical legislation. There is no blueprint that all countries should adopt although there are to my knowledge no nations where the National Statistical Institute is not charged in some manner with leadership in terms of policy direction, strategic planning, determining best practice, international co-operation.

It is not possible to formulate a definitive set of criteria under which one may decide the levels of centralization that would be ideal in the circumstances of an individual nation.

Decentralized systems are thought to have benefits in terms of policy relevance, whereas the more centralized systems have made greater progress in terms of standardization of statistical methodology, dissemination practice, programme planning and in independence from political pressures.

The system in Rwanda is currently partially decentralized with a strong central National Institute but with some instances where MDAs employ staff in small statistical or M&E units.

The justification for decentralization is that the statistics are relevant to policy evaluation and monitoring and that there are strong statistical links to Departmental management information systems. In these circumstances it is highly unlikely that the centralized statistical institute would either have the competence or the desire to take over the running of the management information systems.

In Rwanda this is likely to be the case in the majority of the Ministries. Combined with a strong government strategy for decentralization it is unlikely, even if there were the desire to centralize these activities, that it would receive sufficient central government support.

The quality of the statistical contribution made by those in Ministries and Local Government offices by staff in quasi-statistical M&E roles will I'm sure be highly variable. Their targets as laid down in their personal performance plans will reflect pressures elsewhere in the MDAs often incorporating more general planning tasks as laid down by their supervisors.

The issue facing NISR is whether these staff should be managed by NISR and not by their respective MDAs. This I think is a more difficult question and there are merits in both solutions, but I think that on balance while NISR will have a strong interest in

    i. influencing the statistical development work in the MDAs,
    ii. supporting statistical capacity building in MDAs,
    iii. demonstrating the wider benefits of the contribution to government policy of having professional statisticians engaged in statistical work in MDAs,

it is not necessary to introduce line management control of staff to achieve these goals.

The problems which would have to be faced are diverse.

    i. There would need to be a transfer of funding from MDA to NISR – often in my experience even when such transfers take place they do not fully cover the costs to the receiving department!
    ii. NISR would need to insert within its organisational structure a Unit or more likely a Division to manage the process
    iii. There would inevitably be a small degree of distrust between the non-MDA statistical team and the MDA administrative staff.

The extent to which Rwanda differs in structure from those organizations that are traditionally defined as "centralized".

In contrast to many other countries, the United States does not have a primary statistical agency.

Examples of countries that are described as having centralized statistical agencies include Australia (Australian Bureau of Statistics), Canada (Statistics Canada), and Sweden (Statistics Sweden).

Elsewhere the statistical system is said to be "decentralized", with statistical units often located in different government departments. This structure is intended to keep statistical work within close proximity to the various cabinet-level departments that use the information.

The situation in the USA is significantly different in the sense that there is a Federal system of statistics with a US Census Bureau; Bureau of Labor Statistics; National Centre for Education Statistics; National Agricultural Statistics Service; National Centre for Health Statistics and many others. The Federal Statistical System is coordinated through the U.S. Office of Management and Budget (OMB). OMB establishes and enforces statistical policies and standards, ensures that resources are proposed for priority statistical programs, and approves statistical surveys conducted by the Federal agencies. The Chief Statistician of the United States, also housed within OMB, provides oversight, coordination, and guidance for Federal statistical activities, working in collaboration with leaders of statistical agencies.

Elsewhere, there is relatively little variation in broad structure, irrespective of whether or not the systems are described as centralized or decentralized.

For example the Australian Bureau of Statistics is the primary authority for the conduct of all business and household surveys in the same way that the NISR is in Rwanda. In both countries for example there are Health Management Information Systems which are not part of the Central Statistical structure. In the case of Rwanda the HMIS is an integral part of the Ministry of Health. In Australia it is to the Australian Institute of Health and Welfare that one must proceed in search of statistics on health service provision, episodes and outcomes.

The difference between the Australian system and the existing Rwandan system is one of scale and depth of analysis rather than of structure. In 2011-13 a significant one-off Australian Health Survey which was made up of 3 components:

- the National Health Survey (NHS);
- the National Nutrition and Physical Activity Survey (NNPAS); and
- the National Health Measures Survey (NHMS)

was conducted by the Australian Bureau of Statistics with technical subject matter input from a range of organizations via a steering committee representing a wide range of policy and research interests in the subject area. This I believe is the present model in Rwanda.

I do not have immediately available evidence on funding arrangements but would be extremely surprised to discover that statisticians in the Australian Institute of Health and Welfare are funded from the Australian Bureau of Statistics budget.

Similar situations exist in regard to Stats Canada and the Canadian Institute for Health Information.

The Central Statistical Office in Botswana was many years ago entirely centralized in respect of gathering not only survey statistics but also administrative statistics. The staff of the CSO were responsible for collecting and collating the health and education administrative data. These functions are now devolved to agencies funded by health and education ministries.

Chapter 5: Recommendations for an Organizational Development Strategy for the NSS in Rwanda

My recommendations are based on a radical approach with the aim in the medium term of having a more formalised NSS in Rwanda in which the rôles of constituent parts of NSS are clearly set out and in which the rôle of NISR as coordinator is codified.

It is based on the present levels of centralisation whilst creating a new statutory framework for co-ordinating NSS and offering a central infrastructure to support MDAs.

In due course a new Rwandan National Statistics Act, replacing the current Act, would create a Rwandan National Statistics Board with statutory powers to co-ordinate the activities of the NSS. The RNSB would replace and enhance the statutory functions of the Board of Directors of NISR as presently constituted

The new Act would define the National Statistical System to include

- **producers**, who compile official statistics;
- **suppliers**, or providers, who supply the data for the compilation of official statistics; and
- **those who use** official statistics in policy formulation, decision making, development programs and investment strategies and a wide range of individual and institutional users.

The Act would assign to NISR the powers and responsibilities to carry out the functions of co-ordinating the NSS as directed by the RNSB.

These powers would be set out in a redraft of the Act as follows:

The RNSB would be tasked "*to develop the framework under which the collaborative development of the National Statistical System shall take place*"

It would set out the powers under which collaborative development would be defined, namely to:

- "*co-ordinate and regulate a single system of National Statistics: strengthening the National Statistical System by*

- *convening Committees to review the statistical programs of Ministries and of NISR;*
- *setting quality standards for statistical outputs and their analyses;*
- *developing a system for the accreditation of all published official statistics;*
- *developing a Code of Best Practice;*
- *making agreements in the form of memoranda of understanding between Ministries and NISR relating to delivery of NSDS objectives, accessibility of data, the uses to which data may be put*
- *developing a cadre of high calibre statisticians "*

The role of developing, maintaining and coordinating the activities of the NSS would be placed on NISR in the following terms:

"*The NISR shall develop, maintain and co-ordinate the National Statistical System to ensure the collection, analysis and dissemination of integrated consistent statistical information*"

The responsibility for accreditation and monitoring the statistical systems for the collection, use and dissemination of official statistics would be placed with NISR:

"*NISR shall co-ordinate, monitor and accredit the statistical system in the collection, use of statistics and dissemination by statistical units in MDAs*"

However alongside these powers there would be an explicit recognition of the role of MDAs in a new NSS, there would be an assurance that there are no plans to centralize the NSS with all statistical functions placed in an expanded NISR, and there would be offers to provide infrastructural support to MDAs to assist in the development of statistics.

In short it would offer MDAs a place in a better NSS and it would strengthen NISR's role as secretariat and co-ordinator.

In taking forward this remit, the RNSB would seek to:
- preserve the links between suppliers of statistics in statistical units in MDAs and the policy makers in those organizations by retaining the structure of those statistical units. The RNSB may though recommend measures if it felt that these would enhance the development and efficiency of statistical processes.

- provide the statistical units in MDAs with infrastructural capacity building support in terms of guidance on
  - Methodology
  - Classification systems
  - IT experience
  - Data collection and data management
  - Dissemination processes and
  - Confidentiality protocol
- make greater use of data collected in NISR and in MDA statistical units
- extend the scope for cross cutting statistical activities with wider ranges of users
- reduce the possibility of duplicated effort
- strengthen the confidence of users by a process of accreditation of National Statistics
- extend and strengthen protocols for maintaining confidentiality of identifiable statistics whether individuals' or businesses'. See Annex 1.
- introduce greater consistency of policy across the National Statistical System
- build a greater awareness of the independence and trustworthiness of Rwandan National Statistics.

The RNSB would be required to agree a set of quality standards which may be applied to all official statistics based on the UN Fundamental Principles for Official Statistics which may characterized with the following criteria:

- Meeting users needs
- Impartiality and objectivity
- Integrity
- Sound methods and assured quality
- Confidentiality
- Proportionate Burden
- Resources
- Frankness and accessibility
- NISR would extend the Visa system which currently requires all organisations in Rwanda to seek NISR approval for survey design and analysis methodology with

a view to introducing a programme of assessment and accreditation of all major statistics produced by government departments and ministries based on the above criteria.

Example of the proposed NSS committee structure for some clusters
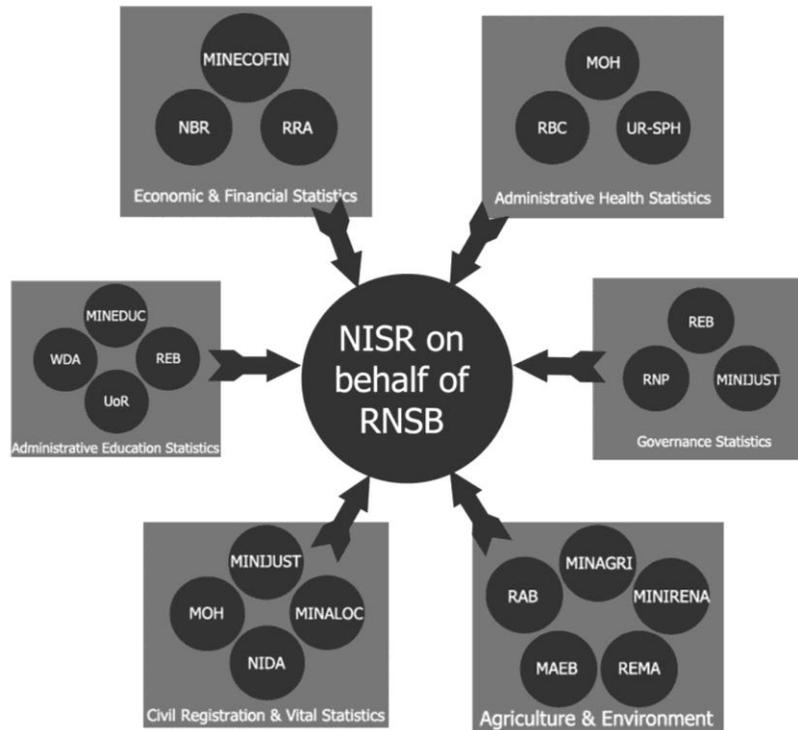
The above thematic chart illustrates how NISR would organize the committees to discuss the co-ordination of work with the various stakeholders to deliver the strategic objectives set out in NSDS2.

The task for each of these committees would be to

- o review the statistical programs of MDAs and of NISR in the light of NSDS2 and in future NSDS3
- o make plans reflecting the contributions to be made both by the MDA and by NISR in terms of technical capacity building and in some cases financial and ICT inputs (involving where appropriate the Aid sponsors of the work)
- o record these agreements in the form of a memorandum of understanding between Ministries and NISR relating to timetable, accessibility of data, the uses to which data may be put and the approval and enforcement of confidentiality constraints.

> o ensure the goals and targets are included in the performance agreements of staff in NISR and the MDA

A typical memorandum of understanding in respect of the NSDS2 objective in the area of improved health administrative statistic might cover the following points.

a. MoH commitment to a new Health Management Information System and the timetable and milestones agreed for achieving this;

b. NISR requirements for improved patient episodic data and NISR's expectations of MoH co-operation in introducing new data collection mechanisms at local level;

c. Statement of the staffing, training and IT requirements and funding implications;

d. Agreement on the funding mechanisms associated with (c) (and if this involves external funding it would be useful for the aid partner to be involved in the discussion and agreement);

e. Agreement to pilot the introduction of patient episode based data collection and an agreed timetable identifying who in NISR and MoH will be responsible for delivering this;

f. Timetable and milestones for the roll-out, again with clear identification of who in NISR and MoH are responsible for delivery;

g. Agreement to incorporate delivery goals and targets in the performance agreements of staff in NISR and MoH;

h. Arrangements for monitoring progress.

A cadre of "government" statisticians

A further method of centralization within a decentralized framework would be for RNSB to establish a cadre of statisticians, identifying able statisticians with potential to serve the NSS in a variety of roles – either in NISR or in MDAs in due course. NISR would

i. ensure continual professional development for members of the cadre,

ii. manage their careers so that members acquired broad experience,

iii. create succession planning options.

Statisticians would be entitled to join the cadre if they had the necessary statistical qualifications and if they demonstrated potential. Members of the cadre would enjoy comparable terms and conditions in whichever Ministry they were currently serving.

I have been told that there exist parallel groups of professional staff in the medical and legal disciplines within the Rwandan public sector.

I base this proposal on the UK Government Statistical Service model:

The GSS comprises about 7,000 civil servants who work in either the Office for National Statistics (ONS), other Government Departments or for devolved Parliaments. The GSS is headed by the National Statistician and is spread across more than 30 government departments, agencies and the devolved administrations. It includes statisticians and other staff providing high quality information, analysis and advice to decision makers. Around 1,700 staff are members of the **Government Statisticians Group**, the professional community of statisticians within government.

Here is a link https://gss.civilservice.gov.uk/which gives a comprehensive description of the GSS, the entry procedures, and the wide range of opportunities that are available for training and continuous professional development. Clearly with a group of 1700 staff there is justification for this major support infrastructure. The present scale and circumstances in Rwanda would not warrant such inputs. However a Rwandan cadre could be developed using the same basic principles.

Entry to the GSS is via a national competition which used to take place once a year. Often applicants were existing members of staff who had been employed in a temporary capacity. Candidates were required to possess good academic qualifications in a numerate discipline. Interviews used (when I was involved in the process) to take place over a 2 day period. Candidates were required to be have a technical interview with a Chief Statistician and a University Professor, a general interview with an additional senior civil servant of under-secretary level, and then the candidates in groups of 4 or 5 would have to take part in an observed discussion group where they would be invited to discuss several non statistical issues: eg they might be asked to give their thoughts on the merits of the UK funding an International Development budget. The purpose of the discussion is to observe whether candidates are able to think on their feet, be articulate, collegiate in their approach to opposite views expressed by

other members of the group and inclusive. The candidate who bombasts the others rarely gets through the process no matter how good his/her argument! Successful candidates may then apply for permanent posts (with a probationary period) within the GSS.

Promotion from main grade statistician to Chief Statistician (Divisional Director) is by open competition interview within the GSS where the interviewers are at least under-secretary statisticians and the interview is normally chaired by the head of administration in the department where post is located.

As a possible contribution to the training element for a Rwandan cadre I have held some provisional discussions with DFID from which I believe that a proposal for technical assistance in support of the cadre would be positively received.

The proposal could involve a two-way exchange scheme over a number of years whereby members of the UK Government Statistical Service would be invited to come and work alongside counterparts in NISR and MDAs for short periods of assignment of up to but not greater than 6 weeks or possibly a series of shorter assignments of 3 x 2weeks over a longer period.

As part of the exchange being considered, members of NISR/MDA staff would be invited to the UK where they would work alongside (shadow) members of the Government Statistical Service in comparable areas of statistical work for a period of up to 6 weeks.

I spoke in October to Robin Youll (who is known to NISR) and who is an IMF consultant but who continues to work for the UK Office for National Statistics and is involved in an ONS bid to DFID (under a UK Treasury "Bilateral Aid Review" process) for funding to carry out just this kind work. If successful – the decision is likely in November/December 2015 – he would be more than happy to liaise with NISR and DFID in Rwanda to set up such a programme.

My thought is that it would provide an opportunity for Rwandan statisticians to liaise with counterparts in the UK system and gain appreciation perhaps of how some developments, currently in NSDS2, are delivered in the UK – for example in the areas of demographic statistics, in administrative health statistics, in ICT and data capture. I

also think it might be of interest for those involved in NISR human resource to see how the Government Statistical Service cadre of statisticians is managed.

Not all the exchanges would be with ONS and Robin Youll would attempt to obtain exchanges with statisticians working in Ministries and Departments in the UK and this would in my view provide an opportunity to begin to enhance the role of non NISR statisticians by showing how it is practiced in another part of world.

As by-product of introducing a Statistical Cadre there would a strong case for a benchmarking/job evaluation exercise in which posts in NISR and the MDAs would be categorized and appropriately graded. Normally within the public sector there are a range of criteria for assessing the grade appropriate to a particular post. Often these criteria include factors such as

a. Number of staff managed and grade of staff managed
b. Scale of budget managed
c. Assessment of the importance of the objectives of the job holder

Quite often someone providing high level advice on key policy issues would score more highly than someone with 20 staff and significant budget particularly if the latter was engaged in repetitive tasks – for example managing the provisions of driving licenses.

Chapter 6: Phased implementation

The main purpose of strategy is to provide a general direction for guidance of development of policy in the medium term. If senior staff in NISR and if members of the Board of Directors of NISR agree with the conclusions as laid out above then over the period to the end of the NSDS3 there will be opportunities for their phased implementation.

Phase 1: immediate

The introduction of committees to discuss the current NSDS2 implementation in those Ministries which host the administrative systems which support the data sources and which are identified as partners in Annex 1 of NSDS2 in respect of priority levels 1 and 2:

   i. Further develop the national system of civil registration and vital statistics;
   ii. Improve business registries;
   iii. Strengthen administrative records in the Health and Education sector;

The outcome should be memoranda of understanding between NSIR and the separate Ministries which set out the contribution each partner commits to the projects and records timetables, milestones and outputs.

Phase 2: during the period of NSDS2 (some elements * may be deferred to NSDS3)

The concept and design of a Rwanda Government Statistician Cadre

   i. The identification of those who would be members of such a cadre.*
   ii. Explore models in other parts of the world
   iii. Discussion with those Ministries in which there are currently statisticians or staff performing such roles.
   iv. Establish whether there would strong objections or barriers to the development of a cadre from those who are responsible for public sector employment policy.
   v. Develop a programme for continual professional development within the cadre – particularly training related to current work programmes*
   vi. Determine within NISR who would be responsible for carrying forward such a programme.

Phase 3: for inclusion NSDS3

A review of Statistical Legislation with a view to creating a Rwandan National Statistical Board as proposed in section 5 above during the period of NSDS3.

In order to secure agreement across government NISR and the Board of Directors would first need to be fully convinced of the benefits and so I believe that the first stage in the process should be the preparation of a paper setting out the principles clauses for inclusion in a new bill together with a statement of benefits and this paper should provide the basis of high level discussion with senior members of NISR and the Board of Directors.

Following agreement there would be an expectation that those involved would become advocates for the new legislation. Support from senior staff in MINECOFIN and NBR would be essential, and following that there would need to be a quiet campaign to win support across a range of Ministries with reassurance that the new Act consolidated the current balance between centralization and decentralization whilst strengthening the mechanisms for coordination, building a more skillful team of statisticians to support the work done in MDAs and building greater confidence in the output of official statistics through the process of assessment/accreditation. That might take the form of process of consultation. BISR might wish it to emerge in the discussions leading up to NSDS3?

After which the path towards passing of a new Act would follow the normal procedures of the Rwanda Government with the timetable depending on competing demands on the Parliamentary schedule.

ANNEX 1: Discussion of the possible codification of confidentiality rules for a Rwandan National Statistics Board

1. Introduction

Reliable official statistics depend on public cooperation and goodwill to provide accurate and timely information requested in surveys. Such cooperation and good will can only be maintained by protecting the confidentiality of information provided by respondents.

Key aspects of confidentiality protection are

- maintaining information securely;
- avoiding disclosure of identifiable information and
- providing access to anonymised micro-data for non-statistical purposes, such as statistical research.

It is important to make a clear distinction between:

- Disclosure of identifiable individual data;
- Providing access to microdata from official statistics: making available non-identifiable individual responses, that is, anonymized individual (non-aggregated) information

The word confidentiality carries a number of connotations.

"the right of an individual to have personal identifiable information kept private"
"restrictions on accessibility and dissemination of information"
"ensuring that information is not released to or accessed by an unauthorized individual".

The OECD describes data confidentiality

"as a property of data usually resulting from legislative measures which prevent their unauthorized disclosure"

Implicit in the concept of confidentiality is a parallel concept of authorization.

When NISR or any part of the NSS acquires individual data (whether relating to a natural or a legal person) it has an implicit contract with that person. It tells the person

the purposes for which their data are required, the uses to which they will be put, and provides an assurance that they will not be disclosed.

Exceptions: There may be some circumstances where individual data may be disclosed. [For example in the UK in the compilation of trade statistics there is a presumption of publication even if there are only a small number of major exporters, and hence publication could be disclosive. Another example is that individual company data on numbers of employees collected by ONS under legislation covering censuses of employment may be passed by ONS to Planning Departments in Local Authorities for their planning purposes. However at the point of collection of these data the respondents are fully informed. And the legal basis under which these statistics are collected gives the ONS the power to disseminate the individual data in these ways.]

The point here is that to be in a position to disclose confidential information to an authorized third party outside of NISR, NISR would need to have powers to give that authorization, and those powers (if they exist) would reside in statistical legislation.

2. Legal Framework

It is therefore to a future statistics law that one would have to go to set out both the responsibilities NISR and other members of the NSS have to protect data, and to learn whether there are any powers that the RNSB or NISR might in future have that would give authority to disclose data. Here is a possible section in a future Act.

Confidentiality

(a) Except for the purpose of a prosecution under this Act,

(b) no individual return or part of the return made for the purpose of this Act;

(c) no answer given to any question put for the purposes of this Act; and

(d) no report, abstract or document, containing particulars contained in any such return or answer and so arranged as to render possible identification of those particulars with any person, business or undertaking; and;

(e) no data set or part thereof stored in a computer or any other electronic media;

shall be published, admitted in evidence, or shown to any person not employed in the execution of a duty under this Act except with the written consent of the person making the return or giving the answer, or, in the case of a business or undertaking, from the

person having the control, management or superintendence of the business or undertaking.

(2) Subsection (1) does not apply where the person, business or undertaking has published the return, answer, report, abstract or document and opened up a computerized data set for general access.

(3) Nothing in this section shall prevent or restrict the publication of any report, abstract or document without the consent referred to in subsection (1) where the particulars contained in the report, abstract or document render identification possible merely by reason of the fact that they relate to an undertaking or business which is the only undertaking or business within its particular sphere of activities, if the particulars do not render possible identification of the costs of production of, or the capital employed or profits arising in the undertaking or business.

(4) Notwithstanding the restrictions under subsection (1) of this section, the Director General may release unit records on computer media, with identifiers removed, if-
(a) he or she is satisfied that the unit records so released will be used for genuine research purposes;
(b) he or she obtains from the recipient of the records a written undertaking that the records will not be released to any other person without the written consent of the Director General;

(c) he or she obtains from the recipient a written undertaking to make available a copy of the research findings to NISR; or

(d) he or she is satisfied that the unit records cannot be identified as relating to any particular person or business enterprise.

3. Implementation: The management and control of confidentiality of Rwandan National Statistics: individual responsibilities

Safeguarding the information that it holds about:

- Individuals
- Households
- Business entities and entrepreneurs

- Non Profit making Institutions Serving Households

is one of the RNSB's overriding concerns. Any failure to protect data would be a major catastrophe for the reputation of the RNSB. The policies and responsibilities set out below reflect the priority that RNSB should attach to this. They are not intended to be prescriptive but to indicate the level of consideration that needs to go into the protection of confidentiality.

The Director General of NISR has the overall responsibility for the policy and effectiveness of the arrangements for protecting the confidentiality of data held by NISR and in formulating the policies under which the confidentiality of individual data are protected in other parts of the NSS.

He should assign to a senior member of his team (let us call him/her the Data Protection and Confidentiality Officer - DPCO) the specific responsibility to advise the Data Custodians on:

- their responsibilities
- the interpretation and application of rules, including recommending independent audit of practices or providing special considerations for research and analysis wherever appropriate.

The DPCO would also responsible for ensuring that all NISR members of staff are fully aware of their personal responsibilities for protecting data confidentiality, and for the maintenance of the RNSB Confidentiality Policy.

The DPCO would report to the Director General on matters associated with the protection of confidentiality.

The DPCO would, for every data set with individual confidential data held by NISR, appoint a Data Custodian.

Data Custodians would be responsible for maintaining the confidentiality of their assigned data set. Data Custodians would have sufficient managerial responsibility – usually they will be at Director level, or Unit/Section Head level. They will ensure that all staff handling the data have operational guidance as to the sensitivity of the data.

No data may be released to anyone outside of NISR without the prior written authority of the Data Custodian, who must consult with the DPCO before giving this authority.

All members of staff should be regularly reminded that unauthorized disclosure is a serious disciplinary matter, and that in some circumstances could be a criminal offence. Maximum caution must always be exercised before any decision is taken leading to the release of individual data records.

Procedures

Data security

1. individual data must be held in a secure IT environment eg on servers where there is no external access even if password protected.
2. individual data may not be downloaded onto laptops without the written authority of the Data Custodian, and even then only if encrypted. Permission to download data to a laptop may only be agreed for a fixed purpose and for a timescale, and a copy of the letter granting permission must be copied to the DPCO. The laptop must be returned to IT Directorate within that agreed time scale and the individual data removed (not just deleted) in such a way that it may not be recovered.
3. incidents where individual data has been downloaded to laptop must be recorded on a log held by the DPCO, and confirmation that the data has been removed must form part of the log.
4. Paper copies of original questionnaires must be kept in a safe physical environment within NISR and be locked in cabinets when not in immediate use.

Disclosure with consent from the data contributor

There will inevitably in the publication of aggregated business statistics be occasions where an aggregate cell in a statistical table is dominated by 3 or by less than 3 major enterprises. To publish such a cell would be disclosive because if 2 of the 3 enterprises were to collude with each other they could deduce the confidential information relating to the 3rd enterprise.

In such circumstances the Data Custodian should first write to the 3 enterprises and seek their consent to go ahead with the publication of the aggregate statistics, explaining the importance of the particular statistics.

If written consent is given by the three enterprises then the Data Custodian can go ahead and publish the aggregate statistic.

However, if permission in writing is not received, then the Data Custodian must combine the aggregate statistic with another in a neighboring cell where the information relating to the combined cell is no longer dominated by the 3 enterprises and hence is not deemed disclosive.

Prior to the publication of any business survey report, all tables should be examined for disclosiveness by the Data Custodian.

Disclosure of individual data (whether anonymised or not) to statistical units in MDAs to enable more in depth analysis using records held by the MDA may not be approved unless there has been a written request from the Head of the Statistical Unit setting out in the MDA:

- the purposes to which the individual data will be put
- the justification for requesting non-anonymised data
- the staff who will be allowed access to the data within the Statistical Unit and an acknowledgement that these staff are fully aware of their responsibilities to protect the data and of the punishments for failing to protect the data
- the IT systems that will hold the data and an acceptance that these systems are similar and consistent with the internal NISR data protection procedures described above.
- the period for which access to the data is required
- a written agreement that any report publishing the conclusion of the research/analysis should be made available to the DPCO in draft prior to the date for publication to enable review and discussion prior the release of the report

- arrangements for removing the data from their systems at the conclusion of the agreement and a warning that if any individual deliberately copies the data to other computers with the purpose of retaining the data for further use then they would be prosecuted under the appropriate section in the future Statistics Act.

If after discussion of the above requirements with the Head of the Statistical Unit the Data Custodian is satisfied he must submit his recommendation to the Director General who would have to satisfy himself/herself that

- a thorough investigation of all non-disclosive options had been fully considered
- the uses to which the data will be put do not go beyond those agreed with the suppliers of the statistics at the time that information was originally collected
- where appropriate ethical approval has been sought and obtained – in particular where individual health records may be concerned
- if the request relates to anonymised data, a thorough investigation has been carried out to demonstrate that information about individual persons may not be deduced by inference from the data

Disclosure requested by individual researchers or non-government institutions outside of the MDAs

Any request must first be addressed to the Director General who would rule whether or not the request should be treated in the same way as any request from within the National Statistical System. Approval of requests for non-anonymised data will be extremely rare. If anonymised data are sought, it will be extremely difficult to satisfactorily anonymise business survey data.

Disclosure of data held in NISR but obtained under a memorandum of understanding with an MDA from confidential administrative sources

Any request for such data must be addressed to the Director General who will normally refer the request to the Head of the MDA.

Access to data held on the NISR Business Register

The Business Register is a list of businesses maintained with information gained from the Rwandan Revenue Authority.

It is clearly of advantage to NISR for surveys conducted in all parts of the National Statistical System to use the same sample frame as those conducted in NISR. It improves the consistency of results. However there is a need to strengthen the approach to confidentiality of data held on the Register.

At the point of collection of data during register proving NISR should fully explain the purposes to which data will be put. On the one hand the business should be informed that the collection of data is statutory under the Statistics Act. They should also be informed that the data will only be used by NISR and other Government Departments for statistical purposes in the conduct of statistical surveys and that having a good up to date and accurate register enables statistical authorities to reduce sample sizes and hence the overall burden on business.

A strong reassurance should be given that the data will not be used for any other purpose, and NISR should refuse all requests for access to the Business Register other than by MDAs for sampling frame purposes.

In such cases the procedures set out above in the section on disclosure of individual data (whether anonymised or not) to statistical units in MDAs to enable more in depth analysis using records held by the MDA

Preventing unintentional disclosure when publishing aggregated statistics from which information about a dominant contributor may be inferred

It may be possible to disclose sensitive information about an individual contributor, even when publishing an aggregate figure for the sector in which that contributor is classified. For example it may be that there are 10 businesses engaged in widget manufacture, but 9 of them are relatively small enterprises and the whole sector is dominated by one or two companies that between them account for say 95% of the output. Both companies will be aware of their dominance of the sector, and so by a process of deducting their own figure from the overall total will be able to deduce the contribution of their major competitor.

This kind of situation is much more like to manifest itself in the sphere of Business Statistics.

Before publishing any table of aggregate business statistics, the statistician responsible for the survey should ensure that there are no such table entries where less than 3 companies dominate a sector.

Where such a situation arises, then there are two options.

- Contact the enterprise and seek written permission to publish the figure or
- Group together results for this sector with those for a similar industrial grouping (probably with high echelons within the ISIC system). Continue to group cells until the issue of dominance is resolved.