

# THE ROLE OF THE NATIONAL STATISTICAL OFFICE IN THE BROADER NATIONAL STATISTICAL SYSTEM - SOME NEW OPPORTUNITIES AND CHALLENGES

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## 1. Introduction

Many countries are grappling with the role of the National Statistical Office in National Statistical Systems. It was the topic of a seminar at the 2004 Conference of European Statistics. It is also one of the key topics for a 2005 Forum for Asia/Pacific Statisticians that will be held in Bangkok in February 2005.

It is a topic of interest across all statistical offices - from both the developed or developing world. Even the meaning of the term "National Statistical System" seems to have gained international acceptance. It is driven mostly by the fact that an increasing number of statistics are being produced by agencies other than the National Statistical Office (NSO). This can sometimes be deliberate - other agencies feel they are better able to conduct the statistical collection, sometimes get frustrated by the lack of responsiveness of the NSO. On other occasions, the subject matter may be such that it is inappropriate for the NSO to conduct the collection. But more often it is being driven by the increasing availability of administrative and transactional data bases to other agencies as a by-product of their own work. They are often the best placed to produce the statistics from these data bases as long as people with appropriate statistical skills are deployed on this work.

NSOs will maintain their statistical production responsibilities but increasingly they are being asked to undertake a statistical leadership role for statistical work outside the NSO. This role is generally one of influencing rather than controlling and is not a role that all people are comfortable with. This paper describes the statistical leadership role and how it might be carried out with particular reference to work in Australia.

## 2. What is Statistical leadership?

Statistical leadership is providing the leadership, and supporting resources, required to ensure:

- (a) Statistical work undertaken by other agencies is of an acceptable standard, and
- (b) The combination of statistical outputs that contribute to the National Statistical System are bigger than the individual components.

This may seem a little vague but it may be clearer after reading the description specific activities that a NSO might undertake (Section 3).

### **3. Statistical Leadership Activities**

There are several which I summarise below. The activities that are undertaken will depend on the institutional arrangements and culture of individual countries and the capabilities of the NSO. In some cases, NSOs will have to focus exclusively on their own production activities and they will not have the time to concentrate on their statistical leadership activities but that is likely to change with the maturity of statistical systems.

Statistical leadership activities include the following. They cover both input and output activities.

1. Developing standard classifications (eg. an industry classification) and making available to other providers of statistics. Support with coding manuals, software systems to support coding etc.
2. Developing and promulgating statistical frameworks, statistical standards and definitions for use by all providers of statistics. Publications of modules of standard questions on particular topics (eg. labour force) can help improve coherence across different sources of related information. These frameworks should be based on international frameworks where they exist.
3. Manuals of Good Practices - often suitable manuals are available from the UN Statistical Division and other individual agencies; sometimes they will have to be adapted to the particular circumstances of a country.
4. Training programs to support these Manuals and provide good guidance on other aspects of statistical production.
5. Maintaining active networks among the key personnel involved in statistical activities through newsletters, seminars, social gatherings, etc.
6. Developing agreed protocols for the National Statistical System.
7. Developing meta data standards for describing collections, particularly quality. These are an important input into the Directory described below.

8. Within the structure of the NSO, developing statistical centres of expertise within particular subject matters. These statistical centres should have good knowledge of all statistics produced in particular fields, not just those produced by NSO. For example, a statistical centre for agriculture would be familiar with agriculture statistics produced by the NSO, the Ministry for Agriculture, by State/provincial bodies involved in agriculture, producer boards and research institutes involved in agriculture. They should be interested in producing publications that link these statistics in a meaningful way. The statistical centre should also be interested in links with other fields of statistics (eg. agriculture and the environment, agriculture and the household sector).
9. The production of Information Development Plans, in collaboration with key stakeholders, that describe the availability of existing statistics, the major gaps in these statistics or the major improvements required, and a plan for further development of the field of statistics.
10. A Directory of statistical sources, from both the NSO and elsewhere. If electronic this could provide a window on available statistics. Given the technology of today, this may not be a physical directory but rather a virtual directory using "Google search" type facilities across the released data bases. Standards for describing meta data become very important in this context. Links to the actual data, not just the meta data, would be a very valuable extension.

#### **4. Ways of Delivering Statistical Leadership Activities**

Links will always be stronger if the statisticians working in other organisations have familiarity with the work of the NSO and the values under which they operate. Ex-NSO staff can often fulfil this role but consideration should be given to outposting statistical experts (paid for by the host agency) on a short to medium term basis. It can also be a very valuable development experience for the NSO staff member.

An alternative is to provide consulting type services - sharing our expertise where it will lead to improvements in the National Statistical Service. Often it can be the most effective way of coordinating across the National Statistical System.

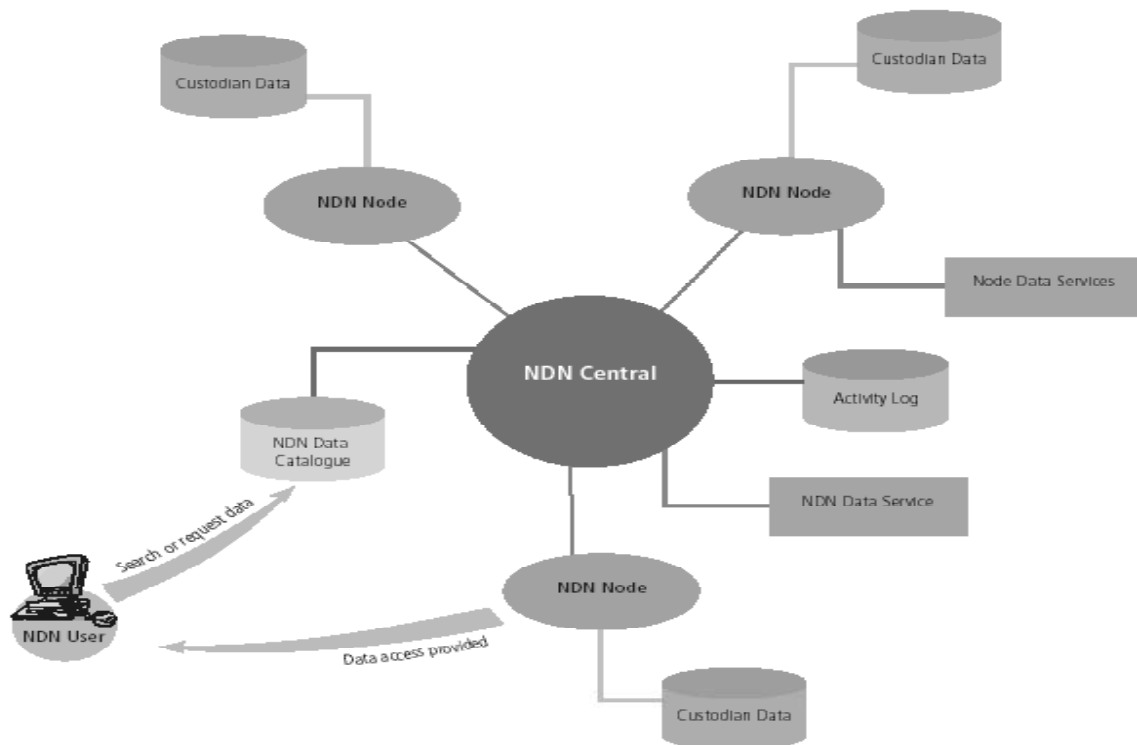
However, I mostly wanted to focus on a new ABS initiative - the National Data Network. The concept is illustrated by Figure 1. It is under development with a demonstration version well under preparation.

#### **5. What is the National Data Network?**

The NDN will create a distributed library of data holdings relevant to policy analysis and research. These data holdings will remain held and controlled by their custodian organisations. Whilst data will be held by each custodian, the National Data Network will provide a complete catalogue of available data sources to allow users to easily search for, and access, data holdings which have been published.

The National Data Network will consist of three key components, the NDN Web Site, NDN Central, and NDN Nodes. The NDN Central will be a hub in the network, linking the NDN Nodes and allowing entry by researchers and policy analysts.

Figure 1: Overview of the National Data Network



(a) NDN Web Site

The NDN Web Site, <[www.nationaldatanetwork.org](http://www.nationaldatanetwork.org)>, will provide easy access to information about the network and link other relevant sites. The site will hold endorsed versions of guidelines, standards and protocols. The NDN Web Site will allow feedback on directions and issues during the development phase. A range of discussion fora will be available to support collaboration amongst both users and developers.

(b) NDN Central

NDN Central will act as the hub of the National Data Network. Each set of data or data service available through the National Data Network will have a unique description stored in a consistent format. The central server will compile descriptors of the available data from the custodian's web site.

NDN Central will maintain a central metadata repository, which will contain descriptions of all available NDN data sources and services. NDN Central will include a search facility to allow users to search and retrieve relevant information about available data based on the metadata repository. NDN Central will also provide some general statistical services (see (e)).

### (c) NDN Nodes

Custodian agencies will be connected to the NDN Central via the World Wide Web and will operate as NDN Nodes. An NDN Node is a library of metadata about the data which the custodian has published to the National Data Network.

Each node will consist of a base program which contains information about where data is stored and key metadata elements about that data. Some NDN Nodes may wish to expand their role by operating selected statistical services. These statistical services would also reside on the NDN Node. (For example, the ABS will be a node and will provide a range of statistical services.)

### (d) Publishing Data to the National Data Network

Custodians will be able to select a range of their data holdings and publish it through the National Data Network. Any data may be loaded to the network, so long as it is accompanied by an appropriate "Data Resource Description" (or metadata). This metadata can be used by policy analysts and researchers to decide which data is relevant for their purposes and assist them to interpret and analyse that data. The metadata will also describe and control access and use restrictions that might apply to the data.

Custodians will control access to their data holdings. To safeguard data, a range of standard Access and Use Policies will be developed to provide appropriate levels of security for varying types of data. Four basic levels of security are envisaged - unrestricted, approval required, remote access only and specification only.

Access to data will be able to be restricted to groups of users. These groups may consist at various levels, such as users within:

- the custodian agency;
- a specified agency;
- a jurisdiction, such as a state; or
- a field or collection of agencies, such as agencies involved in delivering health services.

If required, custodians will also be able to develop and integrate specific security features into the network.

### (e) Access to Statistical Services

The National Data Network will provide access to a range of services to support the creation, management, integration and analysis of data. Some of these services will be provided through NDN Central, while others will be provided by third party service providers. These third party providers will only be able to register their services with the approval of the governing board. The ABS is likely to be the major service provider.

Progressively, the National Data Network services will be expanded to cover the full life-cycle of statistical processes. Services will be provided to aid Custodians in designing, creating and disseminating statistical data; and researchers in analysing this data.

## **5. Summary**

The National Statistical Office (NSO) is an important player in the National Statistical System. This paper describes how the NSO can provide effective statistical leadership to whole national statistical system.