



**Permanent Committee on GIS Infrastructure for Asia and the Pacific**

**Working Group 2**

**Regional Fundamental Data**

# **GUIDELINES FOR CUSTODIANSHIP**

**April 2000**

## EXECUTIVE SUMMARY

These Guidelines have been produced in support of the intention of the to establish an Asia-Pacific Spatial Data Infrastructure under the auspices of the Permanent Committee for GIS Infrastructure for Asia and the Pacific (PCGIAP). They are based on an Australia New Zealand Land Information Council (ANZLIC) publication 'Guidelines for Custodianship', published in April 1998. The guidelines also support the PCGIAP Policy on Sharing Fundamental Data. This paper addresses specific practical issues in implementing and managing the principles of custodianship in order to better integrate spatial information.

The custodian principle has been adopted by PCGIAP as the means of ensuring accountability for the care and maintenance of information within the public sector. As such the guidelines are very much focussed on the needs of public sector custodians.

*In the future it is entirely possible that private sector organisations will become responsible for public datasets under a contractual arrangement. These guidelines will be adapted to address that as the need arises. The guidelines are based on experience and can be seen as a matter of good practice, convention and convenience. It is simply the only way that data can be managed in an orderly fashion. Private sector organisations are encouraged to consider these guidelines for their internal data management needs*

The principle of custodianship assigns to an agency certain rights and responsibilities for the collection of spatial information and the management of this on behalf of the community. The rights and responsibilities include the right to set marketing conditions for the information and responsibilities regarding the maintenance and quality of the information. It also ensures accessibility of the information and provides a recognised contact point for the distribution, transfer and sharing of the information.

The overriding philosophy associated with custodianship is that custodians manage the spatial information as trustees for the community to enable the integration of spatial information.

There are advantages in custodianship to be gained by agencies, government and industry. In following the rules and responsibilities for custodianship as set out in these Guidelines, a custodian agency is most likely to become the preferred supplier for information under its custody. This is because it will have the most accurate and reliable information. Custodianship provides a means of accountability and reliability of source for designated information within government. There can be increased confidence that the information within government is accurate, complete, identifiable and accessible. Custodianship also eliminates unnecessary duplication of capturing and maintaining spatial information which allows funds previously spent on these activities to be reallocated to higher priorities. For clients, custodianship lessens the confusion regarding sources of accurate information; they can also receive more accurate advice on the source, currency and completeness of the information.

The guidelines provide advice on the principles of custodianship, the responsibilities of custodians and users and on the management of information products.

The PCGIAP seeks your comments on these Guidelines. Particularly your practical experiences in applying these guidelines. Please send your comments to:

PCGIAP Secretariat  
PO Box 2  
BELCONNEN ACT 2616  
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or

E-mail: [permcom@auslig.gov.au](mailto:permcom@auslig.gov.au)

# PERMANENT COMMITTEE ON GIS INFRASTRUCTURE FOR ASIA AND THE PACIFIC

## GUIDELINES FOR CUSTODIANSHIP

### 1. INTRODUCTION

#### 1.1 The need for Custodianship

There are few areas of any economy which do not rely either directly or indirectly on spatial data for planning, maintaining or managing activities.

Without spatial data we cannot address, let alone resolve regional issues such as environmental management, the mitigation of natural disasters and economic growth within the context of sustainable development.

A significant proportion of our regions' economic development and social and environmental well-being is heavily dependent upon land related activities. For example, mining, farming, forestry, transport, tourism, fisheries and the planning of services for the community, to name a few.

Much of what we want to do in these areas can only be achieved with good, consistent land and geographic information being available and readily accessible to the private and public sectors as well as the community at large.

Spatial data can be used for a great variety of purposes and the list is growing rapidly as users find new applications. Of course, agencies could be left to collect spatial data in their own way and to meet their own needs, but this leads to costly duplication of data, data systems and inconsistency between data sources. It also results in data that cannot be integrated with other data to produce value added products. Using data that has been collected for one purpose (geology for minerals exploration) in another application (geology for water supplies) is cost efficient. However to take full advantage of this principle the information must be consistent, to acceptable standards, its existence widely known and it must be accessible. This is the essence of a spatial data infrastructure.

PCGIAP believes that an Asia-Pacific Spatial Data Infrastructure will provide the institutional and technical framework to ensure the required consistency, content and coverage to meet the region's needs. The infrastructure will also ensure that all data collection and maintenance efforts are undertaken in the broad regional interest, thereby maximising investment in data collection and maintenance from a regional perspective.

*A key feature of the infrastructure model is the emphasis on the concept of a regional custodian. Broadly speaking a regional custodian will take a regional view of the development of a particular fundamental dataset (eg topography) and will be accountable for the collection and management of the fundamental dataset within the framework provided by the Asia-Pacific Spatial Data Infrastructure.*

More specifically:

A **custodian** of a fundamental dataset, or a component of that dataset, is an agency recognised by PCGIAP as having the responsibility to ensure that a fundamental dataset is collected and maintained according to specifications and priorities determined by consultation with the user community. The custodian also has the responsibility to make the dataset available to the community under certain conditions and in a format that conforms to standards and policies established for the APSDI.

PCGIAP does not intend to invite national sponsors and custodians for every data set. It will be more useful if, in conjunction with the jurisdictional coordinating committees custodians be identified who will be responsible for fundamental datasets or components in their nation. A fundamental dataset is a dataset for which more than one government agency requires consistent national coverage in order to achieve their objectives. This will provide a focus for the most important datasets needed for the Asia-Pacific Spatial Data Infrastructure.

## 1.2 Scope of Guidelines

These Guidelines have been produced to provide guidance on custodianship as a means of ensuring accountability for the care and maintenance of information within the public sector. As such the guidelines are very much focussed on the needs of public sector custodians.

*In the future it is entirely possible that private sector organisations will become responsible for public datasets under a contractual arrangement. These guidelines will be adapted to address that as the need arises. The guidelines are based on experience and can be seen as a matter of good practice, convention and convenience. It is simply the only way that data can be managed in an orderly fashion. Private sector organisations are encouraged to consider these guidelines for their internal data management needs*

It is the intention of PCGIAP to promulgate these guidelines and encourage Governments and organisations to take up custodial responsibilities at a national, jurisdictional and regional level.

## 1.3 Custodianship within the APSDI

Custodianship is seen by PCGIAP as being at the core of efficient and effective spatial information management. because it provides for accountability for fundamental datasets and identifies an authoritative source which gives users a measure of consistency. In addition, custodianship is also a means of:

- eliminating unnecessary duplication in the collection and maintenance of spatial information;
- managing information on behalf of others;
- providing a sound spatial information infrastructure;
- assisting the production and management of spatial information products; and,
- facilitating the collection of fundamental datasets and spatial information.

Collectively, custodian agencies manage the spatial information as trustees in a partnership with national sponsors and users to enable the integration of spatial information for the benefit of the community. Consequently, custodian activities including negotiations with other agencies and users, as well as information product development must take place for the betterment of the whole community, rather than any individual agency. *The overriding philosophy in all these activities should be one of a trustee and partnership for all users.* This gives users confidence in the level of integrity, timeliness, precision and completeness. The coordination of custodianship by national sponsors will assist in the avoidance of duplication of effort and unnecessary cost thus achieving maximum benefit from the investment.

## **2. PRINCIPLES OF CUSTODIANSHIP**

### **2.1 Introduction**

Custodianship assigns to an agency certain rights and responsibilities for the collection of spatial information and the management of that information on behalf of users. The rights and responsibilities include the right to set marketing conditions for spatial information and responsibilities regarding the maintenance and quality of this information and the provision of metadata. Custodianship provides a means of accountability and reliability of source for designated information within government. It also ensures accessibility of the information and provides a recognised contact point for the distribution, transfer or sharing of the information.

#### ***Principle 1 - Trusteeship***

*Custodians do not 'own' data but hold it in trusteeship on behalf of the community.*

Under this principle, custodian agencies become the trustee not the owner of the information held in their databases. This results in an emphasis upon cooperation in sharing information amongst agencies rather than competition.

#### ***Principle 2 - Standard setting***

*Custodians, in consultation with the PCGIAP are responsible for defining appropriate standards and proposing them for regional ratification.*

The setting of standards to determine how the information will be collected, described and used is the most important commitment that an agency makes when agreeing to become a custodian. Custodians must seek input from users to assist in defining appropriate standards for information in their custody, and propose standards for regional ratification. These include standards (as approved by the PCGIAP) for access, collection, classification, description, accuracy, quality, format and structure of the regional datasets.

#### ***Principle 3 - Maintenance of information***

*Custodian agencies must maintain plans for information collection, conversion and maintenance in consultation with the national sponsors and user.*

Consequently custodians must liaise with national sponsors, jurisdictional coordinating committees, clients and other affected parties when making any significant information management or dataset changes, so that the impact upon users can be assessed. The custodian agencies are also responsible for negotiating the terms and conditions under which other agencies collect and maintain the spatial information on its behalf.

#### ***Principle 4 - Authoritative source***

*The custodian becomes the authoritative source for the fundamental dataset in its care.*

In acting as the authoritative source, the custodian agency becomes the preferred supplier of this information. This lessens confusion for users and overcomes the accuracy and reliability problems that may be encountered when supposedly identical information is held separately by several agencies, where several agencies contribute information to a common database, or where information provided by different agencies is combined. By virtue of its development and maintenance plans the custodian is also likely to have more current information than other agencies. As the agency responsible for setting the standards, the custodian is also in the position of being able to advise the client on the source, currency and completeness of the information.

#### ***Principle 5 - Accountability***

*The custodian is accountable for the integrity of the data in its care.*

A custodian may delegate any or all of its responsibilities for a fundamental dataset in its care to another agency. It will, however, still remain accountable for the integrity of the fundamental dataset. The custodian must ensure that through any delegation its full responsibilities can still be met. Where a custodian agency agrees to another agency marketing its information, or producing a value added service or information product, it should draw up a formal agreement with the other agency.

#### ***Principle 6 - Information Collection***

*Collection or conversion of information can only be justified in terms of a custodian's business needs.*

Custodians are not expected to collect or convert information for which they have no business requirement. Collection must be justified in terms of their own needs. These will generally reflect either the agency's Government priorities or statutory responsibilities. If other agencies require further information to be collected, they can either;

- wait until the custodian can justify the collection/conversion;
- contribute the required resources to the collection/conversion of the information by the custodian;
- contribute to a submission by the custodian for more funds for the collection/conversion of the required information; or,
- collect/convert it themselves.

If an agency collects or undertakes work on any spatial information which is under the custodianship of another agency, it must do this according to the custodian's standards and

provide the custodian agency with a copy free of charge and according to an agreed transfer standard. *The custodian will then be responsible for future maintenance.*

## **Principle 7 - Maintain Access**

*A custodian must maintain access to the fundamental datasets in its care at the highest level for all users.*

Due to the potential impacts of outsourcing upon information management, the national coordinating committee must be advised when a custodian agency outsources its information management. When doing so, consideration needs to be given to the ability of the outsourcing arrangement to maintain access and sharing of the spatial information according to these guidelines. If an agency outsources the collection of information for which they are a custodian, they must ensure that the information continues to be collected and made accessible according to PCGIAP or agreed specifications.

## **3. RESPONSIBILITIES OF CUSTODIANS**

To achieve the purposes behind custodianship, agencies designated as custodians will accept the following responsibilities:

### **Data collection, maintenance and revision.**

- consult with the national sponsor and the community to determine data needs and priorities prior to developing or defining collection or maintenance programs and standards for spatial information in their custody;
- avoid duplication of capture, by ensuring, in conjunction with the national sponsor, that data to be captured is not already held in the format required.

### **Standards development**

- develop with the national sponsors and user community appropriate standards for the management and use of the regional fundamental datasets in their care.
- ensure that the fundamental datasets under their custodianship conform to appropriate international or agreed standards;
- propose standards to PCGIAP for the management of the spatial information for which they have custody;

### **Quality**

- provide full and frank quality statements regarding source, reliability, accuracy, completeness and currency.
- maintain the quality of the fundamental datasets assigned to them;

### **Access**

- ensure the spatial information under their custodianship is both accessible and readily available;
- ensure appropriate storage, maintenance, security and archival procedures for their spatial information;
- safeguarding the Government's interest in the use of its information through licensing agreements or letters of understanding to protect privacy and confidentiality and interpretation of the information;

- act as the authoritative source for the information in their care;
- encourage the proper use of spatial information to discourage duplication through ignorance;
- nominating a single point of contact for enquiries about the fundamental datasets under their care;

### **Metadata**

- provide metadata statements describing the data in their care to the jurisdiction and national nodes of the Asia-Pacific Spatial Data Directory. The metadata must comply with PCGIAP guidelines.

### **Privacy**

- The custodian must provide a level of appropriate security to protect the privacy of any data related to an individual person. For example, the name of a person who owns a parcel of land.

### **Negotiations**

- Custodians shall not negotiate unilaterally with any party either on an exclusive basis or for the exclusive use of fundamental datasets. Agreements should wherever possible be negotiated according to these Guidelines; that is, to benefit the community as a whole, not any individual custodian.

## **4. CRITERIA FOR SELECTING A CUSTODIAN**

Custodianship is assigned through invitation to an agency, rather than a division or business unit of an agency. PCGIAP through national coordinating committees will invite agencies to become custodians. The criteria (not in priority order) used to assign custodianship are situations where an agency:

- has sole statutory responsibility for the capture and maintenance of the spatial information;
- has the greatest operational need for the spatial information;
- is the first to record changes to the spatial information;
- is the most competent to capture and/or maintain the spatial information;
- is in the best economic position to justify collection of the spatial information at source; and
- requires the highest integrity of the spatial information.

In accepting an invitation to become a custodian, an agency needs to take into account the roles and responsibilities of being a custodian, and, whether it is appropriate for them to take on these responsibilities. If they cannot meet these requirements, or find that by meeting these requirements it constrains the operations of their activities, the agency should consider relinquishing their custodianship to another agency. In the interests of maintaining completeness in the information holdings, the agency relinquishing its custodianship has the responsibility of finding another agency to take on the role of custodian. This responsibility is particularly important in the situation where the information is defined as a fundamental dataset.

## 5. RIGHTS OF CUSTODIANS

The custodian has the right to establish marketing conditions within Government policy for the fundamental datasets in its care. This includes the establishment of formal agreements between custodians and value adding agencies, royalty arrangements, revenue sharing, feedback on information quality, copyright and intellectual property.

## 6. RESPONSIBILITIES OF USERS

User agencies also have responsibilities to custodian agencies and other users. For example:

- users receiving spatial information from a custodian should advise the custodian of any errors or omissions detected in the information received;
- users must advise the custodian of their future requirements for their information in order to assist the custodian in preparing collection and/or conversion plans;
- users shall not release the supplied spatial information to a third party unless covered by a licensing agreement specifying release criteria;
- where a user collects specific information on behalf of a custodian it shall do this according to the standard set by the custodian. User agencies are also obliged to pass this information back to the custodian for maintenance or storage free of charge;
- users producing information products from information which is the responsibility of another custodian agency should consider the passing back of the information product to the custodian as part of their agreement for the use of the information;
- users shall not sell information if they collect it on behalf of a custodian without first obtaining the permission of that custodian; and,
- users must always cite the source of the information when using the information in any way.

Once the user has completed its obligations to the custodian agency it has **the right to use it internally** as it wishes. The user should also pass on to the custodian information that has been improved or upgraded as part of this process. The custodian should in turn ensure that the improved or upgraded information is made available to other users.

## 7. MANAGEMENT OF INFORMATION PRODUCTS

### 7.1 Information Products

Information products are also known as value added datasets, integrated datasets, value added information or derivative names of these. They consist of information that is value added in some form to make information products. This can be by combining information to form new information products or by distributing information in such a way that value is added. The prevailing philosophy behind the value adding process should be one of maximising the use and market opportunities for spatial information in order to make this information more accessible and relevant to client needs.

## **7.2 Responsibilities between custodian agencies and value adding agencies**

It is the responsibility of the custodian to set the marketing conditions for their information, within the prevailing policy framework agreed by PCGIAP and its participants. Agencies wishing to use spatial information from the custodian to develop a value-added service or information product must draw up a formal agreement with the custodian before entering into any commercial contract for that value added service or information product. This agreement should describe the:

- terms and conditions under which the use of the spatial information is permitted, including those related to privacy, confidentiality, the protection of the Government's interest and national security;
- requirement to protect copyright;
- term or period of the agreement;
- definition and scope of liability for the use and accuracy of the information, and any subsequent modification of the information;
- responsibilities of all parties for the ongoing maintenance of the information;
- format, presentation, performance criteria and quality of information supplied; and,
- monetary or other compensatory considerations where applicable.

## **7.3 Multiple contributors**

Agencies can only claim royalties where they have collected the requested information or contributed reasonable resources to its collection and maintenance. If an agency has not been involved in these activities it is not in a position to receive income from the value added product.

## **8. CONCLUSION**

These Guidelines have been written with the intention of assisting custodians implement and manage the principles of custodianship in order to better integrated spatial information for the benefit of the community. Further information on these policies and their implementation can be obtained by telephoning the PCGIAP Secretariat at 02-6201 4267

## **GLOSSARY**

### **Agency**

Any department, instrumentality, statutory authority, commission or such organisations established by or under legislation and/or subject to government financial and accountability legislation.

### **Collection**

The initial acquisition of information, and the subsequent addition of this to the same specification, including quality assurance processes.

### **Commercial purposes**

The use of information for a purpose relating to trade and the buying, selling or exchange of information commodities or services for profit.

**Copyright**

The exclusive right to reproduce, publish, broadcast or adapt a work.

**Corporate body**

An agency which has its own Act which specifies in the enabling legislation that the agency is a corporate body.

**Cost of supply or transfer**

The cost incurred in supplying or transferring the information, which would not have been incurred had the transaction not taken place.

**Custodian agency**

An agency accepting accountability and responsibility for certain information sets.

**Custodianship**

The act of ensuring appropriate care and maintenance of the information.

**Distributor**

A third party who distributes information on behalf of the custodian, or who adds value to information and on sells it to others.

**Fundamental dataset**

A dataset that cannot be derived from another dataset and is used in a number of agencies; or,  
A dataset that cannot be derived from another dataset and other agencies derive significant benefit from using it.

**Information**

Any data or information processed, organised or classified into categories to serve a useful purpose. It can be presented in voice, digital, printed, pictorial, image, graphical or numerical form.

**Information products**

Information which has been combined, enhanced or provided in a form in which value is added. They are also known as value added datasets, integrated datasets, value added information or derivative names of these.

**Spatial information**

A generic term used to incorporate both land and geographic information as well as datasets

**Maintenance**

A process that ensures that the information conforms to a specification.

**Metadata**

Information about data.

**Users**

End consumers of the information resource; those who use information as input to solve problems and/or make decisions.