Survey on spatial data sharing in Rwanda: Result summary in 2010

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At a glance ...

The three datasets most sought after are fundamental datasets. These are Administrative boundaries data accounting for 25% of all spatial datasets used, Topographic maps (15%) and Orthophotos (14%). Free access to spatial data in Rwanda is the most supported option among organisations using geospatial technology (60%). The major barrier to spatial data sharing identified is the lack of a national spatial data policy especially, the need for a spatial data sharing policy in organizations (64%).

To facilitate the process of spatial data sharing in Rwanda, a survey was conducted in June 2010 to assess the preparedness of organization in Rwanda to share as well as identify the needs and gaps in existing data sharing capability.

Survey sample statistics

Thirty-five organizations using spatial technologies and data were surveyed in different provinces (see Table 1).

Table 1: Organisations surveyed

Status of organizations	Number of organizations	Percentage
Public	22	63%
Semi-public	1	3%
Private consultants	7	20%
Non-Governmental	1	3%
Academic & research	4	11%
Total	**35**	**100%**

Survey Analysis

Spatial data producers/suppliers

Over 40% of the organizations fall into the category of both spatial data providers and users. The need to share spatial datasets between organisations

is evident as all respondents reported using spatial datasets produced by others (100% answered yes to the question, *Do you use spatial data from other organisations?*). The results reveal that the most sought after datasets are fundamental datasets. The three main datasets are Administrative boundaries data accounting for 25%, Topographic maps (15%) and Orthophotos (14%). Invariably, most organizations in Rwanda rely on others to derive the full suite of the spatial datasets to carry out their activities (see Figure 1). Figure 1 shows the organisations from which spatial data are mostly sourced.

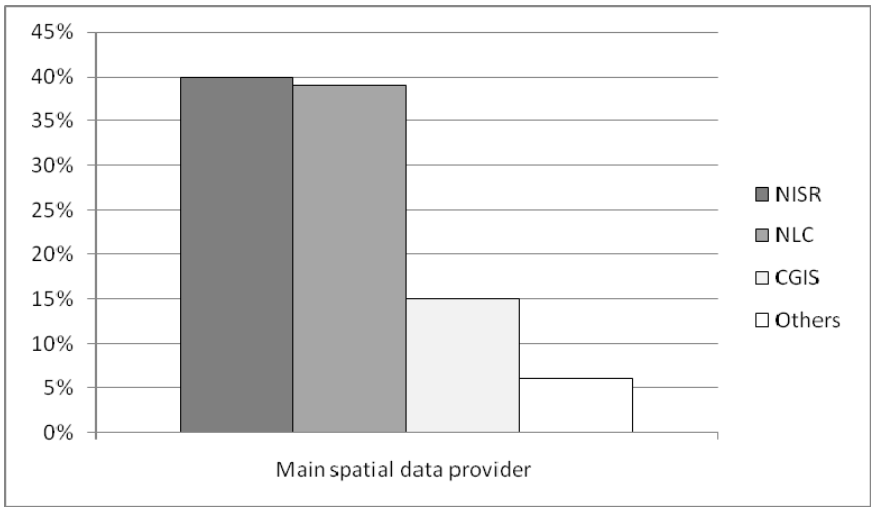

Figure 1: The main spatial data providers in Rwanda

Top of this list of data producers and suppliers are the National Institute of Statistics, Rwanda (NISR) supplying 40% of the spatial datasets, The National Land Centre (NLC) 39%, followed by CGIS-NUR supplying 15%, with other organizations supplying 6% of all datasets used by the surveyed organizations. The NISR produces most of the national socio-economic, demographic survey datasets as well as the spatial sampling frame used in these surveys, the NLC produces mostly the fundamental datasets such as orthophotos, topographic data, while CGIS-NUR has supported the production of most spatial datasets existing in Rwanda. This implies that if any spatial data sharing mechanism is to succeed, it must take into cognizance this arrangement.

Conditions of access and restrictions on spatial data usage

Access to spatial datasets by users can be broadly classified into two, namely: restricted and unrestricted access. Over 60% of data are unrestricted, that is, are to be accessed without any form of restrictions, whereas 40% have restricted access. This second category is either restricted only to some class of users or is meant only for the internal use of the organization producing them. Looking more closely at the types of restriction placed on the usage of these second category datasets, results show that 6% of the organizations producing them allows no redistribution, 3% allows no modification of data, whereas the majority (31%) of these organizations insist that the data must

only be used for the purpose for which it was initially provided. The latter implies that though an organization already received the said dataset initially for a specific purpose, it is not permitted to reuse the data for another purpose other than that for which it was given.

Condition of access to spatial data is equally important as this brings in the issue of payment for data release (see Figure 2).

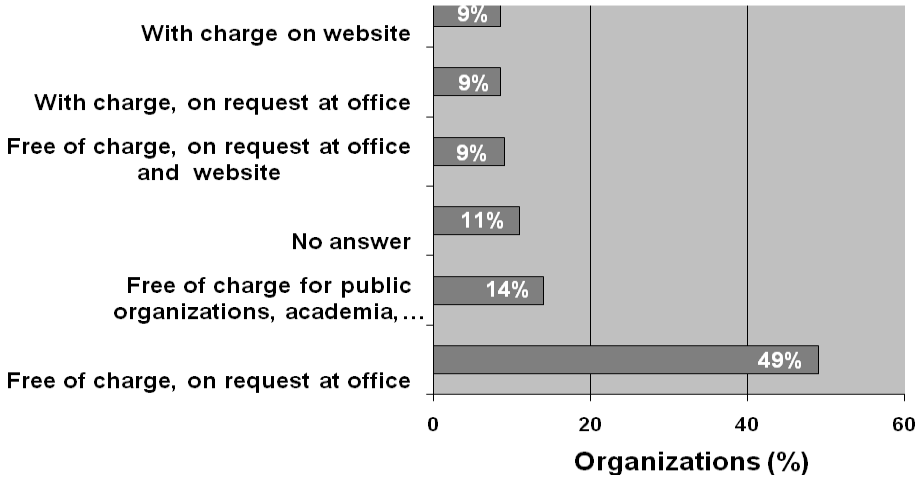

Figure 2: Spatial data access conditions in Rwanda

Figure 2 gives a breakdown of the access conditions to spatial datasets in general. 49% of datasets are given free of charge when official request are made at the office of the organization producing the data to all categories of users. It is interesting to note that differentiation of spatial data users are made by some organizations in granting access. Examples are public, private, academic and research users. 14% of organizations will make data available free only to public, academic and research users, whereas private users such as consulting firms and telecommunication firms will have to pay for datasets. The spatial data sharing policy to be developed for Rwanda must seek to strike a healthy balance between the uses of free access versus paid access models.

In the light of the preceding, users' willingness to pay for spatial data was further examined. Results reveal that 51% of the organisations surveyed are not ready to pay for datasets; whereas 34% are willing to pay to have access. On closer examination of the responses received, a definite pattern emerges. The organisations that categorically said no are public institutions who reason that other public institutions also need data from them. Those organizations that are willing to pay for spatial datasets are mostly private, consulting organizations reasoning that if the data quality is assured and meets their requirements, they would rather pay for the data than go to the field to collect it themselves.

Spatial data dissemination

Different options for spatial data dissemination were explored relating to the use of a centralised or decentralised model. Majority (94%) of the respondents

see the need for a national clearinghouse and 84% that support the idea are willing to make their datasets available to be disseminated through this system (see table 2).

Table 2: Spatial data dissemination

Need for a national clearing house	Making data available for a national clearinghouse				Total
	Available	Available or not available	Not available	No answer	
Needed	84%	0	5%	5%	94
Neutral	0	3%	0	0	3%
Not needed	0	0	3%	0	3%
Total	**84%**	**3%**	**8%**	**5%**	**100%**

Hindrances to spatial data sharing

Majority of respondents (64%) see the absence of a national spatial data and sharing policy as the main impediment to spatial data sharing in Rwanda (see Figure 3).

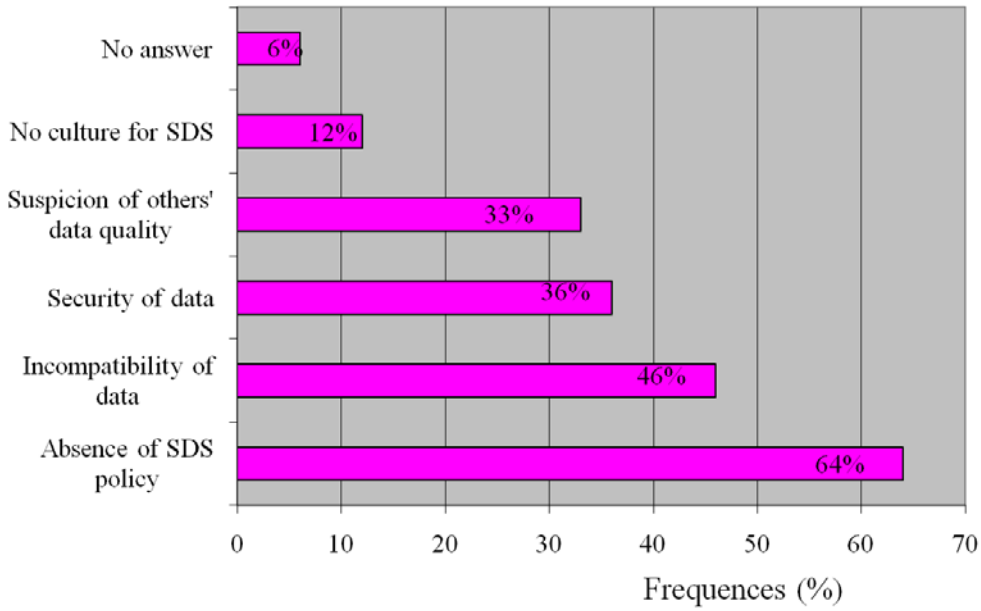

Figure 3: Barriers to spatial data sharing in Rwanda

Acknowledgement

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