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# Building the CIARD framework for Data and Information Sharing - Summary Paper from Mauritius

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Krishan Bheenick  
Food and Agricultural Research Council

Proposed area: Coordination, Strategy development, Capacity Building, Content Development

## Introduction:

The Republic of Mauritius stands out as a good example of telephony and internet connectivity penetration rates in Sub-Saharan Africa (Box 1). The small size of the island and investment in infrastructure by the major telecoms player in the country has enabled the establishment of a network of optical fibre connectivity across the island (Fibre to the Cabinet), with the 'last mile' of connectivity through copper wires to the home. Thus, broadband connectivity is accessible to a large proportion of the country: the population in urban areas and those living close to the connection points in the rural areas (2km radius) can now even benefit from television programmes through connectivity to the web. Despite this development in the field of connectivity, together with the government vision of turning Mauritius into a cyber-island, these investments are yet to achieve an impact on the rural population.

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| Internet Connectivity in Mauritius Population size: 1.2 million                       |
| Fixed Line Population Penetration Rate (%) 30.21                                      |
| Fixed Line Household Penetration Rate (%) 95.75                                       |
| Mobile Penetration Rate (%) 92.79   |
| Internet Population Penetration Rate (%) 22.14  |
| Broadband Internet Population Penetration Rate (%) 20.14                              |
| (source: <i>Information Communication Technology Authority (ICTA) website, 2011</i> ) |

**Box 1.** Telephony and Internet connectivity penetration rates in Mauritius

## Findings:

Along with the stated Government vision, national policy documents have also been developed both in the ICT and the Agricultural sectors (National ICT Strategic Plans 2007-2011; 2011-2014; Blueprint for a sustainable diversified Agri-Food Strategy for Mauritius, 2008-2015). The National ICT Strategic Plan specifically describes the concept of an e-Agriculture project (p91-93) which has reached the stage of finalizing the functional specifications, following consultations among the Ministry departments and parastatal organisations in the agricultural sector. Since 2003, the strategic plans on Agriculture have specifically stressed on the importance of establishing agricultural information systems for the benefit of decision-making at the level of farmers, but also for policy-makers. Unfortunately, many programmes

of this nature end up taking longer than anticipated for the planning stages and implementation is further delayed.

When projects are designed at such a large scale, there is a natural tendency to focus in the administrative aspects of information management, hence a bias towards automatising of administrative procedures and hence the development of *Management Information Systems* from the institutional perspective rather than *Information Management Systems* with the purpose of serving information to all stakeholders. Furthermore, ICT initiatives at the level of the participating institutions are generally held up, awaiting the publication of the initial reports of these national projects, while complementary actions could have been carried out. While this tendency may be characteristic of any institution in the developing world embracing Information and Communication Technologies for the first time, there is no reason why the development of Management Information Systems cannot be developed in tandem with Information Management Systems, such that the development of information systems gradually shifts from an administrative function towards making use of the technology to improve information and service delivery to their stakeholders.

#### *Case studies:*

Currently, several projects are being implemented at institutions to promote the potential applications that improved internet connectivity offers to the agricultural sector. These range from national sector-wide projects (such as the e-Agriculture Project mentioned above) to internal institutional initiatives to adopt ICTs to facilitate institutional information management processes. One such example is the availability of national statistics, including agricultural statistics, in electronic format from the Central Bureau of Statistics (<http://statsmauritius.gov.mu>). The latter has traditionally provided its information in the form of printed publications but now also as electronic publications (pdf and MS Word). The tabular datasets are now also downloadable as Excel spreadsheets through their website.

The Agricultural Research and Extension Unit (AREU) of the Food and Agricultural Research Council (FARC) is the Agricultural Production and Marketing Information System (APMIS) which provides data such as the area under cultivation and prices in the markets for major horticultural crops in the country (<http://apmis.areu.mu>). The data are available in tabular and chart form, the tabular data being downloadable. The datasets are the result of surveys carried out on a fortnightly basis and compiled and reported on every month. The Agricultural Research and Extension Unit publishes information materials for dissemination, many of them now also being made available online. The Food and Agricultural Research Council (FARC) has compiled a database of agricultural research projects in the country and has produced compilations of the project titles in the form of booklets. However the database itself is not yet accessible online (<http://farc.gov.mu>). Among the research institutions, the Mauritius Sugar Industry Research Institute (MSIRI) provides access to its publications through its website as downloadable files. The Library database with over 7000 records is accessible online (<http://www.msiri.mu>).

In July 2010, as a result of a workshop on Web 2.0 technologies, facilitated by the regional ICART project of the SADC Secretariat, a grouping of ARD stakeholder representatives in Mauritius, dealing with the management of agricultural information in its various forms, established themselves as a network, as had also been established in other SADC countries. The creation of the Mauritius Agricultural Information Specialists Network (MAISNET) both as a physical network and as a virtual network uses a Dgroups forum for interaction amongst its members as they collaborate on the development of a national strategy for Agricultural Information, Communication and Knowledge Management. Members of the MAISNET also established a common weblog as a means of sharing news from the ARD institutions in Mauritius: rather than having blogs at each institution, the members of the network have been appointed as collaborators on the blog and contribute news items from their institutions. The Food and Agricultural Research Council has taken the lead to facilitate meetings of the MAISNET working group which is elaborating the strategy document.

### **Discussion & Conclusions:**

While the conditions are established for effective use of ICT for information sharing and collaboration in Mauritius, coordination of the initiatives of the various institutions is still weak. Meanwhile, national projects with sufficient financial resources are struggling to move beyond the conceptualization and planning of implementation, without yet moving to the training and implementation phase. This seems to have resulted in the practical applications of the web and its contents have not yet been fully internalised by the agricultural stakeholders in the country, hence the relatively poor use of the technology across the sector.

Although large-scale national projects are needed, these could also be complemented by smaller modular projects that are implemented by the institutions. This requires good facilitation of the process of coordinating these interventions, rather than just good coordination alone. The adoption of certain guidelines for implementation, such as the use of standards for information storage and exchange, would mean that institutions can already start developing their systems, albeit at a slower pace, that would be compatible with the large-scale projects that are also being developed.

The establishment of the MAISNET network in Mauritius is seen as an opportunity to facilitate communication among the information specialists across the country such that the common vision for information management is implemented. The guidelines and principles of the CIARD are very relevant to the network at this stage, and steps are being taken to extract whatever experiences and best practices are available from the CIARD community. An exercise that is being proposed is the unpacking of the CIARD Checklist for local application. Discussions held through face-to-face meetings will be shared through the electronic forum and such debates will help build consensus on the approaches and the contents of the systems being developed. Sharing of similar experiences among other members of the CIARD community would also be most useful at this stage.

### **References:**

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Contact:

Krishan Bheenick

Programme Manager, Food and Agricultural Research Council

Email: [kjbheenick@yahoo.co.uk](mailto:kjbheenick@yahoo.co.uk)