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ABSTRACT

Many countries in the Economic Community of West African States (ECOWAS) are using Information Communications Technology (ICT) to enhance agriculture development and production. To do this efficiently the John Ogonowski and Doug Bereuter Farmer-to-Farmer Program managed for West Africa by Winrock International has been tasked with providing volunteer assignments to ministries of agriculture. The University of Missouri - Saint Louis (UMSL) has entered a partnership with Winrock International to offer upper-level undergraduate and graduate students the opportunity to provide technical assistance to international government entities. In this panel; we discuss findings and opportunities for improvement in Guinea and Senegal as they relate to ICT discovered through the onsite support provided.

Keywords

Information communications technology, agriculture, and global information systems

INTRODUCTION

The potential impact of the Farmer to Farmer (F2F) assignments is throughout an entire society. Research has shown that nearly in all categories of studies, mean estimated rate of return is high and often exceeding forty percent (Evenson, 2001). These studies directly correlated with agricultural research and extension programs in regional groupings. The organizational setup of the agriculture ministry is similar to those described in this study. However, the gap is the technology that is being used across different business sectors and age groups. Furthermore, there are even identified gaps in technology and efficiency for cocoa production in central and west Africa (Nkamleu, Nyemeck, & Gockowski,2010). Productivity-driven agriculture is essential to making Guinea and Senegal economically sustainable. Farming is relied upon by 48% of the African population. The agriculture industry employees approximately 530 million people; creating the most jobs in Africa.

For participating faculty and students F2F serves as a method to gain international experience (Bates, 2006). Additionally, this program allows ministries to receive the technical support and training in critical areas they need to be effective in their mission. These needs can range from website development for the ministry or database development for federal universities.

The panel will look into the opportunities and challenges in Senegal and Guinea in the agriculture sector. We will discuss the following areas of concern:

1. How to address gaps in workforce computer skills.
2. Cyber security challenges within the Ministry of Agriculture.
3. How to better share technology knowledge among government entities.
4. Methods to leverage open source software to aid in the development of IT systems.
5. Applying standards from the National Institute of Standards and Technology (NIST) for IT systems.
6. Developing and maintaining international partnerships beyond agriculture extension.

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