

Mobile Telephony in Rural Areas

Perspective from Latin America and the Caribbean



SUMMARY



Mobile telephony has had a positive impact on many countries in Latin America and the Caribbean by contributing to rural development. However, there are certain limitations to address in order for this technology to be accessible to more individuals in rural communities, in particular those living in the most marginalized conditions and who would benefit most from the opportunities that this technology can provide.

“ During the last years, we have experienced a great expansion of mobile telephony in Latin America and the Caribbean, reaching remote and marginalized areas. Mobile telephony has become a valuable tool to strengthen social networks and to access new business and employment opportunities.



Luis Alberto Moreno, President of the Inter-American Development Bank (IDB)

IMPACT OF MOBILE TELEPHONY IN RURAL AREAS



In agricultural development the positive impact of mobile telephony becomes evident through the generation of new or increased revenues for producers and farmers through improved communication with suppliers, buyers, producers, and other stakeholders. This is supported by various initiatives by civil society organizations and private companies that provide access to market information, and offer guidance and technical assistance, meteorological notifications, and other information.



Credit: Del Pozo

For example, mobile telephony:

- Delivers timely information that helps understand and analyze market prices, facilitates trade and informs business decisions;
- Reduces transaction time, travel, and costs by bridging distances and allowing for a more effective use of time;
- Strengthens communications which promote social networks and communities' progress in health, safety, employment, recreation, and other areas;
- Increases levels of community participation, facilitating an informed decision making process, particularly greater participation from rural women.

INNOVATIVE USES OF MOBILE TELEPHONY IN RURAL AREAS



In Latin America and the Caribbean different types of innovation are found:

- **Personal use:** Due to the expansion of mobile infrastructure and relatively affordable pricing, mobile phone use has increasingly become part of the everyday life of many rural families.
- **Mass Communication:** There are various organizations in rural areas using short messaging services (SMS) to disseminate information to the rural population more extensively and in a more efficient manner (e.g. news and market prices of agriculture; early warning of conditions and weather threats; and information on disasters and how to mitigate them).
- **Interactive communication:** Mobile phones place the ability to access and interact with information services and databases directly in the hands of the rural population. For example, farmers can easily make inquiries and receive updated price data on a product simply by sending a text message to a specific number.
- **Advanced applications:** The latest mobile technologies (Mobile GPS, MMS, 3G and others) can facilitate the development of innovative services for applications in precision agriculture, geo-traceability, management and control plant and animal health, and other areas.



Credit: F.Martin

“ Mobile phones have given more power to the people and have encouraged entrepreneurship in developing countries. Mobile telephony allows users to access information relevant to education, health, employment, mobile banking, and to also maintain and enhance family relationships and social networks.

United Nations Conference on Trade and Development

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CURRENT CHALLENGES



Despite the developments and innovations, mobile telephony for rural development continues to face certain challenges:



Credit: Perú-Telefónica

- **Sound evidence:** References to the benefits and impacts of mobile telephony in rural areas are generally anecdotal. Studies and analysis are mostly empirical and these do not provide substantial data to facilitate their analysis and evaluation.
- **Development of policies to expand rural coverage:** In many countries of the region, the driver of telephone coverage has been prioritizing access to urban areas that are densely populated and have high economic activity. Thus, the more marginalized rural areas tend to have lower telephone density per capita. While some countries' investment in rural mobile telephony has gradually begun to improve access and coverage, in many other areas it continues to be limited. So promotion of public policies that supporting sustained investment, consistent access and wide coverage is necessary.
- **Sustainability of mobile information services:** Mobile service initiatives that target agricultural information to small holder farmers should consider factors necessary for financial sustainability from the initiation of any investment.
- **Capacity building:** Development of mobile information services for agriculture must respond and adapt to the needs of rural people and their communities, while also taking into account the individuals' skills to use and take advantage of the services and applications in the field.
- **Payment mechanisms:** It is necessary to establish a services payment mechanism that is both within the financial reach of farmers and also is easy for service providers to develop and adapt.

- **Limitations of the technology:** In some rural areas, access to conventional electricity sources is very limited, which can limit the effective use of mobile telephony. This is further compounded by incompatibility between the charging devices of different mobile phones.

However, alternative energy sources to potentially resolve this limitation exist, such as solar/photovoltaic energy and rechargeable batteries using dynamos.

Limitations to the display and collection of data in the field may also be experienced due to small screens and relatively complex interfaces of some mobile phones.



Credit: F.Martin

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Why mobile phones? Mobile telephony represents the most rapidly adopted technology in history. It is estimated that by the end of the year, mobile subscriptions will exceed 4.6 billion ... and 1.9 billion people will have a computer at home.

Jorge Luis Alonso González,

XV Meeting of the American Association of Librarians and Agricultural Information Specialists – RIBDA- Lima, Peru, 2009.

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GENERAL CONCLUSIONS



- Encourage concrete public policies that promote sustainable investment in, as well as broad access and coverage of mobile telephony in remote rural areas.
- Exchange lessons learned and leading practices between countries of Latin America and the Caribbean, as well as with countries from other regions (e.g. Asia or Africa).
- Develop means to survey rural populations for different types of access and use of information and communication technologies (ICTs). More accurate and complete data on penetration and use is needed either through specific studies or by extending national household censuses.

For more information resources please see:
www.e-agriculture.org