

# Linking farmers' access to rural radio, gender and livelihoods: case study of rice processors in Benin

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## Abstract

As most of sub-Saharan Africa countries, Benin has noted a growth of rural radio stations over the past few decades as part of a broader process of democratisation. This paper examines the level of farmers' access to rural radio in relation to gender and livelihood assets. The study was conducted in the north and south of Benin with 18 rural radio stations and 240 rice processors selected at random in 12 villages. We used the Sustainable Livelihoods (SL) framework with 120 rice processors randomly selected among the 240 surveyed rice processors. About 67% of the women rice processors had their own radio set compared to 87% of the men. Although the study did not allow to draw conclusions on causal relationships, rice processors who often listened to agricultural broadcasts had better social, financial and human capital stocks compared to those who didn't listen to agricultural broadcasts. Despite the applaudable efforts of 72% of the radio stations to link up with extension services, half of the rice processors rarely or never listened to agricultural broadcasts, because the timing of the broadcasts was inappropriate. Interactive radio sessions with farmers that involve government officials will need to address this if they are to become more effective.

**Keywords:** Rural radio, gender, livelihoods, rice processing, Benin

## Introduction

The traditional roles of transferring and disseminating agricultural technologies are proving insufficient in today's global context (Cho and Boland, 2002; Rivera & Zijp, 2002). Efforts to improve agricultural extension have focused on innovations in communication to improve the points of interaction between research, extension and farmers to encourage a greater sharing of information. Benin is a country characterized by rurality (58% of population) where 66.4% of the population is illiterate (ONU, 2011). The press thus struggles with languages difficulties and cannot reach the majority of people. Thus, rural radio appeared more appropriate as they broadcast in the local language. This is an opportunity of research-extension-farmer linkages. Agricultural extension could benefit from both the reach and the relevance that local broadcasting can achieve by using participatory communication approaches (Chapman et al., 2003). According to Niang (2001), there were approximately 12 newspapers, 52 televisions, and 198 radios for every 1000 Africans by the end of the 1990s. Radio plays a significant role in the transfer of information in African countries because the spoken word of radio broadcasts helps where literacy rates are low (Hambly Odame and Atibila, 2003; CTA, 2006). The growth of rural radio stations over the past few decades reflects the increased investment in these information technologies (Chapman et al., 2003). In Sub-Saharan Africa, radio is often the only mass medium available in rural areas and most households have access to a receiver (Girard, 2003). In technical terms, rural radio is defined in terms of broadcasting to a rural audience within a relatively local range (25-50 km radius) or functioning at frequencies of less than 1000 MHz. In some cases, rural radio stations using larger transmitters (e.g. 5000 Watts) can technically reach millions of listeners (Hambly Odame and Atibila, 2003). There are three different types of rural radio services: public, private/commercial and community (Farm Radio International, 2008). Community and associative radio are often the only types of stations that broadcast in minor languages and in remote areas. The benefits these rural radios bring are difficult to measure and include information and agricultural knowledge sharing (Farm Radio International, 2008). Most rural radio stations have been established by international agencies, NGOs or governments expressly for development purposes (often not agriculture-oriented) and it is therefore inherently a supplement to other rural services. Many rural radio stations have weak capacities for agricultural broadcasting and lack the skills to search, manage and use the burgeoning information supply for practical poverty-reducing outcomes (Chapman *et al.*, 2003). This

study investigates the interactions between access to rural radio, gender and livelihood assets.

## **Method**

The study was conducted in the north and south of Benin. We interviewed rural radio station managers, hosts, marketing managers and/or founders of a total of 18 rural radio stations (10 in the south and 8 in the north of Benin), based on their willingness to meet us during the field survey period in order to get information on their program content, broadcast schedules and their interactions with researchers and extension agents. We then interacted with rice processors in 12 villages randomly selected around the surveyed rural radio stations. We selected six villages in the north and six in the south of Benin. In each village, we started by collecting qualitative data through focus group discussions to get an idea of the rural radio stations listened to, the role of these radios in agricultural extension, and the overall description of the five sustainable livelihood capitals (natural, human, social, physical and financial). Based on in-depth insights from this qualitative research phase, we formulated a structured questionnaire. We individually interviewed 240 rice processors who were randomly selected (20 per village). After the structured interview, we used the Sustainable Livelihoods (SL) framework on a sub-sample of 120 randomly selected rice processors (10 per village) to get each rice processor's capital stocks. The respondents rated the capital stocks identified for the surveyed year on a 0-5 scale. A spider diagram was then drawn to visualize the five capitals with 0 value (no stock) at the centre of the diagram and the value 5 at the other extreme of the axes, corresponding to a full satisfaction. Table and graphs were made with the median capitals rating values to make differences visible between men and women and those who listened to and did not listen to agricultural broadcasts. The Mann Whitney test was used to appreciate the difference between groups.

## **Results and Discussion**

### **1- Rural media and agriculture**

About 72% of the surveyed rural radios have institutional contracts with the Ministry of Agriculture, especially extension agents and sometimes scientists to make radio broadcasts on agriculture. About 40% of their monthly programs relate to agriculture and

the environment. Apart from their collaboration with the Ministry of Agriculture, rural radio stations have broadcasts on development issues with local NGOs and development agencies and donors such as United Nations Educational Scientific and Cultural Organization (UNESCO); The European Commission (EC), “Centre Technique de Coopération Agricole et Rurale” (CTA); The Food and Agriculture Organization of the United Nations (FAO); the United Nations Children’s Fund (UNICEF); the International Development Research Centre (IDRC) and the Canadian International Development Agency (CIDA). Table 1 describes the rural radio stations visited.

**Table 1: Characteristics of radio stations visited during the survey**

Denomination	Localisation	Type of rural radio	Estimated people reached
Plateau FM	Pobè, South-Benin	Private/commercial	629 881
FM Alakétou	Kétou, South-Benin	Community	1.345.803
Radio Adja-Ouèrè	Adja-Ouèrè, South-Benin	Private/commercial	-
La voix de la Vallée	Adjohoun, South-Benin	Community	284 213
Ahémé FM	Possotomè, South-Benin	Community	554 478
Mono FM	Lokossa, South-Benin	Private/commercial	483 946
La voix de Lokossa	Lokossa, South-Benin	Private/commercial	-
Couffo FM	Azovè, South-Benin	Private/commercial	-
Radio rurale de Lalo	Lalo, South-Benin	Public	555 662
Radio Tonassé	Covè, South-Benin	Private	-
Radio rurale Ouaké	Ouaké, North-Benin	Public	33 695
Radio rurale Tanguiéta	Tanguiéta, North-Benin	Public	163 108
Nanto FM	Natitingou, North-Benin	Community	68 869
Kuffè FM	Bassila, North-Benin	Community	126 379
Nonsina FM	Bembereke, North-Benin	Community	474 174
Kandi FM	Kandi, North-Benin	Community	140 640
Bani Ganse	Banikoara, North-Benin	Public	179 769
Fara'a	Gya, North-Benin/Niger	Private/commercial	-

Radio broadcasts on agriculture are either deferred or live. Live broadcasts are often interactive giving the opportunity to farmers to call and intervene on the broadcast by phone. According to people in charge of the local agricultural extension services, they collaborate with rural radio stations in order to reach millions of illiterate farmers and to provide them with information relating to all aspects of agricultural production, processing and marketing in their local language. Extension services have been criticised both for failing to reach the majority of farmers in many developing countries and to communicate successfully with those that fall within range (Chapman et al., 2003). Partnerships between

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farmers, extension and research can help to develop new knowledge, skills and attitudes towards collaborative learning. However, in most cases this will require considerable efforts, as communicating agricultural topics involves multiple skills and a positive mindset towards working with farmers. The main constraints expressed by the surveyed rural radio stations were the need for capacity building on agricultural subjects and the insufficiency of agricultural research material such as broadcast scripts on agricultural subjects to support the range of topics requested by farmers. Van Mele *et al.* (2010) presents some ways in which farmer-to-farmer video can strengthen the knowledge, confidence and efficiency of radio broadcasters to make broadcasts on agriculture.

## 2- Rice processors' access to rural radio

- **Socio-demographic information**

Rice processors are mostly women (67% in the whole sample). The majority of processors are married (100% of men and 92% of women). Most of them are illiterate (87% of women and 53% of men). Households have on average about eight individuals. The dominant religion in the north is Muslim (100%) and Christian in the south (61.7%).

- **Ownership of radio in relation to gender**

Among the local rice processors, more men (87.3%) have their own radio set compared to women (66.5%).

**Table 2: Reasons (%) why rice processors do not have their own radio set**

Reason	Women (n=54)	Men (n=10)
Lack of financial resource to buy the radio	38.9	60.0
The household's literate will appropriate the radio	38.9	40.0
I don't know how to use a radio	22.2	0.0

The main reason that explains why men don't have their own radio set is the lack of financial resources. Two main reasons explain why women don't have their own radio: (i) the lack of financial resources and (ii) the reason why the literate (often the husband or the children) of the household will appropriate the radio if they would buy one. Among those who did not have their own radio set, about 90% of women and 60% of men listened to the radios of their parents and 10% of women and 40% of men listen to the radios of their neighbours.

**Figure 1: Level of rice processors access to radio according to gender**

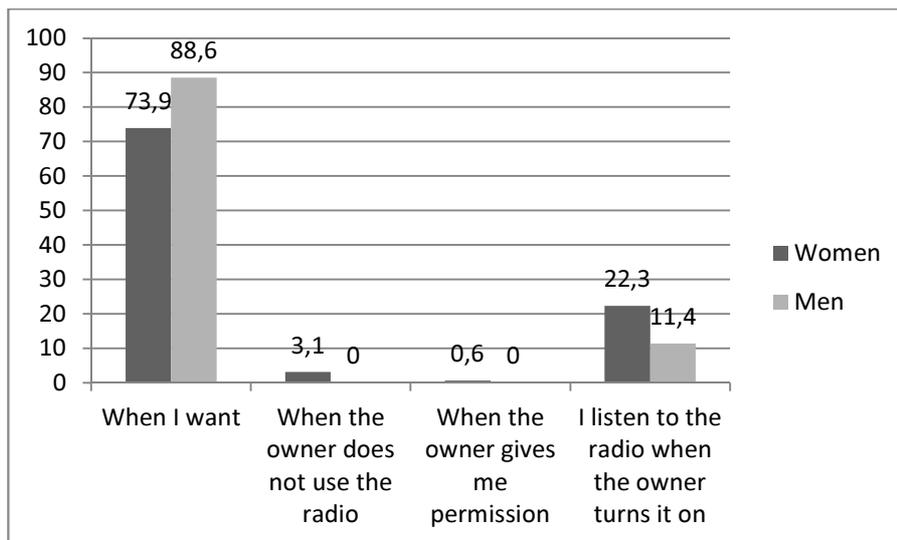
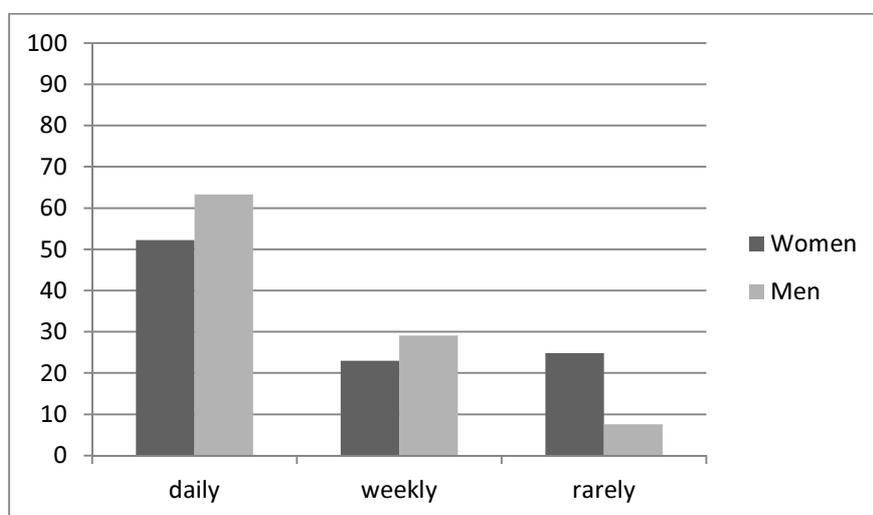


Figure 1 shows that men and women have good access to radio. Men have more access to the radio compared to the women, because more men have their own radio compared to women.

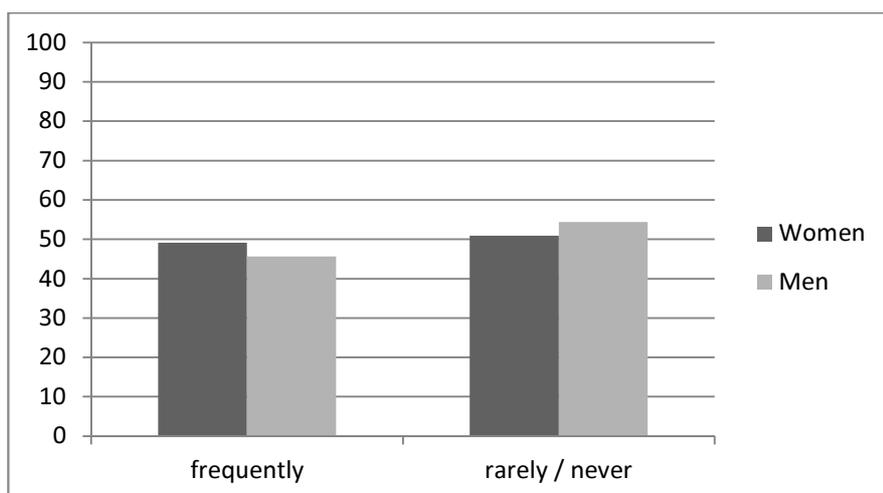
- ***Listen to rural radio broadcasts on agriculture***

More men than women listen to rural radio broadcasts daily (Figure 2). This can be explained by the fact that men are more owners of radio than women. Moreover, women are more occupied in rural area than men. In addition to farming activities, women manage many domestic activities. There were no real gender differences with regard to listening to agricultural broadcasts (Figure 3).

**Figure 2: Frequency with which rice processors listen to rural radio broadcasts in general**

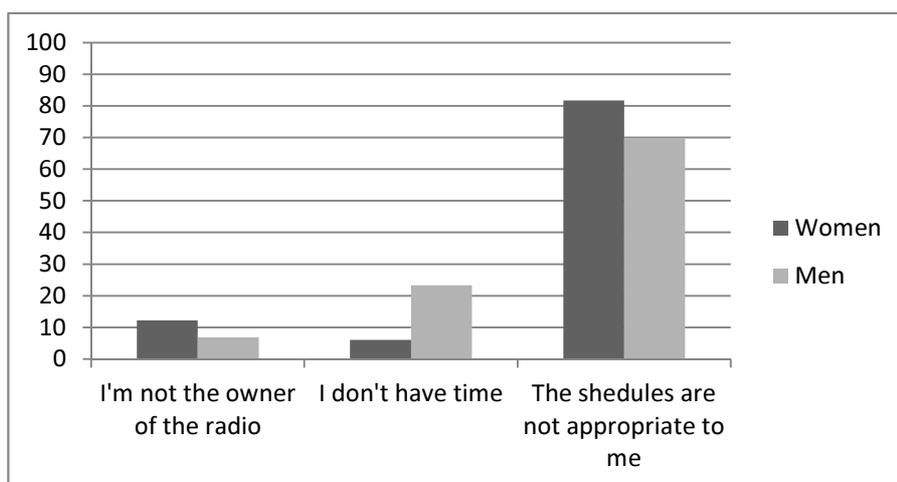


**Figure 3: Frequency with which rice processors listen to rural radio program on agriculture**



The major reason that explains why rice processors rarely or never listen to radio program on agriculture is the inappropriateness of broadcast schedules (Figure 4).

**Figure 4: Reasons why rice processors rarely or never listen to radio program on agriculture**



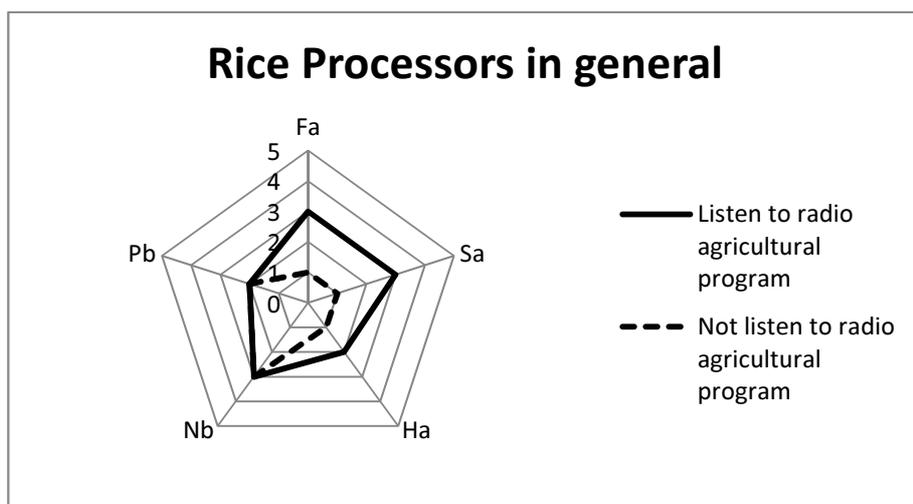
Asking them which time is appropriate, the majority propose 8 pm to 9 pm because they are often busy during the whole day. It is therefore important that the radios and rural development agents consider this problem of agricultural broadcast schedules. As most surveyed rural radio stations have institutional contracts with the Ministry of Agriculture, especially extension agents and sometimes scientists, to make radio broadcasts on agriculture, it will be needed to take into account the issue of broadcast schedules in future contracts to be sure that they can reach the target group which is farmers. This will enable

more farmers to listen to radio program on agriculture and development. Rice processors who listen to radio program on agriculture think that the programs are very interesting.

### 3- Radio programs on agriculture, gender and livelihood assets

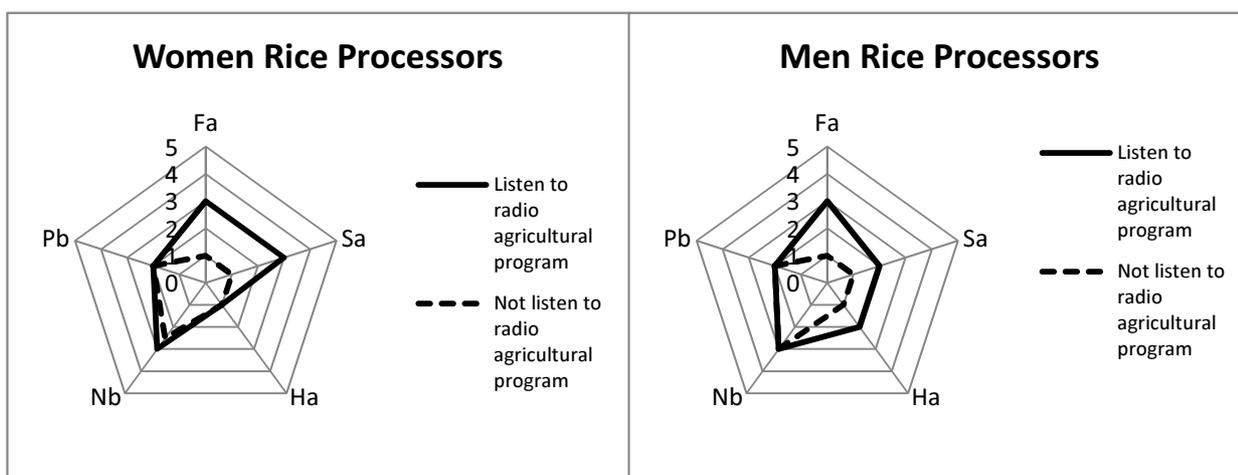
The sustainable livelihood approach was used with 120 randomly selected rice processors. Most were women (67.5%).

**Figure 5: Capital stocks recorded for rice processors according to listen to and not listen to rural radio program on agriculture**



F = Financial Capital, S = Social Capital, H = Human Capital, N = Natural Capital, P = Physical Capital. a = Mann Whitney test significant ( $p \leq 0.05$ ); b = non significant Mann Whitney test.

**Figure 6: Gender dimension of capital stocks recorded for rice processors according to listen to and not listen to rural radio program on agriculture**



F = Financial Capital, S = Social Capital, H = Human Capital, N = Natural Capital, P = Physical Capital. a = Mann Whitney test significant ( $p \leq 0.05$ ); b = non significant Mann Whitney test.

Figures 5 and 6 and Mann Whitney test show that rice processors who often listen to radio program on agriculture have better financial, social and human capital comparing to those who rarely or never listen to radio programs on agriculture. According to Hambly Odame (2003) Participatory Radio Campaigns are widely listened to and can have a significant measurable impact on knowledge and practice in farming communities. Our study implies that especially wealthier and better connected rice processors listen to agricultural radio broadcasts, so future interventions and studies will need to pay attention to social inclusion issues. The extent to which rural radio can trigger behavioural changes in agricultural practices among non-listeners and different strata of society will need further investigation.

## **Conclusion**

Rural radio can be an extension tool to reach millions of illiterate farmers and to provide them with information relating to all aspects of agricultural production, processing and marketing in a language they understand. But most rural radio stations expressed their concerns that they did not have sufficient knowledge of agriculture in order to deliver appropriate messages. Although partnerships with government staff from research and extension services partly helped to address this, interactivity with farmers needs to be revised as the majority of surveyed rice processors could listen to the radio only in the evening, between 8 and 9 pm (after office hours). Expertise could be equally drawn from other sources, such as from farmers within their own or other rural communities, and from farmer-to-farmer training videos. Future efforts need to seek synergies between various media. Access Agriculture is a new initiative that addresses these challenges by building farm-relevant knowledge among multiple rural service providers.

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