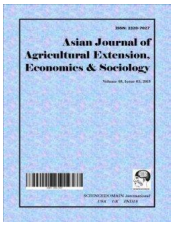

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Applying Participatory Rural Appraisal to Unlock Gender Group Differences in Some Communities in Rural Cameroon

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Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

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ABSTRACT

Aims: The relevance of Participatory Rural Appraisal (PRA) in promoting community participation, enhancing sustainable development in rural communities, and its capacity to succeed where other approaches fail is well recognized in the rural development literature. Some PRA tools have been widely applied empirically for gender analysis than others. This paper analyzes gender differences through the less-applied access and control profiling.
Study Design: Cross sectional, empirical survey.
Place and Duration of Study: North West region of Cameroon, 7-30 October, 2014.
Methodology: Two rural divisions were purposively selected. One division had difficult road access, while the other was fairly accessible. Four rural villages (two from each division) were randomly selected. Access and control profiling was applied separately with different gender groups. In each village, a group of 30-35 self selected men, women and youths were guided by the research team to implement the tool separately. Access and control over resources was scored on a likert scale from 0 to 4, in ascending order of importance. This was complemented by focused

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group discussions and key informant interviews.
Results: Huge differences were observed in access and control over resources between gender groups within and across communities. Men were generally found to have the strongest access and control over resources under difficult accessibility and higher rurality ($\bar{x}$ =2.9), while women dominated under higher accessibility and lower rurality conditions ($\bar{x}$ =3.6). The youth generally lagged behind men and women in both communities ($\bar{x}$ =2.0). Results suggest a relationship between accessibility, rurality and gender based access and control over different resources.
Conclusion: The need to consistently do gender differentiated PRAs prior to community intervention, as prerequisite to achieving gender balanced sustainable development of rural areas in developing countries is emphasized. This is best done on case by case basis in order to capture case-specific dynamics.

Keywords: Participatory rural appraisal; gender; profiling; North West Cameroon.

1. INTRODUCTION

1.1 General Introduction

For almost two centuries today, development practitioners have developed and tested different approaches in an effort to identify the most appropriate ways of bringing meaningful, target oriented and sustainable development to rural areas especially in developing countries. Different development theories have generally influenced the process. Development history holds for instance that development theories were partly responsible for colonization that was predominant in many developing countries, between the late 19th and the early part of the 20th centuries, with different development outcomes [1,2]. The neoclassical theories that preceded independence of many colonies in the mid 20th century equated development to economic growth. Modernization of developing countries to mirror the developed countries became a dominant policy option especially after the failure of colonization, and technology transfer became a dominant development policy objective [3]. Green revolution and other modern technologies hitherto fore available in developed countries were transferred to many developing countries in an attempt to match the level of development in the recipient countries to that of the originating countries. In spite of some pockets of successes [4] the impacts of such policies in developing countries was generally suboptimal.

The barely minimal success of development policies warranted re-thinking. By the 1970s and 1980s, the role of local communities and institutions in stimulating long lasting development which hitherto fore had been generally neglected, was increasingly recognized [5-7]. Institutions and community participation became integral components of development policy, and new approaches such as Goal Oriented Project Planning (GOPP), Rapid Rural Appraisals (RRAs) and Participatory Rural Appraisals (PRAs) were developed, experimented and adopted by government institutions and nongovernmental organizations in many communities, particularly in the developing world [8-11].

Participatory rural appraisal – PRA, developed in the early 1990s, quickly grew up as an important family of approaches, tools and methods which development practitioners appropriated to enable indigenous people to express, enhance, analyze and share their knowledge and conditions of life, in order to plan and to act on that knowledge [4]. Apart from being an important development approach, it also was the basis for the development of other approaches, such as Participatory Appraisal of Needs and the Development of Action, PANDA [11,12] and Participatory Change [13].

Tools from the PRA toolbox (often described as vast, open and flexible) have frequently been applied in the field with different levels of success. PRA applications were, and are still frequent in the domains of natural resource management, agricultural development, food security, health and nutrition and other pro-poor program sectors [9]. The most frequently applied tools include transects, mapping, scoring and ranking, seasonal calendars, focused group discussions and trend analysis [9,14,15]. The use of other PRA tools has generally been negligible.

This article applies access and control profiling in rural Cameroon, in order to identify and compare differences between gender groups within and across rural communities. While adding to the

empirical literature on PRA applications, it attempts to disentangle any ramifications regarding access and control over resources, in rural communities which are fairly accessible as compared to those with difficult access.

This paper will continue as follows. The next subchapter will briefly review the literature on PRA as a suitable framework to enhance development in rural communities. This will be preceded by a brief recap of the evolution and history of PRA. Section 2 will introduce the materials and methods implored in the empirical case study in North West Cameroon. The results will then be presented and discussed. Relevant conclusions and recommendations from the case study and possible implications for sustainable, gender based rural community development will end the paper.

1.2 Literature Review

1.2.1 A succinct overview of the genesis of participatory rural appraisal

The history of PRA in the topical literature probably resonates from the failure of the classical theories that led to Colonization [2]. Colonization which itself was mainly focused on serving the interest of colonialists collapsed as a development approach in the 1950s and 1960s, when it increasingly came under pressure. This consequently led to the independence of many colonies, even if the colonies initially functioned based on colonially established development approaches and administrative units [16]. A first step towards development in the 1960s or so was to try to push developing countries to follow the path of development that had been adopted by the developed countries. Consequently, technology transfer dominated the development platform. This was often preceded by lengthy conventional surveys based on structured questionnaires. Such a development approach assumed that experts (mainly from the formal colonizers) would be responsible for data analysis, and that analytical outcomes will provide the basis for technology transfer [3,4]. It was soon observed that lengthy questionnaires which were at the forefront of surveys demanded much time and financial resources, and the analytical processes were very long. Community development initiatives relied on the outcome of data analysis by experts, who most often than not, were not based in the countries where data was collected but in developed countries. High demand for expert services often resulted in lengthy periods for data analysis. Sometimes, collected data was not analyzed at all, often leading to data grave yards [8]. Nevertheless when such data was analyzed (often many years after it was collected), it provided the basis for development actions. Technology transfer was then carried out based on such results and development actors and beneficiaries in the target countries were expected to abide. As would be expected, such an approach to development was not very successful.

The failure of conventional surveys in the 1960s was quickly replaced by the so called farming systems approach in the 1970s. With the understanding that development in many developing countries could not follow the pattern in developed countries, and that agriculture was the backbone of many of these developing countries, conventional research for development was quickly replaced by farming systems research (FSR) [17]. Unlike conventional surveys, FSR, alternatively called agro-system analysis, represented hope for durable development, as its philosophy required an understanding of the relationships, interdependence and complex interactions between the household and the farm [18]. The 1970s therefore saw the emergence and application of on-farm research, permitting development practitioners to analyze *in-situ*, the specificities, complex relations and realities in specific communities [17,18]. FSR soon came under criticism for being time consuming. In addition, since only few cases could be carried out, generalization was also very difficult and unrealistic. A faster and more appropriate approach was therefore necessary.

The late 1970s and early 1980s saw the emergence of Rapid Rural Appraisals (RRAs). RRAs emphasized social science based approaches, and emphasized the global importance of the need for multidisciplinary teams as a prerequisite to explore local people's knowledge. Even though data was still mostly analyzed by RRA specialists, the RRA approach emphasized the importance of simple data collection and analysis for development, and provided a basis for development actions and plans to be based on specific needs of communities. However, RRA was criticized, since the time spent in the field was very short (usually a maximum of three days) and analysis was still mostly done by specialists outside the community. This probably accounts for why RRA was ironically described as a form of rural development tourism [5].

The criticisms levied on RRA paved the way for the development, or rather its transformation into Participatory Rural /Relaxed Appraisal (PRA) in the late 80s and early 90s. Basically, Like RRA, PRA recognized the fact that community members better understood their conditions of life than outsiders. However PRA warranted a paradigm shift, in which outsiders (formerly experts) would recognize the abilities of communities to identify their problems, to analyze them, to plan and to act. In fact the PRA philosophy demanded mutual learning between outsiders and insiders, in a manner much stronger than was expected with RRA. This in effect meant that outsiders ceased from being experts to becoming catalysts and facilitators of communities that were willing to change their conditions of life [8,9]. PRA practitioners in both government and nongovernmental organizations were therefore expected to hand over the stick to the insiders in methods and action. Communities would therefore take more responsibility and command over their own development, and PRA practitioners will facilitate the process, learning from community members and allowing them to conduct their own analysis [5,8,15,19].

Since the grounding of PRA, development cooperation has witnessed enormous successes. In fact, many successful case studies on the empirical application of PRA have been documented. [8] holds that PRA was a very popular development approach, so much so that by the mid 1990s, it had already been practiced and embedded in the development philosophy of over 40 countries. Today many empirical case studies exist all over the globe, lauding PRA as a successful development philosophy and approach. [20] for instance demonstrate the importance of PRA approaches in reversing degradation, enhancing watershed protection and promoting sustainable livelihoods in India. [21] describe how a multidisciplinary team applied PRA to successfully identify practices, production and marketing constraints and possible solutions for livestock farmers in Cameroon. [22] recalls how PRA was able to help fishing communities to conserve fishery resources and stimulate tourism activities in some communities in Brazil. [23] report how PRA approaches, particularly focused group discussions and matrix ranking enhanced the successful selection, evaluation, breeding and adoption of Sorghum varieties by farmers in Malawi. [24] illustrate the importance of participatory approaches in controlling livestock diseases in developing countries, while [25] emphasizes the role of PRA in enhancing agricultural extension services globally. These examples, though far from being an exhaustive list of documented evidence of the global theoretical and empirical importance of the PRA approach, at least demonstrate the potential of PRAs to enhance durable development around the globe.

The tremendous success of PRA probably stems from the fact that it was conceived as an approach with many tools that can be sequenced and applied differently to model different scenarios and situations. Unfortunately, empirical application of PRA has been largely limited to a group of tools, including mapping, transects, scoring and ranking, seasonal calendars and trend analysis. Others, such as access and control profiling have been largely neglected [7,8]. This paper contributes to the topical literature mainly by empirically applying access and control profiling, which until now has been largely under used in PRA exercises. The tool is used in an empirical case study to disentangle gender differences in terms of access to, and control over resources in some communities in rural Cameroon. The aim of applying this tool is to verify its potentially latent capacity to identify gender differences and their implications for sustainable development in the research region. In addition, it is intended to encourage development practitioners to develop interest in the tool, explore the potentials for its application in the field, as well as other PRA tools with limited empirical application.

1.2.2 Access and control profiling and gender group implications

Within the framework of PRAs, access and control profiles have generally been used to ascertain gender and heterogeneous group differences at household and community levels. Access and control are two terms that in my opinion can be better understood by drawing from the property rights literature [7,26-28]. [27] for instance defines property rights as individual's ability to directly or indirectly consume a commodity or asset. These rights can be formal or informal, usufruct or permanent, and can be captured by others if not protected. *Access* as used in this context refers to the ability to have usufruct or temporary rights over resources. This in essence means that one with only access can have the right to use a resource for instance. The level of access determines to what level the individual has the right to use a resource. *Control*

on the other hand would mean having the unquestionable ability *prima facie* to manage, generate income, to exclude others, to be compensated or to transfer the resource to others. In general, women in many developing countries often have access to, but very limited or no control over resources [26,29-32].

Differentiated access and control over resources influences decision making for different gender groups and often provides credible explanation for motivation or de-motivation of some societal groups to participate or not in the development process. Access and control profiles can reveal gender biases in decision making and allow research to identify intra-household and intra-community inequalities [30,33,34]. Using access and control profiling, [30] for instance found out that women had no control over income from cash and food crops, as well as from large animals, in the Chitwan district in Nepal. This definitely has implications for gender based agricultural development in the research region.

Though slowly, the contextual applications of access and control profiles have evolved beyond traditional boundaries. Contemporarily, they have been increasingly applied for instance to identify gender differences in disaster response [35], collective action for sustainable natural resource management [32] and as key instruments to explain observed behavioral patterns across different gender groups [31]. [31] were able to explain the principal differences between men and women in Western Kenya using access and control profiles, in addition to other PRA tools. Women were found to have strong access and control over food and gifts, while men dominated control over cash and cultural benefits accruing from poultry production. The authors used these findings as explanations for a gender differentiated adoption of technologies amongst men and women in western Kenya.

The widening application of access and control profiles suggests a convergence amongst (rural) development practitioners that the household as a unit of analysis is very complex, with potential differences in terms of access and control over resources, agency, wealth, leisure, consumption, social and power relations, and work which need to be better understood [33]. Intra-household differences can have far reaching implications for development.

A widely accepted definition of gender in the development literature relates to the differences essentially between men and women, which are not determined by sex, but socially constructed [14,22,29,31]. However, the development challenges in Cameroon are better understood by going beyond this traditional definition and examining the specific differences between gender groups (see for instance [36] for a similar application). This allows for the capture of specificities between society-based gender groups, such as men, women and the youth. The youth is considered a gender group based on the premise that their (expected) roles are socially defined differently from those of men and women. This approach allows policy makers to improve on their gender (group) specific targeting efficiency. On this basis, this paper applies access and control profiling to unlock possible differences between heterogeneously defined gender groups, namely men, women and youths, in 4 rural communities from two divisions in the North West region of Cameroon.

2. MATERIALS AND METHODS

2.1 Background of the Research Region

In spite of being a resource-rich country, Cameroon currently faces many development challenges, ranging from poor governance and widespread corruption, through high unemployment and poverty rates to increasing natural disasters and terrorism. Unemployment and underemployment rates for instance are currently estimated at around 30% and 75% respectively, and almost 40% of its total population of around 20 Million currently lives below the national poverty line [37]. Agriculture remains the backbone of the country, contributing about 30% to its Gross Domestic Product. Most of the agricultural production takes place in subsistence farms concentrated in rural areas, where poverty levels are higher [35,38]. A key challenge for the Cameroon government is therefore how to sustainably reduce poverty across different groups, especially in rural areas.

This research was carried out in two rural divisions in the North West region of Cameroon. As the third most populated region in Cameroon, the North West region has an estimated population of over 1.8 million. It has urban and rural growth rates of almost 8% and slightly above 1% respectively [38&39]. The region is bordered to the north by Nigeria, to the south by the Western Region, to the east by Adamawa and to the west by the South West Region [40]. Over 80% of its inhabitants depend on smallholder agriculture for their livelihoods

[41,42]. The region has a poverty rate of 51% and is home to 13% of the total number of rural poor in Cameroon [40].

The North West region of Cameroon has two seasons: The rainy season which traditionally lasts from Mid-March to October, and the dry season from November to Mid-March. Annual rainfall varies from 1300 mm-3000 mm, with a mean of around 2400 mm. Mean monthly temperatures range from about 15°C on the highlands to about 27˚C in low-lying areas [39-41].

2.2 Sampling and Sampling Procedures

This research was carried out in Momo and Ngoketunjia divisions, two of the seven divisions that make up the North West region of Cameroon. The two divisions were purposively selected because they are rural divisions. Both divisions are located in opposite directions, in the immediate peripheries of Bamenda, the capital of the Mezam division and the regional capital for the North West region. However, Ngoketunjia division is fairly more accessible by road and therefore less rural than Momo division. This purposive sampling approach allows us to investigate if accessibility and rurality may have an influence on access and control over resources for different gender groups. Two rural subdivisions (one from each division) were purposively selected as the research was interested in a gender analysis of access and control over resources across different groups in rural areas. Batibo subdivision was selected in Momo division, while Balikumbat Subdivision was selected in Ngoketunjia division respectively. In each subdivision, two villages were randomly selected: Enyoh and Effah in Momo division (Batibo subdivision) and Balikumbat and Bafanji in Ngoketunjia division (Balikumbat subdivision).

In each village, a group of 30 to 35 self selected men, women and youths respectively participated in the PRA exercises. Self selection was necessary, as the PRA exercise was mainly for research rather than a prelude to any intended development intervention. This was clarified to the participants before each exercise to avoid raising any form of false hopes and expectations in the experimental communities. Only villagers who were interested therefore took part in the PRA exercises. Access and control profiling was then applied for different gender groups separately, namely with men, women and the youth. It was necessary to separate the groups in each community to avoid influence, insure free participation and maintain anonymity. As expected in PRA exercises, the participants were guided to implement the tool, while the research team facilitated the process. Profiling was chosen as the principal PRA tool, as its implementation in the field has been relatively scarce, compared to other tools such as resource mapping and transects [8,9]. In addition, previous experience suggests that this tool can greatly illuminate intra-household or intra-community gender differences, as well as differences among groups [29-31]. Access and control over resources was scored by each gender group, based on a likert scale from 0 to 4, in ascending order of importance. The scores were allocated based on consensus by the participants. For each resource, a score of 0 meant no access and/or control; 1 indicated limited access and/or control; 2 acceptable access and control; 3 strong access and/or control and 4 full access and/or control. Generally, scores were only allocated after intense discussions and subsequent agreement by the participants in their respective groups.

The profiled resources included natural resources, food crops, cash crops and small livestock. In each village, a consensus was reached as to what constituted each resource basket before the commencement of the exercise. The different constituents of the resource basket were scored individually by consensus in each gender group. Scoring all individual resources in a resource group was done, before moving to the next resource. The mean score for each resource group was computed based on an arithmetic mean of the individual scores. The calculations were done by the participants, and monitored by a member of the research team. A manual calculator was used to make sure that fractions were exactly recorded. The calculations were done only at the end of the scoring exercise. Access and control profiling was complemented with focused group discussions with each gender group at the end of the exercise. Plenary sessions were organized in each village after the exercises in order to share and discuss the results. Key informant interviews were carried later on, on the same day of the exercise with community members who had deeper knowledge on the issues of interest. Essentially, key informants provided in-depth information to clarify any issues resolving from the exercise, that were not satisfactorily explained during the plenary sessions. The

research was carried out from 7th -30th October 2014.

The summary results across different gender groups by division are presented and discussed in the next section.

3. RESULTS AND DISCUSSION

The summative results of the Participatory Rural Appraisal exercises in the two villages in Momo division are presented in Fig. 1. In general, men were reported to have the strongest access and control over natural resources (Land, fruit trees, indigenous trees, sand and stones) with an overall mean score of 4. Comparatively, women and the youth had significantly lower access and control than men ($\bar{x}$ = 1.7 and 1 for access; and 0.4 and 0.5 for control respectively). As far as food crops were concerned, women had the highest access and control, followed by the youth and lastly by men. The mean scores for access and control over cash crops for men were almost double that of the women. The youth had the least access and control over cash crops. The same domineering pattern was observed for small livestock, where the men had the highest access and control, followed by women and lastly by the youth. This was explained during the focus group discussions and the plenary sessions to be a consequence of the fact that livestock is mostly owned and kept by the men as a form of collateral to buffer shocks (such the illness of household members) and as a source of school needs for children. These conjectures were confirmed during the key informant interviews.

Cumulatively therefore, men dominate access and control over all resources, followed by women and the youth (overall $\bar{x}$ =2.9; 2.3 and 1 respectively). In general, these results are in line with the existing state of the art, and empirical reports from rural areas in other countries (see for instance [29] for crop production and management in Ethiopia, and [31] for poultry production in Western Kenya).

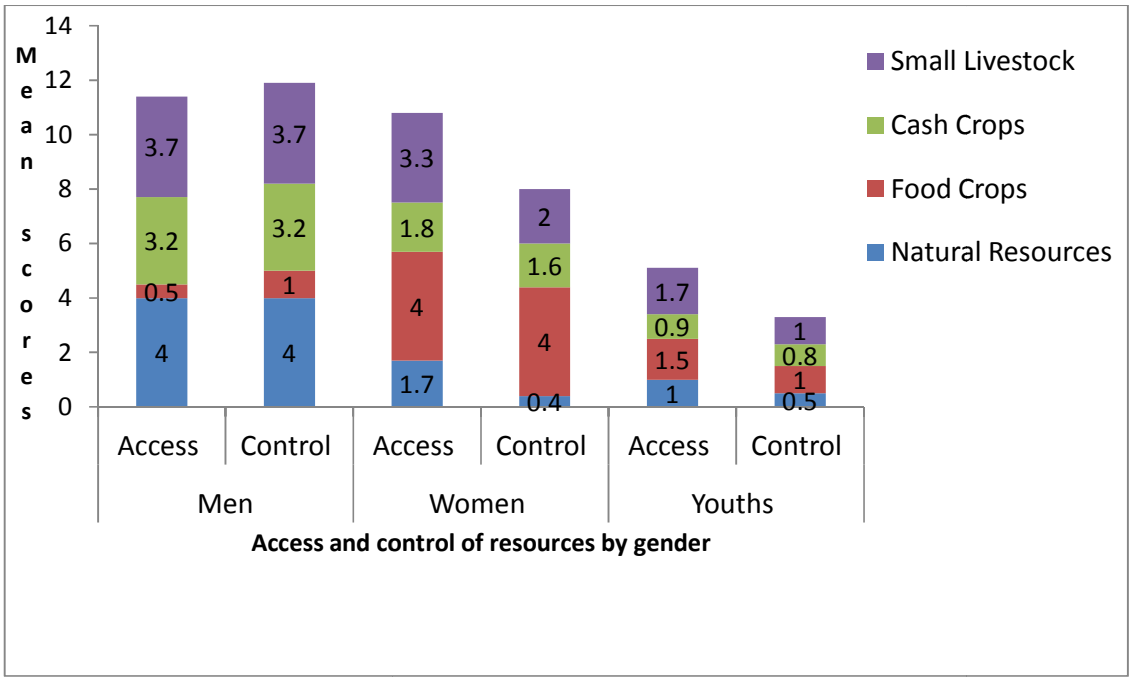

Fig. 1. Mean scores for access and control over resources as obtained from farmers in Momo division in the North West Region of Cameroon

Notes:

1. *The scores for each rubric (that is, access and control) represent the mean scores calculated for the two villages combined, as presented by the different gender groups.*
2. *Each bar represents the cumulative mean scores (and therefore the cumulative access and control over resources) for each gender group*

The summative results of the Participatory Rural Appraisal exercises in the two villages in the more accessible Ngoketunjia division are presented in Fig. 2. In general, men were found to have total access and control over natural resources (Land, fruit trees, indigenous trees, sand and stones; $\bar{x}$ =4). Women and the youth had similarly strong access, even if this was slightly lower as compared to the men ($\bar{x}$ =3.4). Women retained more control than the youth ($\bar{x}$ =3 and 2.8 respectively). Women had the strongest access and control over food crops, followed by the youth and lastly by men. However, as far as cash crops were concerned, men and women had similar access, with the women having only a slightly lower control compared to men. This was explained by the fact that the cash crops in the rural villages in Ngoketunjia division are mainly annual crops, particularly rice, Okra, groundnuts and tomatoes. Thus although men generally have stronger access and control over natural resources (particularly land), this has only a minimal impact on cash crop production by women, who are ready to rent land and cultivate their annually based cash crops, even if the men decide to dispose of the land without the consent of the women.

Surprisingly, as compared to the results from the villages in Momo division (and contrary to general findings in the literature), women had the strongest access and control over small livestock (pigs, goats and chicken) than men. Focused group discussions and key informant interviews revealed that this was possible, considering that the emancipated marketing of these livestock has been highly promoted by accessibility. In addition, cash crop production is very profitable to both men and women so that men do not generally control women's livestock resources. Accessibility has also attracted the proliferation of development NGOs in Ngoketunjia division, whose support to women and the youth with trainings on agricultural production and human rights issues have often empowered them economically by supporting livestock production and related activities, and increased women's and youth's assertion of their rights.

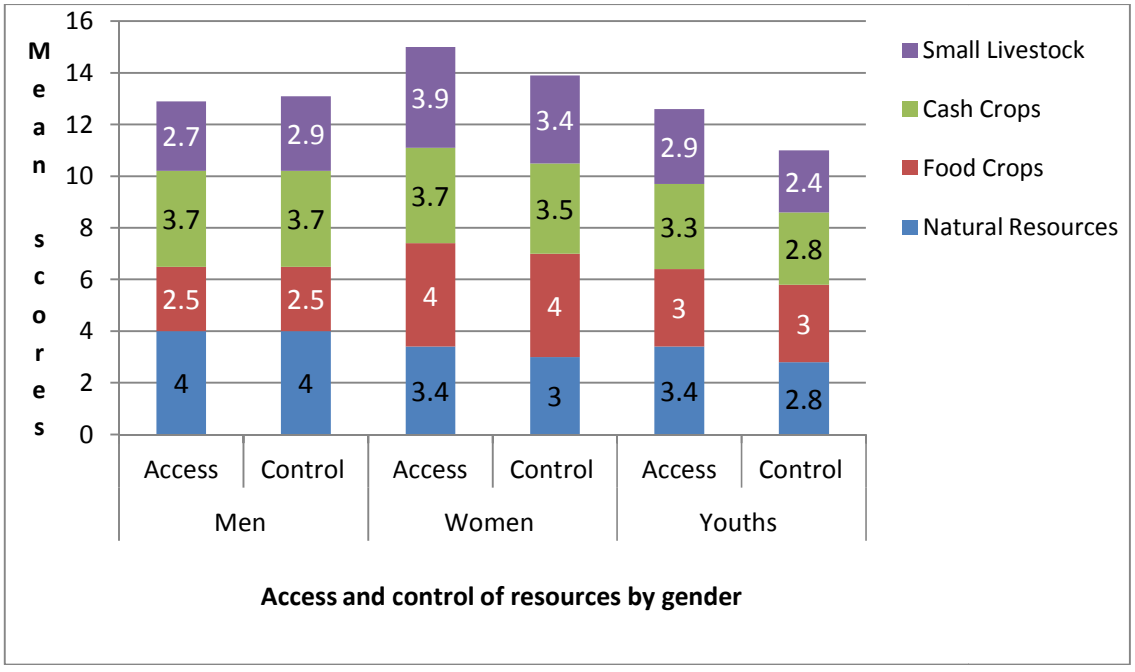

Fig. 2. Mean scores for access and control over resources as obtained from farmers in Ngoketunjia division in North West Region of Cameroon

Notes:

1. *The scores for each rubric (that is, access and control) represent the mean scores calculated for the two villages combined, as presented by the different gender groups*
2. *Each bar represents the cumulative mean scores (and therefore the cumulative access and control over resources) for each gender group*

This is a probable explanation why cumulatively, women were found to have more access and control over resources in the villages in Ngoketunjia division than the men and the youth ($\bar{x}$ =3.6; 3.3 and 3 respectively). The differences are however not as large as in the less accessible and highly rural communities in Momo division. The results suggest that the more accessible and less rural a community is, the less likely it will be to find large differences in access and control over resources between different gender groups. Put differently, women and the youth are likely to have as strong (or even stronger) access and control over resources as men, with increasing accessibility and decreasing rurality.

4. CONCLUSION

This paper has attempted to briefly re-visit the important role that Participatory Rural Appraisals have played in bringing meaningful and long term development in developing countries. Based on an empirical case study from rural Cameroon, the article has demonstrated the importance of access and control profiles in disentangling intra/inter-household and intra/intra community gender differences. The results suggest that differences in accessibility and rurality between communities can profoundly influence gendered differences in terms of access and control over different resources. Based on the results of the case study, the more accessible and less rural a community is, the less likely it is for one to find huge differences in access and control over resources between gender groups, particularly to the advantage of men over women. This contention however needs further research.

I do not intend to present PRA here or any of its tools for that matter, as a panacea to all sustainable development problems in developing countries. In fact, the shortcomings of participatory Rural Appraisals in particular and Participatory Development in general have been discussed in the topical literature (see for instance [43] for a critique of the PRA methodology, and [44] for a general critique on the shortcomings of participatory development in Cameroon).

In spite of these shortcomings, PRA applications in general and access and control profiles in particular can provide insights which are crucial to promote gender oriented sustainable development, especially in rural areas in developing countries. In line with the contention of [19], the results of this case study suggests however, that a case by case approach is necessary, rather than generalization, since gender differences, and gender group differences for that matter, can vary from one community to another and even within the same community. If well done and if the right tools are sequenced and applied appropriately, the PRA approach can potentially provide clarity on who should participate, at what level and who stands to benefit from the development process. In this way the elusiveness of PRA as a bundle of approaches that can enhance sustainable development especially in rural areas of developing countries will be significantly minimized. With increasing applications, the capacity of the PRA approach to contribute to the newly developed global Sustainable Development Goals (SDGs) can be tested and fully exploited. It is suggested to increasingly extend the concept of gender beyond its traditional boundaries, for instance to analyze heterogeneous groups as has been applied in this paper. Perhaps in this way, hidden and relatively untapped potentials for the gender concept and participatory rural appraisals can be tested and validated for their usefulness in enhancing sustainable development, especially in developing countries.

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COMPETING INTERESTS

The author has declared that no competing interests exist.

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