Intensive subsistence agriculture and sustainable livelihood in the Democratic Republic of Congo: a case of small-holder farmers in South Kivu Province

by

Nyatemu Zenda Za Begani Arthur-Josué

Keywords: *Intensive subsistence agriculture*, *sustainable livelihood*.

Introduction

The study assessed the effect of intensive subsistence agriculture on the sustainable livelihood of smallholder farmers in South Kivu province, eastern Democratic Republic of Congo, guided by the agricultural intensification theory. The study contained eight chapters. Chapter one was on the introduction, chapter two reviewed the literature, chapter three discussed the methodology, chapter four was on historical and philosophical aspects of the study variables, while chapters five, six, and seven focused on the analysis, interpretation, and discussions of findings on subsistence agriculture and its effect on smallholder farmers' socioeconomic statuses, the effect on sustainable livelihoods, and the relationship between intensive subsistence agriculture and socioeconomic statuses of smallholder farmers. Chapter eight focused on the contribution of the study to existing knowledge,

conclusion, and recommendations.

Study objective

The objectives of the study included: examining the effects of subsistence agriculture on smallholder farmers' analysing socioeconomic statuses; the effects of farmers' smallholder socioeconomic statuses on sustainable livelihood; and establishing the relationship between the intensive subsistence agriculture practised and the socio-economic statuses of smallholder farmers in terms of sustainable livelihood.

Methodology

The study used a cross-sectional and case study design and employed a mixed-methods approach, which entails the integration of quantitative and qualitative data. The study used a sample size of 389 smallholder farmers. Data collection was conducted using a questionnaire, keyinformant interviews, and focus group discussions. Data were analysed quantitatively using statistical analysis and qualitatively using thematic analysis.

Key findings

The study revealed that the education level of household head ($\beta = 0.205$, p = 0.001) and income status ($\beta = .371$, p < 0.001) were statistically significant (p-value less than 0.05 and 0.000). The interpretation is that the subsistence agriculture practised negatively affects socioeconomic statuses, mainly the education level of both male and

female and income statuses. The results also revealed that the education level of wife ($\beta = .085$, p = 0.016) and household income status ($\beta = .371$, p < 0.001) were statistically significant (p-value less than 0.05 and 0.000). The interpretation is that the education level of a wife and household income status slows down livelihood sustainability among farmers.

The study further revealed that of the subsistence types of agriculture practised in the study area, only intensive subsistence agriculture was statistically significant (β = 0.265, p <0.001). This means that sustainable livelihoods are highest when intensive subsistence agriculture is integrated with improved incomes of the farmers compared to when it is integrated with the education levels of the household heads.

Key recommendations

To avoid a vicious cycle of poverty and natural resource degradation in South Kivu, the study recommended that Provincial and National Governments should introduce an education system based on local realities; improve agricultural extension services; and improve distributive justice and capabilities in agricultural intensification projects and programmes.

Key references

Aliyu Ahmad Aliyu, Ibrahim Musa Singhry, Haruna Adamu and Mu'awuya Muhammad Abubakar. (2015). Ontology, Epistemology and Axiology in

- Quantitative and Qualitative Research: Elucidation of the Research philophical misconception. Research International on New Direction and Uncommon Vol. 2 No. 1. 22nd December, 2015-University of Agriculture, Abekuta, Abekuta, Ogun State, Nigeria.
- Amin, A. E. (2005). Social science research: Conception, methodology, and analysis. Kampala, Uganda: Makerere University Printers.
- Baiphethi, M. N., & Jacobs, P. T. (2009). The contribution of subsistence farming to food security in South Africa. Agrekon, 48(4), 459–482.
- Bocquet-Appel, JP (2011). "When the World's Population Took Off: The Springboard of the Neolithic Demographic Transition", Science, vol. 333.
- Chambers, R., and Conway, Goudon (1992). Sustainable Rural Livelihoods: practical concepts for the 21st century. IDS Discussion paper 296.
- Deininger K. & Byerlee, D. (2011). The rise of Large Farms in Land Abundant Countries Do They Have a Future? Policy Research Working Paper 5588.
- DFID. (1999). Sustainable Livelihoods Guidance Sheets 1-3. Department for International Development: London.
- FAO, (2011). Research on Congo's basic crops: A first step towards producing more and better. FAO Media Centre. Available at: http://www.fao.org/news/story/en/item/49321/icod e/ [Accessed July 13, 2011].

- Gambino, T., (2011). World Development Report 2011 Background Case Study Democratic Republic of the Congo, World Bank.
- Ghauri, P. & Kjell, G. (2005). Research Methods in Business Studies, 3rd. Ed. New York: Prentice
- Hall.Gebrekidan A. A., Rutten, R., Azadi, H., & Witlox, F. (2019). How Social Status Contributes to Sustainable Livelihoods? An Empirical Analysis in Ethiopia. Sustainability, 11, 68.
- Lebailly, F., (2014). Quel développement agricole pour la RDC? Conjoncture congolaise, pp. 45 63. Leprofsky D. & Ken L., (2008). "Documenting ancient plant management in the northwest of North America". Botany, vol. 86, 2:129–145.
- Moss, B. (2008). "Water Pollution by Agriculture". Phil. Trans. R. Soc. Lond. B. 363 (1491): 659 666. Mpanzu, B. (2013). Filière vivrière paysanne du Bas-Congo: Acteurs, facteurs et performance. Dounia, revue d'intelligence stratégique et des relations internationales, 6: 26 41.
- Rakotoarisoa, M. A., M. Iafrate, & M. Paschali (2012). Why has Africa become a Net Food Importer? Explaining Africa Agricultural and Food Trade Deficits, FAO, Roma.
- Rapsomanikis, G. (2005). The economic lives of smallholder farmers: An analysis based on

household data from nine countries. Food and Agriculture Organization of the United Nations, Rome, Italy.UNDP, (2009). Province du Sud Kivu. Profil résumé: Pauvreté et conditions de vie des ménages