

**IMPACTS OF ITINERANT AGRICULTURE ON BRULIS IN THE LIUTUA GROUP,
CHEFFERIE LIUTUA, TERRITORY OF ISANGI, PROVINCE OF TSHOPO IN DR Congo.**

**BOUMO LISAGOLA Dep's¹, LOLIMA ATALA Caleb², DJUMA MASUDI Marcel³ and LISEMBE
MWAMBOLE.⁴**

Assistants at the Higher Pedagogical and Technical Institute of YAHUMA
(ISPT-YAHUMA)

ABSTRACT

In the Democratic Republic of Congo, nearly 70% of the population is mainly rural and semi-rural, who practice cultivation on burns and seek new land every year with environmental risks.

The LIUTA grouping is no exception to this scourge. It is currently under great pressure from an anarchic exploitation of its natural resources by itinerant farmers.

An environmental and social impact study was conducted in the so-called grouping to identify and assess environmental effects.

Analysis of the results showed us that itinerant agriculture on burns has induced harmful effects whose consequences have an impact on both the agro-system and the health of the population. These impacts include the disappearance of vegetation cover, the disappearance of rare plant and animal species, the loss of fertility, etc.

Mitigation, compensation and enhancement of these impacts are proposed for sustainable development in the LIUTUA grouping at ISANGI.

KEYWORDS: impact; agriculture; itinerant; grouping; province; DR Congo.

1. INTRODUCTION

Among the major problems facing the Democratic Republic of Congo are the practice of unsustainable itinerant agriculture, which results in burn-and-fall agriculture with reduced fallow periods, excessive exploitation of primary and secondary forest.

Farmers cultivate soils that are not suitable for sustainable agriculture and as a result, they have to abandon their fields after two or three harvests and find other forest land to clear. For most of them, daily life is a struggle to survive, and the future of their families depends on what the next crop can bring them, which

is always likely to be bad.

In the LIUTUA group, in order to survive, since employment does not exist and unemployment is a pervasive reality, households and individuals are forced to resort to subsistence agriculture. And currently this form of agriculture, has even invaded marginal lands and some cultural, scientific and historical sites or some natural habitats.

The aim of this environmental impact study is to assess the impacts of itinerant agriculture on burns in the LIUTUA group and to propose mitigation measures for sustainable development.

II. ENVIRONMENT, MATERIAL, METHODOLOGY

2.1 Context of itinerant agriculture in DR Congo.

In the DRC, about 60-70% of the rural and periurban population is involved in traditional agriculture, which is practiced by crops on burn. The farmer clears part of the forest or savannah to grow low-demanding plants, and abandons it when yield declines due to reduced soil fertility.

The National Environmental Action Plan (1999) indicates that there are between 3 and 4 million small farms in Congo, cultivating a total of 5 to 6 million hectares annually.

One of the main things in common among farmers who grow on burns in the DRC is that they belong to the poorest and least privileged groups in our society and have little or no influence over important land use policy decisions.

Trapped in illiteracy and endemic poverty and driven by the inability to access arable land and find other jobs, families who devote themselves to subsistence crops are forced to clear forests to plant what they need to survive.

Their work is rewarded only for a meagre income that puts them well below the poverty line.

Sustained agriculture is therefore essential to promote sustainable development in the DRC.

2.2 Description of the study environment

The LIUTUA grouping as part of this study is an administrative entity of the LIUTUA chiefdom in ISANGI territory, TSHOPO Province. It is limited to EST by the KOMBE chiefdom, to WEST by the LUETE sector, to the SOUTH by the LIBANDE grouping and to the NORD by the BAMBELOTA sector. This grouping consists of 11 villages including TOLAW, YABWANZA, YABOALI, YATUMBO,

YABOSIMBA, BOMBULA, YABONGONDA, BAUTU, MOSENGE, LITEMA, LIGASA- ETAT. 10 first villages were selected for our study.

The climate is of the AWA type, according to the Koppen classification. It is a warm and humid tropical climate with 4 months of dry season. The soils are essentially clay-sandy textures. Soil quality is better suited to agriculture.

The vegetation cover is formed of savannahs, forests and hydromorphic soil formation.

The villages in this group are connected by streams and streams whose main stream remains the LOKOMBE River.

Activities focus mainly on food crops (Manioc, maize, rice, bananas), fruit crops (safoutier (*Dacriodes edulis*) Percea American (avocado).

The tools used for this agriculture remain rudimentary; machetes, axes, hoes, swath stones and limes, etc. The breeding in the LIUTUA grouping is that of small cattle; goat, pig, hen and duck. This activity remains secondary because of the epidemics.

The few heads that remain are rambling and are used to receive distinguished visitors (meals, gifts) and also used during major festivals or customary ceremonies: marriage, death (thus a prestigious breeding).

2.3 Study material

The study material for this research remains itinerant agriculture on burns, which is being targeted because of these harmful effects on the environment.

2.4 Methodology

To conduct this study, we used documentation, surveys, observation and data compilation.

III. RESULTS

Table 1. Age of respondents

Age range	Frequency	%
20 years	10	20
30 to 50 years old	30	60
50 years	10	20
Total	50	100

Source: Field Survey, 2019.

Table⁰¹ shows that of the 100% of respondents, 60% are between the ages of 20 and 50, while 20% of respondents are those under the age of 20 and over 50.

Table 2. Sex of farmers

Sex	Frequency	%
masculin	35	70
Female	15	30
Total	50	100

Source: Ditto

It follows from the table above that 70% of farmers are men and 30% are women.

Table 3. Educational level

Level	Frequency	%
Primary	25	50
Secondary	23	46
University	2	4
Total	50	100

Source: Ditto

From the table on the level of education, it should be noted that 50% of farmers attended primary schools, 46% of those surveyed in secondary schools and 4% of farmers carved out the university. By the way, 90% of those who practice this subsistence agriculture have not followed an agricultural or agronomic sector.

Table 4. Income allocation generated

Assignment	Frequency	%
Power	16	32
Health care	11	22
Schooling	14	28
Equipment	9	18
Total	50	100

Source: Ditto

Table⁰⁴ shows that the income generated by the travelling farmer is mainly used to cover household food expenditure (32%), schooling (28%), health care (22%) and home equipment (18%).

Table 5. The impact of itinerant agriculture on the environment

Impact	Frequency	%
Disappearance of forest cover	7	14
Soil loss	4	8
Loss of arable land	8	16
Disappearance of plant and animal species	23	46
Changing the micro-climate	8	16
Total	50	100

Source: Ditto

The results of the table above indicate that 46% of respondents noted the disappearance of rare plant and

animal species, 16% cited the loss of arable land and the modification of the micro-climate, 14% raise the disappearance of forest cover, 8% align the loss of soils among the negative impacts caused by the overburdened.

Table 6. Consequences of on burns on the environment

Consequence	Frequency	%
Climate change	7	14
Desertification	10	20
Deforestation	10	20
Soil depletion	12	24
Water pollution	2	4
Scarcity of animal and plant species	9	18
Total	50	100

Source: Ditto

From this table⁰ 6, we can say that 24% of respondents supported soil depletion, 20% note desertification and deforestation, 18% speak of the scarcity of animal and plant species, 14% support climate change, 4% point to water pollution.

Table 7. Mitigation solutions

Solution	Frequency	%
Sustainable agriculture	10	20
Reforestation	15	30
Education and awareness	10	20
Agroforestry	5	10
Funding for the agricultural sector	10	20
Total	50	100

Source: Ditto

The results of Table⁰ 7 state that 30% of respondents raised reforestation, 20% maintain sustainable agriculture, education and awareness and financing from the agricultural sector, 10% of farmers note agroforestry as measures to mitigate, compensate and improve the impacts of itinerant agriculture on burns.

IV. CONCLUSION

Our study was to assess the impacts of itinerant agriculture on burns carried out in the LIUTUA grouping in DD'ISANGI territory, TSHOPO Province.

Analysis of the results revealed that this subsistence agriculture has generated and is still generating negative impacts for which certain mitigation measures have been proposed.

It should be noted, however, that the diversity of life forms on earth is essentially linked to the survival of humanity. To meet this challenge, sustainable agriculture, that is, that is, that is capable of ensuring food security, providing more jobs and income, and contributing to the eradication of poverty, while safeguarding natural resources and protecting the environment, will have to be expected to meet this challenge.

Bibliography

MECNEF, PNAE, 1999, National Strategy and Biodiversity Action Plan, General Secretariat for The Environment, Nature Conservation, Fisheries and Forests, Kinshasa-DRC, P 133.

- MAFUKA, 2002, environmental impact of human activities, UNIKIN, Kinshasa-DRC, P65.
- REAMAEEKERS, 2001, Agriculture in Tropical Afrique, DCC, Brussels, Belgium, P.1634.
- JEAN NOEL Marie et al, 2013, When the city eats the forest. The challenges of wood-energy in Central Africa, ed. Quae, France, P.119.
- DRC, 2011, Law⁰ 11/009 of 9 July 2011 dealing with key environmental management fundamentals in the DRC.
- DRC, 2011, Act 11/022 of 24 December 2011 dealing with the main fundamentals of agriculture in the DRC.
- Marien JN, Malet. B.2004, New perspectives for forest plantations in Central Africa, Woods and forests of the tropics.
- Karpe, P,2010, developing a roadmap for plantation protection. Report of the MAKALA project, Kinshasa, crad.