



FOREST LANDSCAPE RESTORATION:

A STRONGER COLLABORATION IS NEEDED BETWEEN
BIOPHYSICAL AND SOCIAL SCIENCES

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We support the



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The views expressed in this information note are those of the author who alone lays claim to any shortcomings or errors.



1. INTRODUCTION

Under the African Forest Landscape Restoration Initiative (AFR100), launched in 2015, the governments of 33 African countries have pledged to restore 129.5 million hectares of deforested and degraded forests and lands by 2030. Currently, there are 17 countries from West and Central Africa and 16 countries from Eastern and Southern Africa. AFR100 is a country led initiative where African countries collaborate with 39 technical and 13 financial partners.

The main objective of this information note is to engage a scientific debate on what should be forest landscape restoration (FLR) under the AFR100 initiative and what should be counted to fulfill countries' pledges by 2030. This is an important exercise to carry out to raise the scientific debate and the need to consolidate the methodological approaches among monitoring partners with the goal of helping countries and the AFR100 Secretariat in their annual reporting for the State of AFR100 Implementation. This will increase the collaboration between technical partners of AFR100 and between biophysical and social sciences.

2. AFR100 AND THE RATIONAL CHOICE THEORY OF TWO OUTCOMES

The theoretical approach of AFR100 is better understood when examining the tradeoff between conservation (environment) and development as illustrated in table 1. Environment and Development have each two possible outcomes: WIN or LOSE (Ndoye, 2022).

Table 1: Trade off between conservation and development

CONSERVATION	WIN	LOSE
DEVELOPMENT		
WIN	****	
LOSE		

Conservation means increased forest cover; improvement in biodiversity; carbon sequestration; soil fertility; ecosystem services; water quality, air improvement etc..; that is, all environmental benefits of Forest Landscape Restoration.

 $\textbf{Development} \ \text{means social, economic, and livelihood benefits for human/people/landscape actors.}$

AFR100 is interested in the win-win box (table 1), that is, having environmental, social, economic and livelihood benefits simultaneously(see section 3)

In situations of win-lose (conservation wins) and lose-win (development wins), technical and/or policy recommendations are needed in order to change the undesired results so that they align with the AFROO approach (win-win outcomes).

In a situation of win-lose, there is a need for example to improve market access and marketing strategies; provide training in entrepreneurial development, among others;

In the case of lose-win, there is a need to stop killing trees to market the fruits, the firewood or the timber. In this situation, there is a need to plant more trees and to promote sustainable harvesting technics to preserve the trees themselves. The case of lose-lose is undesirable, but it can happen in case of fire devastating all the restored areas. Fire threatened the world and Africa. In general, 90 percent of fires are caused by humans. In Africa human causes of fires are very important. In addition, Africa accounts for about 70 percent of the total area burned by fire around the world. In Central African Republic, 120000 hectares of land had burned so far in 2022.



3. WHEN SHOULD WE SAY THAT A RESTORED AREA IS AFR100?

Under the AFR100 initiative, restoration should take place in already deforested and degraded forests (ITT0, 2020) and lands, in areas where there are no or very little environmental, social, economic and livelihood benefits which constitute the baseline situation. This justifies the pledges made by African governments. Therefore, fertile lands and forests are never converted to other alternative uses under the AFR100 approach. In situations where this happens we should never mention AFR100 because it is contrary to the approach that should be used. This is very important to note to avoid false interpretation and misunderstanding. This implies that restored areas should be closely monitored in terms of before and after restoration.

Following this logic, a restored area should only be counted as fulfilling country's pledge to AFR100 if environmental, social, economic and livelihood benefits are accounted for at the same time which may require a minimum of three years for tree planting because of the progress in tree domestication which has reduced the production cycle of many important trees while maintaining their characteristics and particularly their consumer preference attributes. For soil fertility enhancement, the process can be shorter than three years. In the Far North Region of Cameroon, a GIZ project has restored the fertility of degraded land in 2 years by producing compost using Crotalaria and *Mucuna pruriens* associated with organic manure (https://youtu.be/wIVNQzJNHJU). For the use of Farmer Managed Natural Regeneration (FMNR) the process could be longer than three years. However, more scientific debate is needed to get consensus on all these and related issues.

According to Arakwiye et al. (2021), we know little about the impact of restoration in Africa. Furthermore, according to these authors, the Maradi and Zinder regions of Niger are always cited as restoration success, but there is little evidence that it led to poverty reduction and biodiversity improvement. To address this challenge, AUDA-NEPAD has capitalized AFR100 technical partners' monitoring methods/tools/platforms and came up with a consolidated AFR100 monitoring platform, drawing on the strengths of AFR100 technical partners. This AFR00 monitoring platform has three pillars: environment, economic (meaning socio-economic) and governance. Each pillar has several indicators that provide information on the impact of AFR100 implementationif compared with the baseline information. Furthermore, the AFR100 monitoring platform encourages a strong collaboration between biophysical and social scientists to achieve the win-win outcomes of the AFR100 approach.

A restored area under the AFR100 approach will have the following impacts compared with the baseline information:

- Increase in forest cover and carbon sequestration to combat climate change;
- Improvement in biological diversity; soil fertility; ecosystems and ecological functions of the forests; air and water quality; reduction in dust;
- Increase in employment opportunities for rural communities by providing green jobs to women, youth and marginalized groups;
- Increase in rural incomes:
- Improvement in food security and nutrition of populations;
- Reduction in gender inequality;
- Reduction in discrimination against marginalized groups.

In summary, AFR100 is a win-win approach where there are simultaneously environmental, social, economic and livelihood benefits. Any component missing makes the outcome not to be fully in line with the AFR100 approach. Therefore, a deforested, and degraded forests and lands may well be restored thereby fulfilling the environment pillar of the AFR100 monitoring approach but it will not be fully in line with the AFR100 approachif the social and economic components are not reported. This is an important contribution that Arakwiye et al. (2021) made in their excellent article cited above. Fortunately for the AFR100 initiative, the AFR100 monitoring platform has incorporated this dimension in the approach, and it will be operationalized through the "restoration help desk".

4. CONCLUSIONS

Thirty-three African countries have pledged to restore 129.5 million hectares of deforested and degraded forests and lands to the AFR100 initiative. Therefore, a close monitoring of how these 129.5 million hectares are restored will be very important to make sure they all comply with the AFR100 approach, that is, having environmental, social, economic and livelihood benefits simultaneously. Indeed, converting good forests and fertile lands to other alternative uses does not comply with the AFR100 approach since this goes against the commitment made by African governments which focusses only on restoring deforested and degraded forests and lands. The AFR100 monitoring platform, drawing on the strengths of technical partners is a good initiative that will provide evidence on where restoration is taking place, and who benefits and how from restoration intervention. The outcomes will directly connect with the Sustainable Development Goals (SDGs) and Agenda 2063 of the African Union. The AFR100 monitoring platform will also encourage a stronger collaboration between biophysical and social scientists.



5. REFERENCES

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[i] In the case of timber harvesting, reduced impact logging (RIL) could be promoted.
[ii]The indicators of the AUDA-NEPAD AFR100 monitoring platform will provide the necessary information.
[iii] CIFOR-ICRAF is the world leader in tree domestication in Africa.

