

AFR100 PULSE

HARNESSING AFRICA'S FLR SPIRIT

RESTORATION AND THE
CONTRIBUTION
OF AFR100 PRODUCTS TO
FOOD SECURITY AND
NUTRITION IN AFRICA

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We support the



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1. INTRODUCTION

Under the AFR100 initiative, 34 African countriesⁱ have pledged to restore 129,700,000 hectares of degraded forests and lands by 2030. This implies that all products, called AFR100 products, coming from the restored degraded forests and lands, are deforestation free and are composed of agricultural, livestock, agroforestry, forestry, and aquaculture products that contribute to the food security and nutrition of the African populations. This is very important because currently the annual cost of Africa's food imports is estimated at 55 billion USD and could double by 2030ⁱⁱ.

The objective of this information note is to show the contribution of AFR100 products to food security and nutrition. The main argument of this note is that AFR100 products can fill the food deficit gap and the under-nourishment that prevails in Africa if all technical and financial partners of the AFR100 initiative work hand in hand to help member countries fulfill their commitment to AFR100.



2. CONTRIBUTION OF AFR100 PRODUCTS TO FOOD SECURITY IN AFRICA

AFR100 products, obtained from restored degraded forests and lands include vegetable products (cucumber, tomatoe, carrot, beet etc...), fruit trees (avocado, papaya, soursoup, oranges, apple, mango, etc...), agricultural products (maize, millet, sorghum, rice, etc...), agroforestry and forestry products (cashew, shea butter, gum arabic, macadamia, cacao, coffee, oil palm, tamarind, honey, moringa, shea butter, marula, baobab, etc...)ⁱⁱⁱ

AFR100 products provide food, fuelwood, fruits, leaves, medicinal products, construction materials and incomes. The contribution of AFR100 products to food security needs to be investigated to inform governments, AUDA-NEPAD/AFR100 Secretariat and technical and financial partners of the AFR100 initiative on the real potential of restoration and its relationship with food security. This is very important since Africa is challenged by a high food deficit gap exacerbated by the consequences of the Covid 19 pandemic, the conflict between Russia and Ukraine, and the negative effect of climate change.

According to the Food and Agriculture Organization of the United Nations (FAO)^{iv}, food security is assured when all individuals at all times have economic, social and physical access to enough food, which satisfy their nutritional and food preferences for an active and healthy life. Food security has four pillars: availability, access, utilization and stability.

AFR100 products contribute to food security in several ways :

a) **On the supply side**, the contribution can be described as the direct harvest/use of the AFR100 products (agricultural, vegetable, fruits, leaves, nuts) for consumption, thereby providing the necessary nutrients needed by human well-being. For example, in Chad, the Great Green Wall Initiative has put in place several Integrated Agricultural Community Farms (FACIs) managed by women and youth to produce vegetables and other products to enhance food security. Kenya and other AFR100 countries produce macadamia nuts in restored areas^v. Macadamia nuts contribute to food security. Fodder is also produced in restored areas to feed livestock in order to get healthy and productive animals which will at the end be consumed by the population and/or will increase national milk production. Fuelwood is an AFR100 product which is used to cook food that is consumed to enhance the food security of rural family farms. Medicinal plants extracted from restored degraded forests and lands are used to cure common ailments due to the high costs of using modern medicine. Furthermore, moringa (*Moringa oleifera*) and other non-timber forest products (NTFP) enhance the food security of people living in AFR100 countries. Beside indicated uses, the production and marketing of these products has huge potential in creating alternative source of income and employment opportunities for rural communities and others at various stages of the respective value chains.

b) **On the demand side**, the contribution can be illustrated from the sales of AFR100 products in order to purchase food. **Table 1 shows** the utilization of the revenues from the sales of AFR100 products [(non-timber forest products (NTFP))] in Democratic Republic of Congo (DRC) and Chad and its link with the Sustainable Development Goals (SDGs) and Agenda 2063 of the African Union.

Table 1. Utilization of the revenues from sales of AFR100 Products (NTFP) and Relationship with SDGs and Agenda 2063

AFR100 Countries	Utilization of revenues from sale of AFR100 products	% allocation of sale of AFR100 products	Links with SDG and Agenda 2063 ^{vi}
DRC	Purchase of Food	32%	SDG 1 No Poverty; SDG2 No Hunger; Goal 1 of Agenda 2063
	Children Education	26%	SDG4 Inclusive and equitable education
	Family Health	14%	SDG3 Good Health and Well-Being; Goal 3 of Agenda 2063
	Clothing	Purchase of Food 10%	SDG1 No Poverty; Goal 1 of Agenda 2063
	Others	18%	
TOTAL		100%	
	Purchase of Food	32%	SDG 1 No Poverty; SDG2 No Hunger; Goal 1 of Agenda 2063
	Children Education	14%	SDG4 Inclusive and equitable education
	Family Health	26%	SDG3 Good Health and Well-Being; Goal 3 of Agenda 2063
	Clothing	14%	SDG1 No Poverty; Goal 1 of Agenda 2063
	Others	13%	
TOTAL		100%	

Source : Author's own investigations



3. CONTRIBUTION OF AFR100 PRODUCTS TO NUTRITION IN AFRICA

As table 2 shows, AFR100 products are rich in vitamins and minerals (calcium, magnesium, iron, potassium and zinc). This implies that the restoration of degraded forests and lands under the AFR100 initiative can have a very strong impact on the nutrition of the populations of Africa. Recent figures from FAO et al. (2020)^{vii} show that the number of undernourished and food insecure people increased in all regions in Africa between 2015 and 2019. For example, in West Africa, the number of undernourished people increased from 50.3 million people to 59.4 million, while the number of food insecure people increased from 43.9 million people in 2015 to 67.4 million in 2019 (FAO et al., 2020). For Central Africa, the number of undernourished people increased from 43.5 million people in 2015 to 51.9 million in 2019.



Table 2 : Nutritional values (mg) of selected AFR100 products

NTFP/Fruit Trees/Vegetables	Calcium	Magnesium	Iron	Potassium	Zinc	Vitamin A	Vitamin E
Honey	20.3	6.8	1.4	176	0.7		--
Maracuja (Passion fruit)	12	29	1.6	348	0.10	1274 IU	--
Vitellaria paradoxa (Shea butter)	30.24	6.24	52	61.7	0.72	--	--
Tamarindus indica (Tamarind)	74	92	2.8	8	0.10	30 IU	10.8
Moringa oleifera (Moringa)	2185	448	25.6	1236	--	--	-
Ziziphus mauritiana (Jujube)	5.9	2.8	0.1	70	-	11.2 IU	-
Balanites aegyptiaca (Dattier du désert)	141	73	4.94	2220	0.65	--	--
Dacryodes edulis (Safou, Atanga)	350.24	285.8	3.5	546.45	3.76	--	--
Irvingia gabonensis (Bush mango)	120	--	2.4	--	--	--	--
Cola acuminata (Kola nut)	124.4	114.8	16.4	3484.6	2.3	--	--
Palm wine	3.85	31.33	3.2	--	0.12	20.76	--
Adansonia digitata (Baobab)	410	270	6.4	910	5.2	--	--
Pineapple	13	12	<1	109	<1	--	--
Papaya	24	10	<1	257	<1	--	--
Avocado	10	24	<1	351	<1	--	--
Red tomatoes	8.14	10.1	0.12	256	0.087	--	0.66
Maize	7.0	127	2.71	287	2.21	11µg	0.49
Rice	14	7.1	0.04	16	0.26	--	<0.08

Source: **Honey:** amounts per 1 cup (339), USDA national nutrient base; **Maracuja:** amounts per 100g, USDA national nutrient base; **Vitellaria paradoxa:** amounts per 100g, Raimi et al (2014); **Tamarind:** amount per 100g, USDA national nutrient data base; **Moringa oleifera:** Moringa oleifera : A review on nutritive importance and its medicinal application <https://www.sciencedirect.com/science/article/pii/S2213453016300362>; **Jujube:** amounts per ounce (28gr), Wikipedia encyclopedia; **Balanites aegyptiaca:** amount per 100gr, Sagna et al (2014); **Dacryodes edulis,** amount per 100g, Omogbaie and Ojeaburu (2010); **Irvingia gabonensis:** amount per 100g, Wikipedia encyclopedia; **Cola acuminata:** amount per kg, Odebunmi et al. (2008); **Palm wine:** Augustine Chima Ogbonna et al (2013); **Adansonia digitata:** amount per 100g, Magdi A.Osman (2004); **Pineapple, Papaya and Avocado,** Pauline Donn et al. (2014) ; **Red tomatoes :** https://www.passeportsante.net/fr/Nutrition/EncyclopedieAliments/Fiche.aspx?doc=tomate_nu; **Maize :** <https://wikifarmer.com/fr/valeur-nutritionnelle-du-mais-et-bienfaits-pour-la-sante/>; **Rice :** https://www.passeportsante.net/fr/Nutrition/EncyclopedieAliments/Fiche.aspx?doc=riz_nu

It can be seen from table 2, that forests and agroforests products are richer in calcium, magnesium, iron, potassium than agricultural, vegetable and fruit trees products. This implies that these AFR100 products should be favored in forest landscape restoration (FLR) strategies aimed at improving food security and nutrition in Africa while increasing environmental benefits.



4. ACTIONS NEEDED TO INCREASE THE CONTRIBUTION OF AFR100 PRODUCTS TO FOOD SECURITY AND NUTRITION IN AFRICA

The **following actions** are necessary to further improve the contribution of AFR100 products to food security and nutrition in Africa :

- a) Ensure that rural communities have secured access to the degraded forests and lands pledged by African governments, paying particular attention to women and youth.
- b) Empower women to be more involved in the valorization of AFR100 products. The more women are empowered, the more likely the family welfare will be enhanced. This means that investing in women and in forest landscape restoration (FLR) is positively correlated with improvement in household well-being;
- c) Promote the development of small and medium enterprises (SMEs) involved in AFR100 products, through access to finance and capacity development, as it is being done through the Land Accelerator Africa Program and Terra Fund for AFR100^{viii};
- d) Include AFR100 products in national food security, poverty reduction and women and youth employment strategies;
- e) Supply high quality seed and planting materials that will increase the production of AFR100 products in a significant manner (**i.e., shifting the supply curves of AFR100 products upward and to the right**).
- f) Mobilize private sector and financial institutions' investments and suggest robust win-win restoration business models that will guaranty returns to investments while ensuring environment and socio-economic benefits.
- g) Ensure the security of private sector and financial institutions' investments by giving them **long-term leases** on the degraded forests and lands to be restored, **rather than** giving them **private ownership**. This will reduce conflicts with surrounding communities.
- h) Reduce or eliminate policy bottlenecks limiting private sector and financial institutions' investments in FLR.

5. CONCLUSION

This information note shows that African policy makers, members of the AFR100 initiative should take advantage of their pledges to improve food security and nutrition in their respective countries through the production of AFR100 products. This is not to say that the involvement of African governments to the initiative will eliminate food and nutritional insecurity but it can reduce it significantly. AFR100 technical and financial partners have a big role to play to increase the contribution of AFR100 products to food security and nutrition in Africa by continuing to accompany member countries. This will have high impact by increasing the potential of reducing the current food deficit gap and nutrition insecurity in the countries, members of the AFR100 initiative.





NOTES

[i] The latest admission is Botswana with a pledge of 200000 ha of degraded forests and lands.

[ii]https://www.scidev.net/sub-saharan-africa/news/africas-food-imports-bill-could-double-by-2030/?gclid=CjwKCAjwrJ-hBhB7EiwAuyBVXSU7WhHqFeUUzUXS1j0tSXzkU_T_0PRwroMtvbnEaa0g9bC6o6UV6xoCDKcQAvD_BwE

[iii] All these AFR100 products are also produced by beneficiaries of **the Land Accelerator Africa Program** and **Terra Fund for AFR100** (see more in note v below).

[iv]<https://www.google.com/search?q=definition+of+food+security+by+fao&oq=definition+of+food+security&aqs=chrome.1.69i57j0i512l9.14024j1j7&sourceid=chrome&ie=UTF-8>

[v] See the beneficiaries of the Land Accelerator Africa Program and Terra Fund for AFR100.

[vi] Agenda 2063 is Africa's strategic framework for an inclusive and sustainable development (<https://au.int/en/agenda2063/overview>).

[vii] FAO, IFAD, UNICEF, WFP and WHO (2020). The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. Rome, FAO.

[viii] **The Land Accelerator Africa Program** is led by the World Resources Institute (WRI) in **collaboration** with AUDA-NEPAD/AFR100 Secretariat and SIDA. **Terra Fund for AFR100** is led by the World Resources Institute (WRI) in **collaboration** with Fledge, Mitsubishi Corporation Foundation, One Tree Planted and Realize Impact.

