



UNCTAD's propagation of the myth of Africa's huge food dependence

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On 11 August 2020 Paul Akiwumi, Director of UNCTAD Division for Africa, Least Developed Countries and Special Programmes, wrote in an article on OECD and UNCTAD websites that “*From 2016 to 2018, Africa imported about 85% of its food from outside the continent, leading to an annual food import bill of \$35 billion, which is forecast to reach \$110 billion by 2025*”, and this statement has been rapidly circulating worldwide.

Happily an in-depth research shows that, in the 2016-18 period, the share of food imports from outside Africa on food consumption was on only 17,7% in Africa, of which 29.2% in North Africa, 13.1% in Sub-Saharan Africa (SSA) and 12.6% in West Africa (WA).

If one of the most imported food in Africa concerns cereals – which accounted for 28.2% of total food imports value from 2016 to 2018 in Africa, of which 66.2% in North Africa, 26.3% in SSA and 34.5% in WA –, taking into account the African production in terms of nutritional energy value, the share of imports in the combined consumption of all cereals plus roots-tubers-plantains was on only 12.1% in Africa in the 2016-18 period, of which 44.3% in North Africa, 6.3% in SSA and 5.5% in WA.

Circulating widely the idea that Africa is importing 85% of its food consumption is highly humiliating for its small farmers, pastoralists and fishermen who, despite all the hurdles put against their hard work, are to the contrary marginalizing food imports value to a mere 17.7%. At the same time this assertion has stirred up the greed of foreign multinationals who are proposing more than ever their conventional model of Western intensive agriculture to raise

African food production. What is also distressing is that the "Agreement in Principle" concluded on 15 April 2021 between the EU and ACP chief negotiators for the successor to the Cotonou Agreement wants to enlarge the objectives of the Economic Partnership Agreements and to support the African Continental Free Trade Area (AfCFTA).

Rebuilding Africa's agricultural development on food sovereignty should be based on five pillars: a radical reform of agricultural land tenure; a guarantee of remunerative agricultural prices in the long run; the promotion of agro-ecological production systems; the compensation of agricultural price increases for consumers and the change of their eating habits.

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Introduction

On May 8, 2021 in a webinar on African economic sovereignty from Dakar, the main panelist presented on a slide the statement of Paul Akiwumi, Director of UNCTAD *Division for Africa, Least Developed Countries and Special Programmes*, that “*From 2016 to 2018, Africa imported about 85% of its food from outside the continent, leading to an annual food import bill of \$35 billion, which is forecast to reach \$110 billion by 2025*”, statement made in an article published on 11 August 2020 by OECD¹ and UNCTAD².

In other words Paul Akiwumi is saying that 85% of the food consumed by Africans is imported from outside the continent so that 15% is either imported from inside the continent or that Africa does not produce any food. Furthermore, in macroeconomic terms, consumption is equal to production plus imports minus exports (initial and final stocks are not available), which do not appear in its statement, even food exports within the continent. Clearly African food exports outside the continent do not correspond to Africa's basic food needs but to those of foreign multinationals (cocoa, coffee, tea, spices, tropical fruits...) because they are more profitable (at least in the short run) but the production factors used for them (land, labour, equipment, inputs) could be reallocate to produce African basic food needs.

As this statement astonished me, I made a research on the UNCTAD data center (from which Paul Akiwumi claims to have got his data) to assess Africa's imports and exports of food as well as on FAOSTAT for the value of food production at farm gate for the 2016 to 2018 years (however I have extended the calculation from 2010 to 2019).

After a first part clarifying the actual share of imports in food consumption value, the second part will analyze the volume of the basic vegetable staples made of cereals and roots-tubers-plantains (RTP), the third part will focus on the dissemination of Paul Akiwumi's statement so far and the fourth part will propose the food policy that Africa should follow to minimize its food imports, boost employment, reach the SDGs and protect the environment. To account for the diverse ecological and geopolitical contexts of Africa we analyse also the data for North Africa (Algeria, Morocco, Tunisia, Lybia and Egypt), Sub-Saharan Africa (SSA) and West Africa (WA).

1 <https://oecd-development-matters.org/2020/08/11/covid-19-a-threat-to-food-security-in-africa/>

2 <https://unctad.org/fr/node/3092>

I – The actual share of food imports from outside Africa and food production

1.1 – Distinction between agricultural trade and food trade

Before concentrating on food trade we need first to differentiate in Table 1 between *agricultural imports* – according to the list of agricultural products in Annex 1 of the WTO Agreement on agriculture (AoA), with the nomenclature of the Harmonised System which excludes fish and preparations – and *food imports*, incorporating only food products (including fish and preparations) with the Standard International Trade Classification (SITC) nomenclature because many people tend to confuse both concepts, and first the DG Trade in the European Commission using the mixed concept of “agri-food trade” to hide its food trade deficit until 2018 despite a growing agricultural surplus.

For the calculation of food trade outside Africa, as the UNCTAD classification differentiates between “all food items” – comprising SITC codes 0+1+22+4, where code 1 contains tobacco (11) and beverages (12) – and “Food basic” (comprising SITC codes 0 + 22 + 4), I have added beverages only to Food basic.

Table 1 (in annex) shows that the share of Africa’s food trade balance in agricultural trade balance outside Africa was of 77.2% in 2019 for Africa (69.5% in the 2016-18 period), of which 72.2% for North Africa (76.7% in the 2016-18 period), 105.6% for SSA (38% in the 2016-18 period) and 324.2% for WA (-184% in 2016-18).

1.2 – Africa’s food imports, gross production value and share of imports on consumption

1.2.1 – Gross food imports and net food imports

Assessing food imports from outside Africa may be understood in two ways: extra-Africa gross imports and extra-Africa net imports, deducting exports, as shown in table 2.

Table 2 – Africa’s gross food imports and net food imports (minus exports)

\$billion	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2016-18
Africa food imports from extra-Africa											
Africa	50134	76062	74010	70433	74395	61411	57746	63863	63464	66919	61691
NAF	24584	34454	35521	33482	36546	30483	28196	29945	28966	30074	29036
SSA	25550	41608	38488	36951	37849	30928	29550	33918	34498	36845	32656
WA	10836	20950	16406	15249	16112	12833	11184	12942	13664	15829	12597
Africa net food imports (imports-exports) from extra-Africa											
Africa	18322	40384	40590	36167	36249	22808	19670	21057	19444	22031	20057
NAF	16926	26196	27736	24728	27161	20213	18235	18949	16869	17533	18017
SSA	1396	14188	12853	11438	9088	2595	1435	2108	2575	4498	2040
WA	-718	7954	4776	4289	3122	-997	-1621	-1728	-1112	3976	-1487

1.2.2 – Gross production value of African food

The gross production value (GPV) of food at farm gate was rather complex to assess because FAOSTAT data on food – available until only 2018 – does not include that of fisheries (and aquaculture). There are a lot of publications on world fisheries, including annual FAO reports, which give a lot of data in volume but none gives the GPV although several give the gross value added (GVA). For Africa the only source available is the FAO report on “*The value of African fisheries*” of 2014 written by Gertjan de Graaf (FAO consultant of the Netherlands), and Luca Garibaldi of FAO³, which relies on figures of 2011 with actual data collected from a sample of countries and then extrapolated to the whole Africa. The total GVA was of \$17.368 billion (bn)

3 <http://www.fao.org/3/i3917e/i3917e.pdf>

of which \$14.592 bn for fisheries and \$2.776 bn for aquaculture. But the GPV was only available for the sampled countries of which the ratio GPV/GVA was of 1.44 for fisheries and of 1.066 for aquaculture. Applying these ratios to the whole production we get a GPV of \$21.012 bn for fisheries and \$2.959 for aquaculture, or a total of \$23.971 bn for fisheries + aquaculture and a ratio of 1.388 for GPV/GVA. We keep this average ratio to assess the GPV for the whole period 2010-19.

However, as Africa's net exports of unprocessed fish doubled from 2010 to 2019 (multiplied by 2.07, that we round at 2), we assume that fish production doubled also, implying an average annual growth rate of 7.18%.

Table 3 summarizes the data on Africa's gross production value (GPV) of food, distinguishing between that excluding fish (from FAO), that on fish and the total with fish. It shows also the total food available by adding table 2 data on gross and net food imports to get finally the share of imports on food consumption, from 2010 to 2019, particularly for the average 2016-18.

Finally we see that, in the 2016-18 period, the share of food imports from outside Africa on food consumption was on only 17,7% in Africa, of which 29.2% in North Africa, 13.1% in SSA and 12.6% in WA.

In contrast, the share of net food imports (minus exports) in the 2016-18 period from outside Africa on food consumption was on only 6.5% in Africa, of which 20.4% in North Africa, 0,9% in SSA and -1.7% in WA (traducing a food surplus). In both case we are very far indeed from the 85% alleged by Paul Akiwumi.

Table 3 – Africa's gross production value of food and share of imports on consumption

\$billion	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2016-18
Gross food production value (excluding fish) at farm gate											
Africa	275285	297425	305770	317278	313977	267097	245553	245052	25498		248527
NAF	84690	91275	81890	84520	75842	71812	63573	58993	59663		60743
SSA	190594	206150	223880	232758	238135	195285	181980	186059	195313		187784
WA	97826	102922	108780	114841	120613	90832	78800	70252	78599		75884
Gross production value of fish and aquaculture at farm (fisherman) gate											
Africa	25335	25750	27599	29581	31705	33981	36421	39036	41839	44843	39099
NAF	7794	7902	7391	7880	7658	91361	9429	9397	9790	10960	9539
SSA	17541	17848	20208	21701	24047	24845	26992	29639	32049	33883	29560
WA	9003	8911	9819	10707	12179	11556	11688	11191	12897	13692	11925
Total gross food production value at farm gate											
Africa	300620	323175	333369	346859	345682	301078	281974	284088	296815		287626
NAF	92485	99177	89281	92400	83500	80948	73003	68390	69453		70282
SSA	208135	223997	244088	254459	262182	220130	208971	215698	227362		217344
WA	106829	111833	118599	125548	132792	102388	90488	81443	91496		87809
Food consumption value: production + gross food imports											
Africa	350754	399237	407379	417292	420077	362489	339720	347951	360279		349317
NAF	117069	133631	124802	125882	120046	111431	101199	98335	98419		99318
SSA	233685	265605	282576	291410	300031	251058	238521	249616	261860		250000
WA	117665	132783	135005	140797	148904	115221	101672	94385	105160		100406
Food consumption value: production + net food imports											
Africa	318942	363559	373959	383026	381930	323886	301644	305145	316259		307683
NAF	109410	125374	117018	117129	110661	101161	91238	87339	86322		88299
SSA	209531	238185	256941	265897	271270	222725	210406	217806	229938		219383
WA	106111	119787	123375	129837	135915	101390	88867	79716	90385		86323
Share of food imports on food consumption											
Africa	14,29%	19,05%	18,17%	16,88%	17,71%	16,94%	17,00%	18,35%	17,62%		17,7%
NAF	21,00%	25,78%	28,46%	26,60%	30,44%	27,36%	27,86%	30,45%	29,43%		29,2%
SSA	10,93%	15,67%	13,62%	12,68%	12,62%	12,32%	12,39%	13,59%	13,17%		13,1%
WA	9,21%	15,78%	12,15%	10,83%	10,82%	11,14%	11,00%	13,71%	12,99%		12,6%
Share of net food imports (minus exports) on food consumption											
Africa	5,7%	11,1%	10,9%	9,4%	9,5%	7,0%	6,5%	6,9%	6,1%		6,5%
NAF	15,5%	20,9%	23,7%	21,1%	24,5%	20,0%	20,0%	21,7%	19,5%		20,4%
SSA	0,7%	6,0%	5,0%	4,3%	3,4%	11,7%	0,7%	0,1%	1,1%		0,9%
WA	-0,8%	6,6%	3,9%	3,3%	2,3%	-0,1%	-1,8%	-2,2%	-1,2%		-1,7%

Source: UNCTAD, FAOSTAT and various sources for fish production value

Table 4 summarizes these data.

Table 4 – Share of food imports in food consumption in Africa on average from 2016 to 2018

In US\$ billion	Africa	Northern Africa	Sub-Saharan Africa	Western Africa
Food production	287.6	70.3	217.3	87.8
Food imports	61.7	29	32.7	12.6
Food consumption (without exports)	349.3	99.3	250.0	100.4
Imports/Consumption (without exports)	17.7%	29.2%	13.1%	12.6%
Food exports	41.6	11	30.6	14.1
Net food imports	20.1	18	2.1	-1.5
Food consumption	307.7	88.3	219.4	86.3
Net imports/Consumption	6.5%	20.4%	6.9%	-1.7%

II – The import volume and nutritional value of cereals and roots-tubers-plantains

As one of the most imported food in Africa concerns cereals – which accounted for 28.2% of total food imports value from 2016 to 2018 in Africa, of which 66.2% in North Africa, 26.3% in SSA and 34.5% in WA –, table 5 (in annex) presents the tonnage of imported cereals, differentiating between cereals mostly imported (CMI: wheat, milled rice and barley)⁴ and those mostly produced in Africa (MPA: maize, sorghum and millet) from 2010 to 2019, fonio imports being almost nil. On average in 2016-18 imports of cereals mostly imported were 3.1 times larger in volume for Africa, twice for North Africa, 7.9 times for SSA and 21.1 times for WA. During the same period wheat imports were 3.1 times larger than those of rice in Africa, of which 61.6 times larger in North Africa, 1.2 times larger in SSA but 4.4% lower in WA. However, given the importance of other basic energy food represented by roots and tubers (cassava, yam, potato, sweet potato, taro) and plantains (RTP), we add them even if there are little imports because their share in production and consumption of energy food is large.

Nevertheless the high rate of cereals mainly imported (CMI) in all cereals imports does not tell us everything in the overall import dependency on consumption of energy staple as we must add the production of African roots-tubers-plantains (RTP), given in table 6 (in the annex). Even if imports of fonio are almost nil its production is not insignificant but we hide it in the column of total CMA production (CMA) to limit the number of columns.

Now adding tables 5 and 6 in table 7 gives the share of imports of cereals and roots-tubers-plantains (RTP) in the consumption of Africans, even if we should have deducted also the African exports of cereals outside Africa but they are very small. To minimize the number of lines, table 7 presents only the data for the average of 2016 to 2018. Finally we see that the share of all imported cereals has represented only 32.5% of the cereals consumption in Africa, of which 53.7% in North Africa, 21.4% in Sub-Saharan Africa and 23,5% in West Africa. As for the share of imported roots-tubers-plantains (RTP) in their consumption it is negligible, despite that potatoes are the main imports: 0.4% for Africa, of which 3.3% in North Africa, 0.3% in SSA and 0.2% in WA.

⁴ Other temperate cereals (triticale, rye and oats) are not included.

Table 7 – Share of imports of cereals and RTP in the consumption of Africans in 2016-18

Tonnes	Rice	Wheat	Barley	CMI	Maize	Sorghum	Millet	CMA	All cereals	RTP
Production										
Africa	22325686	26291057	2814559	51431302	82005889	29592362	14087038	126975310	178406612	311826082
NAfri	3036645	19113303	3808159	25958107	7324992	6171881	1668327	15165200	41123307	13350678
SSA	19289041	7177754	2561057	29027852	74680897	23420481	12418711	111810110	137283305	298475404
WA	12998890	109253	1487	13109630	22541598	13348799	9631956	46167363	59276993	177507390
Imports										
Africa	15312424	46796302	2814559	64923285	20040755	858046	70695	20969496	85892781	1287754
NAfri	463131	28544221	2747764	31686036	15611302	325850	10953	15948104	47634140	454784
SSA	14849192	18252081	66795	33168068	4429453	-300545	58902	4187810	37355878	832971
WA	8874667	8487360	8077	17370104	809275	7719	4896	821890	18191994	339599
Production + imports										
Africa	37638110	73087359	5629118	116354587	102046644	30450408	14157733	147944806	264299393	313113836
NAfri	3499776	47657524	6555923	57644143	22936294	6497731	1679280	31113304	88757447	13805462
SSA	34138233	25429835	2627852	62195920	79110350	23119936	12477613	115997920	174639183	299308375
WA	21873557	8596613	9564	30479734	23350873	13356518	9636852	46989253	77468987	177846989
Share of imports on (Production + imports)										
Africa	40,7%	64,0%	50,0%	55,8%	19,6%	2,8%	0,5%	14,2%	32,5%	0,4%
NAfri	13,2%	60,0%	41,9%	55,0%	68,1%	5,0%	0,7%	51,3%	53,7%	3,3%
SSA	43,5%	71,8%	2,5%	53,3%	5,6%	-1,3%	0,5%	3,6%	21,4%	0,3%
WA	40,6%	98,7%	84,5%	57,0%	3,5%	0,006%	0,005%	1,7%	23,5%	0,2%

Let us stress here the importance of RTP as a source of calories intake. According to a report of January 2017 published by the French Development Agency (AFD): *“Although roots and tubers are more commonly grown in coastal countries, it should be remembered that their energy productivity is much higher than that of cereals and that the development of these plants can constitute a form of agricultural intensification. Cassava and yams, which are gradually spreading in West Africa, have a greater potential than cereals to meet the growing energy demand, given future demographic trends. The calorie production per hectare for these starch crops is in fact twice that of rice and maize and five times that of millet and sorghum (see Table 1). However, these products are poorly taken into account in food policies”*⁵. According to the following table the average nutritional energy value of RTP in Africa in the 2016-18 was about 881 kcal/kg or 274,7 billion (bn) kcal, compared to 80,5 bn kcal for rice, 105,2 bn kcal for wheat, 11.1 bn kcal for barley, 258.9 bn kcal for maize, 39 bn kcal for millet and 84.3 bn kcal for sorghum, or a total of 579 bn kcal for all cereals. Which implies that the African consumption of RTP was equal to 47.4% of the kcal of all imported and African cereals while they accounted for 85.9% of the quantity of all cereals produced and imported (table 6) so that we can build another table 8 adding 47.4% to the energy value of RTP, which will lower much the share of imports on total energy consumption of cereals + RTP.

Table 8 shows that, in terms of nutritional energy value, the share of imports in the combined consumption of all cereals plus RTP was on only 12.1% in Africa during the period 2016-18, of which 44.3% in North Africa, 6.3% in Sub-Saharan Africa and 5.5% in West Africa. A conclusion which dwarfs the claim of the African Development Bank (AfDB) and UNCTAD that Africans are importing 85% of their food consumption even if cereals plus RTP are only a significant part of all imported food.

5 <https://www.afd.fr/fr/ressources/lafrique-la-conquete-de-son-marche-alimentaire-interieur-enseignements-de-dix-ans-denquetes-aupres-des-menages-dafrique-de-louest-du-cameroun-et-du-tchad>

Table 8 – Share of imports of cereals and RTP in the energy consumption of Africans in 2016-18

	All cereals	RTP	147,4% RTP	Cereals+147,4% RTP
Production				
Africa	178406612	311826082	459631645	638038257
North Africa	41123307	13350678	19678899	60802206
SSA	137283305	298475404	439952746	577236050
West Africa	59276993	177507390	261645893	320922886
Imports				
Africa	85892781	1287754	1898149	87790930
North Africa	47634140	454784	670352	48304492
SSA	37355878	832971	1227799	38583677
West Africa	18191994	339599	500569	18692563
Production + imports				
Africa	264299393	313113836	461529794	725829187
North Africa	88757447	13805462	20349251	109106698
SSA	174639183	299308375	441180545	615819728
West Africa	77468987	177846989	262146462	339615449
Share of imports in (Production + imports)				
Africa	32,5%	0,4%	0,4%	12,1%
North Africa	53,7%	3,3%	3,3%	44,3%
SSA	21,4%	0,3%	0,3%	6,3%
West Africa	23,5%	0,2%	0,2%	5,5%

Table 9 transforms table 8 in per capita consumption levels and in nutritional energy for the same 2016-18 period. The share of imports in the combined consumption volume of cereals + RTP does not change for the per capita consumption in nutritional energy but its level has increased much, culminating in 915 kg of nutritional value in West Africa

Table 9 – Per capita share of imports of cereals and RTP in the consumption of Africans: 2016-18

Kg per capita	Population 1,000 inhabit.	Per capita consumption in kg			Per capita in kcal of nutritional energy	
		All cereals	RTP	Cereals+RTP	147,4% RTP	Cer.+147,4% RTP
Production						
Africa	1244395	143	251	394	369	513
North Africa	191977	214	70	284	103	317
SSA	1052417	130	284	414	418	548
West Africa	371230	160	478	638	705	864
Imports						
Africa	1244395	69	1	70	2	71
North Africa	191977	248	2	250	3	252
SSA	1052417	35	0,8	36	1	37
West Africa	371230	49	0,9	50	1	50
Production + imports						
Africa	1244395	212	252	464	371	583
North Africa	191977	462	72	534	106	568
SSA	1052417	166	284	450	419	585
West Africa	371230	209	479	688	706	915
Share of imports on (Production + imports)						
Africa	1244395	32,5%	0,4%	15,1%	0,4%	12,1%
North Africa	191977	53,7%	3,3%	46,9%	3,3%	44,3%
SSA	1052417	21,4%	0,3%	8,1%	0,3%	6,3%
West Africa	371230	23,5%	0,2%	7,3%	0,2%	5,5%

Clearly these basic caloric products provided by cereals and RTP do not encompass all food but they do already show that Africa's food consumption relies first and foremost on its own production despite all the impediments African farmers have been facing for decades.

III – The dissemination of Paul Akiwumi's statement and some comments

Now the issue is to know how extensively this UNCTAD statement – that 85% of Africa's food consumption depends on imports – has been circulating all over the world as it might influence largely African food policies as well as those of the "international community" in a wrong way. So that I made additional research on internet and found the following statements, not exempted of large contradictions.

Already in his article for OECD and UNCTAD, Paul Akiwumi shows that he did not look carefully at UNCTAD data as he claims that Africa is facing “*an annual food import bill of \$35 billion*” from 2016 to 2018 when the actual data were of 61.9 bn, with an average of \$65.8 bn from 2010 to 2019, of which \$66.9 bn in 2019 (table 2).

In fact Paul Akiwumi did not bother to look at UNCTAD data but relied on a statement of the African Development Bank (AfDB) report “*Feed Africa, the road to agriculture transformation in Africa*”⁶ of October 2017, in which the first sentence of the presentation of the report by the President of the AfDB is: “*Each year, Africa spends far too much on food imports – approximately US\$35 billion in 2016. Left unchecked, the figure is expected to surge to US\$110 billion by 2025*”. Let us add that, further on in the report, 2016 has been replaced by 2015: “*These food imports are expected to grow from the US\$35 billion that they stood at in 2015 to over US\$110 billion by 2025*”. The report tells us that these figures were released during a high-level ministerial conference from 21 to 23 October 2015 in Dakar on “*Feed Africa: An Action Plan for African Agricultural Transformation*”, to which “*Over 600 participants attended... including African finance, planning and economy ministers and ministers of agriculture and rural development, selected ministers of industry and trade, as well as central bank governors. Other participants included professionals from research institutes, academia and investment agencies, representatives from civil society organizations, and experts from across the continent and beyond*”.

And this AfDB statement has been reproduced in a “Position paper” of 25 November 2020 on “*African agriculture in the context of COVID-19: Finding salvation in the devil*” by the President of the African Association of Agricultural Economists (AAAE), Guy Blaise Nkamleu, who is also the Lead Economist of the AfDB, stating that “*Increased food demand and changing consumption habits driven by demographic factors such as population growth and urbanisation are leading to rapidly rising net food imports, which are expected to grow from US\$ 35 billion in 2015 to over US\$ 110 billion by 2025 (AfDB 2016)*”⁷. In this article G. B. Nkamleu states also that “*Africa’s food and agricultural imports amount to between \$45 billion and \$50 billion a year*”. But table 1 shows that, on average from 2010 to 2019, Africa’s agricultural imports have reached \$81.9 bn (of which \$79.3 bn in 2015) and food imports \$65.8 bn (of which \$61.4 bn in 2015).

Seleman Yusuph Kitenge – currently serving as a Speech Writer in the Office of the CEO of the African Union Development Agency and previously part of the European Commission - One Young World Peace Ambassador programme⁸ – repeated on 25 February 2021 in the article “*Towards the UN Food Systems Summit: A Common Voice from Africa*” : “*UNCTAD notes that from 2016 to 2018, Africa imported about 85% of its food from outside the continent, leading to an annual food import bill of \$35 billion, which is forecast to reach \$110 billion by 2025*”. Incidentally we did not find where this anticipated figure of \$110 bn by 2025 comes from. The first footnote of the detailed report of the Conference states only that “*Net food imports are estimated at \$111 bn by 2025*”, without more source reference and this statement is ambiguous because “*net food imports*” is usually understood as imports-exports or deficit!

The Senior Agribusiness Consultant George Kanyeki wrote also on 23 October 2020 that “*During the period 2016 to 2018, Africa imported about 85% of its food from outside the*

6 https://afdb-org.cn/wp-content/themes/meteo/pdf/Brochure_Feed_Africa_-En.pdf

7 <https://aaae-africa.org/news/position-paper-african-agriculture-context-covid-19-finding-salvation-devil>

8 https://media.africaportal.org/documents/Globalization_and_the_covid_19_pandemic.pdf

continent, leading to an annual food import bill of \$35 billion, which is forecast to reach \$110 billion by 2025”⁹.

At least the report of the Dakar Conference acknowledges that “Although imports are increasing, domestically produced food represents a larger share of diets”¹⁰. Another more detailed report of the conference states that “around a third of all calories consumed in Africa are imported, resulting in a negative net agricultural trade balance of US\$35 bn per year in 2015”¹¹. And the CGIAR (Consultative Group on International Agricultural Research) Council Meeting of February 8-11, 2016 on the Dakar Conference states: “Currently, one-third of all calories consumed in Africa are imported at a cost of US \$77 billion per year”¹². As we have shown these two statements are not too far from the truth if we consider only cereals.

IV – Some hints to rebase Africa’s food policies on food sovereignty

4.1 – The suicidal African food policies prioritizing food exports

A first remark is that circulating widely the idea that Africa is importing 85% of its food consumption is highly humiliating for the small African farmers, pastoralists and fishermen who, despite all the hurdles put against their hard work, are to the contrary marginalizing food imports value to a mere 17.7% and the import volume of cereals and RTP to a mere 12.1% as we have shown.

A second remark is that this hugely false idea that Africa is importing 85% of its food basket has to the contrary stirred up the greed of foreign multinationals who are proposing more than ever their conventional model of Western intensive agriculture to raise African food production. Thus, during the Dakar Conference it was said that “Over the past 8 years, the Alliance for a Green Revolution (AGRA) and other players have teamed up with African governments to improve access to quality inputs for farmers. The most successful outcomes have been based on a value chain approach. In some cases, yields of staple food crops have doubled and incomes for millions of Africa farmers boosted as a result. To date, as a result of AGRA-led initiatives, start-up grants have been made available to more than 100 seed companies in 18 African countries... Biotechnology innovations are also already being applied in Africa for the transformation of agriculture, and these can be developed and scaled up... The major benefits of GM include cost savings (e.g. on pesticides), environmental protection (i.e., less use of chemicals/pesticides), and new opportunities for nutritional enhancement. Political will and capacity-building are needed for uptake of GM technology, including involvement of the private sector... Now is the time to send the hoe to the museum... Land tenure is also important for security of financial investments. Rwanda has now registered all plots and provided owners (both husbands and wives) with titles. Land is now tradable and can be used as collateral to access loans... Moving Africa to the top of global value chains”.

The most amazing is that, among the hurdles facing African low productivity and competitiveness no mention was made, along its 72 pages report, of the highly subsidized food

9 https://www.linkedin.com/pulse/covid-19-threat-food-security-george-kanyeki/?trk=public_profile_article_view

10 https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Dakar_Report_-_Greenink_-_Draft.pdf

11 <https://www.tralac.org/documents/resources/africa/1750-afdb-feed-africa-strategy-for-agricultural-transformation-in-africa-2016-2025/file.html>

12 <https://storage.googleapis.com/cgiarg/2016/01/CGIAR-FARA-Support-to-Feed-Africa-Initiative.pdf>

imports from the EU and US and of the EPAs (Economic Partnership Agreements) although they will reduce 80% of the customs revenues on food imports from the EU and lower those on cereals and milk powder from the already very low 5% to 0. The fact that it was the President of Senegal, Macky Sall, who convened this Dakar Conference during his Presidency of the ECOWAS Commission may explain that he managed that this issue of EPAs and EU subsidies would not be alluded to. The ALECA agreements that the EU tries to impose to Maghreb States are not much better. For example annual EU subsidies to its food exports to West Africa were of €235 million (M) in 2019 for dairy products, €205 M for cereals and preparations and €97 M for poultry meat and preparations (which mainly concern subsidies to feed consumed by poultry). All these factors have greatly reduced the competitiveness of regional food products and caused many job losses and lack of future for the young Africans who are thus induced to risk their lives either to try to reach the EU on small boats or to enroll in jihadist movements as a last resort. For a good understanding of the danger of the EPAs, ALECA and the AfCFTA, you may read two books¹³ and one article¹⁴.

What is even more distressing is that the "Agreement in Principle" concluded on 15 April 2021 between the EU and ACP chief negotiators for the successor agreement to the Cotonou Agreement provides in Article 50 that "4. *The Parties, taking into account the need to build on their existing preferential trade agreements and Economic Partnership Agreements (EPAs) as instruments of their trade cooperation, recognise that cooperation will be mainly enhanced to support the practical implementation of these existing instruments*"¹⁵. And Article 16 of the Regional Protocol for Africa adds: "*The parties agree that the implementation of the EPAs, the African Continental Free Trade Area and other relevant trade agreements are complementary and mutually supportive, while contributing to the deepening of the regional and continental integration process within the framework of the AU's trade and structural transformation agenda*".

4.2 – How to rebuild African food policies on food sovereignty to reach SDGs

Rebuilding agricultural development on food sovereignty should be based on five pillars: a radical reform of agricultural land tenure; a guarantee of remunerative agricultural prices in the long run; the promotion of agro-ecological production systems; the compensation of agricultural price increases for consumers and the change of their eating habits.

4.2.1 – A radical reform of agricultural land tenure

Instead of promoting the individualistic Western agricultural land tenure, even if it is generalizing in urban areas, Africa must confirm and extend the traditional village land rights that distributes production rights among a large number of peasants gathered in village communities. For land is part of the *commons*. The sociologist Denis Paulme reported in 1963 that: "*In my opinion, the land belongs to a large family, many of whose members are dead, a*

¹³ J. Berthelot, "*Did you say FREE trade? The Economic Partnership Agreement European Union-West Africa*", L'Harmattan, September 2018; Martine Boudet (coord.), "*Résistances africaines à la domination néocoloniale*"¹³, of which chapter 6 on "*La stratégie de l'Union européenne pour perpétuer la néocolonisation de l'Afrique*".

¹⁴ J. Berthelot, *The confrontation of two development strategies, particularly agricultural development, in Africa after COVID-19*, ATTAC, 26 June 2020: <https://france.attac.org/nos-publications/les-possibles/numero-24-ete-2020/dossier-la-transformation-du-systeme-productif/article/l-affrontement-de-deux-strategies-de-developpement-notamment-agricole-en>

¹⁵ <https://bilaterals.org/?eu-acp-post-cotonou-agreement-44167-44167-44167-44167-44167-44167-44167-44167-44167-44167-44167-44167>

*few are alive, and most of whom are still unborn... Ultimately, land rights are part of the status of people, they are an aspect of it: to be without land would be to be without parents, an inconceivable situation... The ties between people count more than the rights to things*¹⁶. The guarantee for Chinese peasants to have a permanent access to their plot of land in the village explains both why they did not hesitate to go and work for a large part of the year, or even several years in a row, in the big cities, especially in the east of the country, while being assured of finding their plot of land in returning to the village¹⁷.

4.2.2 – Guaranteeing remunerative agricultural prices in the long run

In view of the growing food deficit in Africa given the forthcoming population explosion, the priority is to promote the production of basic foodstuffs, which implies guaranteeing remunerative prices to producers in the long run. This can be done by applying the tools that were so effective for EU farmers before the 1992 CAP (Common Agricultural Policy) reform: variable import levies represented by the difference between the remunerative prices retained for the crop year at the wholesale stage in a representative area and the CIF (cost-insurance-freight) prices in one of the main ports on national or regional territory. Since variable levies are set in national currency, this provides much better protection than *ad valorem* customs duties representing a percentage of the CIF import price generally denominated in dollars or euros, given the sharp fluctuation in world prices in dollars and exchange rates. Raising agricultural prices to a remunerative level would be spread over a period of 5 to 10 years, along with measures to protect the purchasing power of disadvantaged households.

In order for remunerative agricultural prices to stimulate farmers' production, all the necessary accompanying measures need to be financed by the State and/or local authorities upstream and downstream production level: access to agricultural credit at reasonable rates, road improvements, dissuasive penalties for illegal levies by law enforcement agencies on the marketing of products, minimum infrastructure and monitoring of the proper functioning of local markets, aid for the constitution of village stocks of food products and monitoring of speculation by traders.

4.2.3 – Promoting agro-ecological production systems

While, under the guise of *double green agriculture*, multinational agribusiness firms and even the African Development Bank are trying to promote the dominant conventional model of production systems intensive in chemical fertilizers, pesticides and heavy motorization, and even GMOs, it is essential to promote labour-intensive agroecological systems on small farms to combat the greenhouse effect and maintain biodiversity and sustainable higher yields. The best and cheapest means of extension is to finance exchanges of experience between farmers.

4.2.4 – Compensating consumers for food price increases

The necessary increase in producer prices must not penalize the vast majority of consumers with very limited purchasing power who already spend a large part of their budget on food. All the more that, otherwise, this would foster riots, as during the soaring food prices of 2008-09.

The solution to this problem may be solved by two means:

¹⁶ <https://www.jstor.org/stable/24348259?seq=1>

¹⁷ Zihan Ren, *Research on the Rural Revitalization Strategy from the Perspective of Sino-US Trade War*, 2019, <https://www.atlantis-press.com/proceedings/bems-19/125907419>

1) The first is to implement national Modern Monetary Theory (MMT) policies¹⁸ through monetary printing by the State as growing African basic staple foods in agroecological production systems can be done without significant imports. In fact this is the best domain in which a MMT policy would be the most efficient.

2) If implementing a MMT policy is not feasible a recourse to the financing of international aid at a very low cost over a decade is possible by funding extensive domestic food aid programmes modelled on the policies of India, the US and Brazil (of President Lula). Households would receive vouchers to buy local food products in approved shops according to their standard of living, and the availability of food products would be enhanced by helping to build up village (or rural commune) stocks paid at minimum prices to producers, but avoiding the building up of massive stocks difficult to maintain in good condition and involving bureaucratic management. In India there is a per capita allocation of 5 kg per month of basic grains (mainly wheat and rice) to 75 % of the rural population and 50 % of the urban population, with additional allocations to some disadvantaged groups including pregnant women and young children and subsidized school lunches. Based on India's example this would imply for SSA, where 60% of the population was rural in 2018, to subsidize 42.5 million tonnes of local food products (cereals, dried beans, vegetable oil, RTP) per year. A first approximation of the necessary funding, in case implementing MMT policies would not be possible, would be around \$15 bn per year, which could be mobilized through concessional loans from the IDA (International Development Agency), a subsidiary of the World Bank, with a 35-year maturity and a 10-year grace period. This may sound very high, but it would be very cost-effective in reducing Africa's food deficit, combating the greenhouse effect, improving biodiversity while creating the tens of millions of jobs each year for young people entering the labour market.

4.2.5 – Changing the eating habits of African consumers

Changing the eating habits of Africans is necessary by diverting them from consuming imported foodstuffs that Africa's ecology does not allow to grow at competitive yields and prices. These are mainly wheat and, to a lesser extent, rice. In SSA, wheat production – limited to East Africa from Eritrea to South Africa because the climate in WA and Central Africa prohibits its production – has increased from 4,5 million tonnes (Mt) in 1999-2000 to 7.9 Mt in 2019-20, an increase of 2.70% per year and, as the population grew by 2.62% per year (from 637 million in 2000 to 1.094 bn in 2020), per capita production was practically stagnant (+ 0.08%)¹⁹. On the other hand, rice production increased from 7.2 Mt to 19.2 Mt, i.e. by 4.80% per year and 2.10% per capita per year. But wheat imports increased faster than rice imports: from 7.9 Mt in 1999-2000 to 26.2 Mt in 2019-20, i.e. by 5.9 % per year, compared to 4.9 Mt to 13.5 Mt for rice, i.e. by 4.9 % per year. As wheat exports rose from 257 000 t to 960 000 t, consumption (equal to production + imports - exports) rose from 12.1 Mt to 33.1 Mt, an increase of 4.9 % per year, and per capita consumption rose by 2.3 % per year. As rice exports increased from 18 000 t to 365 000 t, consumption rose from 12.1 Mt to 32.3 Mt, an increase of 4.8 % per year, or 2.2 % per head per year, practically at the same rate as for wheat. In total, the consumption of wheat + rice rose from 24.2 Mt to 65.5 Mt, while that of local cereals (millet + sorghum + maize) rose from 67.8 Mt to 85.6 Mt, reflecting a 64% increase (from 26.4% to 43.3%) in the share of wheat + rice in total cereal consumption.

¹⁸ Stephany Kelton, *The deficit myth*, 2020 (<https://stephaniekelton.com/>) and https://www.youtube.com/watch?v=28atgck_11A,

¹⁹ USDA PS&D online database: <https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery>

This is because local cereal yields have increased very little in 20 years: by 0.14 % per year for millet (from 694 kg/ha to 715 kg) and 0.82 % for sorghum (from 820 to 973 kg) even though they increased by 1.18 % for maize (from 1,590 kg to 2,033 kg, as it benefited from fertilizers on cotton in WA). As the United Nations anticipate a population of 2.168 billion in SSA in 2050, up 2.22 % per year from 2020, maintaining the annual rate of increase in per capita consumption from 1999-2000 to 2019-20 would rise wheat imports to 130 Mt and rice imports to 51 Mt. With wheat prices expected to rise sharply, SSA will not be able to finance imports so that there is an urgent need to change eating habits.

Indeed, the price of wheat will inevitably increase because yields have been plateauing for 15 years in exporting countries – although not limited in their use of chemical fertilizers and pesticides – and that they will decrease in developed countries, especially in Europe, given the decrease in the use of chemical pesticides and fertilizers desired by the population and the promotion of organic agriculture with lower yields. As Arab and West Asian countries with arid climates do not have the alternative of consuming tropical cereals and RTP like in SSA, and will be better able to afford higher wheat prices, SSA countries will face an unsustainable import bill. This is why the WA regional EPA and the IEPAs of Côte d'Ivoire and Ghana are criminal, as they provide for a reduction in the tariff on wheat imports from the EU from 5 % to 0 %. This could only lead to more imports of heavily subsidized EU wheat and more bread, pasta and couscous being consumed, delaying the day when consumers will not be able to buy them. Current projects to introduce local cereal flour or cassava flour into bread are a lesser evil in the very short term as the percentage of such flour is limited to 15 % (in the World Bank-CNCR project in Senegal) or at best 30 % (in the AFD-SOL project in Senegal). What is imperative is to promote Latin American food models based on maize tortillas and large cassava pancakes. These recipes can be extended to millet and sorghum, for which significant yield increases are possible, following the example of Ethiopia.

Annexes

Table 1 – Africa's agricultural and food trade outside Africa from 2000 to 2019

1,000 US\$	Agricultural products			Food products			Food/agricultural
	Imports	Exports	Balance	Imports	Exports	Balance	Balance
Africa							
2010	62312250	35731727	-26580523	50133875	31811695	-18322180	68,9%
2011	81892128	45004155	-36887973	76062418	35677982	-40384436	1,1%
2012	84216978	43225103	-40991875	74009505	33419662	-40589843	99%
2013	88564976	49659538	-38905438	70433108	34266408	-36166700	93,0%
2014	91828142	52601100	-39227042	74394884	38146264	-36248620	92,4%
2015	79299383	51158749	-28140634	61411411	38603436	-22807975	81,0%
2016	75455653	49209617	-26246036	57746235	38075809	-19670426	74,9%
2017	85263718	55012914	-30250804	63863117	42805903	-21057214	69,6%
2018	86186429	56120974	-30065455	63464419	44020573	-19443846	64,7%
2019	84253870	55715889	-28537981	66918896	44888044	-22030852	77,2%
North Africa							
2010	28234486	6643120	-21591366	24583755	7657977	-16925778	78,4%
2011	38393143	9921062	-28472081	34454134	8257813	-26196321	92,0%
2012	38848927	8793674	-30055253	35521453	7785028	-27736425	92,3%
2013	38762876	10233656	-28529220	33482009	8753555	-24728454	86,7%
2014	40008436	9656237	-30352199	36545668	9384946	-27160722	89,5%
2015	35018090	11084956	-23933134	30483487	10270694	-20212793	84,5%
2016	33000830	9989553	-23011277	28196123	9961012	-18235111	79,2%
2017	35022212	11943953	-23078259	29944879	10996072	-18948807	82,1%
2018	36996117	12636798	-24359319	28966018	12097518	-16868500	69,2%
2019	37274773	12994419	-24280354	30073998	12541216	-17532782	72,2%
Sub-Saharan Africa							
2010	34077764	29088607	-4989157	25550120	24153718	-1396402	28,0%
2011	43498985	35083093	-8415892	41608284	27420170	-14188114	168,6%
2012	45368051	34431429	-10936622	38488053	25634634	-12853419	117,5%
2013	49802100	39425882	-10376218	36951100	25512853	-11438247	110,2%
2014	51819706	42944863	-8874843	37849216	28761318	-9087898	102,4%
2015	44281293	40073793	-4207500	30927924	28332742	-2595182	61,7%
2016	42454823	39220064	-3234759	29550112	28114797	-1435315	44,4%
2017	50241506	43068961	-7172545	33918238	31809831	-2108407	29,4%
2018	49190312	43484176	-5706136	34498401	31923054	-2575347	45,1%
2019	46979097	42721470	-4257627	36844899	32346828	-4498071	105,6%
West Africa							
2010	12789128	10419021	-2370107	10835550	11553457	717907	-30,3%
2011	16535346	14294549	-2240797	20949728	12995404	-7954324	355%
2012	17269647	12839575	-4430072	16406410	11630253	-4776157	107,8%
2013	18832747	12320216	-6512531	15248755	10960011	-4288744	65,9%
2014	19817288	15245258	-4572030	16112342	12989980	-3122362	68,3%
2015	16464198	14558666	-1905532	12832970	13830403	997433	-52,3%
2016	15102626	16139909	1037283	11183515	12804159	1620644	156,2%
2017	18680204	17168733	-1511471	12942432	14669998	1727566	-114,3%
2018	18630194	17751535	-878659	13664342	14776061	1111719	-126,5%
2019	17263952	17141330	-122622	15829336	15431746	-397590	324,2%

Source: UNCTAD for agricultural products and FAOSTAT for food products

Table 5 – Africa's tonnage of imported cereals and RTP from 2010 to 2019 and average for 2016-18

Tonnes	Milled rice	Wheat	Barley	All CMI	Maize	Sorghum	Millet	All CMA	All cereals	RTP
Africa										
2010	9067620	38190279	1352940	48610839	13756216	826950	77007	14660173	63271012	792522
2011	11404610	40394449	1238354	53037413	14722854	1066774	18469	15808097	68845510	845862
2012	13948562	41327649	1615330	56891541	15126192	852743	28254	16007189	72898730	1085620
2013	14137164	40352525	2328194	56817883	14153472	848152	51161	15052785	71870668	1172801
2014	13817789	45936978	2495021	62249788	18623956	867269	28334	19519559	81769347	1241858
2015	12233980	43027331	3003059	58264370	19362561	1118078	42106	20522745	78787115	1306582
2016	13654545	48442245	4009849	66106639	22754766	995415	41061	23791242	89897881	1302562
2017	15950024	46606203	2411445	64967672	21060453	983634	116381	22160468	87128140	1302016
2018	16332402	45340457	2022384	63695243	16307045	595088	54644	16956777	80652020	1258685
2019	16163392	44067513	1681841	61912746	19198599	398433	36510	19633542	81546288	1224436
2016/18	15312424	46796302	2814559	64923285	20040755	858046	70695	20969496	85892781	1287754
North Africa										
2010	229497	24366258	1288684	25847416	12297419	140099	36043	12473561	38320977	358694
2011	432693	24946016	1094772	26445036	12937392	343527	3514	13284433	39729469	379943
2012	617262	25845736	1512990	27832945	12636530	227586	5399	12869515	40702460	417450
2013	384113	24935706	2255966	27467387	12323569	149997	6427	12479993	39947380	468819
2014	234403	29787169	2356822	32351897	16348698	169907	10363	16528968	48880865	401058
2015	319270	26692018	2815732	29726753	16199319	71955	11217	16282491	46009244	435358
2016	350722	30762341	3961076	35005839	16419791	177381	11132	16608304	51614143	521695
2017	426141	27150302	2322984	29823425	16606982	113317	10199	16730498	46553923	450871
2018	612531	27720020	1959232	30228845	13807132	686851	11527	14505510	44734355	391785
2019	961792	25604417	1621842	28139743	16345664	723247	13654	17082565	45222308	403001
2016/18	463131	28544221	2747764	31686036	15611302	325850	10953	15948104	47634140	454784
Sub-Saharan Africa										
2010	8838123	13824021	64256	22726400	1458797	625157	73493	2157447	24883847	433828
2011	10971917	15448433	143582	26563932	1785462	698155	13070	2496687	29060619	465919
2012	13331300	15481913	102340	28915553	2489662	697362	21827	3208851	32124404	668170
2013	13753051	15416819	72228	29242098	1829903	1046123	40798	2916824	32158922	703982
2014	13583386	16149809	138199	29871394	2275258	818034	17117	3110409	32981803	840800
2015	11914710	16335313	187327	28437350	3163242	870317	30974	4064533	32501883	871224
2016	13303823	17679904	48773	31032500	6334975	-91763	30862	6274074	37306574	780867
2017	15523883	19455901	88461	35068245	4453471	-324814	104854	4233511	39301756	851145
2018	15719871	17620437	63152	33403460	2499913	-485058	40990	2055845	35459305	866900
2019	15201600	18463096	59999	33724695	2852935	-354628	-36983	2461324	36186019	821435
2016/18	14849192	18252081	66795	33168068	4429453	-300545	58902	4187810	37355878	832971
West Africa										
2010	5874011	5885140	1872	11761023	207756	40435	14690	262881	12023904	186391
2011	7290477	5900444	2926	13193847	178714	30712	3330	212756	13406603	188797
2012	8623461	6222776	2653	14848890	428697	70848	9824	509369	15358259	247735
2013	8467319	6522244	495	14990058	253125	30604	2929	286658	15276716	181119
2014	8651115	7060383	0	15711498	508170	11194	3557	522921	16234419	260123
2015	6842317	7525922	5	14368244	480906	9992	5687	496585	14864829	317488
2016	7939946	7403900	7459	15351305	587118	5984	6585	599687	15950992	327030
2017	9175381	9615697	8449	18799527	1018682	2654	4900	1026236	19825763	346668
2018	9508674	8442482	8323	17959479	822026	14518	3204	839748	18799227	345100
2019	8312226	8307904	4344	16624474	679943	4709	6233	690885	17315359	331274
2016/18	8874667	8487360	8077	17370104	809275	7719	4896	821890	18191994	339599

Source: FAOSTAT

Table 6 – Africa's production of cereals and RTP from 2010 to 2019 and average for 2016-18

Tonnes	Milled rice	Wheat	barley	CMI	Maize	Sorghum	Millet	CMA	All cereals	RTP
Africa										
2010	17054371	21343370	6738736	39750681	66710348	25073258	16135254	109038610	148789291	235592757
2011	17621260	25321592	6653304	44181206	66255807	23992068	10234250	101645623	145826829	241084249
2012	19369895	24653285	6136910	45638510	72392963	23582941	12246883	109374229	155012739	265400764
2013	19163795	28062462	7253498	49554451	71693317	25285393	11535782	109735198	159289649	277675944
3014	19903582	25434229	6120309	47832832	79520786	29314517	12465908	122558423	170391255	290687553
2015	19901058	29084156	7561489	51988273	74036895	26181955	12271112	113777814	165766087	294091589
2016	21959752	23292929	4842505	49262530	73818863	30320906	13411050	118825797	168088327	303477053
2017	21982250	26512024	6566569	50905719	89301924	28079136	12763858	131464778	182370497	312528708
2018	23035055	29068219	7698573	54125658	82896881	30377045	16086206	130635356	184761014	319472484
2019	25860518	26921248	6884764	54463607	81891311	28619588	13701709	125613610	180077217	330204531
2016/18	22325686	26291057	2814559	51431302	82005889	29592362	14087038	126975310	178406612	311826082
North Africa										
2010	2937258	16015956	4526363	23479577	7358508	3338694	483400	11180602	34660179	10413590
2011	3814031	19399337	4477015	27690383	7143206	5454231	648220	13245657	40936040	11747187
2012	4005295	18153014	3722252	25880561	8239842	3014766	390752	11645360	37525921	12545839
2013	3860024	21133722	4739251	29732997	8121874	5291679	1101700	14515253	44248250	13030151
3014	3680281	18538081	3547231	25765593	8211220	7091531	1256567	16559318	42324911	13195891
2015	3277333	22190296	4977548	30445177	7952609	3473486	496953	11923048	42368225	13510760
2016	3595451	16116350	2057198	21768999	8003507	7201719	1459564	16664790	38433789	12788645
2017	3368755	19655691	4071824	27096270	8688152	5065981	888312	14642445	41738715	13462161
2018	2145728	21567868	5295455	29009051	5283318	6247943	2657104	14188365	43197416	13801229
2019	4526814	19208179	3919365	27654358	7525472	4511534	1142928	13179934	40834292	14358016
2016/18	3036645	19113303	3808159	25958107	7324992	6171881	1668327	15165200	41123307	13350678
Sub-Saharan Africa										
2010	14117113	5327414	2212373	21656900	59351840	21734564	15651854	97858008	114129112	225179167
2011	13807229	5922255	2176289	21905773	59112601	18537837	9586030	88399966	104890789	229337062
2012	15364600	6500271	2414658	24279529	64153121	20568175	11856131	97728869	117486818	252854925
2013	15303771	6928740	2514247	24746758	63571443	19993714	10434082	95219945	115041399	264645793
3014	16223301	6896148	2573078	25692527	71309566	22222986	11209341	105999105	128066344	277491662
2015	16623725	6893860	2583941	26101526	66084286	22708469	11774159	101854766	123397862	280580829
2016	18364301	7176579	2785307	28326187	65815356	23119187	11951486	102161007	129654538	290688408
2017	18613495	6856333	2494745	27964573	80613772	23013155	11875546	116822333	140631782	299066547
2018	20889327	7500351	2403118	30792796	77613563	24129102	13429102	116446991	141563598	305671255
2019	21333704	7713069	2965399	32012172	74365839	24108054	12558781	112433676	139242925	315846515
2016/18	19289041	7177754	2561057	29027852	74680897	23420481	12418711	111810110	137283305	298475404
West Africa										
2010	8043422	128070	1333	8172825	15267474	12875424	13131627	41834400	50007225	130698880
2011	8231626	203021	1343	8435990	16219581	10076390	7414052	34291772	42727762	132287440
2012	9727862	149277	1359	9878498	17276180	11562414	9236563	38650878	48529376	138034545
2013	9883080	119780	1378	10004238	17086995	10961076	7941785	36600209	46604447	140303012
3014	10760809	145829	1430	10908068	18870989	12268751	8415009	40183355	51091423	164428280
2015	11157182	110896	1400	11269478	20253506	12985050	9082229	42964711	54234189	166845784
2016	12492894	116091	1430	12610415	21924286	13441975	9268357	45272107	57882522	176300255
2017	12728328	109391	1463	12839182	22223205	12780319	9114409	44777863	57617045	178715092
2018	13775447	102278	1569	13879294	23477302	13824104	10513101	48452119	62331413	177506822
2019	13977675	81787	1574	14061036	24318809	13344676	9552444	47916430	61977466	183373779
2016/18	12998890	109253	1487	13109630	22541598	13348799	9631956	46167363	59276993	177507390

Source: FAOSTAT

Table 7 – AFD's estimates of yield and energy value of cereals and RTP in West Africa in 2009-13

	Yield in West Africa 2009-2013 in t/ha	Energy value in Kcal/kg*	Energy value in Gcal/ha**
Millet	0.74	2,778	2.05
Sorghum	0.96	2,884	2.78
Sweet potato	3.35	946	3.17
Potato	4.78	664	3.17
Milled rice	3.19	3,604	5.15
Maize	1.73	3,157	5.45
Plantain	6.35	890	5.65
Cassava	12.45	905	11.27
Yam	11.56	999	11.55

Source: AFD authors' calculations based on FAOSTAT data; * kcal/kg or 1,000 kcal per tonne ; ** Gcal or Giga kcal means one million kcal