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Department for Agriculture,
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Regional Agricultural Policy
(ECOWAP)

REPUBLIC OF LIBERIA

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NEPAD
Comprehensive Africa Agriculture
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(CAADP)

LIBERIA

Long-Term Funding for Agricultural Growth, Poverty Reduction, and Food Security

The amount of funding required for meeting both growth and poverty reduction targets as detailed in Brochure 2 (Agricultural Growth, Poverty Reduction, and Food Security: Past Performance and Prospective Outcomes) is estimated based on historical relationships between the level of public agricultural funding and agricultural GDP.

Estimates of this relationship suggest that a 1% increase in agricultural spending raises the sector's growth rate by 0.22% which is lower than the average value of 0.366% across Africa. The long-term projections discussed below are therefore carried out using both the estimated elasticity for Liberia and the average elasticity of 0.366 for Africa to simulate a more optimistic spending efficiency scenario.

LONG-TERM
FUNDING REQUIREMENTS TO MEET THE PRS TARGETS AND THE POVERTY MDG IN LIBERIA

Tables 1 presents the trend of economic growth and government budget allocations in Liberia for the last three years while Table 2 presents the projections of long-term funding needs for the agricultural sector. The results focus on two scenarios: one based on the weak relationship between agricultural spending and agricultural growth (a low elasticity scenario) and a second assuming the same level of responsiveness of agricultural growth to public spending as observed on average among African countries (a high elasticity scenario).

Successful implementation of the government PRS agenda will require agricultural growth rates of 4.1%, 9.4% growth of non agricultural sector, and 6.1% of GDP growth. Implementation of the CAADP agenda in Liberia will require annual growth rates in agricultural spending of between 27.0% and 16.4%, depending on the level of responsiveness of agricultural growth to agricultural spending. It is still much lower than agricultural spending growth rate required to achieve MDG-1 by 2015: 111.3% under low elasticity scenario and 109.6% under high elasticity scenario. Achieving MDG-1 by 2025 will require agricultural funding average growth rate of 59.9% under low elasticity scenario and 31.5% if budget efficiency reaches African average of 0.366.

Implementation of PRS will require almost the same level of the share of agricultural spending in overall spending as in 2008 (8.6 %) under the low elasticity scenario but slightly lower (7.5%) under the high elasticity scenario (Table 2). With respect to CAADP, agriculture share will increase to 15.1% under the low elasticity scenario but fall to 8.8% under the high elasticity scenario in 2015. Under the low elasticity scenario, achieving MDG-1 by 2015 will require that 10.6% of total budget be allocated to agriculture compared to 2.2% under high elasticity scenario by 2015. Under this scenario, the most impact on poverty reduction is expected from non agricultural sector (54.0% per year) against 26.1% from agricultural sector). Therefore, the required funding for non agricultural sector will grow much faster than the required agricultural funding. With the MDG-1 by 2025 scenario, regardless of efficiency scenarios, the share of agricultural spending is expected to be above the Maputo requirement of 10%. It follows that required growth rates for agricultural and non agricultural sector are almost equal, around 14% per year.

Figure 1a and 1b present the trend of agricultural spending for PRS, CAADP, MDG-2015 and MDG-2025 under current agricultural growth responsiveness to agricultural expenditures (low elasticity scenario). The annual amount required to implement PRSP is projected to grow from US$6.1 million in 2009 to US$16.8 million in 2015. To achieve the CAADP target, agricultural budget is projected to grow from US$6.6 million in 2009 to US$27.5 million in 2015. For MDG-1 by 2015, it is expected to grow from US$11.2 million in 2009 to US$1,197.6 million in 2015, and with MDG-1 by 2025, from US$8.6 million in 2009 to US$27,547.4 million in 2025.

Table 1: Economic growth and government budget allocations

	2006	2007	2008	Growth rate (%)
GDP (constant prices, millions USD)				
Ag GDP	185.7	202.2	211.6	6.8
Non-Ag GDP	247.3	272.0	296.4	9.5
Total GDP	433.0	474.2	508.0	8.3
Spending (constant prices, millions USD)				
Agricultural sector	2.2	2.4	3.1	20.6
Non-agricultural sector	52.2	41.1	33.4	-20.0
Total	54.4	43.5	36.6	-18.0
Shares (%)				
Ag Spending/Total Spending (%)	4.0	5.5	8.6	46.9
Ag Spending/Ag GDP (%)	1.2	1.2	1.5	13.2
Total Spending/GDP (%)	**12.6**	**9.2**	**7.2**	**-24.3**

It is obvious that the growth rates (117.7% under low elasticity scenario and 71.4% under high elasticity scenario) required for MDG-1 by 2015 are rather unfeasible, it is unlikely that the Liberian government can afford such agricultural budget growth rates.

INTERNAL
AND EXTERNAL RESOURCE MOBILISATION TO ACHIEVE THE PRS TARGETS AND MDG1

Figures 2 to 5 present the sources of financing required to meet the funding levels shown in Figure 1. Estimated amounts of internal and external funding sources are based on the assumption that internal sources will cover only 15% of the overall agricultural budget. The annual external funding required to implement PRS is projected to grow from US$5.2 million in 2009 to US$14.3 million in 2015. To achieve the CAADP target, agricultural budget from external source is projected to grow from US$5.6 million in 2009 to US$23.4 million in 2015. For MDG-1, it is expected to grow from US$9.6 million in 2009 to 1,017.0 million in 2015, and from US$7.3 million in 2009 to US$27,547.4 million in 2025.

As suggested above, spending presented in Figure 1-5 have been estimated based on the agricultural growth elasticity with respect to expenditures for Liberia (0.222) which is low compared to the African average of 0.366. This elasticity represents the degree of responsiveness of agricultural sector to government strategy. However, if the Liberian government undertakes key sectoral reforms in order to improve the quality of agricultural spending and

Table 2: Estimated resource allocation to the agricultural sector

	CAADP		PRS		MDG-1 by 2015		MDG-1 by 2025	
	Low elasticity (0.222)[1]	High elasticity (0.366)[2]	Low elasticity (0.222)	High elasticity (0.366)	Low elasticity (0.222)	High elasticity (0.366)	Low elasticity (0.222)	High elasticity (0.366)
Growth rate (%)								
Ag GDP	6.00		4.07		26.14		14.58	
Non-Ag GDP	7.80		9.37		53.98		13.90	
GDP	6.65		6.14		40.54		14.34	
Ag spending (%)	27.0	16.4	18.3	11.1	117.7	71.4	65.7	39.8
Total spending (%)								
2010	17.0	16.0	19.1	18.6	111.2	107.8	32.5	29.5
2015	17.5	16.0	19.1	18.7	111.3	109.6	39.7	30.0
2025							59.9	31.5
Ag spending/ Total spending (%)								
2010	10.1	8.6	8.5	7.5	9.1	5.8	13.5	10.0
2015	15.1	8.8	8.2	5.4	10.6	2.2	35.7	14.5
2025							87.6	28.3
Ag spending/Ag GDP (%)								
2010	1.7	1.4	1.5	1.3	3.5	2.1	2.4	1.7
2015	4.1	2.2	2.9	1.8	53.0	9.9	15.3	4.7
2025							612.9	34.3
Total spending/ GDP (%)								
2010	5.2	5.2	5.4	5.3	9.3	9.0	5.9	5.7
2015	8.2	7.7	8.9	8.6	53.5	48.9	14.4	10.8
2025							243.6	64.7

1   The average elasticity for Africa
2   The actual elasticity for Liberia

therefore reach at least the African average, the nominal level of agricultural funding should be reduced. For example, implementation of a well functioning evidence based monitoring and evaluation system should significantly increase the impact of agricultural spending on agricultural growth and therefore reduce the level of required agricultural funding to achieve targeted agricultural growth rate.

The difference between low and high elasticity scenarios reported in Table 3 illustrates expected gains in terms of reduction in agricultural funding as a result of

improved agricultural development strategies at least at the level of the African average. Hence, in 2015, funding requirement is expected to fall from US$27.5 million to US$14.9 for CAADP, from US$16.8 to US$10.8 for PRS, from US$1197.6 million to US$224.4 million for MDG1 – by 2015, and from US$27,545.4 million to US$1542.3 million for MDG1 – by 2025.

Figure 1a: Required agricultural funding under different scenarios in million USD (current)
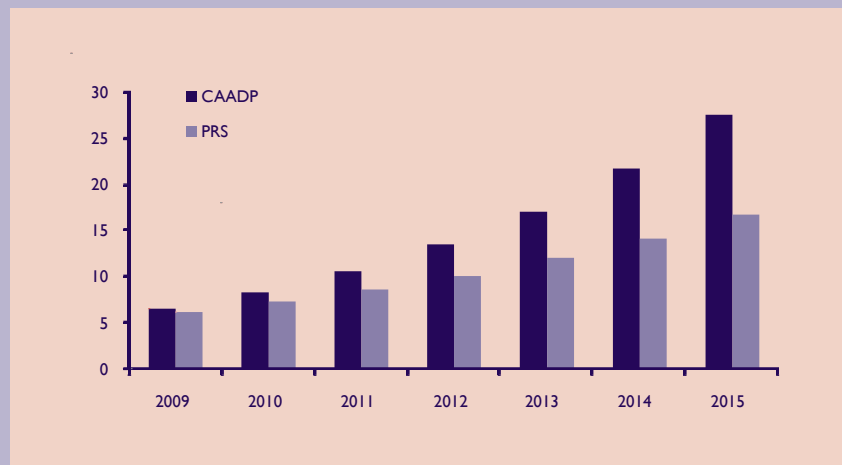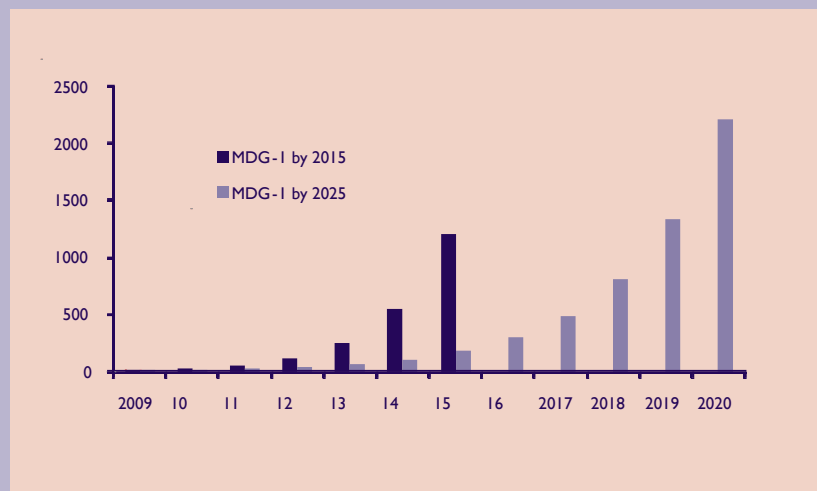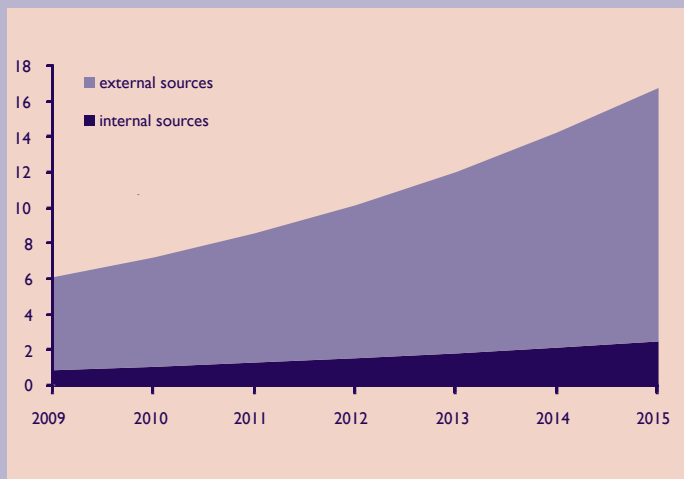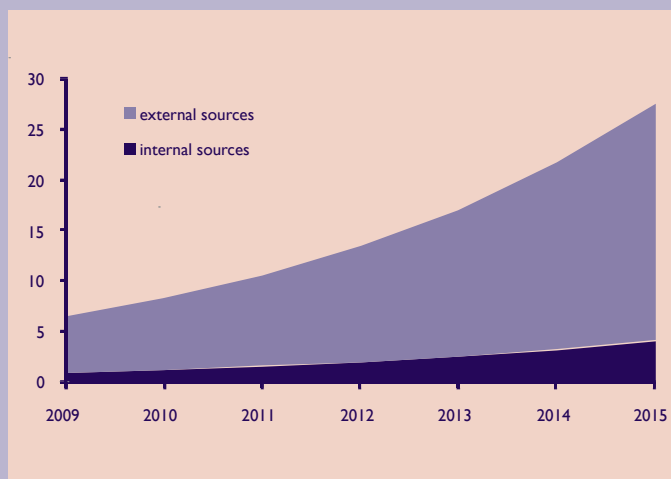

Figure 1b: Required agricultural funding under different scenarios in million USD (current)

Figure 2: Required internal and external agricultural funding to implement PRS in million USD (current)

Figure 3: Required internal and external agricultural funding to achieve CAADP in million USD (current)


Table 3: Evolution of public expenditure in the agricultural sector under the high and low elasticity scenarios

|	CAADP		PRS		MDG-1 by 2015		MDG-1 by 2025	
	Low elasticity (0.222)[1]	High elasticity (0.366)[2]	Low elasticity (0.222)	High elasticity (0.366)	Low elasticity (0.222)	High elasticity (0.366)	Low elasticity (0.222)	High elasticity (0.366)
2009	6.6	6.0	6.1	5.7	11.2	8.8	8.6	7.2
2010	8.3	7.0	7.2	6.4	24.5	15.2	14.2	10.1
2011	10.6	8.1	8.6	7.1	53.3	26.0	23.5	14.1
2012	13.4	9.5	10.1	7.9	116.0	44.6	38.9	19.7
2013	17.1	11.0	12.0	8.7	252.6	76.4	64.4	27.6
2014	21.7	12.8	14.2	9.7	550.0	130.9	106.7	38.6
2015	27.5	14.9	16.8	10.8	1197.6	224.4	176.8	53.9
2016							292.9	75.4
2017							485.3	105.5
2018							804.0	147.5
2019							1,332.0	206.3
2020							2,206.8	288.5
2021							3,656.1	403.4
2022							6,057.2	564.1
2023							10,035.3	788.7
2024							16,626.1	1103.0
2025							27,545.4	1542.3

1   The average elasticity for Africa
2   The actual elasticity for Liberia

Figure 4: Required internal and external agricultural funding to achieve MDG-1 by 2015 in million USD (current)
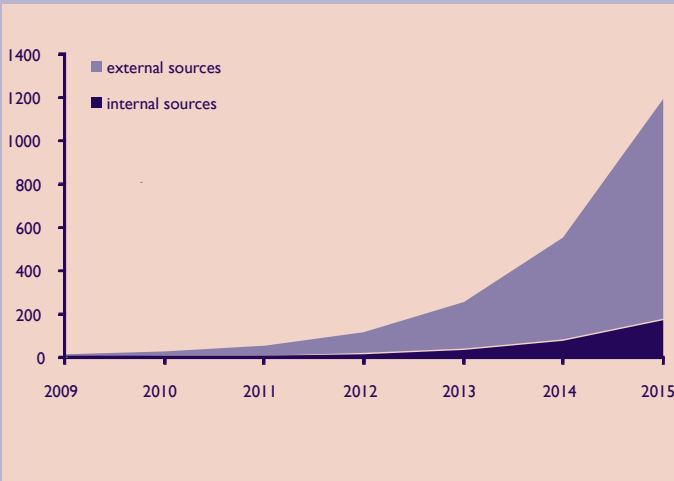
Figure 5: Required internal and external agricultural funding to achieve MDG-1 by 2025 in million USD (current)
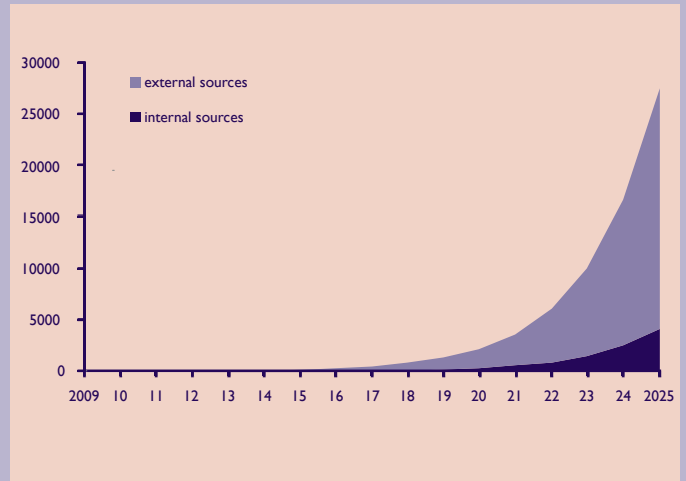
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