

Appendix 1. Main characteristics and calculation assumptions of the sampled LCFCs

Table A1.1: Variables and assumptions used for the cost-benefit analysis of the LCFC of Lolwa

Surface area (ha)	298 903
Start of the process	2013
Accomplished steps	SMP completed but not aligned with present regulations
Consulted documents	SMP, multiple resources inventory report, training reports

Category	<i>Small-scale logging</i>		Source
	Variables	Assumptions	
Starting costs	Social requirements ("Cahiers des charges")	One "cahier des charges" is required for each of the 11 harvesting permits. Each logging permit covers an area of 20ha/yr	SMP, our surveys, Lescuyer et al. 2014
	Official agreement for small-scale logging	One agreement is required for each chainsaw miller	official fees
	Purchase of chainsaws	One chainsaw for each logging permit; unit price in Kisangani	our surveys
	Training of small-scale loggers on improved logging techniques	A one-week workshop for the 11 small-scale loggers by a national expert based in Kisangani	our surveys
Running costs	Trees inventory in the annual logging area	One inventory of valuable trees in each of the 11 small-scale logging areas	SMP, our surveys
	Purchase of the logging permits	11 permits every year	official fees
	Logging and chainsaw milling costs	for 450m ³ of timber per year	SMP, Lescuyer et al. 2014

Turn over	Harvested area, timber species and volume	215 ha are logged; 450 m3 of timber are logged from 3 timber species (linzo, liboyo, mpunga); 150m3 of sawn wood are made	SMP, Lescuyer et al. 2014
	Price of sawn wood	Prices on the Kisangani market: 260 USD/m3 for linzo and liboyo; 290 USD/m3 for mpunga	our surveys

Sustainable hunting

Category	Variables	Assumptions	Source
Starting costs	Wildlife inventory	wildlife inventory already done in the SMP	SMP
	Purchase of rifles	the wildlife inventory is already done for the SMP; 30 hunters can do subsistence and (marginally) commercial hunting in the area, with 10 new hunters involved every year until Year 3; unit price of rifle on the Kisangani market	SMP, our surveys
	Training	10 hunters are trained in the first three years during a one-week workshop by a national expert based in Kisangani	our surveys
Running costs	Wages, equipment and food	Each producer does 2 hunts (of a few days each) per month, over a 9 month period. Most hunting activities are unpaid as done by the household, but hiring bushmeat carriers is often needed (25USD/month). Equipment (cartridge, knife, lamp,...) and food must be bought.	our surveys, Valimahamed et al. 2017
	Harvesting permits	10 permits for Year 1, 20 for Year 2, 30 permits for the following years	official fees
Turn over	Harvested volume and price	Each hunting trip provides an average income of 150USD to the hunter	our surveys, Valimahamed et al. 2017

Charcoal production

Category	Variables	Assumptions	Source
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Starting costs	Resource inventory	Tree inventory for charcoal production is already done in the LCFC for the SMP: resource is abundant for the 5 most valuable species	SMP
	Training	5 fuelwood producers are trained in the first five years during a one-week workshop by a national expert based in Kisangani	our surveys
	Oven	Ovens are already available and will be maintained every year	our surveys
Running costs	Wages for logging and cutting up	Most activities of charcoal production are unpaid as done by the household, but some technical activities require to hire chainsaw millers. The average costs is 40 USD/month/producer for an average monthly production of 25 bags	our surveys, Schure et al. 2014
	Maintenance of the oven	maintenance and operating costs of 50USD a month for a monthly production of 25 bags	our surveys
	Equipment (bags)	Unit price on the Kisangani market	our surveys
Turn over	Harvested volume and price	Each producer trades 300 bags of charcoal every year for local and regional consumption. Charcoal bags are sold at the village gate price	our surveys, Schure et al. 2014

Table A1.2: Variables and assumptions used for the cost-benefit analysis of the LCFC of Uma

Surface area (ha)	49 995
Start of the process	2011
Accomplished steps	SMP to be submitted, but not aligned with present regulations
Consulted documents	SMP, socio-economic report, forest inventory report, gender report, expenses assessment report, annual activity reports

<i>Small-scale logging</i>			
Category	Variables	Assumptions	Source
Starting costs	Forest inventories	Already done for the SMP for a logging area of 20 971 ha with a felling cycle of 25 years	SMP, Forest inventory report
	Social requirements ("Cahiers des charges")	One "cahier des charges" is required for each of the 15 harvesting permits. Each logging permit covers an area of 50ha/yr	our surveys, expenses assessment report
	Building of a warehouse	5,000 USD by a Kisangani-based entreprise	socio-economic report
	Official agreement for small-scale logging	One agreement is required for each chainsaw miller	official fees
	Purchase of chainsaws and bicycles	One chainsaw and one bicycle for each logging permit; unit price in Kisangani	our surveys
	Training of small-scale loggers on improved logging techniques	A one-week workshop for the 15 small-scale loggers by a national expert based in Kisangani in Years 1-3-5	expenses assessment report
	Road maintenance	Wage to local labor for 9km every year	Socio-economic report
Running costs	Trees inventory in the annual logging area	839 ha are inventoried and logged every year	Forest inventory report, socio-economic report
	Purchase of two pirogues	Local production and price	Socio-economic report
	Purchase of the logging permits	15 permits every year	official fees
	Logging and chainsaw milling costs	for 2431m ³ of timber per year	SMP, Lescuyer et al. 2014

Turn over	Harvested area, timber species and volume	839 ha are logged; 2431m ³ of timber are logged from 6 species; 729m ³ of sawn wood are made	SMP, socio-economic report, forest inventory report, Lescuyer et al. 2014
	Price of sawn wood	Prices on the Kisangani market for acajou, afrormosia, iroko, kosipo, sapelli, sipo	our surveys
<i>Sustainable hunting</i>			
Category	Variables	Assumptions	Source
Starting costs	Wildlife inventory	Already done for the SMP for a hunting area of 26 214 ha with a 25 year harvesting cycle	SMP, forest resources inventory
	Purchase of rifles	15 hunters can do subsistence and (marginally) commercial hunting in the area; unit price of rifle on the Kisangani market	expenses assessment report, activities report, our surveys
	Training	15 hunters are trained in the first two years during a one-week workshop by a national expert based in Kisangani	activities report, our surveys
Running costs	Wages, equipment and food	Each producer does 2 hunts (of a few days each) per month, over a 9 month period. Most hunting activities are unpaid as done by the household, but hiring bushmeat carriers is often needed (25USD/month). Equipment (cartridge, knife, lamp,...) and food must be bought.	our surveys, expenses assessment report, Valimahamed et al. 2017
	Harvesting permits	15 permits	official fees
Turn over	Harvested volume and price	Each hunting trip provides an average income of 200USD to the hunter	our surveys, socio-economic report