

## **Appendix 1.** Extended methodology.

### *Household Livelihood Return (HLR)*

In order to calculate the total time households spent engaged in a given activity, respondents were asked which months the activity was carried out, the average number of days per week, and the hours per day spent for each activity. Total time was calculated by multiplying the number of hours per day, the number of days per week and the number of weeks per year. In the case of wildlife trapping, which was a more ‘opportunistic’ activity, total time was calculated by multiplying the number of hours per day, the number of days per order and the total number of orders received in a period.

Revenue was calculated by asking respondents the amount of produce per period (e.g. 50 kg rice), the market value of that produce (e.g. 1 kg rice=900 MGA/0.39 USD) and the average percentage of produce that was sold in that period. For wildlife trapping, respondents were asked the average amount of money they received per order, and this was multiplied by the number of orders in a period.

When assessing costs, respondents were asked to differentiate start-up costs, which were the costs associated with the first time they did an activity (e.g. purchase or loan of land), and ongoing variable costs (excluding fixed costs), which were those associated with continuing the activity (e.g. fertiliser, seed), and the frequency each cost was incurred (e.g. fertiliser – once per year). The ongoing costs (excluding fixed costs e.g. purchase of land) were used in the HLR analysis.

Throughout the analysis, where a range of values was given e.g. 5-10 hours, then the mid-value was used (i.e. 7.5). This was used to calculate median and IQR. Median values were also used in cases of missing price data, for example if one person failed to report the market price of their agricultural produce, then the median value according to all the other respondents was used. For wildlife trapping, where specific information on the number of hours worked per day was missing, then a median value of six hours calculated from respondents who did give the information was used. In cases where respondents stated ‘an entire night’, then an entire night was presumed to be 10 hours (e.g. 8 pm to 6 am).

## Household asset bundle

**Table A1.1.** Household asset bundle including the number and percentage of households that owned each item. The asset bundle ranged from inexpensive to expensive physical items, and livestock. This list was used to create a household asset index based on Morris et al. (2000) where an index is calculated for each household based on the quantity of a particular asset the household in question owns, and the proportion of households owning that asset. Livestock were included given their local importance regarding wealth. Data from systematic sample only.

Item	<i>n</i>	% Households
		(valid %, excl missing answers)
cooking pot	231	100.0
mattress (filled rice sack)	208	91.2
shovel	231	99.1
bed	205	88.7
lamp (kerosene)	203	88.6
table	190	83.3
radio	190	82.3
chair	183	80.3
lamp (battery/electric)	153	66.8
clock	120	51.9
bicycle	111	47.8
mobile phone	97	42.7
watch	60	25.1
mattress (foam)	51	22.0
plough	53	22.8
charcoal stove	52	22.5
music player (CD/DVD)	42	18.3
television	40	17.3
generator (battery/electric)	30	12.9
motorbike	8	3.5
Motor cultivator	5	2.2
solar stove	1	0.4
car	1	0.4
chicken	180	79.3
zebu	67	28.6
pig	52	22.3