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Multidimensional Poverty in Comoros

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Abbreviations

A	Poverty Intensity
AF	Alkire-Foster
BMI	Body Mass Index
DHS	Demographic and Health Survey
ESCWA	Economic and Social Commission of Western Asia
FHHs	Female Headed Households
GDP	Gross Domestic Product
GNI	Gross National Income
H	Headcount Ratio
HDI	Human Development Index
HHs	Households
MHHs	Male Headed Households
MPI	Multidimensional Poverty Index
OPHI	Oxford Poverty and Human Development Initiative
UNDP	United Nations Development Program
USAIDS	US Agency for International Development
WI	Wealth Index

I. CONTEXT

1.1 Comoros is a low-income island country[1] in Sub-Saharan Africa. Located northwest of Madagascar, the archipelago of the Comoros consists of three islands: Ngazidja, Mwali, and Ndzouani. Table 3 shows some of the main socio-economic indicators for Comoros. The Human Development Index (HDI) – a measure of basic human development achievements in a country – for Comoros in 2015 was 0.497, which puts the country in the low human development category, positioning it 160th out of 188 countries and territories. Money metric poverty is high in Comoros, with 42.4% of the population below the national poverty line in 2014 (the most recent year for which data is available)[2]. Income inequality is one of the highest in the world, with a Gini coefficient of 45. The Gender Development Index is low at 0.817.

Table 3: Main socio-economic indicators for Comoros

Indicators	Value (2015 unless otherwise indicated)
Population	788,474
GDP	US$ 0.57 billion
GNI p.c. Atlas Method (current US$)	US$ 780
Life expectancy at birth	63.3 years (2014)
Poverty headcount ratio at national poverty lines (% of population)	42.4% (2014)
Human Development Index (HDI[3])	0.40
Human Development 2014 rank	159th (over 188 countries)
Expected years of schooling	12
Gross enrolment ratio (primary)	103%
Gender Development Index	0.817
Income inequality, Gini coefficient	45 (2014)

Sources: for population, GDP, GNI p.c., life expectancy, poverty headcount, gross enrolment ratio: World Bank World Development Indicators data accessed January 2017. For HDI, expected years of schooling, gender development index and Gini coefficient: UNDP Human Development Reports accessed January 2016.

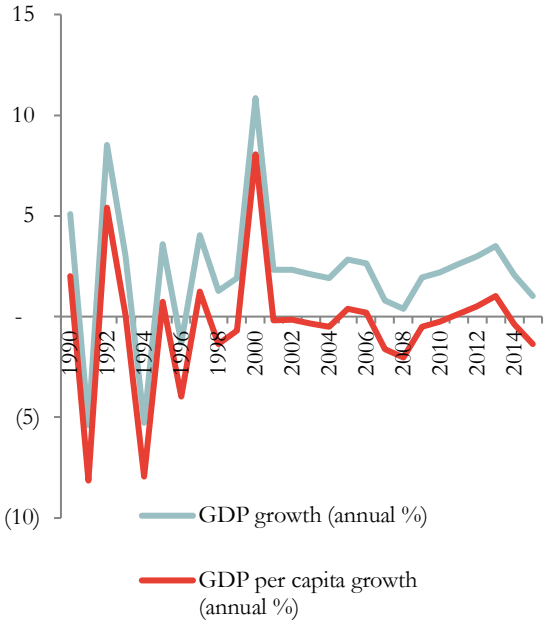
1.2 Comoros experienced considerable political turmoil during the 70s-90s, witnessing no less than 20 coups or attempted coups since gaining independence from France in 1975. Such tumult contributed to the high volatility of the country's GDP, which depends mostly on agriculture (fishing, hunting and forestry). Most of the country's exports are shipping materials and boats, spices and essential oils. Recently, political stability has returned to the islands: presidential elections were held in 2016 and the country's GDP has been slightly recovering[4].

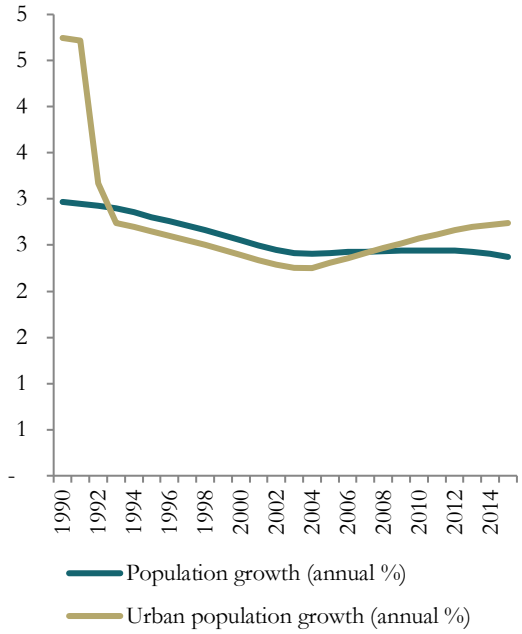
1.3 The objective of this country poverty profile is to assess the prevalence, distribution (geographical and by gender among other dimensions) and severity of multi-dimensional poverty in Comoros. It is one of several country profiles prepared by ESCWA as background papers for the Arab Multidimensional Poverty Report (ESCWA, LAS, OPHI, UNICEF 2017)[5]. The data is from a 2012 survey.

Figure 2: GDP, GDP p.c. and population growth (%)

GDP and GDP p.c. annual growth (%)

Population and urban population growth, annual (%)





Source: World Bank data.

II. METHODOLOGY AND DATA

2.1 Multidimensional poverty captures multiple deprivations in basic services and capabilities, such as poor health, lack of education or illiteracy, and lacking access to safe drinking water. The multidimensional poverty approach complements monetary measures of poverty by considering these multiple deprivations and their overlap. The conceptual framework of multidimensional poverty measures draws from Sen's capability approach which states that development is realised not only through increased incomes and share in assets, but also through people's increased capabilities to lead lives that they have reason to value. Sen contends that capability deprivation is a more complete measure of poverty than income as it captures the aspects of poverty which may get lost or hidden in aggregate statistics (Sen 1985, 1999). In recent years, this conceptual framework was translated into practice to measure household poverty through the Multidimensional Poverty Index (MPI).

2.2 The methodology of the MPI is based on the Alkire-Foster (AF) Method (Alkire, Foster 2011) offering a comprehensive methodology for counting deprivation and analysing multidimensional poverty. The AF-methodology builds on the Foster-Greer-Thorbecke poverty measure, but it considers multiple dimensions. The AF-methodology includes two steps: first, it identifies the poor using a dual cut-off approach and by "counting" the simultaneous deprivations that a person or a household experiences across the different poverty indicators. And the second step is to aggregates this information into the adjusted headcount ratio (or MPI value) which can be decomposed and disaggregated geographically, by socio-economic characteristics, and by indicator.

2.3 Under the first step, to identify multidimensionally poor people, the AF-methodology uses a dual cut-off identification approach. The first cut-off sets a deprivation threshold for each indicator which determines whether a household or a person is considered as deprived or non-deprived in the respective indicator. After the cut-offs have been applied for each indicator, the deprivations of each person in all indicators are counted to calculate a deprivation score for that household or person. Weights are assigned to the indicators which reflect a normative value judgement to assess the relative importance of a given indicator as compared to the other indicators in constructing the deprivation score for a household or person. As a result, the deprivation score is a weighted sum of all deprivations. The second cut-off (the poverty cut-off) is set at a value say 20% or 30% against which the deprivation score is compared to in order to define and

distinguish multidimensionally poor (those whose deprivation score is equal to or more than the poverty cut-off) from non-poor (whose deprivation score falls below the poverty cut-off).

2.4 In the aggregation step of the AF Method, two indices are calculated; the headcount ratio and poverty intensity. The headcount ratio (H) is the proportion of multidimensionally poor people to the total population. The headcount ratio is a useful measure to learn about the incidence of poverty, but it is insensitive to increases in the number of deprivations a poor person is deprived in. However, utilizing the information on the number of deprivations that poor people experience, the poverty intensity can be calculated. The poverty intensity (A), is the average deprivation score that multidimensionally poor people experience. The product of the poverty headcount and poverty intensity is the MPI, which "adjusts" the headcount for the average poverty intensity that poor people experience.

2.5 The use of Multidimensional Poverty Index (MPI) to describe the application of AF Method was coined with the Global MPI launched in 2010 by OPHI and the United Nations Development Program (UNDP). However, the Global MPI has a major shortcoming: it is not very effective in capturing the less severe forms of poverty that characterise many Arab middle-income countries such as Jordan, Egypt or Morocco and thus underestimates the prevalence of less severe forms of multidimensional poverty. However, the AF-Method offers flexibility and it can be tailored to a variety of situations by selecting different dimensions, indicators of poverty within each dimension, and poverty cut offs.

2.6 In order to capture a broader spectrum of level and intensity of deprivation that better reflects the conditions of Arab countries, ESCWA and OPHI proposed an Arab MPI with two different levels: poverty and acute poverty. The Arab MPI is composed of three dimensions and twelve indicators. The education dimension has two indicators: school attendance and years of schooling. The health dimension includes three indicators: nutrition, child mortality, and early pregnancy combined with female genital mutilation. The living standard indicators are: access to electricity, improved sanitation facility, safe drinking water, clean cooking fuel, having suitable floor and roof, no overcrowding, and minimum assets of information, mobility, and livelihood (the deprivation cut-offs for the Arab MPI are presented in Table 2). Each of these indicators has two associated deprivation cut-offs, one reflects the deprivation of acute poverty which is similar (but not identical) to the global MPI. And the other, a higher cut-off denoting a slightly higher standard to measure poverty which is inclusive of acute poverty. While the cut offs usually vary across indicators for acute poverty and poverty, in case of the aggregate score for identifying a poor household, the cut off is the same. A household is considered acutely poor or poor if its total level of deprivation (total of weighted deprivations in all indicators) is higher than one-third of the total possible deprivation (k=33.3%). Similar to the Global MPI, the Arab MPI assigns equal weights to the three dimensions (one third), and indicators within each dimension are equally weighted. To obtain the set of multidimensionally poor people only, all information of deprivation of non-poor persons is censored from the data. Thus, the focus of the MPI measure is purely on the profile of the multidimensionally poor people and the indicators/dimensions in which they are deprived.

2.7 The MPI can be decomposed by population sub-groups, such as sub-national regions, or any socio-economic characteristic of a household that is available from the data. Another feature of the MPI is that it can be decomposed to show how much each indicator contributes to poverty. Furthermore, the MPI can also give insight into the percentage of people that are deprived in multiple indicators, but below the poverty cut-off. This percentage of the population is considered vulnerable to poverty. In the case of the Arab MPI, population whose deprivation score is between 20-33.3% is considered as vulnerable to poverty. On the other side of the scale, the MPI can also give insight into how many people are deprived in for example more than half of all the weighted indicators. This percentage share of the population is considered to be in severe poverty. In the Arab MPI, poor people who are deprived in 50% or more of the indicators are considered as severely poor.

2.8 The results of this study are based on data from the Demographic and Health Survey (DHS), a survey conducted by countries with the support and funding of the US Agency for International Development

(USAIDS)[6]. The survey for Comoros[7], conducted in 2012, covers 24,329 individuals. It provides data on education, health and working status for all members of the household; nutrition status of children and women; child mortality; housing conditions (availability of safe drinking water, sanitation facilities, electricity, etc.); and information on ownership of assets (refrigerator, motorbike, cattle, radio, TV etc.).

Table 2: Deprivation definitions and indicator weights

Dimension	Indicator	Acute poverty if	Poverty if	Weight
Education	Years of Schooling	No household member has completed primary schooling[8].	No household member has completed secondary schooling.	1/6
	School Attendance	Any child of primary school age is not attending school.	Any school-age child is not attending school **or** is 2 years or more behind the right school grade.	1/6
Health	Child Mortality	Any child less than 60 months has died in the family during the 59 months prior to the survey.	Same as acute poverty	1/9
	Child/adult Nutrition	Any child (0-59 months) is stunted (height for age < -2) **or** any adult is malnourished (BMI < 18.5).	Any child (0-59 months) is stunted (height for age < -2) **or** any child is wasted (weight for height < -2) **or** any adult is malnourished (BMI < 18.5).	1/9
	FGM/Early Pregnancy	A woman less than 28 years old got her first pregnancy before 18 years old **and** has undergone a female genital mutilation (FGM)[9].	A woman less than 28 years old either got her first pregnancy before being 18 years old **or** has undergone a female genital mutilation (FGM).	1/9
Living Conditions	Electricity	Household has no electricity.	Same as acute poverty	1/21
	Sanitation	Household sanitation is not improved, according to MDG guidelines, **or** it is improved but shared with other household.	Same as acute poverty	1/21
	Water	Household does not have access to safe drinking water, according to MDG guidelines, **or** safe drinking water is 30-minutes roundtrip walk or more away from home.	Household does not have piped water into dwelling or yard.	1/21
	Floor/Roof	Floor is earth, sand, dung or roof is not available **or** made of thatch, palm leaf or sod	Floor is earth, sand, dung, rudimentary (wood planks/bamboo/reeds/grass/canes), cement floor (not slab or tiles/asphalt strips) **or** roof is not available **or** made of thatch, palm leaf, sod, rustic mat, palm, bamboo, wood plank, cardboard.	1/21
	Cooking Fuel	Household cooks with solid fuels: wood, charcoal, crop residues **or** dung **or** no food is cooked in the household.	Household cooks with solid fuels: wood, charcoal, crop residues or dung **or** no food is cooked in the household **or** does not have a separate room for cooking.	1/21
	Overcrowding	Household has 4 or more people per sleeping room.	Household has 3 or more people per sleeping room.	1/21

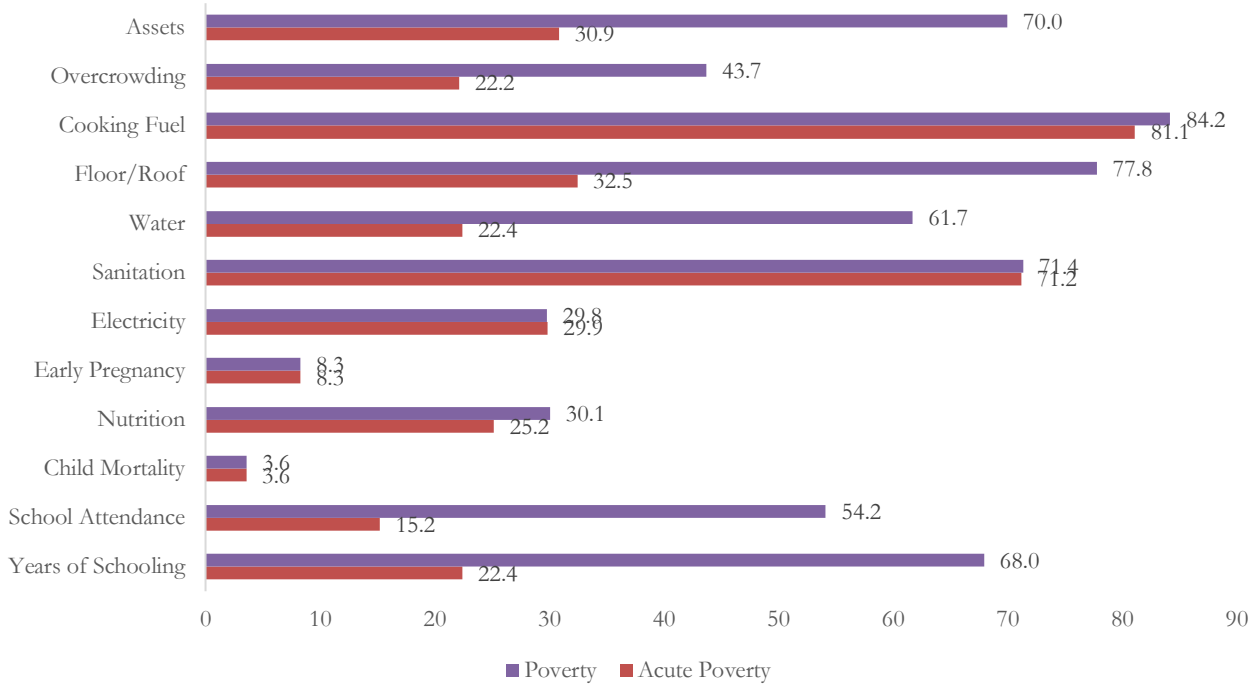
	Assets	Household has either not access to information **or** has access to information **but** no access to easy mobility **and** no access to livelihood assets.	Household has either less than two assets for accessing information or has more than one information asset **but** less than two mobility assets **and** less than two livelihood assets.	1/21

III. POVERTY ANALYSIS

3.1 Incidence of Deprivation in the indicators of the Arab MPI

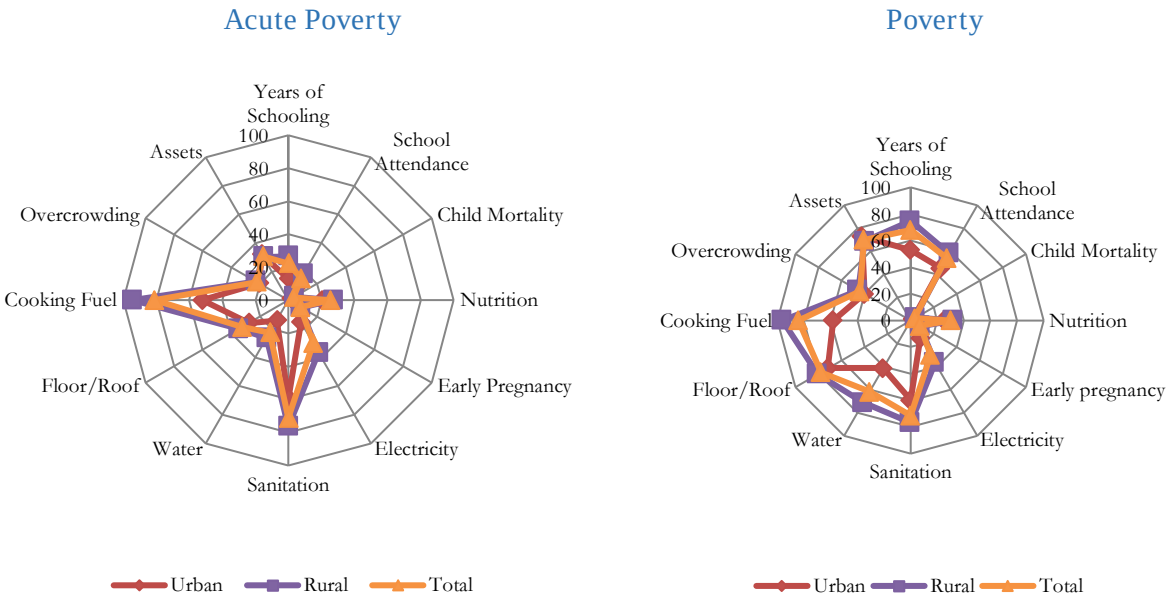
3.1.1 First, we examine the prevalence of deprivation among the Comorian population in each of the Arab MPI indicators using the poverty and acute poverty respective cut-off points as shown in Figure 2. This percentage share is also called the uncensored headcount ratio, as it considers the deprivations of the total population before identifying the poor. At acute poverty, Comorians are particularly deprived in cooking fuel, followed by sanitation and floor/roof. For poverty, the deprivation with the highest headcount is cooking fuel, followed by floor/roof, sanitation, and assets. At poverty, it is important to notice that high deprivation rates are found in the education dimension indicators.

Figure 2: Incidence of Deprivation in the Arab MPI indicators (% of population)



3.1.2 Figure 3 shows the deprivations affecting Comorians in more detail. At acute poverty, differences in deprivation headcount between rural and urban areas are highest in cooking fuel, electricity and sanitation showing a higher deprivation in rural areas. At poverty, the rural disadvantage is manifested in cooking fuel, water and years of schooling. When going from acute poverty to poverty, the largest jumps in deprivation are in years of schooling, floor/roof and water.

Figure 3: Deprivation by indicator (% of population) at Acute Poverty and Poverty for urban and rural areas



3.2 Incidence of censored Deprivation in each of the 12 indicators

3.2.1 The prevalence of deprivation in Table 3 compares the incidence of uncensored and censored deprivations. As we saw above, the uncensored deprivation rates give the percentage of population who is deprived in an indicator regardless of being multidimensionally poor or not. The censored headcount ratio measures the share of the population who are deprived in a given indictor and are classified as multidimensionally poor (or acutely poor). The censored headcount helps in focusing the analysis on the multidimensionally poor and in assessing the extent of their deprivation in the different indicators. Furthermore, assessing the difference between censored and uncensored headcount allows the assessment of the overlap between deprivation and multidimensional poverty.

Table 3: Uncensored and Censored Headcount Ratio

Indicator	Acute Poverty		Poverty	
	% of total population deprived in…	% of poor people deprived in…	% of total population deprived in…	% of poor people deprived in…
Years of Schooling	22.41	16.98	67.96	62.98
School attendance	15.24	12.75	54.15	50.10
Child Mortality	3.57	1.94	3.57	3.32
Child Nutrition	25.18	12.28	30.08	26.66
Early Pregnancy	8.27	5.31	8.28	8.09
Electricity	29.88	18.23	29.80	28.44
Sanitation	71.22	21.85	71.38	58.85
Water	22.43	9.64	61.74	49.76
Floor/Roof	32.47	16.75	77.82	63.61
Cooking Fuel	81.12	25.38	84.21	67.96
Overcrowding	22.16	11.39	43.72	38.58
Assets	30.87	15.52	69.98	56.50

3.2.2 At acute poverty, the indicators cooking fuel, sanitation and floor/roof, show the largest gap between the censored and uncensored headcount ratios. This means that deprivation in these indicators are widespread and do not only affect the multidimensionally poor population. On the other hand, indicators such as child mortality, school attendance and early pregnancy show the lowest gaps which indicates that most people that are deprived in this indicator are actually also considered multidimensionally poor.

3.2.3 At poverty, the indicators cooking fuel, floor/roof and assets show the biggest gaps between the censored and uncensored headcount ratio. Thus, deprivations in living conditions are widespread among the Comorian population, regardless if they are considered multidimensionally poor or not. Whereas, the indicators early pregnancy, child mortality and electricity show the lowest gaps between the ratios. Thus, deprivations in these indicators are mainly found among the multidimensionally poor population.

3.3 Poverty Headcount, Intensity and MPI

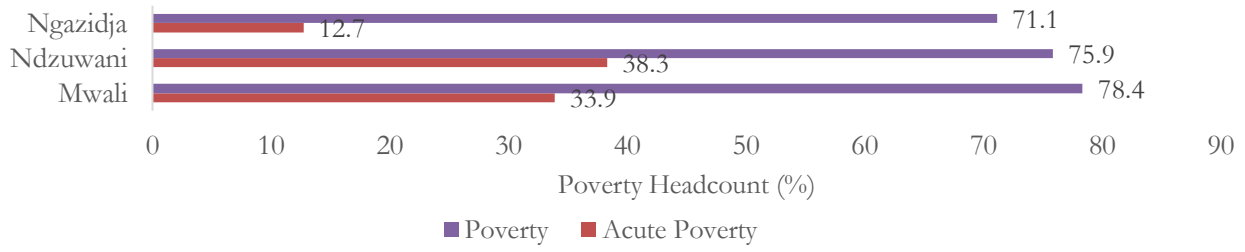
3.3.1 In Comoros, a high percentage of the total population (26.4%) suffers from acute poverty, while an extremely high share of the population (73.9%) suffers from poverty (Table 4). The poverty intensity – the average proportion of indicators in which poor people are deprived – is high at both levels and particularly high at poverty (54.7%). This means that the poor suffer from an intense level on deprivation (on many indicators), especially at poverty. While headcount poverty is significantly higher in rural[10] than in urban areas (almost triple the rate at acute poverty), the intensity of deprivation varies only slightly between rural and urban areas, and more significantly at poverty than they do at acute poverty. This means that while people in rural areas are significantly more likely to be poor than in urban areas; poor people in rural areas are not much more likely to be intensely deprived (deprived in a large number of indicators) than poor people in urban areas.

Table 4: Headcount poverty, intensity and poverty value at national level and in urban and rural areas

	Acute poverty		
	Headcount (%)	Intensity (%)	Multidimensional Poverty Index (MPI) (H*A)
Total	26.36	48.49	0.128
Urban	13.22	47.27	0.062
Rural	32.39	48.72	0.158
Poverty			
Total	73.88	54.68	0.404
Urban	55.81	51.30	0.286
Rural	82.20	55.73	0.458

3.4 As shown in Figure 4, the three islands of the country are highly affected by poverty, with Mwali having the highest poverty headcount of 78.4 %. In terms of acute poverty, the island of Ngazidja is the least affected with a headcount of 12.7 %, while Ndzuwani is the most affected with a headcount of 38.3 %.

Figure 4: Headcount Poverty (%) in Comoros Islands at Acute Poverty and Poverty



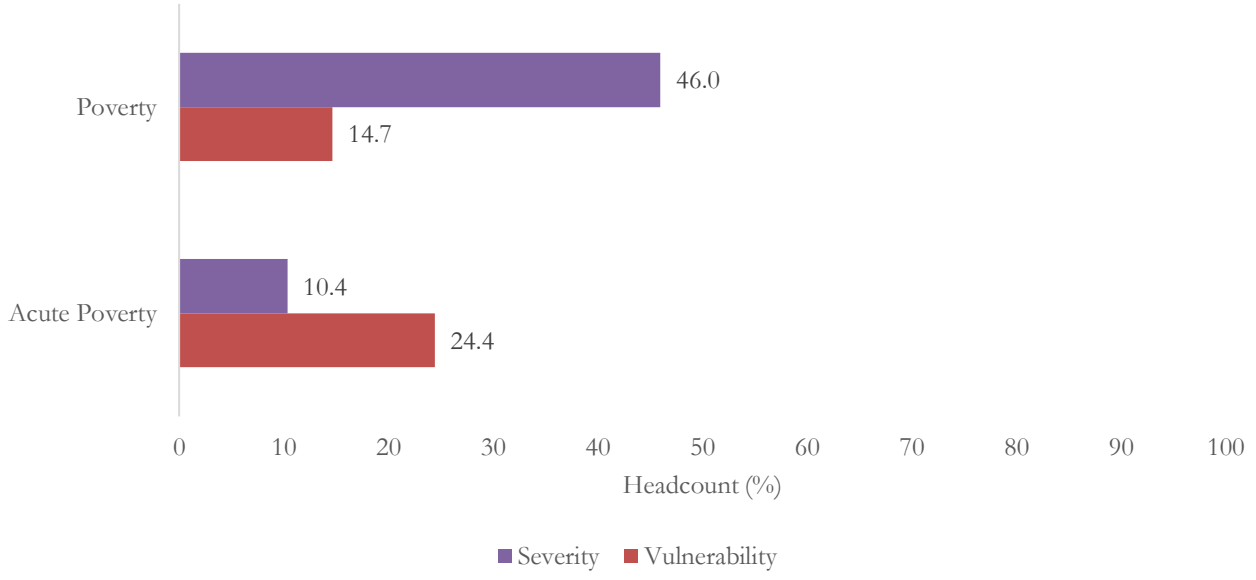
3.5 Table 5 shows the distribution of the national population and of poor people across Comoros. The last two columns of the table calculate the ratio of poor over the share of national population for each island of Comoros. Islands with a ratio above 1, such as Mwali and Ndzuwani are more affected by poverty, whereas Ngazidja is more affected by acute poverty. Factoring the population distribution, we can compare between Ndzuwani and Ngazidja the two most populated islands in Comoros. It should be duly noted that the higher than average poverty and acutely poverty prevalence make Ndzuwani more affected and over-represented in the distribution of the poor and acutely poor in Comoros.

Table 4: Population and headcount poverty shares by island

	Share of survey population (%) (1)	Share of acutely poor population (%) (2)	Share of poor population (%) (3)	(2)/(1)	(3)/(1)
Mwali	6.64	8.54	7.04	0.78	1.06
Ndzuwani	47.74	69.42	49.02	0.69	1.03
Ngazidja	45.63	22.04	43.94	2.07	0.96

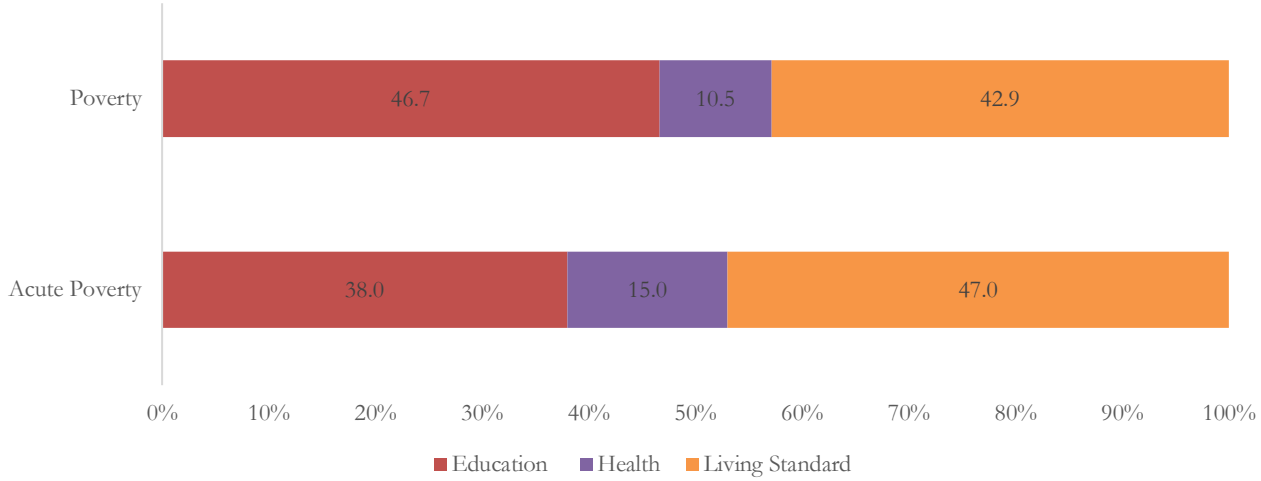
3.6 While, someone is defined as poor if he or she is deprived in at least one third of the weighted indicators, following OPHI's definition, individuals are 'vulnerable to poverty' when they are deprived in 20% – 33.33% of weighted deprivation score. Individuals are defined as in 'Severe Poverty' when they are deprived in 50% or more of the indicators. As shown in Figure 5, in Comoros, 10.4% are severely poor at acute poverty. At poverty, the share of severely poor increases to a staggering 46%. While 14.7 % of the population are vulnerable to falling into poverty, 24.4% of people in Comoros are vulnerable to falling into acute poverty.

Figure 5: Vulnerable and severely poor population at acute poverty and poverty definitions (%)



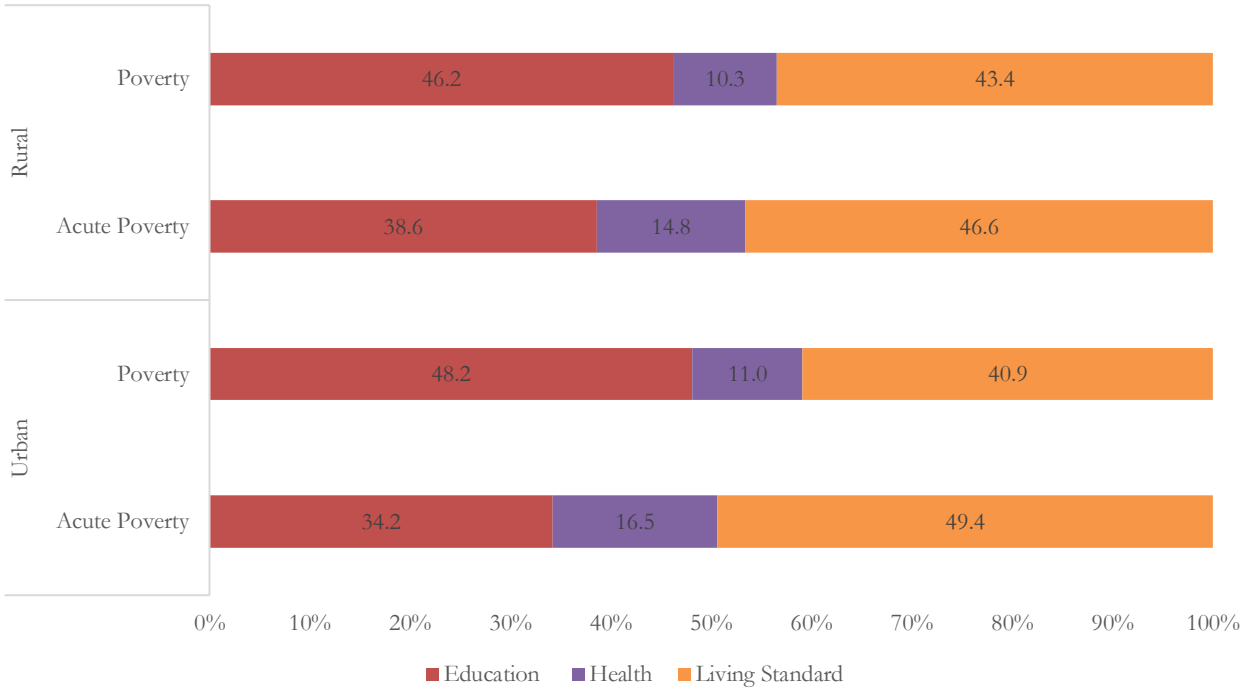
3.7 The percentage contribution of each of the three dimensions to the overall poverty value (taking into consideration both headcount and intensity)[11] is a useful summary indicator[12]. As shown in Figure 6, in Comoros, while education contributes the most to poverty, living standards make the highest contribution to acute poverty. Health makes a lager contribution at acute poverty than it does at poverty.

Figure 6: Contribution of dimensions to acute poverty and poverty value (%)



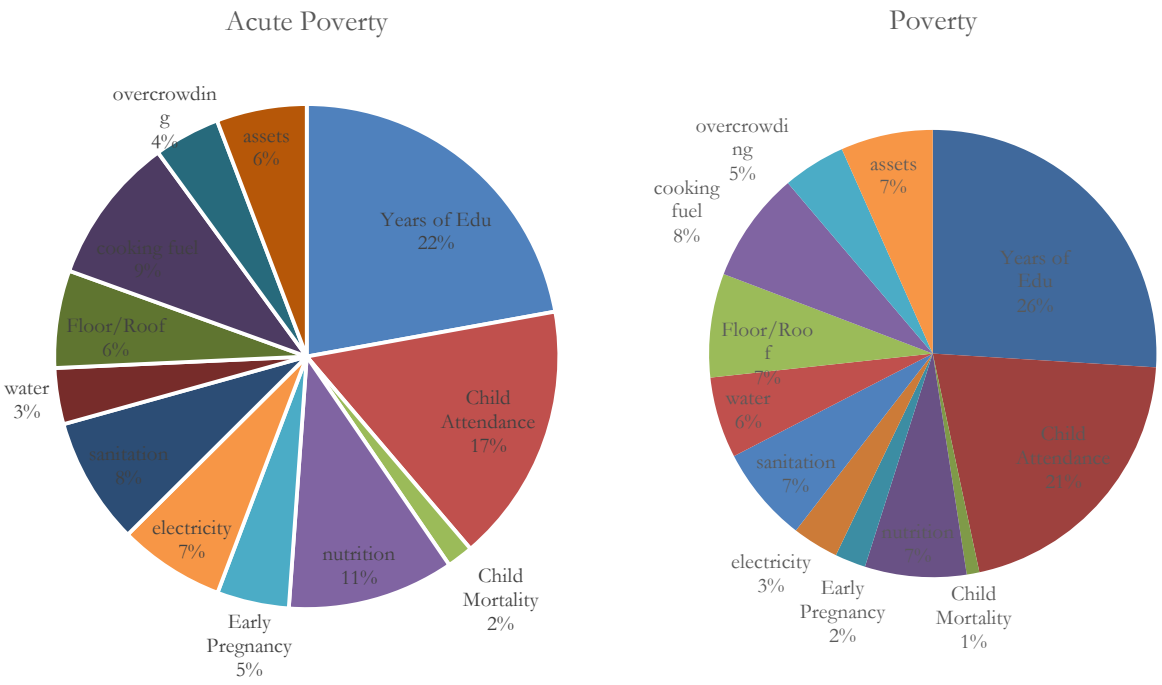
3.8 Looking at the contribution of dimensions by rural and urban areas in Figure 7, we observe that, at poverty, the contribution of education is higher in urban areas, while at acute poverty, it is higher in rural areas. The contribution of health is higher in urban areas at both levels.

Figure 7: Contribution of dimensions to acute poverty and poverty by rural and urban areas (%)



3.9 Figure 8 shows the percentage contribution of each indicator to acute poverty and poverty. Years of education makes the highest percentage contribution to poverty in Comoros at both levels, followed by child attendance. This means that education should be a priority area for poverty-reducing interventions in the country. When looking at acute poverty, nutrition is the indicator with the third largest contribution. When looking at poverty, cooking fuel is the indicator with the third largest contribution.

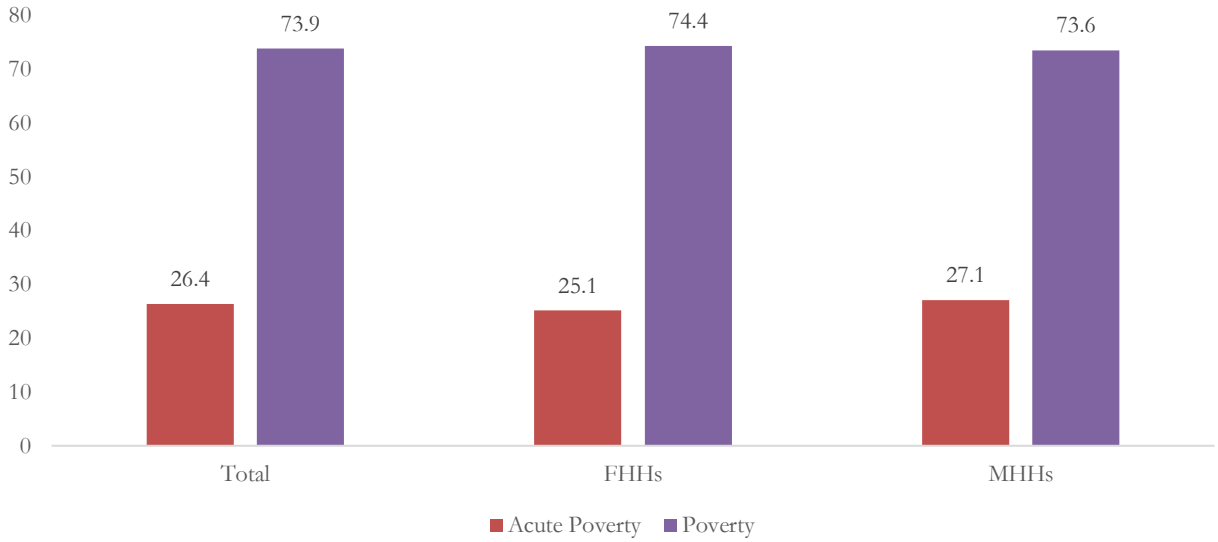
Figure 8: percentage contribution of indicators to acute poverty and poverty



IV. INEQUALITY IN DEPRIVATION

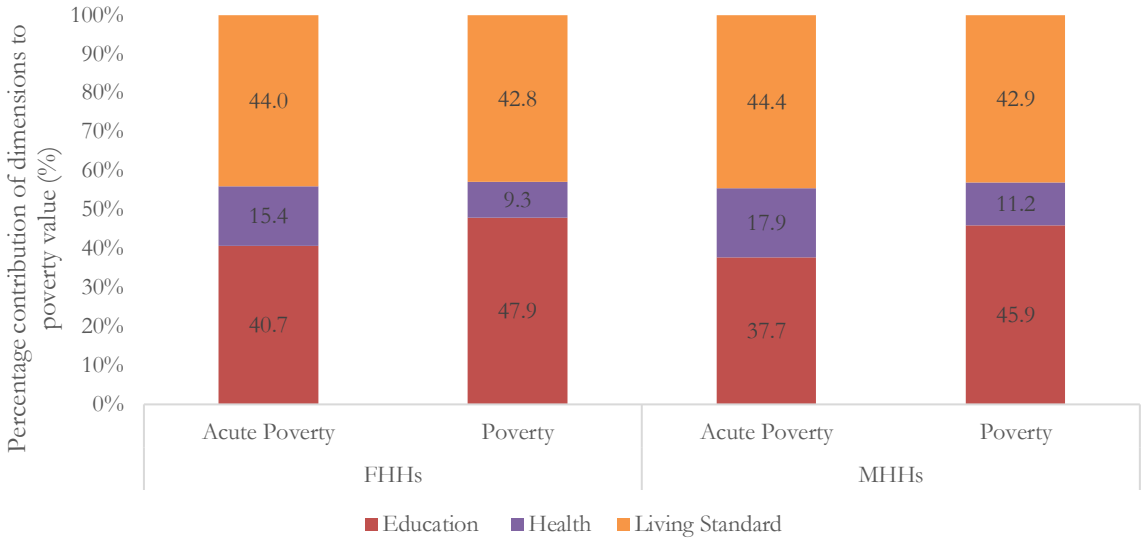
4.1 Figure 9 shows the difference in incidence of poverty between male-headed households (MHH) and female-headed households (FHH). In Comoros, levels are close but FHH have a slightly lower incidence of acute poverty but a slightly higher incidence of poverty.

Figure 9: Poverty headcount by gender of household head (%)



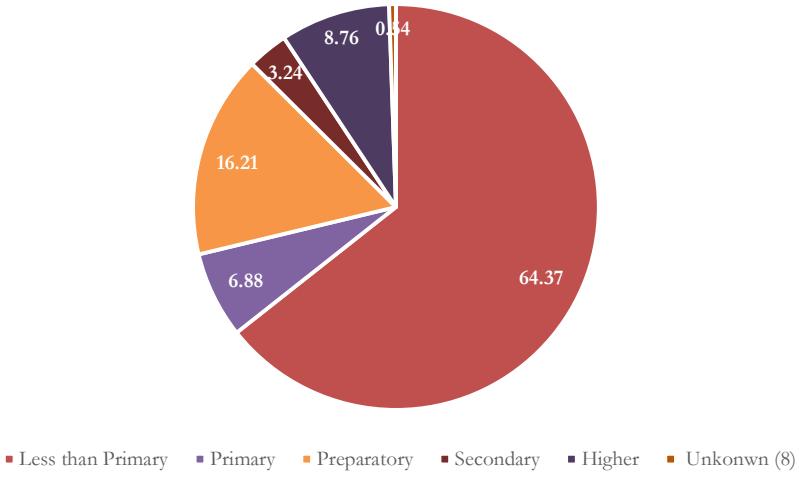
4.2 Figure 10 shows the contribution of each dimension to the overall poverty value by gender of the household head. Education makes a larger contribution to poverty in MHHs than in FHHs at both levels of poverty. Living standards and, more significantly, health, make a larger contribution to poverty in MHHs at both levels.

Figure 10: Contribution of each dimension to poverty value by gender of the household head (%)



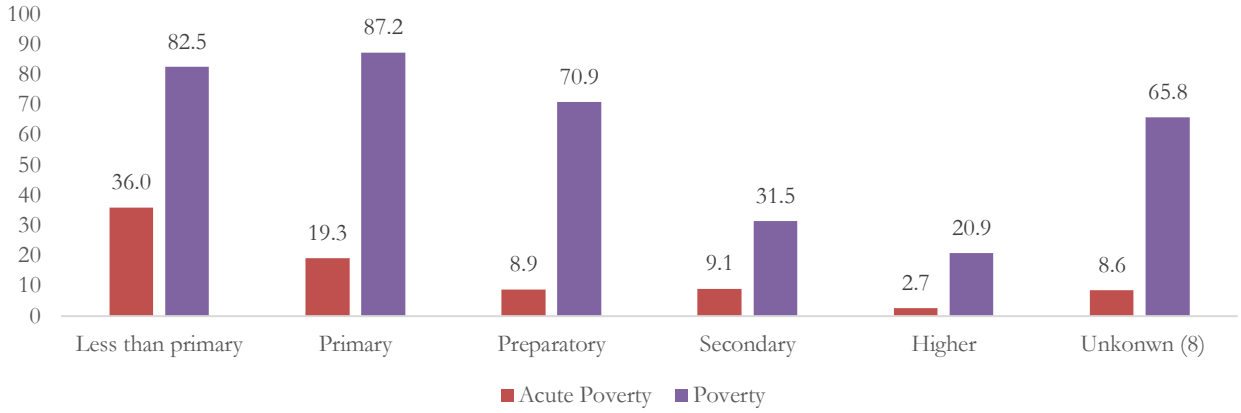
4.3 Figure 11 shows the distribution of households by education of the head of household. In 64.4% of HHs in Comoros, the head of household has less than or incomplete primary education. Overall, 28.2% of households in Comoros are headed by someone with more than primary education.

Figure 11: Education level of household head across overall population



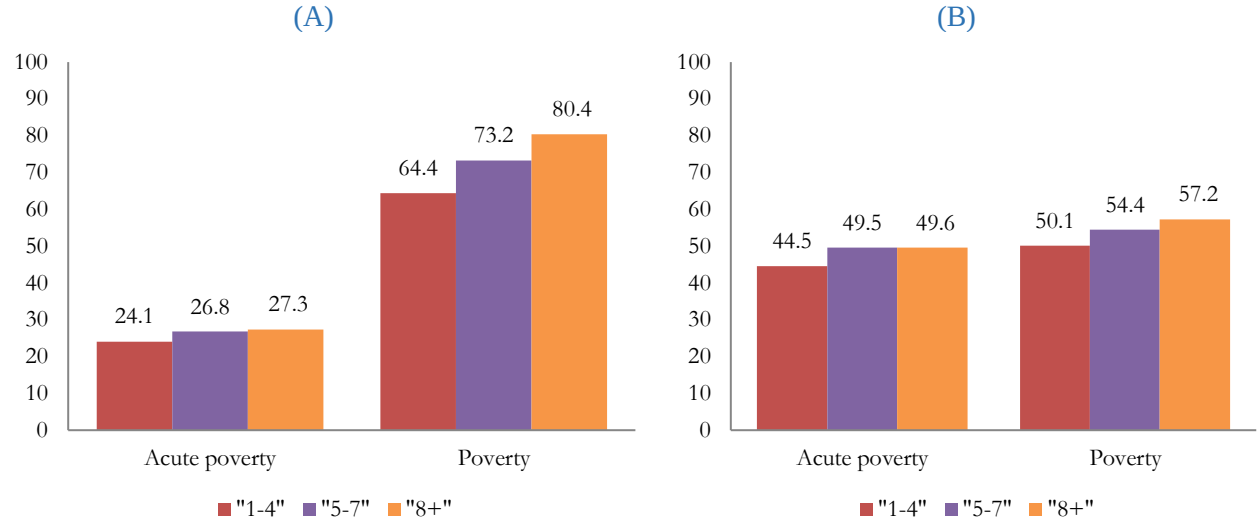
4.4 As shown in Figure 2, multidimensional poverty decreases as the education of the head of household increases. While 82.5% of people in a household whose head has less than primary education are poor, only 31.5% of people in a household whose head has secondary education are. The trend is even more dramatic at acute poverty: households with a head with less than primary education are 13.4 times more likely to be acutely poor than those with a head with the highest level of education available. The same trend (poverty dropping as education increases) applies to the intensity of poverty.

Figure 12: Headcount poverty at acute poverty and poverty by education of household head (%)



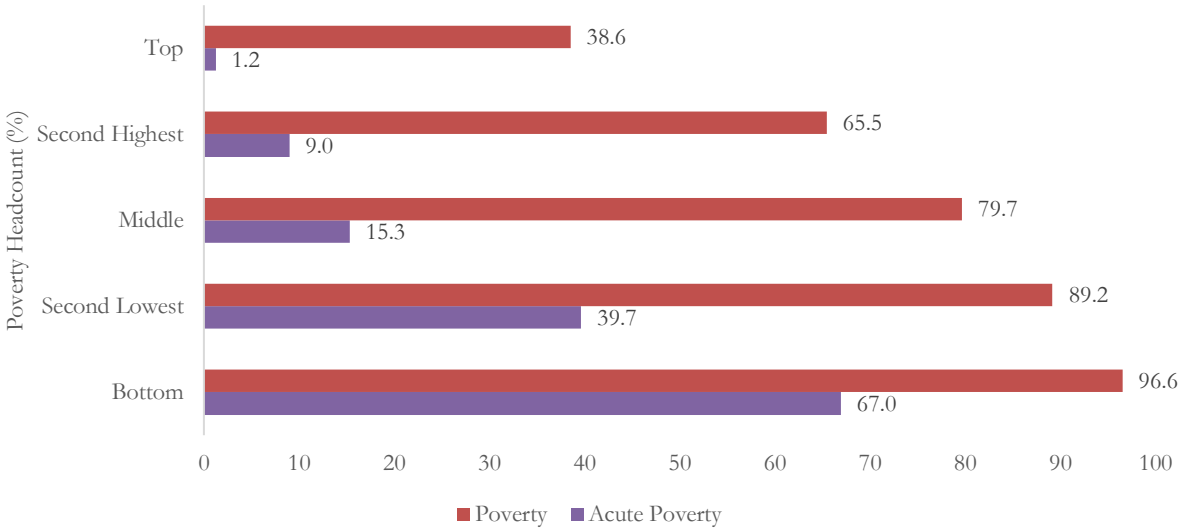
4.5 As shown in Figure 13, larger households (with more members) are significantly more likely to be poor at poverty, although only slightly more likely to be poor at acute poverty. At poverty, households with more than 8 members are 1.3 times more likely to be poor than households with 1-4 members. The intensity of poverty is likely to be higher for larger households at both levels (especially at poverty).

Figure 13: Headcount poverty (A) and intensity (B) for acute poverty and poverty by household size (%)



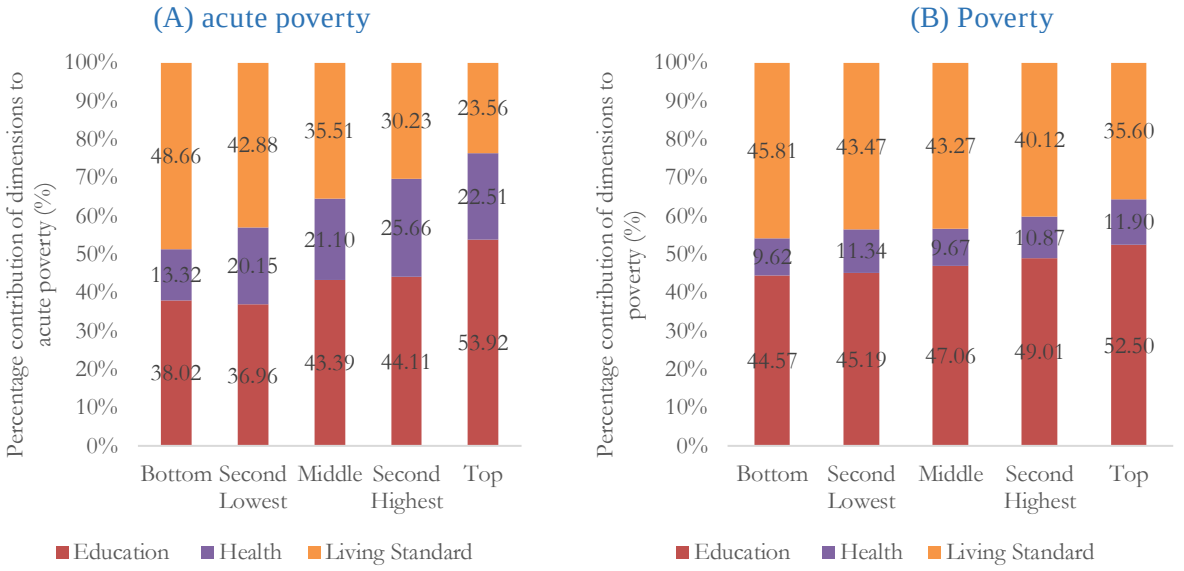
4.6 The survey also provides information about the Wealth Index (WI) of each household, which is an indicator of the economic situation of a household. The WI measures the household's ownership of assets and the quality of some of the assets. As shown in Figure 4, this information allows us to map the incidence of poverty across the different wealth quintiles. While it is expected for poverty to have a different incidence on population in different wealth quintiles due to the overlap between the MPI and the WI, the ratio is quite high: at poverty, households in the bottom quintile are 2.5 times more likely to be poor than those in the top quintile. At acute poverty, the same ratio is 56 times. While the poverty prevalence drops significantly drops at acute poverty, the richest households although face a lower poverty prevalence the extent of poverty and its intensity remain high and significant.

Figure 14: Headcount poverty (%) by wealth quintiles



4.7 As shown in Figure 15, the contribution of living standards to overall deprivation declines as the wealth of the household increases. This is expected as the WI overlaps with the living standards dimension (for example through ownership of assets). As the contribution of living standards goes down with wealth, it is interesting to look at which dimension, education or health, fills the gap more. For poverty the education dimension is the one which increases its contribution the most when going from the bottom to the top quintile. At acute poverty, the share of health is considerably higher in every quintile than it is at poverty.

Figure 15: Contribution of dimensions to multi-dimensional poverty by wealth quintiles



V. POLICY CONSIDERATIONS

5.1 In Comoros, a high share (26.4%) of the total population suffers from acute poverty, while an extremely large share of the population (73.9%) suffers from poverty. The poverty intensity – the average proportion of indicators in which poor people are deprived – is high at both levels and

particularly at poverty: 48.5% for acute poverty and 54.7% for poverty. This means that the poor suffer from a relatively high level of deprivation (i.e. they are deprived on many indicators). These findings show that poverty-reduction strategies in Comoros should be both inclusive - reaching a large share of the population – and wide-ranging - tackling a variety of challenges at the same time.

5.2 24.4 % of the population in Comoros are vulnerable to falling into acute poverty and 14.7% are vulnerable to falling into poverty. This highlights the need for policies to prevent people at risk from falling into poverty, especially at acute poverty.

5.3 At acute poverty, people in Comoros are particularly deprived in cooking fuel, sanitation and floor/roof. For poverty, most of the population is deprived in cooking fuel, floor/roof and sanitation. The top three indicators affecting the poor are the same at both levels of poverty, indicating that poverty-reduction strategies should prioritise these issues.

5.4 The biggest differences in headcount deprivation between urban and rural population (with the rural population being significantly more deprived than the urban one) at poverty are cooking fuel, water and education years. Virtually all population (96.1%) in rural areas is deprived in cooking fuel. Spatial differences across regions are also significant in terms of acute poverty (38.3% in Ndzuwani compared to 12.7% in Ngazidja) entailing that poverty eradication efforts should be spatially tailored.

5.5 When looking at the percentage contribution to poverty, years of education makes the highest contribution at both levels, followed by child attendance. This means that education should be a priority area for poverty-reducing interventions in the country.

5.6 Differences in poverty headcount in rural and urban population in Comoros are particularly high, at acute poverty, in sanitation, water and overcrowding; and, at poverty, in water, floor/roof and education years. This calls for policies targeting rural development and inclusion. Increasing access to water in rural areas appears to be a priority.

5.7 Inequality in multidimensional poverty between the highest and lowest wealth quintiles in Comoros is sharp, suggesting a considerable gap in access to resources and capabilities between rich and poor households, especially at acute poverty. At acute poverty, households in the bottom quintile are 53.8 times more likely to be acute poor than those in the top quintile. This suggests that policies should aim to reduce inequality among different strata of society in Comoros.

5.8 Sharp disparities are found across households with regard to education of household head and household wealth. The analysis shows that poorest and most vulnerable households are those from the bottom wealth quintile, whose head has no or primary education, and large household size. These information are crucial for designing poverty reduction programs taking into account poverty correlates.

Table 1: Acute Poverty: Standard Errors and Confidence Intervals

		Mean	Standard error	95% confidence interval	
Headcount	Total	26.36	0.3549	25.66345	27.05473
Intensity	Total	48.49	0.1924	48.11075	48.86530
MPI	Total	0.1278	0.0018	0.12429	0.13133
Headcount	Urban	13.22	0.4391	12.35721	14.07861
Intensity	Urban	47.27	0.4215	46.44378	48.09635
MPI	Urban	0.0625	0.0021	0.05832	0.06664
Headcount	Rural	32.39	0.4670	31.47377	33.30465
Intensity	Rural	48.72	0.2140	48.29651	49.13569
MPI	Rural	0.1578	0.0024	0.15311	0.16246

Table 2: Poverty: Standard Errors and Confidence Intervals

		Mean	Standard error	95% confidence interval	
Headcount	Total	73.88	0.3511	73.19272	74.56909
Intensity	Total	54.68	0.1222	54.43739	54.91639
MPI	Total	0.4040	0.0021	0.39979	0.40812
Headcount	Urban	55.81	0.6469	54.54221	57.07820
Intensity	Urban	51.30	0.2041	50.89763	51.69765
MPI	Urban	0.2863	0.0035	0.27940	0.29318
Headcount	Rural	82.20	0.3981	81.41629	82.97676
Intensity	Rural	55.73	0.1457	55.44717	56.01830
MPI	Rural	0.4581	0.0025	0.45317	0.46304

Table 3: Acute Poverty Headcount: Standard Errors and Confidence Intervals for different characteristics

		Mean	Standard error	95% confidence interval	
Gender of the Head of Household	Female	25.14	0.5736	24.01973	26.26830
	Male	27.08	0.4514	26.19773	27.96741
Education of the Head of Household	None	36.01	0.4849	35.05939	36.96039
	Primary	19.27	1.1551	17.00451	21.53270
	Preparatory	8.90	0.5887	7.74911	10.05693
	Secondary	9.11	1.2953	6.57199	11.64957
	Diploma/University	2.68	0.4935	1.71143	3.64602
	Non Standard	8.58	2.5316	3.61955	13.54390

Household Size	"1-3"	24.10	0.7350	22.66113	25.54230
	"4-7"	26.76	0.5660	25.64894	27.86773
	"8+"	27.32	0.5797	26.18203	28.45434
Wealth Quintile	Poorest	66.96	0.8291	65.33697	68.58708
	Second	39.67	0.8775	37.94786	41.38796
	Middle	15.34	0.6184	14.12873	16.55307
	Fourth	8.98	0.5248	7.95284	10.01016
	Richest	1.24	0.1563	0.93800	1.55057

Table 4: Poverty Headcount: Standard Errors and Confidence Intervals for different characteristics

		Mean	Standard error	95% confidence interval	
Gender of the Head of Household	Female	74.38	0.5724	73.25449	75.49819
	Male	73.59	0.4445	72.71393	74.45650
Education of the Head of Household	None	82.54	0.3867	81.78029	83.29623
	Primary	87.18	0.9335	85.35115	89.01067
	Preparatory	70.92	0.8990	69.15659	72.68063
	Secondary	31.49	2.0470	27.48141	35.50602
	Diploma / University	20.93	1.0636	18.84622	23.01562
	Non Standard	65.80	5.5865	54.85176	76.75168
Household Size	"1-3"	64.37	0.8080	62.78844	65.95582
	"4-7"	73.22	0.5584	72.12689	74.31591
	"8+"	80.44	0.5227	79.41344	81.46230
Wealth Quintile	Poorest	96.57	0.2657	96.04720	97.08882
	Second	89.22	0.5562	88.12985	90.31006
	Middle	79.72	0.7352	78.27692	81.15893
	Fourth	65.48	0.8466	63.81798	67.13682
	Richest	38.55	0.8583	36.86782	40.23238

Table 5: Acute Poverty: Population deprived by indicator (%), Standard Errors and Confidence Interval

	Mean	Standard error	95% confidence interval	
Years of Schooling	22.41	0.2748	21.87571	22.95298
School attendance	15.24	0.2368	14.77559	15.70404
Child Mortality	3.57	0.1222	3.32684	3.80591
Child Nutrition	25.18	0.2860	24.62014	25.74142
Early Pregnancy	8.27	0.1815	7.91261	8.62405
Electricity	29.88	0.3016	29.28634	30.46877
Sanitation	71.22	0.2984	70.63099	71.80060
Water	22.43	0.2749	21.88783	22.96531
Floor/Roof	32.47	0.3086	31.86460	33.07425
Cooking Fuel	81.12	0.2579	80.61525	81.62620

Overcrowding	22.16	0.2737	21.62799	22.70097
Assets	30.87	0.3044	30.27203	31.46539

Table 6: Poverty: Population deprived by indicator (%), Standard Errors and Confidence Interval

	Mean	Standard error	95% confidence interval	
Years of Schooling	67.96	0.3081	67.35912	68.56707
School attendance	54.15	0.3290	53.50540	54.79531
Child Mortality	3.57	0.1226	3.33159	3.81203
Child Nutrition	30.08	0.3029	29.48713	30.67435
Early Pregnancy	8.28	0.1820	7.92441	8.63786
Electricity	29.80	0.3020	29.20612	30.39013
Sanitation	71.38	0.2985	70.79404	71.96413
Water	61.74	0.3210	61.10999	62.36818
Floor/Roof	77.82	0.2744	77.28201	78.35753
Cooking Fuel	84.21	0.2408	83.74107	84.68498
Overcrowding	43.72	0.3276	43.07581	44.35992
Assets	69.98	0.3027	69.38800	70.57452

Table 7: Acute Poverty: Poverty Headcount (%) by State

	Mean	Standard error	95% confidence interval	
Mwali	33.90	0.7927	32.34751	35.45515
Ndzuwani	38.30	0.6077	37.10859	39.49071
Ngazidja	12.72	0.3703	11.99727	13.44874

Table 8: Poverty: Poverty Headcount (%) by State

	Mean	Standard error	95% confidence interval	
Mwali	78.36	0.6884	77.01540	79.71406
Ndzuwani	75.86	0.5373	74.81041	76.91663
Ngazidja	71.14	0.5150	70.13434	72.15309

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[1] Country classification corresponds to the Word Bank standards as follows: lower middle-income economies are those with a GNI per capita between $1,026 and $4,035; upper middle-income economies are those with a GNI per capita between $4,036 and $12,475; high-income economies are those with a GNI per capita of $12,476 or more (World Bank).
[2] Comoros Poverty Assessment, 2017
[3] The HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. A long and healthy life is measured by life expectancy. Knowledge level is measured by mean years of education among the adult population, which is the average number of years of education received in a life-time by people aged 25 years and older; and access to learning and knowledge by expected years of schooling for children of school-entry age. http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf
[4] Comoros Poverty Assessment, 2017
[5] Arab Multidimensional Poverty Report was launched in September 2017 as a joint publication of the League of Arab States' Council of Arab Ministers for Social Affairs, the Economic and Social Commission for Western Asia (ESCWA), the United Nations Children's Fund (UNICEF), and Oxford Poverty and Human Development Initiative (OPHI).
[6] For more information see https://dhsprogram.com/
[7] Demographic and Health Survey 2012
[8] According to UNESCO guidelines, the definition of primary schooling and secondary schooling is country-specific, as different countries have different durations of primary and secondary schooling. Therefore, our thresholds change according to the definitions of primary and secondary schooling of each country found on the UNESCO website.
[9] FGM does not exist in Comoros.
[10] The definition of rural and urban areas follows the national definitions used in the survey and therefore changes from country to country.
[11] Refer to the technical note of the Human Development Report 2014 for a complete explanation of how the percentage contribution of each dimension is calculated.
[12] Refer to **Error! Reference source not found.** for more details on the composition of the dimensions.