



Aruba
Multi Dimensional
Poverty Index
2010

Aruba Multi Dimensional Poverty Index 2010

What is poverty?

Poverty is defined and measured in various ways. In the Joint report on social inclusion 2004, the European Commission¹ states the following: "People are said to be living in poverty if their income and resources are so inadequate as to preclude them from having a standard of living considered acceptable in the society in which they live. Because of their poverty they may experience multiple disadvantages through unemployment, low income, poor housing, inadequate health care and barriers to lifelong learning, culture, sport and recreation. They are often excluded and marginalized from participating in activities (economic, social and cultural) that are the norm for other people and their access to fundamental rights may be restricted."

In 2010, the Central Bureau of Statistics in cooperation with the Department of Public Health (DESPA), the Foundation for Public Housing (FCCA), the Department of Economic Affairs, Commerce & industry (DEACI) and the Department of Social Affairs (DSZ) updated the subsistence minimum² according to the same methodology used in 1994, taking the budgetary aspect of the social and recreational spectrum into consideration. The subsistence minimum is defined as a standard of living (or wage) that provides only the bare necessities of life³. The subsistence minimum was calculated at AWG.1,985 for a one-person household.

Furthermore a poverty-line can be drafted according to the European standard concept of relative poverty⁴ (cut-off point: 60% of equivalised median monthly household income) and is calculated based on the 2010 Census data at AWG.1,356 per month for a one-person household.

However, income is by no means the sole determinant of the "at risk status" of a person or households, which indicates whether this person or household is vulnerable or at a disadvantage. For example, even as the ability to spend may be primarily determined by the person or household's income, they may have other resources to cover up for the lack of money.

In 2014, the Central Bureau of Statistics Curaçao published an article describing the social-economic situation of certain areas in Curaçao⁵. Based on 2011 Census data, they developed six criteria that were indicative of social-economic development. By means of these criteria they identified the most disadvantaged zones as well as the most prosperous zones in Curaçao.

In line with the paper published by the CBS Curacao, the Central Bureau of Statistics Aruba conducted statistical analyses on the data obtained during the 2010 Census. This paper described the analyses conducted and the results obtained. The intention of this paper is by no means to introduce a new definition of poverty. The sole intention is to highlight the multidimensional nature of poverty. This paper focuses on those who are both living on a relatively low income and experiencing relatively high levels of deprivation. For the analyses, the Multidimensional Poverty Index was used.

Since 2010, the United Nations Development Programme (UNDP) Report Office publishes the Global Multidimensional Poverty Index⁶ (global MPI) which is calculated and updated twice a year by the Oxford Poverty & Human Development Initiative (OPHI) and constructed using the Alkire-Foster method⁷. The MPI is based on the idea that no one indicator, such as income, is uniquely able to capture the multiple aspects that contribute to poverty. One deprivation alone may not represent poverty. The MPI requires a household to be deprived in multiple indicators at the same time. It measures both the incidence of poverty (how many persons are poor) and the intensity of their deprivation (proportion of deprivation experienced). It enables analyses of patterns of poverty, by analyzing how much each indicator and each dimension contribute to overall poverty.

¹ Joint report on Social inclusion, European Commission, 2004

² Commissie Bestaansminimum (2010). 'Rapport Bestaansminimum 2010'.

³ Oxford Dictionaries

⁴ http://ec.europa.eu/Eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty_rate

⁵ CBS Curaçao, *Statistisch Magazine MODUS*, jrg 12, nr3, 2014.

⁶ Alkire, S. & Santos, M.E. (2010) Acute multidimensional poverty: A new index for developing countries. *OPHI Working Paper* 38.

⁷ Alkire, S., & Foster, J. (2007). 'Counting and Multidimensional Poverty Measurement', *Oxford Poverty and Human Development Initiative, working Paper* No. 7, Oxford Department of International Development, University of Oxford.

Methodology

This paper was drafted according to the methodology developed by Maria Emma Santos and Sabina Alkire⁸. The most recent data is from the 2010 Census, which is not at globally comparable data-level for calculating the global MPI. However the MPI can be customized to national level by adapting the indicators, cut-offs, and weights according to local realities, needs and availability of data. However, it must be noted that information on income obtained from the census should be interpreted with caution due to the relatively high non-response (7.7%) to questions about income and the credible risk of additional income not being reported. The use of census data however rests in the ability to reliably map poverty down to geographical areas and for being the most recent data available.

The unit of analysis

The population count component of the Census collects data on individual level and the housing count component collects data on household level. One of the characteristics of the MPI is that a person is identified as poor or non-poor depending on the status of the entire household. In their paper, Santos and Alkire refer to an implicit assumption of a shared effect, whether negative or positive, within a household: if there is one member who is considered deprived, each household member is considered deprived. Therefore the unit of analysis is the household. The data used in this paper includes persons living in normal households, thus homeless and collective households are excluded. In addition, only those households for which income was reported are included, which totals 32,157 households of the total of 34,880 normal households counted during the census.

Dimensions and indicators

The choice of dimensions and indicators is based on what is actually possible in terms of data availability from the 2010 Census and how the data is related to each other. According to OPHI low correlations between indicators makes it possible to track each indicator independently⁹. In the case of 2010 Census data the Pearson's correlation does not exceed 0.2 indicating no evidence to favor any

type of relationship between indicators over others (see Annex I).

The common procedure in choosing dimensions for poverty measurement not only considers availability of data but includes, among others, also participation of and consensus among stakeholders to give the dimensions public legitimacy. However, this paper is a first attempt to introduce an Aruban Multidimensional Poverty Index (AMPI) including only data available from the 2010 Census without consulting stakeholders at this time.

The AMPI is composed of five dimensions, including education, economic activity, health, living conditions and income. As shown in figure 1, each dimension is subdivided in multiple indicators, totaling 10 indicators.

Indicator's deprivation cut-offs

Education

- a. School attendance: deprived if any school aged child (4-16 yrs) is not attending school. Education was not yet compulsory during the 2010 Census (compulsory education came into effect in 2012), however for the sake of this report school attendance is calculated for the compulsory school age, 4-16 years. In creating the global MPI, Alkire and Santos state that when a child is not in school, the household's current and future knowledge and abilities are reduced¹⁰.
- b. Low level educational attainment: deprived if any not school-attending household member (older than 16 yrs. of age) has only primary education or less. While the global MPI uses years of completion as an indicator, the educational level attained follows the same idea they used of effective literacy of Basu and Foster¹¹: 'that all household members benefit from the abilities of a literate person in the household, regardless of each person's actual level of education'.

Economic activity

- a. Unemployment: deprived if any not school-attending household member aged 14+ years is unemployed. Unemployment is amongst many other things the loss of a job and resources. Unemployment occurs when a person who is actively searching for employment is unable to find work or is unable to

⁸ Training material for producing national Human Development Reports; the Multidimensional Poverty Index (MPI) by Maria Emma Santos and Sabina Alkire

⁹ www.ophi.org.uk/wp-content/uploads/A-response-to-Nicole-Rippin.pdf

¹⁰ Acute Multidimensional Poverty: A new index for developing countries, Sabina Alkire and Maria Emma Santos, Human Development Research Paper 2010/11, July 2010,

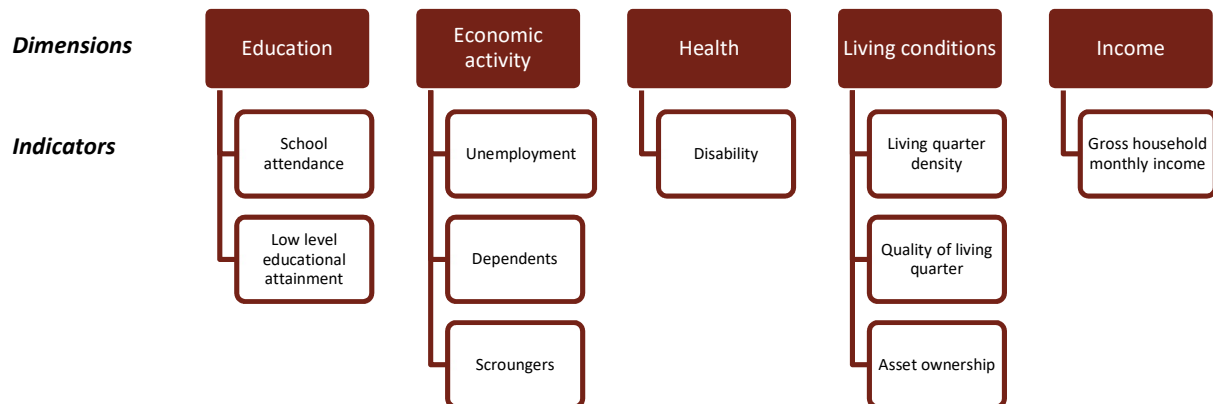
¹¹ Acute Multidimensional Poverty: A new index for developing countries, Sabina Alkire and Maria Emma Santos, Human Development Research Paper 2010/11, July 2010,

- start within two weeks notice, regardless of the cause of the unemployment.
- b. Dependents: deprived if more than half of household members is of non-working age (0-14 and 65+ years of age). This indicator does not account for young people or seniors who are working, nor for working-age persons who are unemployed or not in the labor force. It merely reflects the age structure of the population and it is not meant to diminish the contributions made by persons classified as "dependents".
 - c. Scroungers: deprived if any household member 25-64 yrs. is not school-attending, is economically not active, has no own income, is not living together with a partner and lives off others (either parent(s) or other (non)family member(s), regardless of their educational attainment). The 'donors' of these individuals face the challenge of managing their own finances with the added expense of providing for the scrounger.

Living conditions

- a. Living quarter density: deprived if there are three or more persons per room¹³. In establishing the statistical indicators on living conditions, the Statistical Commission and the Inter-Agency Working Party on Statistics for Social Programmes agreed that dwellings with densities of three or more persons per room should be considered overcrowded under any circumstance.
- b. Quality of living quarter: deprived if the living quarter is in bad condition. Living quarters in bad condition were considered those who scored 'poor' or 'very poor' at an evaluation conducted by census enumerators during their visit to the living quarter. Five major elements of the living quarter were evaluated: the roof, the walls, the floor, the ceiling and the windows, doors, and frames.
- c. Asset ownership: deprived if the household does not own the following: a telephone (landline or mobile), a refrigerator and a car.

Figure 1. Dimensions and indicators



Health

Disability: deprived if any household member experiences at least one difficulty in everyday life due to a physical or mental health problem. Persons experiencing difficulties are more likely to have limited opportunities to earn income and often have increased medical expenses, which may affect the household. The definition of a person with a difficulty is in accordance with the recommendations issued by the United Nations (2008)¹².

Income

- a. Gross monthly household income: deprived if the gross monthly household income is less than 60 percent of the equivalised median monthly household income of AWG.1,356 for a one-person household. The standard equivalence scale (the modified OECD scale) gives a weight to all members of the household which then adds up to the equivalised household size. The first adult (16 years and older) is given a weight of 1.0; 0.5 to the second

¹² Washington Group on Disability Statistics; United Nations City Group that focuses on proposing international measures of disability.

¹³ P301, Principles and Recommendations for Population and Housing Censuses Revision 2

and each subsequent person aged 16 years and over; and 0.3 to each child aged under the age of 16.

Indicator's weights

The five dimensions are equally weighted at 1/5 weight. The indicators within each dimension are also equally weighted. Indicators within the education dimension receive 1/10 weight ($1/5 \div 2$), indicators within the economic activity and living conditions dimensions receive each 1/15 weight ($1/5 \div 3$) and indicators within the health and income dimensions receive each 1/5 weight.

Poverty cut-off

Next, a deprivation score is calculated for each household by calculating the weighted sum of the number of deprivations. The deprivation score lies between 0 and 1, where a household that is not deprived receives a score equal to 0. The poverty cut-off is then defined as the share of weighted deprivations a household must have to be considered poor. The poverty cut-off is set at 1/3, meaning that a household is identified as poor if it has a deprivation score higher than or equal to a third of the (weighted) indicators. In addition, two more categories are defined: the 'population vulnerable to poverty', that is the percentage of households at risk of suffering multiple deprivations (those households with a deprivation score of 20–33 percent), and the 'population in severe poverty', which is the percentage of households in severe multidimensional poverty (households with a deprivation score of 50 percent or more).

Censoring the deprivations of the non-poor

This paper focuses firstly on those households that scored higher or equal to a third of the weighted indicators. Households whose weighted deprivations do not add up to 1/3 of the total number of possible deprivations (the poverty cut-off score) are thus considered non-poor, and their deprivation score value is set at "0". This is called 'censoring' of the headcounts, which reflects the percentage of households that are poor and deprived in each indicator. Households that do not reach the poverty cut-off are not taken into consideration.

Interpretation

The AMPI is the product of two measures, the 'incidence of poverty' (H) and the 'intensity of poverty' (A). (See Annex II for a summary of the AMPI properties)

Incidence of poverty (H)

The incidence of poverty is the proportion of households that experience multiple deprivations, or the so-called multidimensional headcount ratio. It is calculated as the number of households that are multidimensionally poor (q) over the total population (n) of households.

$$H = \frac{q}{n}$$

According to this equation, the incidence of poverty in Aruba is 0.159, meaning that 15.9 percent of our households is AMPI poor and is considered to be in acute poverty. This totals 5,105 households consisting of 13,638 persons living in poor households. These households are deprived in at least one third of the weighted indicators.

The intensity of poverty (A)

The intensity of deprivation (or Average Poverty Gap) is the average number of deprivations a poor household suffers ($c_i(k)$). It is the censored deprivation score of individual indicators over the number of households that are multidimensionally poor.

$$A = \frac{\sum_{i=1}^n c_i(k)}{q}$$

The intensity of poverty in Aruba is 0.429, meaning that on average the poor are deprived in 42.9 percent of the combined weighted indicators.

The AMPI

The AMPI (or the adjusted headcount ratio) calculates the adjusted share of the population that is multidimensionally poor by the intensity of the deprivation they suffer.

$$AMPI = H \times A$$

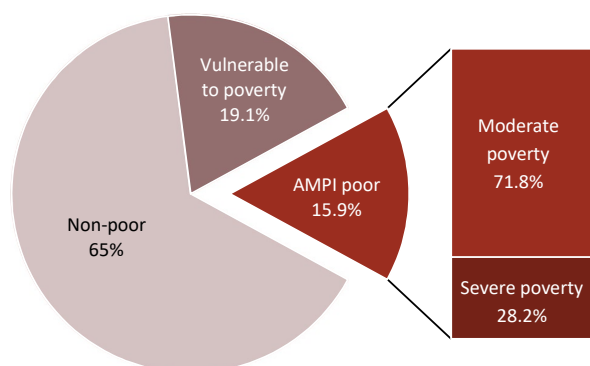
In this case the AMPI is 0.068, meaning that the multidimensionally poor households in Aruba experienced 6.8 percent of all deprivations that society could potentially experience if all households were deprived in all indicators. In an extremely poor society where all households are poor and are deprived in all indicators, the AMPI score is equal to 1.0.

Severity of poverty

Deprived households can be further categorized in households in ‘moderate poverty’ and households in ‘severe poverty’. Households categorized as being in moderate poverty are those with a deprivation score between 34 and 49 percent and represent 71.8 percent of the deprived households and 11.4 percent of all households. The population of households in ‘severe poverty’ – households with a deprivation score of 50 percent or more - represents 28.2 percent of the total number of deprived households and 4.5 percent of all households.

In addition, households can be categorized as being ‘vulnerable to poverty’, which is the percentage of households at risk of suffering multiple deprivations (households with a deprivation score of 20–32 percent). Of all households, 19.1 percent are vulnerable to poverty, but are not yet considered multidimensionally poor.

Figure 2. All households by severity of poverty (n=32,157)



Regional distribution

The incidence of poverty (H) is highest in San Nicolas, particularly in San Nicolas South (28.2%). Even though only 5.2 percent of Aruba’s population resides in San Nicolas South¹⁴, the highest AMPI score is calculated for San Nicolas South. Of the total number of households in San Nicolas South, 28.2 percent are considered AMPI poor, experiencing 43 percent of all deprivations, while in

San Nicolas North 22 percent of the population is poor experiencing 42.9 percent of all deprivations. However, the intensity of poverty (A) in San Nicolas South is comparable to that in other regions (see table 1 and figure 2). The lowest incidence ratios are found in Noord/Tanki Leendert and Paradera, respectively 11.5 and 12.9 percent.

Table 1. Multidimensional poverty by region (GAC1)¹⁶

Region	Population (%)	H (%)	A (%)	AMPI (HxA)	In severe poverty
1. Noord/ Tanki Leendert	21.4	11.5	42.9	0.049	27.5
2. Oranjestad West	14.4	14.5	43.1	0.062	28.2
3. Oranjestad East	14.6	16.3	42.2	0.069	24.7
4. Paradera	11.3	12.9	43.0	0.055	29.9
5. Santa Cruz	12.0	16.3	43.2	0.070	30.2
6. Savaneta	11.4	17.0	42.9	0.073	29.2
7. San Nicolas North	9.7	22.0	42.9	0.094	28.1
8. San Nicolas South	5.2	28.2	43.0	0.121	29.2
Aruba	100.0	15.9	42.9	0.068	28.2

On average, according to the results (A) presented in table 1, the poor in Aruba is deprived in about 4 out of the 10 indicators. Furthermore table 1 shows that even as the intensity of poverty experienced is relatively the same in all regions of Aruba, the AMPI (the adjusted headcount ratio) is highest in San Nicolas due to the larger proportion of households that are considered poor in San Nicolas. San Nicolas North and San Nicolas South had the highest headcount ratio.

In addition to scoring a high headcount ratio and having a high AMPI score, San Nicolas has a relatively high proportion of households in severe poverty, especially San Nicolas South. About 29 and 28 percent of the poor households in respectively San Nicolas South and San Nicolas North are considered to be in severe poverty (see Annex III and figure 2). However, the highest proportions of multidimensionally poor households that are in severe poverty are found in Santa Cruz and in Paradera (30.2 percent, and 29.9 percent, respectively; see table 1).

¹⁴ Including only those households for which income was reported

¹⁶ Geographical Address Classification system, CBS (2010), hierarchical structure on regional level, 8 regions

Figure 2. Proportion of households in poverty (H%) by region

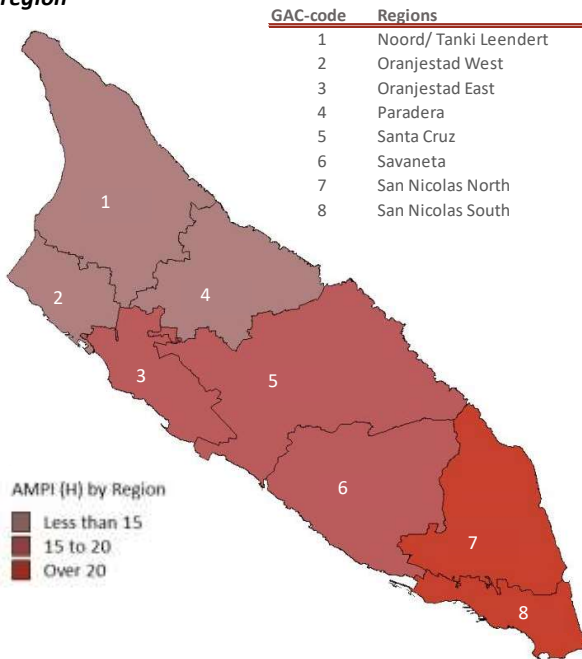
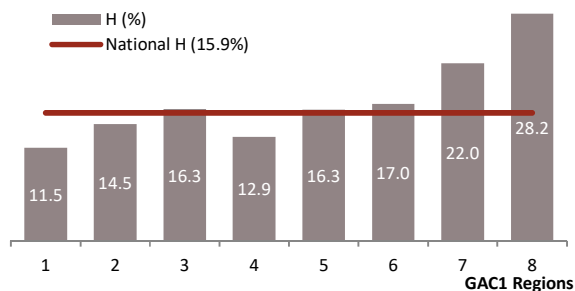


Figure 3. Proportion of households in poverty by region



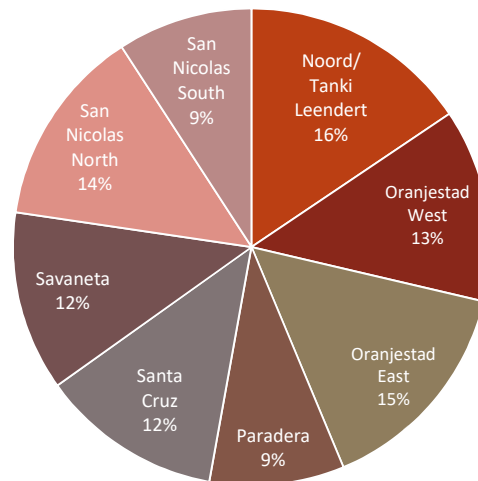
In addition, despite the fact that Noord/Tanki Leendert, Oranjestad West and Paradera, all score below the national headcount (figure 3) Noord/Tanki Leendert is the region with the largest number of poor households (n=794; see figure 4). Of all households that are considered poor (totaling 5,105 households), 15.6 percent reside in Noord/Tanki Leendert and 15.0 percent in Oranjestad East. San Nicolas South and Paradera on the other hand have the smallest number of poor households with respectively 9.2 and 9.1 percent of the total number of poor households residing in San Nicolas South and in Paradera.

¹⁷ Geographical Address Classification system, CBS (2010), hierarchical structure on geographical zones, 55 zones

Analysis on a regional level shows San Nicolas South as the one region with the most AMPI poor households, however at a zone level, a slightly different picture can be discerned. At a zone level there are some AMPI-poor zones (GAC2¹⁷) within regions with a lower AMPI score and vice versa (see Annex III and IV).

Overall, 4.9% to 45.7% of the population of zones is AMPI poor, with the lowest percentage of AMPI poor households in Seroe Colorado and the highest percentage of AMPI poor households in Village.

Figure 4 Regional distribution of the AMPI poor



Zones with a high percentage of poor households (over 20% of the household population being AMPI poor) are Nassastraat, Tarabana, Dakota/Potrero and Simeon Antonio in Oranjestad East with respectively 27.6 percent, 23.1 percent, 21.9 percent and 20.6 percent of their respective populations being AMPI poor. In addition, Madiki Kavel (21.1 percent) in Oranjestad West, Urataca (20.9 percent) in Santa Cruz and Cura Cabai (20.3 percent) in Savaneta are zones with a high percentage of poor households.

As with the overall AMPI score there are some zones with a relatively low percentage of poor households, but with a relatively larger share of households experiencing severe poverty. A good example is Washington, where 10.8 percent of households are considered multidimensionally poor, but more than 30 percent of these households experience severe poverty.

Overall, Urataca has the largest share of households in severe poverty when compared to the other zones, with

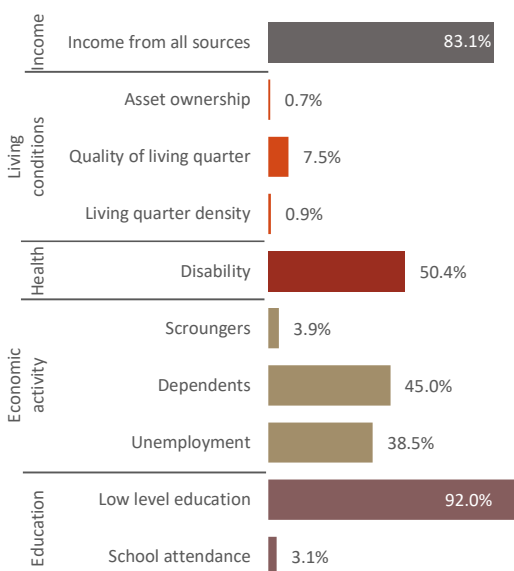
41 percent of the multidimensionally poor households experiencing severe poverty. In absolute numbers, Pos Chikito has the largest number of households in severe poverty, followed by Madiki Kavel, Brazil, Dakota/Potrero and Ayo.

Indicators

The combination of the chosen dimensions and indicators (deprivations) illustrates the importance of each indicator in determining the population in poverty and the at-risk-population (the population vulnerable to poverty). The major contributors to the multidimensional poverty are low level educational attainment and low income, in this particular order. The disability indicator, the number of dependents and unemployment contribute in lesser extent to the measurement of the population experiencing poverty. (Fig. 5)

The education deprivation, particularly low educational attainment is highest in all regions, scoring highest in Paradera with a 95.6 percent deprivation score. Figure 5 shows the limited contribution of the living conditions dimension, school attendance, and the number of scroungers, as individual indicators.

Figure 5. Contribution of indicators to the multidimensional poor (in % of the AMPI population)



However, further analysis shows that there are slight differences on a regional level, such as a slightly higher percentage of households experiencing deprivation in the

unemployment indicator in Oranjestad West and a slightly higher percentage of households with dependents in San Nicolas North and South.

Profile of AMPI poor households¹⁸

The multidimensional poor totaled 5,105 households, of which extended households¹⁹ scored the highest poverty rate (21.6%) and nuclear households the lowest (12.9%) (See Annex IV). Even as the proportion of nuclear households experiencing poverty is lowest among household types, its share within all poor households (n%=44.3) is highest due to a larger number of this type of household in Aruba. Its share is about double the size of that of extended households, 2,261 nuclear households versus 1,062 extended households that are in poverty.

Households with two children scored the highest headcount ratio, followed by households with no children, with respectively 19.8 and 21.6 percent of households that are considered poor (Annex IV). The headcount ratio is also higher for larger households, even as these large households (6+ members) represent less than 6 percent of all households.

Analysis on sociological household type and poverty show that that more single mother households experience deprivations compared to other sociological nuclear household types. One in every 5 single mother households is considered to be multidimensionally poor, of which 23 percent experiences severe poverty (figure 7).

The weighted poverty headcount (AMPI) was highest for both single person households born in Aruba and households where all members were born in Aruba, with a score of respectively 0.103 and 0.068. Furthermore, of the poor single person household born in Aruba, a relatively higher percentage is considered to be in severe poverty compared to the other household types (see figure 8).

All AMPI poor households were deprived in, on average, 41.6 to 43.6 percent of the weighted indicators, suggesting that the high AMPI score was mainly related to the higher headcount and not the average intensity of poverty amongst the poor.

Overall, the largest number of households experiencing poverty is households with no children, totaling 3,568 households, representing 70 percent of all households

¹⁸ See Annex III for complete table

¹⁹ Based on the sociological approach as defined in the Fifth Population and Housing Census, 2010, CBS. Pg.34

experiencing poverty. Of these households, the majority is composed of either an economically non active person with an average age of 68 years or a two adults where at least one of them is on average 65 years of age and economically non-active.

Even as households with children are not in the majority, 1,537 households with children totaling 2,931 children are also experiencing poverty. Among these households 28.5 percent are composed of jobless single parent households, 27.9 percent of two parent households where only one parent has a job, 21.2 percent of employed single parent households and 8.7 percent of two jobless parents households. The parents in households experiencing poverty are relatively young, with fathers being, on average, 41.3 years old and mothers, on average, 36.2 years of old. The children are on average 8.5 years of age.

Profile of households vulnerable to poverty

In addition to the AMPI score, borderline households are categorized as households vulnerable to poverty. These households scored between 20 and 32 percent of the total weighted deprivations. They are not yet categorized as multidimensionally poor or in poverty but are at-risk-of-poverty. The proportion of these vulnerable to poverty households is higher than the proportion of households in poverty. The population vulnerable to poverty totaled 18,398 persons living in 6,144 households, representing 19.1 percent of the total number of households. While those in poverty represent 15.9 percent of the total number of households. (see Annex III and V)

Table 2. Households vulnerable to poverty by region

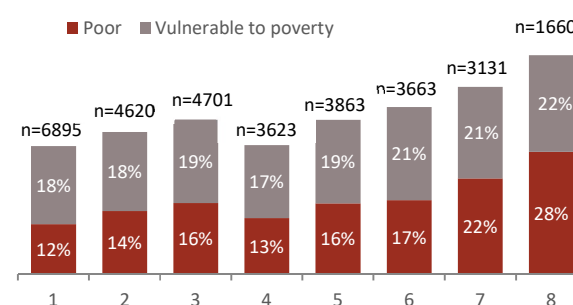
Region	Population (%)	Population vulnerable to poverty		
		abs.	row%	%
1. Noord/ Tanki Leendert	21.4	1,237	17.9	20.1
2. Oranjestad West	14.4	842	18.2	13.7
3. Oranjestad East	14.6	903	19.2	14.7
4. Paradera	11.3	607	16.8	9.9
5. Santa Cruz	12.0	743	19.2	12.1
6. Savaneta	11.4	785	21.4	12.8
7. San Nicolas North	9.7	659	21.1	10.7
8. San Nicolas South	5.2	368	22.2	6.0
Aruba	100.0	6,144	19.1	100.0

San Nicolas scored as the most disadvantaged region in terms of the proportion of households in poverty and those vulnerable to poverty. This was particularly true for San Nicolas South, where 50% of households are either vulnerable to poverty or in poverty. In all regions, except for San Nicolas, the share of households vulnerable to poverty is relatively larger than the share of households in poverty. While Savaneta scored as the third region with

the highest headcount and highest AMPI score, they have, about the same proportion of households vulnerable for poverty as San Nicolas North.

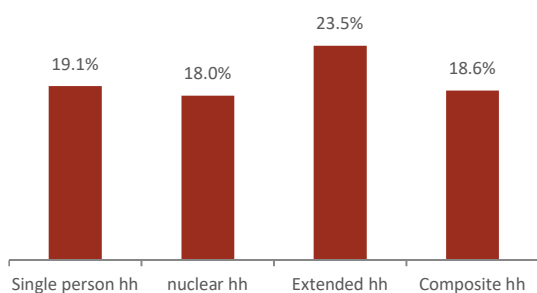
Overall, between 17 and 22 percent of households in each region are vulnerable to poverty and as with the AMPI there are zones with low AMPI scores, but with a relatively higher percentage of households vulnerable to poverty (see Annex III). One of these zones is Ponton, where only 8.1 percent of households are considered poor, but on the other hand 16.9 percent of households are considered to be at risk. Another example is Sabana Blanco/Mahuma with a headcount ratio of 8.2 percent of households considered poor and 15.3 percent of households vulnerable to poverty. In addition, there are zones where both the headcount ratio was above 20 percent and the share of at risk households is also above 20 percent.

Figure 6. Poor households and households vulnerable to poverty by region



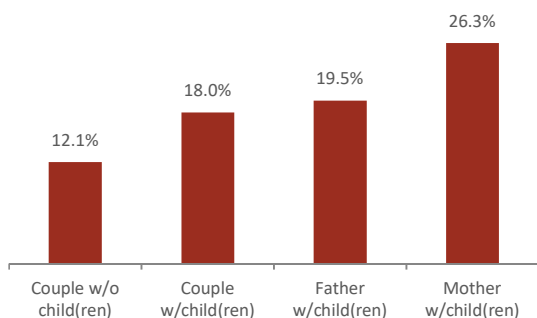
Further analysis of households vulnerable to poverty shows that the headcount ratio is highest for sociological extended households (figure 10). However, as the majority of households are nuclear households, the absolute number of households vulnerable to poverty is largest for nuclear households.

Figure 7. Households vulnerable to poverty by type of sociological household composition



In total, 3,160 nuclear households are vulnerable to poverty. Within these nuclear households, the most at risk are single mothers with children, with a headcount ratio of 26.3 percent (figure 11).

Figure 8. Nuclear households vulnerable to poverty by type of sociological family type



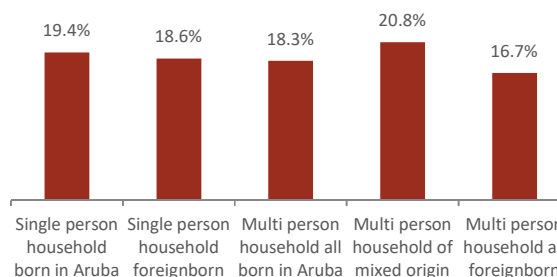
On the other hand, the majority of families within the sociological nuclear households are couples with children, representing 50.7 percent of all sociological nuclear households. Of these couples with children, 18 percent are vulnerable to poverty, while only 7.9 percent are considered in poverty (see annex IV).

As the number of children in the household increases, so does the vulnerability to poverty. The headcount ratio for households with 3 children or more is 25.9 percent. In addition, 14.5 percent of households with 3 children or more are already considered to be in poverty, totaling about 40 percent of all households with three children or more being either at risk for poverty or already experiencing poverty.

Neither the number of persons in the household nor the country of birth of household members has shown to influence the at-risk-of-poverty status of households. All households irrespective of the number of household members or the country of birth of household members

scored between 16.7 and 20.8 percent as being vulnerable to poverty. Multi-person households of mixed origin scored slightly higher (20.8%), followed by single person households born in Aruba (19.4%). Multi person households with all members born in a foreign country scored the lowest with a headcount of 16.7 percent (figure 12).

Figure 9. Households vulnerable to poverty by Aruban status of household



The majority of households vulnerable to poverty (57.6%) are households with no children. These households are much younger when compared to households already experiencing poverty. On average, household members at-risk-of-poverty are 56 years old, with 68 percent ranging between 39 and 64 years of age. Of these household members, 48.1 percent are economically not active, 46.0 percent are employed and 5.8 percent are unemployed.

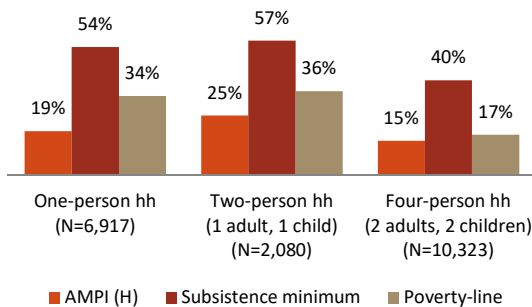
Where households with children are concerned, a total, of 2,606 households consisting of 4,953 children are at risk of poverty. Among these households, 29.3 percent are composed of employed single parent households, 27.9 percent of two parent households where only one parent has a job, 24.4 percent of employed two parent households and 9.6 percent of jobless single parent households. These parents are relatively young too, with fathers being on average 41.3 years of age and mothers 37.0 years of age. The children are on average 8.7 years of age.

Contrary to the situation of the population in poverty, income is the major contributor in defining the population vulnerable to poverty, followed by low educational achievement and disability. The chosen living conditions indicators show minimum contribution as do school attendance and the number of scroungers.

AMPI vs Subsistence minimum and poverty threshold

Figure 13 compares the AMPI incidence measure (H) with the proportion of persons living below the subsistence minimum and the poverty-line for specific household compositions, including one person households, two person households (1 adult, 1 child²⁰) and four person households consisting of 2 adults and 2 children.

Figure 10. Proportion of households in poverty according to different poverty measures and household composition



Based on the subsistence minimum, 54 percent of one person households do not have an income sufficient to cover the proposed basket of goods and services considered the minimum required. While using the European standard concept of relative poverty, 34 percent of one person households live below the poverty line, thus are at risk of poverty. The headcount measure of the AMPI on the other hand shows that 19 percent of one person households are considered to be not only deprived in matters of income, but deprived on several indicators at the same time.

Conclusion

This analysis has shown that 15.9 percent of the 32,157 households in Aruba is considered to be multidimensionally poor (considering the choice of dimensions and indicators and cut-off points), which equals 5,105 households. The intensity of deprivation experienced is 42.9 percent of the weighted indicators, meaning that on average, a multidimensional poor household was deprived in 4.3 out of a total of 10 indicators. In addition, 28.2 percent of the multidimensionally poor, experience severe poverty,

totaling 1,437 households. Major contributors to the multidimensional poverty index are low educational achievement and household income from all sources.

In addition to the 5,105 households experiencing poverty according to this methodology, another 19.1 percent of households is vulnerable to poverty, which totals 6,144 households.

The highest number of households experiencing poverty is found in Noord/Tanki Leendert, despite the fact that San Nicolas has a larger proportion of households living in poverty, particularly San Nicolas South. San Nicolas also scored highest in proportion of households being vulnerable to poverty. Santa Cruz, on the other hand, scored slightly above the national headcount ratio, but had the largest proportion of multidimensionally poor households experiencing severe poverty.

The majority of households in poverty is households with no children and is either a one person or a two person household (all adults). In case of a one person household, this person is economically non active with an average age of 68 years and in case of a two adult household, at least one of the household members is on average 65 years of age and is economically non-active. Households with children experiencing poverty represent 30 percent of all households in poverty, totaling 2,931 children with relatively young parents experiencing poverty.

This report is an effort towards a different approach to measuring poverty in addition to the calculation of the minimum subsistence level and the international standard concept of relative poverty. It is by no means intended to replace or undermine the importance of the above mentioned measures, but rather to complement each other in order to give a better understanding of the socio-economic situation of our population.

The CBS acknowledges the shortcomings of this AMPI as the choice of dimensions and indicators in this first attempt are based on availability of data and should be based on local realities and needs. In addition, guidelines and criteria's need to be set on a national level in order to define, identify and measure poverty in Aruba as well as to introduce new variables, thresholds and indicators.

²⁰ Adult is a person 16 years or older, as defined in the Rapport Bestaansminimum 2010, CBS.

ANNEX I Pearson Correlation of indicators

	Income from all sources	School attendance	Low level educational attainment	Unemployment	Dependents	Scroungers	Disability	Living quarter density	Quality of living quarter	Asset ownership
Income from all sources	1.00									
School attendance	-.034**	1.00								
Low level educational attainment	-.181**	-.036**	1.00							
Unemployment	-.178**	0.00	.092**	1.00						
Dependents	-.034**	-.010**	.168**	-.049**	1.00					
Scroungers	-.092**	-0.01	.036**	-.023**	-.026**	1.00				
Disability	-.066**	.017**	.186**	-.015**	.155**	0.00	1.00			
Living quarter density	-.017**	.012**	-0.01	0.01	-.018**	.006*	0.00	1.00		
Quality of living quarter	-.050**	.007*	.058**	.037**	.014**	.014**	.028**	.031**	1.00	
Asset ownership	-.013**	0.00	.026**	0.01	.014**	0.00	.020**	0.00	.069**	1.00

ANNEX II Summary of AMPI properties

Index	Value
AMPI	6.8
H (%)	15.9
A (%)	42.9
Total number of households (n)	32,157
Total number of households multidimensionally poor (q)	5,105

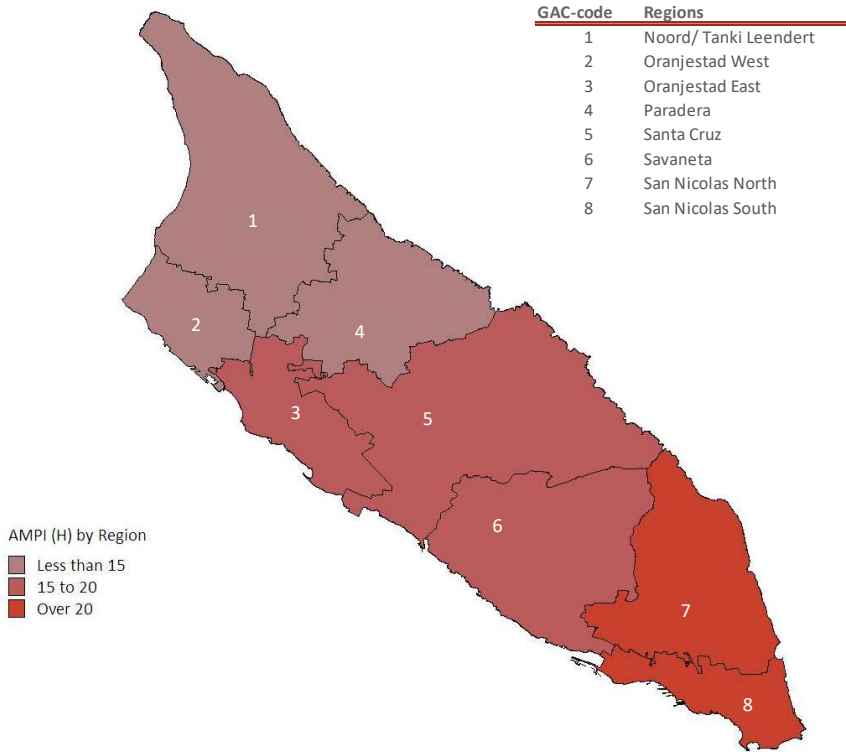
ANNEX III Percentage of multidimensionally poor households and households vulnerable to poverty by GAC-zone

GAC-code	Zone	AMPI (H)	Vulnerable to poverty	Severe poverty
1	Noord/Tanki Leendert	11.5	17.9	27.5
11	Palm Beach/Malmok	10.8	16.6	27.0
12	Washington	10.7	18.5	30.3
13	Alto Vista	10.4	17.2	24.3
14	Moko/Tanki Flip	13.4	19.8	26.5
15	Tanki Leendert	12.8	18.4	30.0
2	Oranjestad West	14.5	18.2	28.2
21	Pos Abao/Cunucu Abao	11.4	13.6	25.0
22	Eagle/Paardenbaastraat	10.1	11.6	28.6
23	<i>Madiki Kavel</i>	21.1	24.4	32.9
24	<i>Madiki/Rancho</i>	18.8	20.4	25.6
25	Paradijswijk/Santa Helena	10.5	18.3	24.2
26	Socotoro/Rancho	18.6	19.4	30.3
27	Ponton	8.1	16.9	26.0
28	Companashi/Solito	12.4	14.2	25.0
3	Oranjestad East	16.3	19.2	24.7
31	<i>Nassastraat</i>	27.6	15.2	17.1
32	<i>Klip/Mon Plaisir</i>	15.1	20.4	18.5
33	<i>Sividivi</i>	13.7	23.3	33.3
34	Seroe Blanco/Cumana	10.2	16.0	29.6
35	<i>Dacota/Potrero</i>	21.9	21.9	25.9
36	<i>Tarabana</i>	23.1	21.5	27.8
37	Sabana Blanco/Mahuma	8.2	15.3	20.0
38	<i>Simeon Antonio</i>	20.6	25.8	25.0
4	Paradera	12.9	16.8	29.9
41	Shiribana	11.8	19.1	26.4
42	Paradera	11.8	17.0	30.5
43	Ayo	14.9	15.1	31.5
44	Piedra Plat	12.5	15.4	31.6
5	Santa Cruz	16.3	19.2	30.2
51	Hooiberg	15.5	18.6	27.3
52	Papilon	14.3	18.1	20.4
53	<i>Cashero</i>	15.6	20.8	28.1
54	<i>Urataca</i>	20.9	19.0	41.0
55	<i>Macuarima</i>	18.2	21.3	36.2
56	Balashi/Barcadera	14.6	18.0	28.8
6	Savaneta	17.0	21.4	29.2
61	<i>Pos Chiquito</i>	14.9	21.9	29.0
62	Jara/Seroe Alejandro	18.8	19.6	33.6
63	<i>De Bruynewijk</i>	16.2	20.3	19.5
64	<i>Cura Cabai</i>	20.3	23.3	31.3
7	San Nicolas North	22.0	21.1	28.1
71	<i>Brasil</i>	23.5	21.5	30.5
72	Rooi Congo	19.3	19.3	27.6
73	<i>Watapana Gezaag</i>	20.3	22.2	25.2
74	<i>Standard Ville/Rooi Hundo</i>	22.9	18.9	33.3
75	<i>Kustbatterij</i>	22.0	21.3	29.7
76	<i>Juana Morto</i>	25.3	23.1	21.0
7	San Nicolas South	28.2	22.2	29.2
81	<i>Zeewijk</i>	31.6	15.5	29.5
82	<i>Pastoor Hendriksstraat</i>	21.0	22.8	31.1
83	<i>van de Veen Zeppenfeldstra</i>	38.5	19.2	23.3
84	<i>Village</i>	45.7	32.1	34.4
85	<i>Essoville</i>	24.5	21.9	24.0
86	<i>Lago/Esso Heights</i>	22.7	19.3	27.0
87	Seroe Colorado	4.9	14.8	0.0
Total		15.9	19.1	28.2

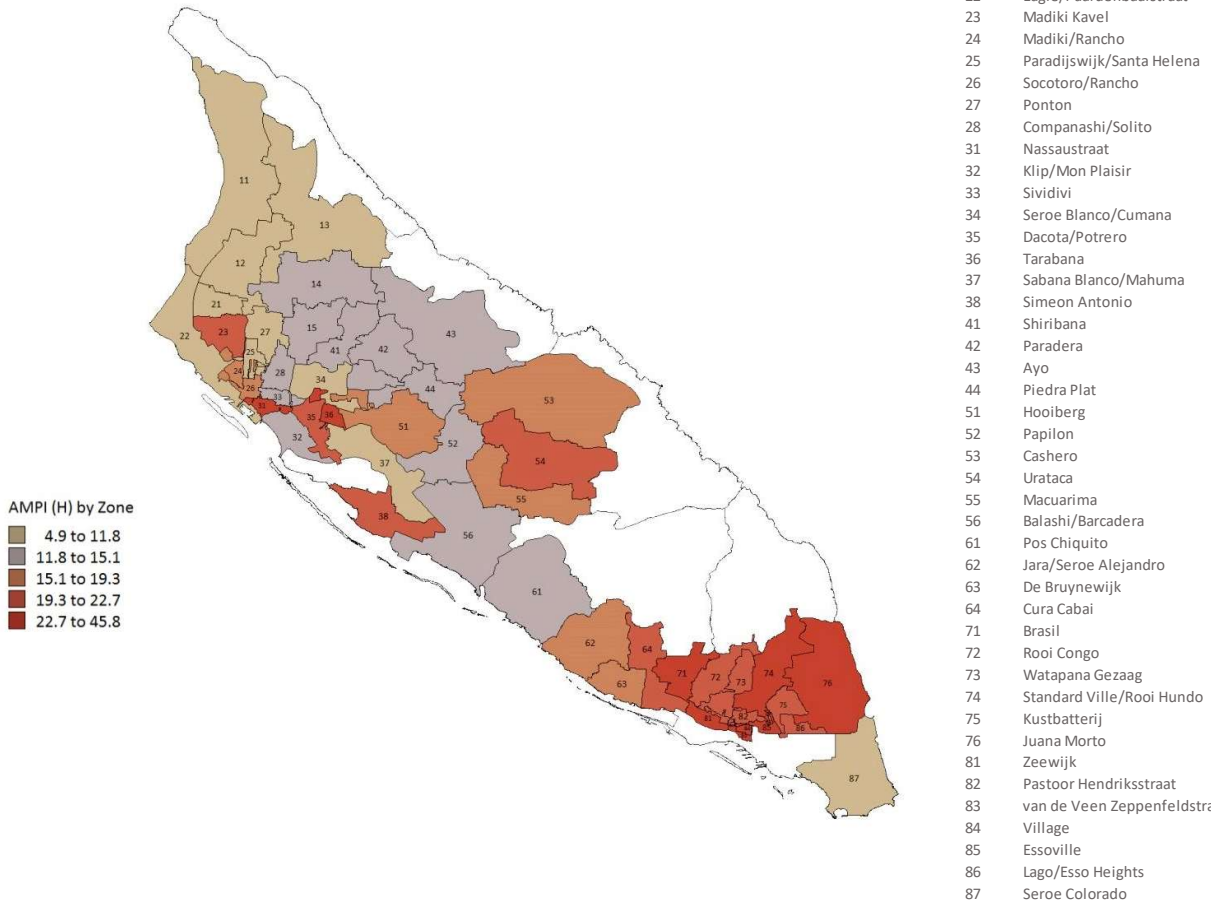
ANNEX IV Characteristics of the Multidimensional poor households and households vulnerable to poverty

	Total Population (%)	Multidimensionally Poor Households					Households in severe poverty			Households vulnerable to poverty		
		H (%)	A (%)	AMPI (HxA)	N		H (%)	N		H (%)	N	
					abs.	%		abs.	%		abs.	%
<i>Sociological household type</i>												
Single person household	22.2	19.8	43.2	0.086	1,416	27.7	30.0	424	29.5	19.1	1,363	22.2
Nuclear household	54.6	12.9	42.4	0.055	2,261	44.3	25.0	565	39.3	18.0	3,160	51.4
Extended household	15.3	21.6	43.5	0.094	1,062	20.8	31.8	338	23.5	23.5	1,154	18.8
Composite household	7.8	14.5	42.9	0.062	365	7.1	30.0	109	7.6	18.6	468	7.6
<i>Sociological nuclear household</i>												
Couple without child(ren)	27.9	17.0	42.2	0.072	833	16.3	25.2	210	37.2	12.1	593	9.7
Couple with child(ren)	50.7	7.9	42.6	0.034	702	13.8	27.0	189	33.5	18.0	1,606	26.1
Father with child(ren)	2.2	14.0	41.8	0.058	55	1.1	17.6	10	1.7	19.5	77	1.3
Mother with child(ren)	19.1	19.9	42.3	0.084	670	13.1	23.3	156	27.6	26.3	883	14.4
<i>Household size</i>												
1	22.2	19.8	43.2	0.086	1,416	27.7	30.0	424	29.5	19.1	1,363	22.2
2	26.5	20.3	42.3	0.086	1,731	33.9	24.3	421	29.3	14.2	1,210	19.7
3	20.4	10.1	43.1	0.043	659	12.9	32.5	214	14.9	22.6	1,479	24.1
4	16.8	10.2	43.5	0.044	553	10.8	31.5	174	12.1	18.9	1,026	16.7
5	8.3	13.0	42.6	0.055	344	6.7	25.8	89	6.2	23.5	625	10.2
6+	5.8	21.4	43.2	0.092	402	7.9	28.6	115	8.0	23.5	442	7.2
<i>Number of children</i>												
0	22.2	19.8	43.2	0.086	3,568	69.9	29.6	1054	73.3	18.0	3,537	57.6
1	54.6	12.9	42.4	0.055	813	15.9	21.4	174	12.1	18.8	1,235	20.1
2	15.3	21.6	43.5	0.094	417	8.2	28.3	118	8.2	21.8	922	15.0
3+	7.8	14.5	42.9	0.062	307	6.0	29.6	91	6.3	25.9	449	7.3
<i>Aruban Status of household</i>												
<i>Single person household</i>												
Born in Aruba	11.5	23.6	43.6	0.103	874	17.1	32.3	283	19.7	19.4	718	11.7
Foreign-born	10.7	15.7	42.6	0.067	542	10.6	26.1	142	9.9	18.6	641	10.4
<i>Multi person household</i>												
All born in Aruba	32.3	15.8	43.1	0.068	1,639	32.1	29.7	486	33.8	18.3	1,901	30.9
Of mixed origin	33.6	14.4	42.7	0.061	1,555	30.5	27.5	428	29.7	20.8	2,245	36.5
All foreign-born	11.8	13.0	41.6	0.054	495	9.7	20.1	100	6.9	16.7	635	10.3

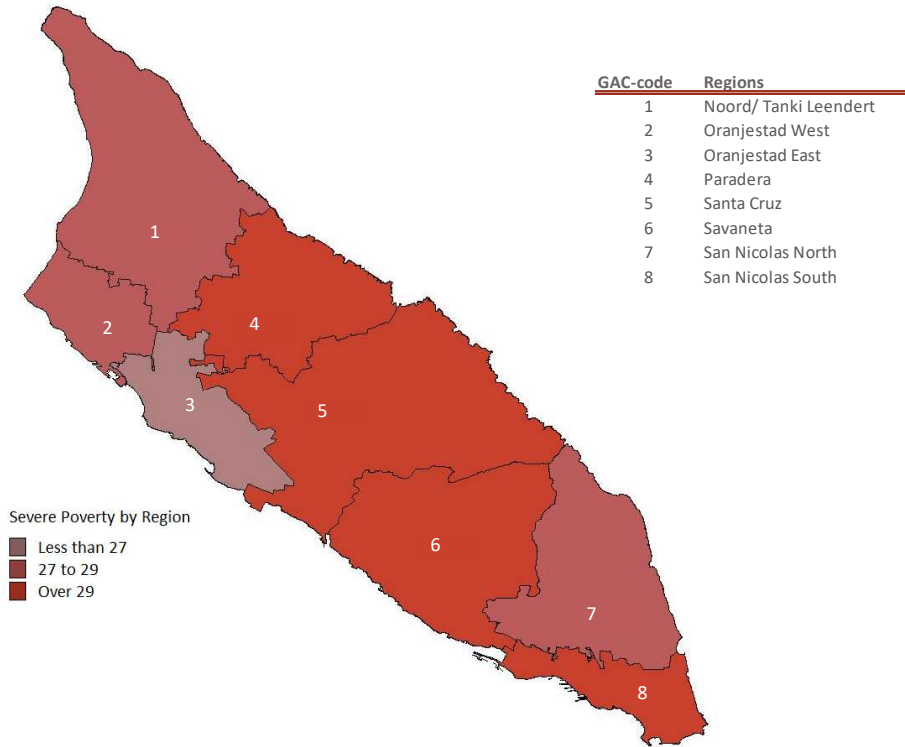
ANNEX V-I. Proportion of Multidimensionally poor households (H%) by GAC-region



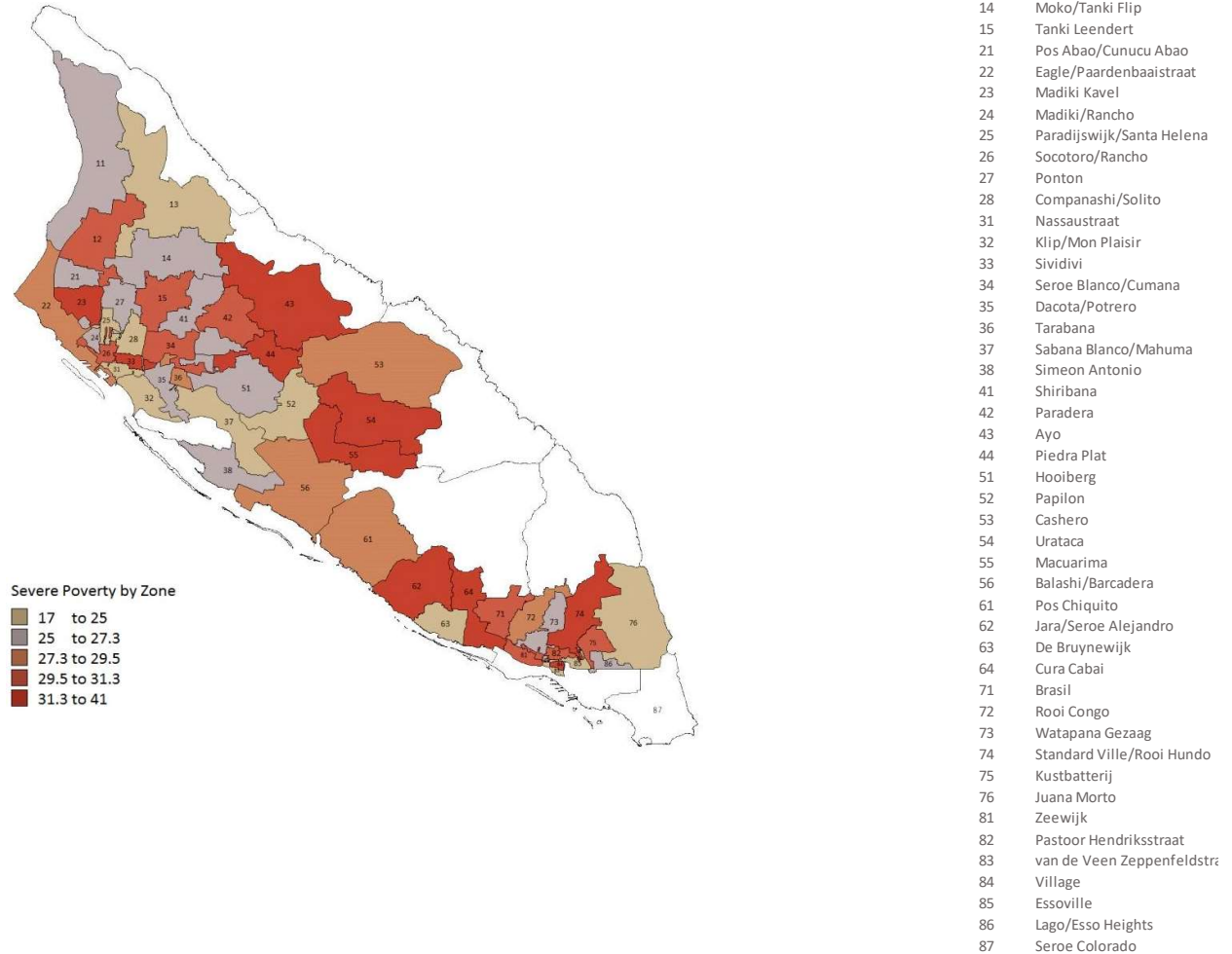
ANNEX V-II. Proportion of Multidimensionally poor households (H%) by GAC-zone



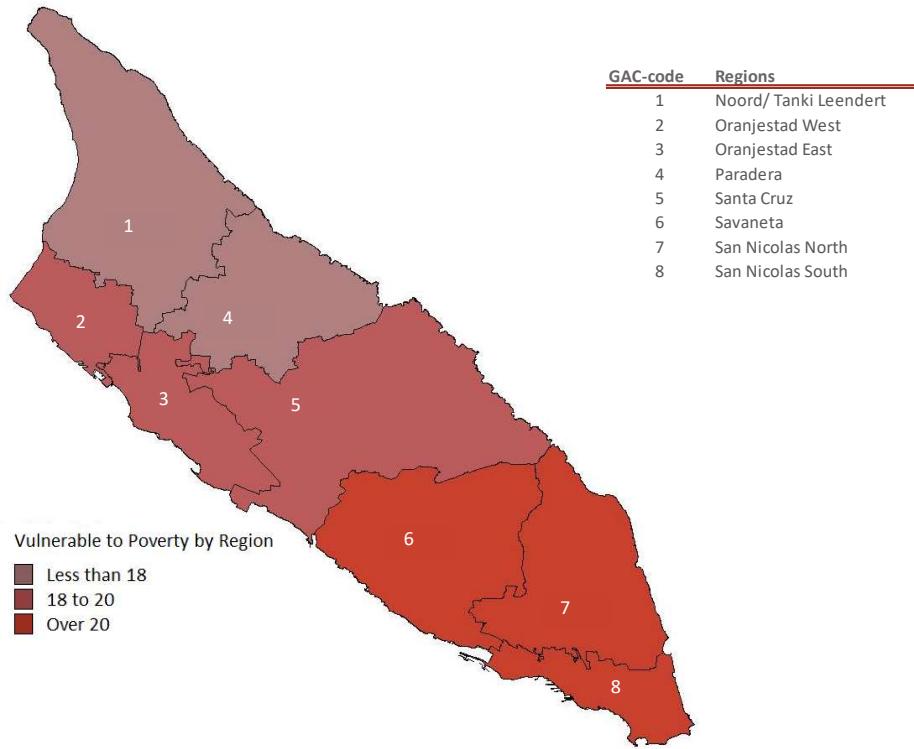
ANNEX VI-I. Proportion of households (%) in severe multidimensional poverty by GAC-region



ANNEX VI-II. Proportion of households (%) in severe multidimensional poverty by GAC-zone



ANNEX VII-I. Proportion of households (%) vulnerable to poverty by GAC-region



ANNEX VII-II. Proportion of households (%) vulnerable to poverty by GAC-zone¹⁷

