STABILIZATION OF THE POPULATION: THE MADAGASCAR CASE

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#### **SECTION 1. INTRODUCTION**

This report highlights the profile of the population and the various factors related to population growth in Madagascar through the analysis of programs and strategies that contribute to population stabilization in the country. It aims to know the level of fertility, infant mortality and practice of family planning that greatly affect the stabilization of the population. It is important to note that its geographical location and its insular appearance allow Madagascar to not be exposed to the flow of migration of people from neighboring countries as is often the case in Africa.

#### History of the population stabilization policy

Since the independence of the Republic of Madagascar in 1960, successive governments have increased awareness of the dynamic relationship between population issues and socio-economic development, including the importance of the consideration of demographic aspects in the various plans and programs for economic and social development at national and international level.

1990: Establishment of the national population policy whose main purpose improving the level and quality of people's lives in Madagascar.

1993 General Census of Population and Housing.

1990: Children's Summit Participation

1994 International Conference on Population and Development

2000 Millennium Declaration

2003: Strategy Paper Poverty Reduction in Madagascar is one of the objectives set in the strategic intervention axis 3 extension of family planning (FP), a key area in the context of reproductive health to increase demand for family planning services; improve family planning services offering and create a favorable policy FP.

2005: Development of the National Health Policy (NHP), one of the main strategic lines is the survival of the mother and child and family planning. The programs of the policy aimed at improving social and health conditions of the population with the inclusion of the fight against poverty.

2007: Formulation of the Strategic Plan on the elimination of malaria.

2007: Launch of the National Strategic Plan on HIV / AIDS.

2015: Formulation of National Social Protection Policy.

#### Geographical location of Madagascar

Madagascar lies in the southwest part of the Indian Ocean, between  $11\,^\circ$  57 'and  $25\,^\circ$  30' south latitude and between  $43\,^\circ$  14 'and  $50\,^\circ$  27' east longitude. It is 350 km in the southeast coast of Africa by the Mozambique Channel. Madagascar is among the various countries participating in the International Conference on Population and Development in Egypt in 1994 which focused particularly on population stabilization. In 2012, the population of Madagascar was estimated at 22.3 million people. The density of the population remains relatively low with 35 inhabitants per square kilometer, but the population growth rate is still high, reaching 2.7% on average over the last decade. Furthermore, the level of life expectancy at birth could reflect the underdevelopment of the country since it was 62.4 years for men and 65.23 years for women in 2012. The region most populous is Analamanga in which localizes the capital Antananarivo and Ihorombe is the

region where is recorded the lowest population size of about 289,900 in 2012 in the country.

#### Area

Madagascar has an area of 190 km2 which 596 puts and fourth among the largest islands on the planet. It extends over a length of 1 500 kilometers between Cape St. Mary in the south and Cape Amber in the extreme north, and nearly 500 kilometers at its widest. She has more than 5000 kilometers from limited coastline, to the west by the Mozambique Channel and to the east by the Indian Ocean. Madagascar is divided into twenty-two (22) administrative regions.

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Map 1: Map of Madagascar

Source: http://www.lib.utexas.edu/maps/africa/madagascar\_physio-2003.pdf

#### Political and socio-economic situation

The last two successive socio-political crises in the country, respectively in late 2001 and in late 2008 had a negative impact both on the economy and on the living conditions of the population. According to the National Statistics Institute of Madagascar, GDP per capita was around 300 to US dollars in 2005, rose to over 500 dollars in 2008 down to about \$ 450 in 2012. The informal sector has grown in the country by constituting more than 24% in non-agricultural market GDP and contributing to over 93% of jobs (76% in agriculture). This only exacerbates insecurity,

instability of jobs and the number of improper operation, a form of underemployment that affects over 81% of workers, especially women in rural areas in Madagascar.

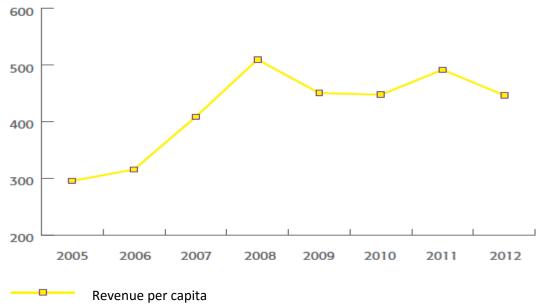


Figure 1: Evolution of per capita income between 2005 and 2012 in Madagascar (US \$)

Source: INSTAT / ENSOMD

The literacy rate for 15 and over was 64.5% in 2012 with 67.4% for men and 61.6% for women. The labor force is distributed as follows: 80.3% for agriculture, 4.6% in industry and 15.1% in services in 2012. Life expectancy was 63.8 years on average for the same year, women live longer than the men (65.3 years against 62.4 years respectively).

#### SECTION 2. SIZE AND STRUCTURE OF THE POPULATION

#### Population size

Since independence in 1960, the population of Madagascar has been increasing exponentially. Estimated at 5.2 million in 1961, the population has increased about 67.4% in 1980 reaching 8,746,516 inhabitants. At the last General Census of Population and Housing (RGPH) of 1993, Madagascar's population was counted at 12,238,914 inhabitants, distributed in 50.3% women against 49.7% of men, a sex ratio of 99 males per 100 females. In Madagascar, the population was estimated at 16,700,000 in 2002 to 20,500,000 in 2009 and 22,300,000 in 2012.

Population in millions

25,0
20,0
20,5
20,6
22,3
20,5
20,6
216,7
15,0
112,2
10,0
7,0
7,6
8,7

Figure 2: Population of Madagascar since independence

Source: RGPH 1993 World Development Indicators, 2013 WBG.

1980

1975

In Madagascar, the number of the population rose by 334,712 people per year on average and is estimated at around 23 million in 2015. The population has nearly doubled since 1990, that is to say, over the last 25 years. This is due, on one side by the high fertility of Malagasy women who reached the end of their reproductive life have 4.8 children on average and the improvement recorded in the infant mortality rate from 93 to thousand in 1997 to 42 per thousand in 2012.

1993

2002

2009

2010

2012

## Population structure

1961

1972

5,0

The last General Census of Population and Housing 1993 (RGPH-93) counted 12,238,914 inhabitants, 50.3% female and 49.7% male, a sex ratio of 99%. He already reported the youth of the Malagasy population with a significant proportion of children and young people and a low percentage of elderly and young people under 15 years old accounted for 45% of the total female population, while children Less than 5 years 18%.

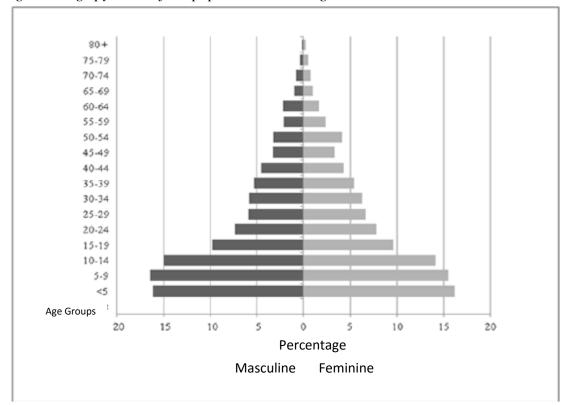


Figure 3: Age pyramid of the population in Madagascar

SOURCE: INSTAT/ENSOMD 2012-2013

According to the National monitoring of the Millennium Development Goals Survey (ENOMD) in 2012-2013, the structure of the population by age and sex shows that the Malagasy population is young because almost two thirds, or 64% are under 25, and almost half, or 47% are under 15 years. People over 65 account for only 3% of the population. During the next decade, many women who will be entering their reproductive age (15- 49 years). This young population will necessarily have a significant impact on the prospects for population growth in Madagascar.

Moreover, the sex ratio for the country is 98.8 (99 men per 100 women) on average, including 92.9 in urban areas and 100.1 in rural areas, the predominance of women in number also contributes to high fertility in Madagascar.

## Population growth rate

According to figures from the National Institute of Statistics of Madagascar, the Malagasy population has evolved at an annual rate of 2.7% between the first General Census of Population and Housing (RGPH) 1975 and the last RGPH 1993. And in the past decade, population growth amounts to an average of 2.8%. During the next 30 years, the Malagasy population could experience an average annual growth rates ranging from 2.4% to 3% low assumption for strong hypothesis.

## Population projections

The outlook for the size of the population in Madagascar surely depend on the evolution of the level of fertility in the country. Projections on the number of the population in Madagascar show an increase from 20,600,000 in 2010 to 86,300,000 in 2060 under the low assumption of 4.4 children per household, which is the current household size (in 2010). But with the strong assumption of 4.8 children per household, number of Madagascar's population will increase from 20.6 million in 2010 to 98400000 in 2060 (see Figure 4).

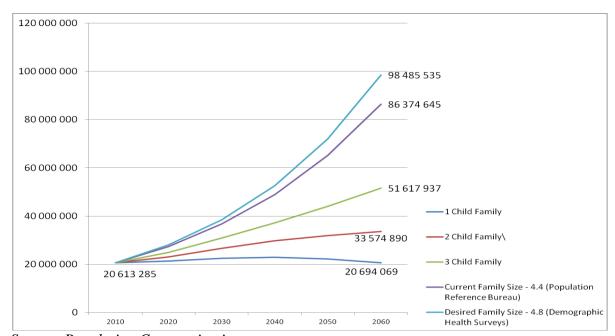


Figure 4: Projections on the number of the population in Madagascar

Source: Population Communication

## Population Distribution by region, average household size and average age

The population distribution by geographical region shows that the population is unevenly distributed throughout the country and with an imbalance in population distribution. The five most populated regions are: Analamanga (15.4% of the population), Vakinankaratra (9.4%), Atsimo-Andrefana (6.6%), Vatovavy-Fitovinany (6.4%) and Upper Matsiatra (6.2%) (see Table 1). Furthermore, more than three quarters of the Malagasy population (77.6%) live in rural areas and agriculture mainly. The average household size in Madagascar, is the number of persons per household was 4.7 in 2012 and the average age is 21.4 years for the same year.

Table 1: Population distribution (%), average household size (in persons) and middle age (years) by region in 2012.

| Regions             | Population Distribution | Average Height | Average Age |
|---------------------|-------------------------|----------------|-------------|
| Betsiboka           | 1,2                     | 4,6            | 21,7        |
| Melaky              | 1,2                     | 4,5            | 21,7        |
| Ihorombe            | 1,6                     | 5,2            | 19,2        |
| Bongolava           | 2,3                     | 4,9            | 20,3        |
| Menabe              | 2,6                     | 4,8            | 19,8        |
| Anosy               | 2,8                     | 4,5            | 18,9        |
| DIANA               | 3,2                     | 3,5            | 23,8        |
| Androy              | 3,3                     | 5,1            | 19,5        |
| Itasy               | 3,5                     | 4,9            | 21,5        |
| Amoron'i Mania      | 3,5                     | 5,2            | 21,5        |
| Boeny               | 3,6                     | 4,5            | 22,0        |
| SAVA                | 4,0                     | 3,9            | 23,7        |
| Atsimo-Atsinanana   | 4,3                     | 5,3            | 19,9        |
| Analanjirofo        | 4,4                     | 3,8            | 21,9        |
| Alaotra Mangoro     | 4,7                     | 4,6            | 22,4        |
| Sofia               | 4,9                     | 4,7            | 20,9        |
| Atsinanana          | 5,1                     | 4,3            | 22, 0       |
| Haute Matsiatra     | 6,2                     | 5,6            | 21,4        |
| Vatovavy-Fitovinany | 6,4                     | 5,4            | 18,5        |
| Atsimo-Andrefana    | 6,6                     | 5,0            | 19,5        |
| Vakinankaratra      | 9,4                     | 5,2            | 20,7        |
| Analamanga          | 15,4                    | 4,4            | 23,8        |
| URBAIN              | 22,4                    | 4,3            | 23,7        |
| RURAL               | 77,6                    | 4,8            | 20,8        |
| ENSEMBLE            | 100                     | 4,7            | 21,4        |

Source: INSTAT / ENEMPSI / 2012 Urbain = Urban: Ensemble = Total

## Population densities

The population growth in recent decades has reduced the availability of arable land in Madagascar. Arable land, in hectares per capita was reduced by more than half from 1961 to 2011 because the topsoil was increased from 0.37 hectares per person in 1961 to 0.16 hectares per person in 2011. The increase number of the population is also reflected in the strengthening of population density from 9 inhabitants per km2 in 1961 to 19.9 inhabitants per km2 in 1990 to 31,5 inhabitants per km2 in 2005 to 38.3 inhabitants per km2 in 2012. Since agriculture is the main activity in rural Madagascar, higher density and high fertility especially in rural areas explain the pressure on arable land especially as parents must distribute to their generations their future land only reduces more and more (see Figure 5).

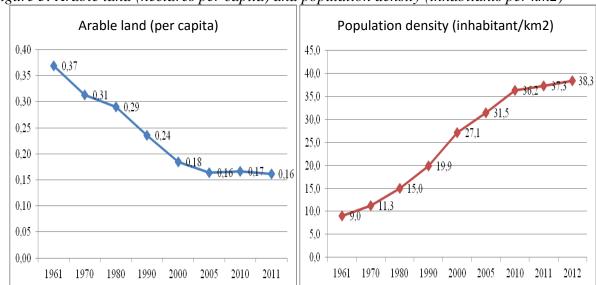


Figure 5: Arable land (hectares per capita) and population density (inhabitants per km2)

Source: World Development Indicators.

## Structure of the labor force by place, sex and region

The performance recorded in the fertility rate and the mortality rate of children under 5 years (from 159 per thousand in 1997 to 62 per thousand in 2012) contributed to the population growth especially in the bracket ages 15 to 64 who constitute the labor force in Madagascar. The National Employment Survey and the informal sector in 2012-2013 recorded an activity rate of 87% for the 15 and over in 2012 in Madagascar. Considering the age range of people 5 years and older, the potentially active population represents 63% of the population in Madagascar. In 2012, 79% of the potentially active population resides in rural areas where the rate of registered activities was 65%.

In Madagascar, the social system that active men (65%) outnumber active women (61%) in both rural and urban areas. Indeed, in addition to their contributions to the purchasing power of households through an economic activity, women should also perform their daily household tasks (15 hours per week).

It is also noteworthy that the participation rate varies greatly depending on the region in Madagascar. The participation rate is the highest in the region Vatovavy Fitovinany in 2012 and in urban areas, the participation rate is the highest in the Sofia region (see Map 2).

Activity rate by percentage

70,3
58,8
58,6

BOENY

ANALANJIROFO

BETERBRA

ALAOTRA

ANALANJIROFO

BONGOLAVA

ITASY

ANALANANA

ATSIMO-ANDREFANA

IHOROMBE

ATSIMO-ANDREFANA

ANOSY

ANDROY

A

Map 2: Activity rate of the population by region in 2012 in Madagascar

Source: INSTAT / ENEMPSI-2012

### **SECTION 3. FERTILITY**

## Fertility level in Madagascar

In Madagascar, the median age at first intercourse is in the high average of sub-Saharan Africa because this age is 17.0 years in 2012/2013 for women aged 25-49. Therefore, despite the high levels of pregnancy, Madagascar is not among the countries where the entry into sexual and reproductive life of women is the earliest. However, sexuality and reproduction remain traditionally early in Madagascar because the woman being the source of descent, her fertility is often tested at puberty.

## The level of fertility is measured by fertility rates by Age, Group and Index

Synthetic Fertility (ISF). Fertility rates by age group are calculated by relating live births to women in each age group in the number of women in the corresponding age group. As for the

ISF, it is obtained from the accumulated age-specific fertility rates. The TFR measures the average number of live births a woman would have in the end childbearing, if the conditions and the current level of fertility remained invariable.

Table 2: Fertility 2012-2013 in Madagascar

| Age    |         | Place o           | f Residence          |             |       |
|--------|---------|-------------------|----------------------|-------------|-------|
| Groups | Capital | Other urban areas | Adjacent urban areas | Rural areas | Total |
| 15-19  | 77      | 92                | 86                   | 180         | 163   |
| 20-24  | 178     | 155               | 163                  | 248         | 231   |
| 25-29  | 157     | 167               | 163                  | 227         | 213   |
| 30-34  | 97      | 137               | 124                  | 193         | 179   |
| 35-39  | 80      | 80                | 80                   | 149         | 134   |
| 40-44  | 29      | 26                | 27                   | 77          | 66    |
| 45-49  | 15      | 3                 | 8                    | 26          | 23    |
| TGFG   | 101     | 106               | 105                  | 175         | 161   |
| ISF    | 3,2     | 3,3               | 3,3                  | 5,5         | 5,0   |
| TBN    | 22      | 28                | 26                   | 37          | 34    |

Source: INSTAT / ENSOMD 2012-2013

Notes: The rates are expressed per 1000 women. The rates correspond to the period 1-36 months prior to the interview. ISF: Synthetic Fertility Index expressed for a woman. GFR: General fertility rate expressed for Global 1000 women. TBN: Rate Crude Birth Rate expressed per 1000 people.

In 2012-2013, the fertility rate by age group shows an early fertility in Madagascar with 163 ‰ fertility rate for the age group of 15-19 years and a maximum fertility reached at the age of 20 - 24 years with a rate of 231 ‰ and which is maintained at a relatively high level up to 35-39 where the rate is still at 134 ‰. From age 40, a significant decrease in the level of fertility is recognized and the lowest fertility rates, 23 ‰, is registered for the age bracket of 45-49. In addition, the following indicators confirm the high fertility of Malagasy women. Indeed, in reaching the end of their reproductive life, a woman has on average 5.0 children in 2012-2013 in Madagascar. In addition, the overall rate of general fertility rate (GFR), measuring the average annual number of live births per 1000 women of childbearing age is estimated at 161 ‰. The crude birth rate (CBR) corresponding to the average annual number of live births in the total population, meanwhile, estimated at 34 ‰ during the period 2012-2013.

#### Fertility Trends

A major goal of Demographic and Health Survey (ENDS 1992, EDS 1997 EDSMD-III 2003-2004 EDSMD-IV 2008-2009) made in Madagascar is the estimation of fertility levels. With the National Survey of the Millennium Goals for Development Monitoring reproduces indicators on fertility in 2012-2013, we can trace the trend of fertility in Madagascar from 1992 to 2013. In general, early fertility has not changed much from 1992 to 2013 in Madagascar because the fertility rate of the 15-19 age group increased from 157 ‰ in ‰ 1992-163 in 2012-2013.

Furthermore, the use of contraception tools by women in particular since the 1990s, may well lead to the reduction of the range of children's births that women's fertility rates in Madagascar tends to decrease. Indeed, the maximum level of fertility, which is usually reached at the 20-24 age bracket has risen from 270 ‰ in ‰ 1992-231 in 2012-2013.

*Table 3: Fertility rates by age and total fertility rate 1992-2013* 

| Age Groups    | ENDS  | EDS               | EDSMD-III              | EDSMD-IV               | ENSOMD    |
|---------------|-------|-------------------|------------------------|------------------------|-----------|
|               | 1992¹ | 1997 <sup>2</sup> | 2003-2004 <sup>3</sup> | 2008-2009 <sup>4</sup> | 2012-2013 |
| 15-19         | 157   | 180               | 150                    | 148                    | 163       |
| 20-24         | 270   | 279               | 245                    | 234                    | 231       |
| 25-29         | 272   | 254               | 235                    | 207                    | 213       |
| 30-34         | 226   | 215               | 189                    | 169                    | 179       |
| 35-39         | 192   | 152               | 130                    | 131                    | 134       |
| 40-44         | 89    | 88                | 69                     | 63                     | 66        |
| 45-49         | 19    | 25                | 17                     | 13                     | 23        |
| ISF 15-49 ans | 6,1   | 6,0               | 5,2                    | 4,8                    | 5,0       |

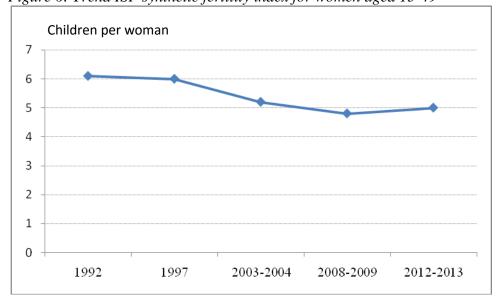
Note: Taux de fécondité par groupe d'âges pour 1 000 femmes.

ORC Macro. 2010.

Source: INSTAT / ENSOMD 2012-2013

In addition, by reaching the end of their reproductive life, a woman had on average 6.1 children in 1992 to Madagascar, while in 2008-2009 it decreased to 4.8 children to 5.0 children to return in 2012 -2013.

Figure 6: Trend ISF synthetic fertility index for women aged 15-49



<sup>&</sup>lt;sup>1</sup>Enquête Nationale Démographique et Sanitaire 1992. CNRE et Macro International Inc. 1994.

<sup>&</sup>lt;sup>2</sup>Enquête Démographique et de Santé 1997. INSTAT/DDSS et Macro International Inc. 1998.

<sup>&</sup>lt;sup>3</sup>Enquête Démographique et de Santé de Madagascar 2003-2004. INSTAT et ORC Macro. 2005.

<sup>&</sup>lt;sup>4</sup>Enquête Démographique et de Santé de Madagascar 2008-2009. INSTAT et

Source: INSTAT / ENSOMD 2012-2013

#### Birth interval

The birth interval between the birth of a child of the previous birth has an influence on the child's health status and that of his mother. The intervals of less than 24 months pose to child and maternal risk of morbidity and increased mortality.

According to the 2012-2013 ENSOMD Madagascar, the distribution of births of five years preceding the survey by number of months since the previous birth shows that 35% of births occurred after a brief interval, less than 24 months, compared to the previous birth. Births occurring between 24 and 35 months represent 40% of cases. Only 8% of births in the interval with the previous birth is 48 months or more. Furthermore, the median number of months since the previous birth is estimated at 26 months.

The comparison of results of different demographic and health surveys, conducted since 1997 allows us to understand the birth interval in Madagascar and shows that the proportion of births occurring in a very short interval (7-17mois) decreased by 13% in 1997 to 8% in 2008-2009 to rise to 15% in 2012. Furthermore, the proportion of births with birth interval is 48 months or more has significantly decreased from 24% in 2008-2009 8% in 2012-2013 in Madagascar. The median birth interval decreased between 2003-2004 and 2012-2013, from 32.6 months to 26 months.

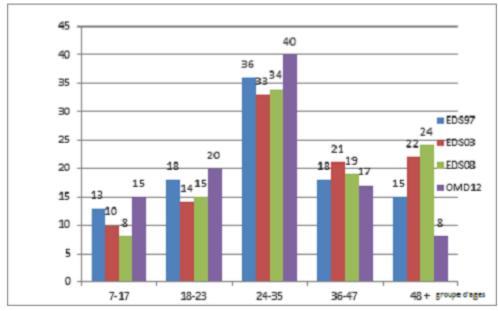


Figure 7: Duration of birth intervals in 1997, 2003, 2008 and 2012

SOURCE: INSTAT/ENSOMD 2012-2013

### Age at first birth

In case, the use of contraceptives remains low in a population, the low age at which women have their first birth strongly influences the total number of children. Indeed, over the age of women at first birth is premature, the number of children might be high. In addition, an age at first birth too early could lead to high mortality risk children and a precarious health of the mother. It is also noteworthy that more early childbirth is, the higher the drop probability is high, which is an important factor of socio-economic vulnerability of women.

Table 4 shows the distribution of women by age at first birth by age group at the time of the survey, and the median age at first birth (which refers to the age at which 50% of women had their first child)

| Age    | Percentage | of women | who had a | birth before | e the age of: | Percentage of                  | Number of | Median age     |
|--------|------------|----------|-----------|--------------|---------------|--------------------------------|-----------|----------------|
| Groups | 15         | 18       | 18 20     |              | 25            | women who never<br>had a birth | women     | at first birth |
| 15-19  | 8,0        | na       | na        | na           | na            | 68,5                           | 3388      | na             |
| 20-24  | 10,3       | 35,8     | 58,1      | na           | na            | 25,3                           | 2804      | 18,2           |
| 25-29  | 9,6        | 35,0     | 55,8      | 71,7         | 86,1          | 8,3                            | 2477      | 19,0           |
| 30-34  | 7,2        | 29,4     | 50,8      | 68,8         | 84,3          | 4,3                            | 2222      | 19,8           |
| 35-39  | 5,6        | 23,5     | 43,6      | 63,1         | 80,4          | 3,4                            | 1984      | 20,5           |
| 40-44  | 5,5        | 19,1     | 35,5      | 51,5         | 71,7          | 4,2                            | 1628      | 21,5           |
| 45-49  | 4,0        | 20,3     | 36,2      | 49,5         | 67,4          | 4,6                            | 1172      | 21,8           |
| 25-49  | 6,8        | 26,8     | 46,2      | 63,1         | 79,7          | 5,2                            | 9483      | 20,2           |

SOURCE: INSTAT/ENSOMD 2012-2013

Table 4: Proportion of women aged 15-49 who had a first birth before reaching some exact ages, and median age at first birth according to current age

The median age at first birth among women 25-49, is estimated at 20.2 years. A slight rejuvenation of the median age of the oldest to the most recent generations has been recorded in Madagascar. Indeed, the median age is above 20 years for women aged 35 and over while it is 18.2 years for women in the age group of 20-24 years.

Table 5: Median age at first birth for women age 25-49 by current age, according to some socioeconomic characteristics

| Characteristics       | 20-24 | 25-29 | Age 30-34 | groups<br>35-39 | 40-44 | 45-49 | Median age of<br>women, 25-49,<br>when they first<br>gave birth |
|-----------------------|-------|-------|-----------|-----------------|-------|-------|---|
| Place of Residence    |       |       |           |                 |       |       |   |
| Capital               | a     | 21,4  | 20,9      | 22,1            | 22,8  | 23,8  | 22,0  |
| Other urban areas     | a     | 20,7  | 20,9      | 21,9            | 21,8  | 21,7  | 21,3  |
| Adjacent urban areas  | a     | 21,0  | 20,9      | 22,0            | 22,1  | 22,6  | 21,5  |
| Rural areas           | 17,9  | 18,7  | 19,6      | 20,2            | 21,3  | 21,5  | 19,9  |
| Level of Education    | 16.0  | 10.0  | 10.0      | 10.0            | 20.7  | 21.6  | 10.2  |
| No Schooling          | 16,8  | 18,0  | 18,9      | 19,8            | 20,7  | 21,6  | 19,3  |
| Primary               | 17,8  | 18,5  | 19,4      | 20,0            | 21,5  | 21,0  | 19,7  |
| Secondary or higher   | a     | 20,8  | 21,3      | 21,7            | 22,0  | 22,2  | 21,5  |
| Consumption Quintiles | 17,4  | 17,6  | 19,0      | 19,8            | 21,3  | 21,3  | 19,2  |
| Poorest               | 17,2  | 18,8  | 19,7      | 19,8            | 21,3  | 21,8  | 19,8  |
| Second                | 18,3  | 18,8  | 19,5      | 20,7            | 21,0  | 22,0  | 20,0  |
| Average               |       |       |           |                 |       | 21,0  |   |
| Fourth                | 18,3  | 19,8  | 19,8      | 20,4            | 22,3  | ,     | 20,3  |
| Richest               | a     | 20,7  | 21,3      | 21,9            | 22,0  | 22,2  | 21,6  |
| Total                 | 18,2  | 19,0  | 19,8      | 20,5            | 21,5  | 21,8  | 20,2  |

SOURCE : INSTAT/ENSOMD 2012-2013

Furthermore, it is also found in Madagascar as age at first birth has variations depending on the level of education for 19.9 years in rural areas, the age at first birth is estimated at 21.5 years in urban areas in 2012-2013. In addition, the median age at first birth is influenced by level of education: the more educated a woman is, the greater the age at first birth is late. Indeed, the age at first birth rose from 19.3 years among those with no education, 19.7 years among those with a primary education, and 21.5 years among the most educated. And the arrival of the first birth occurs later in the households of the richest quintile (21.6 years) compared to that of the poorest (19.2 years) (see Table 5).

## Adolescent fertility

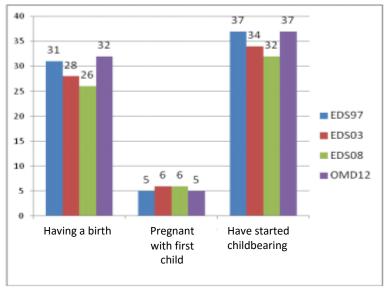
As argued earlier the early fertility often has negative effects on the health of children and mothers because the probability of death among children is even greater if they are born to very young mothers.

According to ENSOMD 2012- 2013, 37% of teenage girls who are young women aged 15-19 years, have already started their reproductive lives in Madagascar which 5% are pregnant the first child and 32% of them had at least one child. The proportion of teenagers who have begun childbearing increases with age from 13% at 15 years, 62% at age 19, age at which 58% of girls have had at least one child. The percentage of adolescents who have begun childbearing is significantly higher in rural areas (42%) than urban areas (17%) in Madagascar. The percentage of adolescents who have begun childbearing significantly decreases with increasing levels of education, from 60% among uneducated, 21% among those with secondary education or higher. Similarly, this proportion decreases significantly with increasing level of economic well-being of

households, from 45% among adolescents of households in the poorest quintile to 37% for those in the richest households.

Compared with previous demographic surveys and health 2008-2009, this proportion increased slightly from 32% to 37%. According to Figure 8, the proportion of adolescents who had at least one child has increased from 26% to 32%.

Figure 8: Proportion of adolescents aged 15-19 who have begun childbearing, according to EDS 1997 EDSMD-III 2003-2004, EDSMD-IV ENSOMD 2008-2009 and 2012-2013 (unit: %)



SOURCE: INSTAT/ENSOMD 2012-2013

#### SECTION 4. FAMILY PLANNING IN MADAGASCAR

Contraceptive prevalence, defined as the percentage of women of reproductive age in union who are currently using contraception, is an indicator that measures the impact of the family planning program in the population. Contraceptive methods not only prevent unwanted pregnancies or closely spaced pregnancies but also in very young women.

#### Contraceptive knowledge

In Madagascar, the efforts made in the context of national health policy on family planning had a significant positive impact. In 2012-2013, the level of knowledge of at least one contraceptive method is high as in women than in men aged 15-49 years in Madagascar. Indeed, 89.2% of women aged 15-49 and 86.8% among men in the same age group, know at least one contraceptive method as modern as traditional (see Table 6). Moreover, modern contraceptive methods are better known than traditional methods. Indeed, the results depending on the methods show higher levels of knowledge for modern methods (88.8% of women and 86.4% men) than traditional methods (44.4% of women and 44% of men).

The average number of known contraceptive methods was 4.7 among women 15 49 years against 3.9 for men in the same age group. Women not in union but sexually active Lading more contraceptive methods among married women (5.0 against 4.8), while among men, those in

union have increased by against a knowledge of contraceptive methods than those not in union but sexually active (4.2 against 4.1).

Compared to EDSMD-IV in 2008-2009, a decrease was recorded in the proportions of men and women who know any contraceptive method. Among married women, the proportion rose from 95.3% to 90.2% for any method, and 95 to 89.9% for a modern method. Among men in union, these proportions increased from 95.5% to 88.6% respectively and 95.2 to 88.1% (See Table 6).

Table 6: Proportion of women and men aged 15-49, considering a contraceptive method

|                           |           | Women |                                |         | Men         |                                |
|---------------------------|-----------|-------|--------------------------------|---------|-------------|--------------------------------|
| Methods                   | All Women |       | Married but<br>Sexually Active | All Men | Married Men | Married but<br>Sexually Active |
| Any method                | 89,2      | 90,2  | 91,7                           | 86,8    | 88,6        | 89,6                           |
| Modern Method             | 88,8      | 89,9  | 91,5                           | 86,4    | 88,1        | 89,6                           |
| Female Sterilization      | 32,1      | 33,6  | 32,7                           | 28,7    | 30,7        | 28,7                           |
| Male Sterilization        | 19,2      | 19,9  | 19,7                           | 20,1    | 22,0        | 19,9                           |
| Pill                      | 77,6      | 78,9  | 80,5                           | 63,5    | 67,5        | 65,0                           |
| IUD                       | 35,5      | 36,6  | 34,8                           | 26,1    | 27,3        | 27,1                           |
| Injectable                | 82,3      | 84,4  | 85,5                           | 67,3    | 72,9        | 66,2                           |
| Implant                   | 51,8      | 53,9  | 52,2                           | 35,0    | 39,0        | 32,4                           |
| Condom                    | 71,6      | 71,2  | 76,1                           | 80,8    | 80,7        | 87,6                           |
| Female Condom             | 15,5      | 15,1  | 19,5                           | 14,4    | 14,5        | 17,5                           |
| Breastfeeding             | 28,2      | 30,8  | 24,4                           | 16,6    | 19,5        | 13,0                           |
| Morning After Pill        | 14,9      | 14,5  | 20,5                           | 11,6    | 12,2        | 12,7                           |
| Calendar method           | 17,2      | 17,2  | 19,1                           | 11,8    | 12,8        | 11,7                           |
| Traditional method        | 44,4      | 45,2  | 51,8                           | 44,0    | 46,5        | 50,4                           |
| Periodic abstinence       | 40,5      | 41,1  | 46,6                           | 37,6    | 39,3        | 43,8                           |
| Withdrawal                | 26,8      | 28,0  | 34,0                           | 31,4    | 33,9        | 35,3                           |
| Popular method            | 2,0       | 2,0   | 2,6                            | 1,7     | 2,1         | 1,1                            |
| Average number of methods | 4,7       | 4,8   | 5,0                            | 3,9     | 4,2         | 4,1                            |
| Total                     | 15675     | 10130 | 1512                           | 7603    | 4914        | 1162                           |

SOURCE: INSTAT/ENSOMD 2012-2013

Among modern methods, the pill, injectables and male condoms are the most commonly known devices both by women than by men, whether in union or not. Indeed, in women, injectables and the pill are the most known methods (82.3% and 77.6% respectively). And in men, the male condom is the most known device that the individual is or not in union, 80.8% of men know it. For cons, the morning after pill and the Standard Days Method (SDM) rank among the least known methods as among women than men. In 2012-2013, women aged 15-49, the morning after pill and the Standard Days Method are known respectively by 14.5% and 17.2% of married women and only 12.2% and 12.8% respectively for the two methods by men in union. As for traditional methods, whether in women or in men, periodic abstinence is the best known method (41.1% of married women and 39.3% of men in union in 2012-2013).

## Contraceptive Use

In Madagascar, the use of contraceptives by women of childbearing age, which is one of the main determinants of the level of fertility is relatively high because almost at least one in two women of 15-49 years reported having already used at least one contraceptive method at any time of his life. A relatively high share of 44% of women said they had ever used a modern method, especially injectables (30%), the pill (14%) and the male condom (6%). And traditional contraceptive methods are also practiced but to a lesser extent, as 15% of women aged 15-49 years reported having ever used any traditional method during their lives, mostly periodic abstinence for 13% of women (Cf. Table 7).

Table 7: Previous use of contraceptives by women aged 15-49 in Madagascar

|       |            |                   |                         |                       |      | Mod | dern Me    | ethods   |        |                  |             |                       |                    |                      | Traditi                | onal N     | 1ethods            | ,     |
|-------|------------|-------------------|-------------------------|-----------------------|------|-----|------------|----------|--------|------------------|-------------|-----------------------|--------------------|----------------------|------------------------|------------|--------------------|-------|
|       | Any method | Any modern method | Female<br>Sterilization | Male<br>sterilization | Pill | IUD | Injectible | Implants | Condom | Female<br>Condom | /amenorrhea | Morning<br>After Pill | Calendar<br>Method | Any modern<br>method | Periodic<br>abstinence | Withdrawal | Popular<br>methods | Total |
|       |            |                   |                         |                       |      |     |            | Al       | l Won  | nen              |             |                       |                    |                      |                        |            |                    |       |
| Age   | Group      | os                |                         |                       |      |     |            |          |        |                  |             |                       |                    |                      |                        |            |                    |       |
| 15-19 | 23,9       | 19,8              | 0                       | 0                     | 6    | 0,2 | 10,6       | 1,4      | 3,8    | 0,2              | 1,7         | 0,5                   | 1,6                | 8,3                  | 6,9                    | 3,1        | 0,2                | 3393  |
| 20-24 | 52,5       | 46                | 0                       | 0,1                   | 14,4 | 0,3 | 31,1       | 2,8      | 7,6    | 0                | 6,4         | 1,3                   | 2,2                | 16,4                 | 13,5                   | 7,3        | 0,4                | 2804  |
| 25-29 | 62,5       | 57,4              | 0,3                     | 0                     | 17   | 1,2 | 40,9       | 4,2      | 6,8    | 0,2              | 9,3         | 1,2                   | 2,4                | 17,2                 | 14,2                   | 7,8        | 0,6                | 2477  |
| 30-34 | 61,8       | 56,2              | 1                       | 0                     | 19   | 1   | 40,2       | 3,6      | 7,1    | 0,1              | 9,8         | 0,9                   | 1,6                | 18,8                 | 15,2                   | 7,5        | 0,6                | 2223  |
| 35-39 | 59,1       | 54,6              | 2,2                     | 0,1                   | 18,3 | 1,2 | 36,8       | 4,3      | 7,6    | 0                | 8,8         | 1                     | 2,5                | 17,5                 | 14,9                   | 6,6        | 0,7                | 1976  |
| 40-44 | 51,4       | 45,4              | 3,7                     | 0                     | 16,2 | 1,8 | 30         | 2,7      | 5,3    | 0,1              | 6,3         | 0,4                   | 2,8                | 16,1                 | 14                     | 5,6        | 0,6                | 1630  |
| 45-49 | 44,4       | 38,6              | 3,7                     | 0                     | 12,8 | 1,9 | 22,9       | 2,7      | 4      | 0                | 5,9         | 0,4                   | 2,7                | 15,5                 | 14,1                   | 5,6        | 0,9                | 1172  |
| Total | 49,4       | 44,1              | 1,1                     | 0                     | 14,2 | 0,9 | 29,6       | 3        | 6,1    | 0,1              | 6,6         | 0,9                   | 2,2                | 15,2                 | 12,7                   | 6,1        | 0,5                | 15675 |

Source: INSTAT / ENSOMD 2012-2013

Regarding the recent level of contraceptive use in Madagascar, the ENSOMD 2012-2013 revealed that almost a third of women of 15- 49 years reported that they are about to use some method contraception at the time of the survey, 27% use a modern method, especially injectable (16%) and the pill (5%), and 6% reported using a traditional method mainly periodic abstinence for 5 % women.

Analysis by age shows that the proportion of women who reported using contraception increases with age from 18% among those 15- 19 years, to 42% among those aged 30-34 which is the age group in which is the maximum level of contraceptive use among women of childbearing age.

Table 8: Current use of contraceptive methods by women aged 15-49 in union or not sexually active but in Madagascar

|               |            |                      |                         | Mod                   | dern M | Iethoc | ls          |            |         |                          |                              |                        | Trad       | itional I          | Methods              | ;     |           |
|---------------|------------|----------------------|-------------------------|-----------------------|--------|--------|-------------|------------|---------|--------------------------|------------------------------|------------------------|------------|--------------------|----------------------|-------|-----------|
| Age Groups    | Any method | Any modern<br>method | Female<br>Sterilization | Male<br>sterilization | Pill   | IUD    | Injectables | Implants   | Condom  | Breastfeeding/amenorrhea | Any<br>traditional<br>method | Periodic<br>abstinence | Withdrawal | Popular<br>methods | Not using any method | Total | Effective |
|               |            |                      |                         |                       |        |        |             | ENSEMBI    | E DES I | EMMES                    |                              |                        |            |                    |                      |       |           |
| 15-19         | 17,8       | 13,7                 | 0,0                     | 0,0                   | 3,3    | 0,1    | 7,3         | 1,1        | 1,0     | 0,8                      | 4,1                          | 3,4                    | 0,6        | 0,1                | 82,2                 | 100,0 | 3388      |
| 20-24         | 35,4       | 28,8                 | 0,0                     | 0,0                   | 6,4    | 0,2    | 18,0        | 1,7        | 1,1     | 1,3                      | 6,6                          | 4,9                    | 1,7        | 0,0                | 64,6                 | 100,0 | 2804      |
| 25-29         | 40,4       | 34,5                 | 0,2                     | 0,0                   | 6,2    | 0,4    | 22,4        | 2,5        | 1,3     | 1,4                      | 5,9                          | 4,9                    | 0,9        | 0,1                | 59,6                 | 100,0 | 2477      |
| 30-34         | 41,5       | 34,5                 | 1,0                     | 0,0                   | 6,4    | 0,7    | 21,1        | 2,4        | 2,0     | 0,9                      | 7,1                          | 5,5                    | 1,4        | 0,2                | 58,5                 | 100,0 | 2222      |
| 35-39         | 40,6       | 33,8                 | 1,8                     | 0,0                   | 6,3    | 0,8    | 19,7        | 3,4        | 0,9     | 1,0                      | 6,8                          | 5,4                    | 1,1        | 0,3                | 59,4                 | 100,0 | 1984      |
| 40-44         | 32,6       | 26,2                 | 3,6                     | 0,0                   | 5,3    | 0,8    | 14,2        | 1,5        | 0,7     | 0,2                      | 6,4                          | 5,5                    | 0,9        | 0,0                | 67,4                 | 100,0 | 1628      |
| 45-49         | 23,1       | 17,5                 | 3,6                     | 0,0                   | 2,9    | 1,0    | 7,7         | 1,3        | 0,5     | 0,5                      | 5,6                          | 4,8                    | 0,5        | 0,3                | 76,9                 | 100,0 | 1172      |
| Ensemble      | 32,8       | 26,9                 | 1,0                     | 0,0                   | 5,3    | 0,5    | 16,0        | 2,0        | 1,1     | 0,9                      | 6,0                          | 4,8                    | 1,1        | 0,1                | 67,2                 | 100,0 | 15675     |
|               |            |                      |                         |                       |        |        |             | FEMM       | ES EN U | NION                     |                              |                        |            |                    |                      |       |           |
| 15-19         | 29,2       | 24,7                 | 0,0                     | 0,0                   | 5,3    | 0,2    | 13,9        | 3,2        | 0,4     | 1,7                      | 4,5                          | 2,7                    | 1,5        | 0,3                | 70,8                 | 100,0 | 979       |
| 20-24         | 40,0       | 34,5                 | 0,0                     | 0,0                   | 8,2    | 0,3    | 21,2        | 2,3        | 0,7     | 1,9                      | 5,5                          | 3,7                    | 1,8        | 0,0                | 60,0                 | 100,0 | 1775      |
| 25-29         | 42,0       | 36,6                 | 0,2                     | 0,0                   | 6,5    | 0,5    | 23,6        | 2,8        | 1,1     | 1,8                      | 5,4                          | 4,4                    | 0,9        | 0,1                | 58,0                 | 100,0 | 1888      |
| 30-34         | 44,4       | 37,2                 | 1,0                     | 0,0                   | 7,0    | 0,8    | 22,8        | 2,8        | 1,9     | 0,9                      | 7,1                          | 5,6                    | 1,2        | 0,3                | 55,6                 | 100,0 | 1813      |
| 35-39         | 45,9       | 38,1                 | 2,0                     | 0,0                   | 7,1    | 1,0    | 22,3        | 3,8        | 0,9     | 1,0                      | 7,8                          | 6,1                    | 1,4        | 0,4                | 54,1                 | 100,0 | 1573      |
| 40-44         | 37,7       | 29,8                 | 4,3                     | 0,0                   | 6,0    | 0,9    | 16,3        | 1,4        | 0,7     | 0,2                      | 7,9                          | 6,7                    | 1,2        | 0,0                | 62,3                 | 100,0 | 1233      |
| 45-49         | 28,2       | 21,5                 | 4,4                     | 0,0                   | 3,6    | 1,0    | 9,8         | 1,4        | 0,7     | 0,6                      | 6,7                          | 5,6                    | 0,7        | 0,4                | 71,8                 | 100,0 | 869       |
| Ensemble      | 39,8       | 33,3                 | 1,4                     | 0,0                   | 6,6    | 0,7    | 19,9        | 2,6        | 1,0     | 1,2                      | 6,4                          | 5,0                    | 1,3        | 0,2                | 60,2                 | 100,0 | 10130     |
|               |            |                      |                         |                       |        |        |             | N EN UNION |         |                          |                              |                        |            |                    |                      |       | ***       |
| 15-19         | 38,6       | 26,5                 | 0,0                     | 0,0                   | 8,5    | 0,0    | 12,9        | 0,7        | 4,1     | 0,3                      | 12,1                         | 11,0                   | 1,1        | 0,0                | 61,4                 | 100,0 | 550       |
| 20-24         | 46,9       | 29,4                 | 0,0                     | 0,0                   | 6,0    | 0,0    | 18,9        | 1,4        | 2,3     | 0,7                      | 17,5                         | 14,4                   | 3,1        | 0,0                | 53,1                 | 100,0 | 387       |
| 25-29         | 54,5       | 42,3                 | 0,0                     | 0,0                   | 7,4    | 0,0    | 28,3        | 2,7        | 3,9     | 0,0                      | 12,2                         | 10,5                   | 1,8        | 0,0                | 45,5                 | 100,0 | 219       |
| 30-34         | 51,0       | 36,8                 | 1,9                     | 0,0                   | 9,9    | 0,0    | 17,5        | 0,9        | 5,3     | 1,2                      | 14,2                         | 10,2                   | 4,1        | 0,0                | 49,0                 | 100,0 | 128       |
| 35-39         | 35,3       | 30,5                 | 1,8                     | 0,0                   | 6,9    | 0,0    | 21,7        | 0,0        | 0,0     | 0,0                      | 4,8                          | 4,4                    | 0,5        | 0,0                | 64,7                 | 100,0 | 99        |
| 40-44         | 34,9       | 33,0                 | 1,5                     | 0,0                   | 10,4   | 1,5    | 11,2        | 5,6        | 2,8     | 0,0                      | 1,9                          | 1,9                    | 0,0        | 0,0                | 65,1                 | 100,0 | 92        |
| 45-49         | (24,7)     | (10,6)               | (0,0)                   | (0,0)                 | (1,5)  | (0,0)  | (8,2)       | (0,8)      | (0,0)   | (0,0)                    | (14,1)                       | (14,1)                 | (0,0)      | (0,0)              | (75,3)               | 100,0 | 37        |
| Ensemble      | 43,4       | 30,5                 | 0,3                     | 0,0                   | 7,7    | 0,1    | 17,3        | 1,4        | 3,3     | 0,4                      | 12,8                         | 11,0                   | 1,9        | 0,0                | 56,6                 | 100,0 | 1512      |
| () Basé sur 3 | 7 cas non  | pondérés             |                         |                       |        |        |             |            |         |                          |                              |                        |            |                    |                      |       |           |

SOURCE: INSTAT/ENSOMD 2012-2013

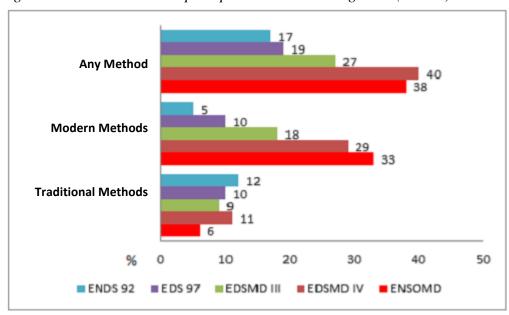
Ensembles des Femmes = All Women; Femmes en Union = Married Women; Femmes non en union mais sexuellement actives = Unmarried women who are sexually active. \* () Basé sur 37 cas non pondérés = Based on 37 un-weighted cases

The high level of knowledge of contraceptive methods as in Madagascar by women than by men could explain the fact that contraceptive prevalence is relatively high, at 32.8%, including 40% of married women and 43% of those not but in union who are sexually active.

Analysis by type of methods shows that among married women, 33% use a modern method, especially injectables (20%) and the pill (7%) and a significant share of 6.4% of women use a traditional method, essentially periodic abstinence (5%). The maximum level of contraceptive use is recorded in the age group 35-39 years with 46% of married women using contraception. Moreover, among women not in union and sexually active, 43% reported using at the time of the investigation, any method of contraception. These women used more modern methods (30.5%) than traditional (12.8%). Among modern methods, injectables are the most used (17%) and the pill (8%). While among traditional methods, periodic abstinence prevails mainly with a proportion of 11% of non-union and sexually active women who have used it. It is also noteworthy that in this sub-group of women, the male condom usage rate is higher (3.3%) than

among other women (1%). Also, unlike other women, the maximum contraceptive prevalence level of 55% is reached in the age bracket 25-29 years while it remains higher from 15-19.

As for the trend in contraceptive use in Madagascar, a progressive increase was recorded in all since 1992 until 2009, then a decline was recorded in 2012-2013 although a difference in trends was observed by type contraceptive methods.



*Figure 9: Trends in contraceptive prevalence in Madagascar (unit:%)* 

SOURCE: ENDS, EDS 97, EDSMD III, EDSMD IV et ENSOMD 2012-2013

Indeed, the rate of contraceptive use among married women has gradually increased from 17% in 1992 to 19% in 1997 and 27% in 2003-2004 and 40% in 2008-2009. But in 2012-2013, the registered contraceptive prevalence decreased 2 points to 38%. Depending on the type of methods, utilization of modern methods has increased gradually from 5% in 1992 to 10% in 1997 and 18% in 2003-2004 to 29% in 2008-2009 to reach 33% in 2012-2013. On the whole, the upward trend in contraceptive use remains insufficient in Madagascar, given the existence of unmet potential demand increase to contain the national ISF still considered high. Moreover, the rate of use of traditional methods changed little, rising from 12% in 1992 to 11% in 2008-2009 to return to 6% in 2012-2013.

From Figure 10, injectables and the pill remain the most frequently used by modern methods among married women aged 15-49 in Madagascar. Through awareness campaigns in the country, the injectable utilization rate increased sharply between 2008-2009 and 2003-2004 from 10.2% to 17.9% during this period to reach 20.5% in 2012-2013.

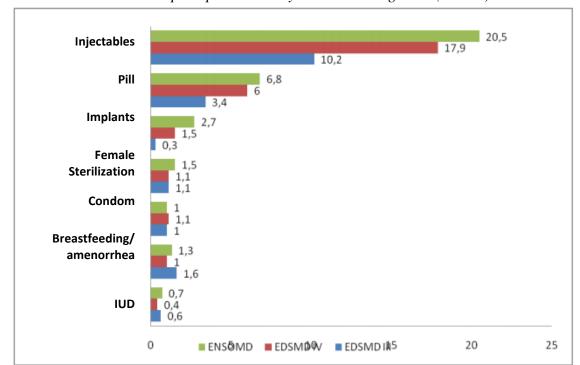


Figure 10: Trends in contraceptive prevalence by method Madagascar (unit:%)

SOURCE: EDSMD III, EDSMD IV et ENSOMD 2012-2013

## Number of children at first use

The use of contraception for the first time may explain some fertility characteristics such as delaying the first birth, birth spacing or stopping births.

In 2012-2013, 12% of women aged 15-49 have begun to use contraception when they had no children, to delay the arrival of the first birth. On average, 27.9% of women began to use contraception when they were between 1-3 children. In 10% of cases, contraceptive use began at high parity (four or more children), certainly to limit the descent.

Table 9: Percentage of women aged 15-49 by number of living children at the first use of contraception, according to current age

|            | Number of living children when acceptor began using contraception |      |      |     |      |                          |       |  |  |
|------------|---|------|------|-----|------|--------------------------|-------|--|--|
| Age Groups | 0   | 1    | 2    | 3   | 4+   | Never used contraception | Total |  |  |
| 15-19      | 14,3  | 8,2  | 1,3  | 0,2 | 0,1  | 76,0                     | 100,0 |  |  |
| 20-24      | 18,3  | 22,5 | 8,0  | 2,9 | 0,7  | 47,5                     | 100,0 |  |  |
| 25-29      | 12,8  | 21,3 | 13,4 | 8,3 | 6,7  | 37,5                     | 100,0 |  |  |
| 30-34      | 9,1   | 15,0 | 12,8 | 9,6 | 15,2 | 38,3                     | 100,0 |  |  |
| 35-39      | 6,5   | 11,5 | 10,0 | 9,6 | 21,5 | 41,0                     | 100,0 |  |  |
| 40-44      | 5,9   | 7,7  | 7,1  | 7,8 | 23,2 | 48,4                     | 100,0 |  |  |
| 45-49      | 5,8   | 6,2  | 7,5  | 5,2 | 19,3 | 56,0                     | 100,0 |  |  |
| Ensemble   | 11,5  | 14,0 | 8,2  | 5,7 | 10,0 | 50,6                     | 100,0 |  |  |

SOURCE: INSTAT/ENSOMD 2012-2013

## Knowledge of the fertility cycle

In according ENSOMD in 2012-2013, almost one in two women know precisely the period when it is fruitful in Madagascar. However 10% of women cannot locate this period. Among nonusers women periodic abstinence, 65% were able to locate the period during which the chances of getting pregnant are highest. The level of knowledge of women using periodic abstinence as a method of contraception is significantly better, with 84% of them were able to correctly locate the fertile period. However, among these users, it is found that 12% have a doubtful knowledge, and 5% do not know situate this period. Therefore, further efforts are needed to further inform women of the fertile period of their menstrual cycle especially if they use periodic abstinence as a contraceptive method.

Table 10: Proportion of women aged 15-49, according to their knowledge of the fertile period, during the monthly cycle, depending on the current use of periodic abstinence

|                              | Practitioners of abstinence | Non-practitioners of abstinence | Total |
|------------------------------|-----------------------------|---------------------------------|-------|
| Just before their period beg | rins 1,7                    | 5,3                             | 5,0   |
| During their period          | 2,9                         | 3,0                             | 3,0   |
| Just after their period ends | 10,1                        | 19,8                            | 19,2  |
| Between two periods          | 83,8                        | 64,9                            | 66,1  |
| Other (specify)              | 1,0                         | 0,8                             | 0,8   |
| I don't know                 | 0,5                         | 6,2                             | 5,8   |
| Total                        | 100,0                       | 100,0                           | 100,0 |

Source: INSTAT / ENSOMD 2012-2013

## Sources of supply

In Madagascar, the public sector is the main supplier of contraceptives used in modern methods up to 48%. The supply from the private sector also proves considerable, since 15.1% of women in the age group 15-49 contraceptive users refuel it. The public sector contributes to the supply of contraceptives, mainly through basic health centers level II (CSBII) up to 37.8%. Also, note that the most frequently used by women aged 15-49 methods, namely, injectables, implants and pills are obtained mainly from the public sector (respectively 64%, 63% and 46%) mainly in the CSB-II (51%, 53% and 40%). Female sterilization method that few women use, is also practiced, mainly in the public sector (72%).

Table 11: Distribution of modern contraceptive methods to current users, ages 15-49, by source of supply and by the method

| Supply Source               | Female sterilization | Pill  | IUD   | Injectables | Implant | Condom | Total |
|-----------------------------|----------------------|-------|-------|-------------|---------|--------|-------|
| Public sector               | 71,8                 | 45,7  | 43,8  | 63,6        | 63,1    | 9,3    | 48,1  |
| CHD II                      | 24,4                 | 2,5   | 5,4   | 2,5         | 2,3     | 0,5    | 2,8   |
| CHD I                       | 10,2                 | 1,1   | 2,0   | 1,9         | 2,6     | 0,7    | 1,7   |
| CHU, CHRR                   | 7,6                  | 0,4   | 1,9   | 0,4         | 1,6     | 0,0    | 0,8   |
| CSB II                      | 29,1                 | 35,9  | 34,5  | 51,3        | 52,7    | 7,8    | 37,5  |
| CSB I                       | 0,5                  | 5,8   | 0,0   | 7,6         | 3,8     | 0,3    | 5,3   |
| Private Sector              | 22,5                 | 23,4  | 30,3  | 16,0        | 19,8    | 16,3   | 15,1  |
| Hospital/<br>private clinic | 18,4                 | 1,4   | 5,8   | 0,7         | 4,8     | 0,6    | 1,6   |
| Health Center               | 0,0                  | 0,4   | 6,8   | 2,0         | 2,1     | 1,3    | 1,3   |
| Pharmacy/ Medical depot     | 0,0                  | 12,4  | 0,0   | 1,6         | 0,0     | 9,2    | 3,0   |
| Private Physician           | 1,5                  | 5,8   | 14,1  | 8,6         | 7,6     | 3,0    | 6,3   |
| Center of PF / FISA         | 0,0                  | 3,5   | 3,6   |             | 5,4     | 2,2    | 2,8   |
| Other private medical sou   |                      | 0,0   | 0,0   | -           | 0,0     | 0,0    | 0,1   |
| Other sources               | 0,0                  | 15,8  | 5,2   |             | 9,8     | 50,5   | 20,1  |
| Community<br>health agent   | 0,0                  | 4,2   | 3,1   | 3,0         | 0,7     | 4,3    | 3,2   |
| VBC Agent                   | 0,0                  | 0,6   | 0,0   | 0,2         | 0,0     | 0,4    | 0,3   |
| Media/ Commercial           | 0,0                  | 0,0   | 0,0   | 0,0         | 0,7     | 0,0    | 0,1   |
| Shop                        | 0,0                  | 5,5   | 0,0   | 0,0         | 0,0     | 27,8   | 2,2   |
| Kiosk                       | 0,0                  | 0,1   | 0,0   | 0,0         | 0,0     | 2,5    | 0,1   |
| Church                      | 0,0                  | 0,0   | 0,0   | 0,1         | 0,0     | 0,0    | 0,3   |
| Parent/Friend               | 0,0                  | 1,2   | 0,0   | 0,4         | 0,4     | 5,6    | 5,4   |
| Other                       | 3,5                  | 4,2   | 2,0   | 3,2         | 7,9     | 9,8    | 8,6   |
| Missing                     | 2,2                  | 15,1  | 20,7  | 13,4        | 7,3     | 23,9   | 16,6  |
| Total                       | 100,0                | 100,0 | 100,0 | 100,0       | 100,0   | 100,0  | 100,0 |

Source: INSTAT / ENSOMD 2012-2013

## Information on contraception Sources

The media are important channels of information dissemination and awareness on contraceptive methods and contribute to the popularization of contraceptive use. Radio is the main source of

information about contraception in Madagascar since 14% of women aged 15-49 reported receiving messages on family planning against 15% of men in the same age group according ENSOMD in 2012-2013 in Madagascar. Next is the television as a source of information on contraception as 8% of women and 7% of men. The written press is the least used information on family planning because only 2% of women and 4% of men of the said age group are said to appeal. It should be noted that 76% of women aged 15-49 said they had received no message about family planning through the three media (radio, TV and newspaper / magazine) in the last months preceding the survey .

Table 12: Proportion of women and men aged 15-49 according to the type of media used to get information about family planning in Madagascar

| mo                         | Percentage of women 15-49 years of age, in the last months preceding the survey, have either heard on the radio or seen on television, in a newspaper or magazine a message about family planning. |      |                      |                     | Percentage of men 15-49 years of age, in months preceding the survey, have either hadio or seen on television, in a newsp magazine a message about family plant |       |      |                      | heard or<br>oaper or |                |
|----------------------------|--|------|----------------------|---------------------|---|-------|------|----------------------|----------------------|----------------|
|                            | Radio  | TV   | Journal/<br>Magazine | None<br>of<br>these | #<br>Of<br>Women  | Radio | TV   | Journal/<br>Magazine | None<br>of<br>these  | #<br>Of<br>Men |
| Age Group                  |  |      |                      |                     |   |       |      |                      |                      |                |
| 15 - 49                    | 10,0   | 7,8  |                      | 79,6                | 3388  | 11,2  | 5,9  | 2,9                  | 80,0                 | 1469           |
| 20 - 24                    | 11,4   | 8,7  | 3,3                  | 76,5                | 2804  | 12,7  | 8,1  | 4,5                  | 74,6                 | 118            |
| 25 - 29                    | 14,2   | 8,3  | 2,4                  | 75,1                | 2477  | 14,4  | 6,5  | 4,2                  | 75,0                 | 95             |
| 30 - 34                    | 13,4   | 8,4  | 3,0                  | 75,2                | 2222  | 15,5  | 6,8  | 3,5                  | 74,1                 | 980            |
| 35 - 39                    | 13,3   | 8,3  | 3,5                  | 75,0                | 1984  | 16,7  | 7,3  | 4,6                  | 71,3                 | 84             |
| 40 - 44                    | 13,4   | 7,9  | 1,9                  | 76,7                | 1628  | 17,9  | 8,5  | 4,7                  | 69,0                 | 78.            |
| 45 - 49                    | 13,5   | 7,8  | 3,0                  | 75,6                | 1172  | 16,5  | 6,7  | 3,9                  | 72,9                 | 138            |
| Residency                  |  |      |                      |                     |   |       |      |                      |                      |                |
| Capital                    | 11,0   | 32,3 | 14,9                 | 41,9                | 1333  | 9,4   | 25,5 | 16,1                 | 48,9                 | 633            |
| Other urban                | 11,2   | 20,9 | 3,3                  | 64,6                | 2782  | 11,9  | 18,7 | 4,8                  | 64,7                 | 124            |
| Adjacent<br>Urban          | 11,1   | 25,1 | 7,6                  | 56,2                | 4115  | 10,9  | 21,4 | 9,3                  | 58,3                 | 187            |
| Rural                      | 12,8   | 3,9  | 1,6                  | 81,7                | 11560   | 15,6  | 3,5  | 2,7                  | 78,2                 | 572            |
| Level of<br>Education      |  |      |                      |                     |   |       |      |                      |                      |                |
| None                       | 7,7  | 0,8  | 0,3                  | 91,3                | 3974  | 9,4   | 0,9  | 0,8                  | 89,0                 | 174            |
| Primary                    | 13,6   | 3,1  | 0,8                  | 82,5                | 5771  | 15,5  | 2,7  | 1,4                  | 80,4                 | 274            |
| Secondary<br>or higher     | 14,1   | 17,5 | 6,3                  | 62,1                | 5930  | 16,3  | 13,5 | 7,6                  | 62,6                 | 311            |
| Economic<br>Level          |  |      |                      |                     |   |       |      |                      |                      |                |
| Poorest                    | 8,0  | 0,3  | 0,7                  | 91,0                | 2627  | 9,9   | 0,5  | 1,2                  | 88,4                 | 114            |
| Second                     | 10,9   | 1,5  | 0,8                  | 86,8                | 2629  | 15,6  | 0,7  | 1,4                  | 82,2                 | 126            |
| Average                    | 14,4   | 3,0  | 1,4                  | 81,2                | 2971  | 16,7  | 1,5  | 1,9                  | 79,8                 | 143            |
| Fourth                     | 14,8   | 9,5  | 2,6                  | 73,1                | 3380  | 17,3  | 7,7  | 3,8                  | 71,1                 | 169            |
| Richest  Fotal of all      | 12,9   | 21,0 | 7,0                  | 59,2                | 4064  | 13,0  | 17,6 | 8,6                  | 60,8                 | 206            |
| woman 15 -<br>49 years old | 12,4   | 8,2  | 2,8                  | 76,5                | 15675   | 14,7  | 7,0  | 4,0                  | 74,4                 | 760            |

SOURCE: INSTAT/ENSOMD 2012-2013

### **SECTION 5. INFANT MORTALITY**

## Trend in child mortality in Madagascar

Since a high mortality level is a reflection of a precarious nutritional status, low access to health care, safe water and adequate sanitation, it is considered one of the best Indicators level of development of a population. Therefore, it is also one of the Millennium Development Goals, MDG 04: "Reducing mortality among children under 5 years."

In Madagascar, the mother's health and child efforts of the various entities both public and private and national and international, including from development partners have gradually borne fruit since the child mortality recorded a net decrease from 159 ‰ in 1997 to 72 ‰ in 2009 to 62 ‰ in 2012-2013.

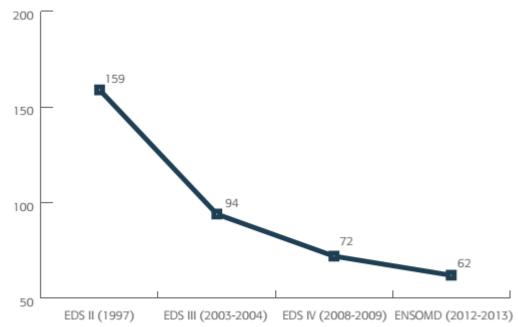


Figure 11: Infant and child mortality rate (under 5) (%)

Source: INSTAT / ENSOMD 2012-2013

For the most recent period (0-4 years prior to the 2012-2013 survey) in 1000 live births, 42 die before their first birthday. Note also that neonatal mortality is higher than post-neonatal because the probabilities are respectively 26 and 17%. About 1000 children a year, reach 20 not their fifth birthday. Overall, the risk of death between birth and the fifth birthday was 62 per thousand births.

Table 13: child mortality quotients less than five years

| Number of years Neonatal mortality preceding the survey (NN) |    | Post neonatal<br>mortality (PNN) <sup>1</sup> | Infant<br>Mortality<br>(1q0) | Child mortality (4q1) | Infant<br>and child<br>mortality<br>(5q0) |
|--|----|---|------------------------------|-----------------------|---|
| 0-4  | 26 | 17  | 42                           | 20                    | 62  |
| 5-9  | 21 | 19  | 41                           | 20                    | 60  |
| 10-14  | 22 | 20  | 41                           | 27                    | 67  |

SOURCE: INSTAT/ENSOMD 2012-2013

## Differential mortality (socio-economic differentials of the mother and child)

In Madagascar, child mortality is higher in rural than urban areas. In general, the differences between the rural and the mortality in urban areas are almost the same, about 7 ‰ for neonatal period (0-1 months) and post-neonatal (1-11 months). Moreover, from birth and based on 1,000 live births, 43 die before their first birthday, rural, against 30 in urban areas. Similarly, between 1 and 4 years, the risk of dying is 22 ‰, rural, against 9 ‰, urban. Overall, the risk of dying between birth and age five a difference of 25 points between rural (64 ‰) and urban (39 ‰) (see Table 14).

In addition, it was found that the higher the level of education of the mother, the higher the mortality rate is low to the extent that educated women have more access to information about good nutrition, use of contraception for birth spacing, prevention of childhood diseases and their treatment. For the period of the ten years preceding the 2012-2013 survey, infant mortality and significantly decreases as the education level of the mother increases, it goes from 34 ‰ in children whose mothers have a secondary education or higher, 48 ‰ among those whose mothers have no education. It is the same child mortality, she spent 13 ‰ among children whose mothers have secondary or higher level, 27 ‰ among those it has no instructions. And in 1000 live births to women with no education, 74 do not reach their fifth birthday, 46 against when it comes to female births with secondary education or higher.

Table 14: child mortality quotients, according to the socio-economic characteristics

| Socio-economic<br>Characteristics    | Neonatal mortality<br>(NN) | Post neonatal<br>mortality<br>(PNN) | Infant<br>Mortality<br>(1q0) | Child<br>mortality<br>(4q1) | Infant and<br>child<br>mortality<br>(5q0) |
|--------------------------------------|----------------------------|-------------------------------------|------------------------------|-----------------------------|---|
| Residency                            |                            |                                     | 1                            |                             | , , , ,                                   |
| Capital                              | 14                         | 11                                  | 25                           | 7                           | 32  |
| Other urban areas                    | 20                         | 12                                  | 33                           | 10                          | 43  |
| Adjacent urban areas                 | 18                         | 12                                  | 30                           | 9                           | 39  |
| Rural                                | 25                         | 19                                  | 43                           | 22                          | 64  |
| Level of<br>Education                |                            |                                     |                              |                             |   |
| None                                 | 26                         | 22                                  | 48                           | 27                          | 74  |
| Primary                              | 24                         | 17                                  | 41                           | 19                          | 59  |
| Secondary or higher                  | 20                         | 14                                  | 34                           | 13                          | 46  |
| Economic                             |                            |                                     |                              |                             |   |
| Level                                |                            |                                     |                              |                             |   |
| Poorest                              |                            |                                     |                              |                             |   |
| Second                               | 28                         | 20                                  | 48                           | 22                          | 69  |
| Average                              | 25                         | 29                                  | 54                           | 28                          | 80  |
| Fourth                               | 22                         | 16                                  | 38                           | 23                          | 60  |
| Richest                              | 24                         | 10                                  | 33                           | 16                          | 49  |
| Total of all woman 15 - 49 years old | 20                         | 10                                  | 29                           | 8                           | 37  |

SOURCE: INSTAT/ENSOMD 2012-2013

Household living conditions also have an influence on the mortality of children under five. The mortality rate for children under 5 is higher in the quintile of the poorest households (69 ‰) and quintile well being second economic (80 ‰), while the rate is 37 ‰ in the quintile of the richest households.

#### Maternal mortality

Maternal health is an important element in reproductive health. The target for the reduction of maternal mortality rate by three quarters between 1990 and 2015 was not achieved in Madagascar because the current level is still very high with 478 maternal deaths per 100,000 live births if the target is located 127 maternal deaths per 100,000 live births.

The analysis of the trend in the maternal mortality rate shows that it remains almost constant in recent decades. While the maternal mortality ratio was 498 maternal deaths against 100 000 live births in 2008- 2009, it is still estimated to be high to 478 maternal deaths per 100,000 live births for the period 2006-2013 in particular because lack in coverage and implementation of ANC who are not much improved.

#### SECTION 6. PROSPECTS FOR POPULATION STABILIZATION

The Government of the Republic of Madagascar has been an increased awareness of the importance of population stabilization by making efforts, among others, in family planning which proves to be an effective means of reducing maternal mortality and the high fertility rate

in recent decades. This translates membership in various maternal health programs and will to implement them.

In 2004, the Ministry of Public Health has formulated its National Health Policy (PNS) which puts maternal health among the priorities. On the one hand, the department has made efforts in promoting maternal health through the implementation of motherhood programs safer and family planning. On the other hand, to achieving the Millennium Development Goal No. 5 (MDG5) which concerns maternal health, he made a series of documents aimed at reducing maternal and neonatal mortality, ie (i) the road map for reducing maternal and neonatal mortality in 2005, (ii) the standards and procedures in SR in 2008, (iii) the operational plan for the implementation of the commitment of Madagascar in the overall strategy of the United Nations General Secretariat for the health of women and children in 2011, and (iv) political orientations reproductive health in 2012.

Health interventions in local communities were highlighted in the national community health policy in 2009 that focuses on reducing maternal and neonatal mortality and increased contraceptive coverage.

Moreover, the Constitution of the 4th Republic of Madagascar stated in its Articles 19 and 21 of the recognition by the state of the right to health protection and the assurance of the protection of the development of the mother and the child through legislation and appropriate social institutions.

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