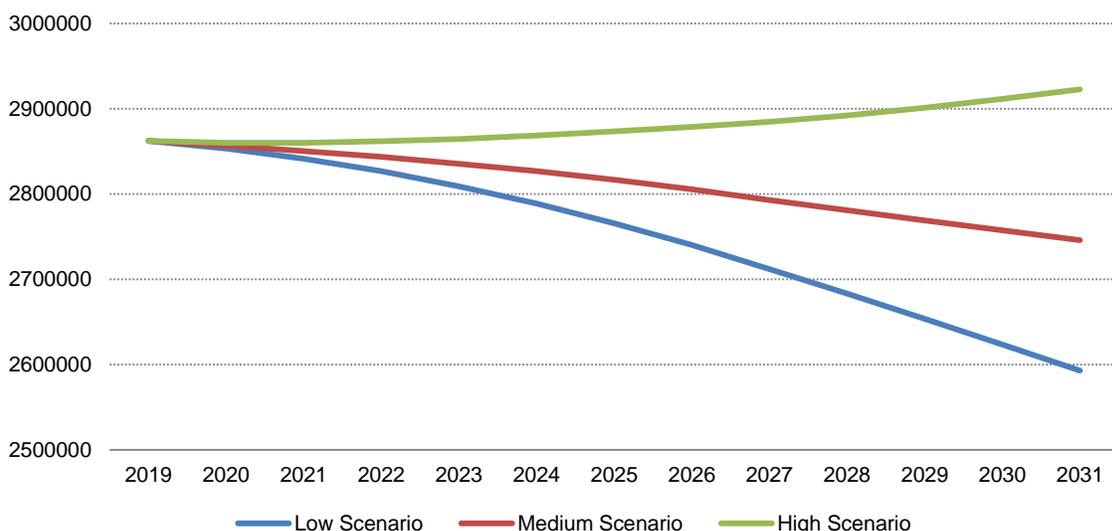


# Projections of the population

## 2019 - 2031

**Tirana, 26<sup>th</sup> of February 2019:** INSTAT, based on international recommendations, will update the population projections every 5 years. The population of Albania in 2031, according to the updated projections, is estimated to be 2,745,996 inhabitants. This number is about 36 thousand inhabitants less than the population number given by the Population Projections 2011 - 2031. The change of this number is a direct consequence of lower fertility rates and the gender distribution of migrants which does not coincide with the hypothesis of Population Projections 2011 - 2031

**Fig. 1 Updated population projections according to 3 scenarios 2019-2031**



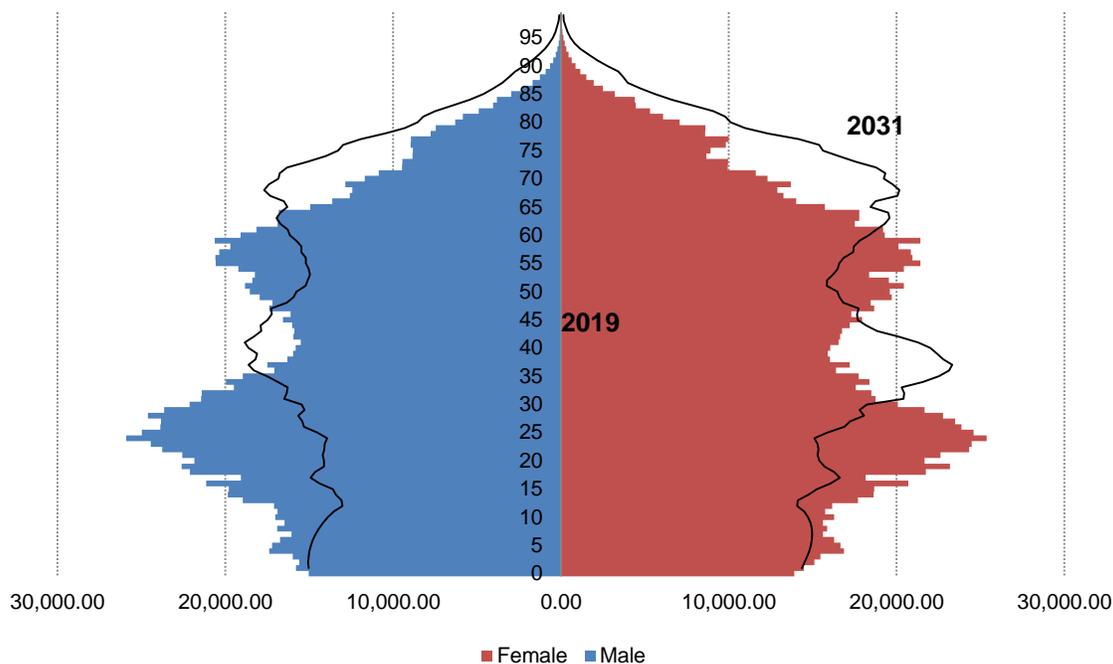
The slow growth rate of TFR, coupled with less numerous generations of women entering the reproductive age, means that the number of births will not undergo significant changes during the period 2019-2031. At the same time, the number of deaths will continue to grow, as a result of a larger population of old age. These two changes will also bring the natural increase of the population down to about 3.2 thousand in 2031.

During 2011 - 2018, emigration rates of men were higher than those assumed in the previous projections. While for women, emigration rates were several times lower than those previously assumed. These changes in migratory behavior have also led to a change in the gender structure of the population.

In 2011, Albania was a country with more men than women. This has already changed in 2019, as in Albania the gender ratio stands at 99.8 men per 100 women. According to the updated population projections, the gender ratio is expected to deepen in favor of women reaching 89.1 men per 100 women. Albania's population will continue the aging process and its median age is expected to reach 42.1 years in 2031. This aging process is associated with the rapid growth of the old dependency ratio from about 20.5 elderly people for 100 people in working age in 2019, to about 35.0 elderly people for every 100 working age people. During this period the youth dependency ratio will remain at constant levels of about 25.0 young people per 100 working age people.

The demographic changes expected to happen to the population of Albania by 2031 will also have an impact on its distribution among the regions of the country. Until 2031, only the population of the prefecture of Tirana is expected to be higher than that of 2019, reaching about 954 thousand inhabitants. In 2031, around 35% of Albania's population is expected to live in the prefecture of Tirana. The prefectures with the lowest population will continue to be those of Gjirokastra and Kukës, respectively with about 53 thousand and 60 thousand inhabitants.

**Fig. 2 Population pyramids according to the updated population projections, 2019-2031.**



# Methodology

To calculate the population projections, there are 3 possible scenarios based on estimating the future trends of births, deaths and migration. Since these phenomena can not be precisely predicted for the future, three variants are prepared, the low, medium and high variants. The medium variant is also considered the most likely variant. <http://www.instat.gov.al/media/5223/updated-population-projections-hypothesis-2019-2031.pdf>

## Cohort component method

Demographic change occurs when couples give birth to children and when individuals arrive from other countries by adding new members to the population, while others are dying or leaving in other countries, reducing the population. Because these demographic events affect the population by sex and age groups, they determine the number and structure of the population. The main objective of demographic projections is to determine how births, deaths and migrations will occur in the following years. The methodology used for this cycle of population projections by INSTAT, the cohort component model, calculates these events for each year, sex or age according to the assumptions of reliable trends in mortality, fertility and future migration. These events are subtracted and added to the population at the beginning of the year, giving the population by age and sex at the beginning of the following year, and so on.

The number of demographic events depends on the population structure and on demographic behavior (i.e. the number of births depends on the number of women in reproductive age and the age specific fertility rates). Since the population structure and demographic behaviors are known for the base year, future trends in demographic behavior were predicted based on hypotheses based on our knowledge of the demographic situation, past tendencies, political context and social economics, and international comparisons.

Population by age group and sex at the beginning of the projections, January 1, 2019, is estimated by INSTAT based on the empirical data of previous years.

Population at the national level, by sex and age, is projected repeatedly year after year, starting with the population on January 1, as follows:

- The number of deaths is estimated for the first six months from the application of mortality rates by age and sex for the population on 1 January; deaths are subtracted from the population to get survivors in the middle of the year (June 30);

- The annual number of emigrants by age group and sex is estimated from the mid-year population using the emigration rates and these events are subsequently deducted; meanwhile, the supposed number of immigrants by sex is redistributed by age and is added to the population.
- The number of deaths for the second semester is then estimated and subtracted from this revised population number in the middle of the year, giving the number of survivors at 31 December;
- The number of births is estimated by multiplying fertility rates by age group with the average number of women of reproductive age; infant deaths and those who migrate by the end of the year are estimated and subtracted from the number of births;
- To get the population on 1 January of the following year, each group is moved forward by one year of age to reflect ageing of the population and the number of surviving births within the country is the first age (age 0).

The population of the prefectures by sex and age groups of 5 years is projected repeatedly and at the same time at five-year intervals using a multi-regional model of the cohort component migration reserve, adapted from the multi-regional model proposed by the United Nations. The procedure contains the following steps for each cycle:

- Population by sex and age at the beginning of the interval is projected to survive by 5 years.
- Surviving emigrants (from abroad) and domestic migrants (from other prefectures) are assessed one by one using transition rates for migrants (considering the mortality and international migration in the case of domestic migration) that apply to the population in end of the interval. The number of emigrants is subtracted to the number of the total population and domestic immigrants are distributed by age group and sex, which gives the number of internal immigrants for redistribution among prefectures.
- The number of internal immigrants, as well as an assumed number of immigrants from abroad (taken from the national level projections) are added to the population at the end.
- Births are estimated by applying the specific rates of fertility to the average population at the beginning and end of the 5 year interval and the survivors are projected to the end of the interval.
- In order to obtain the population on 1 January at the beginning of the next 5-year interval, each generation is aged by five years to reflect population ageing; the number of live births within Albania is the first age group.
- Population by sex and age and demographic events at the regional level should coincide with the total determined by national projections.

## Definitions

**Resident population:** is based on the concept of usual residence. According to this definition in the resident population of one year are included all those persons who lived or have the intention to live for at least 12 months in the country, regardless of nationality.

**Median age:** age in which the half of population is older and the other half is younger.

**Sex ratio:** Ratio of the number of males to the number of females, in a given period of time, usually expressed as number of males for every 100 females.

**Sex ratio at birth:** Ratio of the number of baby boys to the number of baby girls, born in a given period of time, usually expressed as number of males for every 100 females.

**Natural increase in population:** The difference between the number of live births and the number of deaths during in a given period of time.

**Net migration:** is the difference between the number of immigrants and the number of emigrants of a population, in a specific territory, in a given period of time (I-E).

**Youth dependency ratio:** Ratio of the number of persons under working age (0-14 years of age) with the number of persons of working age (from 15 to 64 years of age).

**Old dependency ratio:** Ratio of the number of persons above the working age (65+ years of age) with the number of persons of working age (from 15 to 64 years of age).

**Gross Migration Rate (GMR):** The average number of migrations that a hypothetical generation of individuals would experience by the end of their life, if they were subject through their lifetime to migration rates observed in specific period of time (and if not subjected to mortality). Shown as number of migrations for each individual.

**Life expectancy at birth (e0):** The average number of expected years of life for a hypothetical group of individuals who will be subject throughout their lifetime to the specific mortality rates of a given period.

**Total Fertility Rates (TFR):** The average number of children that a hypothetical group of women will have at the end of their reproductive period, if they would be subjected throughout their lifetime to age specific fertility rates of a given period.