

27 September 2018

Life Table

2015 - 2017

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## Norte, Centro and Área Metropolitana de Lisboa regions exceed the national life expectancy

**Life expectancy at birth** in Portugal was estimated at 80.78 years for total population in the period 2015-2017, i.e. 77.74 years for men and 83.41 years for women.

At birth, life expectancy continues to be higher for women, but the difference for men has been declining and is now 5.67 years (compared to 6.02 in 2008-2010).

By regions **NUTS 2**, the Norte recorded the highest values of life expectancy at birth for total population (81.13 years) and for men (78.21 years), sharing the highest life expectancy for women (83,74) with the Centro region.

The greatest differences in longevity between men and women were observed in the Região Autónoma da Madeira and Região Autónoma dos Açores, while the lowest were observed in the Área Metropolitana de Lisboa and Norte.

By sub-regions **NUTS 3**, the highest life expectancies at birth were recorded in Cávado (81.73 years), Região de Leiria (81,40 years) and Região de Coimbra (81,35 years).

**Life expectancy at age 65** in Portugal reached 19.45 years for total population.

Men aged 65 may expect to live on average 17.55 years more and women 20.81 years more.

Norte and Área Metropolitana de Lisboa – compared with the 7 **NUTS 2** regions – recorded the highest values of life expectancy at age 65 for men (17.89) and women (21.11), respectively.

By sub-regions **NUTS 3**, Terras de Trás-os-Montes (20.13), Região de Coimbra and Médio Tejo (both with 20.11 years), and Região de Leiria (20.03 years) recorded the highest longevity at age 65.

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Statistics Portugal releases the complete life tables 2015-2017 for NUTS 2 regions, by sex and both sexes, and life expectancy at birth and at age 65 for NUTS 3 regions for both sexes. The analysis is carried out in comparison with the 2008-2010 results, the first period for which life expectancies at birth and at age 65 are available for the sub-regions NUTS 3, version of NUTS 2013.

In the 2015-2017 period, life expectancy at birth for Portugal was estimated at 80.78 years for both sexes, i.e. 77.74 years for men and 83.41 years for women, which accounted for a gain of 1.57 and 1.22 years respectively, in comparison with the values estimated for 2008-2010. The gap between male and female life expectancy at birth narrowed by 0.35 years, from 6.02 to 5.67 years.

Life expectancy at age 65 reached, in the 2015-2017 period, 19.45 years for both sexes. Men aged 65 may expect to live on average 17.55 years more and women 20.81 years more, which accounted for gains of 0.81 and 0.78, respectively, vis-à-vis 2008-2010. The gap between male and female longevity at age 65 was of 3.26.

**Figure 1. Life expectancy at birth and at age 65, Portugal, 2008-2010 to 2015-2017**

	Portugal					
	Life expectancy at birth (years)			Life expectancy at age 65 (years)		
	Both sexes	Males	Females	Both sexes	Males	Females
2008 - 2010	79.29	76.17	82.19	18.59	16.74	20.03
2009 - 2011	79.55	76.47	82.43	18.75	16.92	20.20
2010 - 2012	79.78	76.67	82.59	18.84	16.94	20.27
2011 - 2013	80.00	76.91	82.79	18.97	17.07	20.40
2012 - 2014	80.24	77.16	83.03	19.12	17.23	20.55
2013 - 2015	80.41	77.36	83.23	19.19	17.32	20.67
2014 - 2016	80.62	77.61	83.33	19.31	17.44	20.73
2015 - 2017	80.78	77.74	83.41	19.45	17.55	20.81

### Life expectancy at birth in NUTS 2 regions

*Life expectancy at birth recorded gains in all regions between 2008-2010 and 2014-2016; largest increase was recorded in Região Autónoma da Madeira*

The Norte region recorded the highest values of life expectancy at birth both for total population and for men, sharing the highest life expectancy for women with the Centro region. By contrast, Região Autónoma da Madeira and Região Autónoma dos Açores recorded the lowest values for life expectancy at birth, both for total population and for men and women.

In the last seven years, life expectancy at birth improved in all regions, although the biggest rise was seen in Região Autónoma da Madeira. In this region, life expectancy at birth went up from 76.13 years to 78.18 years, which means that in the 2015-2017 period people could expect to live at birth, on average, 2.05 years more than in 2008-2010.

The greatest differences in longevity between men and women were recorded in Região Autónoma da Madeira and Região Autónoma dos Açores, where women could expect to live, on average, 7.18 and 7.11 years more than men respectively. The Área Metropolitana de Lisboa and Norte regions showed the lowest differences in longevity between the two sexes (5.47 and 5.53 years respectively).

**Figure 2. Life expectancy at birth, NUTS 2, 2008-2010 to 2015-2017**

	Norte	Centro	A. M. Lisboa	Alentejo	Algarve	R. A. Açores	R. A. Madeira
<b>Life expectancy at birth (years) - Both sexes</b>							
2008 - 2010	79.64	79.59	79.29	78.58	78.90	75.86	76.13
2009 - 2011	79.97	79.90	79.52	79.01	79.43	76.01	76.54
2010 - 2012	80.14	80.09	79.65	79.26	79.67	76.32	77.03
2011 - 2013	80.32	80.24	80.00	79.45	80.02	76.49	77.49
2012 - 2014	80.55	80.55	80.32	79.81	80.22	76.82	77.68
2013 - 2015	80.69	80.80	80.50	80.03	80.38	77.15	77.76
2014 - 2016	80.99	80.98	80.71	80.04	80.34	77.28	78.02
2015 - 2017	81.13	81.07	80.85	80.19	80.17	77.48	78.18
<b>Life expectancy at birth (years) - Males</b>							
2008 - 2010	76.65	76.52	75.92	75.47	75.62	72.21	71.85
2009 - 2011	76.94	76.84	76.21	75.95	76.05	72.28	72.67
2010 - 2012	77.05	77.05	76.53	76.40	76.36	72.80	73.19
2011 - 2013	77.36	77.12	76.85	76.29	76.74	72.80	73.41
2012 - 2014	77.52	77.42	77.14	76.91	77.17	73.05	73.62
2013 - 2015	77.70	77.71	77.43	77.05	77.19	73.38	73.65
2014 - 2016	78.07	78.05	77.65	77.07	76.99	73.72	73.96
2015 - 2017	78.21	78.15	77.95	77.27	76.72	73.89	74.25
<b>Life expectancy at birth (years) - Females</b>							
2008 - 2010	82.43	82.43	82.34	81.49	82.22	79.41	79.68
2009 - 2011	82.82	82.71	82.38	81.89	82.59	79.73	79.74
2010 - 2012	82.90	82.94	82.54	82.02	82.90	79.88	80.27
2011 - 2013	83.01	83.07	82.77	82.24	83.01	79.99	80.91
2012 - 2014	83.24	83.37	83.10	82.57	83.03	80.27	81.12
2013 - 2015	83.42	83.54	83.19	82.70	83.31	80.65	81.19
2014 - 2016	83.64	83.66	83.30	82.72	83.48	80.75	81.41
2015 - 2017	83.74	83.74	83.42	82.83	83.37	81.00	81.43

### Life expectancy at age 65 in NUTS 2 regions

*Norte with the highest values for men and Área Metropolitana de Lisboa with the highest values for women; greatest gains in Região Autónoma da Madeira*

The Área Metropolitana de Lisboa region recorded the highest values of life expectancy at age 65 for both the total population and women, with 19.66 and 21.11 years, respectively, in 2015-2017. The highest longevity at age 65 for the men, of 17.89 years, was recorded in Norte region. However, Região Autónoma da Madeira recorded the greatest increase in the last seven years both for men and women, from 13.86 to 15.12 years and from 18.05 to 19.40 years respectively.

The biggest differences in longevity at age 65 between men and women were recorded in Região Autónoma da Madeira and Região Autónoma dos Açores, where women could expect to live, on average, 4.28 and 3.92 years more than men respectively. The Norte region experienced the lowest differences in longevity at age 65 between the two sexes (3.11 years).

**Figure 3. Life expectancy at age 65, NUTS 2, 2008-2010 to 2015-2017**

	Norte	Centro	A. M. Lisboa	Alentejo	Algarve	R. A. Açores	R. A. Madeira
<b>Life expectancy at age 65 (years) - Both sexes</b>							
2008 - 2010	18.61	18.63	18.83	18.20	18.79	16.18	16.40
2009 - 2011	18.88	18.89	18.91	18.32	19.03	16.07	16.65
2010 - 2012	18.95	19.03	18.86	18.48	19.09	16.30	17.11
2011 - 2013	19.04	19.08	19.11	18.65	19.17	16.62	17.45
2012 - 2014	19.21	19.32	19.35	18.74	19.33	16.66	17.53
2013 - 2015	19.25	19.45	19.43	18.87	19.66	16.84	17.67
2014 - 2016	19.45	19.55	19.52	19.05	19.66	17.06	17.67
2015 - 2017	19.65	19.61	19.66	19.18	19.46	17.12	17.75
<b>Life expectancy at age 65 (years) - Males</b>							
2008 - 2010	16.84	16.74	16.74	16.33	16.89	14.22	13.86
2009 - 2011	17.12	16.94	16.85	16.45	16.87	13.99	14.11
2010 - 2012	17.08	17.08	16.97	16.69	17.03	14.19	14.97
2011 - 2013	17.24	17.16	17.16	16.77	17.31	14.37	15.07
2012 - 2014	17.38	17.33	17.36	16.84	17.34	14.44	15.08
2013 - 2015	17.48	17.43	17.49	16.99	17.66	14.76	15.15
2014 - 2016	17.70	17.60	17.57	17.26	17.67	14.98	14.99
2015 - 2017	17.89	17.78	17.85	17.28	17.34	14.92	15.12
<b>Life expectancy at age 65 (years) - Females</b>							
2008 - 2010	20.08	20.15	20.39	19.68	20.44	17.71	18.05
2009 - 2011	20.31	20.41	20.38	19.83	20.69	17.67	18.24
2010 - 2012	20.42	20.58	20.34	19.98	20.82	18.06	18.51
2011 - 2013	20.46	20.56	20.63	20.14	20.75	18.23	18.89
2012 - 2014	20.55	20.81	20.81	20.2	20.89	18.29	18.99
2013 - 2015	20.64	20.95	20.86	20.28	20.99	18.41	19.17
2014 - 2016	20.83	20.99	21.03	20.48	21.04	18.69	19.35
2015 - 2017	21.00	21.03	21.11	20.69	21.06	18.84	19.4

## Life expectancy at birth in NUTS 3 sub-regions

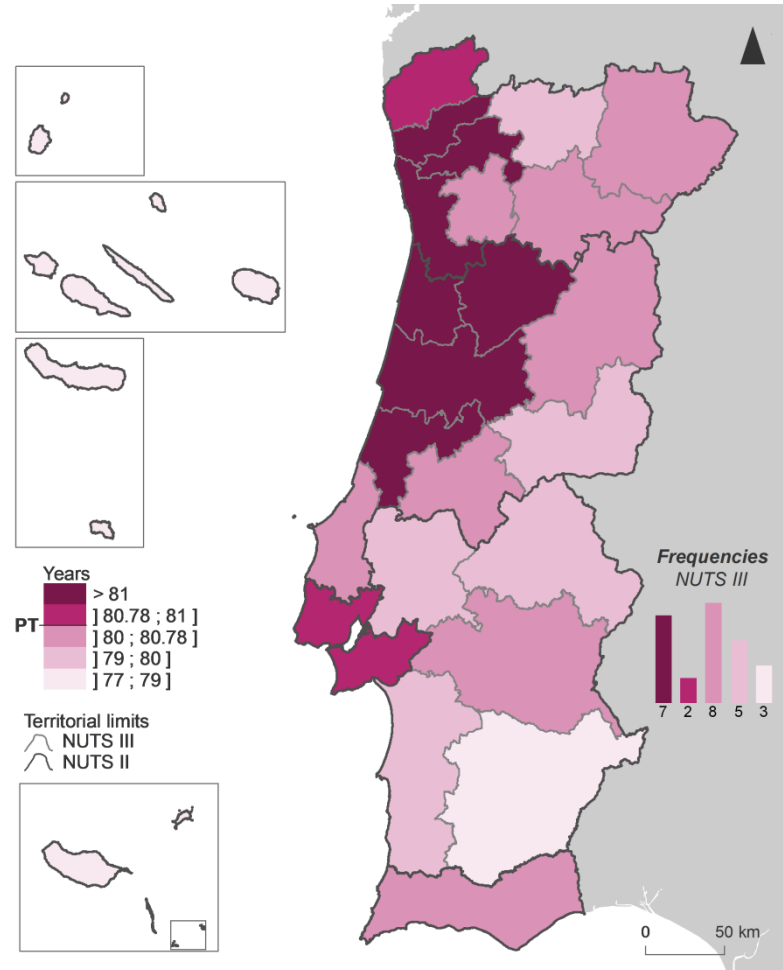
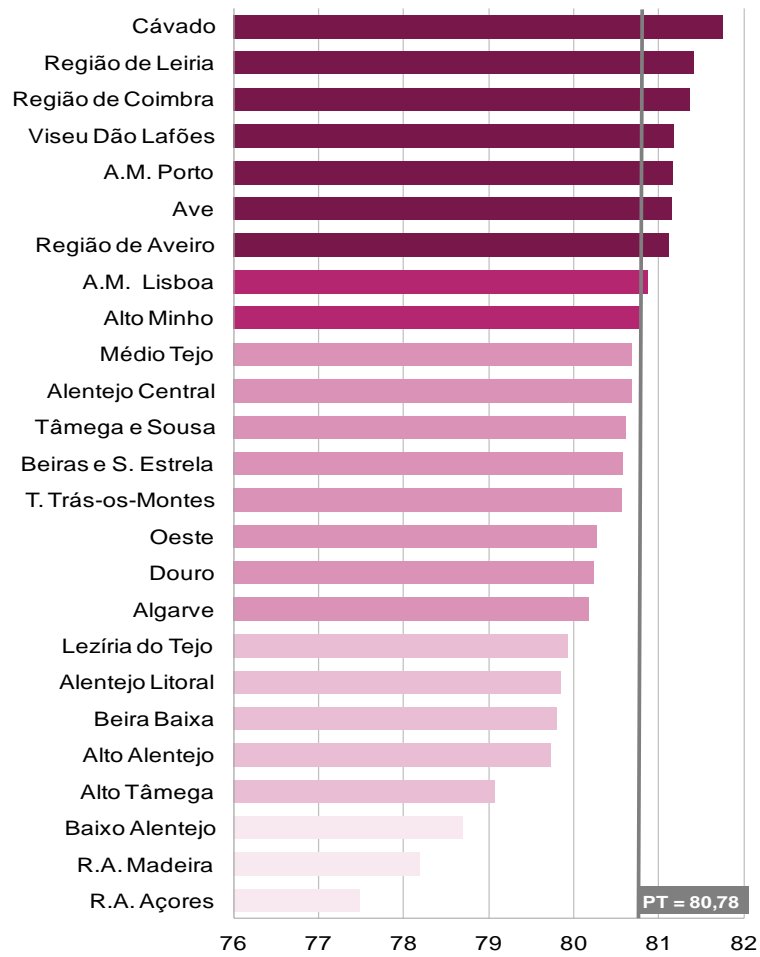
*Nine sub-regions NUTS 3 exceeded the national value (80.78 years); Região de Leiria recorded the highest increase in the last seven years.*

Results for the 2015-2017 period showed that, out of the 25 NUTS 3 sub-regions, 9 exceeded the national life expectancy at birth (80.78 years).

Seven sub-regions (Cávado, Região de Leiria, Região de Coimbra, Viseu Dão-Lafões, Área Metropolitana do Porto, Ave, and Região de Aveiro) recorded values of life expectancy at birth above 81 years. By contrast, the lowest life expectancies at birth were observed in Região Autónoma da Madeira and Região Autónoma dos Açores and Baixo Alentejo, with the expected longevity at below 79 years.

In the last seven years, life expectancy at birth improved in all sub-regions NUTS 3. The highest gains in longevity at birth occurred in the Região de Leiria (2.24 years) and the lowest were recorded in Terras de Trás-os-Montes (0.49 years).

**Figure 4. Life expectancy at birth, NUTS 3, 2015-2017**



## Life expectancy at age 65 in NUTS 3 sub-regions

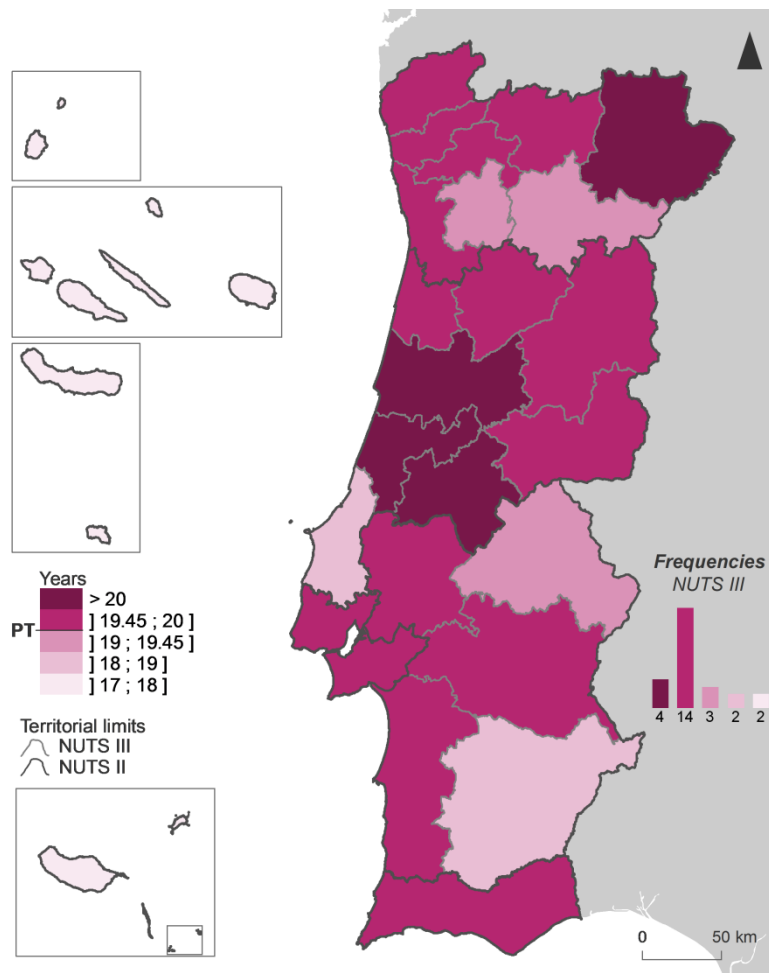
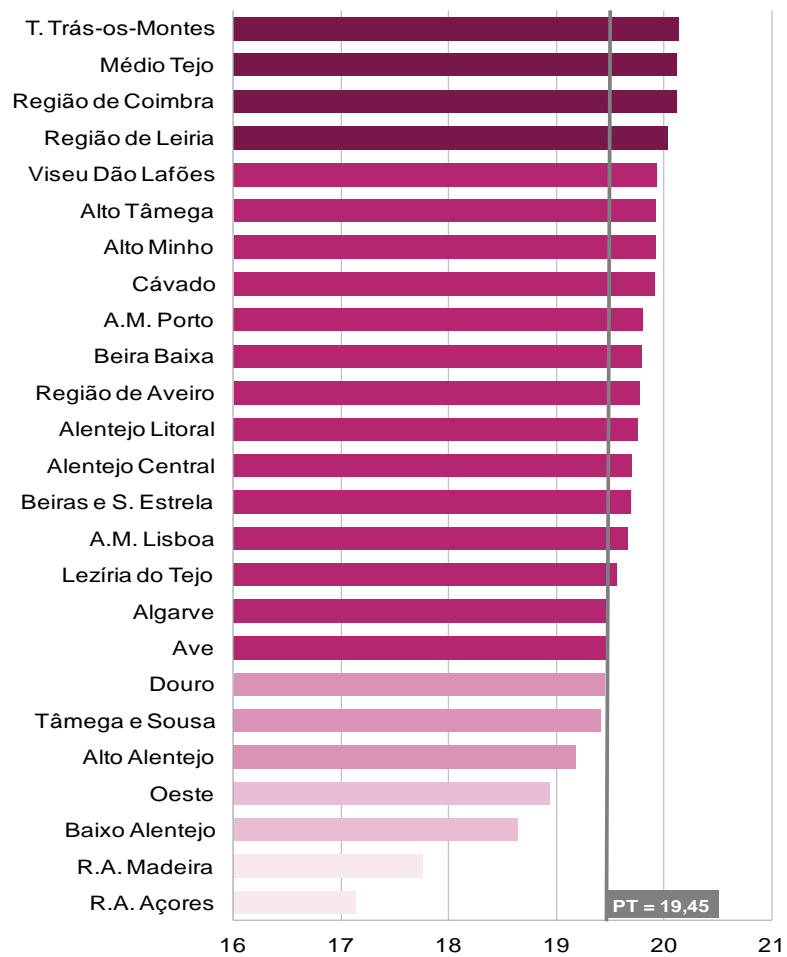
*Eighteen sub-regions exceeded the national value (19.45 years); Região de Leiria recorded the highest increase in the last seven years.*

Results for the 2015-2017 period showed that the four sub-regions with the highest values, above 20 years, were Terras de Trás-os-Montes (20.13 years), Região de Coimbra and Médio Tejo (both with 20.11 years), and Região de Leiria (20.03 years).

In addition to Região Autónoma da Madeira and Região Autónoma dos Açores, the sub-regions of Baixo Alentejo and Oeste recorded the lowest life expectancy at age 65, at below 19 years.

Between the 2008-2010 and the 2015-2017 periods life expectancy at birth improved in all sub-regions NUTS 3. The highest gains in longevity at age 65 occurred in the Lezíria do Tejo (1.51 years) while the lowest were recorded in Alto Alentejo (0.5 years).

**Figure 5. Life expectancy at age 65, NUTS 3, 2015-2017**





**Figure 6. Life expectancy at birth and at age 65, Portugal NUTS 1, NUTS 2 e NUTS 3, 2008-2010 and 2015-2017**

	Life expectancy at birth (years) - Both sexes		Life expectancy at age 65 (years) - Both sexes	
	2008-2010	2015-2017	2008-2010	2015-2017
<b>Portugal</b>	<b>79.29</b>	<b>80.78</b>	<b>18.59</b>	<b>19.45</b>
<b>Continente</b>	<b>79.38</b>	<b>80.99</b>	<b>18.60</b>	<b>19.65</b>
<b>Norte</b>	<b>79.64</b>	<b>81.13</b>	<b>18.61</b>	<b>19.65</b>
Alto Minho	79.37	80.79	18.75	19.91
Cávado	80.07	81.73	18.71	19.90
Ave	79.49	81.14	18.44	19.46
Área Metropolitana do Porto	79.72	81.15	18.79	19.80
Alto Tâmega	78.09	79.05	18.55	19.91
Tâmega e Sousa	78.90	80.59	18.23	19.40
Douro	78.79	80.22	18.38	19.44
Terras de Trás-os-Montes	80.06	80.55	19.42	20.13
<b>Centro</b>	<b>79.59</b>	<b>81.07</b>	<b>18.63</b>	<b>19.61</b>
Oeste	78.79	80.25	17.78	18.93
Região de Aveiro	79.64	81.10	19.00	19.76
Região de Coimbra	79.87	81.35	18.83	20.11
Região de Leiria	79.16	81.40	18.66	20.03
Viseu Dão Lafões	79.87	81.17	19.08	19.92
Beira Baixa	77.72	79.79	18.98	19.78
Médio Tejo	79.47	80.67	18.96	20.11
Beiras e Serra da Estrela	79.11	80.57	18.81	19.68
<b>Área Metropolitana de Lisboa</b>	<b>79.29</b>	<b>80.85</b>	<b>18.83</b>	<b>19.66</b>
Área Metropolitana de Lisboa	79.29	80.85	18.83	19.66
<b>Alentejo</b>	<b>78.58</b>	<b>80.19</b>	<b>18.20</b>	<b>19.18</b>
Alentejo Litoral	78.36	79.83	18.29	19.75
Baixo Alentejo	77.12	78.67	17.43	18.63
Lezíria do Tejo	78.62	79.92	18.04	19.55
Alto Alentejo	77.97	79.72	18.67	19.17
Alentejo Central	79.10	80.67	18.91	19.69
<b>Algarve</b>	<b>78.90</b>	<b>80.17</b>	<b>18.79</b>	<b>19.46</b>
Algarve	78.90	80.17	18.79	19.46
<b>Região Autónoma dos Açores</b>	<b>75.86</b>	<b>77.48</b>	<b>16.18</b>	<b>17.12</b>
<b>Região Autónoma dos Açores</b>	<b>75.86</b>	<b>77.48</b>	<b>16.18</b>	<b>17.12</b>
Região Autónoma dos Açores	75.86	77.48	16.18	17.12
<b>Região Autónoma da Madeira</b>	<b>76.13</b>	<b>78.18</b>	<b>16.40</b>	<b>17.75</b>
<b>Região Autónoma da Madeira</b>	<b>76.13</b>	<b>78.18</b>	<b>16.40</b>	<b>17.75</b>
Região Autónoma da Madeira	76.13	78.18	16.40	17.75

Following the release in May 2017 of the 2015-17 complete life table for Portugal, Statistics Portugal releases the complete life tables for NUTS 2 regions for the same period, by sex and both sexes, and life expectancy at birth and at age 65 for NUTS 3 (NUTS 2013) sub-regions for both sexes

**Technical note:**

The construction of life tables and the calculation of the population's life expectancy is an annual statistical study covering the whole resident population in Portugal, based on information from other statistical demographic operations carried out by Statistics Portugal. This study is part of derived statistics production projects, since the information produced integrates data from various sources of primary statistical production.

Statistics Portugal calculates complete life tables for Portugal, NUTS 1, 2 and 3 regions with a reference period of three consecutive years. With regard to NUTS 3 from the mainland ('Continente'), only life expectancy at birth and at age 65 are released.

The construction of complete life tables for Portugal and Continente uses the gross estimate of mortality rates, and the methodology proposed by Denuit and Goderniaux (2005) for closing and extrapolating old age mortality rates is applied.

The complete life tables for NUTS 2 regions are based on graduation and smoothing methods of gross estimates of mortality rates. For the 'Continente' NUTS 3 sub-regions the Brass relational model (1971, 1974) is applied for obtaining the estimates of mortality rates. In both cases, the same method of closing and extrapolating old age mortality rates is applied.

Values for life expectancy and other life table functions correspond to estimates calculated from statistical data and models, and should not be interpreted as deterministic indicators. However, assuming that the empirical mortality conditions observed in the reference period for the life table remain constant, it is possible, in a given population, to make probabilistic judgments on the evolution of mortality. In this sense, slight movements in these indicators between different periods should be interpreted in the methodological context explained, especially when analysing indicators with higher regional detail.

More detailed information on the methodology of construction of the complete life tables is available on the Statistics Portugal's website: <http://smi.ine.pt/DocumentacaoMetodologica/Detalhes/1239>

**References**

Brass, W. (1971). On the scale of mortality. In: Biological Aspects of Demography, London Taylor and Francis.

Brass, W. (1974). Mortality models and their uses in demography. Transactions of the Faculty of Actuaries, 33, 123-132.

Denuit, M. and Goderniaux, A. (2005). Closing and projecting life tables using log-linear models. Bulletin de l'Association Suisse des Actuaries, 1, 29-49.