

## Regional Development Composite Index 2017

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### ***Environmental quality and Competitiveness: the lowest and the highest interregional disparity***

In 2017, according to the results of the *regional development composite index*, four out of the 25 NUTS 3 sub-regions stood above the national average in terms of the overall regional development – the metropolitan areas of Lisboa and Porto, Cávado and Região de Aveiro.

In the *competitiveness* index only four sub-regions stood above the national average: Área Metropolitana de Lisboa, standing out from Região de Aveiro, Área Metropolitana do Porto and Alentejo Litoral. The *Competitiveness* revealed the highest disparity among the three components of regional development.

In the *cohesion index*, eight NUTS 3, mostly from the mainland coast, stood above the national average. In this component, the Área Metropolitana de Lisboa, Cávado and Região de Coimbra stood out with the highest *cohesion indexes*.

The *environmental index* results highlight the inner mainland sub-regions and the two autonomous regions with higher performances. The national average in this component was exceeded by 14 NUTS 3, showing a lower interregional disparity than the other components. Terras de Trás-os-Montes was the sub-region with the highest score in the *environmental index*.

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The **Regional Development Composite Index** (ISDR) relies on a conceptual framework which benefits from a multidimensional approach to regional development that encompasses three components: *competitiveness*, *cohesion* and *environmental quality*.

With the release of the 2017 results, Statistics Portugal continues the production cycle of ISDR's version 2, comprising a data series for the 2011-2017 period, in line with the organization of the level 3 NUTS regions set by the Commission Regulation (EU) No. 868/2014, August 8 (NUTS-2013).

The conceptual and computational methodological options as well as annual results data for the 2011-2017 period are available at [www.ine.pt](http://www.ine.pt), in accordance with the technical note included in the end of this press release.

## The NUTS 3 performance in 2017: *competitiveness, cohesion and environmental quality*

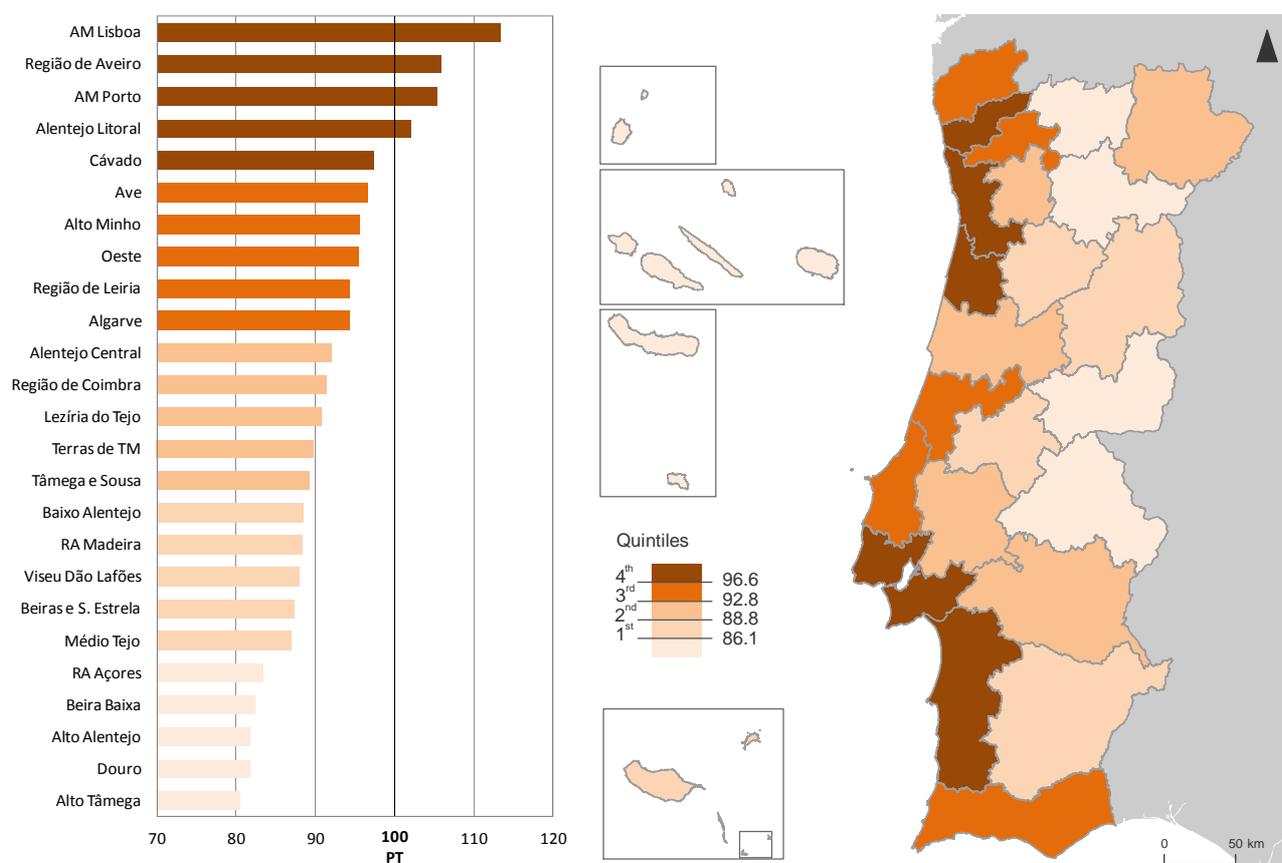
### Competitiveness index

This index aims to express the regional potential (both regarding human resources and physical infra-structures) for the performance in *competitiveness*, as well as the efficiency in the path being followed (measured by the educational, professional, entrepreneurial and productive profiles) and, also, the effectiveness in creating wealth and the ability to compete in international markets.

The 2017 results revealed that the sub-regions with higher scores in the *competitiveness* index are concentrated in the mainland coast. Área Metropolitana de Lisboa (113.18) scored the highest index standing out from the other sub-regions with values above the national average: Região de Aveiro (105.75), Área Metropolitana do Porto (105.21) and Alentejo Litoral (101.90). The inner mainland and the autonomous regions scored lower *competitiveness* indexes compared to coastal mainland.

Within the three dimensions of development, the *competitiveness index* in the Portuguese NUTS 3, revealed the highest regional disparity, according to the coefficient of variation<sup>1</sup>.

**Figure 1: Competitiveness (Portugal = 100), NUTS 3, 2017**



<sup>1</sup> In 2017, the coefficient of variation of the competitiveness index was 8.9%, for the cohesion index was 6.8% and for environmental quality index was 5.2%.

## Cohesion index

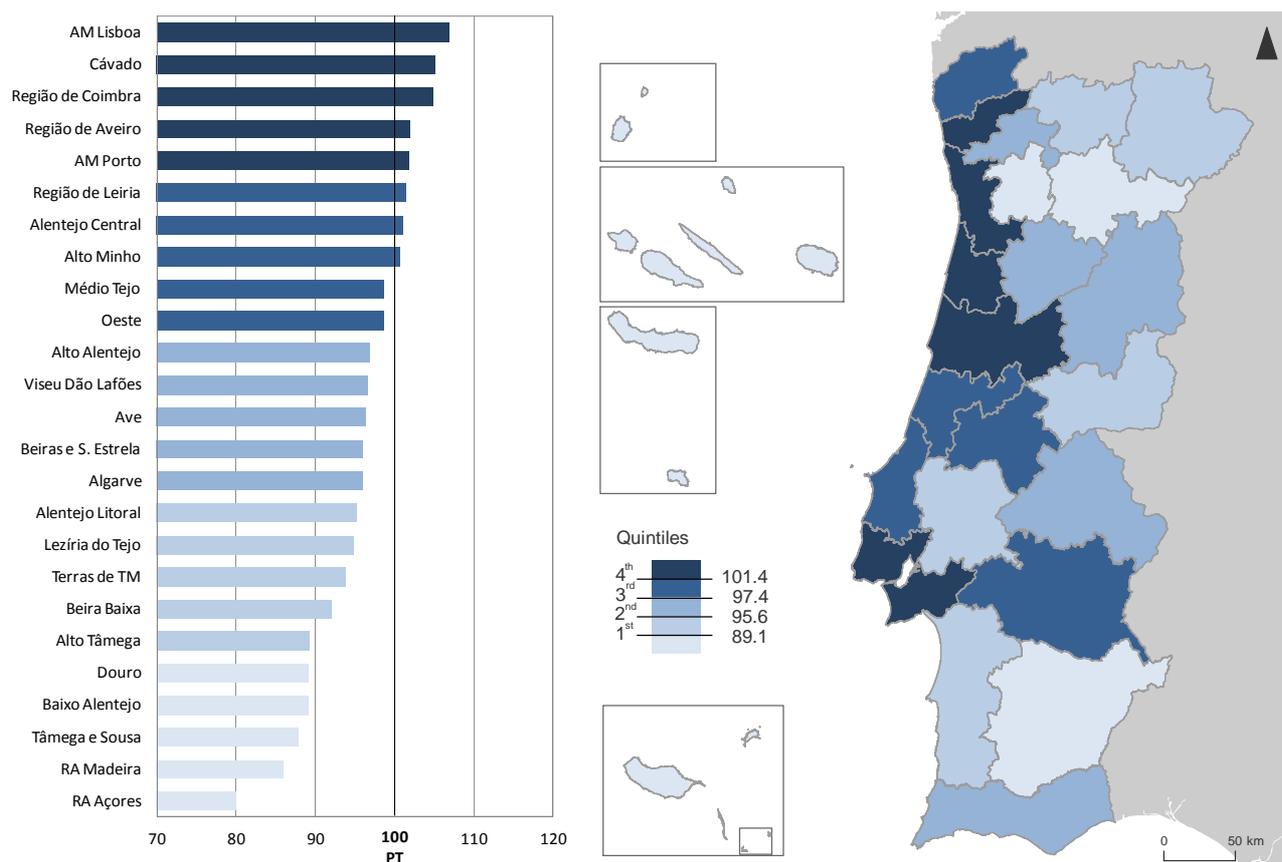
The *cohesion* index aims to reflect the population potential accessibility to basic collective equipment and services (health, education, culture), as well as the profiles that lead to a greater social inclusion and the effectiveness of public policies given by an increase in the quality of life and by a decrease in territorial disparities.

In the *cohesion* index, the results display a more balanced territorial picture than the one resulting from *competitiveness* as eight sub-regions exceeded the national average.

NUTS 3 of the mainland coast scored the higher values: Área Metropolitana de Lisboa (106.78), Cávado (105.00), Região de Coimbra (104.66), Região de Aveiro (101.77) and Área Metropolitana do Porto (101.67).

The two autonomous regions, the territory of Norte region, formed by Tâmega e Sousa and by Douro and, in south, the Baixo Alentejo scored the lowest cohesion indexes.

**Figure 2: Cohesion (Portugal = 100), NUTS 3, 2017**



## Environmental quality index

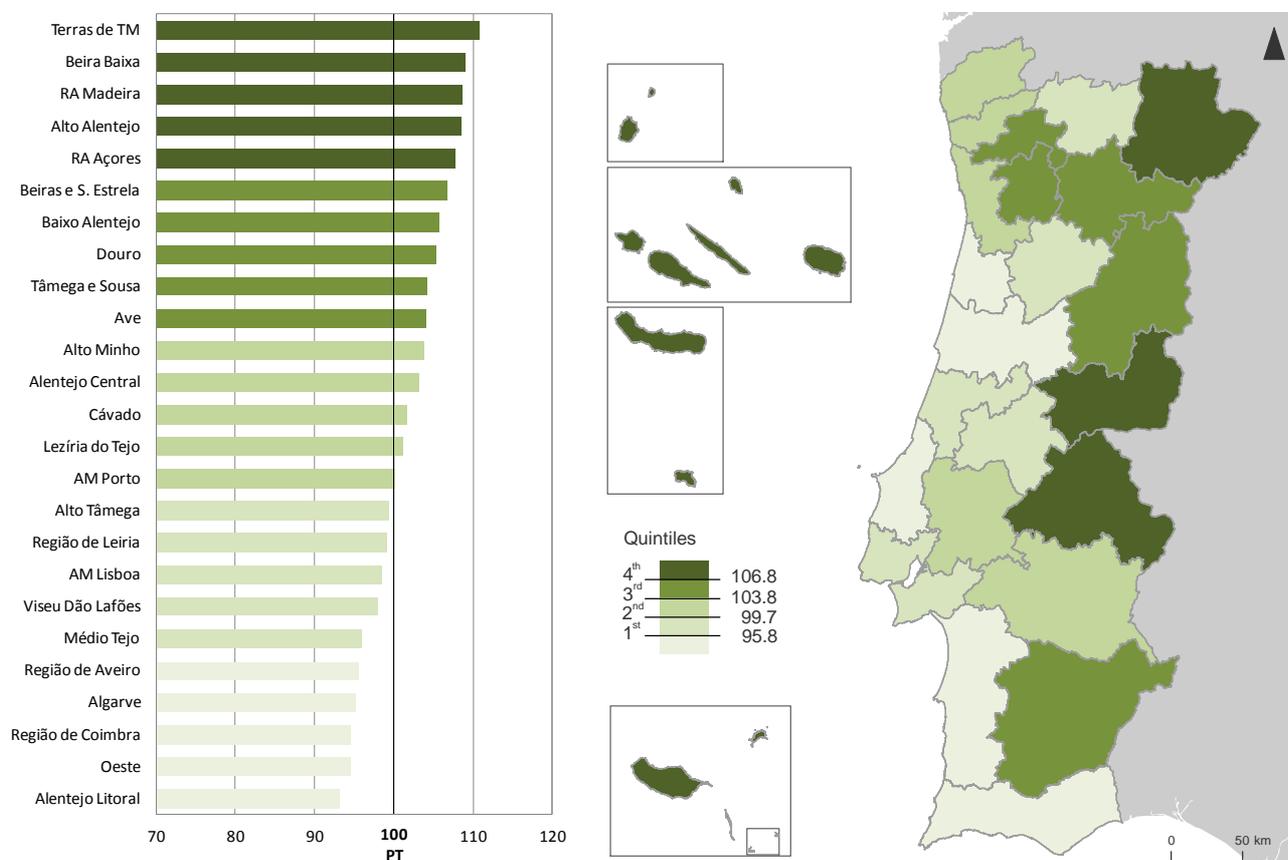
The *environmental quality* is associated with pressures on the environment and territory, but also on environment effects (water quality, air quality and energy efficiency) and responses in terms of individual behaviours and public policies.

The 2017 results tend to have a territorial pattern symmetrical to *competitiveness*, with a concentration of sub-regions with higher *environmental* indexes in the inner mainland and in the two autonomous regions, suggesting that *environmental quality* progressively increases from the coast towards the inner mainland. In this context, is important to highlight the coastal mainland NUTS 3 – Alto Minho (103.68) e Cávado (101.55) – scoring above the national value.

The national average in this component was exceeded in 14 NUTS 3, with a lower territorial disparity compared to the other components. Among the sub-regions with an *environmental quality* below the national average, there were seven out of the 10 most competitive NUTS 3: Área Metropolitana do Porto, Região de Aveiro, Região de Leiria, Oeste, Área Metropolitana de Lisboa, Alentejo Litoral and Algarve.

Terras de Trás-os-Montes (110.72) was, in 2017, the NUTS 3 with the best performance in the environmental quality index.

**Figure 3: Environmental quality (Portugal = 100), NUTS 3, 2017**



## The joint analysis of regional development

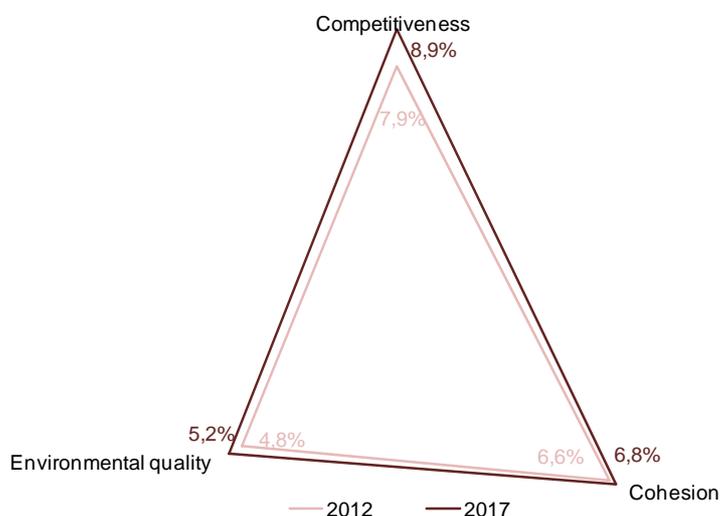
### Evolution of interregional disparities

Considering the available Regional Development Composite Index series (2011-2017) in 2012, was observed the lowest level of interregional disparity in the *competitiveness* and in *cohesion index*; while in the case of the *environmental quality index* this situation occurred in 2011. The highest level of disparity was observed in 2015 for *cohesion* and *environmental quality indexes* and in 2017 for the *competitiveness index*.

Throughout the Regional Development Composite Index series, the *competitiveness index* scored successively the highest level of disparity between the three partial indexes of regional development, followed by the *cohesion index* and, with a lower disparity, the *environmental quality index*.

In 2017 there was an increase in the territorial disparity in the three components of regional development compared to 2012, highlighting the evolution showed in the *competitiveness index* coefficient of variation: 7.9% in 2012 and 8.9% in 2017.

**Figure 4: Coefficient of variation of the partial indexes of competitiveness, cohesion and environmental quality, 2012 and 2017**

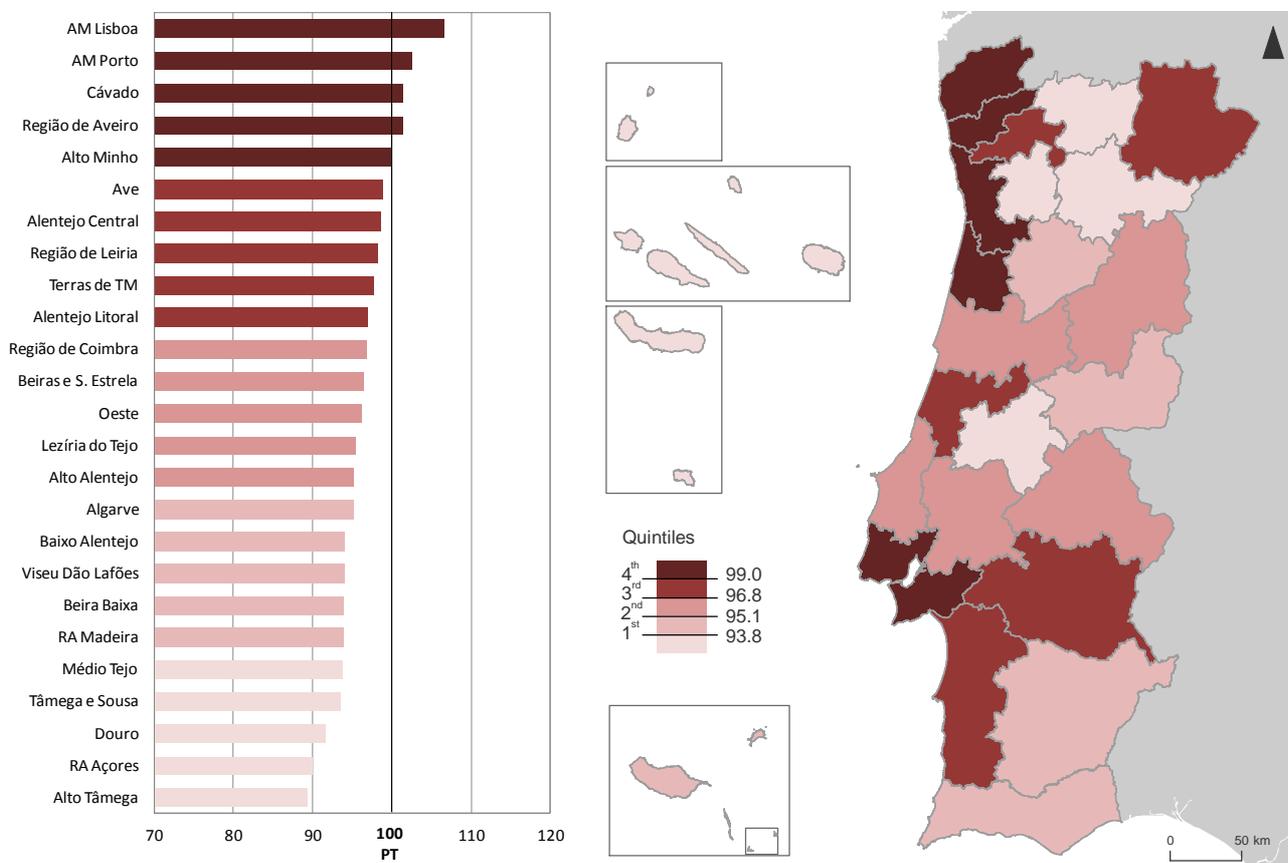


### Overall index of regional development of 2017

The *overall index of regional development* is the result of the joint performance in *competitiveness*, *cohesion* and *environmental quality*.

According to 2017 results, four out of the 25 NUTS 3 sub-regions scored above the national average – the metropolitan areas of Lisboa (106.36) and Porto (102.37), Cávado (101.18) and Região de Aveiro (101.17).

**Figure 5: Overall index of regional development (Portugal = 100), NUTS 3, 2017**



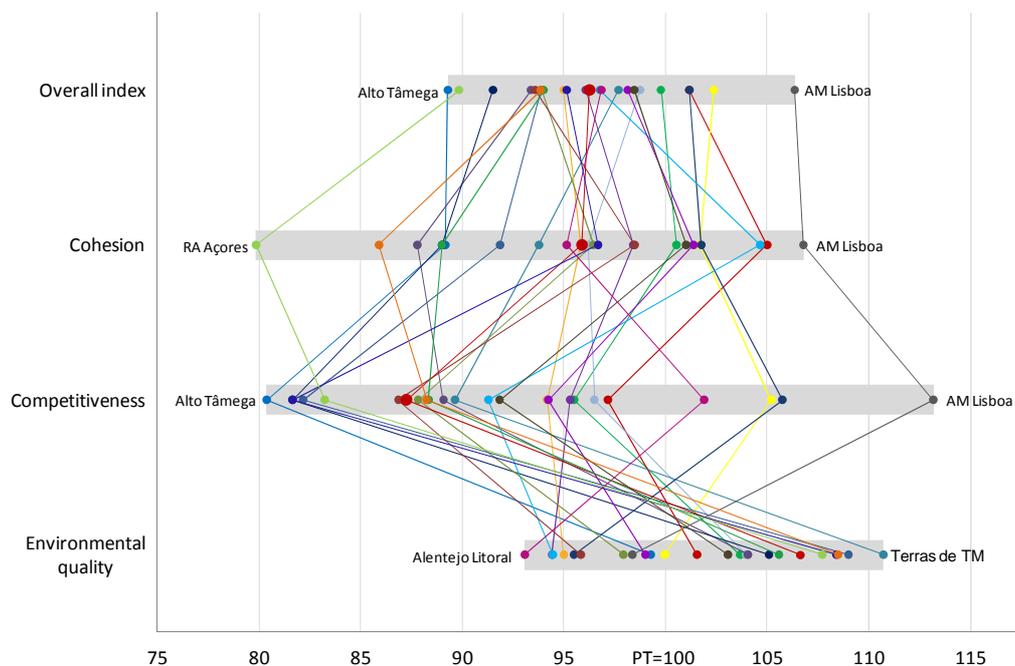
In 2017, the *competitiveness* and *cohesion* indexes showed a positive correlation with the *overall index of regional development* (0.9 and 0.8, respectively), while in case of *environmental quality* there was a low and negative correlation (-0.2). At the component level, there is a positive association between the Portuguese sub-regions performance in the *competitiveness* index and in the *cohesion* index while the correlations between the *environmental quality* and the *competitiveness* index and between *environmental quality* component and *cohesion* were negative.

**Figure 6: Correlation matrix, NUTS 3, 2017**

	Overall index	Competitiveness	Cohesion	Environmental quality
Overall index	-			
Competitiveness	0,9	-		
Cohesion	0,8	0,7	-	
Environmental quality	-0,2	-0,5	-0,5	-

The differentiated behavior in the three components of development reflects the multidimensionality and the complexity of regional development that the Regional Development Composite Index intends to capture through the identification of the heterogeneity of the regional profiles.

**Figure 7: Overall index of regional development, competitiveness, cohesion and environmental quality (Portugal = 100), NUTS 3, 2017**

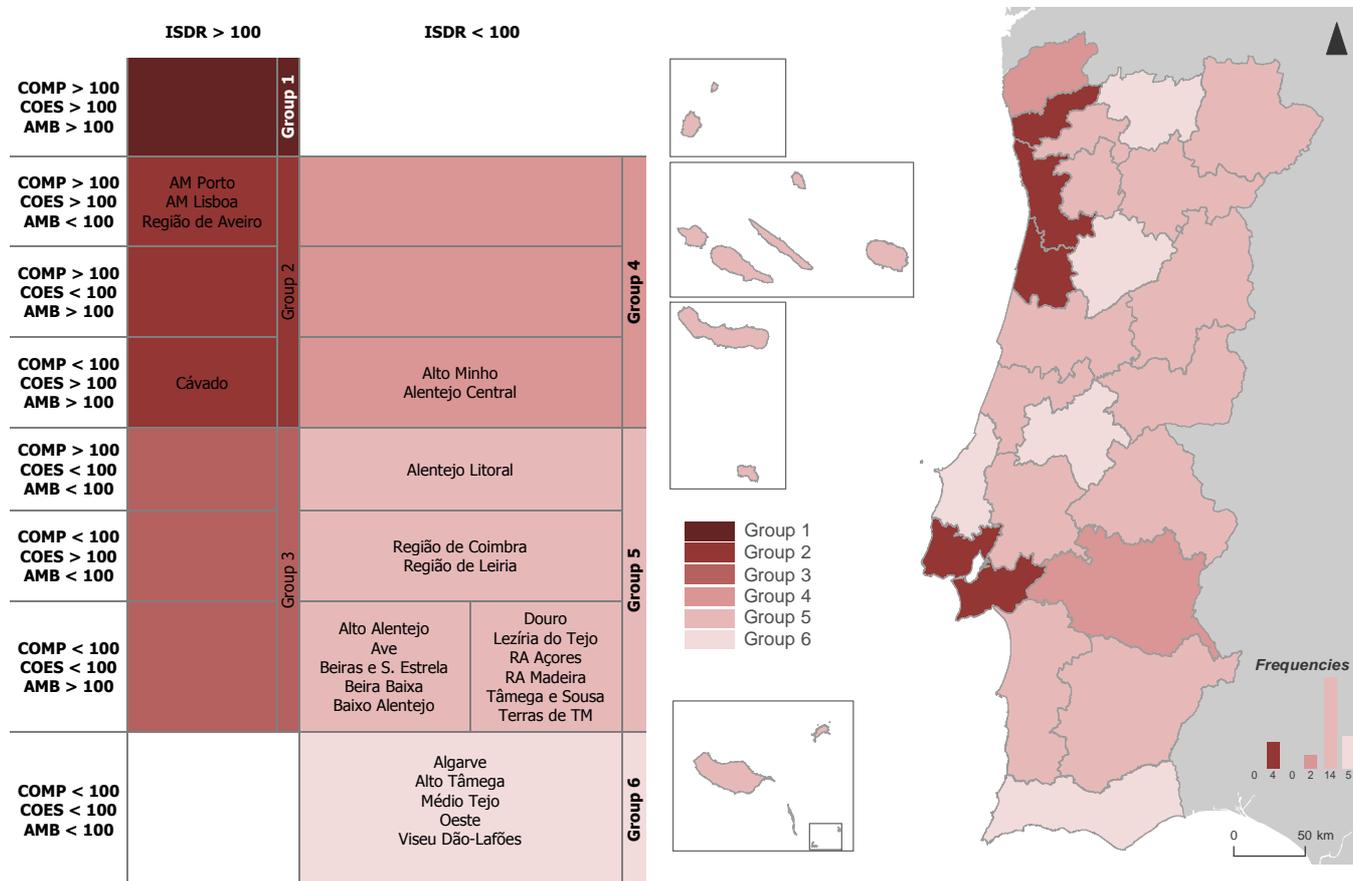


In 2017, the four sub-regions performing above the national average in the *overall index of regional development* shared the characteristic of staying below that reference in, at least, one partial index: on the one hand, Região de Aveiro and the metropolitan areas of Lisboa and Porto did not exceed the national average in the *environmental quality* index; on the other hand, Cávado was below the national average in *competitiveness*.

At the opposite side, performing below the national average in the four indexes were the NUTS 3 Algarve, Alto Tâmega, Médio Tejo, Oeste and Viseu Dão-Lafões.

The most common regional profile, covering 11 NUTS 3, consisted in an *environmental quality* index above the national average and results in *competitiveness* and *cohesion* indexes below the national value.

**Figure 8: Overall index of regional development, competitiveness, cohesion and environmental quality: performance in relation to the national average (Portugal = 100), NUTS 3, 2017**



Note: The acronym ISDR refers to the overall index of regional development, COMP to the competitiveness index, COES to the cohesion index and AMB to the environmental quality index

### Technical note

The Regional Development Composite Index (ISDR) is calculated annually for the Portuguese NUTS 3 sub-regions. Data collection is indirect and the variables used to compute the composite index result from administrative procedures and from statistical operations within the National Statistical System.

The statistical pertinence determined the selection of the statistical indicators that supported the quantitative match to the concepts underlying the construction of the index – competitiveness, cohesion and environmental quality –, taking into account the 25 Portuguese NUTS 3 level regions (NUTS-2013). It is, however, worthwhile to highlight the diversity of territorial contexts among these regions, of which the autonomous regions and the metropolitan areas are examples, as well as the heterogeneity regarding the size of the 25 Portuguese NUTS 3.

On the basis of a 65 statistical indicators matrix, for the 25 Portuguese NUTS 3, properly normalized (statistical standardization and minmax rescaling, with the minimum and maximum reference values extracted from the set of 65 standardized indicators for the time span available), distributed by three dimensions – competitiveness, cohesion and environmental quality – subsequently aggregated by a non-weighted average, for the dimensions level as well as from the dimensions level to the overall index level, four composite indicators are produced – competitiveness, cohesion, environmental quality and overall index of regional development. The four composite indicators are referenced to the national value (Portugal = 100), being the national value the average of the NUTS 3 indexes weighted by the resident population. As the national value, the indexes for the NUTS 2 regions correspond to the population weighted average indexes of their respective NUTS 3.

Comparing with the results released in 2018 for the 2011-2016 period, the minimum and maximum reference values do not change, matching the same region and the same individual indicator – the minimum value corresponds to the *energy intensity of the economy in final energy* observed in 2014 in Alentejo Litoral and the maximum corresponds to the *lodging capacity in hotel establishments with 3 or more stars per 1 000 inhabitants* observed in 2014 in Algarve.

This ISDR edition did not benefit yet from the updating of the *physicians employed at official clinics per 1 000 inhabitants*, since the Official Clinics survey was suspended, and its replacement was not completed by the appropriation of administrative data to be provided to Statistics Portugal.

The conceptual and computational methodological options are presented in the methodological document Índice Sintético de Desenvolvimento Regional, código 127 / versão 2.0, INE (available at [www.ine.pt](http://www.ine.pt), in Metadata, Metadata System, Methodological documentation).

Annual figures for the 2011-2017 period, in accordance with the 2.0 version of the methodological document, are available at [www.ine.pt](http://www.ine.pt), in Statistical information, Statistical data, Database.