26 March 2021

Indicators of demographic context and territorial expression of the COVID-19 pandemic in Portugal

COVID-19: a territorial view on demographic context and territorial expression of the pandemic

- On 24 March 2021, there were 3,155 new cases in the last 7 days, corresponding to a daily average of 451 new cases and the lowest since 9 September 2020. Since 28 January, there has been a marked decrease in the number of new confirmed cases in the last 7 days. The 14-day incidence rate of COVID-19 was 64 cases per 100 thousand inhabitants. This rate had peaked on 29 January (1,667).
- At the regional level, it should be noted that the number of deaths in the Metropolitan Area of Lisboa, between 8 February and 7 March 2021, was 1.3 times higher than in the same period of the previous year. Compared to the previous week, however, there was a reduction in this ratio in all NUTS II regions. In 137 municipalities the number of deaths between 8 February and 7 March was equal to or lower than the corresponding reference period.
- On 16 March 2021, date of the last data update at the municipal level, the trend towards an increase in the territorial concentration of the number of new cases was accentuated. The value obtained for this date (28.2%) was close to the value of 19 November 2020 (28.7%). The reduction of the cumulative incidence rate at 14 days also continued, although dimmed compared to the previous week.
- As of 16 March 2021, 261 of the 308 municipalities registered values below the threshold of 120 new cases per 100 thousand inhabitants. Compared to the previous week (9 March), 62% of the municipalities recorded a reduction in the cumulative incidence rate. However, 71 municipalities recorded a positive 14-day cumulative incidence rate of change, 36 more municipalities than in the previous week.
- Within the framework of Statistics Portugal's Statslab, the data on population mobility at a regional level suggest an overall increase in the levels of mobility from the second week of February, which is accentuated from 15 March onwards following the lifting of the restrictive measures, highlighting, in particular, the increase in mobility recorded in all the NUTS 3 regions of the mainland on 15, 16 and 17 March, compared with the same period the previous week (8, 9 and 10 March) and in all the regions of the country on 18 and 19 March, compared with the same period the previous week (11 and 12 March).

www.ine.pt | Communication Unit - Tel: +351 21.842.61.00 - sci@ine.pt

I. Demographic and territorial context indicators

The number of deaths in the Metropolitan Area of Lisboa was 1.3 times higher than in the reference period

Figure 1 - Ratio between deaths in the last 4 weeks and deaths in the same reference period, Portugal, weekly

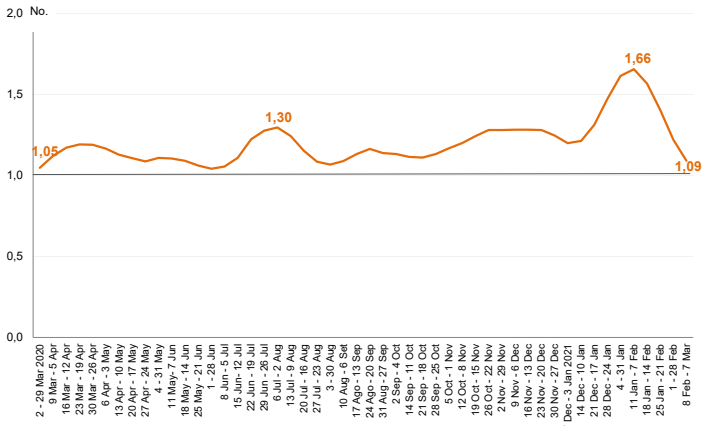
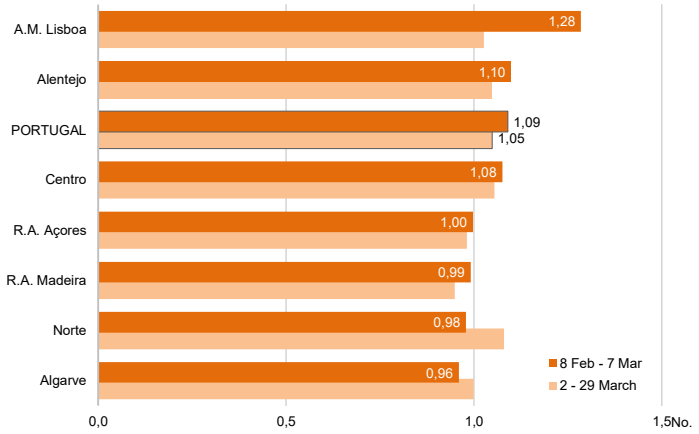


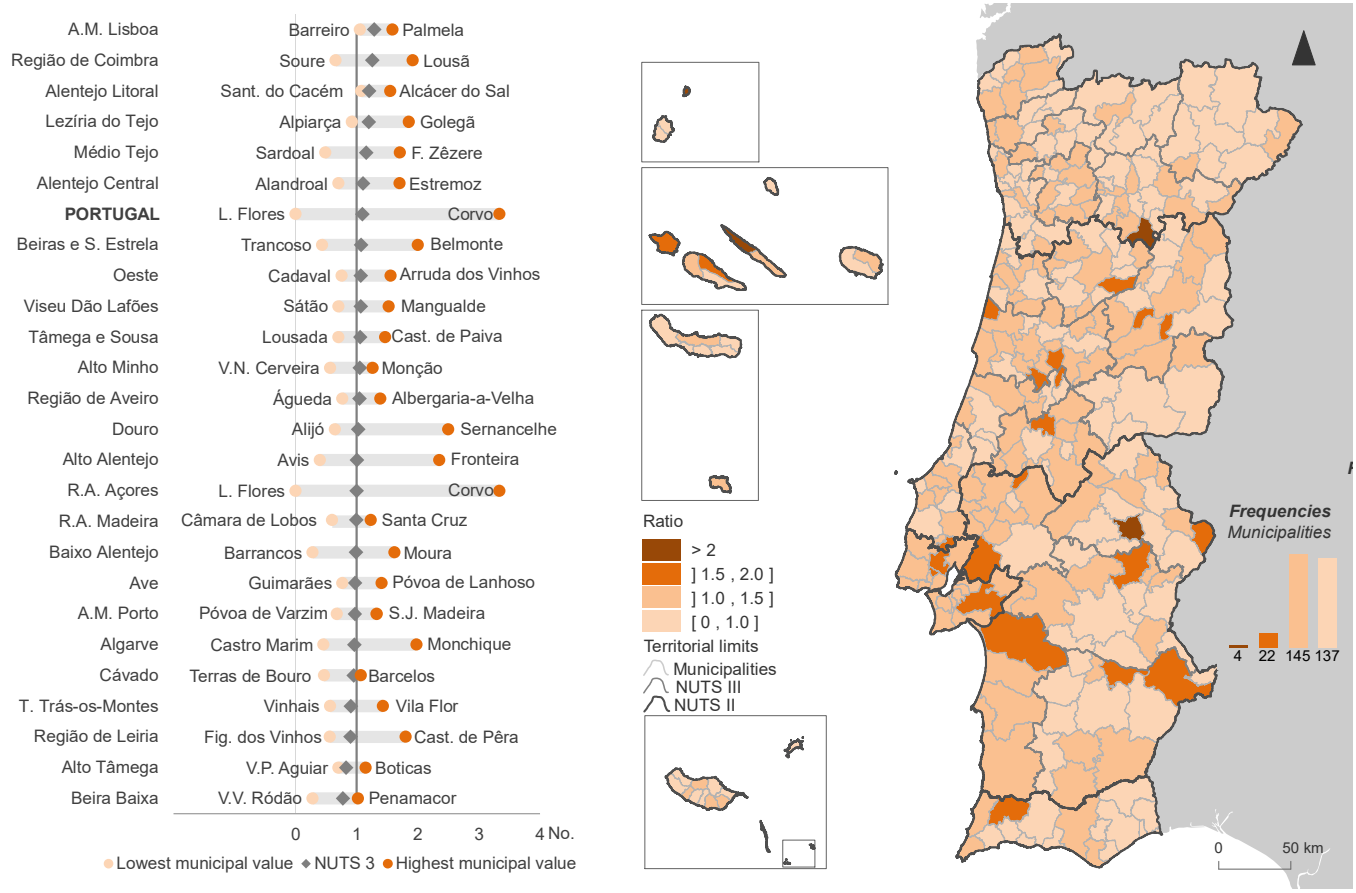
Figure 2 – Ratio between deaths in the last 4 weeks and deaths in the same reference period, Portugal and NUTS 2



Source: INE, I.P., Statistics on Deaths (Preliminary (2020 and 2021) and Final Results (2015 up to 2019)).

In 137 municipalities the number of deaths between 8 February and 7 March was equal or lower than in the same reference period

Figure 3 - Number of deaths in the last four weeks (7 March 2021) per deaths in the same period of reference, Portugal, NUTS 3 and municipality



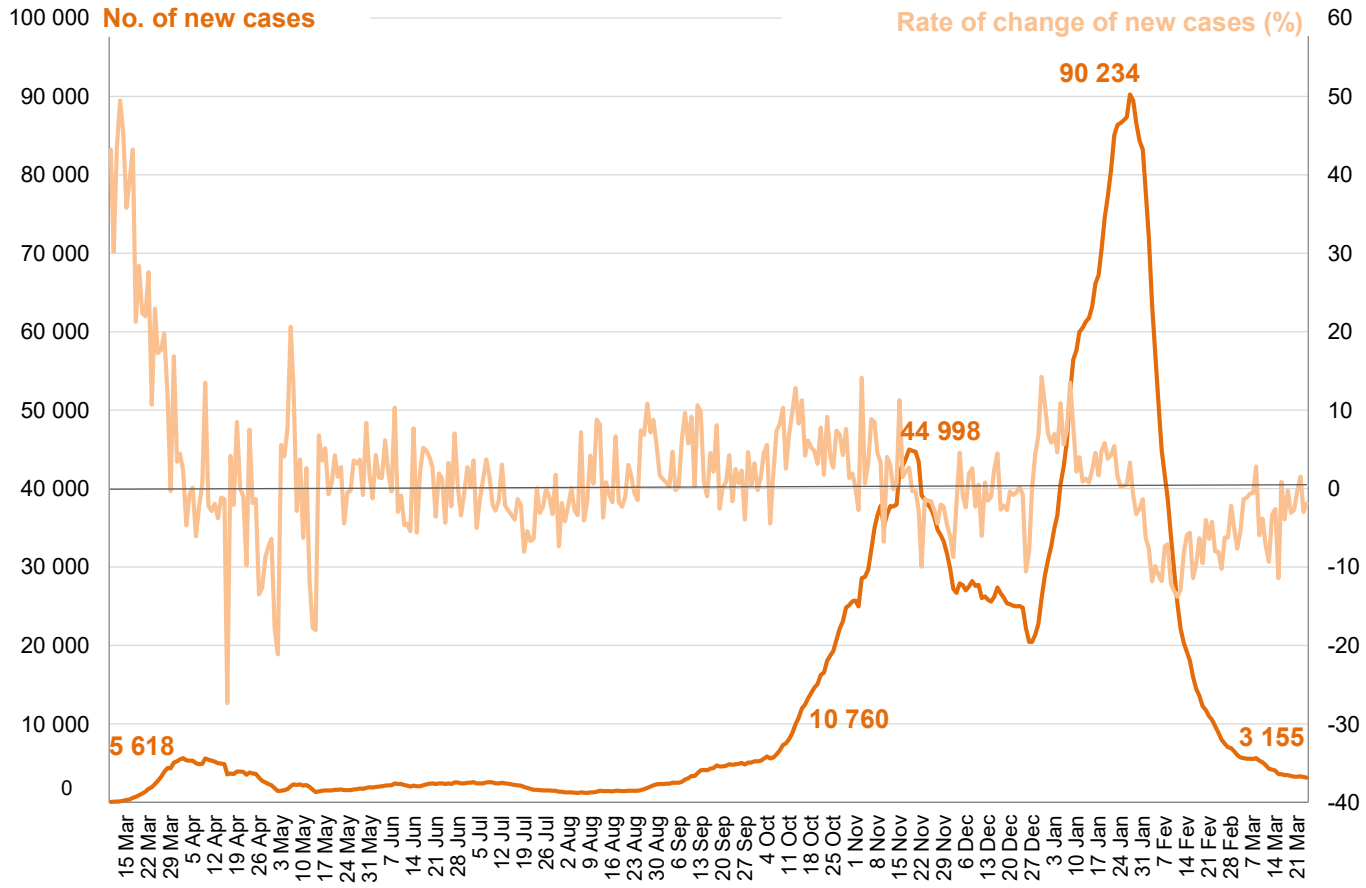
Source: INE, I.P., Statistics on Deaths (Preliminary (2020 and 2021) and Final Results (2015 up to 2019)).

www.ine.pt | Communication Unit - Tel: +351 21.842.61.00 - sci@ine.pt

II. The expression of the pandemic in the municipalities

On 24 March 2021 there were the lowest number of new cases (last 7 days) since 9 September 2020

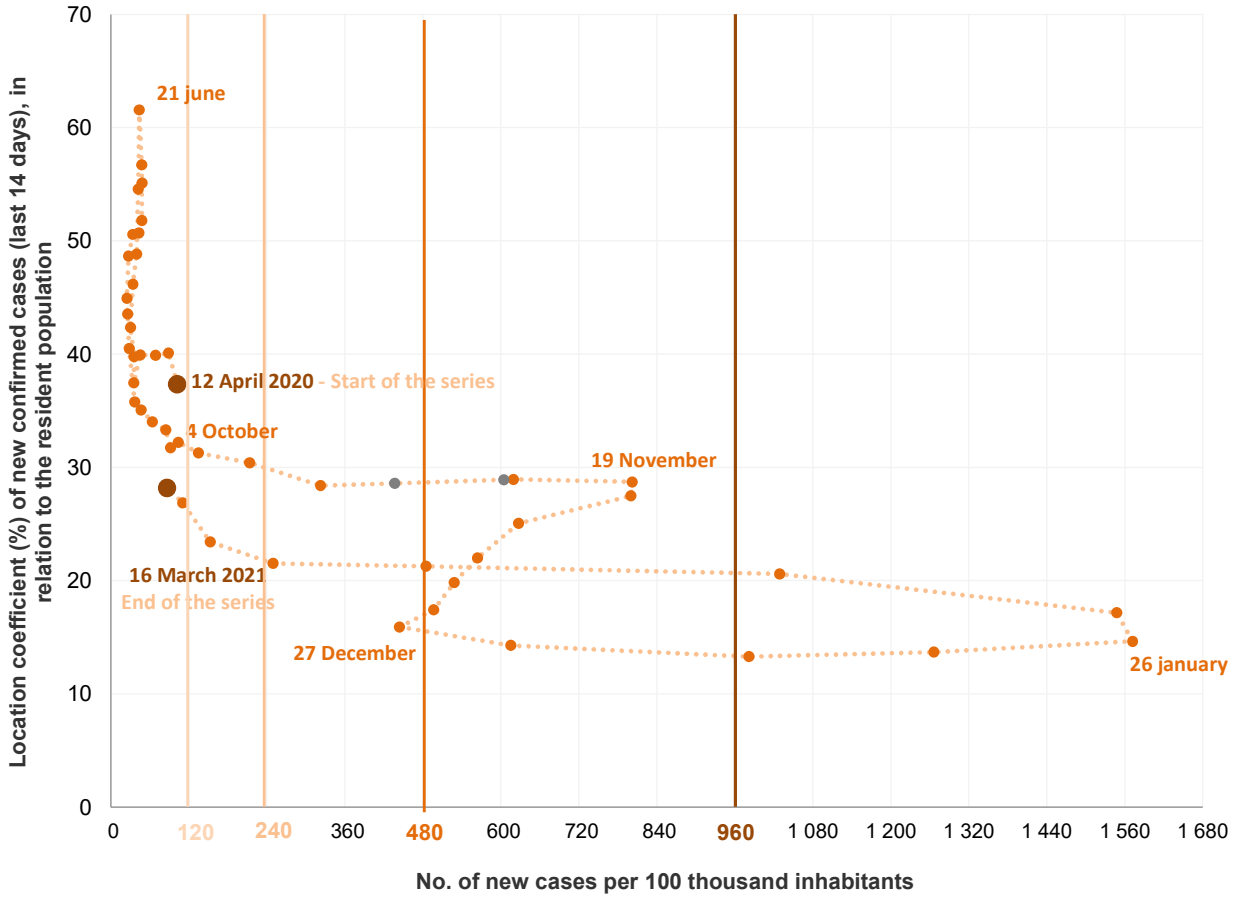
Figure 4- Number of new confirmed cases (last 7 days) of COVID-19 and respective rate of change, Portugal, per day (up to 24 March 2021)



Source: Directorate-General of Health, Daily COVID-19 Status Report (released up to March 25).
Note: The number of new cases includes the +4,375 confirmed cases resulting from the historical update released by the Directorate-General of Health in the COVID-19 Status Report made available on 16 November (data on the situation up to 15 November) with impact on the new cases in the last 7 days for the period 15-21 November. The dates marked on the graph axis correspond to Sundays.

On 16 March 2021, the territorial concentration of the number of new cases was accentuated and the reduction in the incidence rate continued to slow down compared with the previous week

Figure 5- Territorial concentration of new confirmed cases of COVID-19 (last 14 days), in relation to the resident population and 14-day cumulative incidence rate, Portugal

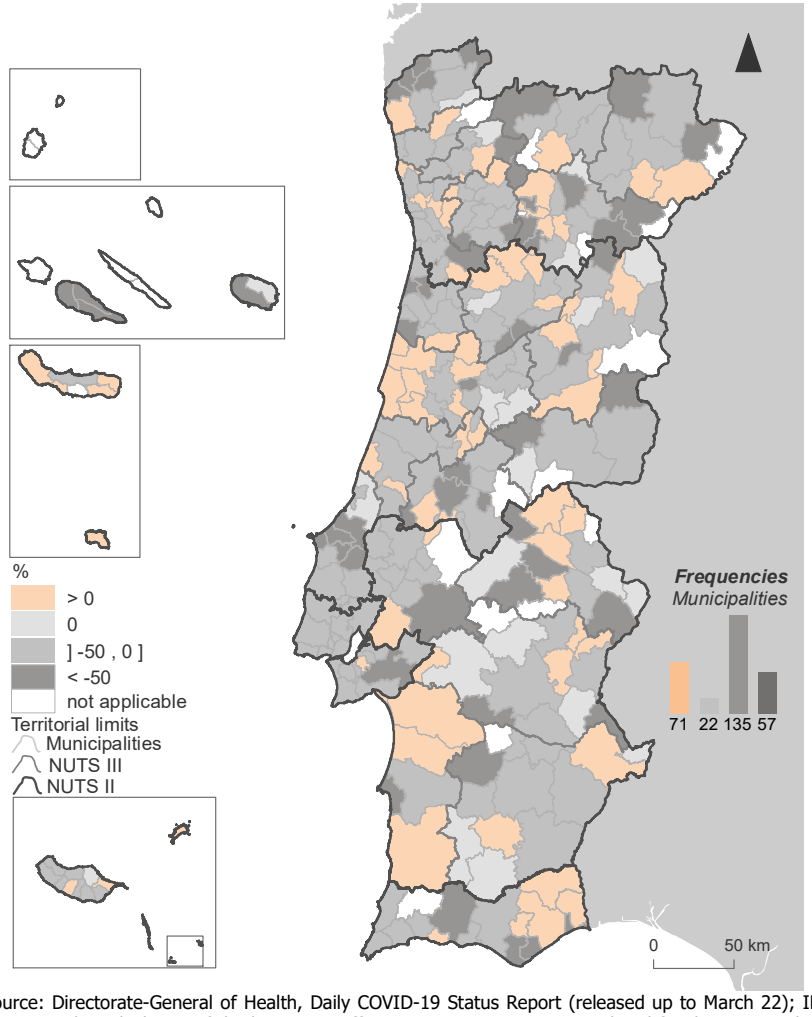


Source: Directorate-General of Health, Daily COVID-19 Status Report (released on March 22); INE, I.P., Annual estimates of resident population, 31 December 2019.
Note: For the calculation of the location coefficients zero cases were considered for the municipalities with no value in the Directorate-General of Health Status report (0 or< 3 cases).

Between 9 and 16 March, 71 municipalities recorded a positive rate of change of the 14-day cumulative incidence rate, 36 more than in the previous week

Figure 6- Rate of change and territorial concentration of new confirmed cases of COVID-19 (last 14 days), in relation to the resident population

Rate of change (9 / 16 March), by municipality



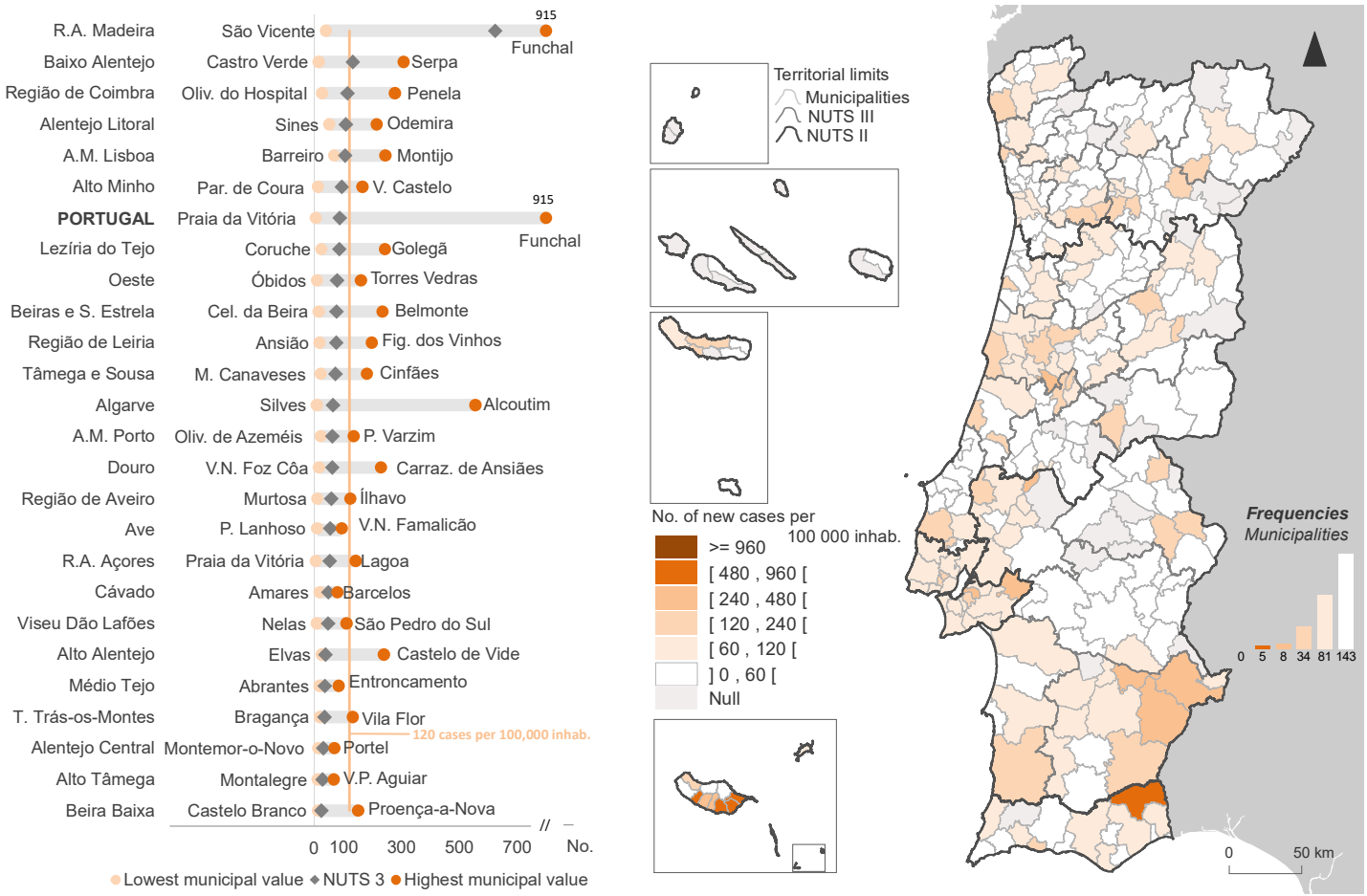
Location Coefficient, Portugal

		CL
Tuesdays	16 March	28.2
	9 March	26.9
	2 March	23.4
	23 February	21.5
	16 February	21.3
	9 February	20.6
	2 February	17.2
	26 January	14.6
18 January – Monday		13.7
12 January – Tuesday		13.3
5 January – Tuesday		14.3
27 December – Sunday		15.9
20 December – Sunday		17.4
17 December – Thursday		19.8
8 December – Tuesday		22.0
2 December – Wednesday		25.1
25 November – Wednesday		27.5
19 November – Thursday		28.7
10 November – Tuesday		28.9
Sundays	25 October	28.4
	18 October	30.4
	11 October	31.3
	4 October	32.2
	6 September	35.1
	9 August	44.9
	12 July	51.8
	21 June	61.6
	17 May	39.8
	19 April	40.1

Source: Directorate-General of Health, Daily COVID-19 Status Report (released up to March 22); INE, I.P., Annual estimates of resident population, 31 December 2019.
Note: For the calculation of the location coefficients zero cases were considered for the municipalities with no value in the Directorate-General of Health Status report (0 or< 3 cases). For 9 and 16 March, the data for the municipalities of Região Autónoma da Madeira should be interpreted taking into account the delay between diagnosis and notification reported by the DGS in the period under analysis.

On 16 March 2021, 261 municipalities recorded values below the threshold of 120 new cases per 100 thousand inhabitants

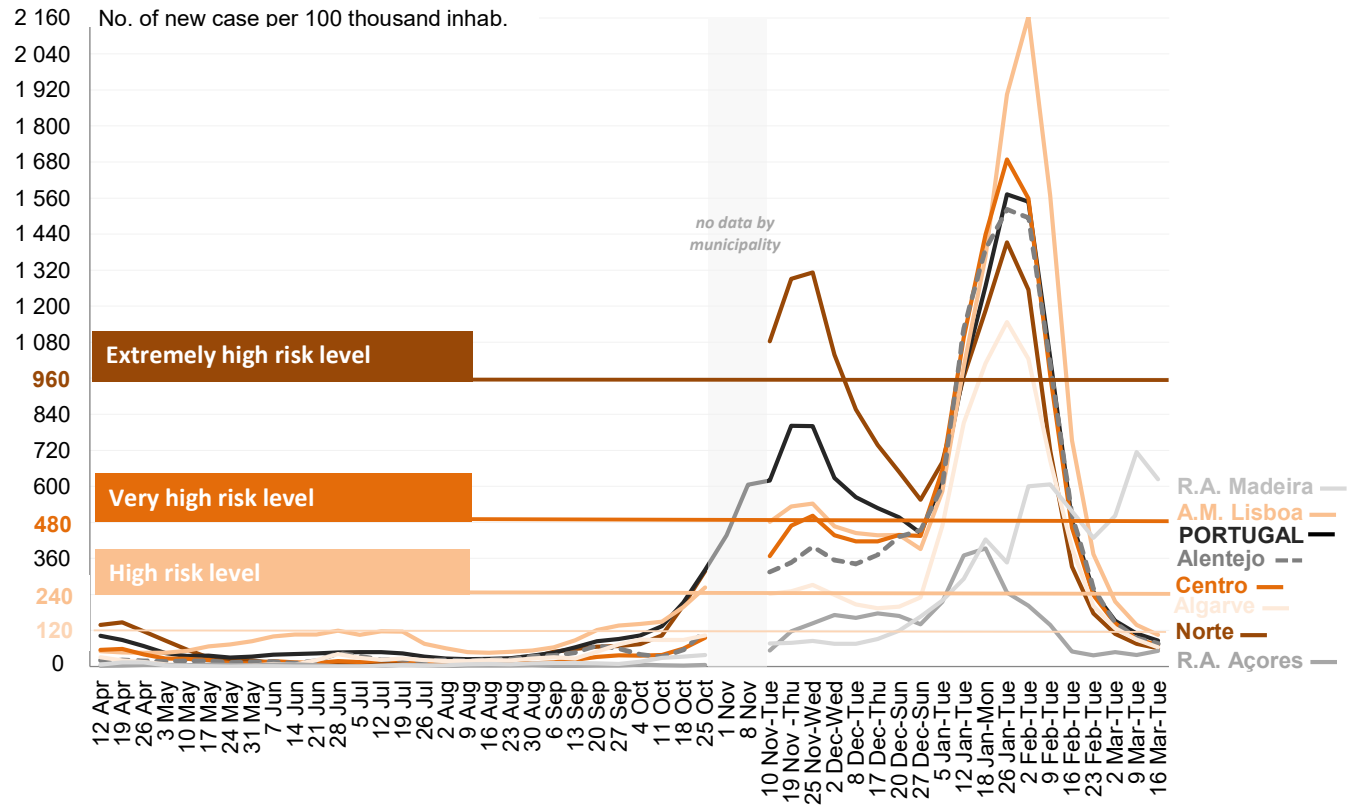
Figure 7 – 14-day cumulative incidence rate of COVID-19 on 16 March 2021, Portugal NUTS 3 and municipality



Source: Directorate-General of Health, Daily COVID-19 Status Report (released on March 22); INE, I.P., Annual estimates of resident population, 31 December 2019.
Note: In the graph, in NUTS 3 sub-regions with zero data status, the municipalities with the lowest value in the indicator are identified. The data for the municipalities of Região Autónoma da Madeira should be interpreted taking into account the delay between diagnosis and notification reported by the DGS in the period under analysis.

The Metropolitan Area of Lisboa concentrated the highest number of new confirmed cases in the last 14 days

Figure 8 - 14-day cumulative incidence rate of COVID-19, Portugal and NUTS 2, weekly



Source: Directorate-General of Health, Daily COVID-19 Status Report (released up to March 22). INE, I.P., Annual estimates of resident population, 31 December 2019.
Note: The absence of values at the regional level on 1 and 8 November is due to the interruption in the dissemination of data at the municipality level in the COVID-19 Status reports. The dates marked on the graph axis correspond to Sundays until 8 November and then to the reference days associated with the 14-day cumulative incidence indicator that is now being released weekly by the Directorate-General of Health (see technical note at the end of the press release). For 9 and 16 March, the data for Região Autónoma da Madeira should be interpreted taking into account the delay between diagnosis and notification reported by the DGS in the period under analysis.

STATS lab

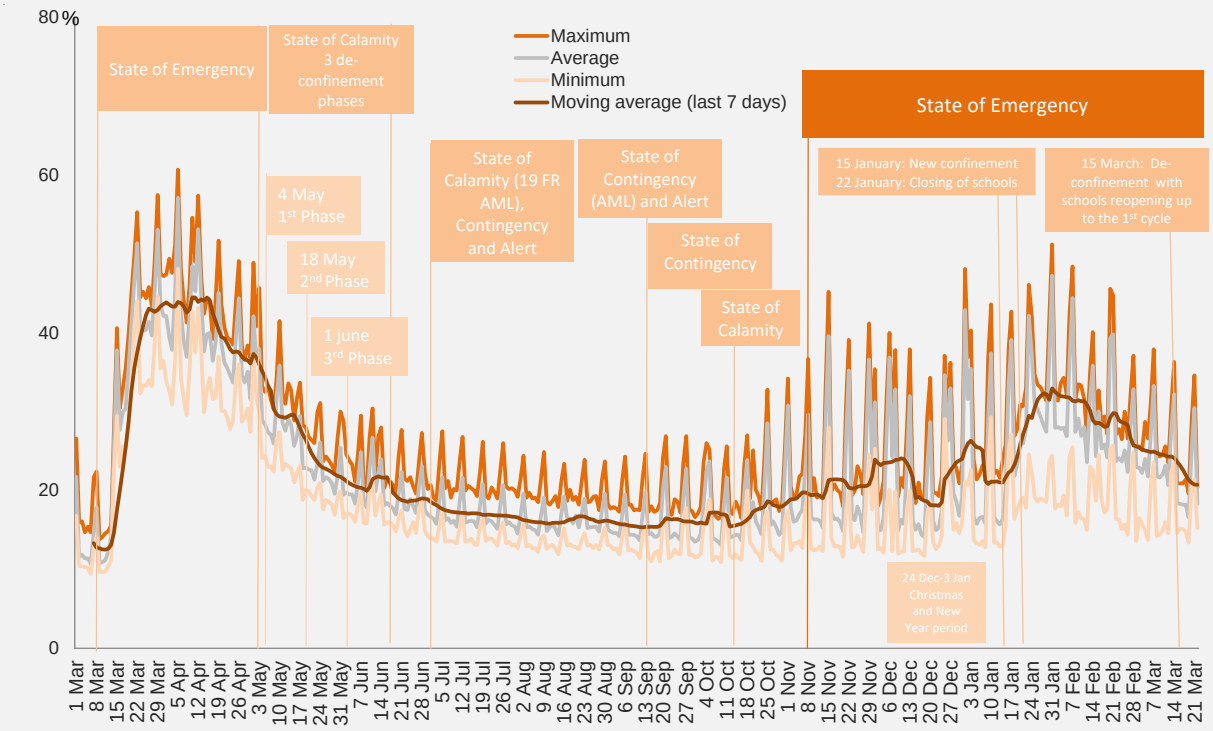
Population mobility indicators at regional level: an analysis based on information from Facebook's "Data for Good" Initiative

Taking advantage of Facebook's "Data for Good" initiative, the figure below shows the proportion of the population "staying put" between 1 March 2020 and 22 March 2021, namely the minimum, average and maximum values calculated based on the NUTS 3 sub-regions. The proportion of population that "stayed put" is based on the number of Facebook users associated with a single reference grid of 600mx600m during 8 am and 8 pm on day x, requiring at least three occurrences during that time period.

It is possible to observe that on Sundays there is generally less mobility of the population than on other days of the week. It is also noteworthy that after the first confirmed cases of COVID-19 and following the declaration of the first State of Emergency, there is a decrease in the mobility of the population, followed by an increase in the levels of mobility after the implementation of the de-confinement measures.

Considering the moving average of the last 7 days there has been an overall reduction in the average levels of mobility following the declaration of the State of Emergency on November 9 and subsequent renewals. In this context, the days before Christmas and after New Year are the exception, where there is an increase in mobility due to the general cancelling of measures restricting circulation. This tendency to reduce mobility is accentuated after the entry into force, on January 15, 2021, of extraordinary measures to limit the spread of the pandemic, including a new confinement period, followed by the closing of schools on January 22. From the second week of February onwards there is an overall upward trend in mobility levels, which is accentuated from 15 March onwards following the lifting of restrictive measures and the reopening of schools up to the 1st cycle of basic education.

Proportion of the population "staying put" between 1 March 2020 and 22 March 2021 – minimum, average and maximum values of NUTS 3 sub-regions

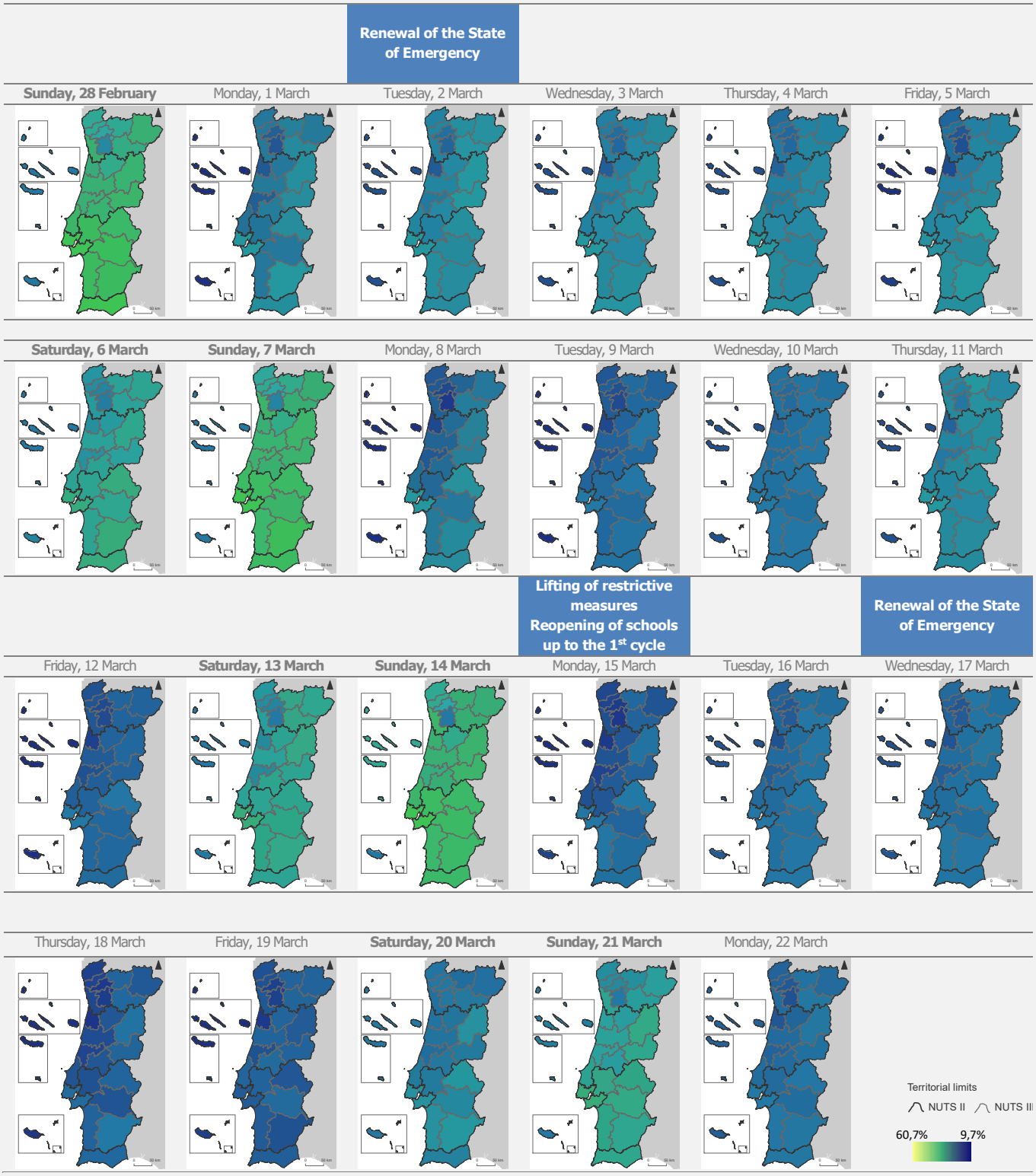


Source: Facebook's "Data for Good" Initiative. Data provided by Carnegie Mellon University. Note: The dates marked on the graph axis correspond to Sundays.

The following figure shows the levels of mobility of the population between 28 February and 22 March 2021 for the 25 NUTS III sub-regions. Overall, there are lower levels of mobility at the weekend and, in particular, on Sundays. An overall upward trend in mobility levels is also observed. In comparison with the values for the same reference day of the immediately preceding week, the increase in mobility registered on the working days after the entry into force of the lifting of the restrictive measures, including the reopening of schools up to the 1st cycle of basic education, is particularly noteworthy: on 15, 16 and 17 March, compared with the same period of the previous week (8, 9 and 10 March) in all the NUTS III regions of the Mainland and on 18 and 19 March, compared with the same period of the previous week (11 and 12 March) in all the NUTS III sub-regions of the country.

STATS lab

Proportion of the population "staying put" between 28 February and 22 March 2021 by NUTS 3



Source: Facebook's "Data for Good" Initiative. Data provided by Carnegie Mellon University.

www.ine.pt | Communication Unit - Tel: +351 21.842.61.00 - sci@ine.pt