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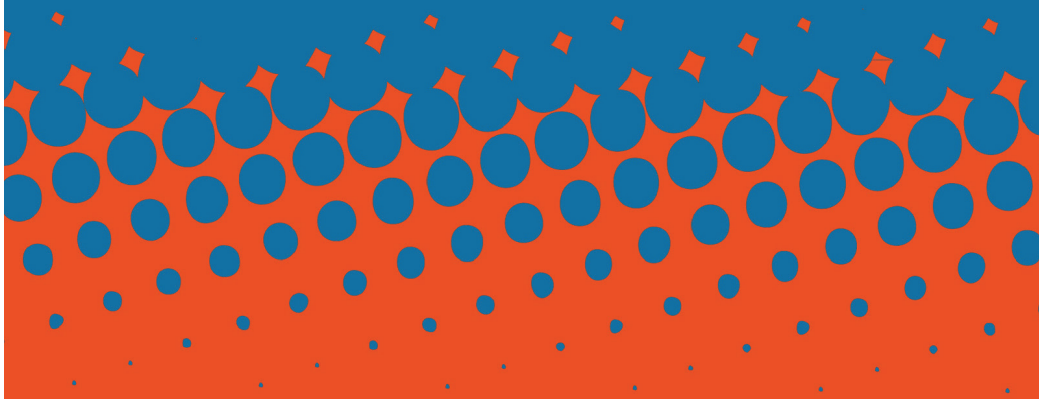
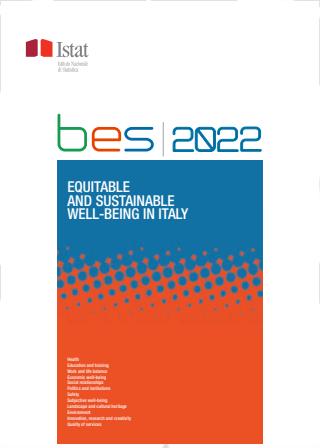
EQUITABLE AND SUSTAINABLE WELL-BEING IN ITALY



Health
Education and training
Work and life balance
Economic well-being
Social relationships
Politics and institutions
Safety
Subjective well-being
Landscape and cultural heritage
Environment
Innovation, research and creativity
Quality of services



bes 2022

EQUITABLE AND SUSTAINABLE WELL-BEING IN ITALY

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Foreword

The first report on equitable and sustainable well-being was published in 2013. It was the result of a major challenge undertaken by Istat through an unprecedented, internationally pioneering process of constructing a system of well-being indicators beyond GDP. The project was a challenge in terms of content and methodology, which resulted from a process of dialogue with the scientific community and civil society. Launched in 2010, it involved setting up two commissions. The first, coordinated by Istat and the National Council for Economics and Labour (CNEL), consisted of representatives of civil society, such as trade unions, charities, environmental, business, and women's organisations. The second, coordinated by Istat, included representatives of the international scientific community. Citizens were also consulted through a sample survey of 45,000 people, who gave their opinion on the importance of the various dimensions of well-being.

The reasons for this project are still relevant today: the system of well-being indicators provides policy-oriented information on issues that are relevant to the lives of citizens. This great commitment, full of passion and competence, has left its mark on the country's history. The recognition that GDP cannot be the sole measure of a country's development is almost as old as GDP itself, and many influential scholars in the second half of the last century looked at the need for complementary instruments. The first decade of our millennium has seen a revival of these efforts. Between 2007 and 2009, the international scientific community, in an unprecedented dialogue with governments and institutions, proposed solutions based on innovative multidisciplinary theoretical frameworks that placed the notion of well-being at the centre of reflection.

Examples include the OECD's Better Life Index project, the EU's Beyond GDP programme, and the report of the Stiglitz-Sen-Fitoussi Commission, in which they state that the Commission recommends measuring well-being through a multidimensional approach, including aspects of citizens' subjective evaluations and indicators of sustainability, not only environmental but also economic and social1. The BES project has fully embraced and accelerated this path. The BES system is in full development. The 134 indicators that described the evolution of the twelve fundamental dimensions of well-being at national and regional level in the first edition of 2013 have now grown to 152. The pandemic, the climate crisis and the acceleration of the technological revolution have made it necessary to add new indicators to the system.

While maintaining the initial approach of using data already held by Istat or by other institutes that are part of the National Statistical System (Sistan) to populate the indicators, ad hoc data were also collected to supplement some surveys. The experiments, now increasingly consolidated and mature, were launched in response to the growing interest in measurements at provincial and local level, and comparisons with the countries of the European Union were strengthened. In just a few years, the BES has been recognised by the highest institutional bodies in the country as the basis for new and useful evidence for policy. In fact, with Law 163/2016, which reformed the Budget Law, the main instrument of public financial manoeuvre along with the Stability Law, the BES, with a selection of indicators, entered the process of defining economic policies, drawing attention to their

1 Stiglitz, J.E., A. Sen, and J.-P. Fitoussi. 2009. Report by the Commission on the Measurement of Economic Performance and Social Progress. https://ec.europa.eu/eurostat/documents/8131721/8131772/Stiglitz-Sen-Fitoussi-Commission-report.pdf.

impact also on some fundamental dimensions of quality of life. The comparison with international trends and standards and the articulation of measures by regional areas and, where appropriate, by gender, age, and educational level, make the BES a precise tool for measuring inequalities and critical areas and highlight the greatest needs for public intervention and investment in policies and services.

The series of data - almost all of which now cover a ten-year period - which accompany each Report as a statistical annex, trace, beyond the simple comparison between one year and the next, progress, stagnation, and medium- and long-term setbacks. The introduction of a new domain on democracy, which will further enrich the set of measures, is currently being tested. By virtue of its characteristics as an information system that is both broad in scope and very detailed in the phenomena it tracks, the BES has proved to be a particularly sensitive tool for recording the impact on the country of the last three dramatic years, marked by the pandemic, the environmental crises, and the outbreak of war in Ukraine. This edition of the report aims to make the reader aware of the country's transformation since 2019, the last year before the pandemic. The juxtaposition of the indicators effectively portrays the social, economic, and cultural processes that have withstood the upheavals without being too deeply affected by them and that are now characterised by a decidedly positive sign. The comparison also reveals the processes that have suffered regressions, but have resumed, albeit with some setbacks. Finally, the comparison highlights the areas that, already weak and insecure before 2019, still show no significant signs of recovery in 2022 and remain behind pre-pandemic levels. The BES measures show how territorial disparities, many of which are long-term, have increased and, moving from the North to the South and the Islands, indicators with a negative sign predominate compared with the previous period. Reading by gender the 88 indicators allowing this breakdown, the 2022 Report indicates that, for women, most (52.8%) of the measures show an improvement compared to 38.9% for men, for whom there are more measures that are worse than in 2019. However, 39% of the indicators still show a net disadvantage for women compared to men. In particular, the female employment rate is so far from the European average and so low that almost half of women are excluded from economic independence. There are also generational differences. While more than half of the indicators relating to adults recorded an improvement in well-being, to the point of exceeding the pre-pandemic level in the latest year available, only 44% of the indicators for young people under 24 years of age improved, and almost as many (43%) deteriorated. The phenomena and processes described by the very rich statistical documentation on well-being made available with the report and accompanying it - with subsequent in-depth studies at a finer granularity - make it possible to draw a remarkably accurate and concrete map of the policy needs expressed by the country. We are committed to making this map even more specific and detailed. It is our contribution to the national community's targets for progress. The first report in 2013 clearly and effectively defined the ethos and strategy of this great enterprise of measuring well-being. Today, the aim is to make it a flexible tool, open to the introduction of new measures, and better adapted to the changing reality, while always guaranteeing its continuity.

Francesco Maria Chelli
Istat Acting President

Warnings

CONVENTIONAL SIGNS

The following conventional signs are used in the statistical tables:

Dash

(-) a) the phenomenon does not exist;
b) the phenomenon exists and is detected but there have been no cases.

Four dots

(....) the phenomenon exists, but data are not known for whatever reason.

Double dot

(..) for numbers not reaching half the figure for the minimum order considered.

Asterisk

(*) data obscured for the protection of statistical confidentiality.

PERCENTAGE COMPOSITIONS

The percentage compositions are rounded to the first decimal place. The sum of the percentage values calculated in this way may not be equal to 100.

GEOGRAPHIC AREAS

North

North-west	Piemonte, Valle d'Aosta/Vallée d'Aoste, Lombardia, Liguria.
North-east	Trentino-Alto Adige/Südtirol, Veneto, Friuli-Venezia Giulia, Emilia-Romagna.

Centre Toscana, Umbria, Marche, Lazio.

South and Islands

South	Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria
Islands	Sicilia, Sardegna.

Equitable and sustainable well-being in Italy, an overview[1]

1. Introduction

The BES report, based on the system of indicators launched in 2010 by Istat in collaboration with CNEL to measure equitable and sustainable well-being, provides a complete picture of the well-being of our society in the 12 dimensions identified as relevant for its measurement. The system includes 152 indicators, some of which have been updated over time to adapt to changes, taking advantage of the introduction of new questions in the surveys carried out by Istat. Thanks to this design work, for example, from 2021 onwards, the questionnaire of the Aspects of Daily Life survey has been supplemented with new questions that allow to deepen the analyses presented in this report by monitoring new phenomena. These include the sense of democracy, analysed in the Politics and institutions chapter, and satisfaction with working from home, including an analysis of advantages and disadvantages perceived by workers, in the Work and life balance chapter. The richness of the analyses presented in this volume makes it possible to identify strengths or weaknesses on which to base policy interventions to ensure that levels of well-being are equitably distributed and do not deteriorate over time. In this way, comprehensive and structured information is made available to support the public debate, facilitating the monitoring of evolution of well-being conditions over time in terms of starting levels, widening or narrowing of gaps and disparities across regions, gender and age groups, also in comparison with Europe[2].
In this edition of the BES report, in which about half of the indicators have been updated to 2022, the introductory chapter offers a synthetic picture of well-being in Italy, describing the recent trends of the indicators in the 12 domains compared to 2019. The analysis focuses in particular on those indicators for which the recovery from the effects of the pandemic is not yet complete, while highlighting the positive developments that are also due to the strategies adopted to deal with the crisis. The report also highlights key areas of concern where efforts to catch up and close persistent gaps remain insufficient. Finally, a special focus is given to an in-depth analysis of three perspectives of the BES indicators that allow us to monitor inequalities and trends in the distribution of well-being: territorial, gender and generational. Since its inception, the BES has provided indicators broken down by a number of characteristics that allow measuring the equity of well-being and monitor inequalities. These characteristics coincide with the three transversal axes of the National Recovery and Resilience Plan (NRRP), and for this reason the analyses presented in the following paragraphs of this chapter constitute a tool that also facilitates a useful reading of the data inherent in the priorities of the NRRP.
The 12 thematic chapters begin with a summary showing the evolution of the indicators up to 2019, which is taken as the reference year for the pre-pandemic situation. It then analyses the evolution of the indicators in the two years in which the impact of the pandemic was

1 This chapter was edited by Lorenzo Di Biagio, Romina Fraboni, Maria Clelia Romano and Alessandra Tinto, with contributions from Carmen Federica Conte and Stefania Taralli.
2 It should be borne in mind that the number of BES indicators available at European level is limited and does not reflect a representative selection of the wider set of indicators used to measure well-being in Italy.

most evident, 2020 and 2021[3], and examines whether the recent evolution has allowed the pre-pandemic situation to be restored. The thematic chapters then analyse the differences in the evolution of the well-being indicators between different population groups (by gender, age group and level of education) and between territories, in order to identify inequalities and gaps.

2. The evolution of well-being during and after the pandemic

The evaluation of the evolution of the indicators between 2019, the year considered as a benchmark of the pre-pandemic situation, and the most recent available data, allows for an initial and immediate summary measure that reflects the most recent evolution in each domain.

Five profiles of evolution are considered in the analysis: indicators that have improved both between 2019 and 2021 and between 2021 and 2022 (highlighted in dark green in the graphs), Indicators for which the latest update shows a better situation than in 2019, but after a discontinuous evolution between the two periods considered, or for which the 2022 update is not yet available (light green), indicators for which the most recent figure is stable compared to 2019 (grey)[4], indicators with a discontinuous trend that do not recover the 2019 level at the end of the period (light red), indicators that steadily deteriorate over the two periods considered (2019-2021 and 2021-2022) (dark red).

More than half (58) of the well-being indicators for which data is available for comparison[5] show an improvement in the latest available year compared with 2019, a third are at a worse level than in 2019, while the remaining 13.8% remain stable at pre-pandemic levels (Figure 1).

Progress is most widespread in the domains of Safety, Quality of services, and Work and life balance (more than 72% of indicators improve compared to 2019). This is followed by the domains Politics and institutions and Innovation, research and creativity, with two-thirds of the indicators improving. Among the domains showing a more critical trend overall over the last three years, with most indicators worsening, are Social relationships, Subjective well-being, Education and training, and Economic well-being.

The Health and Environment domains are in an intermediate situation: in the former, around 36% of indicators have remained stable, a similar proportion of indicators have improved, but more than a quarter are at worse levels than in 2019; in the latter, the proportion of indicators that have remained stable remains considerable (around 31%), but more than half have improved compared to the pre-pandemic period. The Landscape and cultural heritage domain also shows mixed trends, with equal proportions of indicators improving and deteriorating (around 43%).

3 We consider the pandemic period as a whole, without distinguishing the analysis for 2020 and 2021, in order to have a global view, as in some cases the impact of the pandemic on well-being was more evident in 2020, and in others in 2021.

4 Between -1% and +1% the change is considered stable. The polarity of the indicator has been taken into account in the calculation of the change in order to consider the improvement or worsening in terms of well-being.

5 109 indicators out of the total of 152.

Figure 1. Evolution of Bes indicators between 2019 and 2022 by well-being domain. Percentage of total comparable indicators (a)

Source: Istat, Bes indicators
(a) For each domain, the number of comparable indicators between 2019 and 2022 (or 2021 if more recent data are not available) is given in brackets. Between -1% and +1% the change is considered stable. The polarity of the indicator has been taken into account in the calculation of the change in order to consider the improvement or worsening in terms of well-being.

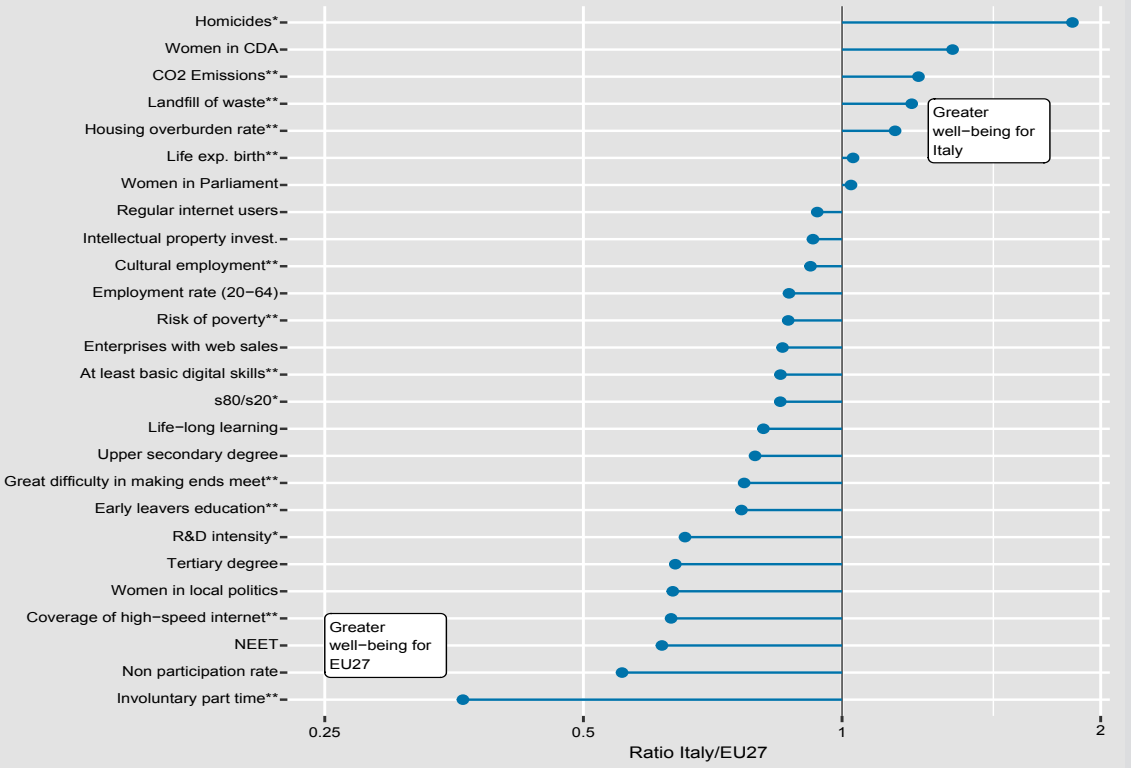
BES indicators are available for comparison with the EU27 average in a small number of cases, but it is also useful to consider this benchmark, which allows us to identify some other critical issues. Figure 2 shows, for comparable indicators, the ratio between Italy's value and that of the EU27 average in the most recent available year. The ratio, which takes into account the polarity of the indicators, is greater than one when the level of the indicator indicates an advantage for Italy in terms of well-being (right-hand side of the figure) and less than one when it indicates a disadvantage for Italy with respect to the EU27 average (left-hand side of the figure).

Most of the BES indicators available for comparison with the average of European countries (EU27) show a worse situation for Italy. This is particularly the case for some indicators in the areas of Education and training and Work and life balance. These include the share of 15-29-year-olds who are not in education, training or employment (NEET), which reaches 19.0% in Italy compared with 11.7% for the EU27 average, and the share of 30-34-year-olds who have completed tertiary education, which is 27.4% in Italy compared with 42.8% for the EU27 average. With regard to the labour force, the Italian employment rate in 2022 is around 10 percentage points lower than the European average (74.7%), with a particularly large gap for women (55.0% in Italy compared with 69.4% for the EU27 average).

Italy's disadvantage in the context of the EU27 is also noted in some indicators of Economic well-being updated to 2021, such as the risk of poverty and great difficulty in making ends meet, or to 2020, such as net income inequality (s80/s20).

One of the indicators where Italy performs better in terms of well-being when compared with the EU27 average is the homicide rate, which, at 0.5 per 100,000 inhabitants in 2020, is well below the EU27 average (0.9). In addition, Italy remains at the top of the ranking of countries in terms of survival, with life expectancy at birth equals to 82.5 years (80.1 the EU27 average in 2021).

Figure 2. Ratio between Italy and the EU27 for available Bes indicators (a). Year 2022 (logarithmic scale)



Source: Istat, processing on Eurostat data
Notes: The calculation method used by Eurostat for the life expectancy at birth indicator differs from that used by Istat due to the use of a different model for estimating survival in old age (85 years and over); the annual value for the EU27 average of the indicators Upper secondary degree (People with at least a tertiary education - 25-64 years old), Tertiary degree (Graduates and other tertiary qualifications – aged 30-34), Life-long learning, Young people not working and not studying (NEET) has been calculated as the average of the values for the 4 quarters of 2022; the European indicator on regular internet users refers to the population aged 16-74.
(a) The ratio between indicators takes into account the polarity of well-being measures; thus, the advantage of one group over the other indicates a better well-being associated with a given indicator for that group than for the reference group (EU27 average). Values above 1 indicate greater well-being for Italy, values below 1 indicate greater well-being for the EU27 average.
* Indicators updated to 2020.
** Indicators updated to 2021.

3. Territorial differences

The territorial analysis, in addition to showing the North-South and Island gaps, allows us to go deeper by assessing the level of regional disparities for the BES indicators in combination with the dynamics of regions moving closer or further apart over time, in particular analysing whether and how the dynamics of territorial convergence/divergence have changed as a result of the pandemic.
A summary regional classification[6] of the indicators into five levels of well-being reveals a clear North-South divide (Figure 3). For the North-east, 60.5% of the indicators are in the medium-high and high levels of well-being and only 10.1% in the low and medium-low levels of well-being; for the South and Islands, on the other hand, most of the indicators are

6 For each indicator, the regional distribution of values is sorted and the regions are divided into 5 groups that are as homogeneous as possible (although they may differ in size) in order to maximise the between groups variability and minimise the within groups variability, according to Jenks' method of natural breaks. For each region, the percentage of indicators found in the different groups is considered, from the worst group (with the lowest level of well-being) to the best group (with the highest level of well-being). The calculation takes into account the polarity of each indicator, i.e. whether its increase has a positive or negative effect on well-being. Some indicators are excluded from the analysis (see the Methodological Annex).

in the low or medium-low levels (62.0% for the South and 58.1% for the Islands) and only a minority (19.4% for both breakdowns) are in the two most virtuous levels.

Figure 3. Bes indicators by level of well-being, region and geographic area. Latest available year. Percentage values

REGIONS AND GEOGRAPHIC AREAS	Level of well-being					Total available indicators
	low	*medium-low*	*medium*	*medium-high*	*high*	
Piemonte	3.8	22.9	32.1	30.5	10.7	131
Valle d'Aosta/Vallée d'Aoste	13.4	16.5	19.7	22.8	27.6	127
Liguria	3.8	25.8	34.8	28.0	7.6	132
Lombardia	9.2	12.2	28.2	30.5	19.8	131
Bolzano/Bozen	9.3	10.9	16.3	16.3	47.3	129
Trento	3.9	8.5	11.6	31.8	44.2	129
Veneto	6.1	168	28.2	30.5	18.3	131
Friuli-Venezia Giulia	3.8	15.2	26.5	29.5	25.0	132
Emilia-Romagna	5.3	15.9	29.5	28.8	20.5	132
Toscana	3.0	17.4	37.9	31.1	10.6	132
Umbria	7.6	16.8	27.5	35.9	12.2	131
Marche	7.6	18.2	30.3	29.5	14.4	132
Lazio	9.1	17.4	35.6	21.2	16.7	132
Abruzzo	9.1	27.3	37.9	17.4	8.3	132
Molise	17.6	30.5	22.1	16.0	13.7	131
Campania	40.2	25.8	14.4	9.8	9.8	132
Puglia	25.0	38.6	17.4	12.9	6.1	132
Basilicata	31.1	24.2	18.9	14.4	11.4	132
Calabria	36.6	22.1	19.1	13.7	8.4	131
Sicilia	37.1	31.1	13.6	12.9	5.3	132
Sardegna	13.0	32.8	26.7	15.3	12.2	131
North-west	*0.8*	*19.4*	*31.0*	*32.6*	*16.3*	*129*
North-east	*0.8*	*9.3*	*29.5*	*37.2*	*23.3*	*129*
Centre	*1.5*	*15.9*	*31.8*	*40.9*	*9.8*	*132*
South	*10.9*	*51.2*	*18.6*	*9.3*	*10.1*	*129*
Islands	*16.3*	*41.9*	*22.5*	*14.0*	*5.4*	*129*

Source: Istat, Bes Indicators

3.1 Well-being trends by regions

A first aim of the analysis is to assess the level of regional inequality and to study the dynamics of regions converging or diverging over time in terms of well-being indicators. Inequality between regions can be measured by the coefficient of variation (CV), which quantifies the dispersion of a variable between regions in a given year. To assess the trend in this inequality index over time, the average of its annual variations can be used, with the sign changed to take account of the negative polarity of the CV (the smaller the CV, the lower the regional inequality). This gives the Annualised Rate of Convergence between regions (ARC), which, if positive, indicates a decrease in regional inequality and, if negative, an increase (see Methodological Annex for more details)[7].

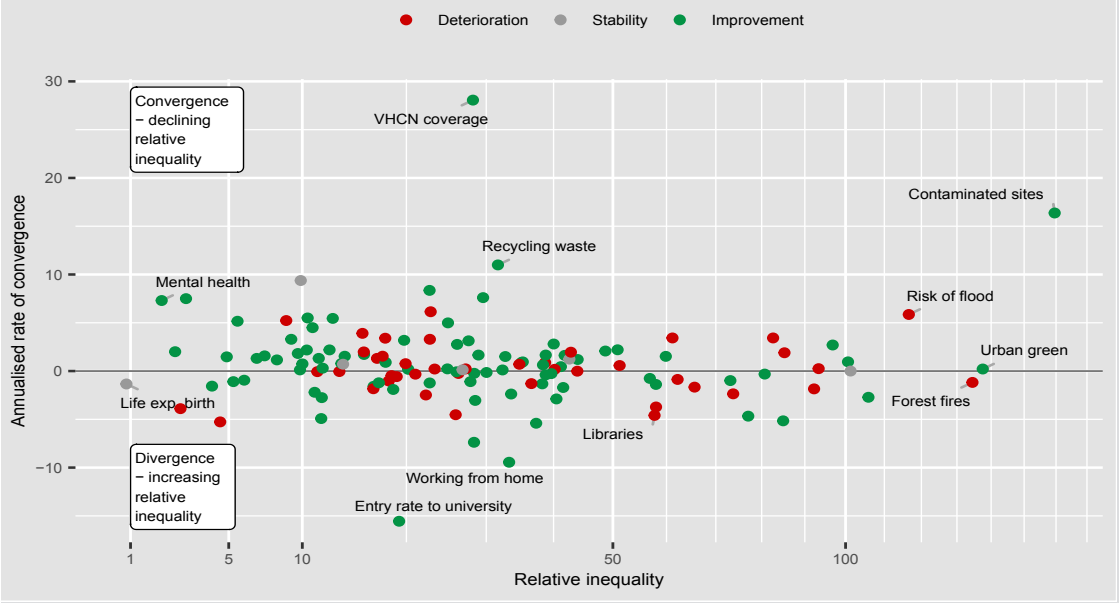
7 Cfr. Chelli, F. M., Ermini, B., Gallegati, M. & Gentili, A. (2022). Investigating Regional Disparities in Italy's Well-Being Since Unification (1871–2011). Italian Economic Journal, 1-26. Ferrara, A.R. & Nisticò R. (2013). Well-being indicators and convergence across Italian regions. Applied Research in Quality of Life 8: 15-44.

Figure 4 shows the well-being indicators, while Figure 5 shows the same indicators but broken down by domain, comparing, on the x-axis, inequality measured on the most recent available year with, on the y-axis, the annualised rate of regional convergence calculated over the long term. The figure also takes into account the trend of the indicators: the points representing them are in green, grey or red, depending on whether the indicator has improved, remained stable[8] or worsened over the period considered.

Out of the 131 Bes indicators that can be analysed at the regional level, 27 show a rather high relative regional inequality in the latest available year, indicating a greater distance between regions, particularly in the domains of Environment, Landscape and cultural heritage, Economic well-being and Safety. In contrast, the domains with more than half of the indicators with a lower relative inequality are Health, Education and training, Social relationships, Politics and Institutions, and Subjective well-being.

Analysis of the evolution of regional differences shows that, in the long period[9], 51 indicators improve at the national level and at the same time regional inequality decreases, while 32 improve but regional inequality increases. Of the 42 indicators deteriorating at the national level, half converge (thus regions move closer together) the other half diverge. In the domains Subjective well-being, Innovation, research and creativity, Safety, and Work and life balance, more than half of the indicators fall into the preferred condition, with improvement at the national level accompanied by a reduction in territorial disparities. In contrast, one-third of the Social relationships indicators fall into the more severe situation of a simultaneous worsening of territorial values and distances.

Figure 4. Bes indicators by relative regional inequality (latest available year), annualised rate of convergence and changes in the long period. Percentage values.

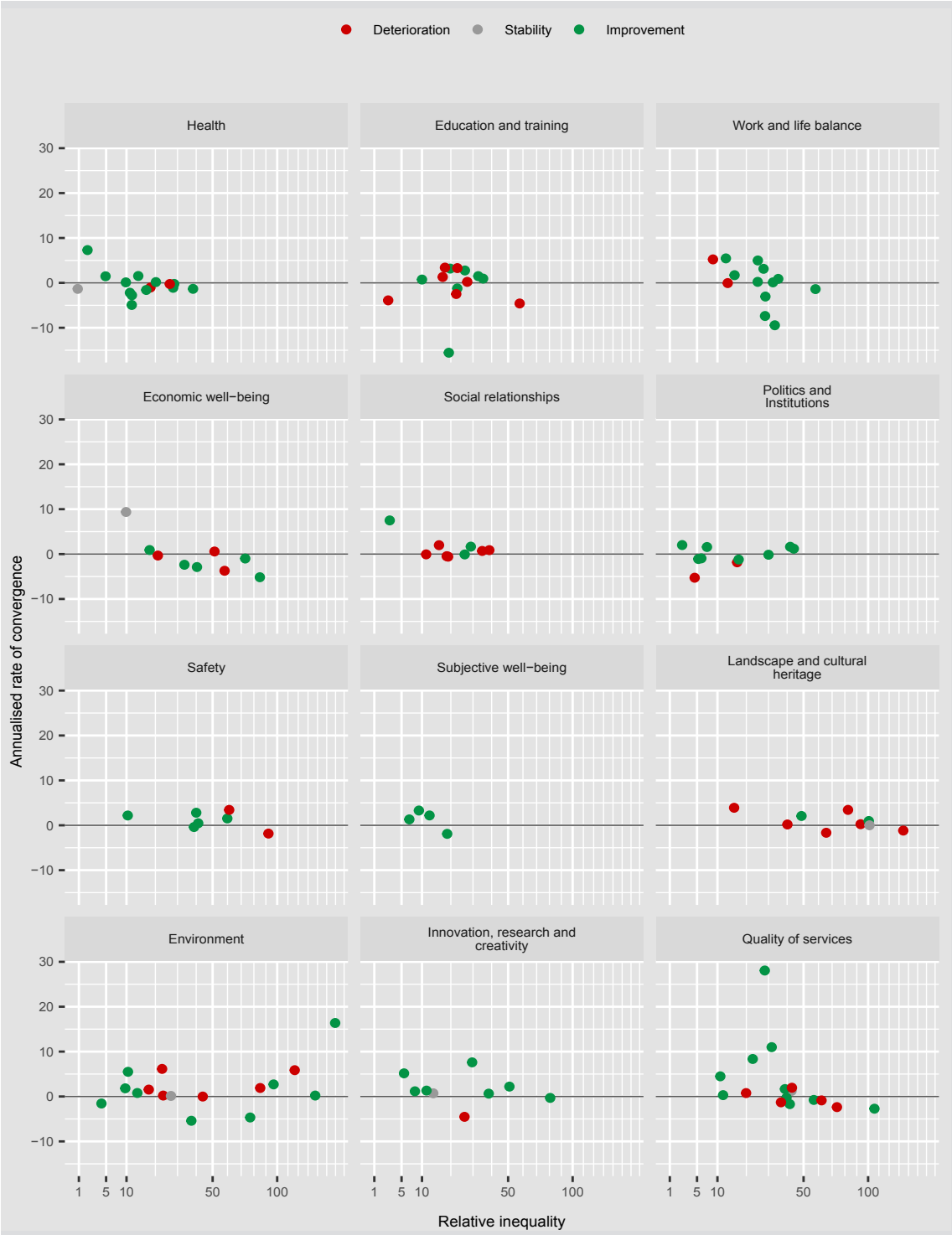


Source: Istat, Bes Indicators
Note: a scale transformation was performed on the x-axis to make the graph more readable. Long period is defined as the time span between 2010 (or the closest year for which data exist) and the latest available year. For an interactive version of the figure see https://www.istat.it/it/archivio/283033 (in Italian).

8 In the range -1 and +1% the change is considered stable (grey). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

9 Long period refers to the period from 2010 (or the closest year for which regional data are available) to the latest year for which regional data are available. The annualised rate is used to compare indicators defined in different time periods.

Figure 5. Bes indicators by relative regional inequality (latest available year), annualised rate of convergence and changes in the long period by domain. Percentage values.



Source: Istat, Bes Indicators

3.2 The evolution of differences between regions before and after the pandemic

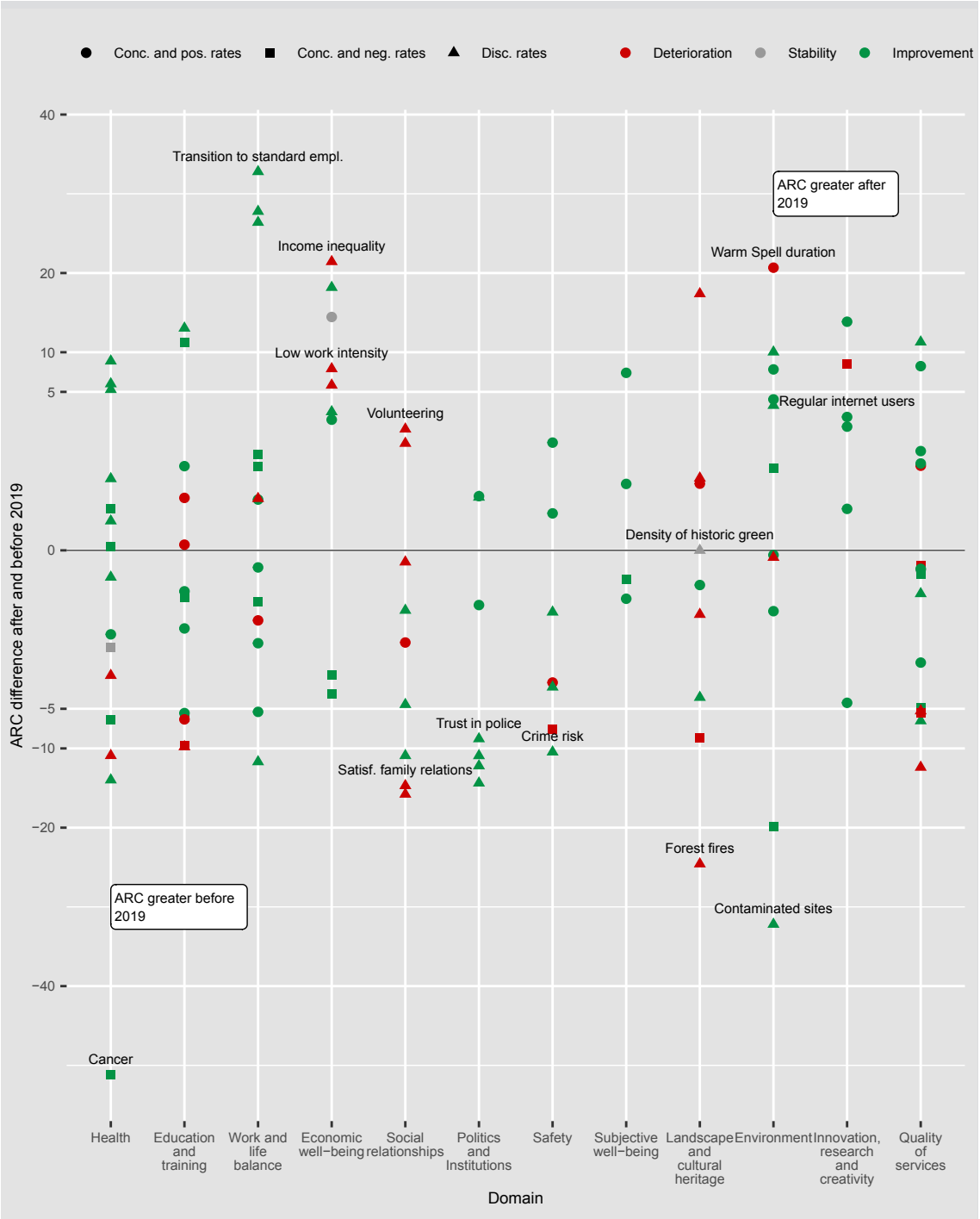
It is interesting to analyse whether and how the dynamics of territorial convergence/divergence have changed as a result of the pandemic. Figure 6 shows the well-being indicators classified by domain, comparing on the y-axis the difference between the annualised rate of convergence in the period 2019 - latest available year, thus taking into account the pandemic period, and the ARC for the period up to 2019[10]. The indicators for which the rate of convergence has increased at the turn of the year 2019 (the ARC for 2019-latest available year is greater than the ARC for the period up to 2019) fall on the upper half of the graph, while the indicators for which the rate of convergence has decreased (the ARC for 2019-latest available year is less than the ARC for the period up to 2019) fall on the lower half of the graph. In order to distinguish those indicators for which the behaviour in terms of convergence is similar or opposite in the two periods considered, those indicators for which the ARCs are concordant and positive (convergence in both periods) are marked with a circle, those for which the rates are concordant and negative (divergence in both periods) are marked with a square, and, finally, a triangle for those indicators where the ARCs in the two periods do not have the same sign (if the indicator is in the upper half, there is convergence in the period after 2019 and divergence in the period up to 2019; if the indicator is in the lower half, the opposite situation occurs). As in the previous graph, the dots are coloured green, grey or red, depending on whether the indicator has improved, remained stable or deteriorated in the long term.

Comparison between the pre-COVID period (up to 2019) and the period from 2019 onward (possible for 119 indicators[11]) shows that for 43 indicators the trend towards territorial convergence characterises both periods; this is particularly the case for all indicators (except one) in the Subjective well-being and Innovation, research and creativity domains, resulting in a decrease in disparities. For 24 indicators, on the other hand, there is a continuing trend toward increasing inequality. The most common situation, however, is one in which the dynamics of regional distances vary in sign between the two periods (51 indicators), with 23 indicators converging in the most recent period and 28 converging in the pre-COVID period.

10 The time interval is from 2010 (or the closest available year) to 2019. In some cases, the starting year is 2018.

11 Of the 131 indicators analysed, it was necessary to exclude those for which there are no data more recent than 2019 (e.g. voter turnout, bathing beaches) and those for which there are no data for 2019 (e.g. women in parliament, innovation in the production system). In particular, 1 indicator was excluded from the domain of Education (library use), 3 indicators from the domain of Politics and institutions, 5 indicators from the domain of Environment and 3 indicators from the domain of Innovation, research and creativity.

Figure 6. Bes indicators classified by the difference of annualised rate of convergence (ARC) after and before 2019 and changes in the long period by domain. Percentage values.



Source: Istat, Bes Indicators
Note: A scaling expansion was performed on the y-axis (between -5 and +5) to make the graph more readable. For an interactive version of the figure see https://www.istat.it/it/archivio/283033 (in Italian).

4. Comparing women and men

4.1 Well-being trends by gender

For most of the well-being indicators (90) we dispose of data broken down by gender, the analysis of which provides interesting insights not only into the presence/persistence of gender gaps in our country, but also into their evolution over time[12].

Figure 7. Evolution of Bes indicators between 2019 and 2022 by well-being domain and gender. Percentage of total comparable indicators (a)

Source: Istat, Bes Indicators
(a) For each domain, the number of comparable indicators between 2019 and 2022 (or 2021 if no more recent data is available) is reported in parentheses. In the range -1 and +1%, the variation is considered stable. In calculating the variations, the polarity of the indicator was taken into account to consider improvement or worsening in terms of well-being.
(b) In this representation, the Landscape and Cultural Heritage and Environment domains are presented jointly, due to the limited number of gender-disaggregated indicators.

12 From the analysis in question are therefore excluded those indicators of the framework, of extreme relevance for the study of well-being, but specifically referring to the female condition (e.g. indicators of violence against women), for the analysis of which please refer to the thematic chapters per domain.

Similarly to what has been done for the analysis of the evolution of well-being during and after the pandemic (section 2 of this chapter), it is therefore possible to calculate, separately for men and women, the number of indicators for which there has been an improvement between 2019 and 2022 (or 2021, when 2022 is not yet available), those for which there has been a worsening and those for which the situation appears stable[13].
Between 2019 and 2022, the majority of well-being measures (54.1%) showed an improvement for women compared to 39.2% for men, for whom there is a higher share of indicators that are stable or worse comparing to 2019 (Figure 7). The number of improved well-being measures is higher for women in all domains, except for the Safety domain, where there is substantial parity in terms of proportion of indicators showing improvement (four out of five for both men and women).

4.2 Gender imbalances

The classification and quantification of the indicators based on the evolution over the reference period is a useful starting point for contextualising and subsequently deepening the analysis of the levels of well-being from a gender perspective. In particular, in order to examine the differences between men and women on the various dimensions and to highlight the most critical areas (i.e. where such differences persist or increase), the parity index has been used, comparing the value of each indicator for the female population with the value for the male population[14] (Figure 8). In this way, it is possible to analyse the domains and individual indicators where there are imbalances, i.e. where the situation of women appears to be significantly better than that of men or, conversely, where it is men who enjoy better living conditions[15].
For the majority of indicators, however, a gender gap continues to be observed, which penalises women in particular. In fact, out of 86 total indicators[16], only 26 show gender parity. On the contrary, 34 show a disadvantage for females and 26 a disadvantage for males.
Health and Education and training are the domains for which the condition of women is generally better than that of men. In the domains of Safety and Innovation, research and creativity a more heterogeneous situation is observed, with some indicators showing a female advantage and others a male advantage. There are a number of domains in which a widespread gender imbalance in favour of men appears: Work and life balance, Politics and institutions, Social relations, Economic well-being and Subjective well-being.

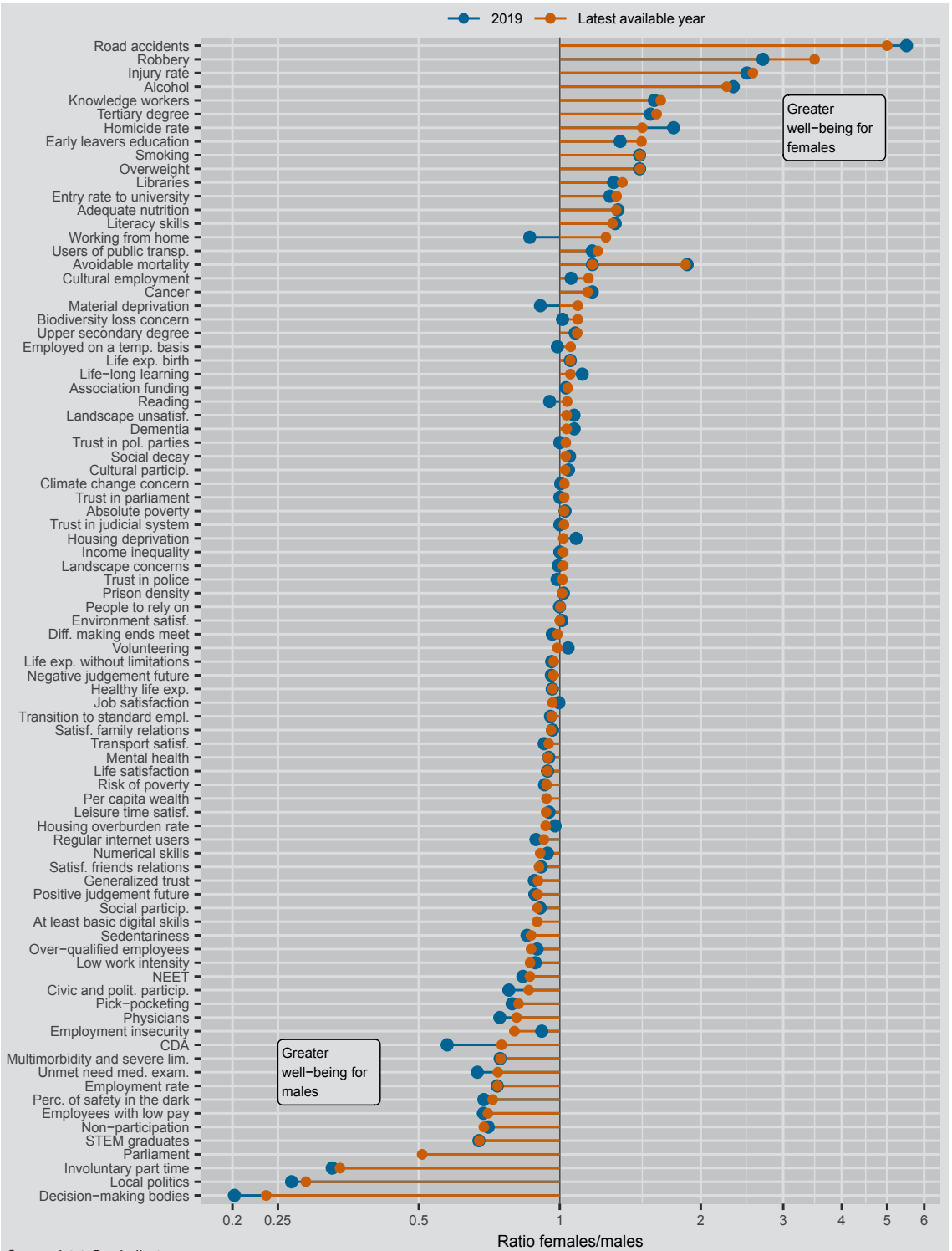
4.3 Variation and imbalance of indicators by gender

The analysis of gender imbalances, integrated with the examination of the variations of indicators for women and men since 2019 shows that in most cases (59 indicators out of

13 The indicators for which it is possible to make a gender-disaggregated comparison in the 2019-2022 period are 72.
14 The F/M ratio-based indicator reaches the value 1 in conditions of perfect parity, values greater than 1 when the situation of women is better than that of men, and values less than 1 when the opposite is true, i.e. men have a better condition, taking into account the polarity of the indicators. In the presence of values between 0.95 and 1.05, it is assumed that there is a substantial gender balance.
15 This is an indicator also used by the OECD to measure gender differences. OECD (2020), How's Life? 2020: Measuring Well-being, OECD Publishing, Paris, https://doi.org/10.1787/9870c393-en.
16 For 21 of these indicators, since the 2022 data is not available, the comparison concerns 2021 (10 indicators), 2020 (10) or 2019 (1).

83 indicators available for this comparison) there are no significant differences in the trend between the two genders, with the majority of indicators showing a variation of the same sign (26 improving and 26 worsening) (Figure 9). Among the 24 indicators with a significantly

Figure 8. Ratio between females and males for Bes indicators (a)**. Year 2019 and last available year (logarithmic scale)**

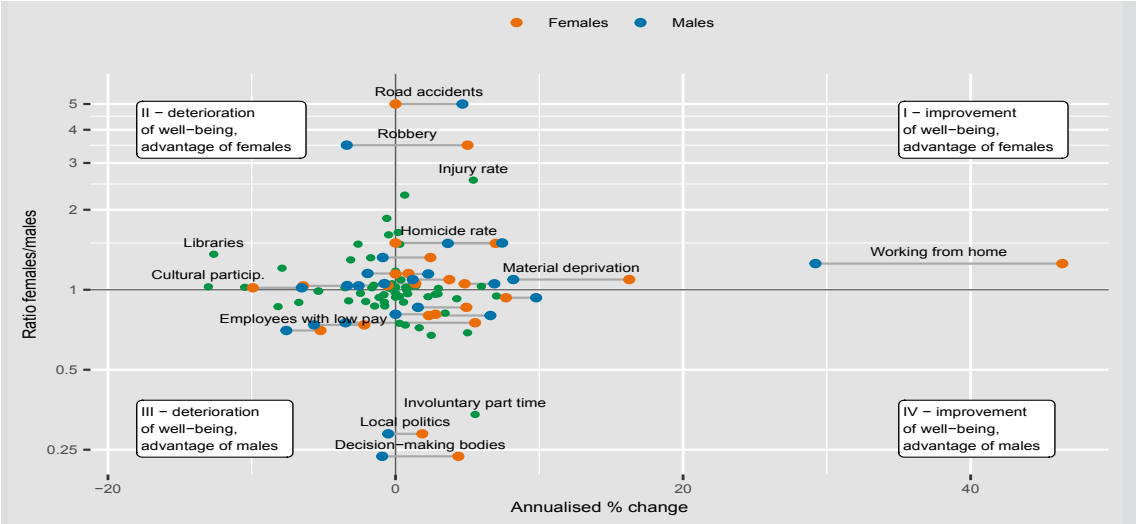


Source: Istat, Bes Indicators

(a)The ratio between the two groups (males and females) takes into account the polarity in terms of well-being measures, so the advantage of one group over the other indicates the improvement of well-being associated with a given indicator for that group compared to the reference group (males). For an interactive version of the figure see https://www.istat.it/it/archivio/283033 (in Italian).

different trend between men and women, in 13 cases, despite having a trend of the same sign, the variation is more marked for men or women. This is the case, for example, for the indicator of severe material deprivation and the proportion of employed people working from home, which improved compared to 2019 for both men and women, but with a higher intensity for the latter, reversing the gender balances. In the remaining 11 cases, the variation compared to 2019 is statistically significant but of different sign between women and men, with an improving trend for women and a worsening trend for men in most cases. Nevertheless, these different trends do not always result in a reduction of imbalances.

Figure 9. Percentage variation in well-being indicators for males and females (x-axis) and ratio between females and males in the latest available year (y-axis). Percentage variations compared to 2019 (logarithmic scale) (a)



Source: Eurostat, Labour force survey adjusted series, historical data
(a) The green dot indicates the total average change in cases where the differences between the level changes detected for men and women in the period between 2019 and the last available year are considered not very significant (less than 2%). The ratio between indicators referring to the two groups (males and females) takes into account the polarity in terms of well-being measures, so the advantage of one group over the other indicates the improvement of well-being associated with a given indicator for that group compared to the reference group (males). For an interactive version of the figure see https://www.istat.it/it/archivio/283033 (in Italian).

5. Comparing young people and adults

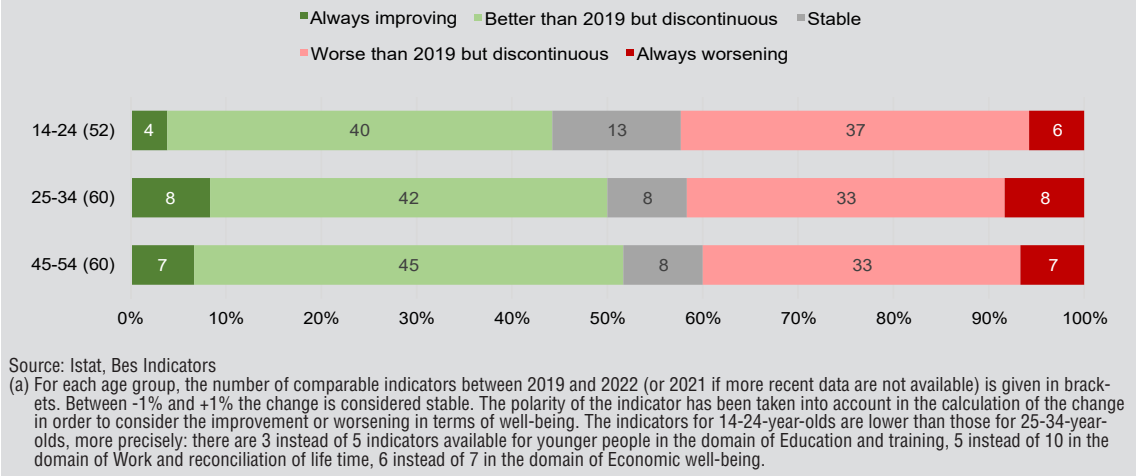
5.1 The evolution of well-being for youths and adults

Breaking down the indicators of the BES framework by age makes it possible to highlight the imbalances between different population groups and their evolution. To this aim, the population of adults and young people are examined and compared here, limiting the analysis to indicators relating to individual units for which the age dimension is available. The population of young people is further disaggregated into two groups in order to take account of their large heterogeneity, also in terms of the stage of the life cycle they have passed through: the youngest, under 24 years of age[17], who are still partly involved in the educational

17 The lower age limit of the youngest age group is defined according to the availability of the indicator: in most cases indicators are available from the age of 14, but in some cases indicators are available from the age of 15 (e.g. indicators in the domains of Work and life balance and Innovation, research and creativity, which are based on the Labour Force Survey); in other cases they are available from age 18 (Economic well-being and Security domains); finally, in other cases indicators are available from age 20 (e.g. employment rate indicator 20-64). In some cases the indicators on young people have not been disaggregated into the two subgroups, very young and young adults,

system and in the phase of training and entering into the labour market, mostly still living in the family of origin, and the young adults, in the 25-34 age group, who have largely completed their studies and are in a more advanced stage of the transition to adulthood.
Both age groups are compared with an adult generation, the 45-54 age group, which is in an active phase of the life cycle in the labour market, often with family and parental responsibilities[18].
In order to compare young people with adults, only those indicators that are simultaneously available for the three groups are examined. Therefore, the indicators which are specific to the situation of young people (NEET, early school leavers, educational attainment, to name but a few) are not included. These will be analysed in the thematic chapters per domain.
A comparison between age groups shows that 52% of the well-being indicators for adults aged 45-54 improves in the most recent available year, exceeding pre-pandemic levels (year 2019), while 40% remains below (Figure 10). Even among young adults aged 25-34, half of the well-being indicators improves and 41% shows a deterioration. In contrast, post-pandemic recovery is more difficult for the 14-24-year-olds, for whom only 44% of indicators improves, while a similar proportion shows deterioration (43%) and 13% remains stable[19] (compared with 8% for the other two age groups).

Figure 10. Evolution of Bes indicators for selected age groups. Years 2019, 2021 and 2022. Percentage of total comparable indicators (a)



Source: Istat, Bes Indicators
(a) For each age group, the number of comparable indicators between 2019 and 2022 (or 2021 if more recent data are not available) is given in brackets. Between -1% and +1% the change is considered stable. The polarity of the indicator has been taken into account in the calculation of the change in order to consider the improvement or worsening in terms of well-being. The indicators for 14-24-year-olds are lower than those for 25-34-year-olds, more precisely: there are 3 instead of 5 indicators available for younger people in the domain of Education and training, 5 instead of 10 in the domain of Work and reconciliation of life time, 6 instead of 7 in the domain of Economic well-being.

For the adults, improvement is most widespread (80% of the indicators) in the domains of Work and life balance, Safety, Landscape and Environment, followed by Innovation, research and creativity and Quality of services (67%) (Figure 11). At the opposite side of the ranking for the adults there are the Health and Social relationships domains, with less than 20% of the indicators improving. In the Work and life balance domain, most indicators also improve for young people.

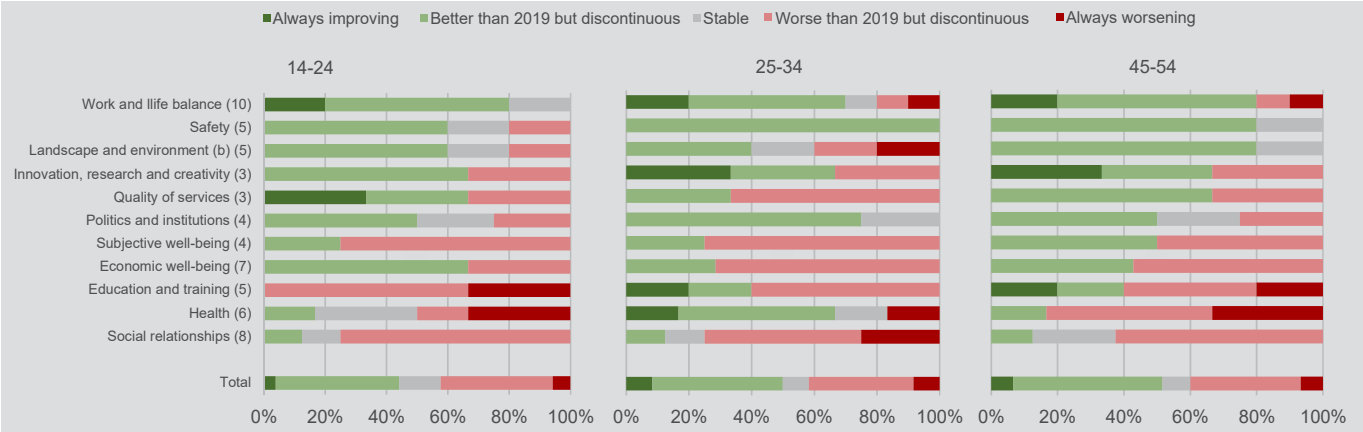
and are therefore kept in aggregate form and considered under young adults (e.g. absolute poverty incidence for 18-34-year-olds and accident rates, perceived job insecurity and job satisfaction for 15-34-year-olds).

18 In the case of adults, some indicators are also available for a different age group than the one considered here (45-54 years): this is the case of the indicators of perceived security and job satisfaction (35-54 years), absolute poverty (35-64 years), the ratio of employment rates of women with children of pre-school age to women without children (45-49 years) and injury rates (50-64 years).

19 Indicators are considered stable if, in the most recent available year, the percentage change compared to 2019 is less than 1%.

Health is the domain with the worst performance for adults (five out of six indicators worsen) and is also an element of vulnerability for young people aged 14-24, with half of the indicators worsening. Moreover, for young people, the three available indicators in the area of education and training also worsen compared to 2019: use of libraries, participation in cultural activities outside the home and, above all, reading books and newspapers. This deterioration is also common to young adults and adults.
Among the youngest, the lowest share of improving indicators compared to adults is found on some indicators of Social Relations (trust in others and having people to rely on), which worsen compared to 2019 while it is stable among adults, and on the positive attitude towards future perspectives, which is decreasing among young people and increasing among adults.

Figure 11. Evolution of Bes indicators for selected age groups by domain of well-being. Years 2019, 2021 and 2022. Percentage of total comparable indicators (a)

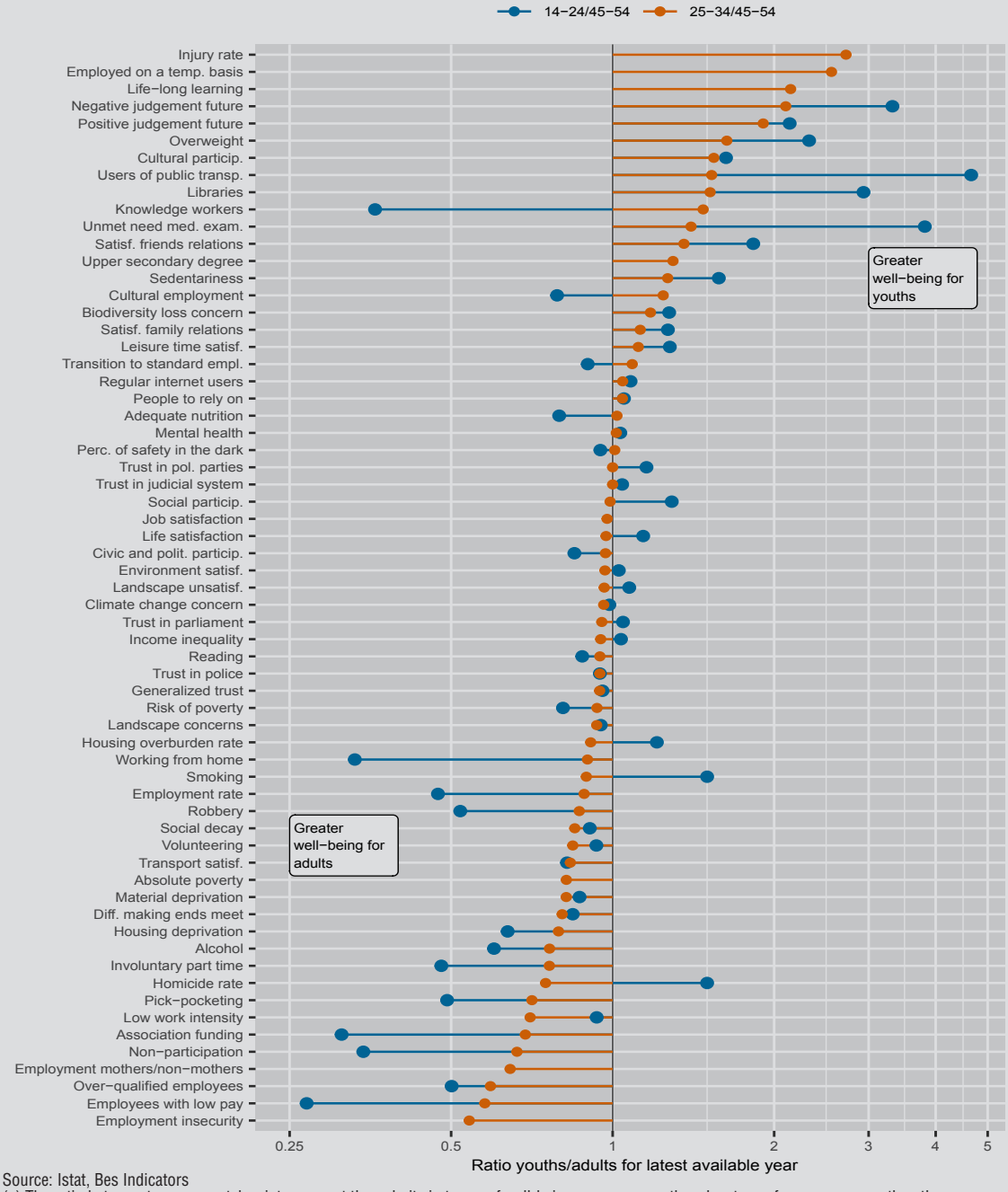


Source: Istat, Bes indicators
(a) For each domain, the number of comparable indicators between 2019 and 2022 (or 2021 if more recent data is not available) is given in brackets. In the range -1 and +1% the change is considered stable. In the calculation of the change, the polarity of the indicator was taken into account to consider the improvement or worsening in terms of well-being. The indicators for 14-24-year-olds are fewer than those for 25-34-year-olds, more precisely: there are 3 instead of 5 indicators available for younger people in the Education and training domain, 5 instead of 10 in the Work and life-time balance domain, 6 instead of 7 in the Economic well-being domain.
(b) In this representation, the domains Landscape and cultural heritage and Environment are presented together, due to the limited number of indicators available by age groups.

5.2 Imbalances between youths and adults

The analysis of the imbalances between the levels of the indicators in the different age groups highlights the distance from parity, and the comparison of these imbalances over time allows to highlight processes of convergence or divergence between young people and adults over the years considered. To measure intergenerational imbalances, the ratios of young people under 24 to adults aged 45-54 and of young adults aged 25-34 to the same category of adults are examined (Figure 12). Taking into account the polarity of the indicators, the ratios express the imbalance in well-being measures in favour of young people, when the imbalance is above 1, and in favour of adults, when the imbalance is below 1.
In the most recent available year the adult generation aged 45-54 is better off the two younger generations on almost half of the well-being indicators. At the opposite end of the spectrum, younger people have an advantage over adults for 36.4% of the indicators and are in balance for 16.4%, while young adults are better off compared to adults for 30.2% of the indicators, and are in balance with them for 23.8% of the cases.

Figure 12. Ratio between people aged 14-34 and 45-54 for Bes indicators by age group (a). Year 2022 (logarithmic scale)



Source: Istat, Bes Indicators

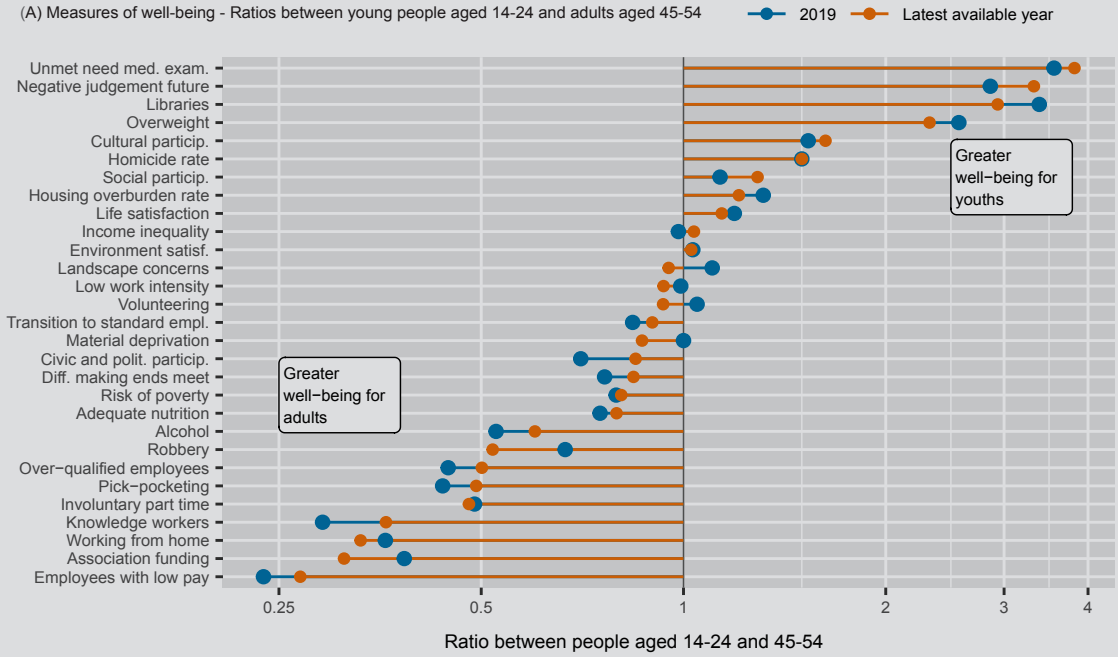
(a) The ratio between two groups takes into account the polarity in terms of well-being measures, so the advantage of one group over the other indicates the improvement of well-being associated with a given indicator for that group compared to the reference group (adults). For an interactive version of the figure see https://istat.it/it/archivio/283033 (in Italian).

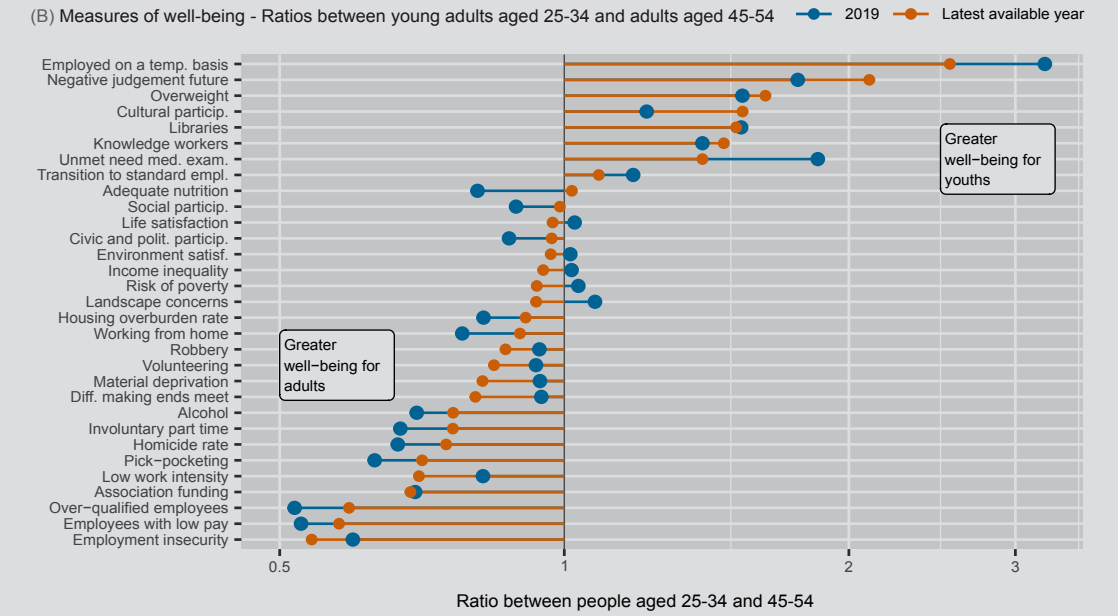
Compared to 2019, the advantage of adults over young adults is unchanged and prevalent; in contrast, the youngest lose the advantage they had over adults. However, most of the gaps between the young and adult age groups narrow, especially between those aged 25-34 and the adults (Figure 13).

The disadvantage of youths compared to adults, already found in 2019, is confirmed in the Work and life balance domain on all seven indicators for the 14-24 age group and two-thirds of the indicators for the 25-34 age group (eight out of 12). Indicators in the Economic well-being

domain also report a more marked advantage of adults, increasing from 2019, on both the youngest (from three to five out of the seven indicators) and young adults (from six to all of the eight indicators). In contrast, both groups of youths were and are better off comparing to adults in the domains of Subjective well-being, Quality of services, and Education and training.

Figure 13. Ratio between people aged 14-24 (A), 25-34 (B) and 45-54 for Bes indicators (a)**. Years 2019 and latest available year (logarithmic scale)**





Fonte: Istat, Bes indicators

(a) The ratio between two groups takes into account the polarity in terms of well-being measures, so the advantage of one group over the other indicates the improvement of well-being associated with a given indicator for that group compared to the reference group (adults). For an interactive version of the figure see https://www.istat.it/it/archivio/283033 (in Italian).

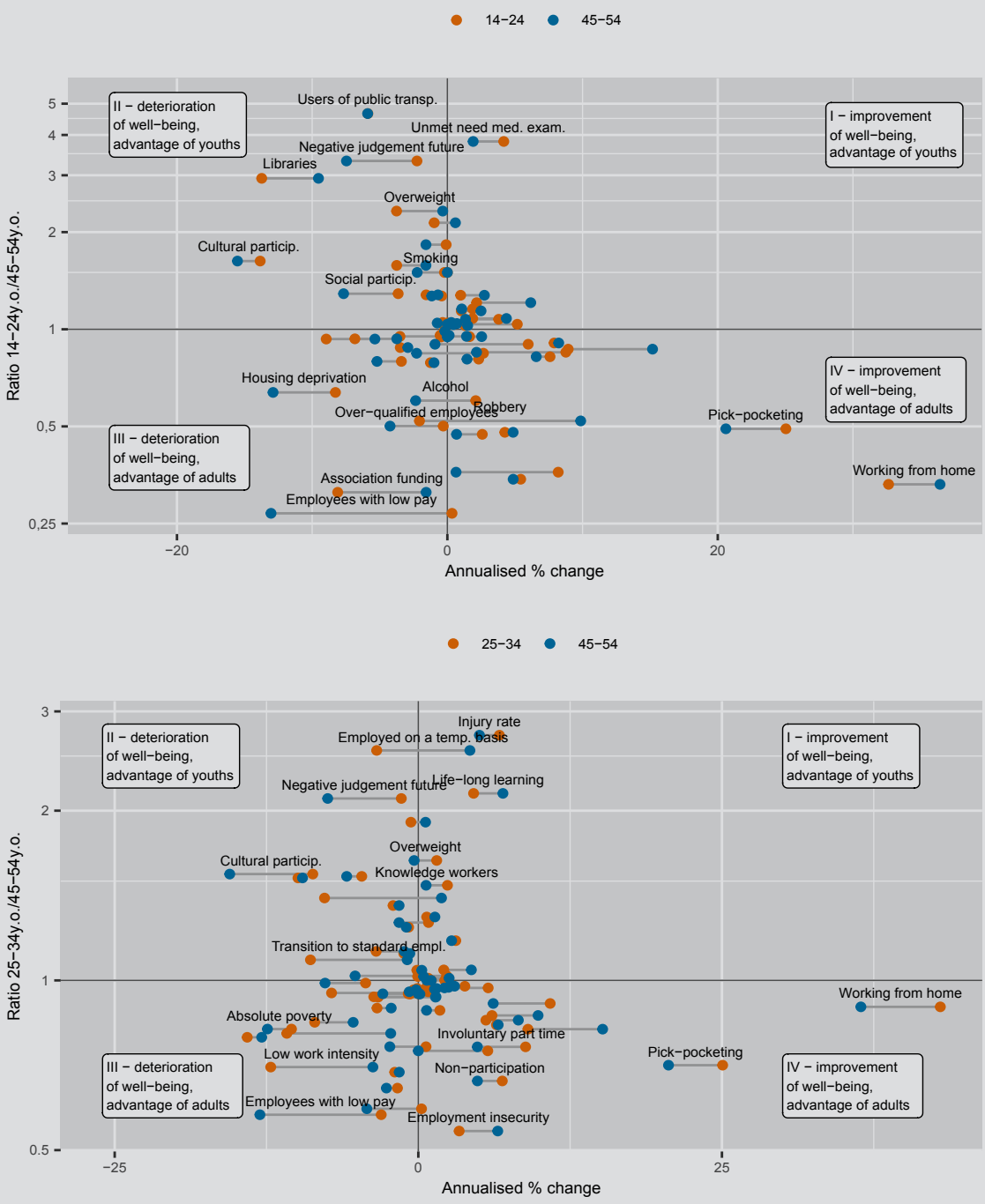
5.3 Variation and imbalance of indicators for youths and adults

In this further analysis, the imbalance found in the latest available year between young people and adults is compared with the change in the indicators over time in order to identify which age groups have contributed the most to any process of convergence or divergence between the generations (Figure 14). The x-axis distinguishes the indicators on the basis of positive changes between 2019 and the latest available year, indicating an improvement in well-being (to the right of the origin), or negative changes, indicating a deterioration in well-being (to the left of the origin). On the other hand, the y-axis, which describes the ratio of young people to adults, distinguishes indicators that are unbalanced in favour of young people (top) or adults (bottom) in the most recent available year[20].

Many labour market indicators show better conditions for adults and a strong intergenerational polarisation (lower part of Figure 14). Compared to 2019, employment rate, non-participation rate, employed from home, involuntary part time, perceived job insecurity, job satisfaction, and injury rate improved concordantly in all three age groups. There was in almost all cases a less strong improvement for adults, which were in a better position, leading to a convergence with the two groups of young people. The ratio of the employment rate of mothers with children under six to childless women worsens simultaneously, relative to 2019, for young adults and adults, but with greater intensity for the latter. Some indicators have discordant variation across ages, among them the term employed and the overeducated: the worsening is evident only among adults for the overeducated and among young adults for the term employed. It follows that even in these cases there is a convergence between the two generations.

20 The space is divided into four quadrants delimited by the value 0 on the x-axis (no change) and the value 1 on the y-axis (balance between the generations). Thus, the first quadrant on the top right includes indicators showing an advantage for young people in terms of well-being and an improvement in well-being; the second quadrant is characterised by a deterioration in well-being and an advantage for young people over adults; the third quadrant groups together indicators with worsening well-being and an advantage for adults; and finally, the fourth quadrant includes indicators with a positive change in well-being and an advantage for adults.

Figure 14. Percentage variation in well-being indicators for people aged 14-34 and 45-54 (x-axis) and ratio between people aged 14-34 and 45-54 in the latest available year (y-axis), by age group. Percentage variations compared to 2019 (logarithmic scale) (a)



Fonte: Istat, Bes indicators

(a) The ratio between two groups takes into account the polarity in terms of well-being measures, so the advantage of one group over the other indicates the improvement of well-being associated with a given indicator for that group compared to the reference group (adults). For an interactive version of the figure see https://www.istat.it/it/archivio/283033 (in Italian).

METHODOLOGICAL ANNEX

In the analysis of territorial differences, for the calculation of the 5 groups of well-being levels (Figure 3) and for the calculation of the relative regional inequality (Figures 4, 5 and 6), some conventions are applied:

- in the case of missing values for the autonomous provinces of Trento or Bolzano (e.g. road accidents mortality, illegal building rate), the data for the region of Trentino-Alto Adige (if available) are considered;
- in the case of missing values for some (but not all) regions (e.g. integrated home assistance service, coastal bathing waters) groups and relative inequality are computed using only regional available data.

In addition, some indicators are excluded from the calculation, namely:

- all indicators that do not have a regional breakdown (e.g. absolute poverty, women in decision-making bodies);
- indicators for which no updates are currently available after 2017 (e.g. physical violence on women, erosion of farmland from urban sprawl);
- indicators that measure a change (e.g. mobility of Italians with tertiary degree);
- indicators with absolute values that cannot be compared between regions because they depend on specific characteristics (demographic, climatic, etc.) of the region (e.g. domestic material consumption, consecutive dry days).

For each indicator available at regional level and for each year t of the time series, relative inequality between regions is measured by the coefficient of variation , which is calculated as the product of 100 and the ratio of the standard deviation to the absolute value of the arithmetic mean of regional values:

$$CV_t = 100 \cdot \frac{\sigma_t}{|\mu_t|} = 100 \cdot \frac{\sqrt{\frac{1}{\#Reg}\sum_{i \in Reg}(x_{i,t} - \mu_t)^2}}{|\mu_t|}$$

where $x_{i,t}$ is the value of the indicator for region i at time t, μ_t is the mean value on i of $x_{i,t}$ and $\sigma_t = \sqrt{\frac{1}{\#Reg}\sum_{i \in Reg}(x_{i,t} - \mu_t)^2}$ is the standard deviation at time t of the $x_{i,t}$'s.

The percentage change in relative inequality is calculated through the annualised rate of convergence between regions (ARC).
The ARC between time t and time t_0 is calculated as $-\left(\left(\frac{CV_t}{CV_{t_0}}\right)^{\frac{1}{t-t_0}} - 1\right) \cdot 100$.

Since higher values of the coefficient of variation indicate greater inequality, the ratio between the CVs is varied by sign in the formula for the annualised rate of convergence, so that positive values of the ARC indicate a desirable development (less inequality), while negative values of the ARC indicate a negative development (more inequality).

When analysing differences between men and women and between young people and adults, the ratios between the two categories of the same indicator (female/male, youths/adults) are calculated to measure imbalances. If the indicator has a negative polarity, the inverse ratio is calculated. In the graphs, these ratios are presented on a logarithmic scale, so that a ratio and its inverse are visually symmetrical with respect to the parity line (ratio=1) and so that different ratios can be compared correctly. For example, if for an indicator A with positive polarity the value for females is twice the value for males, while for an indicator B with positive polarity the value for males is twice the value for females, then the point representing the female/male ratio for indicator A will be to the right of the parity line, the point representing the female/male ratio for indicator B will be to the left of the parity line, but the distances from the parity line will be identical.

Health[1]

The analysis of the indicators of the health domain shows that in 2019, on the eve of the pandemic, most of the indicators (12 indicators out of 15) were at better levels than a decade earlier, with the only exceptions of the indicator monitoring mortality due to dementia and diseases of the nervous system for the elderly, which has been rising almost constantly since 2015, and the daily consumption of at least 4 portions of fruit and/or vegetables, which, although with a fluctuating trend, showed better values in 2010. The mental health indicator was stable[2].

The excess mortality linked to the spread of the pandemic has led to a reduction in life expectancy at birth of over 1 year in 2020, which only partially recovered in 2021 and 2022 (82.5 and 82.6 years of life expectancy compared to 83.2 years in 2019).

Despite the decline in expected life years, the healthy life expectancy at birth has improved in 2020 compared to 2019, due to an increase in the share of people who assessed their health more positively in the context of the pandemic in the face of overall distress.

In 2021, this improvement has been partially counterbalanced and the data for 2022 show an unchanged situation compared to 2021, however healthy life expectancy is still higher than before the COVID-19 pandemic.

The analysis of the mental health indicator, although showing relative stability on average for the population, highlights the sharp decline in psychological well-being experienced in the last two years by young people, especially girls.

The trend in some mortality indicators by cause[3] shows a further worsening in 2020 of the indicator on mortality due to dementia and diseases of the nervous system in the elderly population, as well as the stop in the steady improvement recorded until 2019 of the indicator on avoidable mortality. The latter is likely to be the effect of the pandemic crisis, which in 2020 led to an increase in the total number of deaths from various causes, many of which are included among the avoidable ones.

Road accident mortality among 15-34–year-olds has decreased in 2020 due to the reduced mobility resulting from travel restrictions to contain the spread of the pandemic. A reduction, although more limited, was also confirmed in 2021 when the mobility situation, although normalising, had not yet fully returned to pre-pandemic levels.

As far as population's lifestyles are concerned, after a general improvement observed up to 2019, significant fluctuations are evident from 2020 onwards for almost all indicators and, in most cases, the level in 2022 is worse compared to 2019. In particular, the sedentariness indicator, which has improved in 2020 and 2021 due to a greater prevalence of unstructured physical activity outside gyms and swimming pools, worsens in 2022 and returns to even more critical levels than in 2019.

Overweight and obesity among the adult population, after increasing in 2020, realign to pre-pandemic levels in 2021 and 2022, although the obesity component of the indicator is increasing over the long period.

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1 This chapter was edited by Emanuela Bologna, with contributions from Silvia Bruzzone, Lidia Gargiulo, Simone Navarra, Marilena Pappagallo, Silvia Simeoni, Alessandra Tinto.

2 For this indicator, the long-term comparison was made taking 2016 as the starting year, as no such data was available before then.

3 For these indicators, the latest available data is 2020.

Smoking has been on a constant downward trend in recent years, while the share of people with risky alcohol consumption, after a fluctuating trend, has returned to the pre-pandemic level. The negative trend for the indicator on adequate nutrition persists in 2022, with lower levels comparing to 2019.

Table 1. Health domain indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Life expectancy at birth (in years)* (a)	2010	2022	82.6	Better	Worse	Stable	Worse
Healthy life expectancy at birth (in years) (a)	2010	2022	60.1	Better	Better	Stable	Better
Mental health index (SF36) (average scores)	2016	2022	69.0	Stable	Stable	Stable	Stable
Avoidable mortality (age 0-74) (per 10,000 residents) (b)	2010	2020	16.6	Better	Stable	-	-
Infant mortality rate (per 10,000 residents) (b)	2010	2020	2.5	Better	Stable	-	-
Road accidents mortality rate (15-34 years old) (per 10,000 residents)	2010	2021	0.6	Better	Better	-	-
Cancer mortality rate (20-64 years old) (per 10,000 residents) (b)	2010	2020	8.0	Better	Better	-	-
Mortality rate for dementia and nervous system diseases (65 years and over) (per 10,000 residents) (b)	2010	2020	35.7	Worse	Worse	-	-
Multimorbidity and severe limitations (75 years and over) (%)	2010	2022	49.0	Better	Better	Worse	Stable
Life expectancy without activity limitations at 65 years of age (in years) (a)	2010	2022	10.0	Better	Worse	Better	Better
Overweight or obesity (standardised rates)	2010	2022	44.5	Better	Better	Stable	Stable
Smoking (standardised rates)	2010	2022	20.2	Better	Worse	Worse	Worse
Alcohol consumption (standardised rates)	2010	2022	15.5	Better	Better	Worse	Better
Sedentariness (standardised rates)	2010	2022	36.3	Better	Better	Worse	Worse
Adequate nutrition (standardised rates)	2010	2022	16.8	Worse	Stable	Worse	Worse

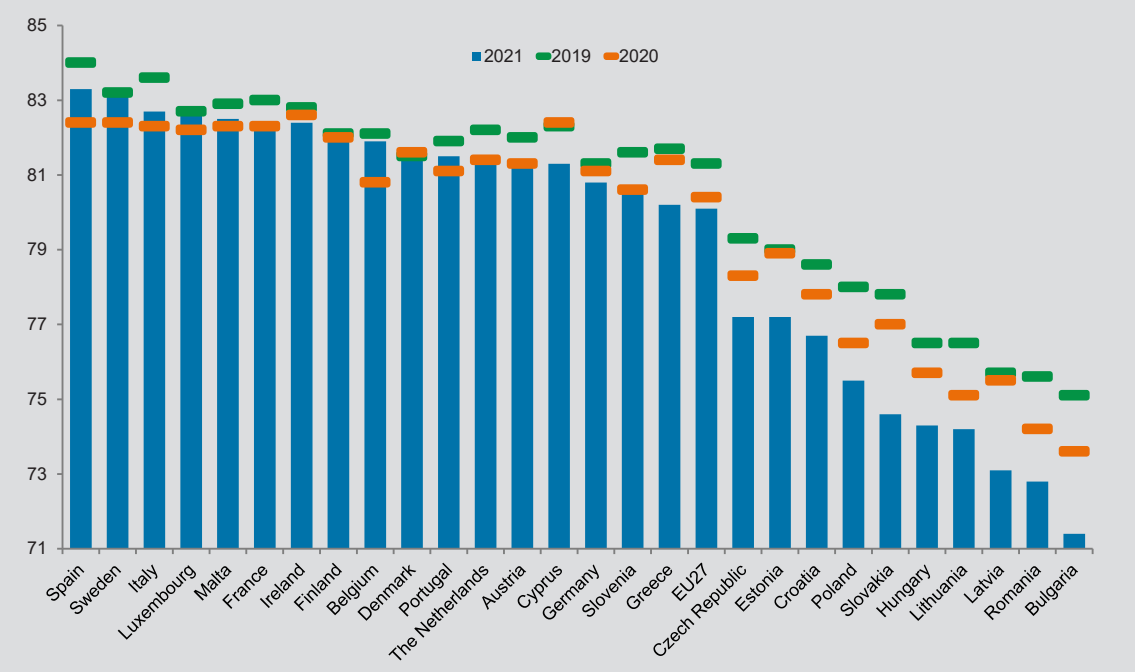
Better Worse Stable - Not available

* For this indicator, the difference in points is taken into account in the calculation of the change.
(a) 2022 data is provisional.
(b) 2021 and 2022 data are not available, change calculated between 2019 and 2020.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is less than -1% it is considered negative (red). In the range -1 and +1% the variation is considered stable (yellow). The polarity of the indicator has been taken into account in the calculation of the variations, to consider the improvement or worsening in terms of well-being.

In 2022, life expectancy at birth remains below the pre-pandemic level

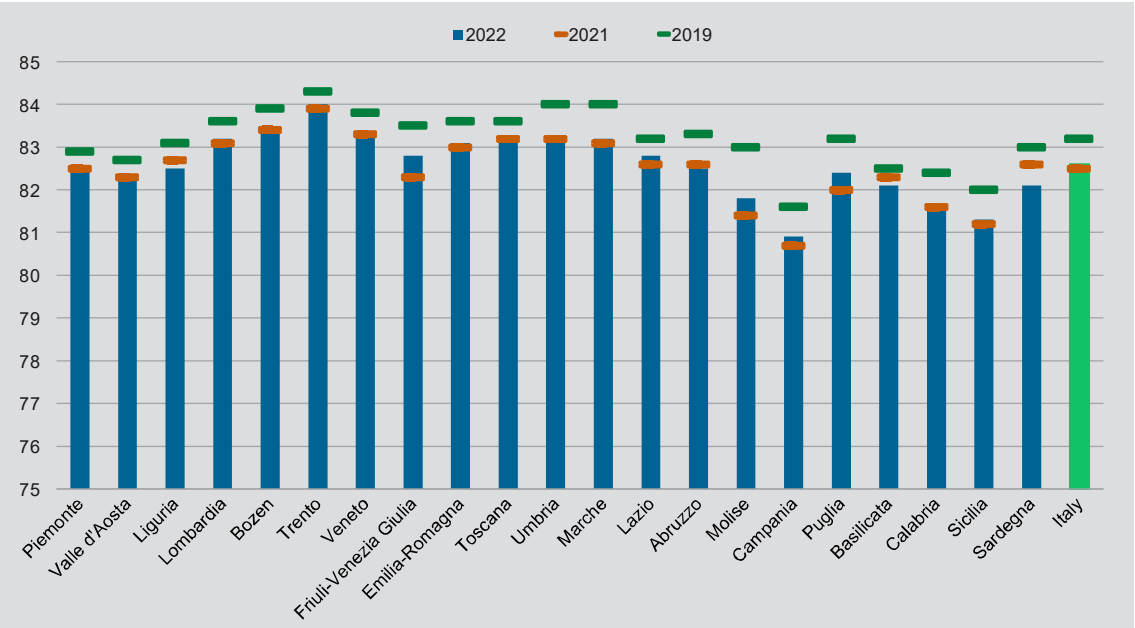
The excess mortality linked to the spread of the pandemic led in 2020 to a reduction in life expectancy at birth of more than a year (82.1 years compared to 83.2 in 2019), only partially recovered in 2021 (82.5 years) and in 2022 (82.6).
In the European context, our country has regained in 2021 in only one year the positions lost in 2020 due to the considerable excess of mortality determined by the pandemic shock: in 2021, Italy is again in third place in the ranking of EU countries in terms of average life expectancy, after Spain and Sweden (Figure 1).
The territorial analysis highlights how, in 2022, no region has returned to the average life expectancy levels of 2019; only a few regions have largely recovered the years of life lost during the two-year pandemic period. Overall, the variations recorded between 2020 and 2022 bring little change in the geography of life expectancy, consolidating the well-known territorial inequalities that see Campania with the lowest life expectancy at birth (80.9 years), almost three years less than Trento (84.0 years) (Figure 2).

Figure 1. Life expectancy at birth in EU27 countries. Years 2019-2021. In years



Source: Eurostat

Figure 2. Life expectancy at birth by region. Years 2019, 2021 and 2022 (a). In years



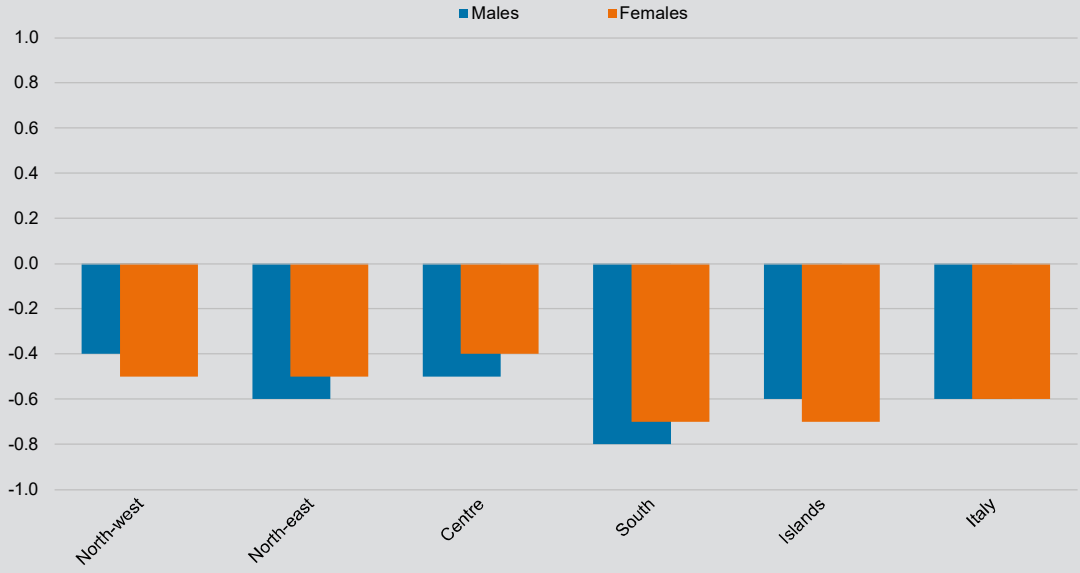
Source: Istat, Mortality tables of the Italian population
(a) The data for 2022 is a provisional estimate.

In 2022 the gender gap in life expectancy at birth narrows down to to its lowest level ever, as in 2019

The analysis by gender shows that the excess mortality in the two pandemic years affected men more than women, but the overall loss of life years compared to 2019 is estimated at 0.6 years

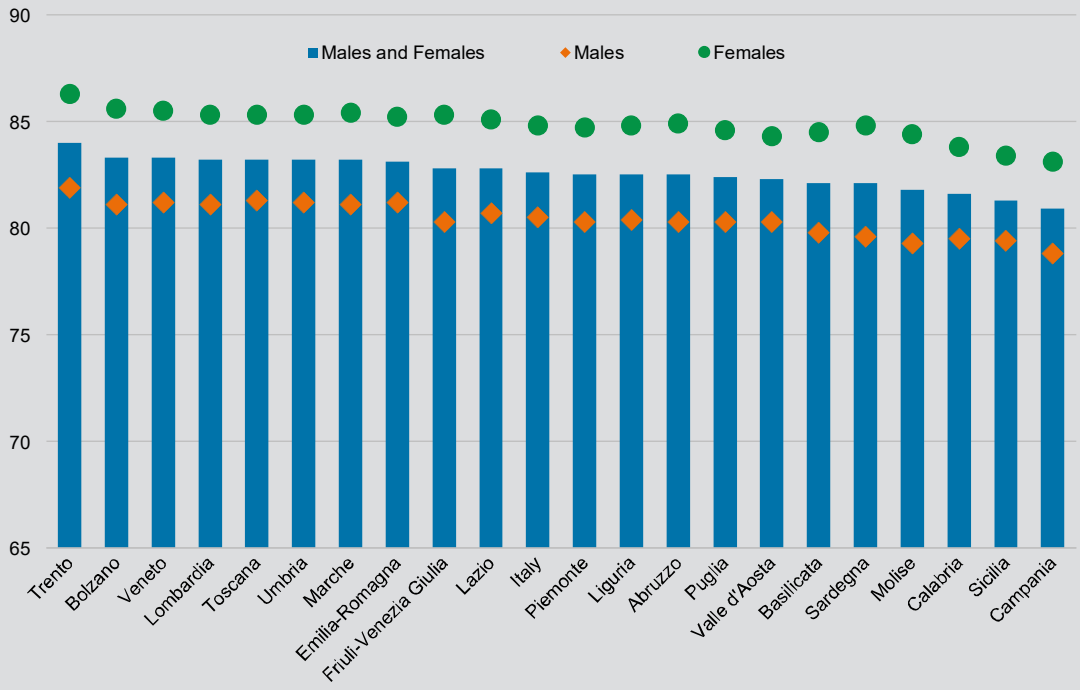
for both genders. In 2022, the gender gap in life expectancy at birth returns to the low peak of 4.3 years, first observed in 2019, after a slight increase in 2020 (4.7 years) and 2021 (4.5).
On the territory, the effects of the two pandemic years differ with respect to gender. In the comparison with 2019, men experienced greater losses than women in the South (-0.8 years, vs -0.7 of women), in the North-east (-0.6 vs -0.5 of women) and in the Centre (-0.5 vs -0.4), while they were greater for women in the Islands (-0.7 vs -0.6 of men) and in the North-west (-0.5 vs -0.4) (Figure 3).

Figure 3. Life expectancy at birth by geographic area and gender. Differences 2022-2019 (a). In years



Source: Istat, Mortality tables of the Italian population
(a) The data for 2022 is a provisional estimate.

Figure 4. Life expectancy at birth by region and gender. Year 2022 (a). In years



Source: Istat, Mortality tables of the Italian population
(a) The data for 2022 is a provisional estimate.

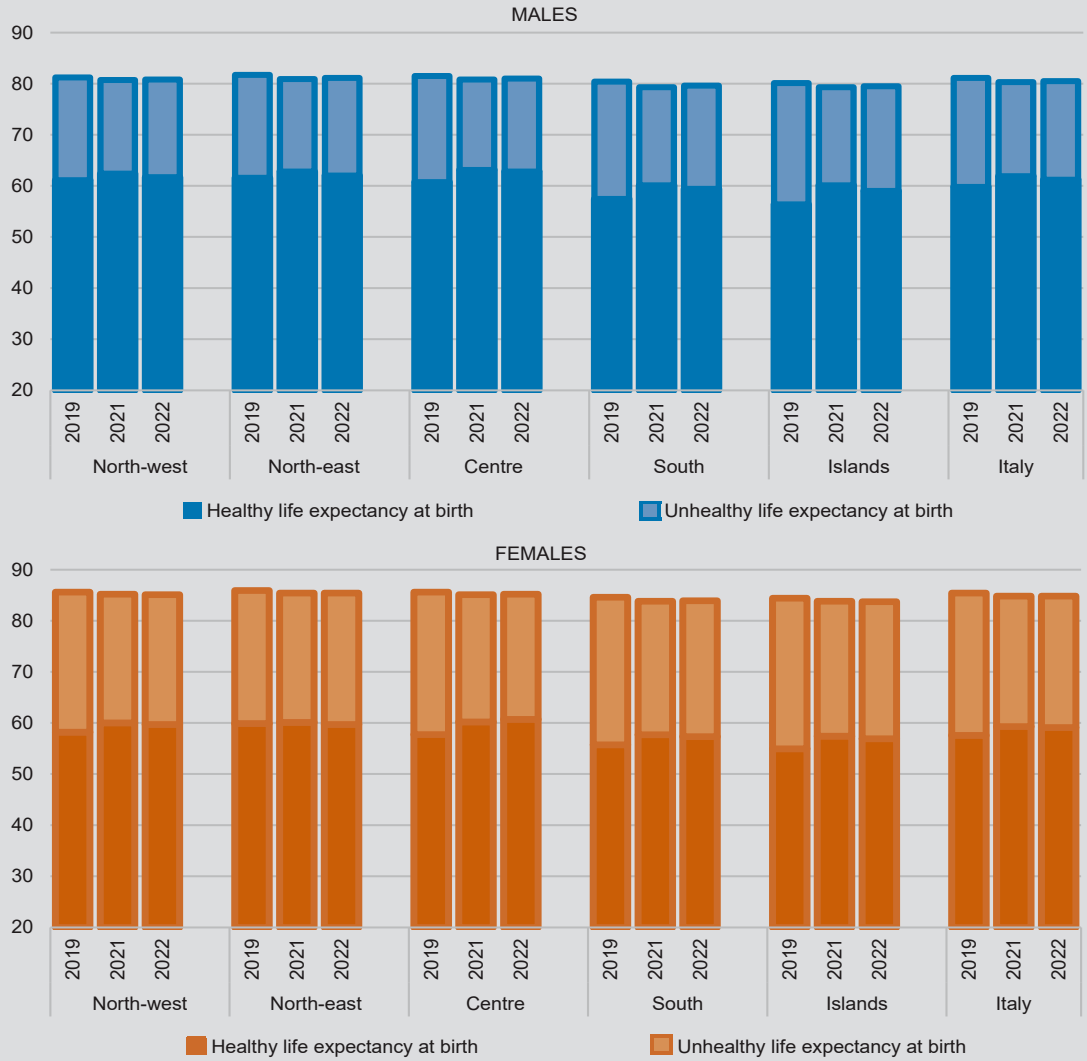
Healthy life expectancy in 2022 is equal to 60.1 years

In 2022, healthy life expectancy is estimated at 60.1 years. The trend of this indicator showed a breaking point after the pandemic due to the opposite trends of the two components of the indicator (life expectancy and prevalence of perceived good health), registering higher values in both 2020 and 2021 than in 2019 (it was 58.6 years). The trend is due to the peak increase in the share of people who has assessed their health positively in the context of the pandemic. The gender gap in favour of men remains, with more than two years difference (61.2 and 59.1 for men and women, respectively).

Stable gender differences in healthy life expectancy

Compared to 2019, for both genders, the period left to live with no good health decreases by about 2 years. Comparing the different geographic areas, Figure 5 shows the greatest gains in terms of average life expectancy years in good health for both men and women living in

Figure 5. Life expectancy at birth and healthy life expectancy at birth by geographic area and gender. Years 2019, 2021 and 2022 (a) In years



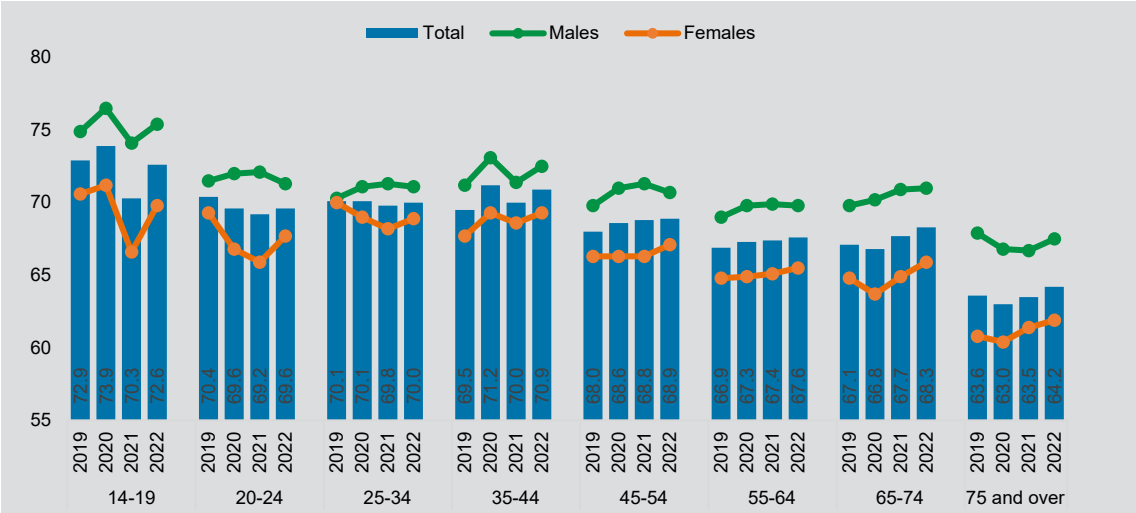
Source: Istat, Mortality tables of the Italian population and Survey on Aspects of Daily Life.
(a) The data for 2022 is a provisional estimate.

the Centre and the South, at the expense of those remaining to live with no good health. In the Centre, for example, women gain as many as 3 years in good health compared to 2019 and men 2.1, so that for the latter as many as 77.5% of the expected average life years will be lived in good health (the largest share estimated in 2022) (Figure 5).

Psychological well-being improves but critical issues remain among younger people

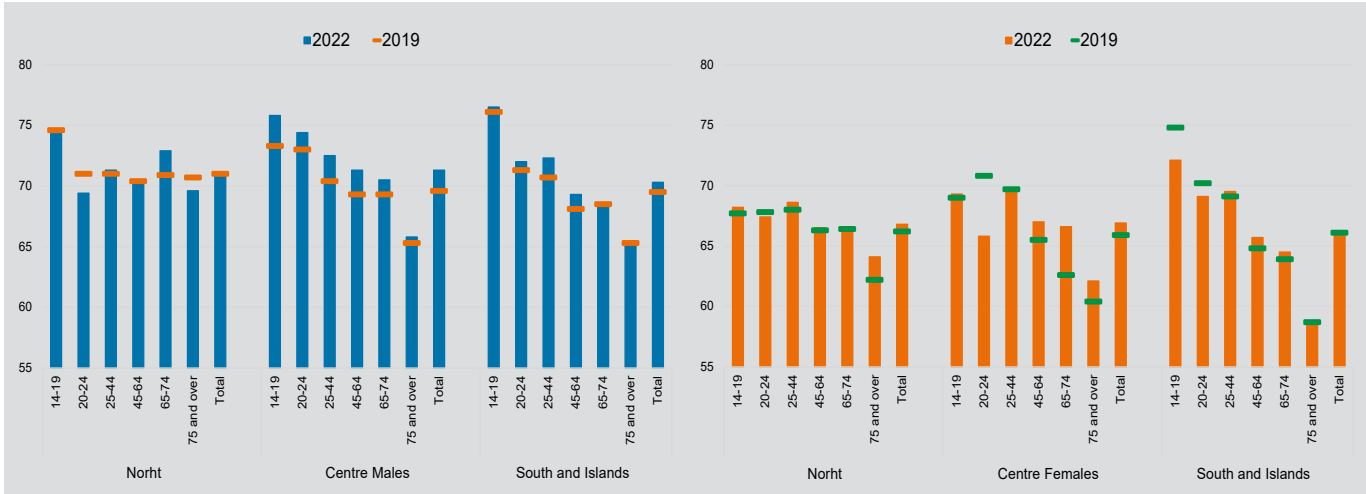
In 2022, the mental health index was 69.0, a slight improvement on both 2021 and 2019 (it was 68.4 in both years). The analysis by age highlights, however, the strong contraction in terms of psychological well-being observed in the last two years among the youngest, especially girls, among whom the indicator remains at worse values than in the pre-COVID period, both in the 14-19 age group and, even more critically, in the 20-24 age group (Figure 6).

Figure 6. Mental health index for persons aged 14 and over by gender and age group. Years 2019 - 2022. Average scores



Source: Istat, Survey on Aspects of Daily Life

Figure 7. Mental health index for persons aged 14 and over by geographic area, gender and age group. Years 2019 and 2022. Average scores

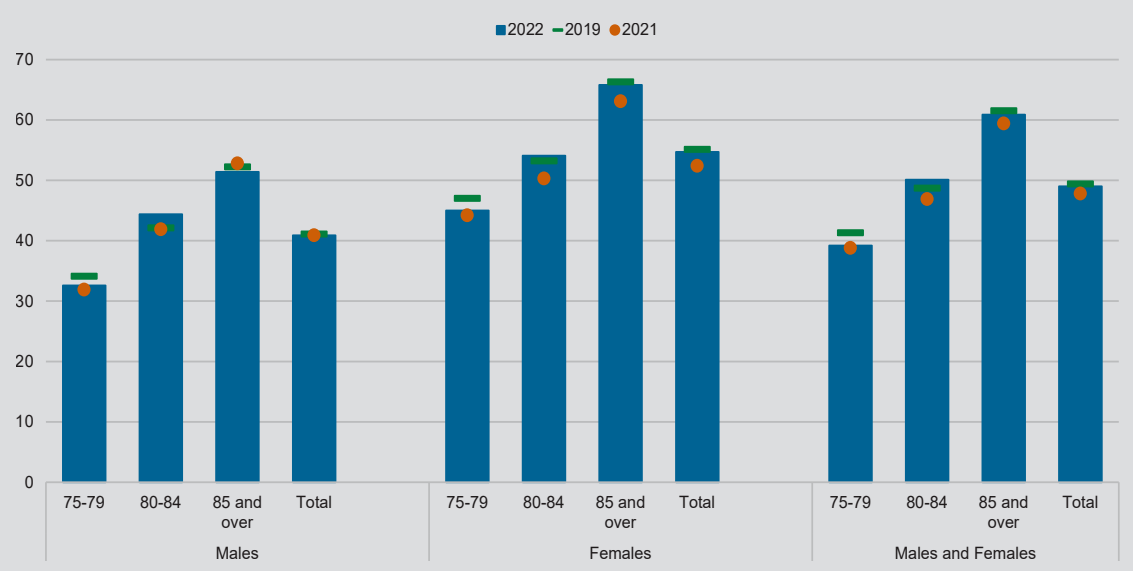


Source: Istat, Survey on Aspects of Daily Life

Almost half of the elderly aged 75 and over are in bad health, with a higher proportion of women

The analysis of the condition of multicronicity and severe limitations highlights that in 2022, 49% of the population aged 75 and over suffers from three or more chronic diseases or has severe limitations in performing the activities that people usually perform (Figure 8). The proportion of the elderly in a more fragile health condition is higher among women (54.7% compared to 40.9% of men) and increases progressively as age increases, reaching 60.9% among people aged 85 and over (compared to 39.2% among people aged 75-79).

Figure 8. Persons aged 75 and over with three or more chronic conditions and/or severe limitations that last for at least six months in carrying out the activities that people usually do, by gender and age groups. Years 2019, 2021 and 2022. Percentage values

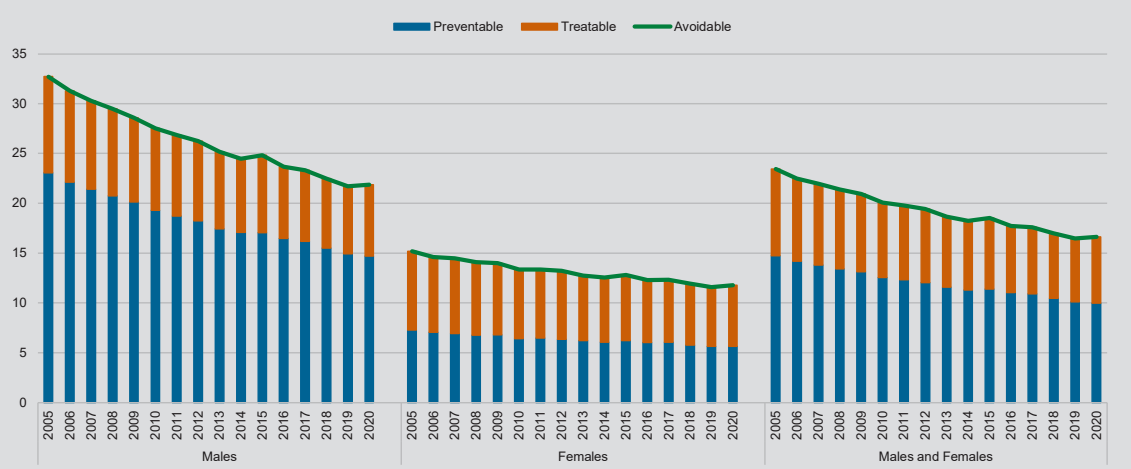


Source: Istat, Survey on Aspects of Daily Life

Increasing mortality from dementia and diseases of the nervous system

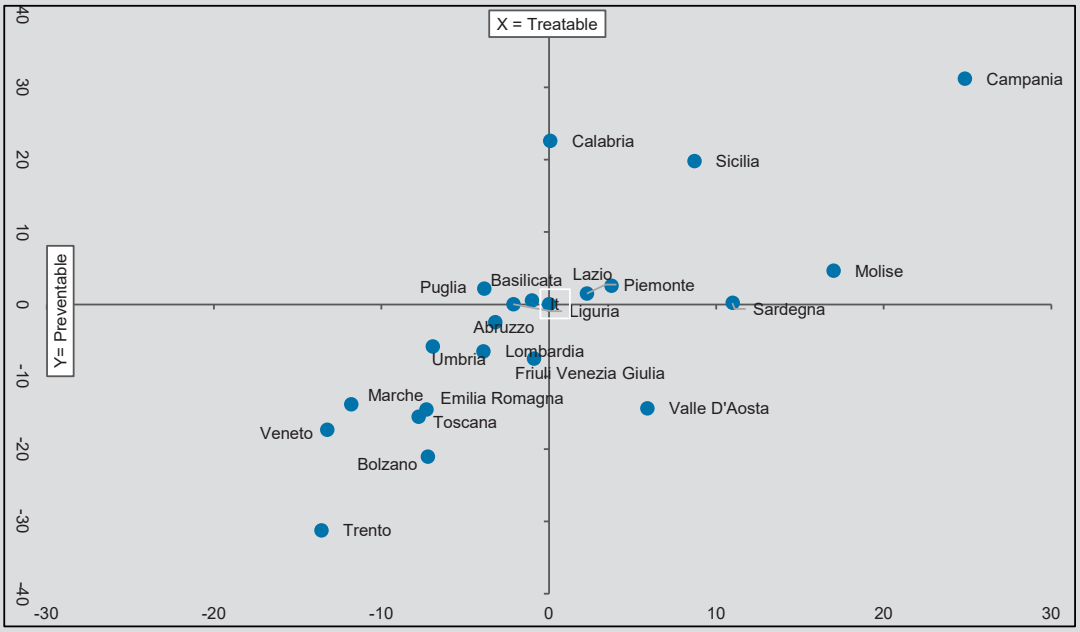
Among the indicators of mortality by cause, in 2020 mortality from dementia and diseases of the nervous system in the elderly population has increased (from 34.0 per 10,000 inhabitants in 2019 to 35.7 in 2020), confirming the negative trend already recorded in previous years. There is also a halt to the progressive improvement observed up to 2019 in the avoidable mortality indicator (it was 15.5 per 10 thousand residents in 2019 and stands at 16.5 in 2020) (Figure 9).

Figure 9. Standardised rates of avoidable mortality (preventable and treatable) of persons aged 0-74 years by gender. Years 2005-2020. Per 10,000 residents



Source: Istat, For deaths: Survey of deaths and causes of death. For population: Survey of municipal resident population by sex, year of birth and marital status

Figure 10. Standardised rates of avoidable mortality (preventable and treatable) of persons aged 0-74 years by region. Year 2020. Percentage changes compared to national average scores



Source: Istat, for deaths: Survey of deaths and causes of death. For population: Survey of municipal resident population by sex, year of birth and marital status

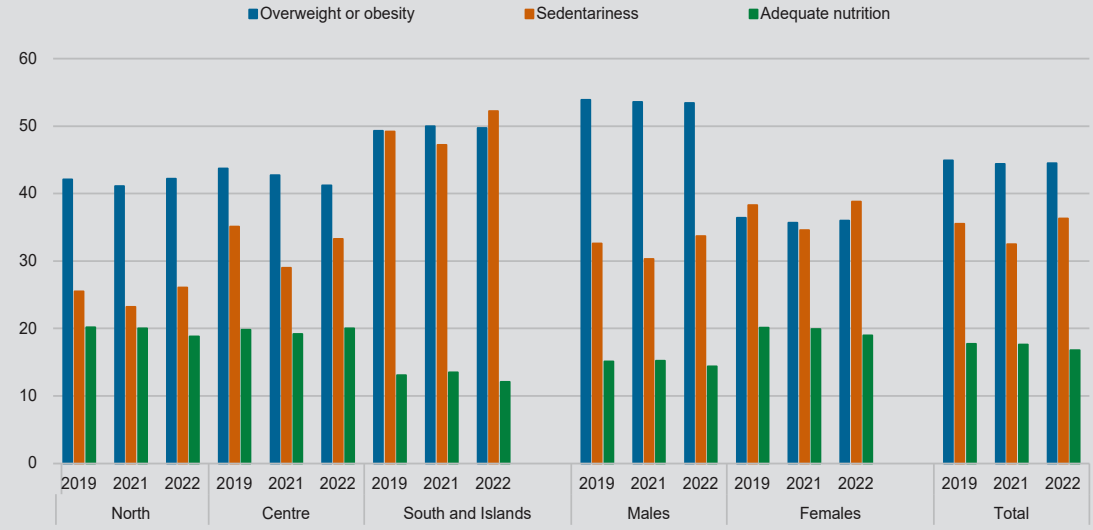
In 2021, the mortality rate for road traffic accidents among 15-34-year-olds is confirmed to decrease compared to 2019

The reduction in death from road accidents among 15-34-year-olds, already experienced in 2020 (0.5) due to the travel restrictions to contain the spread of the pandemic, is confirmed in 2021 (with the indicator at 0.6 per 10,000 residents, compared to 0.7 per 10,000 residents in 2013-2019).

Sedentary lifestyle increases, excess body weight is stable, adequate consumption of fruit and vegetables decreases

In 2022, the proportion of sedentary people, i.e. those who say they do not engage in sport or physical activity in their free time, is 36.3%. This indicator shows a significant worsening compared to 2021 (when it was 32.5%) and is in line with the levels recorded in the pre-pandemic two-year period 2018-2019.
The overweight or obesity rate among the adult population, which increased in 2020 (when it was 45.9%), realigns in both 2021 and 2022 to pre-pandemic levels (with values of 44.4 and 44.5%, respectively). However, the obesity component of the indicator remains on the rise over the long term.
In 2022, the share of the population aged three years and over who consumed at least four portions of fruit and/or vegetables daily is 16.8%, steadily decreasing in recent years (it was close to 20% in 2015-2018).

Figure 11. Standardised proportion of sedentary people aged 14 years and over, standardised proportion of people aged 18 years and over who are overweight/obese, and standardised proportion of people aged 3 years and over who consume at least 4 portions of fruit and/or vegetables daily by geographic area and gender. Years 2019, 2021 and 2022. Percentage values



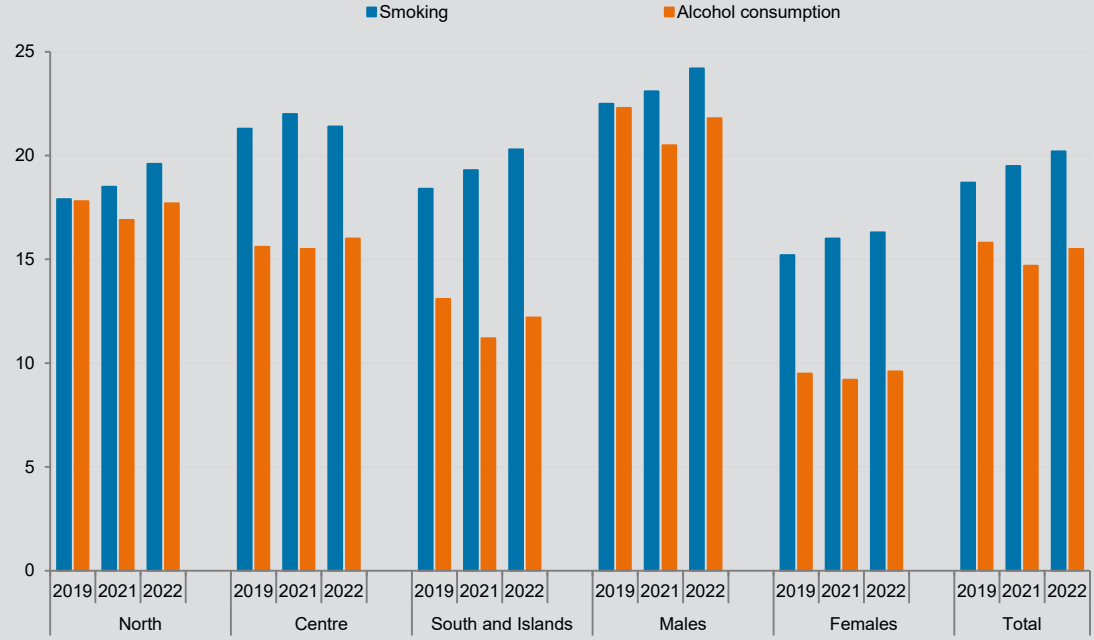
Source: Istat, Survey on Aspects of Daily Life

Smoking habits and risky alcohol consumption on the rise

In 2022, the percentage of smokers aged 14 and over is 20.2%, increasing compared to 2019 (18.7%). Smoking is more widespread among men than women (24.2% vs. 16.3%). Over time, the increase in the number of women smokers has lead to a reduction in this gap (it was 11.2 percentage points in 2010 and it reaches 7.9 percentage points in 2022). The increase observed between 2021 and 2022, however, mainly concerns men (+1.1 percentage points compared to +0.3 for women), thus widening the gender gap once again.
In 2022, risky drinking affected 15.5% of the population aged 14 and over. It thus returns to

the level of 2019 (when it was 15.8%), following the increase of about 1 percentage point between 2019 and 2020 and the subsequent decrease in 2021 (-2 percentage points). The increase in the share of at-risk drinkers observed in 2022 relates exclusively to the increase in the binge-drinking habit, which grew mainly among young people and adults aged 14-44 (from 10.4 % in 2021 to 11.7 % in 2022).

Figure 12. Standardised proportion of people aged 14 and over who report currently smoking and standardised proportion of people aged 14 and over who have at least one risk behaviour in alcohol consumption by geographic area and gender. Years 2019, 2021 and 2022. Percentage values



Source: Istat, Survey on Aspects of Daily Life

Indicators

1. **Life expectancy at birth:** Life expectancy expresses the average number of years that a child born in a given calendar year can expect to live if exposed during his whole life to the risks of death observed in the same year at different ages.
   Source: Istat - Life tables of Italian population.
2. **Healthy life expectancy at birth:** It expresses the average number of years that a child born in a given calendar year can expect to live in good health on the assumption that the risks of death and perceived health conditions remain constant. It is built using the prevalence of individuals who respond positively ("good" or "very good") to the question on perceived health.
   Source: Istat - Life tables of Italian population and Survey on Aspects of daily life
3. **Mental health index (SF36):** The mental health index is a measure of psychological distress obtained from the synthesis of the scores obtained by each individual of 14 years and over to 5 questions from the SF36 questionnaire (36-Item Short Form Survey). It includes one or more items from each of the four major mental health dimensions (anxiety, depression, loss of behavioural or emotional control, and psychological well-being). The final score is a standardised measure, which varies between 0 and 100, with better psychological well-being corresponding to higher scores.
   Source: Istat - Survey on Aspects of daily life
4. **Avoidable mortality (age 0-74):** Deaths of persons aged 0-74, due to causes identified as treatable (in the light of medical knowledge and technology at the time of death, most deaths from that cause could be avoided through optimal quality health care) or preventable (in the light of understanding of the determinants of health at the time of death, most deaths from that cause could be avoided by public health interventions in the broadest sense). The definition of the lists of treatable and preventable causes of mortality is based on a joint OECD/Eurostat work, revised in November 2019. Standardised rates with European 2013 population aged 0-74, per 10,000 residents.
   Source: Istat - Vital register on deaths and causes of death
5. **Infant mortality rate:** Deaths during the first year of life per 10,000 born alive.
   Source: Istat - For deaths: Vital register on deaths and causes of death. For live births: Migration and calculation of yearly resident population
6. **Road accidents mortality rate (15-34 years old):** Mortality rate in road accidents by five year age groups for people aged 15-34 years, standardised by the European 2013 population of the same age groups.
   Source: Istat - For deaths: Survey on road accidents resulting in death or injury. For population: Survey on the municipal resident population by sex, year of birth and marital status
7. **Age-standardised cancer mortality rate (20-64 years old):** Mortality rate for cancer (initial cause) by five year age groups for people aged 20-64 years, standardised by the European 2013 population in the same age groups.
   Source: Istat - For deaths: Istat, Survey on deaths and causes of death. For population: Survey on the municipal resident population
8. **Age-standardised mortality rate for dementia and nervous system diseases (65 years and over):** Mortality rate for nervous system diseases and psychical and behavioral disorders (initial cause) by five year age groups for people aged 65 years and over, standardised by the European 2013 population in the same age groups.
   Source: Istat - For deaths: Istat, Vital register on deaths and causes of death. For population: Survey on the municipal resident population
9. **Multimorbidity and severe limitations (75 years and over):** Percentage of people aged 75 and over who declare to be affected by 3 or more chronic conditions and/or to be severely limited, for at least the past 6 months, because of a health problem in activities people usually do.
   Source: Istat - Survey on Aspects of daily life
10. **Life expectancy without activity limitations at 65 years of age:** It expresses the average number of years that a person aged 65 can expect to live without suffering limitations in activities due to health problems. It is based on the prevalence of individuals who answer to be limited, for at least the past 6 months, because of a health problem in activities people usually do.
    Source: Istat - Life tables of Italian population and Survey on Aspects of daily life
11. **Overweight or obesity (standardised rates):** The indicator refers to the Body Mass Index (BMI), which classifies people as overweight (25 <= BMI <30) or obese (BMI> 30) as classified by the World Health Organization (WHO). The indicator is standardised using the 2013 European standard population.
    Source: Istat - Survey on Aspects of daily life
12. **Smoking (standardised rates):** Proportion of people aged 14 and over who report current smoking. The indicator is standardised using the 2013 European standard population.
    Source: Istat - Survey on Aspects of daily life
13. **Alcohol consumption (standardised rates):** Proportion of people aged 14 and over who are at-risk consumers of alcohol. Taking into account the definitions adopted by the WHO and the recommendations from INRAN, in agreement with the National Institute of Health, are identified as "at-risk consumers" all those individuals who have at least one risk behaviour, exceeding the daily consumption of alcohol (according to specific thresholds for sex and age) or concentrating on a single occasion of consumption the intake of 6 or more units of any alcoholic drink (binge drinking). The indicator is standardised using the 2013 European standard population.
    Source: Istat - Survey on Aspects of daily life
14. **Sedentariness (standardised rates):** Proportion of people aged 14 and over referring not to play sports neither continuously nor intermittently during their spare time, and people aged 14 and over referring not to perform any physical activity, such as walking at least 2 km, cycling, swimming, etc. The indicator is standardised using the 2013 European standard population.
    Source: Istat - Survey on Aspects of daily life
15. **Adequate nutrition (standardised rates):** Percentage of people aged 3 years and over who say they take every day at least 4 portions of fruit and vegetables. The indicator is standardised using the 2013 European standard population.
    Source: Istat - Survey on Aspects of daily life

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Life expectancy at birth (a)	Healthy life expectancy at birth (a)	Mental health index (SF36) (b)	Avoidable mortality (age 0-74) (c)	Infant mortality rate (d)	Road accidents mortality rate (15-34 years old) (e)	Age-standardised cancer mortality rate (20-64 years old) (f)
	2022 (*)	2022 (*)	2022	2020	2020	2021	2020
Piemonte	82.5	60.8	68.5	16.9	2.1	0.5	7.9
Valle d'Aosta/Vallée d'Aoste	82.3	60.9	68.0	16.3	-	-	6.2
Liguria	82.5	59.1	68.6	16.4	2.1	0.5	8.0
Lombardia	83.2	61.0	69.2	15.8	2.4	0.4	7.7
Trentino-Alto Adige/Südtirol	83.7	66.2	71.9	13.8	2.2	0.5	6.5
Bolzano/Bozen	*83.3*	*69.3*	*72.8*	*14.5*	*2.7*	*0.6*	*6.9*
Trento	*84.0*	*63.2*	*70.9*	*13.2*	*1.5*	*0.4*	*6.1*
Veneto	83.3	60.5	68.5	14.1	1.9	0.9	7.0
Friuli-Venezia Giulia	82.8	60.4	68.8	16.0	2.0	0.8	7.3
Emilia-Romagna	83.1	59.9	69.6	14.9	1.7	0.7	7.3
Toscana	83.2	62.5	68.5	14.8	1.8	0.5	7.7
Umbria	83.2	62.5	69.4	15.5	3.2	0.5	7.1
Marche	83.2	60.2	66.9	14.5	1.9	0.3	7.2
Lazio	82.8	61.4	70.6	17.2	2.6	0.7	8.1
Abruzzo	82.5	61.6	68.3	16.1	2.8	0.9	7.9
Molise	81.8	58.2	67.8	18.6	2.3	0.7	8.6
Campania	80.9	59.0	67.7	21.2	3.3	0.6	9.8
Puglia	82.4	58.6	68.4	16.4	3.1	0.8	8.3
Basilicata	82.1	57.9	67.8	16.6	2.3	1.0	8.5
Calabria	81.6	53.1	69.7	18.1	3.9	0.6	8.0
Sicilia	81.3	57.8	68.6	18.8	3.3	0.8	8.6
Sardegna	82.1	58.1	71.0	17.7	1.3	0.7	9.4
North	83.0	60.7	69.1	15.5	2.1	0.6	7.5
North-west	82.9	60.7	69.0	16.2	2.3	0.4	7.8
North-east	83.2	60.8	69.3	14.6	1.9	0.7	7.1
Centre	83.0	61.7	69.4	15.9	2.3	0.6	7.8
South and Islands	81.7	58.2	68.6	18.5	3.2	0.7	8.8
South	81.7	58.3	68.3	18.6	3.2	0.7	8.8
Islands	81.6	57.9	69.2	18.5	3.0	0.8	8.8
Italy	**82.6**	**60.1**	**69.0**	**16.6**	**2.5**	**0.6**	**8.0**

(a) Average number of years;
(b) Standardised mean values;
(c) Standardised rates per 10,000 residents;
(d) Standardised rates per 1,000 resident live births;
(e) Standardised rates per 10,000 residents aged 15-34;
(f) Standardised rates per 10,000 residents aged 20-64;
(g) Standardised rates per 10,000 residents aged 65 and over;

Age-standardised mortality rate for dementia and nervous system diseases (65 years and over) (g)	Multimorbidity and severe limitations (75 years and over) (h)	Life expectancy without activity limitations at 65 years of age (a)	Overweight or obesity (i)	Smoking (l)	Alcohol consumption (l)	Sedentariness (l)	Adequate nutrition (m)
2020	2022	2022 (*)	2022	2022	2022	2022	2022
39.7	41.9	10.7	42.4	19.9	18.1	29.5	22.2
48.6	38.8	10.4	40.2	17.0	23.5	20.3	14.0
37.7	48.5	10.5	41.4	23.1	17.4	29.1	17.2
43.5	45.3	11.4	41.2	19.7	16.8	25.6	17.9
38.6	34.1	12.3	40.1	16.7	20.3	15.9	19.1
43.3	*27.9*	*12.4*	*38.8*	*16.4*	*20.8*	*16.5*	*15.5*
34.6	*40.4*	*12.2*	*41.5*	*16.9*	*19.8*	*15.4*	*22.6*
40.5	42.2	11.0	42.4	16.3	19.6	25.8	16.4
33.6	43.4	11.3	44.3	20.2	21.9	21.6	18.5
35.1	47.9	10.6	44.7	22.4	16.2	26.7	21.4
34.6	42.7	11.6	42.4	21.4	16.8	27.6	19.0
33.1	52.2	10.4	44.2	24.8	16.9	29.0	23.6
38.2	51.7	10.0	43.5	22.1	19.3	30.4	18.9
29.8	49.5	10.0	39.7	20.8	14.5	38.4	20.5
34.3	50.5	9.6	45.9	19.9	15.3	35.8	12.0
27.4	49.1	9.3	51.4	22.4	18.7	43.9	12.5
26.3	66.5	7.5	54.1	20.2	11.6	53.5	9.6
31.6	50.1	9.3	49.8	20.1	12.2	53.4	12.7
27.0	56.9	7.9	52.8	20.7	14.9	52.5	7.9
24.5	55.5	9.2	47.4	17.9	13.5	58.2	13.4
31.1	58.8	7.4	49.2	22.5	9.2	57.7	12.1
44.2	47.8	8.8	40.4	17.4	17.7	35.4	19.8
39.9	44.4	11.0	42.2	19.6	17.7	26.1	18.8
41.7	44.6	11.1	41.5	20.0	17.2	27.0	18.8
37.4	44.0	11.0	43.2	19.0	18.5	24.9	18.8
33.0	47.8	10.5	41.2	21.4	16.0	33.3	20.0
30.7	56.8	8.3	49.7	20.3	12.2	52.2	12.1
28.7	57.3	8.6	51.1	19.8	12.6	52.2	11.2
34.7	55.8	7.8	46.8	21.2	11.3	52.0	14.0
35.7	**49.0**	**10.0**	**44.5**	**20.2**	**15.5**	**36.3**	**16.8**

(h) Per 100 persons aged 75 years and over;
(i) Standardised rates per 100 persons aged 18 and over;
(l) Standardised rates per 100 persons aged 14 and over;
(m) Standardised rates per 100 persons aged 3 and over.
(*) Provisional data.

2. Education and training[1]

The educational attainment of the population, as well as participation in education and training, showed some improvement and some stability in 2019 compared to previous years. In particular, there was an increase in the number of children attending nursery school and an increase in the share of graduates in STEM disciplines; at the same time, there was a decrease in the share of 18-24-year-olds who had dropped out of the education and training system and in the share of NEETs. The percentage of 25-64-year-olds with at least upper-secondary education, the percentage of 30-34-year-olds with tertiary education and participation in lifelong learning remained stable, although at lower levels comparing to the EU27 average.

The pandemic caused a setback in almost all indicators in this domain, especially in 2020. In 2021, there were first signs of recovery, which were consolidated for some indicators in 2022. In 2021, 29.5% of 0-2-year-olds are enrolled in nursery school (28% in 2019); 9.9% of 25-64-year-olds participate in lifelong learning (7.1% in 2019) and 12.7% of 18-24-year-olds who are no longer in education or training (13.3% in 2019). There are also positive signs for 25-64-year-olds with at least a secondary education in 2022, 63.0% (62.3% in 2019). The share of young people with a tertiary degree (27.4% in 2022), the share of people who have participated in 2 or more cultural activities outside the home (23.1% in 2022) and the share of people who use libraries (10.2% in 2022) increase in 2022, but fail to return to 2019 levels.

Of particular concern, however, is the indicator on reading books and newspapers, which shows a continuous decline since 2010: in 2022, 35.9% of people aged 6 and over read 4 or more books a year and/or read newspapers 3 or more times a week, compared with 36.6% in 2021, 38.0% in 2019 and 44.4% in 2010 (Table 1).

Table 1. Education and training indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Children aged 0-2 years enrolled in nursery school (%)	2010	2021	29.5	●	●	-	-
Participation in the school system of children aged 4-5 (%)	2013	2021	92.8	●	●	-	-
People with at least upper secondary education level (25-64 years old) (%)	2018	2022	63.0	●	●	●	●
People having completed tertiary education (30-34 years old) (%)	2018	2022	27.4	●	●	●	●
First-time entry rate to university by cohort of upper secondary graduates (%)	2013	2020	51.9	●	-	-	-
Early leavers from education and training (%)	2018	2022	11.5	●	●	●	●
People not in education, employment, or training (NEET) (%)	2018	2022	19.0	●	●	●	●
Participation in life-long learning (%)	2018	2022	9.6	●	●	●	●
Inadequate level of literacy (students in grade 8) (%)	2018	2022	38.6	●	●	●	●
Inadequate level of numeracy (students in grade 8) (%)	2018	2022	43.6	●	●	●	●
Individuals with basic or above basic overall digital skills (%) (a)	2021	2021	45.7	-	-	-	
STEM graduates (%)	2012	2020	1.65	●	-	-	-
Cultural participation outside the home (%)	2010	2022	23.1	●	●	●	●
Reading books and newspapers (%)	2010	2022	35.9	●	●	●	●
Use of libraries (%)	2019	2022	10.2	-	●	●	●

● Better ● Worse ● Stable - Not available

(a) No comparisons are available for the indicator on Individuals with basic or above basic overall digital skills.

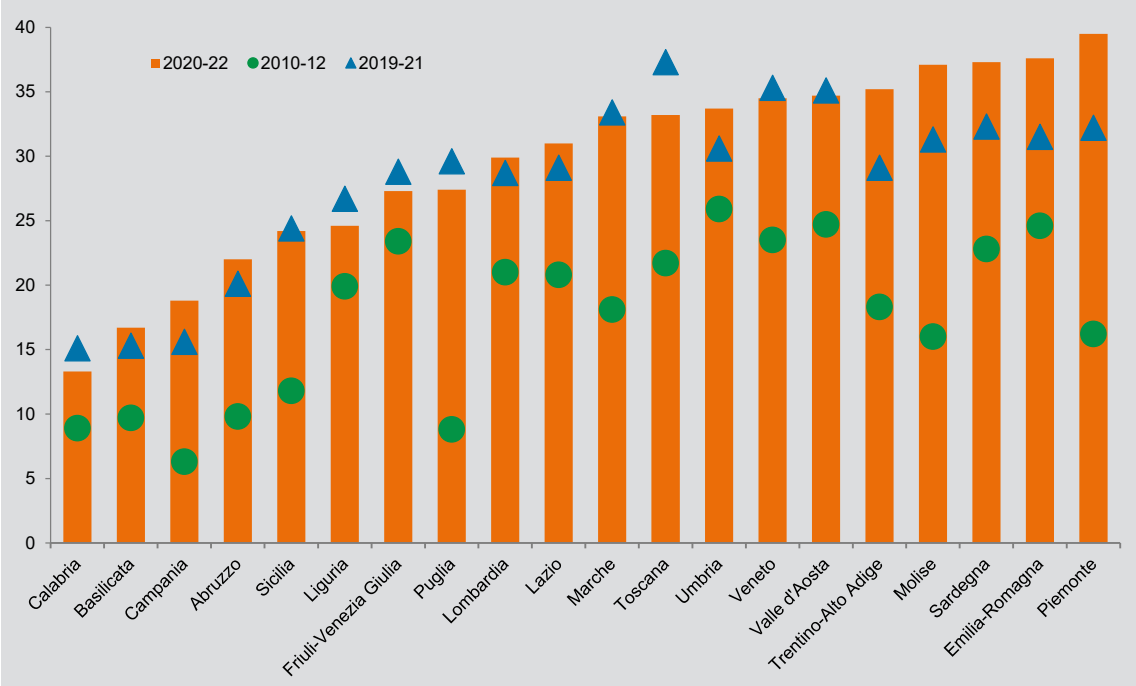
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

1 This chapter was edited by Barbara Baldazzi, with contributions from Emanuela Bologna, Claudia Busetti, Raffaella Cascioli, Donatella Grassi, Giulia Milan, Marina Musci, Miria Savioli, Azzurra Tivoli and Laura Zannella.

In 2022 the number of children attending childcare services returns to grow

In the three-year period 2020-2022, 29.5% of 0-2-year-olds are enrolled in early childcare services (1.5 percentage points higher than in 2019-2021). Despite this progress, inclusion remains highest in the North-east (35.2% of 0-2-year-olds enrolled in nurseries) and Central regions (32.2%), falling to 20.7% in the South (Figure 1).
By the age of 4-5, almost all children are enrolled in education; however, in the 2020/2021 school year, the percentage of children attending pre-school or the first year of primary school fell slightly to 92.8% (it was 95.9% in 2019/2020), reaching 96.6% in the South and falling to 90.7% in the Centre.

Figure 1. Children aged 0-2 years enrolled in early childcare services by region. Years 2010/12-2019/21-2020/22. Percentage values

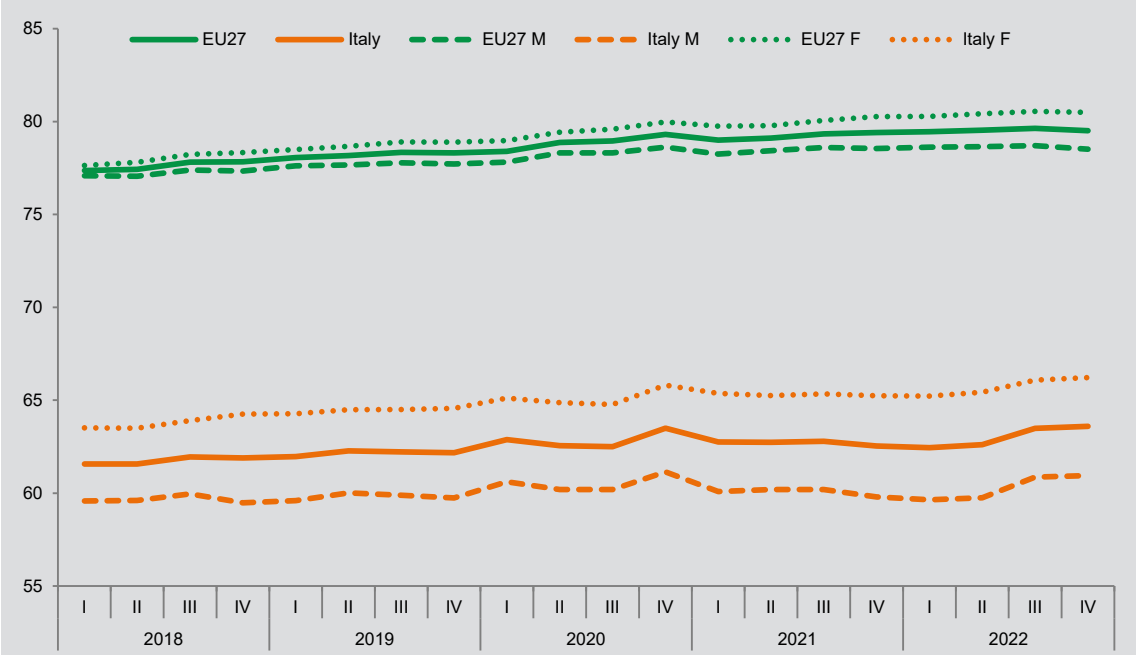


Source: Istat, Survey on Aspects of daily life

Back to growth for the number of secondary school and tertiary graduates in 2022, but Italy is still far behind the European average

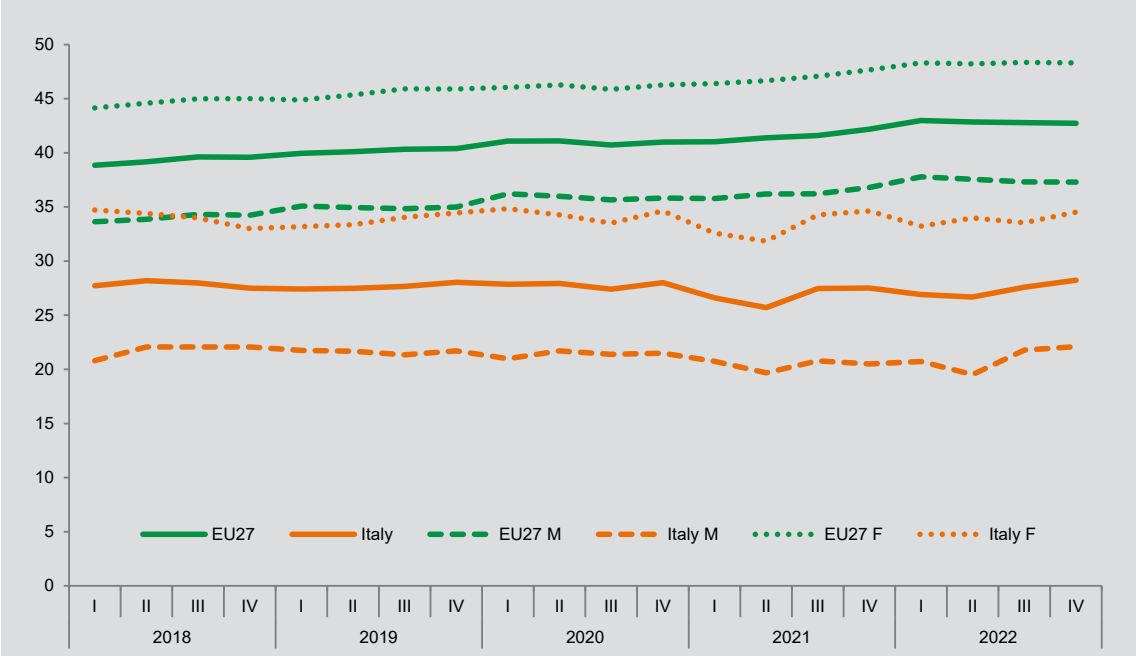
In 2022, 63.0% of 25-64-year-olds have at least upper secondary qualification or diploma (+0.3 percentage points compared to 2021), compared to around 79.5% as European average. In Italy, 65.7% of women have at least an upper secondary qualification; among men, the share of graduates is 60.3% (Figure 2).
In 2022, 27.4% of young people aged 30-34 in Italy has a tertiary degree, an increase compared to the previous year (26.8%), especially among men. However, Italy is still far from the average of European Union countries, where the share of young people with a university degree or tertiary qualification exceeds 42% (Figure 3).

Figure 2. People with at least upper secondary education level (25-64 years old) in Italy and in EU27. Quarterly data I 2018-IV 2022. Percentage values



Source: Istat, Processing of data from Eurostat, Labour force survey

Figure 3. People having completed tertiary education (30-34 years old) in Italy and in EU27. Quarterly data I 2018-IV 2022. Percentage values

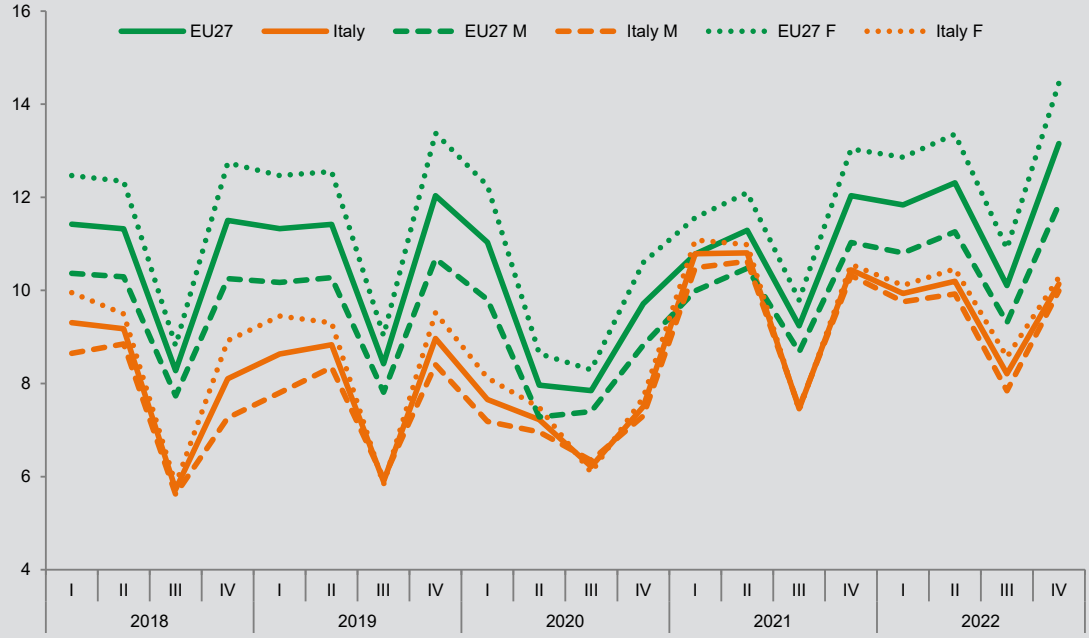


Source: Istat, Processing of data from Eurostat, Labour Force Survey

Participation in lifelong learning remains high in 2022

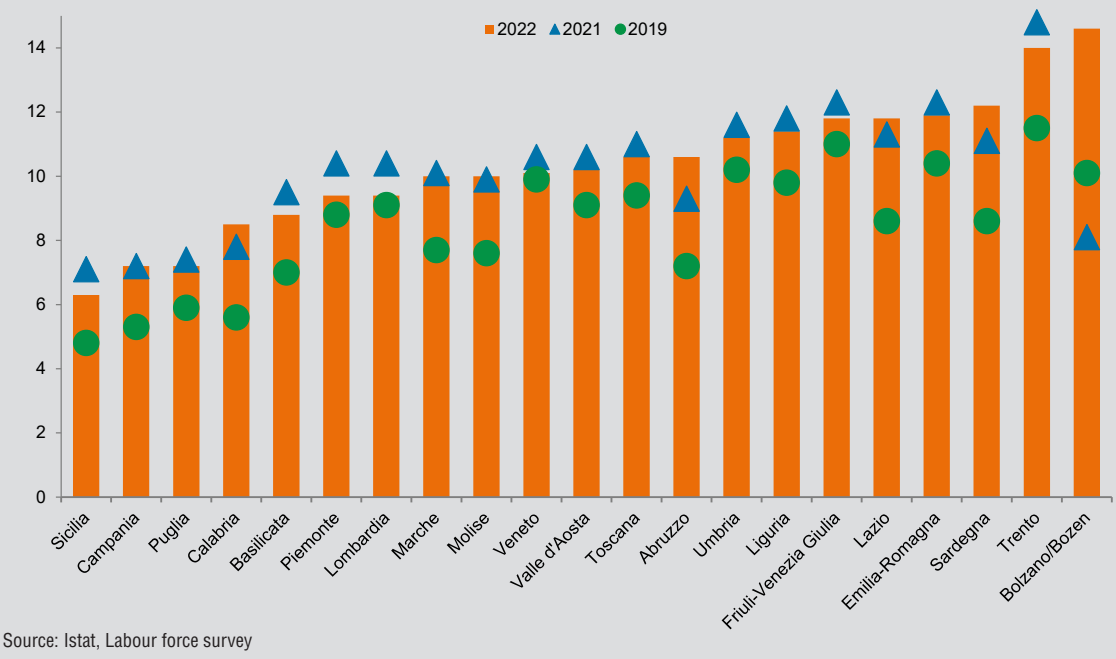
In Italy in 2022, 9.6% of the population aged 25-64 participated in life-long learning in the four weeks preceding the interview (Figure 4). This figure is stable compared to 2021 (9.9%) and clearly recovering from the low level of participation recorded in 2020 (7.1%). In all regions, participation in life-long learning in 2022 exceeds that observed in 2019 (8.1% for the national average - Figure 5).

Figure 4. Participation in life-long learning in Italy and in EU27. Quarterly data I 2018-IV 2022. Percentage values



Source: Istat, Processing of data from Eurostat, Labour Force Survey

Figure 5. Participation in life-long learning by region. Years 2019, 2021 and 2022. Percentage values

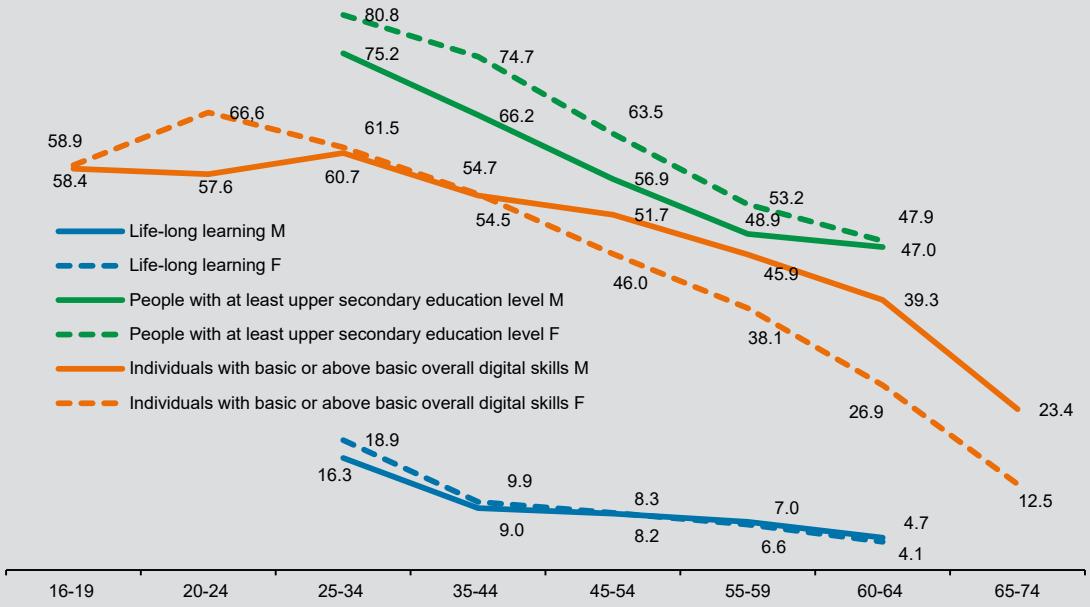


Source: Istat, Labour force survey

Significant generational differences in educational attainment, participation in life-long learning and digital skills

In 2021, just under half of those aged 16-74 who have used the internet in the last three months have at least basic digital skills. The proportion rises to 61.7% for the 20-24 age group and falls rapidly with age, to 17.7% among 65-74-year-olds (Figure 6).

Figure 6. People with at least upper secondary education level (25-64 years old), participation in life-long learning and Participation in life-long learning (a) by age class and gender. Year 2022. Percentage values

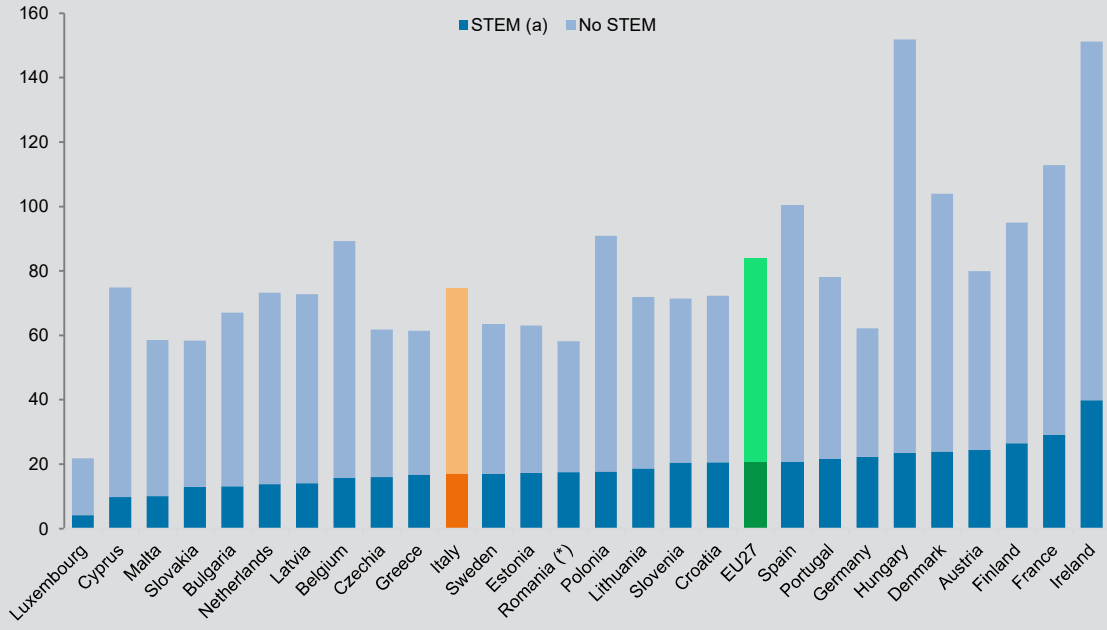


Source: Istat, Labour force survey, Survey on Aspects of daily life
(a) Year 2021.

More women than men hold a tertiary qualification, but fewer in science disciplines

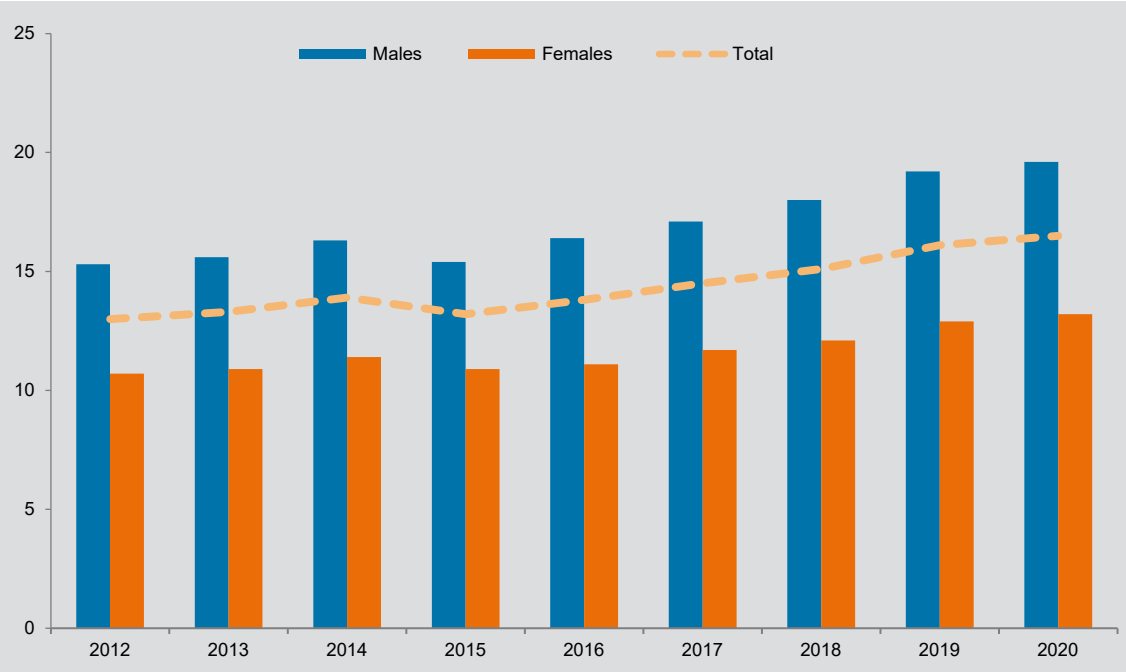
In the European Union (EU27) as a whole, about 4.2 million people have a tertiary degree in 2020, of which 454,000 in Italy (37,000 more than in 2019); they represent 84 per 1,000 of young people aged 20-29 (the reference population conventionally used to measure the intensity of the phenomenon). In Italy this indicator is 74.6 per 1,000 and has been rising steadily in recent years (it was 42 per 1,000 in 2010), while it is above 100 in Denmark, France, Hungary and Ireland (Figure 7).
In Italy in 2020, the share of the population aged 20-29 with a tertiary education in STEM fields (Scientific, Technological, Engineering and Mathematical) is 19.6 per thousand for men and 13.2 per thousand for women, both below the European average (Figure 8).

Figure 7. STEM graduates in Europe. Year 2020. Per 1,000 population aged 20-29



Source: Istat, Processing of data from Eurostat
(a) The STEM disciplines are: Natural Sciences, Physics, Mathematics, Statistics, Computer Science, Information Engineering, Industrial Engineering, Architecture and Civil Engineering.
(*) Year 2019.

Figure 8. STEM graduates by gender. Years 2012-2020. Per 1,000 population aged 20-29

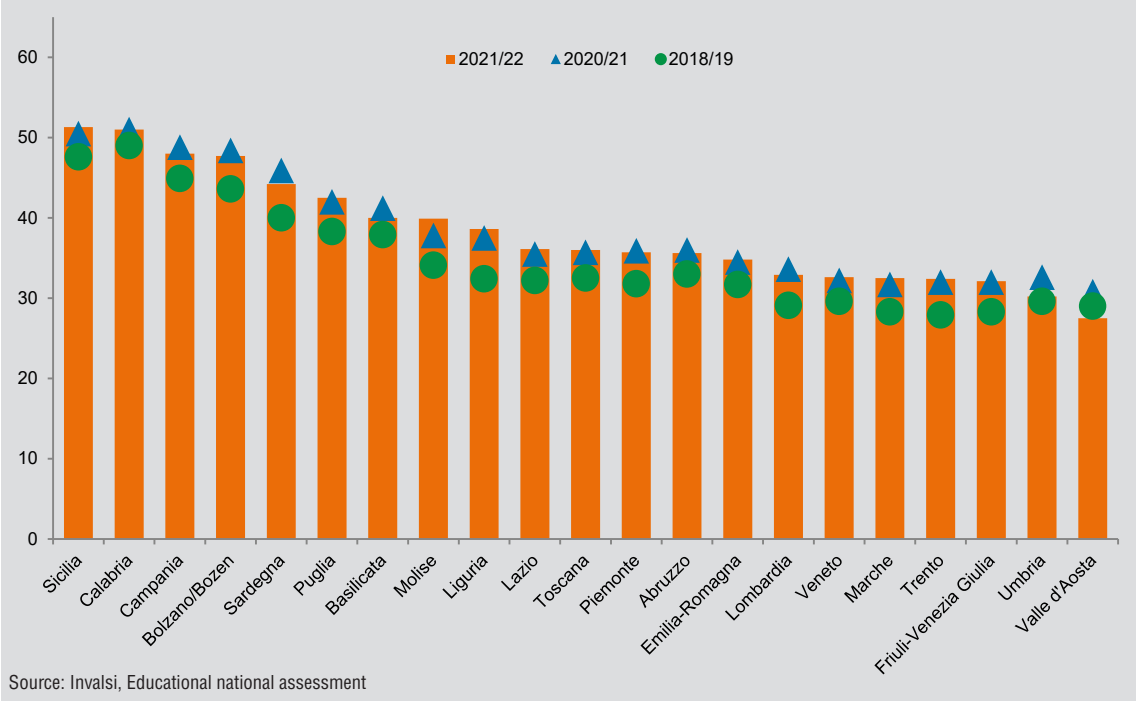


Source: Istat, Processing of data from Ministry of University and Research
Note: The STEM disciplines are: Natural Sciences, Physics, Mathematics, Statistics, Computer Science, Information Engineering, Industrial Engineering, Architecture and Civil Engineering.

Pupils's skills still deeply unequal and penalised by the pandemic

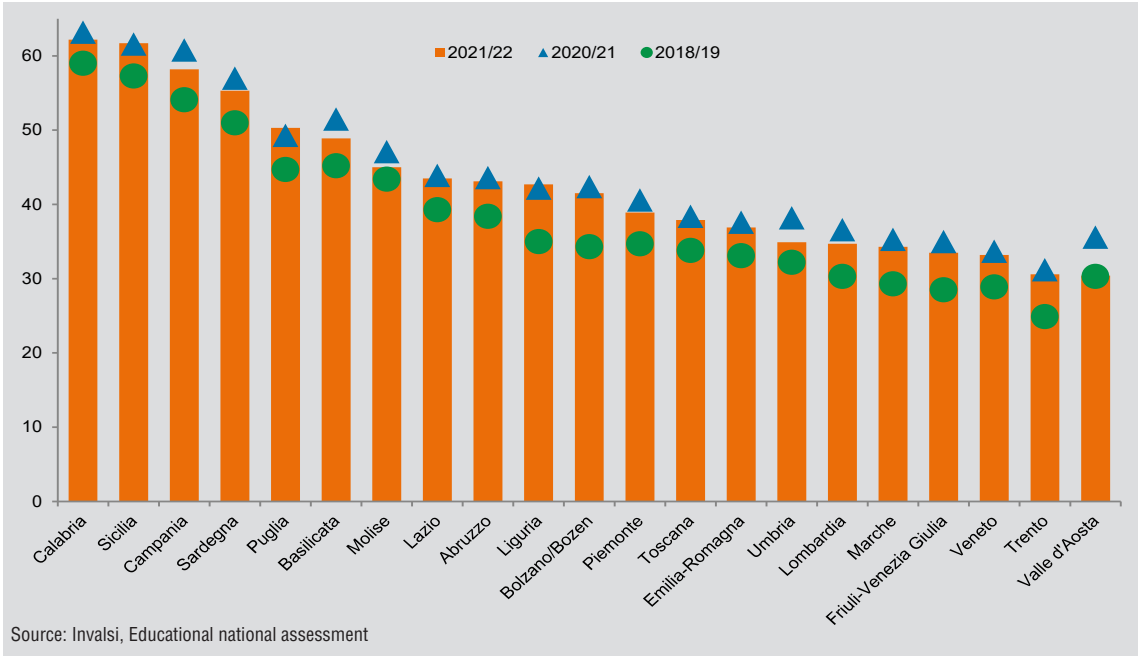
In the 2021/2022 school year, there was no recovery in the skills of secondary school pupils after the deterioration occurred during the pandemic years. The share of those who have not reached at least a sufficient level of competence (the low performers) is 38.6% for literacy (it was 35.2% in 2018/2019 - Figure 9) and 43.6% for numeracy (it was 39.6% in 2018/2019 - Figure 10).

Figure 9. Inadequate level of literacy (students in grade 8) by region. School years 2018/19, 2020/21 and 2021/22. Percentage values



Source: Invalsi, Educational national assessment

Figure 10. Inadequate level of numeracy (students in grade 8) by region. School years 2018/19, 2020/21 and 2021/22. Percentage values

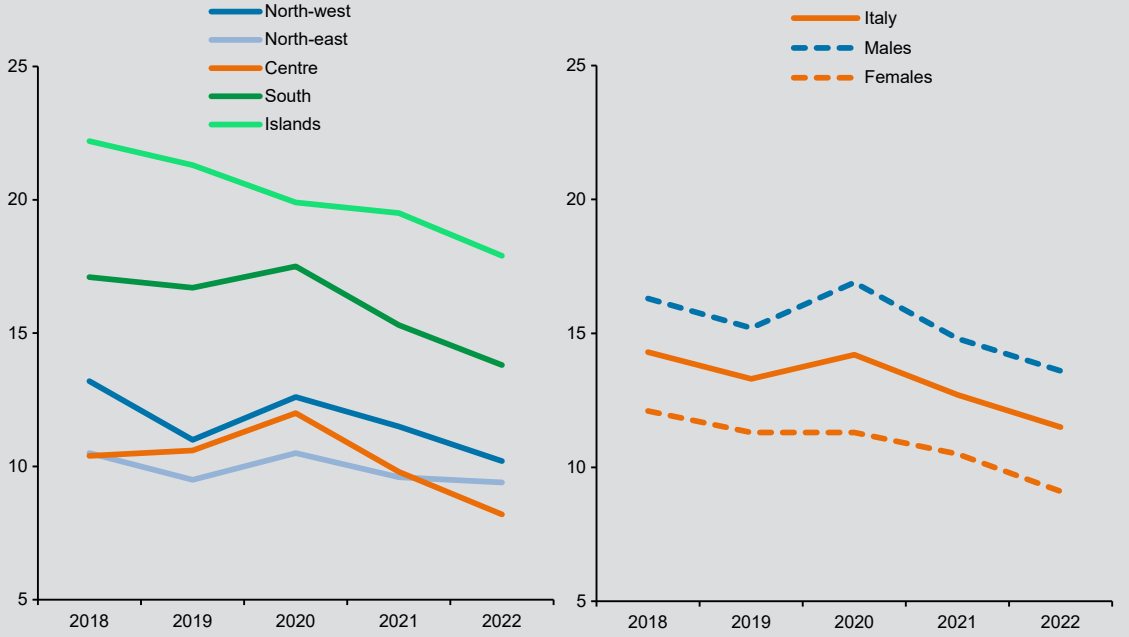


Source: Invalsi, Educational national assessment

The proportion of young people leaving education and training early is falling but large territorial differences remain

In 2022, 11.5% of young people aged 18-24 have completed their education with an upper secondary degree, an improvement on the previous year (12.7%). However, there is still a gender gap which penalises boys, who tend to drop out more often (13.6% compared to 9.1% for girls - Figure 11).

Figure 11. Early leavers from education and training by geographical area and gender. Years 2018-2022. Percentage values



Source: Istat, Labour force survey

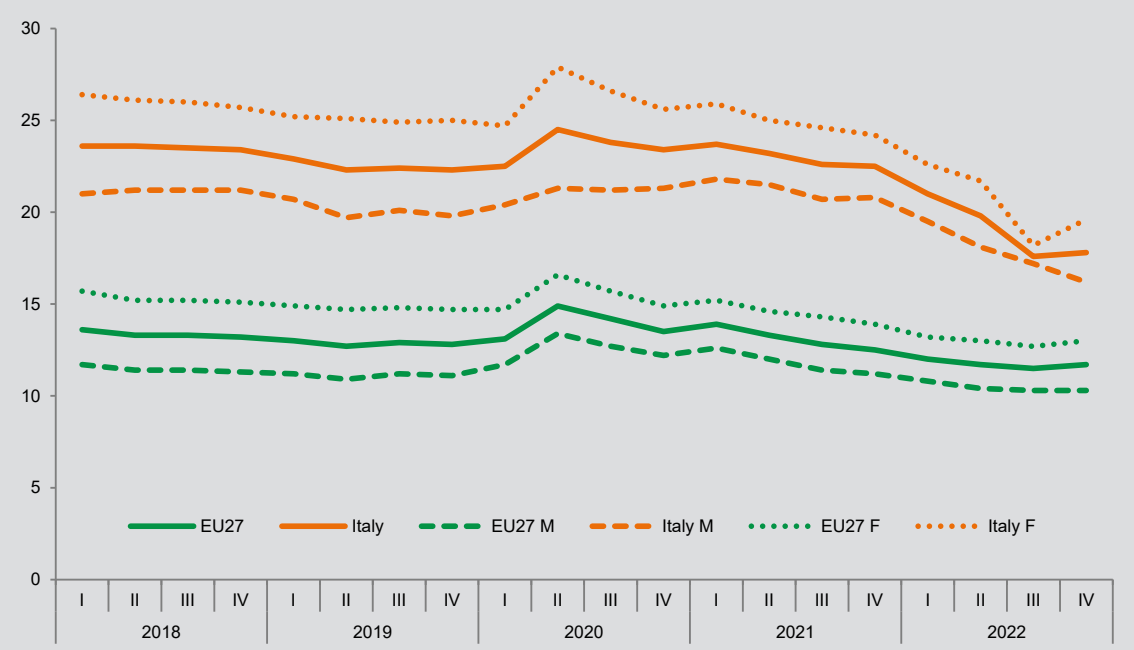
NEETs also fall in 2022

The percentage of young people no longer in education, training or employment, known as NEETs (Neither in Employment nor in Education and Training), is also improving. Out of the total number of 15-29-year-olds, the share of NEETs is 19.0%, lower than 2020 (23.7%) and 2021 (23.1%), years in which the impact of the pandemic on youth employment was particularly pronounced (Figure 12).

Cultural participation increases in 2022, still remaining below pre-pandemic levels

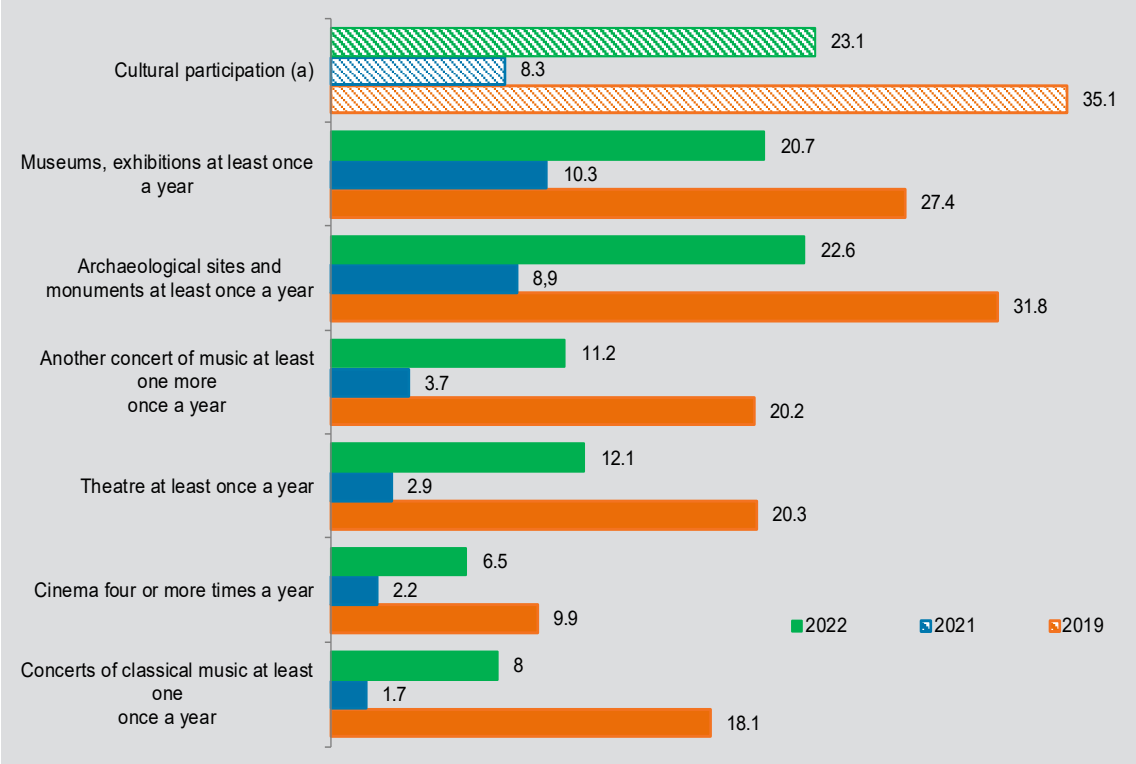
The gradual reopening of cultural venues to the public during 2021 allowed the level of out-of-home cultural participation to recover and, reaching 23.1% in 2022, almost three times higher than the previous year, but still far from the pre-pandemic levels (-12 percentage points compared to 2019 - Figure 13).

Figure 12. People not in education, employment, or training (NEET) in Italy and in EU27 by gender. Quarterly data I 2018-IV 2022. Percentage values



Source: Istat, Processing of data from Eurostat, Labour force survey

Figure 13. Persons aged 6 years and older who engaged in 2 or more cultural activities outside the home in the 12 months before the interview. Years 2019, 2021 and 2022. Percentage values

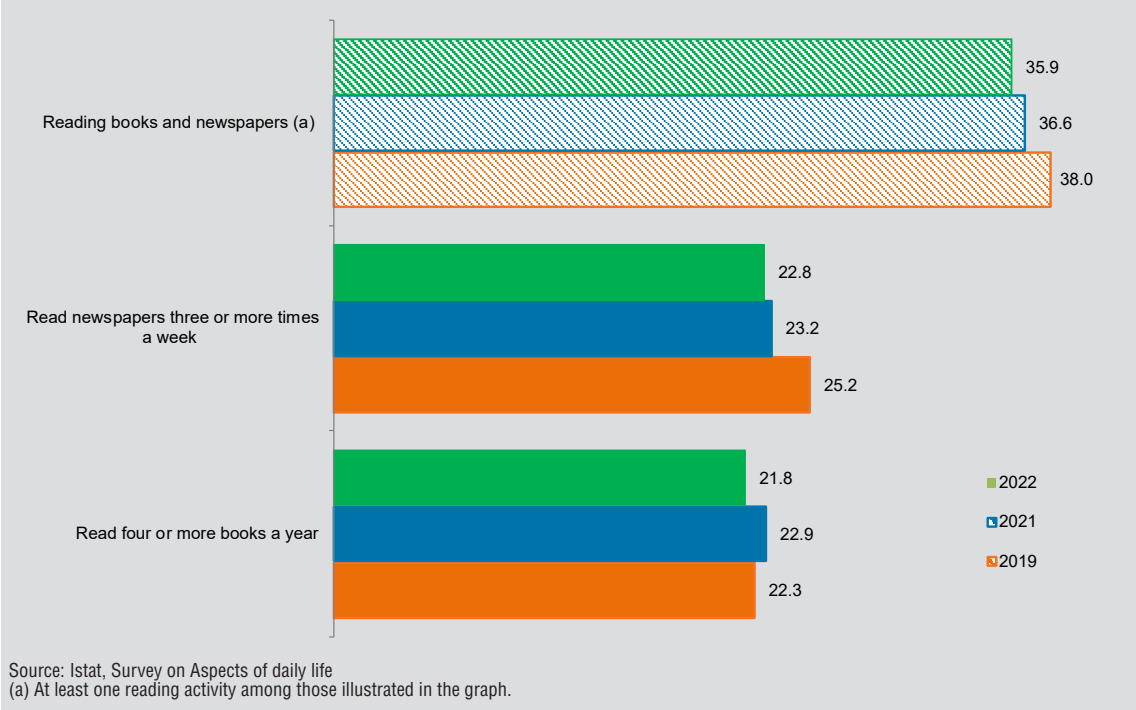


Source: Istat, Survey on Aspects of daily life
(a) Carried out two or more of the activities.

Reading books and/or newspapers continues to fall in 2022

In 2022, the indicator monitoring the reading of books and/or newspapers stands at 35.9% (-0.7 percentage points compared with the previous year). This is in line with the negative trend observed since 2010, when the number of people aged six and over who read four or more books per year and/or read newspapers was 44.4%. In particular, in 2022, the proportion of those who read at least four books a year decreases (-1.1 percentage points), while reading newspapers at least three times a week remains stable at 22.8% (Figure 14).

Figure 14. Persons aged 6 and older who read at least 4 books in the year and/or at least 3 newspapers per week (print or online). Years 2019, 2021 and 2022. Percentage values



Source: Istat, Survey on Aspects of daily life
(a) At least one reading activity among those illustrated in the graph.

Increase in library use in 2022, but still below the pre-pandemic levels

In 2022, the share of library users is 10.2%, a recovery of almost three percentage points compared to the previous year, but still far from the pre-pandemic levels (-5.1 points compared to 2019).

Indicators

1. **Children aged 0-2 years enrolled in nursery school:** Pupils aged 0-2 years enrolled in early childcare services (per 100 children aged 0-2 years).
   Source: Istat, Survey on Aspects of daily life.
2. **Participation in the school system of children aged 4-5:** Percentage of children aged 4-5 years participating in pre-primary education or in primary education on total children aged 4-5 years.
   Source: Istat, Processing of data from Ministry of Education.
3. **People with at least upper secondary education level (25-64 years old):** Percentage of people aged 25-64 years having completed at least upper secondary education (ISCED level not below 3) on total people aged 25-64 years.
   Source: Istat, Labour force survey.
4. **People having completed tertiary education (30-34 years old):** Percentage of people aged 30-34 years having completed tertiary education (ISCED 5, 6, 7 or 8) on total people aged 30-34 years.
   Source: Istat, Labour force survey.
5. **First-time entry rate to university by cohort of upper secondary graduates:** Proportion of new-graduates from upper secondary education enrolled for the first time at university in the same year of upper secondary graduation (cohort-specific rate). Students enrolled in "Istituti Tecnici Superiori", "Istituti di Alta Formazione Artistica, Musicale e Coreutica", "Scuole superiori per Mediatori linguistici" and at foreign universities are excluded.
   Source: Ministry of Education; Ministry of University and Research.
6. **Early leavers from education and training:** Percentage of people aged 18-24 years who have achieved only lower secondary (ISCED 2) and are not included in a training program on total people aged 18-24 years.
   Source: Istat, Labour force survey.
7. **People not in education, employment, or training (NEET):** Percentage of people aged 15-29 years that are not in education, employment, or training on total people aged 15-29 years.
   Source: Istat, Labour force survey.
8. **Participation in life-long learning:** Percentage of people aged 25-64 years participating in formal or non-formal education on total people aged 25-64 years.
   Source: Istat, Labour force survey.
9. **Inadequate level of literacy (students in grade 8):** Share of students in grade 8 (third year of lower secondary education) who do not reach an adequate level of proficiency in literacy competence (level 2 out of 5 levels).
   Source: Invalsi, Educational national assessment.
10. **Inadequate level of numeracy (students in grade 8):** Share of students in grade 8 (third year of lower secondary education) who do not reach an adequate level of proficiency in numerical competence (level 2 out of 5 levels).
    Source: Invalsi, Educational national assessment.
11. **Individuals with basic or above basic overall digital skills:** Percentage of people aged 16-74 with basic or above basic digital skills in all 5 areas (Information and data literacy, Communication and collaboration, Digital content creation, Safety and Problem solving), identified in the "Digital competence framework 2.0".
    Source: Istat, Survey on Aspects of daily life.
12. **STEM graduates:** Graduates in tertiary education, in science, math., computing, engineering, manufacturing, construction per 100 residents aged 20-29. The numerator includes graduates with a Short-cycle tertiary education, Bachelor's or equivalent level, Master's or equivalent level, Doctoral or equivalent level (levels 5-8 of Isced 2011).
    Source: Istat, Processing of data from Ministry of University and Research.
13. **Cultural participation outside the home:** Percentage of people aged 6 years and over who have carried out 2 or more activities in the 12 months before the interview out of total people aged 6 years and over. The activities considered are 6: going to the cinema at least four times; at least once to: theatre; exhibitions and museums; archaeological sites, monuments; concerts of classical music, opera; concerts of other kind of music.
    Source: Istat, Survey on Aspects of daily life.
14. **Reading books and newspapers:** Percentage of people aged 6 and over who have read at least four books a year for reasons not strictly educational or professional (paper books, e-books, online books, audio books) and / or have read newspapers (paper and/ or online) at least three times per week out of total people aged 6 years and over.
    Source: Istat, Survey on Aspects of daily life.
15. **Use of libraries:** Percentage of people aged 3 and over who went to the library at least once in the past 12 months before interview out of total people aged 3 years and over.
    Source: Istat, Survey on Aspects of daily life.

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Children aged 0-2 years enrolled in nursery school (a) 2020/2022	Participation in the school system of children aged 4-5 (b) 2020/2021	People with at least upper secondary education level (25-64 years old) (c) 2022	People having completed tertiary education (30-34 years old) (d) 2022	First-time entry rate to university by cohort of upper secondary graduates (e) 2020	Early leavers from education and training (f) 2022
Piemonte	39.5	93.1	64.0	25.6	55.7	11.0
Valle d'Aosta/Vallée d'Aoste	34.7	95.9	62.1	30.6	42.6	13.3
Liguria	24.6	91.8	69.6	25.2	58.1	10.3
Lombardia	29.9	90.3	65.4	31.3	55.7	9.9
Trentino-Alto Adige/Südtirol	35.2	93.8	70.8	28.8	35.2	10.5
Bolzano/Bozen	*27.1*	*92.4*	*69.5*	*25.2*	13.5	*13.5*
Trento	*44.9*	*95.5*	*72.0*	*32.4*	*55.9*	*7.3*
Veneto	34.5	91.3	65.6	27.6	52.7	9.5
Friuli-Venezia Giulia	27.3	92.8	71.2	29.2	55.3	7.7
Emilia-Romagna	37.6	91.1	68.1	33.2	55.6	9.5
Toscana	33.2	93.0	65.5	29.4	55.9	10.7
Umbria	33.7	94.8	71.5	30.8	61.1	7.3
Marche	33.1	94.5	65.9	28.5	57.8	5.8
Lazio	31.0	87.9	72.1	35.9	55.3	7.4
Abruzzo	22.0	95.7	68.4	27.3	59.1	9.3
Molise	37.1	94.2	63.1	32.9	59.5	8.3
Campania	18.8	97.2	53.8	23.4	41.5	16.1
Puglia	27.4	96.1	52.5	19.6	50.6	14.6
Basilicata	16.7	98.7	63.0	23.6	55.6	5.3
Calabria	13.3	96.4	56.6	23.5	50.9	10.3
Sicilia	24.2	93.7	52.4	17.8	46.8	18.8
Sardegna	37.3	95.0	54.6	22.1	50.1	14.7
North	33.4	91.4	66.3	29.6	54.4	9.9
North-west	32.1	91.2	65.4	29.3	55.8	10.2
North-east	35.2	91.7	67.6	30.0	52.6	9.4
Centre	32.2	90.7	69.2	32.7	56.2	8.2
South and islands	22.8	95.8	54.8	21.6	47.2	15.1
South	20.7	96.6	55.8	22.9	47.1	13.8
Islands	27.0	93.9	52.9	18.8	47.5	17.9
Italy	**29.5**	**92.8**	**63.0**	**27.4**	**51.9**	**11.5**

(a) Per 100 children aged 0-2;
(b) Per 100 children aged 4-5;
(c) Per 100 persons aged 25-64;
(d) Per 100 persons aged 30-34;
(e) Specific cohort rate;
(f) Per 100 persons aged 18-24;

People not in education, employment, or training (NEET) (g)	Participation in life-long learning (c)	Inadequate level of literacy (students in grade 8) (h)	Inadequate level of numeracy (students in grade 8) (h)	Individuals with basic or above basic overall digital skills (i)	STEM graduates (j)	Cultural participation outside the home (k)	Reading books and newspapers (k)	Use of libraries (l)
2021	2022	2021/2022	2021/2022	2021	2020	2022	2022	2022
15.4	9.4	35.7	38.9	48.7	16.4	23.5	40.5	10.6
15.3	10.2	27.5	30.4	50.3	12.4	23.1	45.5	20.8
14.8	11.4	38.6	42.7	49.1	17.6	20.0	39.5	8.3
13.6	9.4	32.9	34.7	51.0	15.3	26.6	44.4	15.7
10.5	14.3	....	....	49.7	8.4	29.3	54.9	26.6
9.9	*14.6*	*47.7*	*41.5*	*47.6*	*3.1*	*27.0*	*55.7*	*27.3*
11.1	*14.0*	*32.4*	*30.6*	*51.7*	*14.0*	*31.5*	*54.2*	*25.9*
13.1	10.1	32.6	33.2	50.1	16.7	25.6	41.5	12.9
13.5	11.8	32.1	33.5	52.3	18.5	24.9	47.9	11.1
12.2	11.9	34.8	36.9	51.2	16.5	24.7	44.0	13.6
13.8	10.6	36.0	37.9	49.8	13.8	25.5	39.4	12.0
14.4	11.2	30.2	34.9	50.0	17.0	22.0	32.0	7.9
13.1	10.0	32.5	34.3	46.0	18.4	23.8	35.2	10.4
17.0	11.8	36.1	43.5	52.9	18.2	30.1	36.4	7.3
17.9	10.6	35.6	43.1	43.1	19.7	23.0	32.3	6.1
20.9	10.0	39.9	45.0	37.7	21.5	19.3	32.3	6.1
29.7	7.2	48.0	58.2	34.2	15.9	21.9	22.7	5.9
26.0	7.2	42.5	50.3	38.5	15.9	13.7	23.4	5.1
20.6	8.8	40.0	48.9	36.1	18.3	14.8	22.6	5.8
28.2	8.5	51.0	62.2	33.8	16.0	12.0	23.0	5.2
32.4	6.3	51.3	61.7	34.0	13.5	15.5	21.2	4.4
21.4	12.2	44.2	55.3	45.4	13.5	21.8	41.7	10.7
13.5	10.3	33.9	35.8	50.4	15.8	25.3	43.5	13.9
14.2	9.6	....	....	50.2	15.7	25.1	42.9	13.7
12.5	11.3	....	....	50.7	15.9	25.5	44.3	14.2
15.3	11.2	35.2	40.0	50.9	16.8	27.2	36.9	9.2
27.9	7.8	46.7	56.4	36.5	15.5	17.7	24.8	5.7
26.9	7.8	....	....	36.3	16.4	17.9	24.1	5.6
30.1	7.8	....	....	36.9	13.5	17.1	26.3	6.0
19.0	**9.6**	**38.6**	**43.6**	**45.7**	**16.5**	**23.1**	**35.9**	**10.2**

(g) Per 100 persons aged 15-29
(h) Per 100 students attending grade III of secondary school;
(i) Per 100 persons aged 16-74;
(j) Per 100 inhabitants aged 20-29;
(k) Per 100 persons aged 6 and over;
(l) Per 100 persons aged 3 and over.

3. Work and life balance[1]

The year 2022 is characterised by a general improvement in the labour market compared to the previous year: the employment rate of people aged 20-64 increases and exceeds the level of 2019, fully recovering the decline observed in 2020 due to the pandemic. Compared to 2021, both the number of people seeking a job and the number of people who are available but have not looked for a job decrease; the non-participation rate therefore shows a marked reduction and reaches its lowest value in the five-year period 2018-2022. Territorial disparities remain broadly stable, while the gender gap widens slightly. On the other hand, the distance in percentage points between the employment rate of the youngest (20-34-year-olds) and that of the 35-49-year-olds, as well as from that of the oldest (aged 50-64) declines. Indeed, the 20-34 age group shows the most marked growth in the employment rate and also the strongest decrease in the non-participation rate.

The growth in employment mainly involves employees, both fixed-term and permanent. Among the former, the increase concernes almost only those with a fixed-term contract of less than five years, so that the share among those employed on fixed-term contracts who have been employed for at least five years decreases. The share of those who say they are in part time job because they have been unable to find a full-time job is decreasing; although the decline is more pronounced among women, the clearly female character of the phenomenon remains.

The employment rate of women aged 25-49, with and without children, is also growing; the ratio between these two rates is almost unchanged at the national level, compared to the previous year, while it shows differences at the territorial level, with a gap between the rates in the Centre due to an increase in the employment of women without children. The asymmetry index, which measures the proportion of time spent by women on domestic work in the household, shows some improvement over the last decade up to 2020/2021, while it is stable in 2021/2022 compared to the average of the previous two years.

The difficulty in properly enhancing human capital in the labour market persists. In fact, a slow but progressive growth can be observed in the share of the employed people with a higher qualification than the one most frequently required for their job, a share that exceeds 25% in 2022.

In 2022, the percentage of employed persons who worked from home in the four weeks preceding the interview is 12.2%; after the increase experienced in 2020 due to the pandemic and the further growth in 2021, it declines, although it remains more than two and a half times higher than in 2019. It decreases mainly in skilled occupations or in the education and public administration sectors, which had reached high shares in the previous two years; however, the percentage remains very high in the information and communication sector.

Finally, compared to 2021, the proportion of employed persons who are very satisfied with some aspects of their job remains stable at around 50%, while the proportion of those who feel likely to lose their job within six months and at the same time unlikely to find a similar one decreases.

1 This chapter was edited by Silvia Montecolle and Alessia Sabbatini, with contributions from Danilo Birardi, Tania Cappadozzi and Maria Elena Pontecorvo.

Table 1. Work and life balance indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Employment rate (20-64 years)	2010	2022	64.8	●	●	●	●
Non-participation rate	2018	2022	16.2	●	●	●	●
Transition rate from temporary to permanent employment	2013/14	2019/20	22.4	●	-	-	-
Employed persons with temporary jobs for at least 5 years	2018	2022	17.0	●	●	●	●
Employees with low pay (a)	2010	2020	10.1	●	-	-	-
Over-qualified employed persons	2018	2022	26.0	●	●	●	●
Rate of fatal accidents and permanent disability	2018	2021	10.2	●	●	-	-
Non-regular employed	2010	2020	12.0	●	-	-	-
Ratio of employment rates (25-49 years) of women with pre-school children to women without children	2018	2022	72.4	●	●	●	●
Asymmetry in family work	2009/10	2021/22	61.6	●	●	●	●
Job satisfaction	2018	2022	50.2	●	●	●	●
Perception of employment insecurity	2018	2022	4.9	●	●	●	●
Involuntary part-time	2018	2022	10.2	●	●	●	●
Employed people working from home	2018	2022	12.2	●	●	●	●

● Better ● Worse ● Stable - Not available

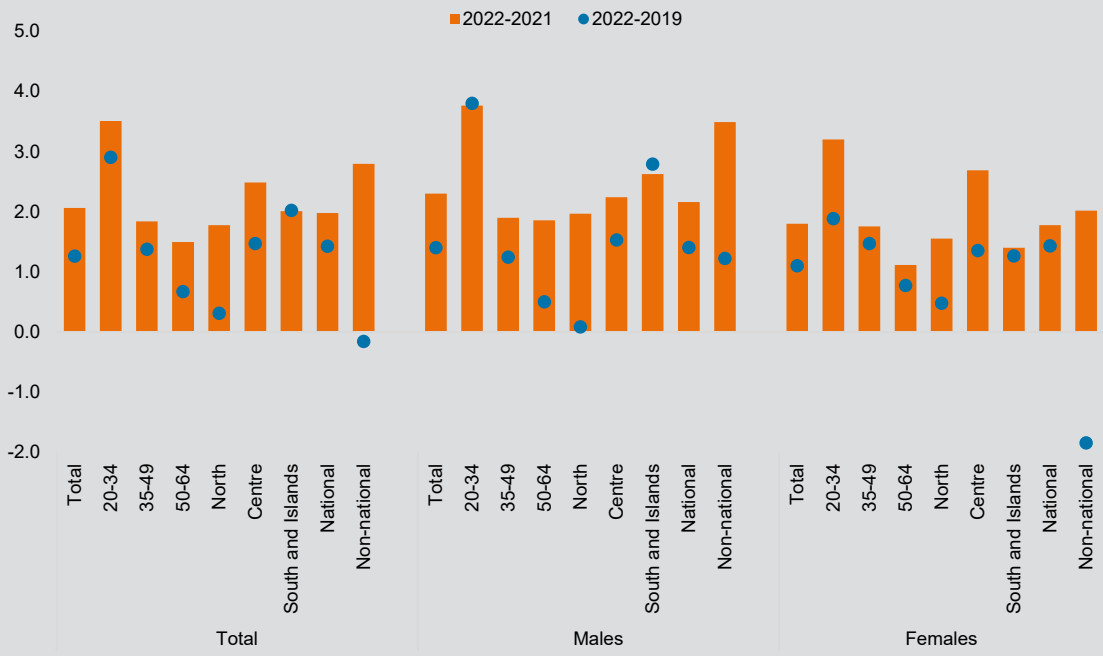
(a) Data refer to the series based on the Regulation in effect until 2020.

Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

Employment recovery in 2022: back to 2019 levels

In 2022, the labour market shows a general improvement compared to the previous year: the number of employed people aged 20-64 increases by 538 thousand (+2.5% compared to 2021), the employment rate rises and exceeds the level of 2019, fully recovering the drop recorded in 2020 (for 20-64-year-olds it is 64.8%; +2.1 percentage points compared to 2021; Figure 1). Among young people (aged 20-34), the employment rate is 56.2% and shows the strongest growth (+3.5 points compared to 2021), exceeding the pre-pandemic level (it was 53.3% in 2019).

Figure 1. Employment rate of the population aged 20-64 by main characteristics. Years 2022-2021,2022-2019. Variations in percentage points



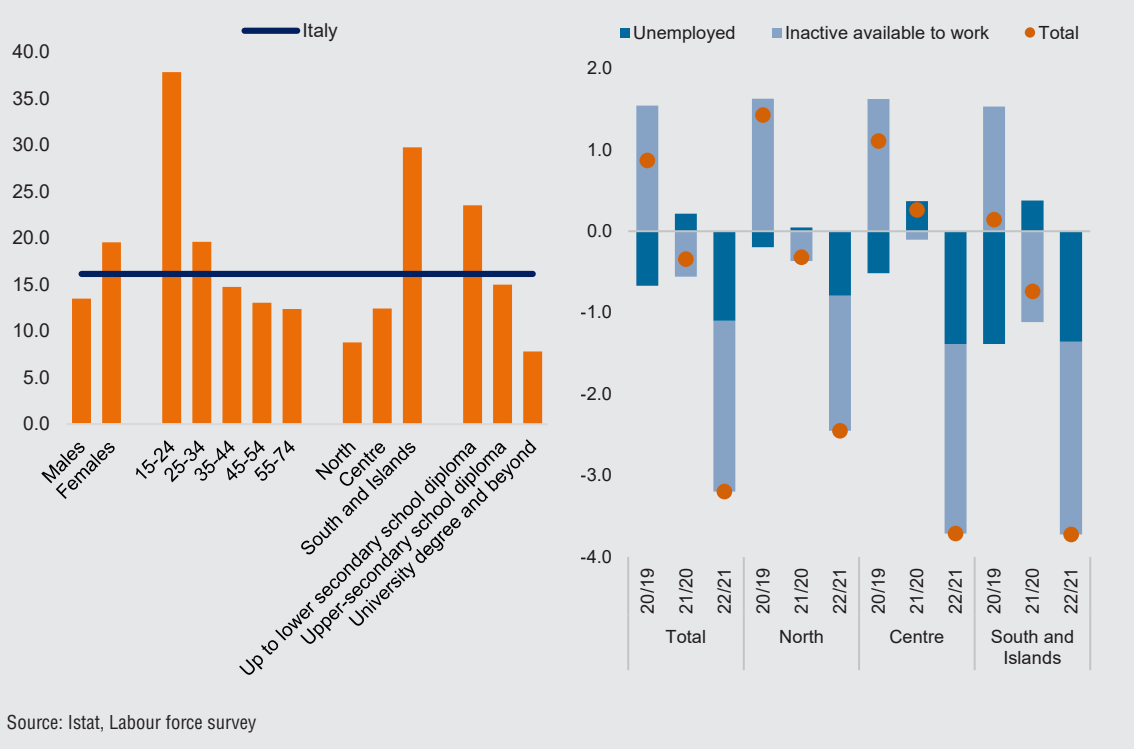
Source: Istat, Labour force survey

Fall in non-participation in the labour market accelerates

The number of people seeking a job decreases (-339 thousand; -14.3%) but even more so the number of people who are available for work but have not looked for it (-623 thousand; -20.5%). The non-participation rate shows a strong reduction with the lowest value in the five-year period 2018-2022 (16.2%; -3.2 percentage points compared to 2021; Figure 2).

Figure 2a. Non-participation rate of the population aged 15-74 by main characteristics. Year 2022. Percentage values

Figure 2b. Non-participation rate of the population aged 15-74 and its components. Years 2022-2021, 2021-2020, 2020-2019. Variations in percentage points



Source: Istat, Labour force survey

Temporary employment on the rise. Slight decline in long-term precarious employment

In 2022, the number of temporary workers (fixed-term employees and term-contract workers) increases by 4.6% (3.3 million; +146 thousand). The increase concerns almost exclusively those with fixed-term jobs for less than five years (+5.3%) and only marginally those who have been employed for five years or more (+1.3%). The ratio of those employed with a temporary job for at least five years in their current job to the total number of temporary workers is 17.0%, down by half a point compared to 2021.

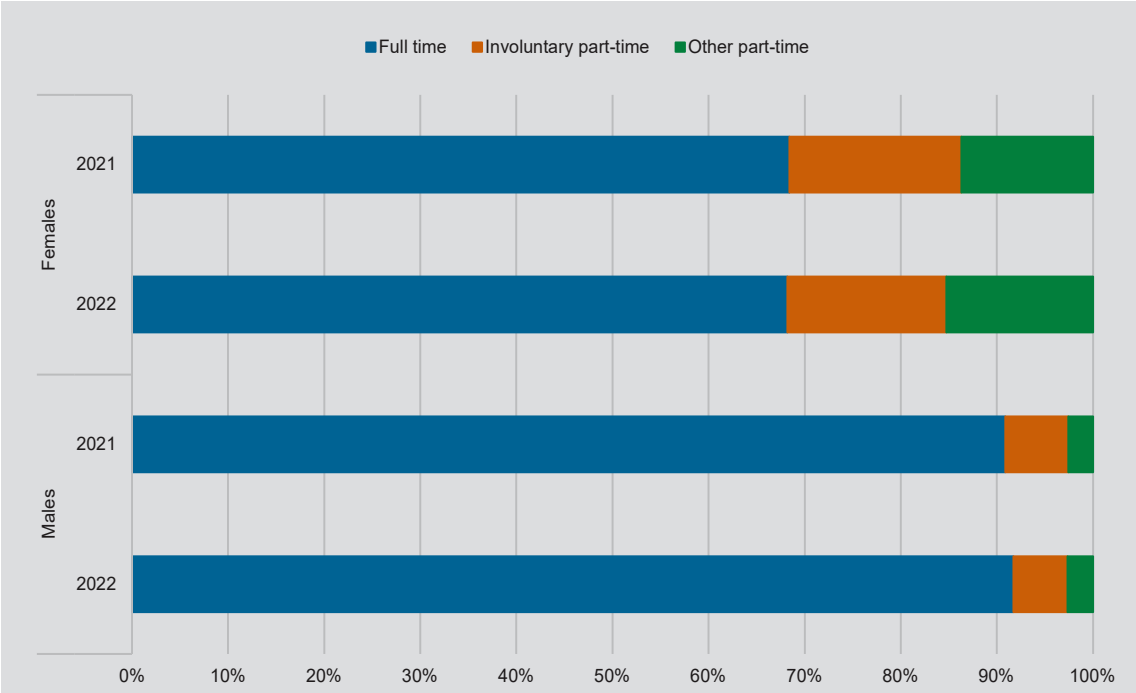
Inefficient labour force placement persists

Approximately one in four employed persons have a higher qualification than is most common for their occupation. Over-education is more widespread among women (28.1%) and especially among service workers and shop and market sales workers (43.7%) and those employed in the sector “Household services” (42.4%).

Decline in involuntary part time work, mainly among women

The share of people working part time because they could not find a full-time job has decreased (10.2% of the employed population; -1.1 points compared to 2021; Figure 3). Although the reduction is more pronounced for women (-1.4 points compared to 2021), the female character of the phenomenon remains evident (16.5% compared to 5.6% for men).

Figure 3. Employed persons by sex and time regime. Years 2021-2022. Percentage values

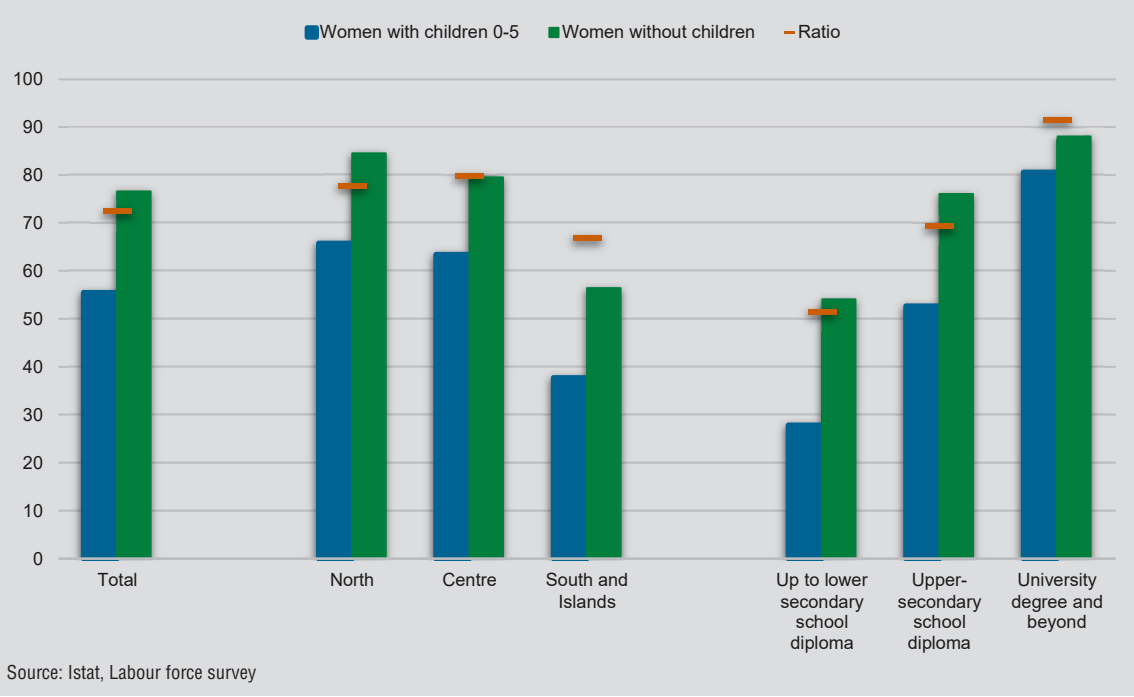


Source: Istat, Labour force survey

Female employment increasing for both women without children and those with young children

Among women aged 25-49, both the employment rate of women with children aged 0-5 and the employment rate of women without children are increasing; the ratio between these two rates is almost stable compared to the previous year and is 72.4 at national level (when the indicator is 100, it means equality between the two rates; Figure 4).

Figure 4. Employment rate of women aged 25-49 with at least one child aged 0-5, employment rate of women aged 25-49 without children and ratio by sex, geographic area and educational level. Year 2022. Percentage values and ratio per 100

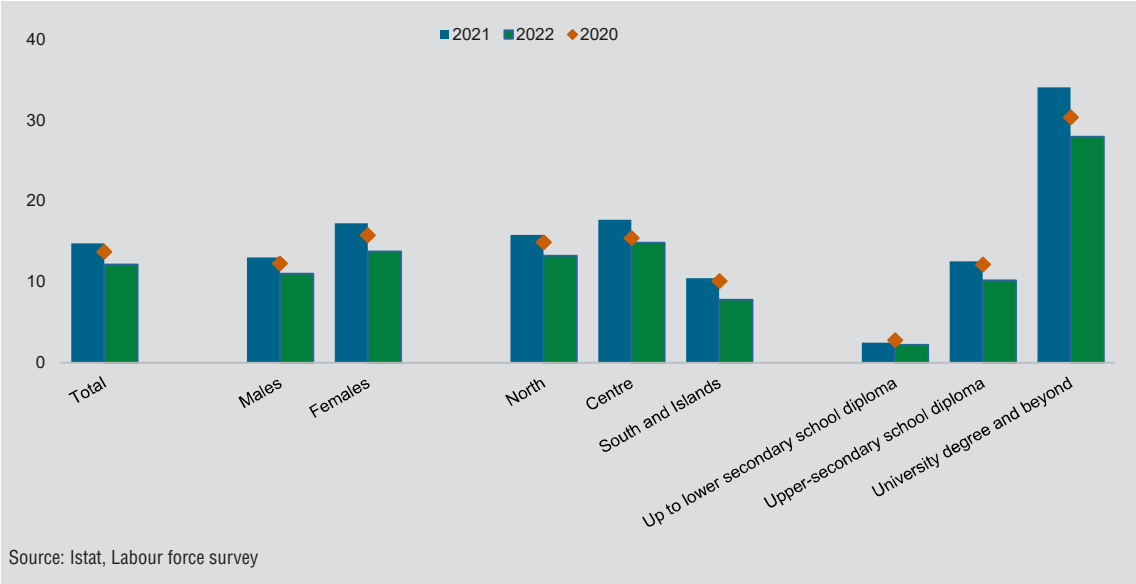


Source: Istat, Labour force survey

Declining number of people working from home

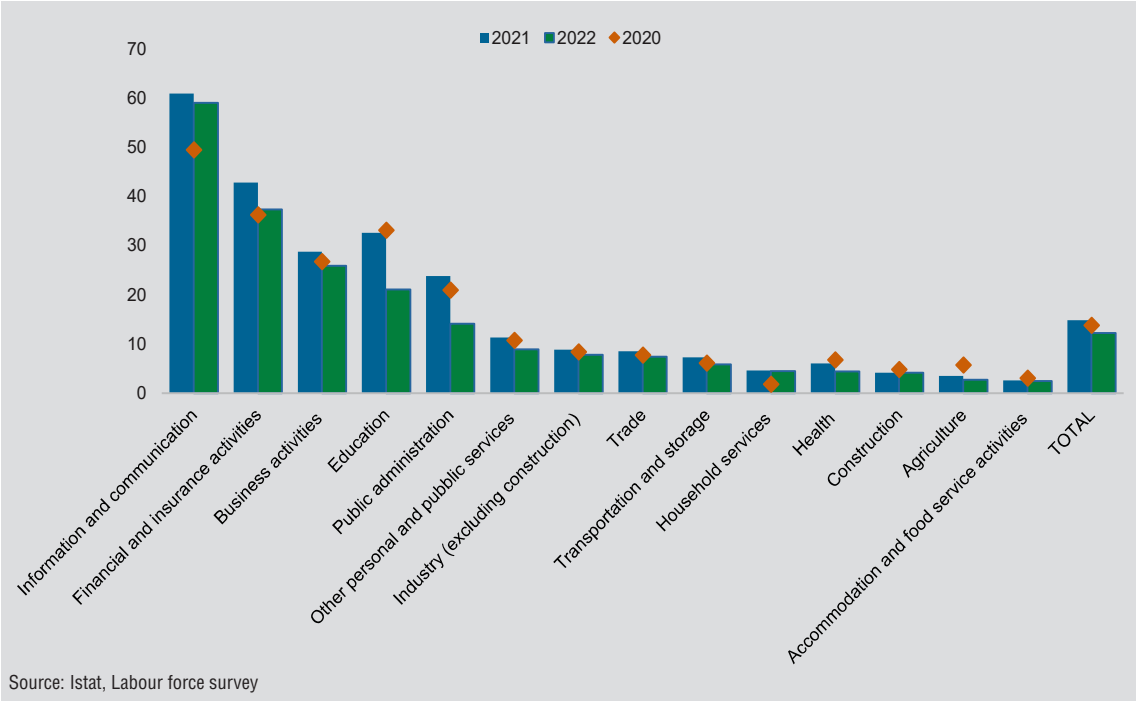
In 2022, 12.2% of the employed people worked from home in the four weeks prior to the interview (Figure 5); while this rate decreases compared to the pandemic years, it is still more than two and a half times higher than in 2019. It decreases mainly in the education and public administration sectors, which had reached high shares in the previous two years, but the percentage remains very high in the information and communication sector (Figure 6).

Figure 5. Employed persons who worked from home by sex, geographic area and educational level. Years 2020-2022. Percentage values



Source: Istat, Labour force survey

Figure 6. Employed persons who worked from home by sector of economic activity. Years 2020-2022. Percentage values

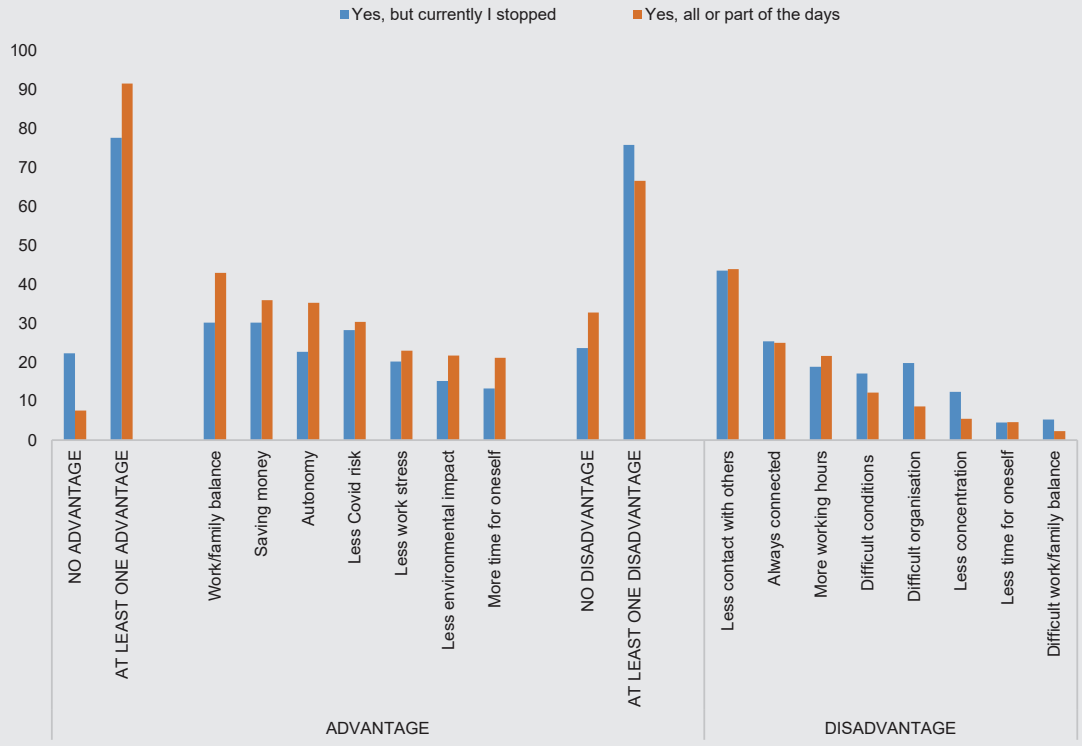


Source: Istat, Labour force survey

SATISFACTION, ADVANTAGES AND DISADVANTAGES OF WORKING FROM HOME

Among those who had worked from home in the three months preceding the interview, 34.6% were very satisfied, 45.0% fairly satisfied and only 4.3% not at all satisfied (Figure A). For those who continue to work from home, the most frequently stated advantage is the ability to balance work/home/family (42.9%). Saving money (35.9%) and greater autonomy (35.2%) are also cited as the main advantages.

Figure A. Employed persons who have worked from home but currently stopped and employed persons who work from home for all or part of the days by advantages and disadvantages of working from home. Year 2022. Percentage values

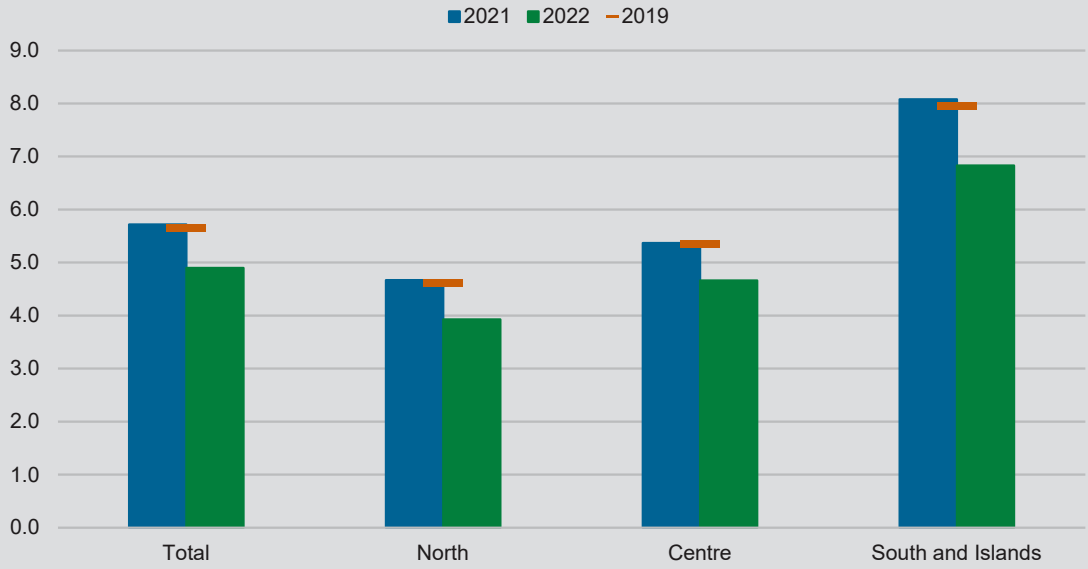


Source: Istat, Survey on Aspects of daily life

Job satisfaction is stable, perception of insecurity decreases

In 2022, the share of those in employment who say they are very satisfied with some aspect of their job remains stable at around 50%, while the share of those who think they are likely to lose their job within six months and unlikely to find a similar one decreases (4.9%; Figure 7).

Figure 7. Employed persons who in the following 6 months think it is likely to lose their current job and unlikely to find another similar job by geographic area. Years 2019, 2021 and 2022. Percentage values



Source: Istat, Labour force survey

Indicators

1. **Employment rate (20-64 year-old):** Percentage of employed people aged 20-64 on total population aged 20-64.
   Source: Istat - Labour force survey.
2. **Non-participation rate:** Percentage of unemployed people and the potential labour force (those who have not looked for a job in the past 4 weeks but willing to work), on the total labour force (employed and unemployed) plus the potential labour force, referred to population aged 15-74.
   Source: Istat - Labour force survey.
3. **Transition rate (12 months time-distance) from temporary to permanent employment:** Percentage of people employed in temporary jobs at the time t0 (employees with temporary jobs + term-contract workers) who are in permanent jobs one year later (permanent employees) over the total number of those employed in temporary jobs at time t0.
   Source: Istat - Labour force survey.
4. **Share of employed persons with temporary jobs for at least 5 years:** Percentage of temporary employees and term-contract workers who began their current job at least 5 years prior to interview on total temporary employees and term-contract workers.
   Source: Istat - Labour force survey.
5. **Share of employees with below 2/3 of median hourly earnings:** Percentage of employees with an hourly wage of less than 2/3 of the median on total number of employees.
   Source: Istat - Labour force survey.
6. **Share of over-qualified employed persons:** Percentage of people employed with a qualification higher than the qualification held by the majority of people who exercise the same profession on total employed people.
   Source: Istat - Labour force survey.
7. **Incidence rate of fatal occupational injuries or injuries leading to permanent disability:** Proportion of fatal occupational injuries or injuries leading to permanent disability on total people employed (excluding the armed forces) per 10,000.
   Source: Inail.
8. **Share of employed persons not in regular occupation:** People employed who do not comply with work, fiscal and pension laws on total people employed.
   Source: Istat - National Accounts.
9. **Ratio of employment rate for women aged 25-49 with at least one child aged 0-5 to the employment rate of women 25-49 years without children:** Employment rate of women aged 25-49 with at least one child aged 0-5 / Employment rate of women aged 25-49 without children.
   Source: Istat - Labour force survey.
10. **Share of employed people aged 15-64 years working over 60 hours per week (including paid work and household work):** Percentage of employed people aged 15-64 years that work over 60 hours per week of paid work and household work.
    Source: Istat - Time use survey.
11. **Household workload inequality index:** Time spent on household and family care by women aged 25-44 on the total time spent on household and family care by both partners, multiplied by 100. The indicator is calculated for couples with both partners in employment, where the woman is 25-44 years old. The indicator is derived from the Time Use Survey for the years 2008-09 and 2013-14, for intermediate and subsequent years estimates are based on the trend of the phenomenon derived from the Aspects of Daily Life Survey.
    Source: Istat - Time use survey; Survey on Aspects of daily life.
12. **Job satisfaction:** Percentage of employed persons with an average level of satisfaction from 8 to 10 considering the following dimensions: earnings, career opportunities, number of hours worked, job stability, home-work distance, interest in the work.
    Source: Istat, Labour force survey.
13. **Employed persons who feel their work unsecure:** Employed persons who, in the following 6 months, consider it is likely they lose their job and it is not at all or a little likely that they find another similar job, over the total of employed persons.
    Source: Istat - Labour force survey.
14. **Involuntary part time:** People employed in a part time job because they did not find a full time job on total employed people.
    Source: Istat - Labour force survey.
15. **Employed persons working from home:** Employed persons working from home in the last four weeks as a percentage of the total employment.
    Source: Istat - Labour force survey.

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Employment rate (20-64 years old) (a) 2022	Non-participation rate (b) 2022	Transition rate (12 months time distance) from temporary to permanent employment (c) 2019/2020 (*)	Share of employed persons with temporary jobs for at least 5 years (d) 2022	Share of employees with below 2/3 of median hourly earnings (e) 2020 (*)	Share of over-qualified employed persons (f) 2022	Incidence rate of fatal occupational injuries or injuries leading to permanent disability (g) 2021
Piemonte	71.3	10.7	26.3	11.2	9.2	23.9	7.5
Valle d'Aosta/Vallée d'Aoste	74.9	8.8	19.2	17.2	7.7	23.0	9.5
Liguria	70.7	11.2	19.2	12.7	8.9	29.1	12.7
Lombardia	73.4	8.5	28.6	10.8	6.9	22.5	7.6
Trentino-Alto Adige/Südtirol	77.1	5.9	23.7	19.2	6.3	21.1	11.3
Bolzano/Bozen	*79.2*	*4.2*	*23.7*	*22.4*	*6.5*	*16.4*	*11.9*
Trento	*74.9*	*7.7*	*23.7*	*16.3*	*6.1*	*26.1*	*10.7*
Veneto	72.9	7.8	31.1	9.5	8.2	27.0	10.0
Friuli-Venezia Giulia	73.4	8.8	19.7	15.9	6.9	28.7	7.5
Emilia-Romagna	74.8	8.8	25.6	15.4	8.3	26.0	11.4
Toscana	73.7	10.3	26.4	15.3	9.1	27.4	12.4
Umbria	69.9	12.2	24.0	15.2	9.5	33.1	15.1
Marche	72.0	10.3	21.1	13.5	8.3	30.8	15.2
Lazio	66.5	14.5	21.1	19.6	10.8	29.5	7.5
Abruzzo	62.8	16.9	25.2	17.3	10.8	30.2	14.3
Molise	58.8	21.5	27.0	11.8	9.4	30.3	12.5
Campania	47.3	33.3	15.2	22.1	15.1	25.2	9.7
Puglia	53.4	25.4	12.8	23.5	17.6	24.8	12.6
Basilicata	57.3	22.6	16.8	27.5	14.2	29.3	18.9
Calabria	47.0	33.0	9.2	27.6	19.0	27.2	13.8
Sicilia	46.2	35.3	18.1	27.4	16.1	26.0	12.3
Sardegna	58.6	23.1	17.1	11.7	10.7	25.9	10.0
North	73.2	8.8	26.9	12.3	7.8	24.6	9.1
North-west	72.6	9.3	26.9	11.2	7.7	23.4	8.0
North-east	74.1	8.1	26.8	13.5	7.9	26.2	10.4
Centre	69.7	12.4	23.0	17.0	9.9	29.2	10.7
South and islands	50.5	29.8	15.8	22.9	15.3	26.1	12.0
South	51.1	28.7	14.8	22.7	15.6	26.2	12.1
Islands	49.3	32.1	17.8	23.1	14.6	26.0	11.6
Italy	**64.8**	**16.2**	**22.4**	**17.0**	**10.1**	**26.0**	**10.2**

(a) Per 100 persons aged 20-64;
(b) Per 100 workforce and part of the potential workforce aged 15-74;
(c) Per 100 persons employed in unstable jobs at time t0;
(d) Per 100 temporary employees and term-contract workers;
(e) Per 100 employees;

Share of employed persons not in regular occupation (f) 2020	Ratio of employment rate for women aged 25-49 with at least one child aged 0-5 to the employment rate of women 25-49 years without children, multiplied by 100 (h) 2022	Share of employed people aged 15-64 years working over 60 hours per week (including paid work and household work) (i) 2013/2014	Share of household work time carried out by women in a couple on the total of the household work time (h) 2021/2022	Share of employed persons who feel satisfied with their work (f) 2022	Employed persons who feel their work unsecure (f) 2022	Involuntary part time (f) 2022	Employed persons working from home (f) 2022
9.8	75.5	51.3	....	56.9	3.6	8.4	13.0
10.1	86.5	47.0	....	59.3	4.6	8.2	6.7
11.4	77.2	51.7	....	48.0	4.4	10.3	13.7
9.4	76.4	51.8	....	52.7	3.7	8.4	15.2
8.9	73.4	53.7	....	61.9	3.6	5.5	12.3
8.4	*68.5*	*54.6*	....	*62.0*	*3.3*	*4.0*	*12.4*
9.5	*78.6*	*52.7*	....	*61.9*	*4.0*	*7.1*	*12.2*
8.5	78.1	51.9	....	49.8	3.8	7.0	10.8
9.2	79.6	51.7	....	51.5	4.0	8.5	10.6
9.3	82.4	49.4	....	51.7	4.8	7.7	13.0
10.2	84.4	52.1	....	51.8	5.0	11.7	10.1
12.4	79.4	52.8	....	56.1	5.0	10.5	8.8
10.1	84.7	53.1	....	52.2	5.5	9.4	7.6
14.3	76.1	48.0	....	50.3	4.2	11.9	21.1
13.6	74.5	47.1	....	48.4	6.1	11.9	7.4
15.5	88.2	50.6	....	52.6	4.8	13.8	7.4
17.9	65.8	47.8	....	39.1	6.8	12.6	8.5
15.3	69.8	45.1	....	48.7	6.1	12.8	6.6
13.9	80.7	48.6	....	40.1	8.9	11.5	8.0
20.9	80.8	49.4	....	39.6	6.4	13.3	8.0
17.3	63.4	38.7	....	43.0	7.5	15.7	7.3
14.7	66.6	49.8	....	53.2	7.8	16.1	10.0
9.4	77.8	51.4	58.8	52.8	3.9	8.0	13.3
9.7	76.4	51.6	58.5	53.5	3.7	8.6	14.5
8.9	79.5	51.1	59.3	51.9	4.2	7.3	11.8
12.4	79.8	50.3	63.3	51.5	4.7	11.4	14.9
16.7	66.8	45.6	67.5	44.3	6.8	13.6	7.8
16.8	69.9	47.2	67.6	43.5	6.5	12.7	7.7
16.6	60.9	42.0	66.8	46.0	7.6	15.8	8.1
12.0	**72.4**	**49.6**	**61.6**	**50.2**	**4.9**	**10.2**	**12.2**

(f) Per 100 employed;
(g) Per 10,000 employed;
(h) Per 100;
(i) Per 100 employed aged 15-64.
* The data is based on the regulation in force until 2020.

4. Economic well-being[1]

The indicators related to Economic well-being show different and not always consistent trends. The Italian economy grows strongly in 2022, but less than in 2021. The growth in productive activity, with a 3.7% increase in GDP in volume terms, is accompanied by an expansion in labour input and employees compensation. In 2022, gross disposable income per capita is 9.0% higher than in 2019 (the year taken as a reference for the pre-COVID situation), exceeding the pre-crisis level. In 2020, a year characterised by a severe economic crisis (GDP falls by 9.0% compared to 2019), average annual net wealth per capita falls by 11.3% compared to 2010 (from 103,654 euro in 2010 to 91,896 euro in 2020) (Table 1). The economic and labour market difficulties lead to an increase in the individual incidence of absolute poverty to a maximum of 9.4% in 2020 and 2021, which is 1.7 percentage points higher than in the pre-pandemic year (7.7% in 2019) and 5.2 percentage points higher than in 2010 (4.2%). As a consequence of the pandemic, the net income inequality index also increases slightly in 2020 compared to the previous year (5.8, compared to 5.7 in 2019): this worsening was limited by the support measures introduced (emergency transfers and citizenship income), without which the inequality index would have been 6.9, much higher than the observed value. Despite the fact that, in the first year of the COVID-19 pandemic, household income fell again compared to the previous year, both in nominal (-0.9%) and in real terms (-0.8%), the at-risk-of-poverty rate remains broadly stable at 20.1% compared to the previous two years. The housing cost overburden indicator also remains stable, with 7.2 per cent of the population experiencing a severe burden. The pandemic significantly changes the way households perceive their situation, to the extent that it reverses the positive trend recorded in previous years for some indicators. The proportion of those who say their economic situation has worsened compared to the previous year, which was 25.8% before the crisis, increases in the two years of the pandemic and continues to rise, reaching 35.1% in 2022, an unprecedented level. A similar trend is observed for the share of people reporting great difficulty in making ends meet, rising from 8.2% in 2019 to 9.1% in 2021, but also for the share of people living in households with severe housing deprivation, rising from 5.0% in 2019 to 5.9% in 2021. In the years before the pandemic crisis, the share of people living in low work intensity households (with members aged 18-59 working less than a fifth of the time) falls: the indicator shows a positive trend, falling from 12.8% in 2016 to 10.0% in 2019. In 2020, the positive trend stops and the percentage of people living in this situation increases to 11.0% in 2020 and 11.7% in 2021. Severe material deprivation presents a seemingly contradictory trend to the economic picture described so far. Indeed, in the two years of the pandemic, the positive trend that has seen the proportion of people in this situation fall since 2016 continues. This dynamic is mainly a consequence of the evolution of two of the nine deprivation items covered by the indicator: the share of those who report that they cannot afford to take a week's holiday a year for economic reasons and the share of those who report that they cannot afford an unexpected expense of 850 euro has fallen significantly. The reason for the improvement in these two items is the strong increase in the propensity to save, which, having reduced their consumption as a precautionary measure during the COVID-19 induced recession, allowed them to count on an extra sum to cover sudden needs or to go on holiday if they so wished. In other words, at an aggregate level, the value of these indicators represents the synthesis between the worsening economic situation of the most vulnerable groups and the consumption behaviour of those households that managed to save more than usual in a period of uncertainty and concern about the future.

1 This chapter was edited by Clodia Delle Fratte and Francesca Lariccia, with contributions from Barbara Baldazzi, Claudia Cicconi, Stefania Cuicchio, Daniela Lo Castro, Alessandro Brunetti and Carmela Squarcio.

Table 1. Economic well-being indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Gross disposable income per capita (absolute values)	2010	2021	19,753	Better	Better	-	-
Disposable income inequality (s80/s20) (absolute values) (a)	2010	2020	5.9	Stable	Worse	-	-
People at risk of poverty (%)	2010	2021	20.1	Worse	Stable	-	-
Per capita net wealth (absolute values) (b)	2010	2020	91,773	Worse	-	-	-
Absolute poverty (incidence) (%)	2010	2021	9.4	Worse	Worse	-	-
Severe material deprivation rate (%)	2010	2021	5.6	Stable	Better	-	-
Severe housing deprivation (%)	2010	2021	5.9	Better	Worse	-	-
Great difficulty in making ends meet (%)	2010	2021	9.1	Better	Worse	-	-
Very low work intensity (%)	2010	2021	11.7	Better	Worse	-	-
Economic situation of the household (%)	2016	2022	35.1	Better	Worse	Worse	Worse
Housing cost overburden rate (%)	2010	2021	7.2	Worse	Better	-	-

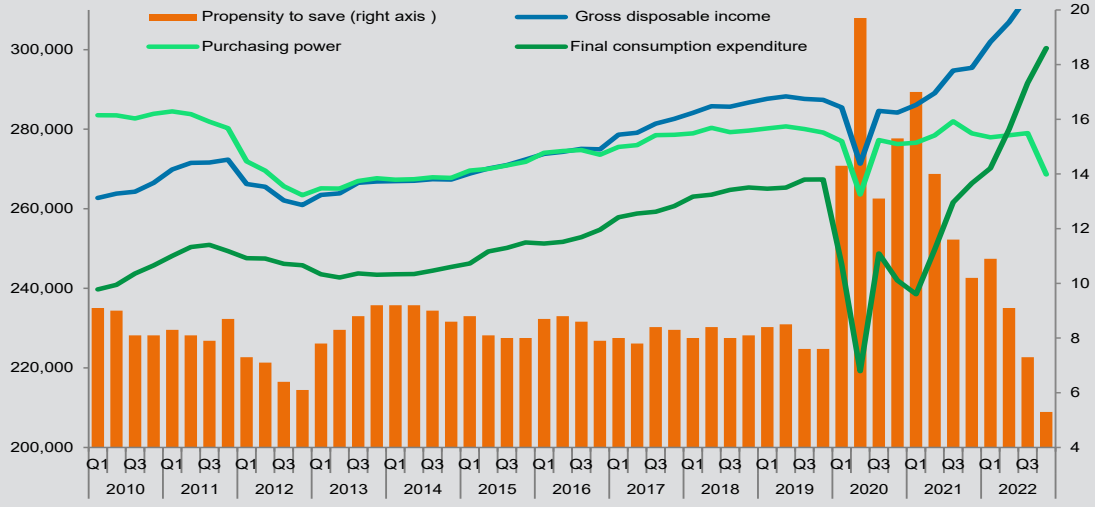
Better Worse Stable - Not available

(a) Year 2021 not available. Changes calculated between 2019 and 2020.
(b) Year 2019 not available. Changes calculated between 2010 and 2020.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

Rise in disposable income and final consumption expenditure reinforces the downward trend in the propensity to save

In 2022, the gross disposable income of consumer households increased compared to the previous year (Figure 1). The strong increase in final consumption expenditure reinforced the downward trend in the propensity to save, which fell to a level lower than in the pre-pandemic period.

Figure 1. Propensity to save (right-hand scale), gross disposable income, purchasing power (a), final consumption expenditure of consumer households. Years 2010-2022. Seasonally adjusted data in millions of euro and percentage values



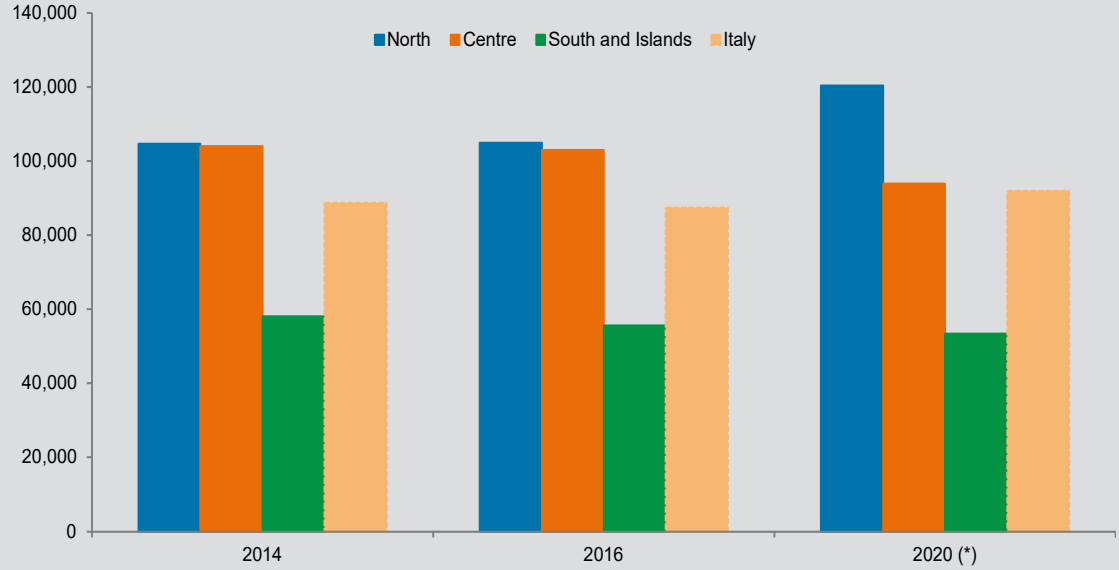
Source: Istat, National Accounts
(a) Gross disposable income of consumer households in real terms, obtained using the household final consumption expenditure deflator (chained values with reference year 2015).

Rising wealth level

Average net wealth increases between 2016 and 2020, mainly due to the financial component, supported by both savings growth and higher asset values (Figure 2). The amount of average annual net wealth per capita is 91,896 euro (it was 87,451 in 2016). The

gap is widening between the South, where wealth is still falling (-4.0%), at 53,369 euro per capita, and the North, where it is increasing (120,340 euro).

Figure 2. Median per capita net wealth. Years 2014, 2016, 2020. Data in euro

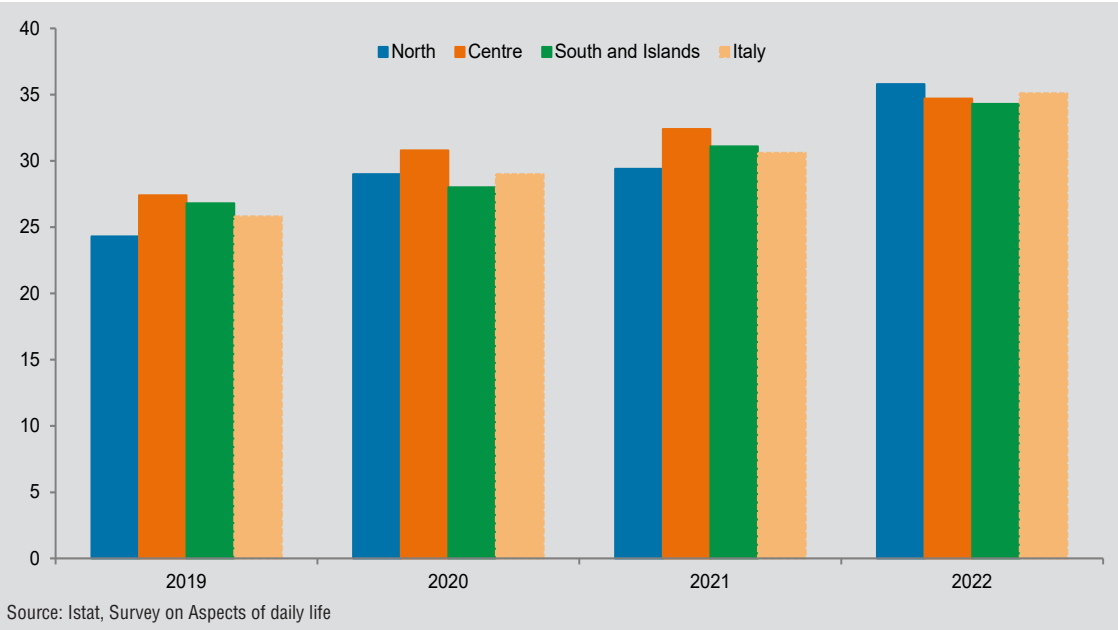


Source: Bank of Italy - Financial accounts and household wealth (SHIW)
(*) Values obtained using weights for historical comparison.

Perception of the economic situation still worsening in 2022

The pandemic significantly changes the way households perceive their economic situation, reversing the positive trend recorded in previous years for some indicators. The proportion of those who say their economic situation has worsened compared to the previous year, equivalent to 25.8% in 2019, rises in the two years of the pandemic and continues to rise in 2022, reaching 35.1%, an unprecedented level (Figure 3).

Figure 3. Households reporting that the household economic situation has worsened or worsened a lot compared to the previous year by geographic area. Years 2019-2022. Percentage values

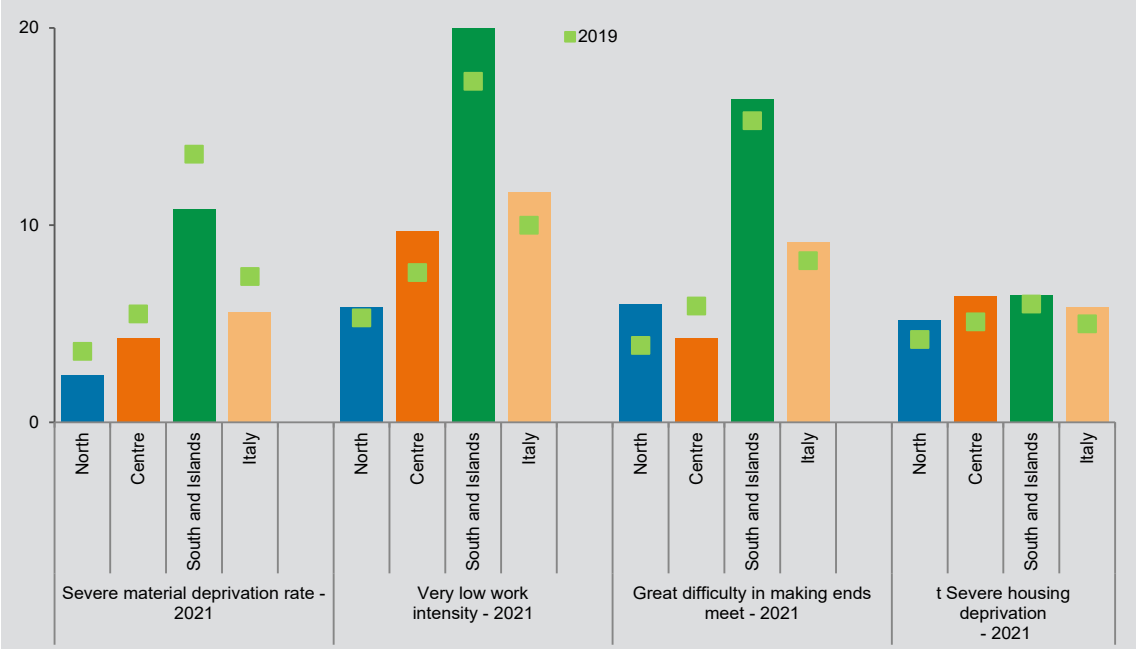


Source: Istat, Survey on Aspects of daily life

Most non-monetary indicators of living conditions worsen in 2021, high income inequality persists

In the years preceding the pandemic crisis, the share of persons living in low work intensity households (i.e. with members aged 18-59 who worked less than a fifth of the time) decreases, so that the indicator falls to 10.0% in 2019. In 2020, the positive trend stops and the share of persons in this situation rises to 11.0% and continues to rise in 2021 (11.7%).
A similar trend is observed for the share of people who say they have great difficulty in making ends meet, rising from 8.2% in 2019 to 9.1% in 2021 (Figure 4).

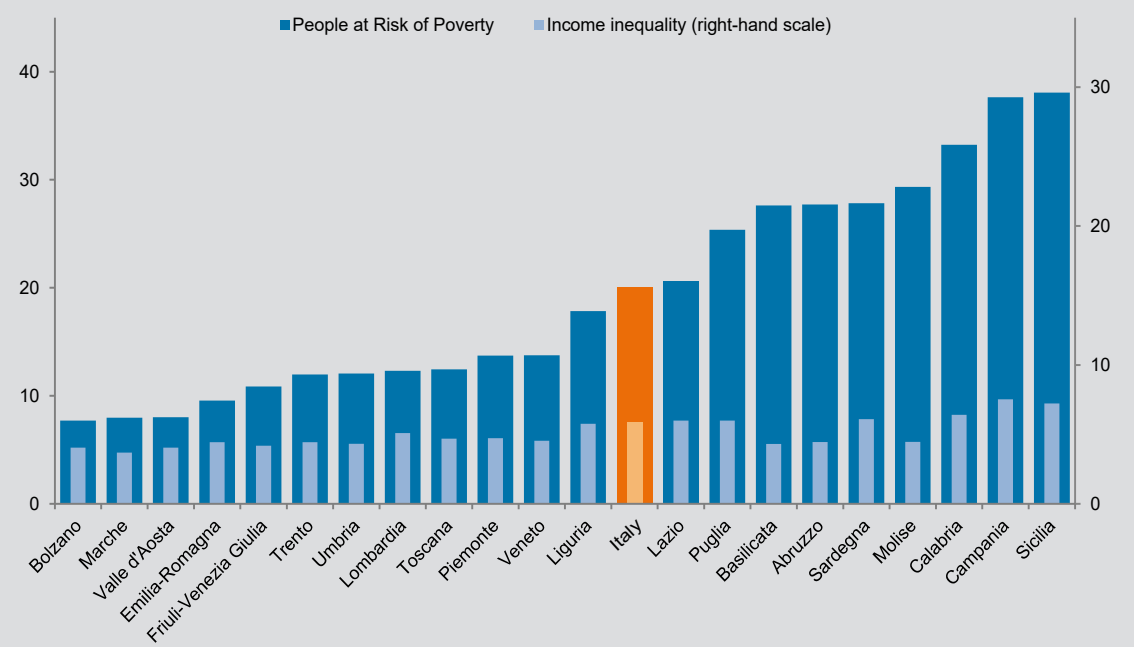
Figure 4. Non-monetary indicators of living conditions by geographic area. Years 2019 and 2021. Percentage values



Source: Istat, Eu-Silc

The net income inequality index increased slightly in 2020 compared to the previous year (5.9 compared to 5.7 in 2019) (Figure 5). The value recorded is the effect of the support measures introduced at the start of the pandemic (emergency transfers and citizenship income); without the support measures introduced, the estimated inequality index would have been 6.9.
The at-risk-of-poverty rate remains broadly stable compared to 2019, at 20.1%. In 2020, the housing cost overburden indicator also remains stable, representing a severe burden for 7.2% of the population.

Figure 5. Income inequality (a) (right-hand scale) and people at risk of poverty by region. 2021 Survey year - 2020 Incomes. Ratio of S80/S20 incomes and percentage values

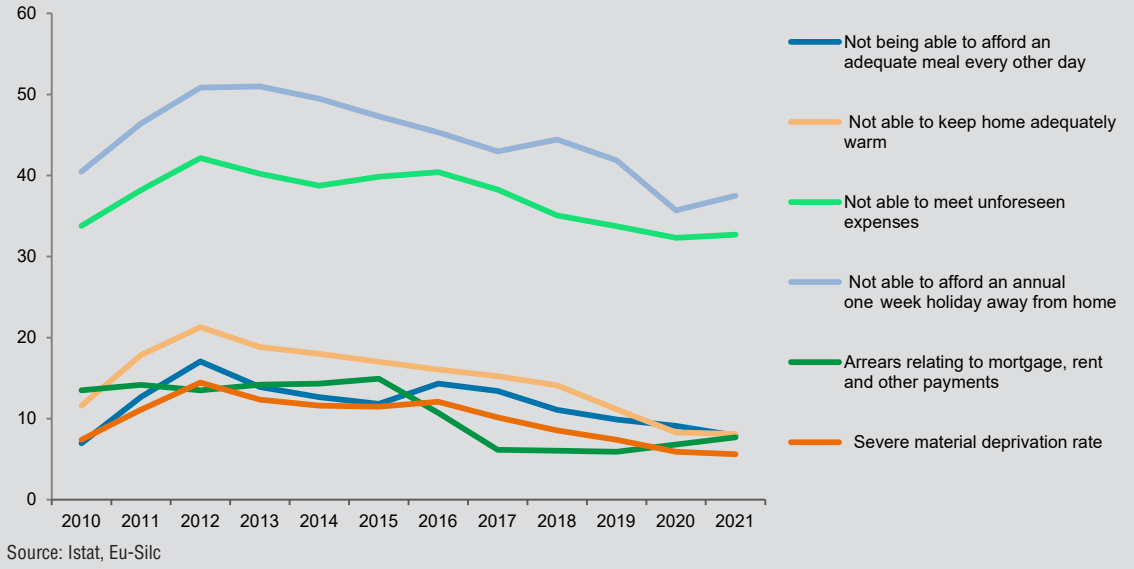


Source: Istat, Eu-Silc

Housing conditions and material deprivation

In 2021, the positive trend of a decrease since 2016 in the proportion of people living in conditions of severe material deprivation (5.6%), i.e. having at least four of the nine symptoms of deprivation covered by the indicator, will continue (Figure 6).
In particular, the proportions reporting that they could not afford one week's holiday a year for economic reasons and those living in households that could not meet an unexpected expense of 850 euro have increased slightly compared with 2020, the year in which both indicators reached their lowest levels over the last decade (+1.8 and +0.4 percentage points respectively).

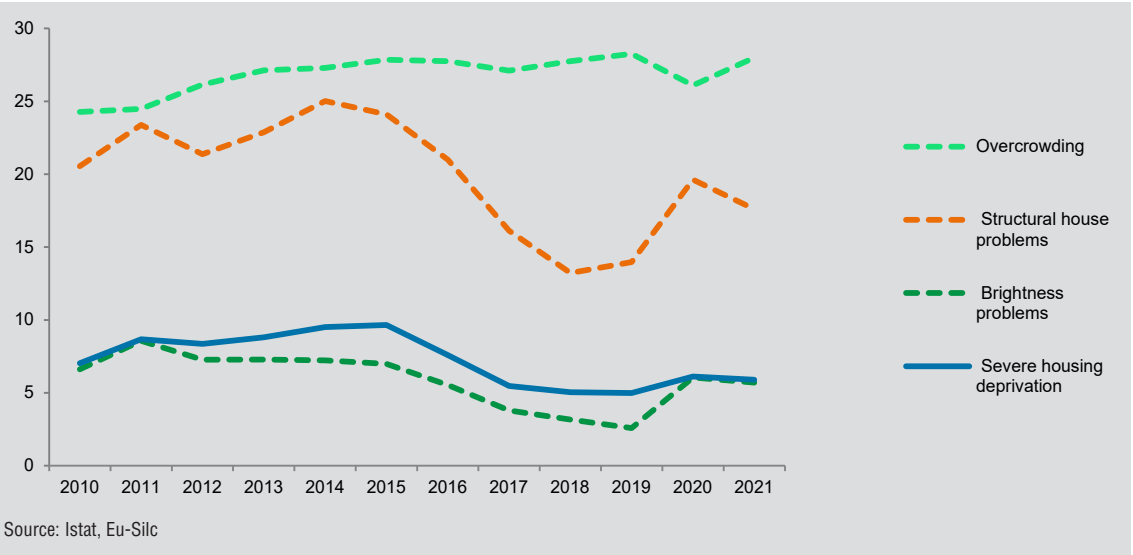
Figure 6. People with severe material deprivation and specific deprivation conditions. Years 2010-2021. Percentage values



Source: Istat, Eu-Silc

In 2021, the percentage of people living in severe housing deprivation , i.e. in overcrowded[2] dwellings or in dwellings lacking certain services and with structural problems (ceilings, fixtures, etc.), is 5.9%, slightly lower than in 2020 but still higher than in 2019 (Figure 7). Indeed, the component of the indicator that detects the presence of structural problems in the dwelling decreases, affecting 17.6% of the population in 2021. However, the overcrowding indicator remains at a high level, increasing by 1.9 percentage points (from 26.1% in 2020 to 28.0% in 2021).

Figure 7. People with severe housing deprivation and specific deprivation conditions. Years 2010-2021. Percentage values



Source: Istat, Eu-Silc

2 According to the methodology currently used by Eurostat, a dwelling is considered overcrowded when it does not have a minimum number of rooms equal to: - one room for the household; - one room for each couple; - one room for each member aged 18 and over; - one room for every two members of the same gender aged between 12 and 17; - one room for every two members up to 11, regardless of gender.

Indicators

1. **Gross disposable income per capita:** Ratio between gross disposable income of consumer households and the total number of residents (current prices).
   Source: Istat - National Accounts.
2. **Disposable income inequality:** Ratio of total equivalised income received by the 20% of the population with the highest income to that received by the 20% of the population with the lowest income.
   Source: Istat - Eu-Silc.
3. **People at risk of poverty:** Share of population at risk of poverty, with an equivalised income less than or equal to 60% of the median equivalised income.
   Source: Istat - Eu-Silc.
4. **Per capita net wealth:** Ratio of total net wealth of households to the total number of residents.
   Source: Bank of Italy - Financial accounts and household wealth (SHIW).
5. **Absolute poverty (incidence):** Ratio of people belonging to households with total consumption expenditure equal to or below the absolute poverty threshold value and total resident people.
   Source: Istat - Household Budget Survey.
6. **Severe material deprivation rate:** Share of population living in households lacking at least 4 items out of the following 9 items: i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses (of 850 euros from 2020 survey), iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home vi) a colour TV, vii) a washing machine, viii) a car, or ix) a telephone.
   Source: Istat - Eu-Silc.
7. **Severe housing deprivation:** Share of population living in a dwelling which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures. Housing deprivation is calculated by reference to households with a leaking roof, neither a bath, nor a shower, nor an indoor flushing toilet, or a dwelling considered too dark.
   Source: Istat - Eu-Silc.
8. **Great difficulty in making ends meet:** Share of individuals in households that, considering all the available income, declare to get to the end of the month with great difficulty.
   Source: Istat - Eu-Silc.
9. **Very low work intensity:** Proportion of people 0-59 living in households in which, in the previous year, household members of working age (person aged 18-59 years, excluding students aged 18-24) worked less than 20% of the number of months that could theoretically have been worked by the same household members (excluding households with only minors, students aged less than 25 and persons aged 60 and over).
   Source: Istat - Eu-Silc.
10. **Housing cost overburden rate:** Share of population living in households where the total housing costs represent more than 40% of disposable income.
    Source: Istat - Eu-Silc.
11. **Economic situation of the household:** Households reporting that their economic situation has worsened or worsened a lot compared to the previous year.
    Source: Istat - Aspects of daily life.

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Gross disposable income per capita (a)	Disposable income inequality	People at risk of poverty (b)	Per capita net wealth (a)	Absolute poverty (incidence) (b)
	2021	2020 (*)	2021 (**)	2020	2021
Piemonte	21,729	4.7	13.7	....	....
Valle d'Aosta/Vallée d'Aoste	21,593	4.0	8.0	....	....
Liguria	22,348	5.8	17.8	....	....
Lombardia	23,862	5.1	12.3	....	....
Trentino-Alto Adige/Südtirol	24,324	4.1	9.8	....	....
Bolzano/Bozen	*26,296*	*4.0*	*7.7*	....	....
Trento	*22,381*	*4.4*	*12.0*	....	....
Veneto	21,000	4.5	13.7	....	....
Friuli-Venezia Giulia	21,625	4.2	10.9	....	....
Emilia-Romagna	23,288	4.4	9.6	....	....
Toscana	20,747	4.7	12.4	....	....
Umbria	19,278	4.3	12.1	....	....
Marche	19,623	3.7	8.0	....	....
Lazio	21,001	6.0	20.6	....	....
Abruzzo	17,071	4.5	27.7	....	....
Molise	15,742	4.5	29.3	....	....
Campania	14,513	7.5	37.6	....	....
Puglia	15,392	6.0	25.4	....	....
Basilicata	15,732	4.3	27.6	....	....
Calabria	14,108	6.4	33.2	....	....
Sicilia	14,764	7.2	38.1	....	....
Sardegna	16,859	6.1	27.8	....	....
Noth	22,757	4.9	12.5	120,340	8.2
North-west	23,126	5.2	13.2	....	8.0
North-east	22,251	4.5	11.5	....	8.6
Centre	20,620	5.2	15.8	93,886	7.3
South and Islands	15,111	6.5	33.1	53,369	12.1
South	15,030	6.4	32.0	....	13.2
Islands	15,282	7.0	35.5	....	9.9
Italy	**19,753**	**5.9**	**20.1**	**91,896**	**9.4**

(a) In euro;
(b) Per 100 persons;
(c) Data for Valle d'Aosta statistically not very significant, because it corresponds to a sample size between 20 and 49 units;
(d) Data for Veneto, Friuli-Venezia Giulia, Emilia-Romagna, Umbria and Basilicata statistically not very significant, because it corresponds to a sample size between 20 and 49 units;
(e) Data for Valle d'Aosta, province of Trento of Bolzano, Friuli-Venezia Giulia, Basilicata and Calabria statistically not very significant, because it corresponds to a sample size between 20 and 49 units;
(f) Percentage of people in families who manage to reach the end of the month with great difficulty;

	Severe material deprivation rate (b) (d)	Severe housing deprivation (b) (e)	Great difficulty in making ends meet (b) (f) (g)	Very low work intensity (b) (h)	Housing cost over-burden rate (b) (i) (**)	Households economic situation (b)
	2021	2021	2021	2021	2021	2022
	4.5	9.8	6.8	7.2	7.3	40.3
	..	11.7	4.9	6.1	5.5	34.8
	4.1	8.6	5.6	10.6	8.6	33.9
	2.7	4.3	8.3	5.3	7.5	33.1
	..	5.7	2.9	5.4	8.2	30.4
	..	*8.4*	*4.1*	*4.2*	*8.5*	*30.5*
	..	*3.0*	*1.7*	*6.8*	*7.9*	*30.3*
	1.2	4.3	4.4	5.8	5.7	38.0
	2.1	2.3	3.6	8.4	4.6	35.5
	0.8	3.0	3.4	3.9	4.3	37.1
	2.6	5.3	2.7	8.4	7.7	37.9
	2.0	5.9	2.3	6.8	4.5	35.7
	4.6	5.8	5.7	7.8	3.6	39.8
	5.5	7.3	5.2	11.4	6.5	31.4
	7.2	10.3	20.8	13.2	4.4	38.7
	..	11.6	16.8	14.5	3.0	35.6
	17.3	6.8	31.9	29.6	11.6	28.6
	8.6	5.2	9.9	13.7	8.7	34.2
	4.3	6.8	8.2	9.8	6.3	29.2
	8.9	4.5	6.4	11.8	5.5	33.4
	9.6	6.7	8.8	22.9	9.5	38.7
	6.0	5.9	11.9	18.4	4.3	38.4
	2.4	5.2	6.0	5.9	6.6	35.8
	3.3	6.2	7.6	6.3	7.6	35.2
	1.1	3.7	3.8	5.3	5.3	36.7
	4.3	6.4	4.3	9.7	6.4	34.7
	10.8	6.5	16.4	20.6	8.6	34.3
	11.8	6.4	19.7	20.1	8.8	32.1
	8.7	6.5	9.6	21.9	8.2	38.6
	5.6	**5.9**	**9.1**	**11.7**	**7.2**	**35.1**

(g) Data for Valle d'Aosta, Trentino-Alto Adige, province of Trento of Bolzano, Umbria and Basilicata statistically not very significant, because it corresponds to a sample size between 20 and 49 units;
(h) Data for Valle d'Aosta, province of Bolzano and Basilicata statistically not very significant, because it corresponds to a sample size between 20 and 49 units;
(i) Data for Valle d'Aosta, Molise, Basilicata and Sardegna statistically not very significant, because it corresponds to a sample size between 20 and 49 units;
(*) The indicator refers to the year of achievement of income (2020) and not to the survey year (2021);
(**) The indicator refers to the year of the survey (2021) while the year of achievement of income is previous year (2020).

5. Social relationships[1]

Prior to the pandemic, many indicators in the domain were at worse or stable levels compared to the situation a decade earlier, with the only exceptions being the number of non-profit institutions, the share of the population expressing trust in others, and the share of the population claiming to have people to rely on, which were instead showing a positive trend.

In 2020, the indicators have remained stable and some have shown improvement. In particular, family and friends networks have confirmed their central and protective role to alleviate the difficulties of a very delicate and unprecedented lockdown phase.

In 2021, on the other hand, people have more dramatically been affected by the lingering effects of the crisis, with many indicators in this domain clearly worsening compared to 2019 and touching the lowest values in the period considered.

Despite the generally deteriorating context, some indicators have registered positive signs in 2020-21: trust in others - historically very low in Italy – has increased, and civic and political participation has begun to grow again after years of decline. Non-profit organisations also have confirmed the upward trend (Table 1).

In 2022, many indicators in the domain show an overall improvement compared to 2021; however, in almost all cases, the growth only partially compensates for the losses experienced in 2021 and does not allow a recovery to 2019 levels.

Table 1. Social relationships indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Satisfaction with family relations (%)	2010	2022	32.6	Worse	Worse	Better	Worse
Satisfaction with friends relations (%)	2010	2022	21.6	Worse	Worse	Better	Worse
People to rely on (%)	2009	2022	81.0	Better	Worse	Stable	Stable
Social participation (%)	2013	2022	25.4	Stable	Worse	Better	Worse
Civic and political participation (%)	2011	2022	63.5	Worse	Better	Worse	Better
Voluntary activity (%)	2010	2022	8.3	Worse	Worse	Better	Worse
Association funding (%)	2010	2022	12.8	Worse	Worse	Better	Worse
Nonprofit organizations (per 10,000 inhabitants) (a)	2011	2020	61.2	Better	Better	-	-
Generalised trust (%)	2010	2022	24.3	Better	Better	Worse	Better

Better Worse Stable - Not available

(a) Year 2021 not available. Changes calculated between 2019 and 2020.

Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

As the restrictions that characterised the most critical moments of the pandemic fade, satisfaction with family and friends relations begins to rise again, especially satisfaction with friends, which had shown the greatest decline. For both indicators, the improvement is most pronounced among 14-24-year-olds, who had experienced the sharpest worsening in satisfaction. In particular, the 20-24 age group returns to 2019 levels of satisfaction for both family and friends relations.

Involvement of the population in voluntary activities and the share of the population who say they have funded associations also show a recovery in 2022.

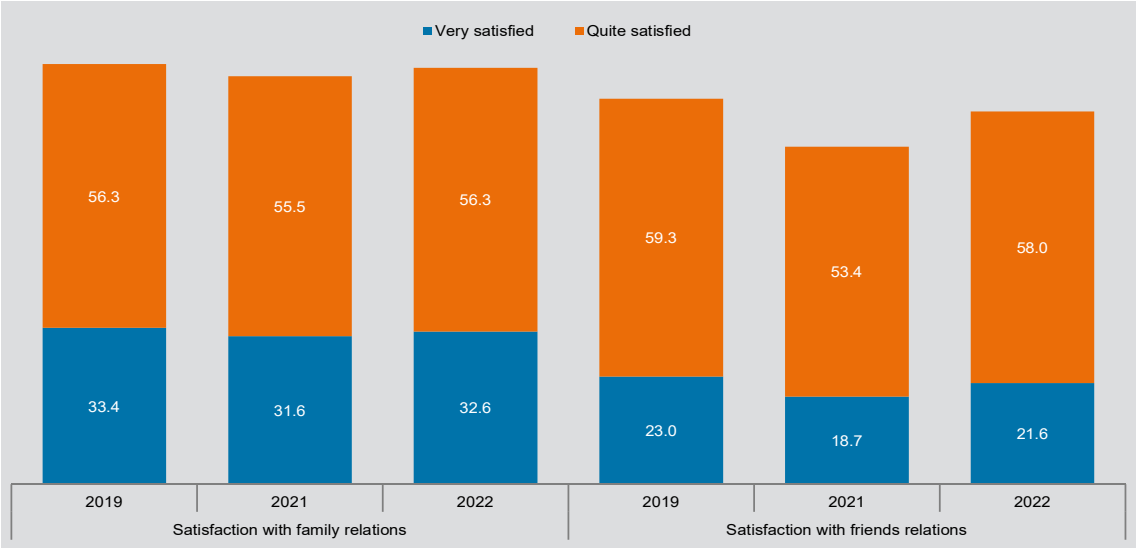
1 This chapter was edited by Miria Savioli with contributions from Isabella Latini and Massimo Lori.

Of all the indicators in the domain, social participation is that showing the greatest growth in the past year especially for younger people, that experienced the sharpest decline in participation. However, pre-pandemic levels are not restored in any age group.
In the most recent year, only those indicators that had improved during the pandemic show a negative decline: civic and political participation, which breaks the positive trend, and trust in others, which had reached its highest level in the entire time trend in 2021. Despite the decline in 2022, both indicators are still at higher levels than before the pandemic.

Satisfaction with family and friends relations grows, especially among younger people

Satisfaction with family and friends relations, which was stable in the first year of the pandemic and worsened in 2021, starts to improve again in 2022: 32.6% of people aged 14 years and over say they are very satisfied with family relations and 21.6% with friends relations. However, the growth does not fully compensate for the loss experienced during the pandemic (Figure 1).

Figure 1. People aged 14 and over that are satisfied with family and friends relations. Years 2019, 2021 and 2022. Percentage values

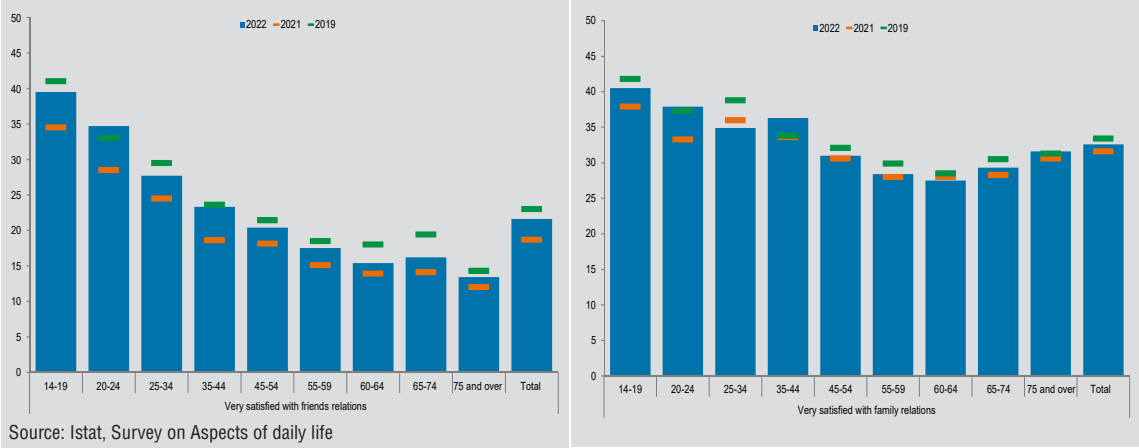


Source: Istat, Survey on Aspects of daily life

In 2022, satisfaction with family and friends relations shows small gender differences in favour of men; the differences by age, however, are more pronounced. Satisfaction with family relations, in fact, is highest between the ages of 14 and 44 (between 35% and 40%), and then declines at later ages, going down to 27.5% among the population aged 60-64; the proportion rises slightly in the older population (31.6% among those aged 75 and over, Figure 2).
Satisfaction with relations with friends is highest among 14-19 (39.5%) and 20-24-year-olds (34.7%), who tend to have a wider network of friends. Satisfaction with the friends' network declines markedly from the age of 25, reaching its lowest level in the older population (13.4% among those aged 75 and over, Figure 2).

The improvement observed in 2022 is most pronounced among young people aged 14-24, that experienced the sharpest drop in satisfaction during the pandemic. In particular, the 20-24 age group returns to the 2019 levels of satisfaction for both family and friends relations (Figure 2).

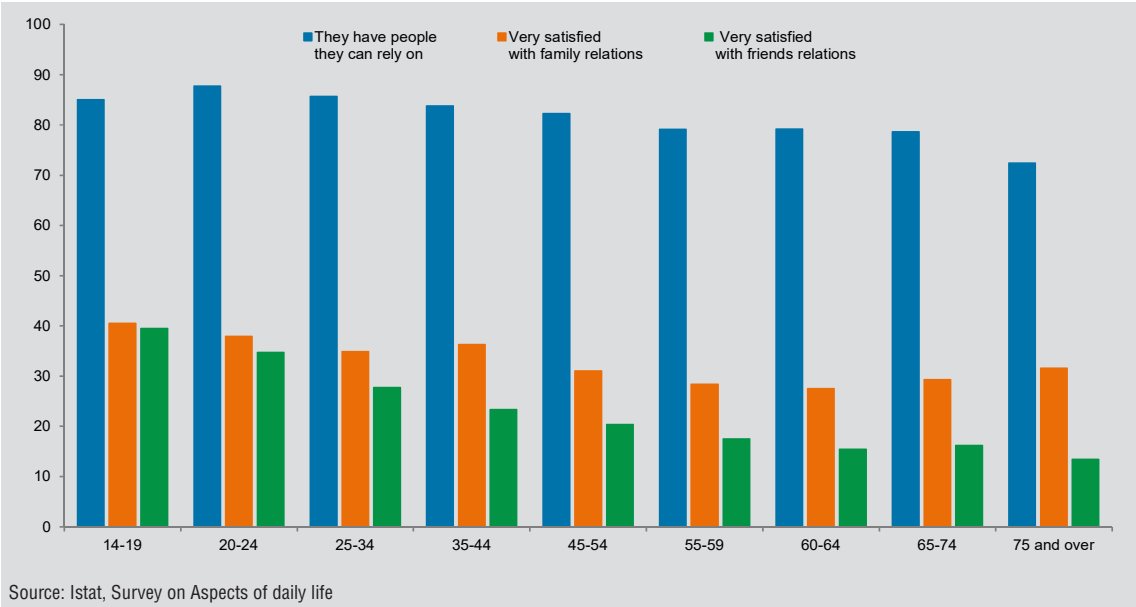
Figure 2. People aged 14 and over that are very satisfied with family and friends relations by age group. Years 2019, 2021 and 2022. Percentage values



Source: Istat, Survey on Aspects of daily life

In 2022, the share of the population aged 14 and over declaring that they have non-cohabiting relatives, friends or neighbours to rely on in case of need continues to be very high (81.0%). There are no gender differences, but the indicator follows a downward trend with age: it is highest among people aged 14-54 (over 82%), decreases from age 55 onwards and reaches its lowest value among people aged 75 and over, among whom the share nevertheless remains high (72.4%, Figure 3).

Figure 3. People aged 14 and over that have people they can rely on and people aged 14 and over that are very satisfied with family and friends relations by age group. Year 2022. Percentage values



Source: Istat, Survey on Aspects of daily life

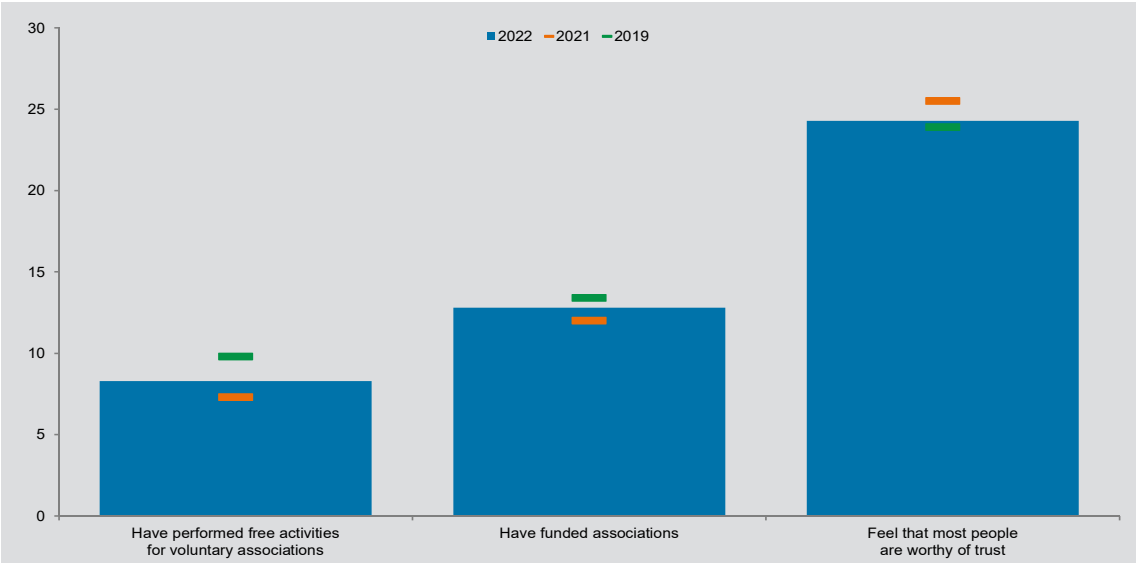
Voluntary activity and association funding grow

The share of people aged 14 and over that declares that it is involved in voluntary activity rises again compared to the previous year, reaching 8.3% in 2022 (+1 percentage point); the increase does not, however, make it possible to return to pre-pandemic levels (9.8% in 2019). There are no gender differences in volunteering, while in terms of age, the highest levels are found among young people aged 20-24 and in the 35-74 age group (between 8% and 9%); the lowest level is found among the population aged 75 and over (5.2%, Figure 4).
In 2022, the percentage of population aged 14 and over that have funded association recorded a slight recovery reaching 12.8%; the growth is not enough to offset the decrease in 2021 and does not allow for a return to 2020 levels (14.3%, Figure 4).

Trust in others decreases

The trust that people are willing to place in their fellow citizens is declining, with a widespread mistrust emerging: in 2022, 24.3% of people aged 14 and over believe that most people are trustworthy. This decrease interrupts the upward trend that began in 2018 and in 2021 had reached the highest value of the entire time trend (25.5%, Figure 4).

Figure 4. People aged 14 and over that feel that most people are worthy of trust and people aged 14 and over that have funded associations or have performed free activities for voluntary associations in the last 12 months. Years 2019, 2021 and 2022. Percentage values



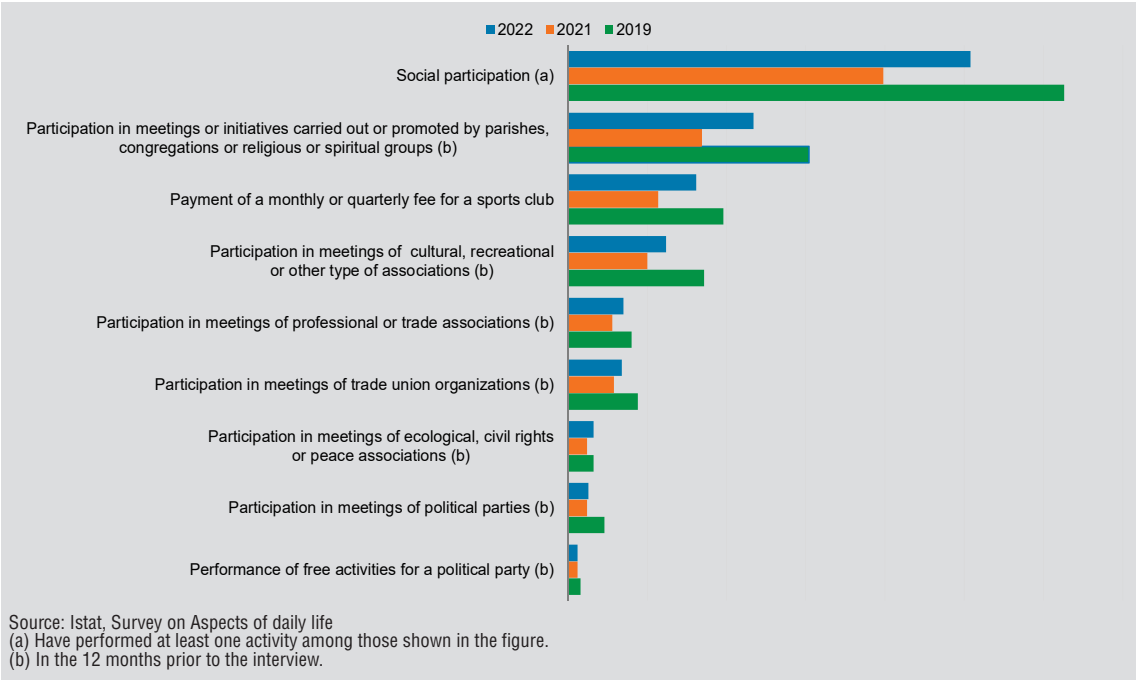
Source: Istat, Survey on Aspects of daily life

After a sharp decline in 2021, social participation grows

In 2022, 25.4% of the population aged 14 years and over carried out social participation activities, taking part in the activities of recreational, cultural, political, civic, sporting, religious or spiritual associations. After the sharp drop recorded in 2020-2021 due to the

measures taken to counter the development of the pandemic, the percentage of those who carry out social participation activities is growing again (+5.5 percentage points compared to 2021), but at levels well below those observed in 2019 (31.3%, Figure 5).
When analysing the individual components of the indicator, it can be seen that the items that have increased in the last year are: participation in meetings or initiatives organised or promoted by parishes, congregations or religious or spiritual groups (from 8.4% in 2021 to 11.7% in 2022), payment of monthly or periodic fees to a sports club (from 5.7% to 8.1%) and participation in meetings of cultural, recreational or other associations (from 5% to 6.2%, Figure 5).

Figure 5. People aged 14 and over that have carried out social participation activities. Years 2019, 2021 and 2022. Percentage values

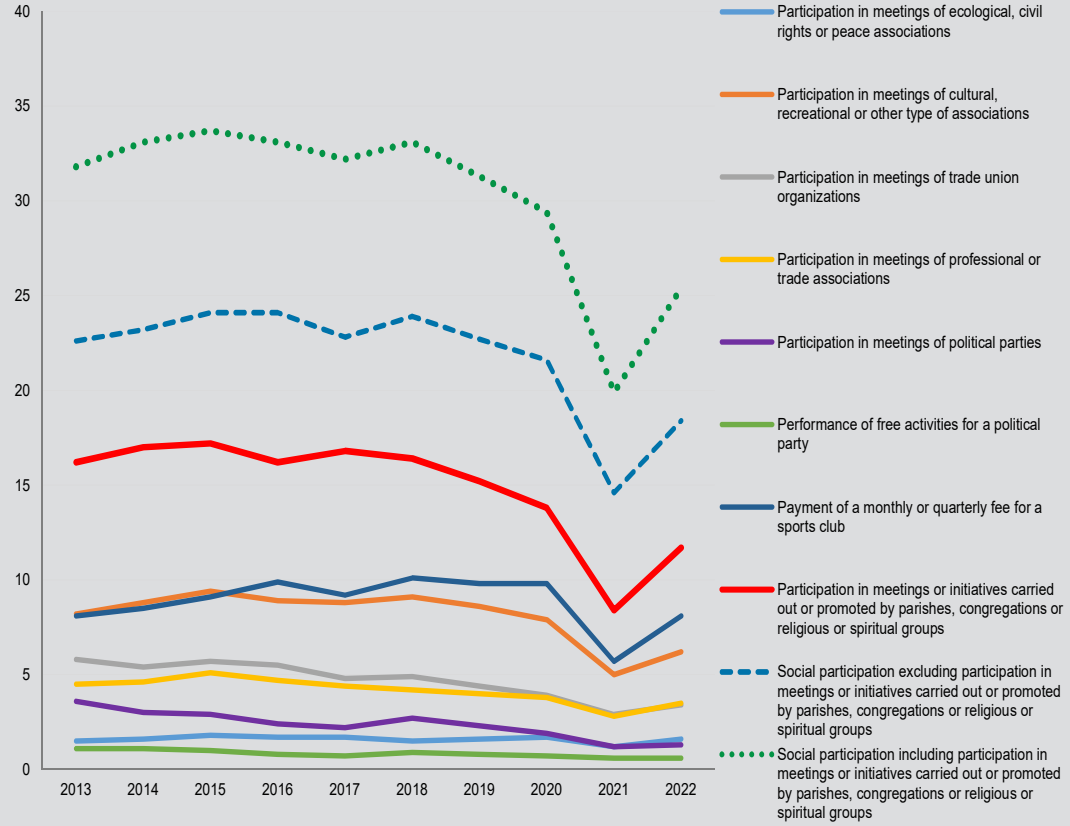


Source: Istat, Survey on Aspects of daily life
(a) Have performed at least one activity among those shown in the figure.
(b) In the 12 months prior to the interview.

THE MULTIPLE ASPECTS OF SOCIAL PARTICIPATION: THE CONTRIBUTION OF A NEW INDICATOR

This Bes report proposes the new indicator of social participation, which includes, among other activities, participation in social activities involving religious or spiritual centres as meeting places.
The share of the population aged 14 years and over that claims to participate in meetings or initiatives carried out or promoted by parishes or religious or spiritual groups stands at 11.7%, and this is the most performed activity among all those considered. This has a strong impact on the overall indicator, which stands at 25.4 percent in 2022, 7 percentage points higher than the indicator that did not take this type of participation into account (Figure A).

Figure A. People aged 14 and over that have carried out social participation activities. Years 2013-2022. Percentage values

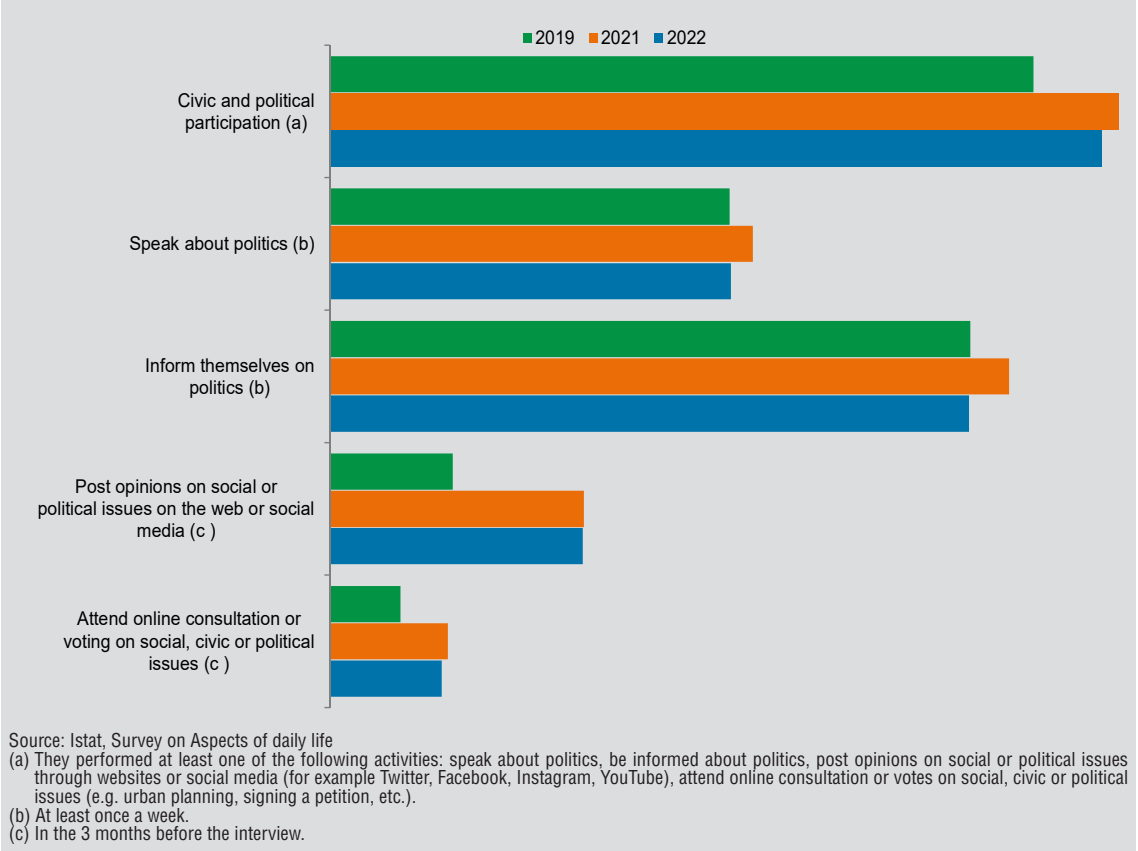


Source: Istat, Survey on Aspects of daily life

Civic and political participation declines

In 2022, 63.5% of the population aged 14 years and over said they had carried out at least one indirect civic and political participation activity, down from 2021 (64.9%, Figure 6). There is thus a reversal of the upward trend that began in 2020, when the need to follow the evolution of the measures put in place to counter the spread of the COVID-19 pandemic had favoured civic and political participation of the population. Despite the decline over the past year, civic and political participation is still higher than the pre-pandemic level (57.9% in 2019).

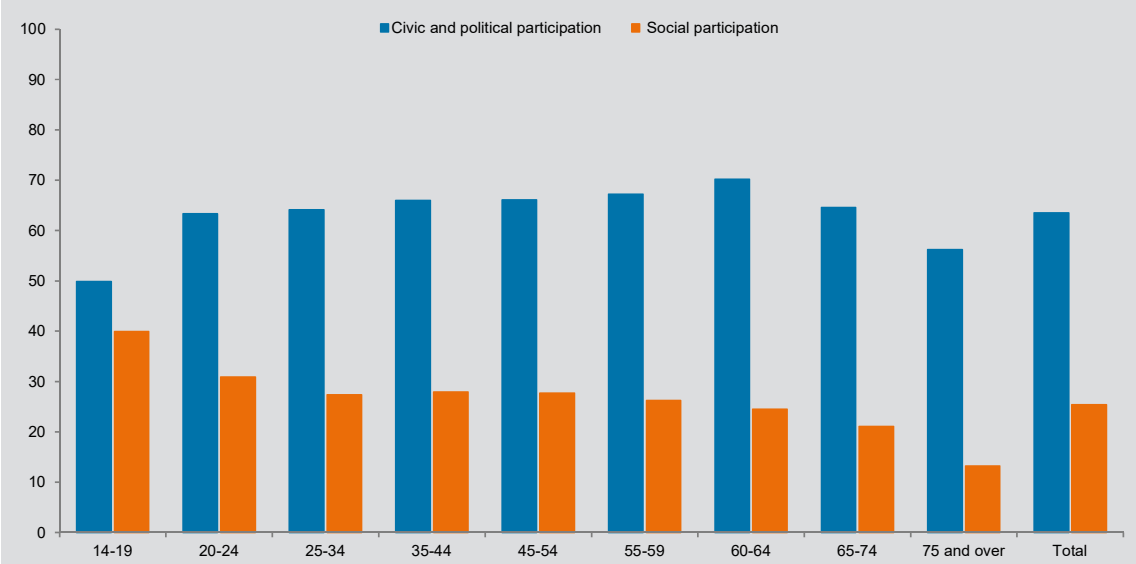
Figure 6. People aged 14 and over who perform activities of civic and political participation. Years 2019, 2021 and 2022. Percentage values



Source: Istat, Survey on Aspects of daily life
(a) They performed at least one of the following activities: speak about politics, be informed about politics, post opinions on social or political issues through websites or social media (for example Twitter, Facebook, Instagram, YouTube), attend online consultation or votes on social, civic or political issues (e.g. urban planning, signing a petition, etc.).
(b) At least once a week.
(c) In the 3 months before the interview.

Civic and political participation, which is less widespread among young people (49.9% in the 14-19 age group in 2022), registers an upward trend with age, peaks in the adult population (70.2% in the 60-64 age group) and then declines to 56.2% among the over 74 years (Figure 7). Marked gender differences are observed in favour of men, with 9.7 percentage points more for men in 2022: 68.5% compared to 58.8% for women.

Figure 7. People aged 14 and over who perform activities of social, civic and political participation by age group. Year 2022. Percentage values

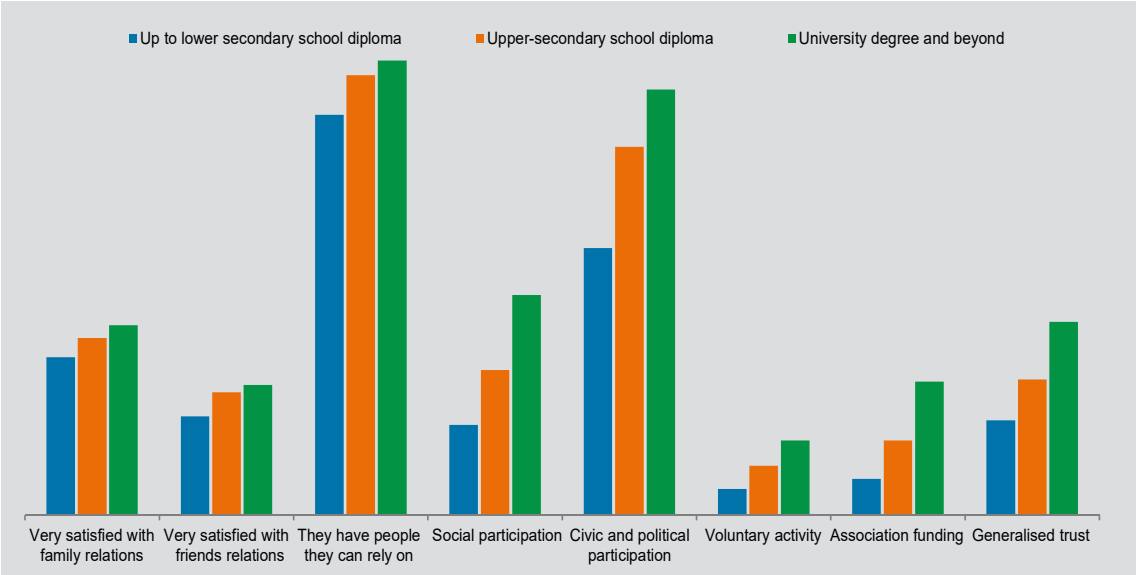


Source: Istat, Survey on Aspects of daily life

Significant differences by educational level

All indicators in this domain show the highest values among the most educated population. In particular, the indicators that differ most according to the level of education are those relating to the financing of associations and the performance of voluntary activities (Figure 8).

Figure 8. Social relationships indicators by educational level. Year 2022. Percentage values

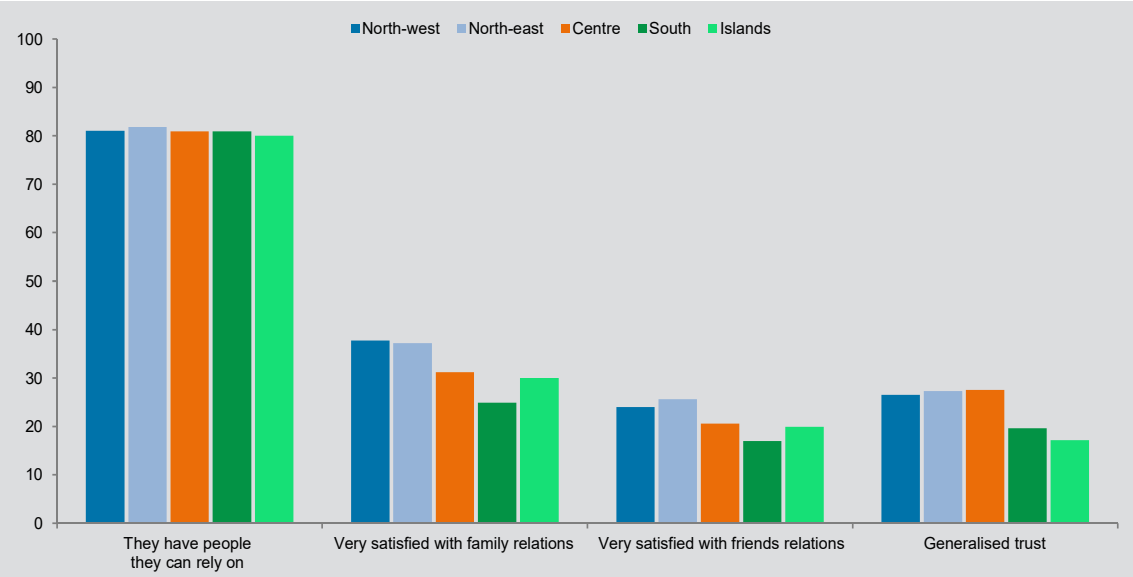


Source: Istat, Survey on Aspects of daily life

The disadvantage of the South is confirmed

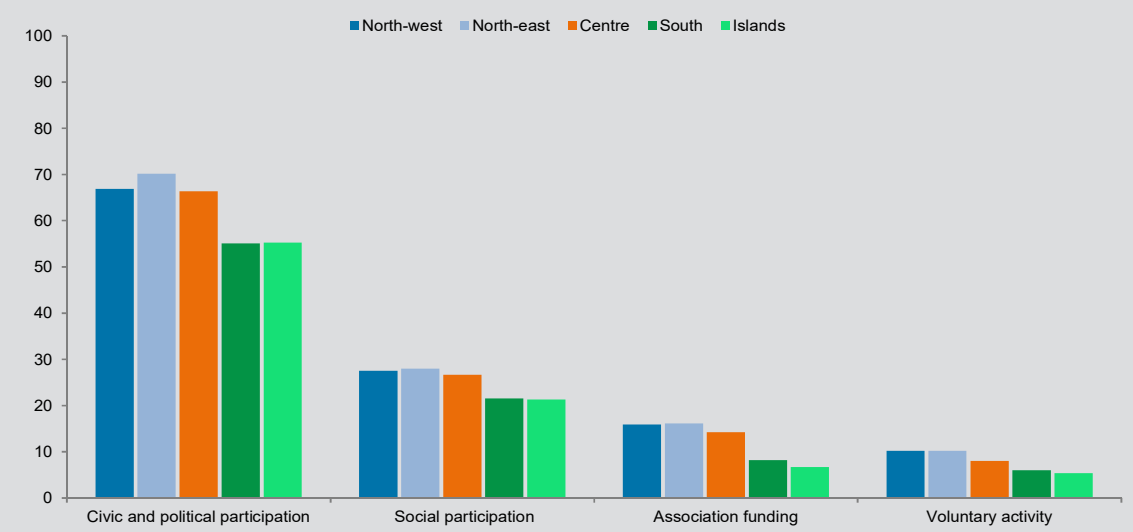
In the South and Islands, all forms of social networks appear weaker than in the rest of the country. Only in the case of the potential help network do the territorial differences diminish, almost to the point of disappearing: the possibility of relying on relatives, friends and neighbours who do not live with the respondent in case of need is in fact equally widespread throughout the territory, with values of around 81% in all the divisions (Figures 9 and 10).

Figure 9. Social relationships indicators by geographic area.Year 2022. Percentage values



Source: Istat, Survey on Aspects of daily life

Figure 10. Selected social relationships indicators by geographic area.Year 2022. Percentage values



Source: Istat, Survey on Aspects of daily life

Slight increase in non-profit institutions, more widespread in the Centre-North

In 2020, there were 363,499 active non-profit institutions in Italy (61.2 per 10,000 inhabitants) and, in total, 870,183 people employed.
Between 2019 and 2020, nonprofit institutions grew by 0.2%, a smaller increase that that found between 2018 and 2019 (+0.9 percent) while the increase in employees remains around +1.0% for both periods.

Indicators

1. **Satisfaction with family relations:** Percentage of people aged 14 and over that are very satisfied with family relations on total population aged 14 and over.

   Source: Istat - Survey on Aspects of daily life

2. **Satisfaction with friends relations:** Percentage of people aged 14 and over that are very satisfied with relations with friends on total population aged 14 and over.

   Source: Istat - Survey on Aspects of daily life

3. **People to rely on:** Percentage of people aged 14 and over that have non cohabiting relatives (besides parents, sons, siblings, grandparents, nephews), friends or neighbors they can rely on, on total population aged 14 and over.

   Source: Istat - Survey on Aspects of daily life

4. **Social participation:** People aged 14 and over that have performed at least one social participation activity in the last 12 months on total population aged 14 and over. The activities in question are: participation in meetings or initiatives (cultural, sports, recreational, spiritual) carried out or promoted by parishes, congregations or religious or spiritual groups; participation in meetings of associations cultural, recreational or other type; participation in meetings of associations ecological, civil rights, peace; participation in meetings of trade union organizations, participation in meetings of professional or trade associations; participation in meetings of political parties; performance of free activities for a party; payment of a monthly or quarterly fee for a sports club.

   Source: Istat - Survey on Aspects of daily life

5. **Civic and political participation:** People aged 14 and over who perform at least one of the activities of civic and political participation on total population aged 14 and over. The activities in question are: The activities in question are: to speak about politics at least once a week; to inform of the facts of Italian politics at least once a week; to attend online consultation or voting on social issues (civic) or political (e.g. urban planning, sign a petition) at least once in the 3 months prior to the interview, to read and to post opinions on social or political issues on websites or social media at least once in the 3 months preceding the interview.

   Source: Istat - Survey on Aspects of daily life

6. **Voluntary activity:** Percentage of people aged 14 and over that have performed free activities for voluntary associations or groups in the last 12 months on total population aged 14 and over.

   Source: Istat - Survey on Aspects of daily life

7. **Association funding:** Percentage of people aged 14 and over that have funded associations in the last 12 months on total population aged 14 and over.

   Source: Istat - Survey on Aspects of daily life

8. **Nonprofit organizations:** Number of no-profit organizations per 10,000 inhabitants.

   Source : Istat - Statistical register and Census of nonprofit institutions

9. **Generalised trust:** Percentage of people aged 14 and over that feel that most people are worthy of trust on the total population aged 14 and over.

   Source : Istat - Survey on Aspects of daily life

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Satisfaction with family relations (a)	Satisfaction with friends relations (a)	People to rely on (a)	Social participation (a)
	2022	2022	2022	2022
Piemonte	36.5	25.0	80.9	28.5
Valle d'Aosta/Vallée d'Aoste	35.1	24.9	86.3	30.3
Liguria	36.5	24.6	83.7	25.8
Lombardia	38.4	23.4	80.6	27.3
Trentino-Alto Adige/Südtirol	42.9	31.2	83.1	33.4
Bolzano/Bozen	*46.1*	*33.3*	*81.4*	*34.1*
Trento	*39.9*	*29.2*	*84.6*	*32.7*
Veneto	37.8	25.1	80.3	29.5
Friuli-Venezia Giulia	36.5	24.3	83.5	27.3
Emilia-Romagna	35.5	25.0	82.6	25.2
Toscana	33.8	22.5	79.9	25.9
Umbria	40.4	26.5	82.5	25.7
Marche	31.6	20.6	84.9	26.2
Lazio	28.0	18.5	80.2	27.6
Abruzzo	30.5	19.8	81.3	26.7
Molise	27.6	19.5	81.1	21.4
Campania	23.2	16.2	82.8	22.3
Puglia	24.6	15.9	77.8	20.3
Basilicata	23.0	17.5	77.0	22.7
Calabria	26.6	19.1	82.6	17.8
Sicilia	30.4	19.5	78.5	20.5
Sardegna	29.0	20.8	84.7	23.6
North	37.5	24.6	81.3	27.7
North-west	37.7	24.0	81.0	27.5
North-east	37.2	25.6	81.8	28.0
Centre	31.2	20.6	80.9	26.7
South and Islands	26.5	17.9	80.6	21.4
South	24.9	17.0	80.9	21.5
Islands	30.0	19.9	80.0	21.3
Italy	**32.6**	**21.6**	**81.0**	**25.4**

(a) Per 100 persons aged 14 and over;
(b) Per 10,000 inhabitants.

Civic and political participation (a)	Voluntary activity (a)	Association funding (a)	Nonprofit organizations (b)	Generalised trust (a)
2022	2022	2022	2020	2022
65.7	9.6	14.1	70.4	25.7
64.0	12.6	15.5	115.0	30.0
69.6	7.4	13.1	73.2	26.3
67.0	10.8	17.1	57.9	26.8
72.1	17.0	23.4	114.8	41.7
71.9	*15.0*	*22.7*	*109.8*	*43.4*
72.3	*18.9*	*24.0*	*119.7*	*40.1*
70.0	9.7	15.4	63.2	25.9
72.4	10.2	16.3	91.2	27.5
69.3	9.0	15.0	62.1	25.2
67.1	8.7	15.7	75.8	24.8
64.8	6.8	12.5	83.2	26.0
66.6	7.3	14.7	76.4	22.8
66.0	7.8	13.3	59.1	30.6
66.3	8.5	12.6	63.5	22.7
59.0	5.1	9.3	69.1	17.8
56.9	6.1	8.8	39.6	17.5
52.1	4.9	5.9	48.9	20.9
51.1	8.2	11.9	68.6	19.8
49.2	5.3	6.8	54.8	21.2
52.2	4.8	5.0	47.0	16.2
64.6	6.9	11.6	72.0	20.2
68.3	10.2	16.0	66.2	26.8
66.9	10.2	15.9	63.1	26.5
70.2	10.2	16.1	70.5	27.3
66.4	8.0	14.2	68.3	27.5
55.2	5.8	7.7	50.0	18.8
55.1	6.0	8.2	48.5	19.6
55.3	5.4	6.7	53.2	17.2
63.5	**8.3**	**12.8**	**61.2**	**24.3**

6. Politics and institutions[1]

Most of the indicators were already at critical levels in the pre-pandemic years, although slowly improving.
In the two years of the pandemic crisis, and then in 2022, the pre-existing critical issues did not escalate, but the latest updates available for the indicators of this domain still point to a need for improvement (Table 1).
Key issues remain the low level of trust in democratic institutions, the limited participation of women in politics and top institutions, the low presence of young people in Parliament, the efficiency of the civil justice system and prisons overcrowding.
In 2020 and 2021 there has been a slight improvement in trust in institutions, which nevertheless remains low, and in some indicators of gender balance, which are still far from the goal of parity, the share of women on the boards of listed companies being the only exception. This was already the least critical measure of gender balance.
The COVID-19 emergency affected the functioning of the Courts, leading to a very slight deterioration in the duration of civil trials, which has not yet been recovered. The health crisis also required emergency measures to reduce prison overcrowding. However, the problem was not solved, as the prisons density rose again in 2021, and more rapidly in 2022, although without returning to its critical pre-pandemic level.
Furthermore, the renewal of the Italian Parliament in September 2022, led to a decline in the two indicators related to the inclusion of women and young people in the national political representation.

Table 1. Politics and institutions indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Voter turnout	2009	2019	56.1	●	-	-	-
Trust in the parliament	2011	2022	4.5	●	●	●	●
Trust in judicial system	2011	2022	4.8	●	●	●	●
Trust in political parties	2011	2022	3.3	●	●	●	●
Trust in police and fire brigade	2012	2022	7.4	●	●	●	●
Women and political representation in national Parliament (a)	2008	2022	33.7	●	-	-	●
Women and political representation at regional level	2012	2022	22.3	●	●	●	●
Women in decision-making bodies	2013	2023	21.0	●	●	●	●
Women in the boards of companies listed in stock exchange	2010	2022	42.9	●	●	●	●
Mean age of members of national Parliament (a)	2014	2022	51.4	●	-	-	●
Length of civil proceedings	2012	2022	433.0	●	●	●	●
Prison density	2010	2022	109.5	●	●	●	●

● Better ● Worse ● Stable - Not available

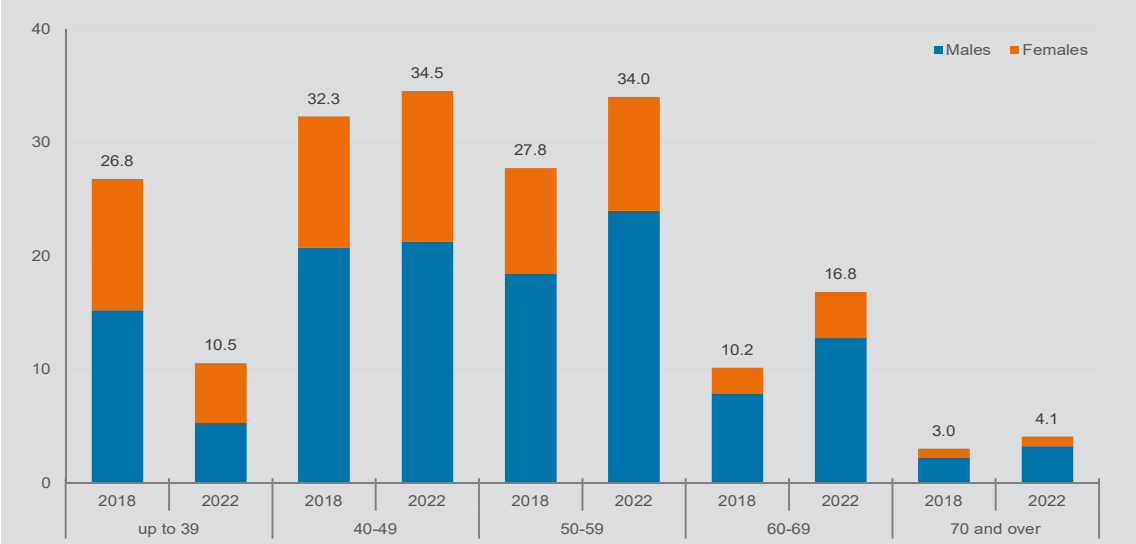
(a) Year 2019 not available. Changes referred to the year 2018.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

1 This chapter was edited by Stefania Taralli, with contributions from Francesca Dota and FrancoTuretta. Stefania Taralli, Alessandra Tinto and Paola Conigliaro collaborated in the implementation of the box “The sentiment of democracy and tolerance”.

In the Italian Parliament elected in 2022, less members, fewer young people and women

The renewal of the Italian Parliament in September 2022 reversed the positive trend observed in previous elections in terms of inclusion of women and young people (Figure 1). 600 deputies were elected (345 seats less than in the previous election): their average age has risen to 51.4 years (+3.8 years) compared with 47.6 years at the beginning of the 18th legislature and the percentage of women has fallen to 33.7% (it was 35.4%).

Figure 1. Members of Italian Parliament by gender and age group. Years 2018 and 2022. Percentage values

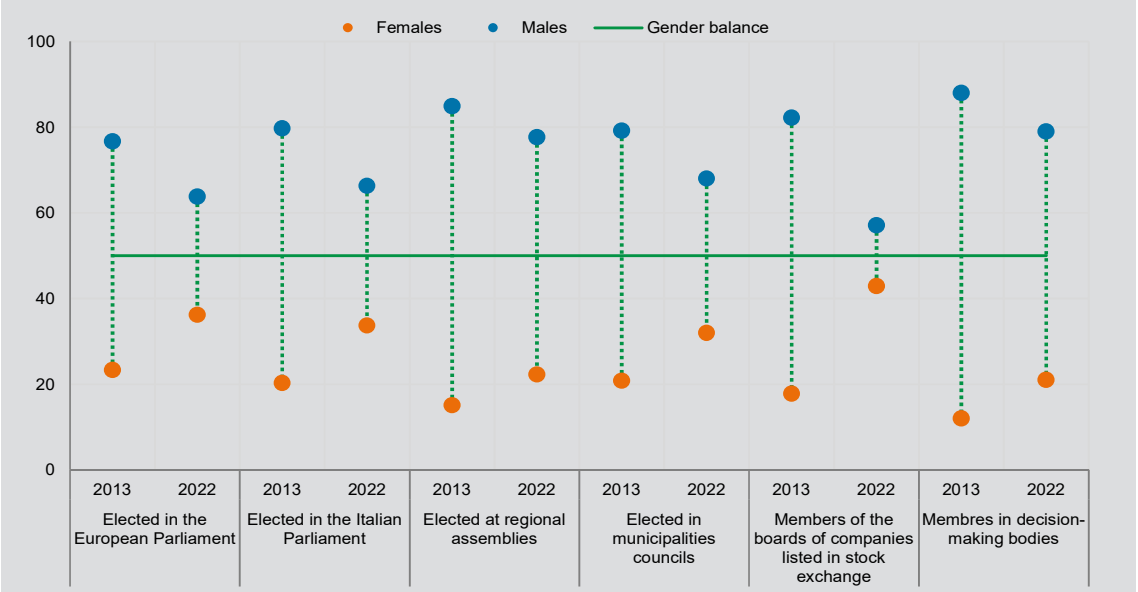


Source: Istat, Processing of data from the Chamber of Deputies and the Senate

Italy is still far from gender balance in national politics and top institutional positions

Over the last decade, the presence of women in positions of political representation and at the top of institutions has increased, but gender gaps remain wide (Figure 2). The greatest progress can be observed in the composition of the boards of directors of large listed companies (42.9% in 2022; +25.1 percentage points since 2013), which shows a rapid and significant reduction in the gender gap (from 64.4 percentage points in 2013 to 14.2 in 2022).

Figure 2. Gender composition of those elected to European and national parliaments, regional assemblies and Municipal Councils, of members of Boards of Directors of listed companies and of decision-making Bodies. Years 2013; 2022. Percentage values

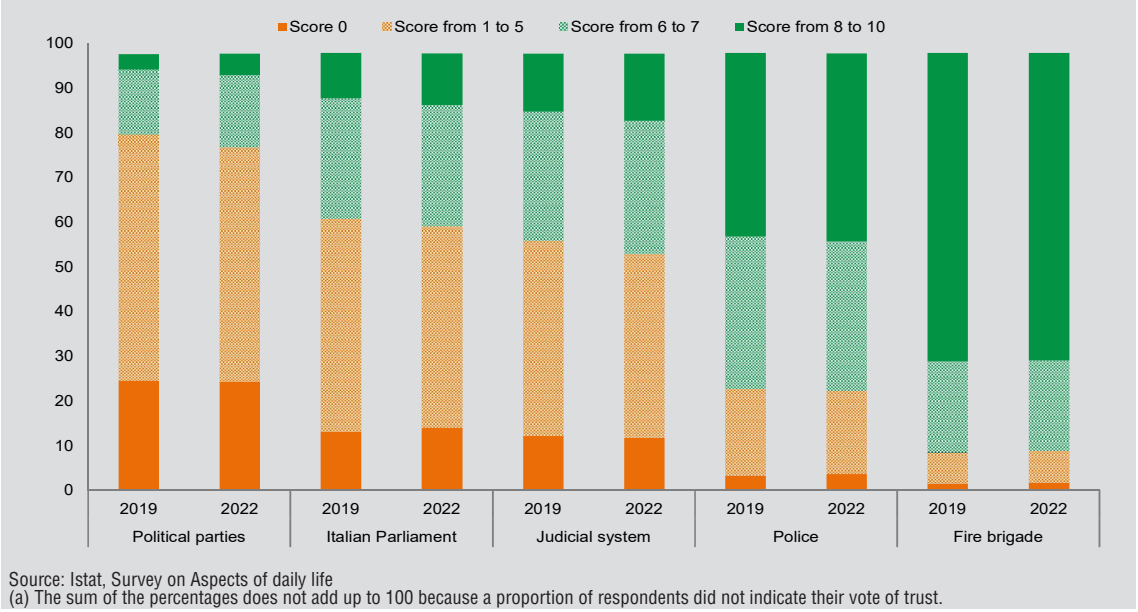


Source: European Commissioner for Justice, Consumers and Gender Equality and Istat, Processing of data from the Chamber of Deputies and the Senate, Italian Embassies abroad, Constitutional Court, Magistrates' Governing Council and some Independent Administrative Authorities, Consob.

Public trust in Parliament, political parties and the judiciary is still insufficient

The level of trust in political and judicial institutions (unchanged between 2021 and 2022) remains well below the sufficiency level (Figure 3). On a scale of 0 to 10, trust in political parties has an average score of 3.3, with insufficient (<6) scores for almost eight out of ten citizens; the average scores for Parliament and the Judiciary are 4.5 and 4.8, with insufficient trust scores for more than half of the population aged 14 and over (59.0% and 52.8% respectively).

Figure 3. Population aged 14 and over by vote of trust in different institutions. Year 2022. Percentage values (a)

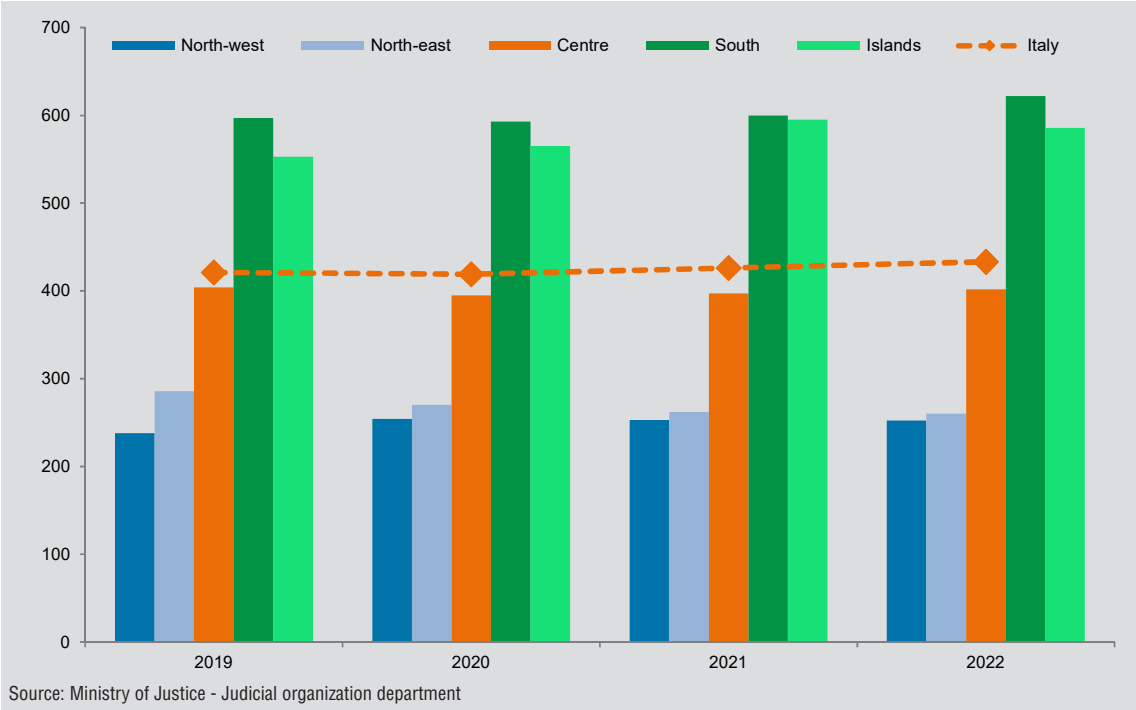


Source: Istat, Survey on Aspects of daily life
(a) The sum of the percentages does not add up to 100 because a proportion of respondents did not indicate their vote of trust.

Civil proceedings in ordinary Courts still too long

The duration of civil trials in ordinary Courts remains long: the indicator rises to 433 days in 2022 (it was 421 in 2019), consolidating the very slight deterioration observed during the health emergency (Figure 4). The delay in the South remains considerable, with times that are more than double those in the North-west (622 and 253 days respectively). On the other hand, the trend towards the reduction of the backlog resumes (-6.4% of pending cases at the end of 2021 compared to 2019).

Figure 4. Effective duration of proceedings defined in ordinary courts by geographic area. Years 2019-2022. Average duration in days

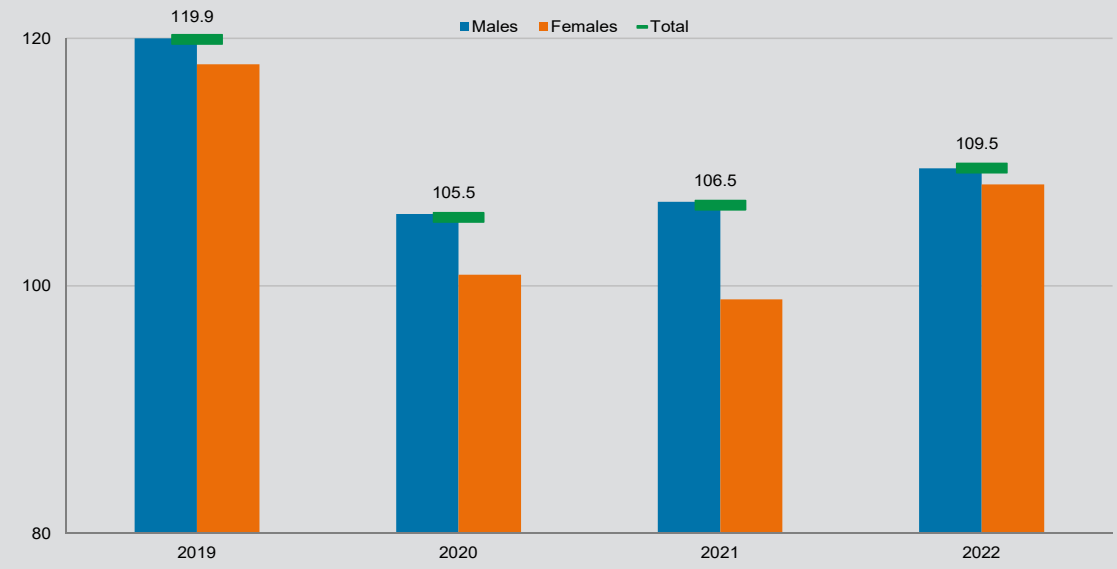


Source: Ministry of Justice - Judicial organization department

Prison crowding is set to get worse, especially for women

The increase in prisons overcrowding, started in 2021 and accelerated over the past year (Figure 5). As at 31 December 2022, the indicator rose to 109.5 inmates per 100 regulatory capacity places (3 percentage points higher than in 2021, 4 points higher than in 2020). Prisons density exceeds 150% in 17 of the 189 country's prisons. Although the prison population is almost exclusively male (95.8% in 2022), the sharpest and most rapid deterioration concerns women (108.2%; +7.3 percentage points compared to 2020 versus +3.7 percentage points for men).

Figure 5. Prison population density by sex. Years 2019 and 2022. Percentage on the total capacity of penal institutions



Source: Istat, Processing on Ministry of Justice-Penitentiary Administration Department data

SENTIMENT OF DEMOCRACY AND TOLERANCE

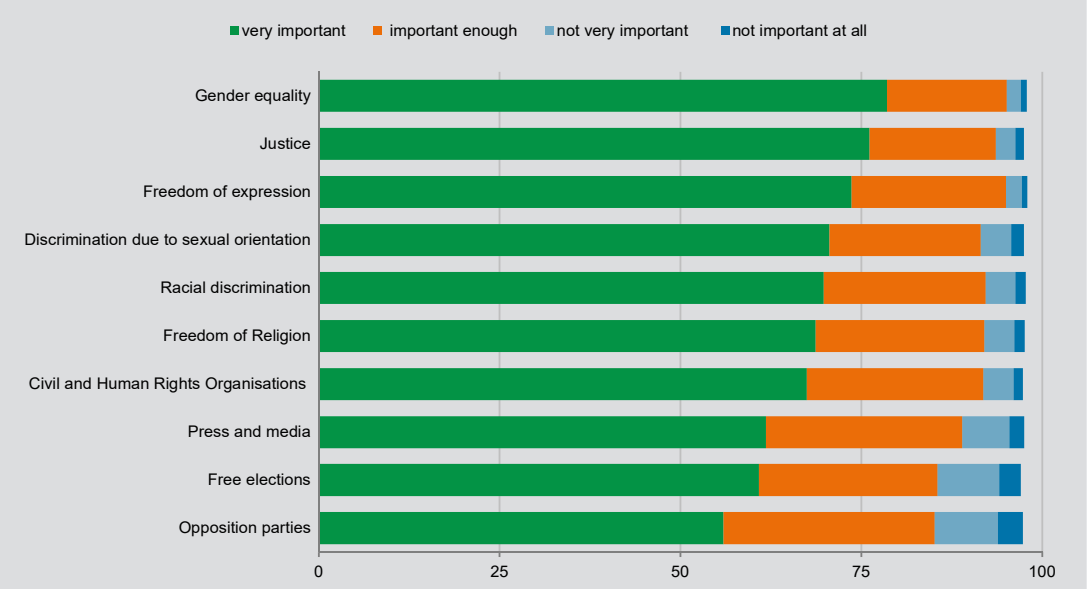
For the first time in 2022, Istat included in the annual survey Aspects of daily life a 10-item set of questions on the sense of democracy and tolerance. Items were related to freedom of thought, religion, civil rights, gender equality, and the absence of discrimination on the grounds of race or sexual orientation, political rights, freedom of the press and media (Table A). Respondents (people aged 14 and over living in Italy) were asked to rate each item on a 4-point scale ranging from 'very important' to 'not at all important'.

Table A. Items related to the sense of democracy and tolerance proposed in the rating scale. Istat, Survey on Aspects of daily life. Year 2022

Item	In your opinion, how important is it in Italy
Gender equality	That men and women have equal rights and can enter all jobs with the same salary if they perform the same tasks
Justice	That the judicial system is fair
Freedom of expression	That everyone may freely say what they think
Discrimination due to sexual orientation	That all people have the same rights regardless of sexual orientation
Racial discrimination	That all people have the same rights regardless of their country of origin, skin colour and ethnicity
Freedom of Religion	That everyone may freely profess their religion
Civil and Human Rights Organisations	That civil, social and human rights organisations operate freely
Press and media	That newspapers and mass media can express different points of view without being censored
Free elections	that free elections are held periodically
Opposition parties	That opposition parties can operate freely

40.9% of people rated all items as "very important", and a further 32.1% showed a positive orientation, rating all items as "very important" or "important enough". A further 20.7% had mixed ratings, with a number of items being "not very important" or "not important at all", although positive ratings predominated. At the extreme end of the scale, 3.7% of individuals rated most (2.9%) or all (0.8%) items as "not very important" or "not important at all".
Sense of democracy varies widely according to the region of residence and the level of education. More than three out of four people consider it very important that in Italy "men and women have the same rights and can have access to the same jobs with the same pay for the same work" (78.5% on average in Italy; 82.2% in the North and 72.7% in the South). In any case this was the item with the highest level of importance.
At the bottom of the list and at a distance from all the others items are those concerning political participation and freedom of the press and media (Figure A).

Figure A. People aged 14 and over by vote of importance given to the items of the scale. Year 2022. Percentage values



Source: Istat, Survey on Aspects of daily life
(a) The sum of the percentages does not add up to 100 because a proportion of respondents did not indicate their vote.

The greatest differences emerge particularly for three items that collect the lowest percentages of "very important": that "opposition parties can operate freely" (56.0% of "very important"); that "free elections are held regularly" (60.8% on average in Italy; 63.8% in the North, 55.0% in the South), that "newspapers and mass media can express different points of view without being censored" (61.8%). For these three items, the share of "very important" among those with tertiary education is about 20 percentage points higher than that of those with at most a high school diploma.
Around 70% of individuals aged 14 and over consider it "very important" that in Italy "all people have the same rights regardless of their sexual orientation" or regardless of their "country of origin, skin colour and ethnicity"; among young people (aged 14 to 24) this rises to 76-77%.

Indicators

1. **Voter turnout:** Percentage of eligible voter who cast a ballot in the last election for the European Parliament (excluding voting abroad).
   Source: Ministry of the Interior.
2. **Trust in the Parliament:** Average score of trust in the Italian Parliament (on a scale from 0 to 10) expressed by people aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.
3. **Trust in Judicial system:** Average score of trust in the Judicial system (on a scale from 0 to 10) expressed by people aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.
4. **Trust in political parties:** Average score of trust in political parties (on a scale from 0 to 10) expressed by people aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.
5. **Trust in police and fire brigade:** Average score of trust in the police and the fire brigade (on a scale from 0 to 10) expressed by people aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.
6. **Women and political representation in national Parliament:** Percentage of women on total members of Parliament (excluding senators and deputies elected in foreign constituencies and senators for life).
   Source: Istat - Processing of data from the Chamber of Deputies and the Senate.
7. **Women and political representation at regional level:** Percentage of women elected in regional councils on total number of elected people.
   Source: Istat - Processing of data from Regional councils.
8. **Women in decision-making bodies:** Percentage of women in position of high responsibility within the following bodies: Italian embassies abroad, Constitutional court, Magistrates' Governing Council (including magistrates who participate in the functioning of the Body), and some Independent Administrative Authorities (for Communications, Antitrust, Data protection, Consob - Italian Securities and Investments Board).
   Source: Istat - Processing of data from Italian Embassies abroad, Constitutional Court, Magistrates' Governing Council and some Independent Administrative Authorities.
9. **Women in the boards of companies listed in stock exchange:** Percentage of women in the board of companies listed in stock exchange.
   Source: Consob.
10. **Mean age of members of national Parliament:** Average age of members of national Parliament. Senators and deputies elected in foreign constituencies and senators for life are excluded.
    Source: Istat - Processing of data from the Chamber of Deputies and the Senate..
11. **Length of civil proceedings:** Effective average duration in days of proceedings set up in ordinary courts.
    Source: Ministry of Justice - Judicial organization department.
12. **Prison density:** Percentage of prisoners in penal institutions on the total capacity of penal institutions.
    Source: Istat - Processing of data from Ministry of Justice, Penitentiary Administration Department.

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Voter turnout (a) 2019	Trust in the Italian parliament (b) 2021	Trust in judicial system (b) 2021	Trust in political parties (b) 2021	Trust in police and fire brigade (b) 2021	Women and political representation in Parliament (c) 2018
Piemonte	64.7	4.2	4.8	3.1	7.5	27.9
Valle d'Aosta/Vallée d'Aoste	51.9	4.0	4.2	3.0	7.3	50.0
Liguria	58.5	4.6	4.9	3.4	7.6	26.7
Lombardia	64.1	4.3	4.5	3.1	7.5	28.9
Trentino-Alto Adige/Südtirol	59.9	4.3	4.9	3.3	7.7	53.8
Bolzano/Bozen	*62.8*	*4.3*	*5.0*	*3.6*	*7.6*	....
Trento	*57.3*	*4.2*	*4.7*	*3.1*	*7.7*	....
Veneto	63.7	4.2	4.5	3.1	7.6	40.4
Friuli-Venezia Giulia	57.0	4.4	4.6	3.1	7.6	50.0
Emilia-Romagna	67.3	4.7	4.8	3.5	7.7	48.8
Toscana	65.8	4.7	4.8	3.4	7.4	36.1
Umbria	67.7	4.5	4.8	3.1	7.7	33.3
Marche	62.1	4.4	4.7	3.2	7.4	26.7
Lazio	53.3	4.9	5.1	3.6	7.5	27.3
Abruzzo	52.6	4.7	4.8	3.4	7.4	38.5
Molise	53.3	4.6	4.7	3.3	7.3	25.0
Campania	47.6	4.9	5.3	3.7	7.0	29.6
Puglia	49.8	4.8	4.9	3.7	7.2	25.0
Basilicata	47.3	4.6	5.1	3.4	7.3	14.3
Calabria	44.0	4.7	5.1	3.4	7.2	42.1
Sicilia	37.5	4.6	5.2	3.2	7.5	39.6
Sardegna	36.3	4.0	4.7	2.8	7.4	31.3
North	63.7	4.3	4.7	3.2	7.5	36.0
North-west	63.6	4.3	4.6	3.1	7.5	28.7
North-east	63.9	4.4	4.7	3.2	7.6	46.1
Centre	59.3	4.8	4.9	3.5	7.5	30.4
South and islands	44.7	4.7	5.1	3.5	7.3	32.3
South	48.3	4.8	5.1	3.6	7.2	29.9
Islands	37.2	4.5	5.0	3.1	7.5	37.5
Italy	56.1	4.5	4.8	3.3	7.4	33.7

(a) Per 100 eligible voters;
(b) Average trust on a 0-10 scale expressed by persons 14 and over;
(c) Per 100 elected persons;
(d) Percentage of women in the total membership;
(e) Excluding senators and deputies elected in foreign constituencies and senators for life;
(f) Average duration in days;
(g) Number of prisoners per 100 available places as defined by the regulatory capacity.

Women and political representation at regional level (c)	Women in decision-making bodies (d)	Women in the boards of companies listed in stock exchange (d)	Mean age of members of Parliament (e)	Length of civil proceedings (f)	Prison density (g)
2021	2022	2021	2018	2021	2021
15.7	....	....	50.6	218	101.5
11.4	....	....	55.0	522	56.4
19.4	....	....	53.4	267	119.6
24.7	....	....	52.4	262	132.0
25.7	....	....	52.8	232	90.0
25.7	....	....	....	*175*	*119.3*
25.7	....	....	....	*275*	*82.1*
35.3	....	....	52.4	284	127.5
14.3	....	....	50.3	216	121.4
32.0	....	....	51.9	258	112.8
35.0	....	....	48.5	385	93.5
38.1	....	....	53.7	441	106.4
29.0	....	....	50.5	306	102.0
31.4	....	....	52.6	421	112.2
16.1	....	....	47.4	363	112.5
28.6	....	....	56.5	425	120.1
15.7	....	....	49.9	627	108.7
13.7	....	....	51.2	606	135.7
4.8	....	....	57.3	861	114.0
19.4	....	....	51.1	751	107.4
21.4	....	....	49.6	600	94.3
13.3	....	....	52.6	520	79.4
23.2	....	....	52.0	256	118.0
19.4	....	....	52.0	253	119.0
26.8	....	....	52.0	260	116.3
32.9	....	....	51.1	402	105.1
16.7	....	....	50.6	611	105.1
16.0	....	....	50.8	622	114.8
17.7	....	....	50.3	586	90.0
22.3	21.0	42.9	51.4	433	109.5

7. Safety[1]

The objective and subjective indicators measuring the evolution of safety in our country in 2019 were at better or stable levels than the situation a decade earlier, with the exception of pickpocketing and robbery, which instead showed an upward trend.
Homicides and predatory crimes (residential burglary, pickpocketing, and robbery), which in the first year of the pandemic touched the lowest values in the entire time series, due to the measures introduced to restrict mobility and social contacts, returned to register a slight increase in 2021; for predatory crimes, the increase continued in 2022.
Despite this growth, crime indicators remain below pre-pandemic values, with the exception of the robbery rate, which returned to the levels recorded in 2019.
Subjective perception indicators show the same trend as objective crime indicators: perceptions of safety when walking in the dark alone increased in 2020, and perceptions of social decay and crime risk decreased. In 2021 these indicators recorded the best performance in the entire time series. In 2022, the indicators of safety perception referring to the area where one lives break the positive trend recorded in the two pandemic years: perception of safety walking in the dark alone decreases and perception of crime risk increases. In contrast, the perception of degradation remains stable.Subjective perception of safety keeps improving.

Table 1. Safety indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Intentional homicide rate (per 100,000 inhabitants) (a)	2010	2021	0.52	●	●	-	●
Burglary (per 1,000 households)*	2010	2022	7.6	●	●	●	●
Pick-pocketing (per 1,000 inhabitants)*	2010	2022	5.4	●	●	●	●
Robbery (per 1,000 inhabitants)*	2010	2022	1.3	●	●	●	●
Physical violence on women (%) (b)	2006	2014	7.0	-	-	-	-
Sexual violence on women (%) (b)	2006	2014	6.4	-	-	-	-
Intimate partnership violence (%) (b)	2006	2014	4.9	-	-	-	-
Worries of being victim of a sexual violence (%) (b)	2009	2016	28.7	-	-	-	-
Perception of safety walking alone in the dark (%)	2010	2022	60.6	●	●	●	●
Concrete fear of crime (%) (b)	2009	2016	6.4	-	-	-	-
Social decay (or incivilities) (%)	2010	2022	6.9	●	●	●	●
Perception of crime risk (%)	2010	2022	21.9	●	●	●	●

● Better ● Worse ● Stable - Not available

(a) Year 2022 not available. Changes referred to 2019 compared with 2021.
(b) No comparisons are available for the indicators related to violence against women and the indicator related to concrete fear of crime for the reporting periods.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.
* 2022 data are provisional.

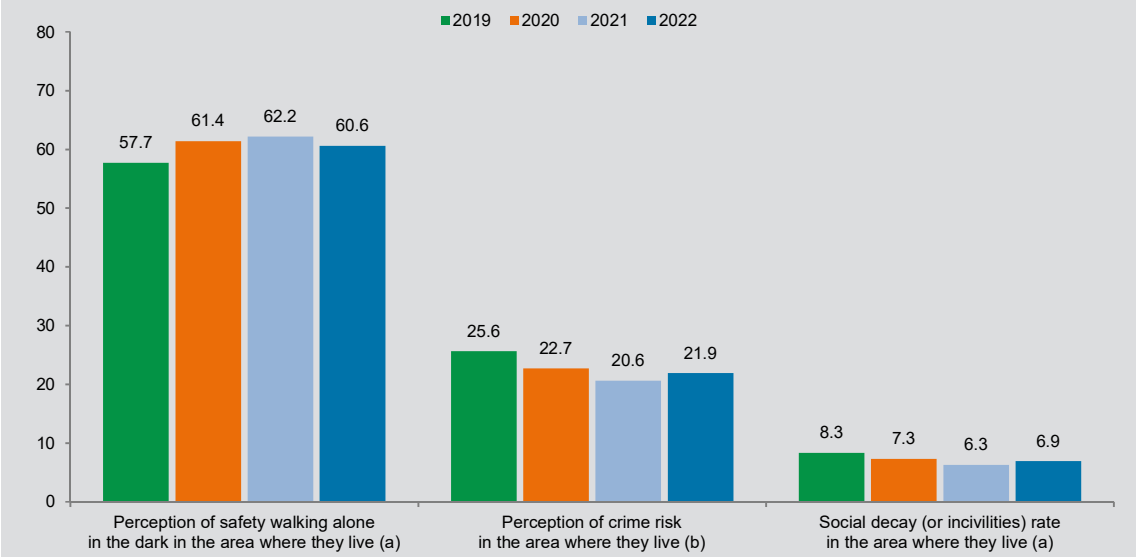
Subjective perception of safety worsens after pandemic

In 2022, the share of people who feel very or fairly safe when walking alone in the dark in the area where they live decreases by 1.6 percentage points compared to 2021, to 60.6% (it was 57.7% in 2019), and over the same period the share of households saying that the area where they live is very or fairly at risk of crime increases by 1.3 percentage points to 21.9% comparing to 2021 (it was 25.6% in 2019).

1 This chapter was edited by Miria Savioli, with contributions from Isabella Corazziari, Maria Giuseppina Muratore, Lucilla Scarnicchia and Franco Turetta. Boxes are edited by Lucilla Scarnicchia.

The share of the population who say that they have seen people taking or dealing drugs, prostitutes looking for customers or vandalism against public property in the area where they live remains stable at 6.9% (6.3% in 2021, 8.3% in 2019, Figure 1).

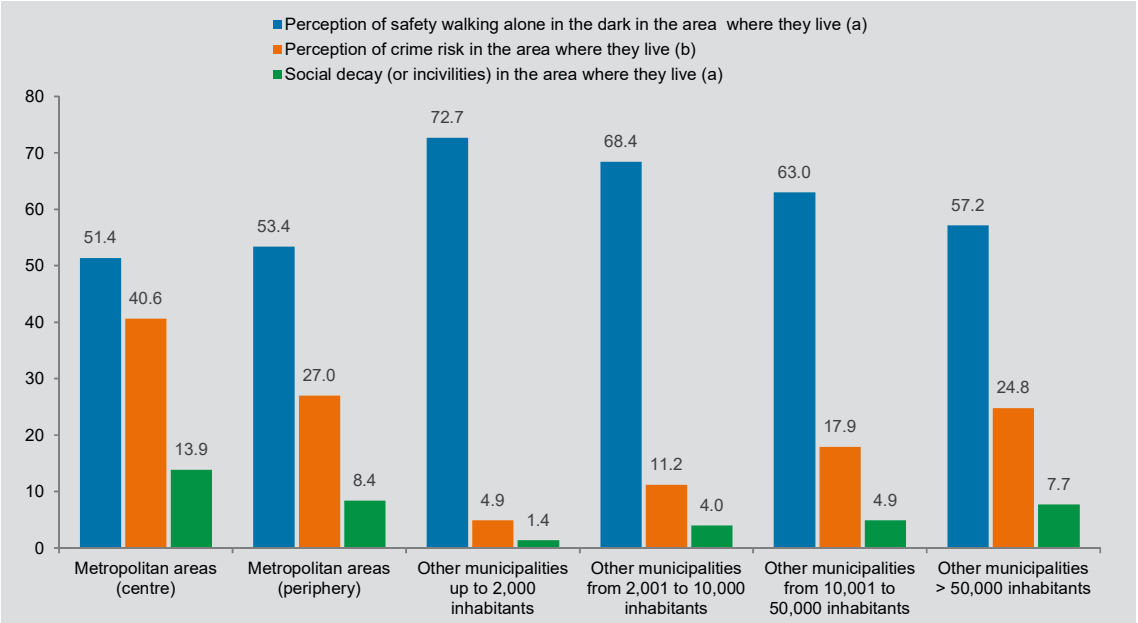
Figure 1. Perception of safety in the area where people live: people aged 14 and over feeling very or quite safe walking alone when it is dark, people aged 14 and over who often see elements of social and environmental decay, households declaring a very high or quite high risk of crime. Years 2019-2022. Percentage values



Source: Istat, Survey on Aspects of daily life
(a) Per 100 persons aged 14 and over;
(b) Per 100 households.

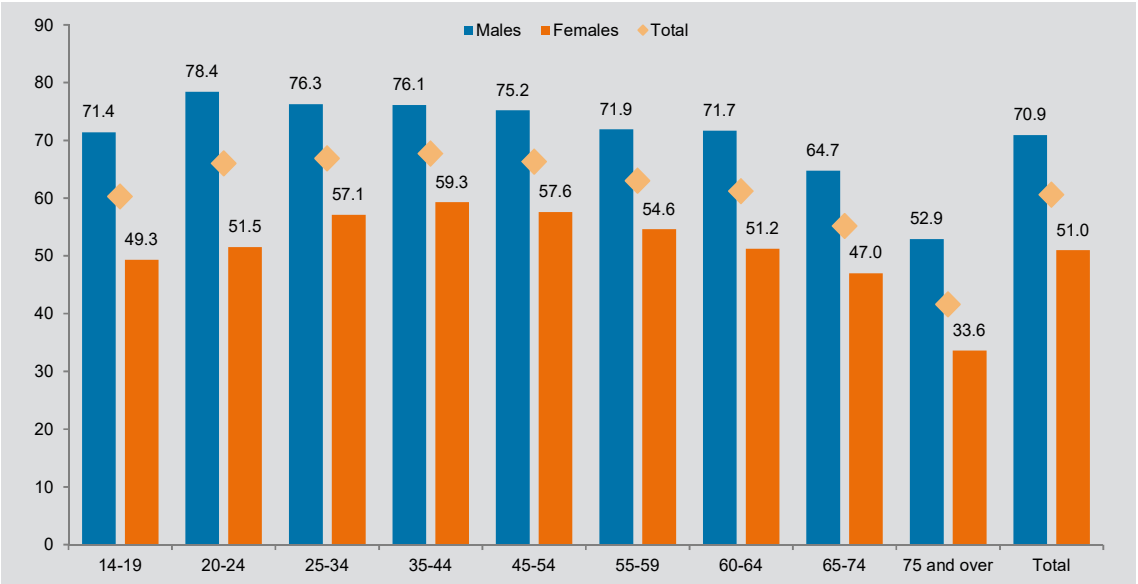
There are significant differences in people's perception of safety according to the size of the town they live in: people living in towns with up to 2,000 inhabitants and in towns with 2,000 to 10,000 inhabitants feel safer, perceive a lower risk of crime and report less social and environmental degradation than those living in large urban areas.
In towns with 2,000 to 10,000 inhabitants, the proportion of people aged 14 years and over who feel very or quite safe walking alone when it is dark in the area in which they live is 21 percentage points higher than in large urban areas (68.4% compared with 51.4%).
The same applies to the perception of the risk of crime 11.2% versus 40.6%) and social and environmental degradation (4.0% versus 13.9% - Figure 2).
Perception of safety is not evenly distributed across the population but varied by gender and age. 70.9% of men feel safe walking alone when it is dark in the area where they live compared to just over half of women (51%). The situation also differs in relation to different age groups: the least safe are the elderly aged 75 and over (41.6%) whereas young people and adults feel more safe (more than 66% between the ages of 20 and 54, Figure 3).

Figure 2. Perception of safety in the area where people live: people aged 14 and over feeling very or quite safe walking alone when it is dark, people aged 14 and over who often see elements of social and environmental decay, households declaring a very high or quite high risk of crime by municipality size. Year 2022. Percentage values



Source: Istat, Survey on Aspects of daily life
(a) Per 100 persons aged 14 and over;
(b) Per 100 households.

Figure 3. People aged 14 and over feeling very or quite safe walking alone when it is dark in the area where they live by gender and age group. Year 2022. Percentage values

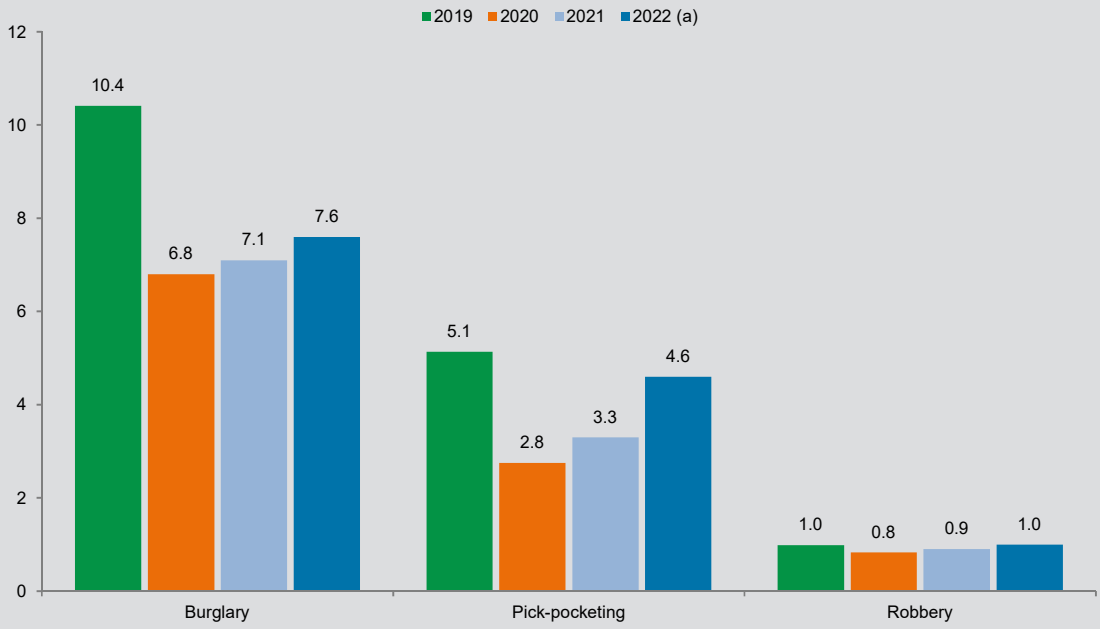


Source: Istat, Survey on Aspects of daily life

Predatory crimes rise

After the sharp reduction in predatory crimes as a result of the restrictive measures imposed in 2020, the growth trend started in 2021 continues in 2022. The rate of victims of residential burglaries stands at 7.6 per 1,000 households (compared to 7.1 in 2021); the rate of victims of pickpocketing is 4.6 victims per 1,000 inhabitants (compared to 3.3 in 2021) and the rate of victims of robbery is one victim per 1,000 inhabitants (it was 0.9 in 2021). Despite the growth, the rates of residential burglaries and pickpocketing remain below pre-pandemic levels, while the rate of robberies has returned to the levels recorded in 2019, Figure 4).

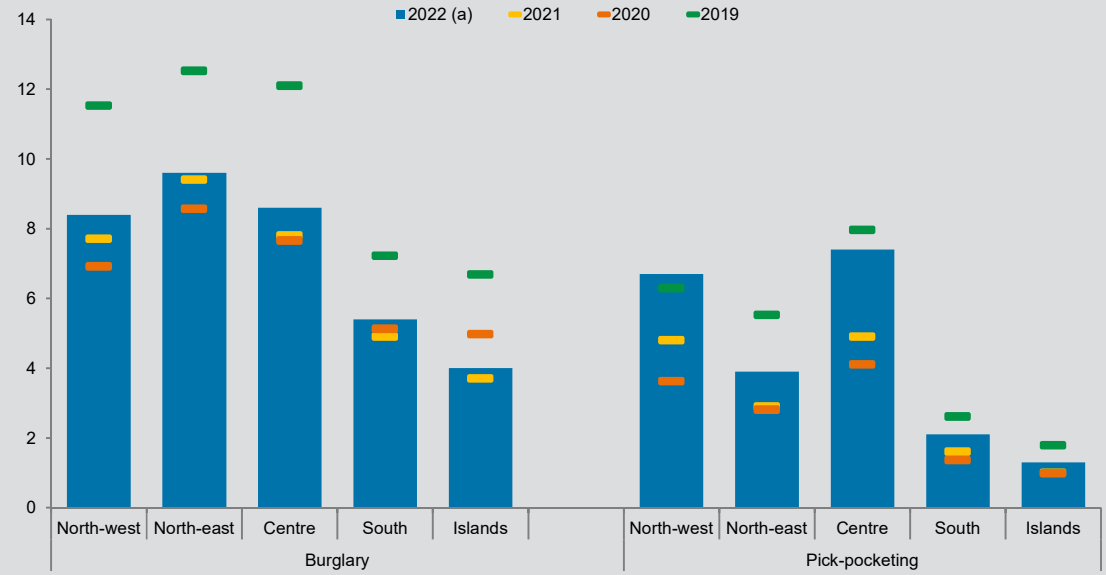
Figure 4. Households that were victims of burglaries and persons that were victims of robberies and pick-pocketing. Years 2019-2022. Burglaries per 1,000 households, and robberies and pick-pocketing per 1,000 population



Households that were victims of burglaries and persons that were victims of robberies and pick-pocketing. Years 2019-2022. Burglaries per 1,000 households, and robberies and pick-pocketing per 1,000 population
(a) Provisional data.

Predatory crimes are distributed unevenly across the Country. The highest rates of victims of pick-pocketing is found in the Centre and the North-west with respectively 7.4 and 6.7 victims per 1,000 inhabitants, compared to 1.8 victims per 1,000 inhabitants in the South and Islands (2.1 in the South and 1.3 in the Islands).
Burglary is more widespread in the Centre-North and in particular in the North-east, where there were 9.6 victims per 1,000 households, whereas in the South and Islands the figure is 5.4 and 4.0 victims per 1,000 households, respectively.
For robbery, on the other hand, the differences are much smaller, with the highest value in the North-west (1.3 victim per 1,000 inhabitants) and the lowest in the Islands (0.5 victims per 1,000 inhabitants - Figure 5).

Figure 5. Households that were victims of burglary and persons that were victims of pick-pocketing by geographic breakdown. Years 2019-2022. Burglaries per 1,000 households and pick-pocketing per 1,000 population



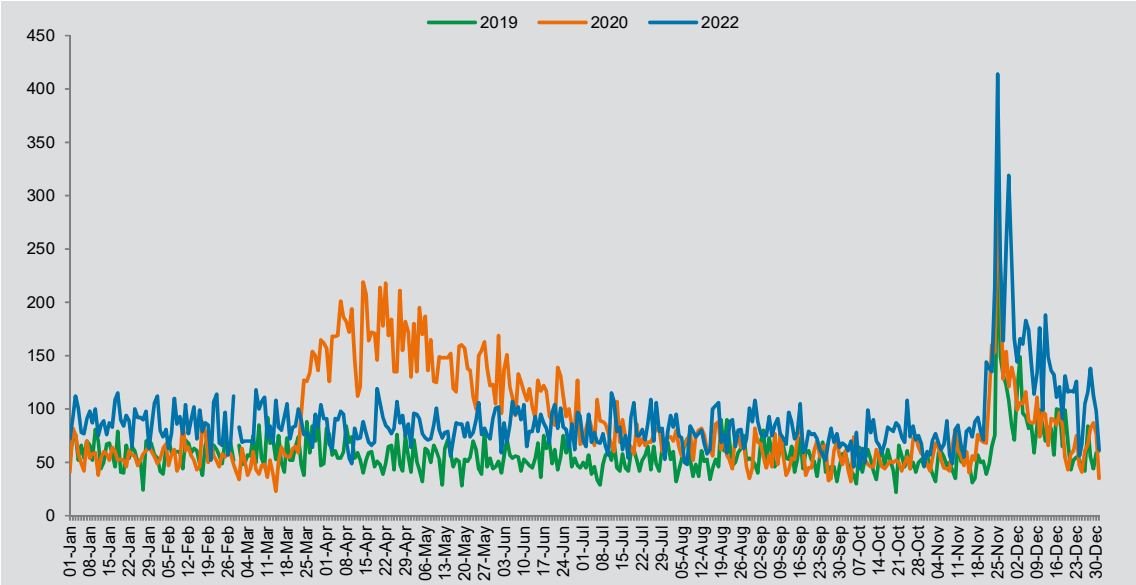
Source: Istat, processing of data on crimes reported to Police Forces (Ministry of Interiors) and data on Citizens' Safety Survey
(a) Provisional data.

Calls to the 1522 helpline decrease in 2022

The 1522 helpline[2] against violence and stalking, provided by the Department for Equal Opportunities of the Presidency of the Council of Ministers, is a very supportive tool for victims of violence.
In 2022, the number of valid calls declines comparing to 2021 but continues to remain higher both comparing to the same period in 2020, except for the lockdown months, and comparing to 2019 (Figure 6).

2 The 1522 number is active 24 hours a day, every day of the year, and can be reached toll-free throughout the nation on a land-line or cell phone. The helpline is available in Italian, English, French, Spanish and Arabic. The telephone operators working for the service provide a first response to the needs of victims of gender-based violence and stalking, offering useful information and an introduction to the anti-violence centres and public and private social/healthcare services available everywhere in Italy and listed on the DPO's official map.

Figure 6. Number of valid calls to the 1522 number. Years 2019, 2020 and 2022 (daily data). Absolute values

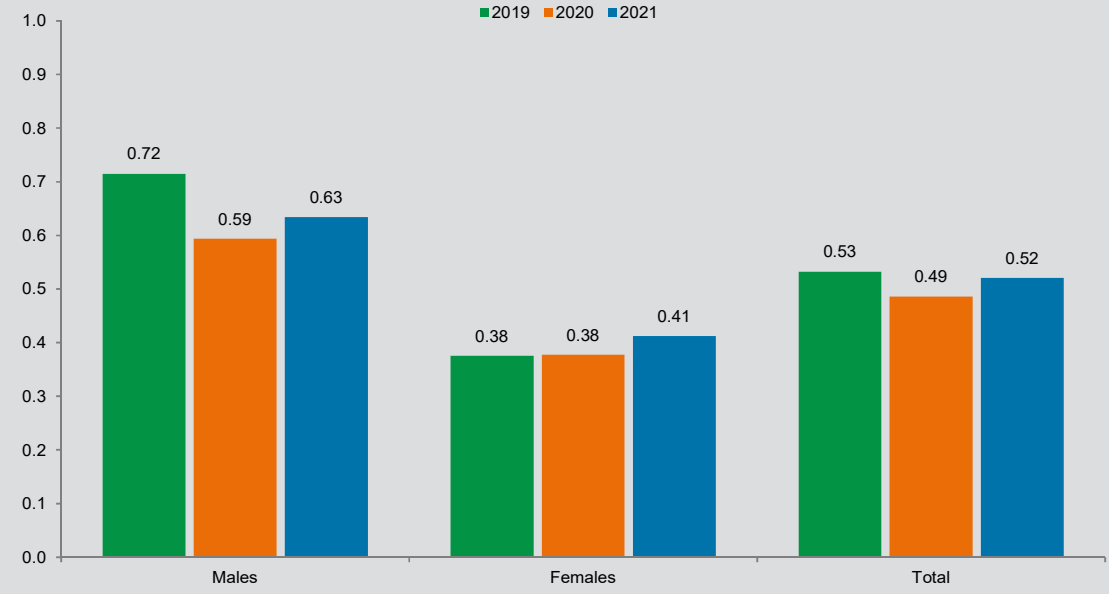


Source: Istat, Processing on data from the Department for Equal Opportunities

Homicides return to values close to the pre-pandemic period

In 2021, 308 homicides were committed in Italy, that is 0.52 per 100,000 inhabitants. The homicide rate shows a slight increase compared to 2020, when it stood at 0.49 per 100,000 inhabitants (for a total of 289 homicides), returning to values close to 2019 (0.53).
In 2021, there were 183 male and 125 female homicide victims (0.63 and 0.41 homicides per 100,000 inhabitants of the same sex, respectively). Between 2020 and 2021, there was a slight increase in the homicide rate for men (it was 0.59 in 2020), but the value remains lower than the pre-pandemic period (0.72 in 2019). The homicide rate for women, which had remained stable in 2019-2020, increases slightly in 2021 compared to the previous two years (0.38 in 2019 and 2020, Figure 7).

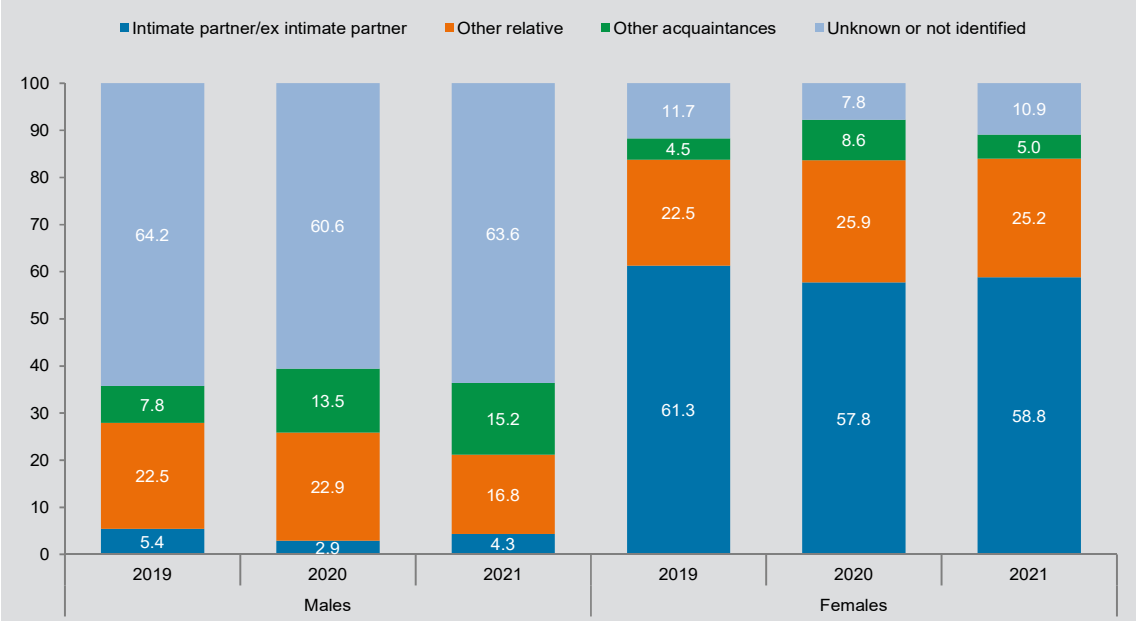
Figure 7. Homicide rate by gender. Years 2019-2021. Per 100,000 inhabitants of the same gender



Source: Ministry of the Interior - Department of Public Security (SDI/SSD database)

In 2021, 89.1% of female homicides were committed by a person the victim knew. This figure is slightly lower than in 2020 (92.2%), but remains higher than in 2019 when it stood at 88.3%. Specifically, in 2021, approximately six out of 10 women were killed by their current or previous partner, 25.2% by a family member (including the children and parents) and 5% by another person the woman knew (friends, colleagues, etc.). The situation is very different for men: in 2021, 36.4% were killed by a known person and only 4.3% by a partner or ex-partner; while 63.6% were killed by a stranger or perpetrator not identified by the police (Figure 8).

Figure 8. Victims of homicide by relationship with the murderer and gender. Years 2019-2021 (a)**. Per 100 victims of the same gender**



Source: Ministry of the Interior (DCPC), homicide database
(a) Figures related to the homicide victim and perpetrator relationship are extracted from the homicide database of the Ministry of the Interior (DCPC). Since this data are used for operational purposes, it is subject to changes that may emerge in subsequent extractions.

PATHS OUT OF VIOLENCE

In 2021 just under 19,600 women started a customised pathway out of violence at the Anti-Violence Centres[1].
Of these, 81.4% started the pathway in the same year, while the remaining share started it in 2020. In 30.3% of the cases, these were foreign women.
19.1% of women started the path out of violence in an emergency situation, that is, their safety was at risk.
54.9% of women who decided to start a pathway out of violence were between 30 and 49 years of age, 20.4% were under 30s, 16.8% were aged between 50 and 59, and 7.9% were 60 years or older.

HOMICIDES OF WOMEN ARE PREDOMINANTLY "FEMINICIDES"

In March 2022, the 53rd session of the Statistical Commission approved the "Statistical framework for measuring the gender-related killing of women and girls (also referred to as "feminicide")[2].
In this context, gender-based homicides, commonly referred to as feminicides, are defined as those involving the killing of a woman as a woman. The variables needed to identify a feminicide are many and involve both the victim, the perpetrator, and the context of the violence.
In Italy, not all the information needed to identify a feminicide is available. However, it is possible to sketch an initial picture from the available information: in 2021, 70 women were killed within the couple, by their partner or ex-partner; 30 women were killed by another relative; and four women were killed by acquaintances in an emotional or relational context. In total, this is 104 alleged feminicides, out of 119 homicides with a female victim. Based on the same analysis, the number of alleged feminicides in Italy was 101 in 2019 and 106 in 2020.

1 According to the State, Regions and Autonomous Provinces Agreement of 2014, Anti-Violence Centres are "facilities that welcome women of all ages and their minor children - free of charge - who have suffered violence, regardless of their place of residence".
2 https://www.unodc.org/documents/data-and-analysis/statistics/Statistical_framework_femicide_2022.pdf.

Indicators

1. **Intentional homicide rate:** Number of intentional homicide on total population per 100,000.
   Source: Ministry of the Interior - Department of Public Security (SDI/SSD database).
2. **Burglary:** Victims of burglaries per 1,000 households: the number of victims is calculated using data on victims who reported burglary to the police, adjusted by the number of non-reporting victims from the Citizens' Safety Survey, using a specific correction factor by geographical area.
   Source: Istat - Processing of data from crimes reported to Police Forces (Ministry of Interiors) and data on Citizens' Safety Survey.
3. **Pick-pocketing:** Victims of pick-pocketing on total population per 1,000: the number of victims is calculated using data on victims who reported pick-pocketing to the police, adjusted by the number of non-reporting victims from the Citizens' Safety Survey, using a specific correction factor by geographical area and by sex and age group.
   Source: Istat - Processing of data from crimes reported to Police Forces (Ministry of Interiors) and data on Citizens' Safety Survey.
4. **Robbery:** Victims of robberies on total population per 1,000: the number of victims is calculated using data on victims who reported robbery to the police, adjusted by the number of non-reporting victims from the Citizens' Safety Survey, using a specific correction factor by geographical area and by sex and age group.
   Source: Istat - Processing of data from crimes reported to Police Forces (Ministry of Interiors) and data on Citizens' Safety Survey.
5. **Physical violence on women:** Percentage of women aged 16-70 victim of physical violence in the last 5 years before the interview on total women aged 16-70.
   Source: Istat - Women Safety Survey.
6. **Sexual violence on women:** Percentage of women aged 16-70 victim of sexual violence, including physical sexual harassment, in the last 5 years before the interview on total women aged 16-70.
   Source: Istat - Women Safety Survey.
7. **Intimate partnership violence:** Percentage of women aged 16-70 victim of physical or sexual violence by the partner or ex-partner during the 5 years before the interview on total women aged 16-70 who have or had a partner.
   Source: Istat - Women Safety Survey.
8. **Worries of being victim of a sexual violence:** Percentage of people aged 14 years and over who are very or quite worried of being victim of a sexual violence for yourself or for someone in your family.
   Source: Istat - Citizens' Safety Survey.
9. **Perception of safety walking alone in the dark:** Percentage of people aged 14 and over feeling very or quite safe walking alone when it is dark in the area where they live.
   Source: Istat - Survey on Aspects of daily life.
10. **Concrete fear of crime:** Percentage of people aged 14 and over who are afraid of becoming concretely a victim of crime in the last 3 months.
    Source: Istat - Citizens' Safety Survey.
11. **Social decay (or incivilities):** Percentage of people aged 14 and over who often see elements of social and environmental decay in the area where they live. They often see at least one element of decay among the following: people who take drugs, people who sell drugs, vandalism against the public good, prostitutes looking for clients.
    Source: Istat - Survey on Aspects of daily life.
12. **Perception of crime risk:** Percentage of households declaring a very high or quite high risk of crime in the area where they live on the total number of households.
    Source: Istat - Survey on Aspects of daily life.

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Intentional homicide rate (a)	Burglary (b)	Pick-pocketing (c)	Robbery (c)	Physical violence on women (d)	Sexual violence on women (d)
	2021	2022 (*)	2022 (*)	2022 (*)	2014	2014
Piemonte	0.5	8.0	5.7	1.2	6.3	6.2
Valle d'Aosta/Vallée d'Aoste	1.6	2.8	0.5	0.3	7.0	3.9
Liguria	0.3	5.5	4.2	1.4	7.8	7.6
Lombardia	0.4	9.2	7.5	1.4	6.1	6.6
Trentino-Alto Adige/Südtirol	0.5	5.5	2.1	0.9	6.8	5.1
Bolzano/Bozen	*0.7*	*6.5*	*2.6*	*1.1*	*6.9*	*5.9*
Trento	*0.2*	*4.6*	*1.6*	*0.6*	*6.7*	*4.3*
Veneto	0.4	10.3	3.9	0.8	5.0	6.2
Friuli-Venezia Giulia	0.2	6.2	1.1	0.5	5.9	5.9
Emilia-Romagna	0.7	10.6	5.1	1.3	8.2	6.7
Toscana	0.3	10.8	5.3	1.4	8.9	4.5
Umbria	0.5	10.4	2.0	0.5	8.0	6.9
Marche	0.3	6.3	1.4	0.5	7.8	5.0
Lazio	0.6	7.6	11.1	1.1	9.1	6.8
Abruzzo	0.3	7.7	1.2	0.4	9.3	9.1
Molise	0.3	5.5	0.7	0.2	7.7	7.1
Campania	0.8	5.6	3.7	1.8	8.4	8.8
Puglia	0.7	5.7	1.2	0.6	6.8	5.3
Basilicata	0.2	4.0	0.4	0.2	4.3	6.5
Calabria	0.5	3.0	0.4	0.2	4.6	4.7
Sicilia	0.7	4.6	1.4	0.6	5.7	5.2
Sardegna	0.9	2.6	0.7	0.3	6.6	5.2
North	0.5	8.9	5.5	1.2	6.4	6.4
North-west	0.4	8.4	6.7	1.3	6.3	6.6
Noth-east	0.5	9.6	3.9	0.9	6.5	6.3
Centre	0.4	8.6	7.4	1.1	8.8	5.9
South and Islands	0.7	4.9	1.8	0.8	6.9	6.5
South	0.7	5.4	2.1	1.0	7.3	7.2
Islands	0.7	4.0	1.3	0.5	5.9	5.2
Italy	**0.5**	**7.6**	**4.6**	**1.0**	**7.0**	**6.4**

(a) Per 100.000 inhabitants;
(b) Per 1.000 households;
(c) Per 1.000 inhabitants;
(d) Per 100 women aged 16-70;
(e) Per 100 women aged 16-70 who have or have had an intimate relationship with a partner;
(f) Per 100 persons aged 14 and over;
(g) Per 100 households;
(*) Provisional data.

Intimate partnership violence (e) 2014	Worries of being victim of a sexual violence (f) 2016	Perception of safety walking alone in the dark (f) 2022	Concrete fear of crime (f) 2016	Social decay (or incivilities) (f) 2022	Perception of crime risk (g) 2022
4.7	33.7	64.0	2.6	6.7	20.0
3.6	16.3	79.0	4.7	2.4	5.5
6.2	26.1	66.7	5.0	6.3	18.3
4.6	32.4	57.9	9.5	9.7	24.2
4.5	19.5	74.3	4.6	4.0	10.1
4.9	*20.3*	*71.6*	*5.0*	*3.5*	*10.7*
4.2	*18.6*	*77.0*	*4.3*	*4.6*	*9.5*
4.4	29.9	59.0	7.6	5.1	18.4
3.0	26.0	68.2	4.3	1.5	9.4
5.9	28.5	61.2	8.5	7.3	17.8
4.9	29.1	65.3	6.4	7.2	20.4
5.2	26.5	63.0	5.0	4.9	25.1
4.3	19.7	66.7	6.5	4.2	13.9
5.7	37.8	56.3	7.9	10.4	31.5
7.6	28.5	64.3	4.9	4.5	16.3
6.9	23.1	72.5	4.6	3.2	8.1
5.8	23.1	51.8	5.2	6.3	33.6
4.6	22.2	59.4	5.8	6.5	26.6
4.4	24.6	74.0	6.9	3.2	14.4
2.4	34.4	64.1	4.7	4.4	16.2
4.6	24.1	60.1	4.3	5.0	17.5
4.4	23.0	68.4	3.8	5.8	13.2
4.8	30.3	61.2	7.2	7.2	19.8
4.8	31.9	60.5	7.1	8.5	22.3
4.8	28.0	62.2	7.3	5.5	16.4
5.2	31.9	60.9	7.0	8.2	25.5
4.9	24.6	59.5	4.9	5.5	22.7
5.1	25.0	58.3	5.3	5.7	25.9
4.5	23.9	62.2	4.2	5.2	16.4
4.9	**28.7**	**60.6**	**6.4**	**6.9**	**21.9**

8. Subjective well-being[1]

The domain indicators showed a generally positive trend in the years prior to the pandemic crisis, with the only exception being the proportion of those who rated their life satisfaction as between 8 and 10. This proportion dropped by 10 points in 2012, in coincidence with the accentuation of the social as well as economic effects of the great crisis, and it had not yet fully recovered in 2019. The year 2019 is assumed to be the pre-COVID situation. Between 2019 and 2021, life satisfaction and the assessment of future prospects maintained generally stable, or even improved, consistent with the country's positive reaction to the severe conditions brought about by the pandemic (Table 1). In 2022, the percentage of people who consider themselves very satisfied with their lives is the highest to date, and the share of people scoring insufficient is among the lowest. Substantially almost nine out of 10 people say they are very (score between 8 and 10) or sufficiently (score 6 or 7) satisfied. Leisure satisfaction, which suffered an unprecedented slump in 2021 due to the protracted restrictive measures to contain the effects of the pandemic, shows a marked recovery in 2022, although not enough to regain the levels observed in 2019.
In contrast, the trend of an increasing optimistic outlook and a lower share of pessimists, observed from 2012 to 2021 and also confirmed in the two pandemic years, reverses. The percentage of people who believe their situation will improve in the next five years decreases in 2022, with the largest decline recorded in a single year, while the percentage of people who believe things will get worse increases for the first time (Table 1).

Table 1. Subjective well-being indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Life satisfaction 8-10 (%)	2010	2022	46.2	Stable	Better	Stable	Better
Leisure time satisfaction (%)	2010	2022	65.7	Better	Worse	Better	Worse
Positive judgement of future perspectives (%)	2012	2022	29.4	Better	Better	Worse	Worse
Negative judgement of future perspectivese (%)	2012	2022	12.9	Better	Better	Worse	Worse

Better Worse Stable - Not available

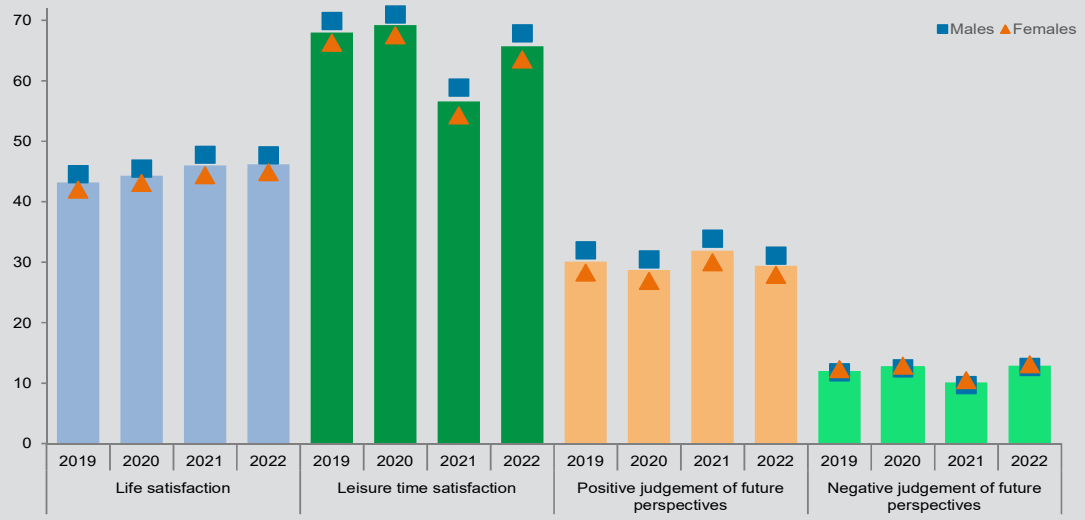
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

Young people aged 14-19 regain in terms of satisfaction with life

The highest percentage so far of people who consider themselves very satisfied with their lives (46.2%) is reached in 2022 (Figure 1). At the same time, one of the lowest shares of people assigning an insufficient score is observed. Substantially almost nine out of 10 people say they are very (score between 8 and 10) or sufficiently (score 6 or 7) satisfied.
The percentage of those saying they were very satisfied also increased for the youngest, aged 14-19, reaching the highest value (58.2%) among those recorded since 2010. The youngest were the only ones who experienced a decline between 2019 and 2021.

1 This chapter was edited by Paola Conigliaro and Alessandra Tinto. Contributors to the box: Daniela Lo Castro and Maria Gloria Narilli.

Figure 1. Subjective well-being indicators by gender. Years 2019-2022. Per 100 persons aged 14 and over with the same characteristics

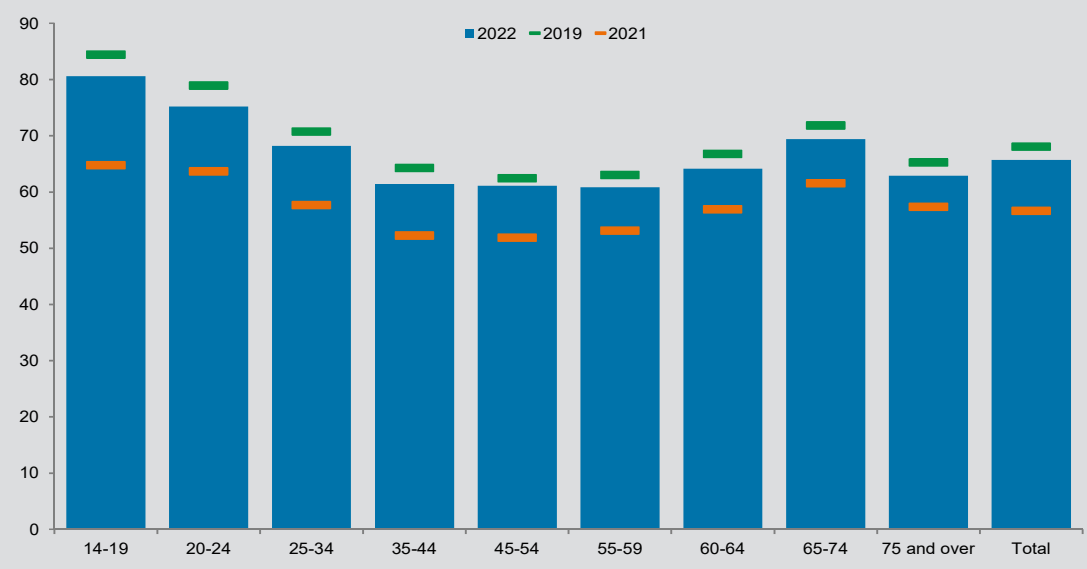


Source: Istat, Survey on Aspects of daily life

Recover, though not fully, the value of leisure time satisfaction

Satisfaction with leisure time shows a substantial recovery (+9.1 percentage points) from the slump that occurred in 2021, although it has not yet reached the level observed before the pandemic (68.0% in 2019). In 2022, 65.7% of people aged 14 and older say they are very or fairly satisfied. The improvement occurs across all age groups (Figure 2), particularly among the very young (14-19-year-olds) who return to levels above 80%, a rise of 16.1 percentage points from 2021.

Figure 2. People aged 14 and over who are very or quite satisfied with their leisure time, by age group. Years 2019, 2021 and 2022. Percentage values

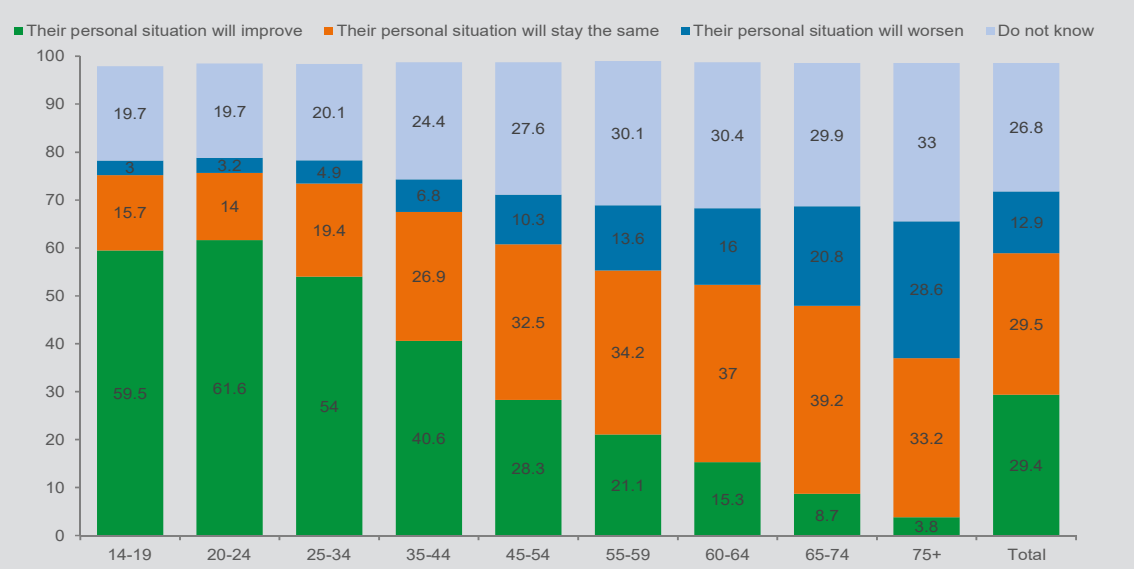


Source: Istat, Survey on Aspects of daily life

Optimists decreasing and pessimists increasing from 2021

The percentage of optimists decreases and the percentage of pessimists increases. 2022 thus marks the end of the general improvement observed for both indicators since 2012. Those who think their lives will get better account for 29.4%, compared to 31.9% in 2021. Meanwhile, for the first time, the proportion of people who expect their lives to get worse in the next five years rises (12.9% in 2022 compared to 10.2% in 2021).
Despite the data being less positive for everyone compared to the previous year, the youngest continue to be predominantly optimistic (Figure 3), with a peak in the 20-24 age group (61.6%), followed by the very young under 20 (59.5%) and 25-34-year-olds (54%). The percentage drops sharply in the subsequent age groups, down to 3.8% optimists (and 28.6% pessimists) among those aged 75 and over.
In terms of opinions about the future, Sardinia is the most positive region in 2022, having the highest percentage of people who are optimistic (34.1%) and one of the lowest of pessimistic people (9.9%); conversely, the Marche region has one of the lowest proportion of optimists (25.3%) and the highest proportion of pessimists (18.1%).

Figure 3. People aged 14 and over by opinion on their future perspectives, by age group. Year 2022. Percentage values (a)



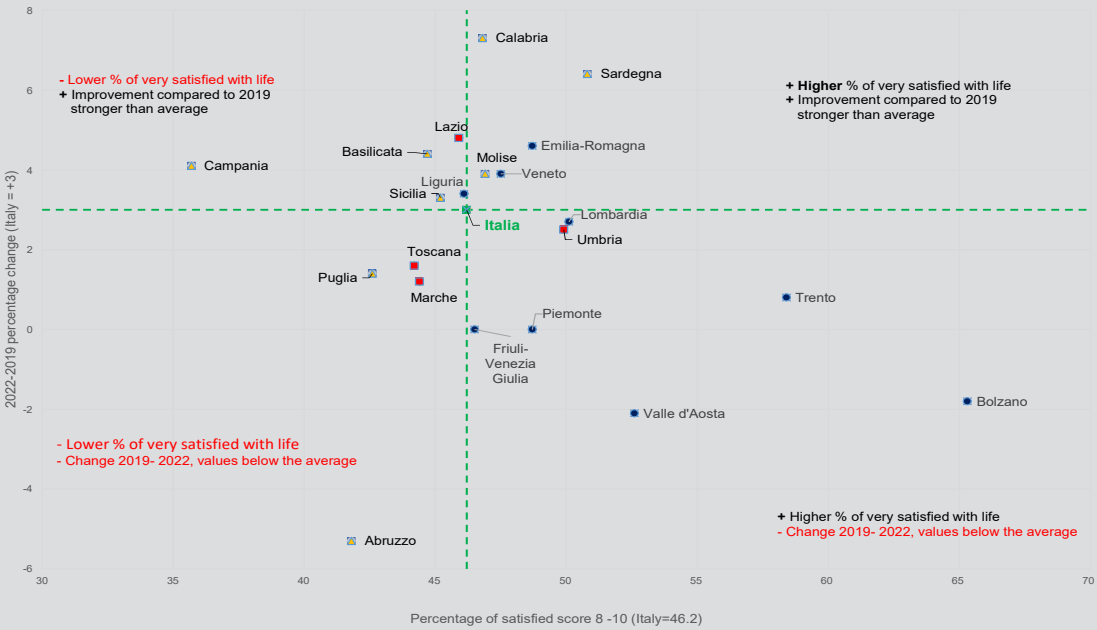
Source: Istat, Survey on Aspects of daily life
(a) The sum of the percentages for each year does not add up to 100 because a proportion of respondents did not indicate their opinion on their future perspectives.

Peculiarities of well-being at regional level

The territorial analysis shows how, compared to the pandemic years, the North-West has regained its advantage over the rest of the country for all subjective well-being indicators. At the regional level, the situation is more nuanced. In order to jointly analyse levels and evolution over time of life satisfaction, let us consider the share of very satisfied in 2022 and the change in terms of percentage points compared to the pre-pandemic period (2019). Figure 4 shows a dispersion of positions that reflects some specificities. For example, the

northern regions (blue dots) all have a proportion of very satisfied in 2022 equal to or above the Italian average, but there is a strong differentiation among them in terms of percentage change compared to 2019.

Figure 4. People aged 14 and over who gave a high score (8-10) to their life satisfaction, by region (Nuts 2). Percentage values 2022 and 2022 – 2019 percentage change.

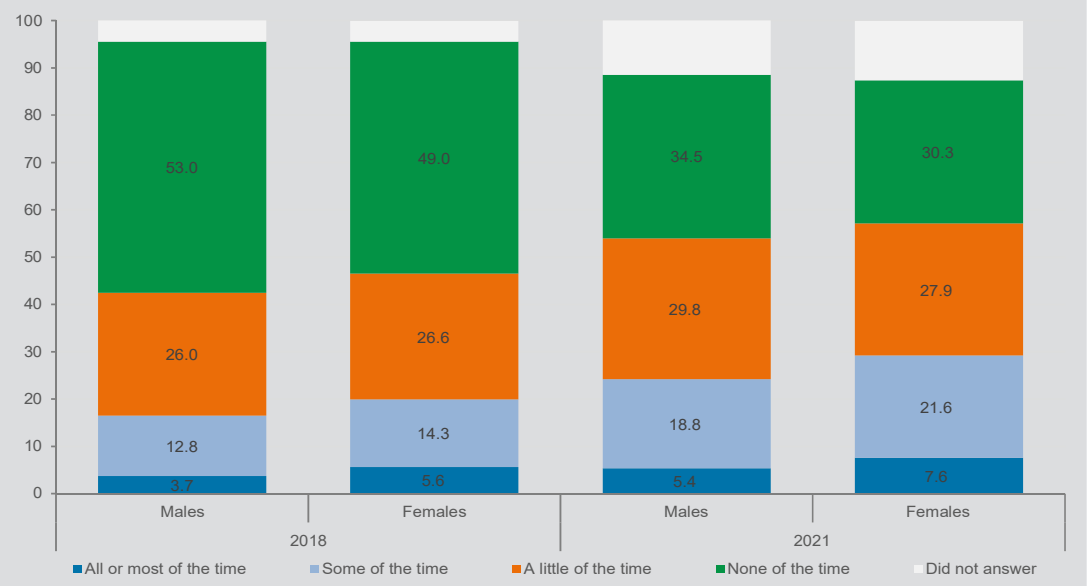


Source: Istat, Survey on Aspects of daily life

FEELING LONELY

Studies in the field of social isolation show that people who do not feel lonely have better health outcomes, and are also happier (Hawkley, L. C., & Cacioppo, J. T., 2010. Loneliness matters: A theoretical and empirical review of consequences and mechanisms. Annals of behavioral medicine, 40(2), 218-227).
This focus compares the sense of loneliness expressed in 2021 (latest available data) to that expressed in 2018 (pre-pandemic period). Data comes from Eu-SILC survey, an official survey harmonised at EU level.
In 2021, 26.8% of people aged 16 and over reported feeling alone at least some of the time, 8.5 percentage points higher than in 2018 (18.3%). Specifically, 6.5% felt alone all of the time or most of the time, 20.3% some of the time, 61.2% a little or none of the time, and 12% did not answer. In 2018, the proportion of those who never or almost never felt alone was higher (77.3%); this decrease was mainly due to a reduction in those choosing the 'never' option from 50.9% to 32.3%. The shift in choice was mainly towards the 'sometimes' response, which increased by 6.7 percentage points from 13.6% in 2018. In both years, women were more likely to feel lonely than men, with 29.2% of women feeling lonely at least some of the time in 2021 (Figure A).

Figure A. People aged 16 and over by the time they felt lonely in the previous 4 weeks and gender. Years 2018 and 2021. Percentage values



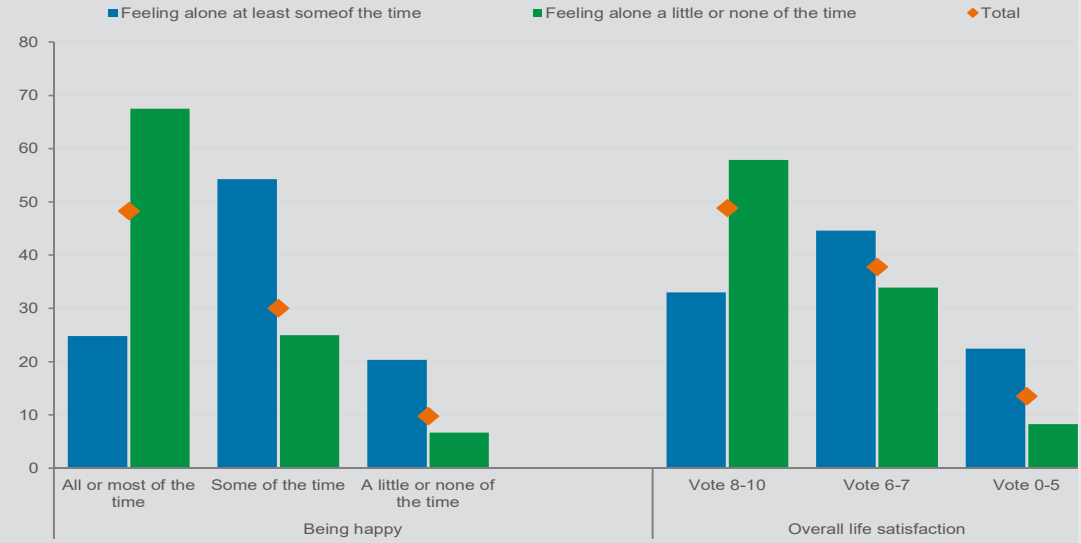
Source: Istat, Survey on Income and Living Conditions Survey (EU-SILC)

Further reflection focuses on the relationship of this indicator with other aspects of subjective well-being[1]. The analysis confirms what emerges from the literature: those who feel lonely are also less often happy and satisfied with their lives than those who do not feel lonely (Figure B). Barely one fourth (24.8%) of the people who felt lonely for at least some of the time in the previous four weeks declare that they were happy all or most of the time. They rise to more

1 This analysis uses data from Eu-SILC 2021 survey. It must be noted that they provide a slightly different value for the life satisfaction comparing with that coming from the Aspects of Daily Life survey, used for the BES indicator.

than two thirds (67.5%) among those who did not usually feel lonely. The difference is also very marked, albeit to a lesser extent, for satisfaction with one's own life: 33% of lonely people are very satisfied, compared with 57.8% of those who do not usually feel lonely.

Figure B. Happiness and life satisfaction by sense of loneliness. Year 2021. Percentage values



Source: Istat, Survey on Income and Living Conditions Survey (EU-SILC)

Indicators

1. **Life satisfaction:** Percentage of people aged 14 and over who expressed a life satisfaction score between 8 and 10 on total population aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.
2. **Leisure time satisfaction:** Percentage of people aged 14 and over very or quite satisfied with their leisure time on total population aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.
3. **Positive judgement of future perspectives:** Percentage of people aged 14 and over that believe their personal situation will improve in the next 5 years on total population aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.
4. **Negative judgement of future perspectives:** Percentage of people aged 14 and over that believe their personal situation will worsen in the next 5 years on total population aged 14 and over.
   Source: Istat - Survey on Aspects of daily life.

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Life satisfaction (a)	Leisure time satisfaction (a)
	2022	2022
Piemonte	48.7	67.4
Valle d'Aosta/Vallée d'Aoste	52.6	65.8
Liguria	46.1	69.0
Lombardia	50.1	68.8
Trentino-Alto Adige/Südtirol	61.8	76.0
Bolzano/Bozen	*65.3*	*79.5*
Trento	*58.4*	*72.6*
Veneto	47.5	64.3
Friuli-Venezia Giulia	46.5	65.0
Emilia-Romagna	48.7	67.4
Toscana	44.2	67.2
Umbria	49.9	71.2
Marche	44.4	63.9
Lazio	45.9	66.6
Abruzzo	41.8	62.9
Molise	46.9	66.7
Campania	35.7	65.2
Puglia	42.6	61.2
Basilicata	44.7	63.2
Calabria	46.8	65.8
Sicilia	45.2	58.2
Sardegna	50.8	60.5
North	49.3	67.7
North-west	49.4	68.4
North-east	49.1	66.6
Centre	45.5	66.8
South and Islands	42.4	62.2
South	40.5	63.8
Islands	46.6	58.8
Italy	46.2	65.7

(a) Per 100 persons aged 14 and over.

Positive judgement of future perspectives (a)	Negative judgement of future perspectives (a)
2022	2022
28.7	15.1
27.8	14.3
27.4	15.2
32.7	11.4
30.6	12.0
28.6	*11.7*
32.5	*12.3*
29.0	14.0
29.0	16.6
27.8	15.3
28.7	15.2
26.3	14.7
25.3	18.1
32.1	12.3
31.2	12.5
25.5	16.3
30.2	9.4
28.6	10.3
30.8	8.5
24.8	13.7
24.7	13.4
34.1	9.9
30.0	13.6
31.0	12.8
28.7	14.6
29.8	14.1
28.4	11.3
29.0	10.7
27.1	12.6
29.4	**12.9**

9. Landscape and cultural heritage[1]

Prior to the onset of the pandemic in 2019, the picture of medium-term trends for the domain indicators showed a slight prevalence of negative signals[2]. Compared to 2010, the municipalities' current expenditure per capita on culture had decreased, while the illegal building rate had increased. The comparison was negative as well for the perception indicators (with a higher share of people not satisfied with the quality of landscape of the place of living, and a lower share of people concerned about landscape deterioration), and – to a lesser extent – for the indicator of density and importance of museums' heritage. In contrast, improvements were observed in the pressure of mining and quarrying activities and, even more, in the impact of forest fires and the spread of rural tourism facilities. A comparison of 2021/2022 values with the pre-pandemic benchmark of 2019 is fully positive only for the spread of rural tourism facilities, which increases in both 2020 and 2021, continuing its upward trend. The indicator of density and importance of musems' heritage, instead, is further worsening, since in 2021 it has only partially recovered from 2020's heavy losses in terms of facilities and visitors. The impact of forest fires, affected by the adverse evolution of climatic parameters, is worsening as well, while the illegal building rate improves in 2020 and 2021, but remains stable in 2022. Finally, the experience of the pandemic seems to have had only a transitory effect on perception indicators, which had resulted in downsizing the dissatisfaction with the landscape of the place of living (probably due to the rising of other forms of discomfort, related to the lockdown experience), and interrupting the decline in the concern about landscape deterioration. By 2022, in fact, dissatisfaction has come back to rise (although it still remains below the 2019 level), while the concern inclines to resume its downward trend, even though there is no significant change from 2019. In 2020, the impact of the pandemic severely reduced budgets of municipalities for culture, further widening huge territorial inequalities in public spending. On the other hand, it had a limited effect on the pressure from mining and quarrying activities, as this indicator decreased between 2019 and 2020, but is expected to rise above the 2019 level as early as 2021, according to Eurostat's provisional estimates.

1 This chapter was edited by Luigi Costanzo and Alessandra Ferrara, with contributions from Francesca Budano, Elisabetta Del Bufalo, Alessandra Federici, Antonino Laganà, Maria G. Magliocchi, Stefano Tersigni, Francesco G. Truglia and Donatella Vignani.

2 Medium- and short-period analysis is limited to nine of the 11 domain indicators. The two indicators on farmland erosion, for which no data is available for the reference periods, were not considered.

Table 1. Landscape and cultural heritage indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Current expenditure of Municipalities for culture (Euro per capita) (a)	2010	2020	17.3	Worse	Worse	-	-
Density and importance of musems' heritage (per 100 km^2)	2015	2021	1.42	Worse	Worse	-	-
Illegal building rate (per 100 building permits issued)	2010	2022	15.1	Worse	Better	Stable	Better
Pressures of mining and quarrying activities (m^3 per km^2) (a)	2013	2020	275	Better	Worse	-	-
Impact of forest fires (per 1,000 km^2)	2010	2021	5.0	Better	Worse	-	-
Spread of rural tourism facilities (per 100 km^2)	2010	2021	8.4	Better	Better	-	-
Presence of Historic Parks/Gardens and other Urban Parks recognised of significant public interest (per 100 m^2)	2011	2021	1.7	Stable	Stable	-	-
People that are not satisfied with the quality of landscape of the place where they live (percentage values)	2012	2022	20.5	Worse	Better	Worse	Better
Concern about landscape deterioration (percentage values)	2013	2022	11.8	Worse	Stable	Worse	Worse

Better Worse Stable - Not available

(a) Year 2021 not available. Changes referred to 2019 compared with 2020.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being. Indicators of Erosion of farmland (from urban sprawl and from abandonment) do not appear in this table because no comparison is possible for any of the reference periods.

Italy retains top spot on UNESCO World Heritage List

Italy is still the country with the largest number of properties inscribed in Unesco World Heritage List (58), despite recording no new entries in 2022. Italy is followed by China (56), Germany (51), Spain and France (49 each; Figure 1a).

Figure 1a. Properties inscribed in the UNESCO World Heritage List, by category and country (top 20 countries by number of inscribed properties). Year 2022. Absolute values.

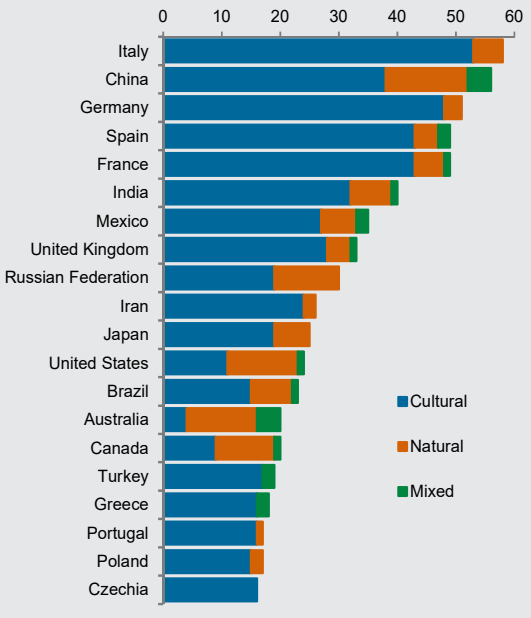
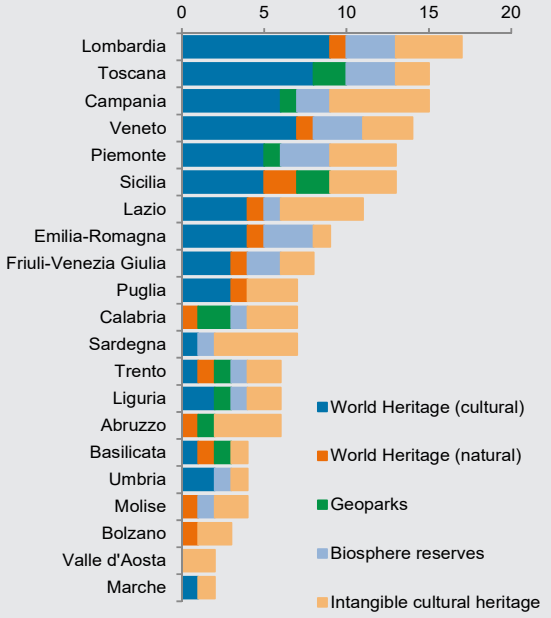


Figure 1b. Properties inscribed in the World Heritage List by category and other elements recognised by the UNESCO, by region (a). Year 2022. Absolute values.



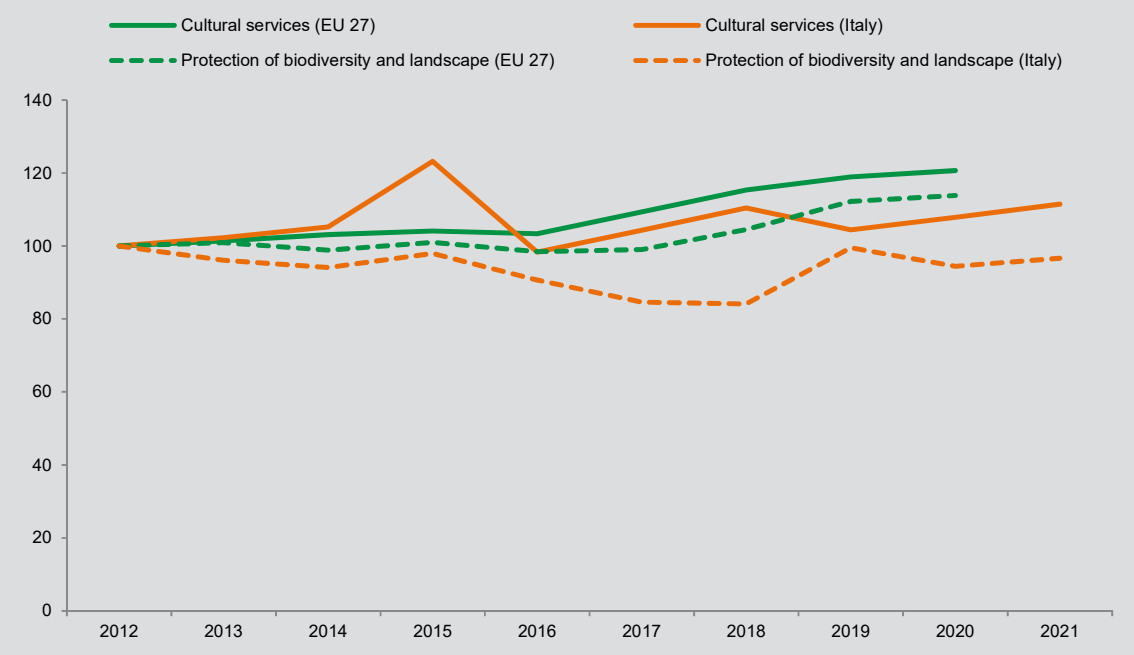
Source: Istat, processing on Unesco data
(a) Elements located in more regions are counted more times. Two intangible cultural heritages, not located in a specific territory are not respresented on the chart.

As for the other UNESCO initiatives that contribute to the protection and promotion of cultural heritage and landscape, Italy has so far achieved recognition of 20 Biosphere Reserves, 11 Geoparks and 15 Intangible Cultural Heritages (two of which recognised in 2022). The number and territorial distribution of recognitions (all regions are represented with more than one element in the various UNESCO lists) testify to the richness and diversity of Italy's cultural heritage and landscape (Figure 1b).

Public spending on cultural services on the rise, but remains among the lowest in Europe

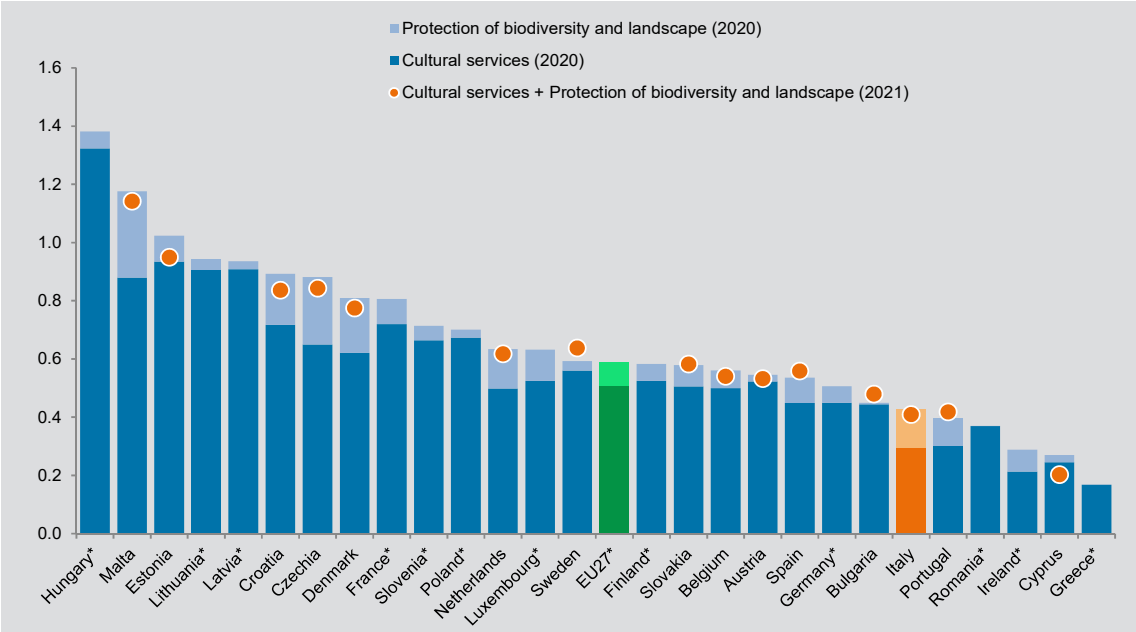
In 2020 and 2021, Italy's general government expenditure on Cultural services is about 5 billion euros: an amount comparable to that of Spain, among the largest EU economies, but far lower than those of France and Germany (16.6 and 15.3 billion in 2020, respectively). Despite an increasing trend, Italy's public spending on cultural services remains among the lowest in Europe in relation to the GDP: 2.9 per thousand in 2020, compared with an EU average of 4.8 per thousand. Italy, by contrast, is the EU country that spends the most on the Protection of biodiversity and landscape: 2.2 billion euros in 2020, and 2.3 in 2021. This entry, however, is equal to only 1.3 per thousand of GDP, and declines by 2.9% between 2019 and 2021 (Figure 2). As a result, in a ranking of public spending on landscape and cultural heritage, formed by relating the sum of both expenditure entries to the GDP (which cover a much broader area than that strictly referable to protection and promotion of landscape and cultural heritage, anyway), Italy ranks only 22nd among the 27 EU member States in 2020 (Figure 3).

Figure 2. General government expenditure on Cultural services and Protection of biodiversity and landscape in Italy and the EU. Years 2012-2021. Index, 2012=100



Source: Eurostat, Government finance statistics

Figure 3. General government expenditure on Cultural services and Protection of biodiversity and landscape in the EU countries. Years 2020 e 2021. Percentages of GDP



(*) 2021 data not available.
Source: Eurostat, Government Finance Statistics

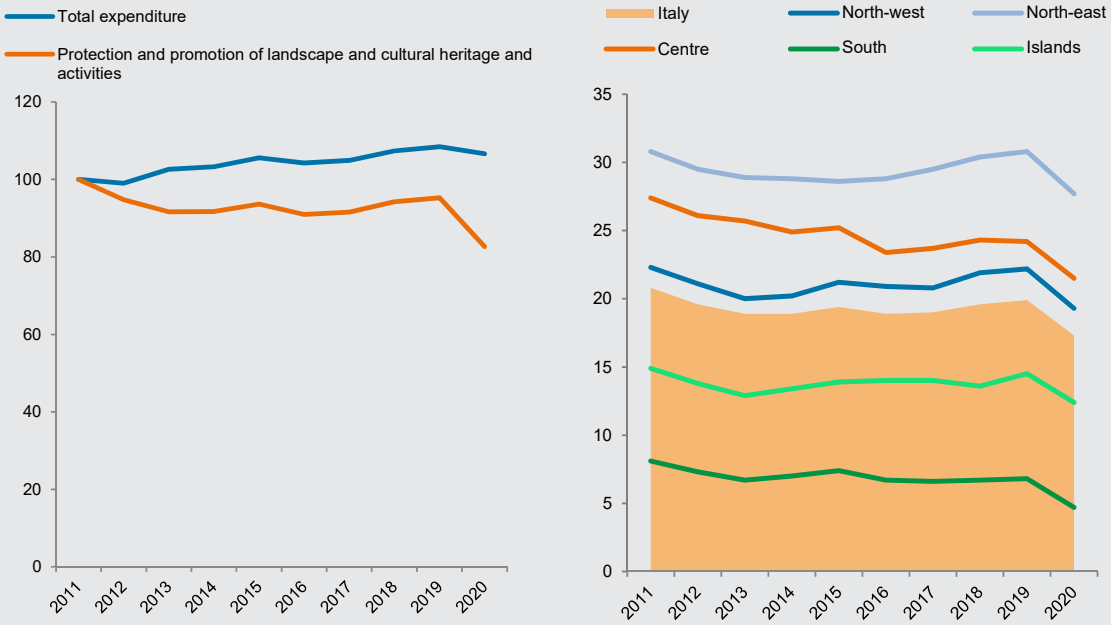
During the pandemic, municipalities' spending on culture collapses, especially in the South

In 2020, the current expenditure of the municipalities for the management of cultural heritage and activities decreased sharply to 17.3 euros per capita (2.6 less than the previous year), and – for the first time since 2013 – the trend of this spending entry deviates significantly from that of overall spending (Figure 4a). As a result, the share of culture in the budget of municipalities falls from 2.8 to 2.5%. In addition, inequalities are increasing: compared to 2019, per capita spending is decreasing by 10.1% in the North-east (where municipalities spend 27.7 euros per capita, about 60% more than the national average) and by 30.9% in the South, where in 2020 they spend only 4.7 euros per capita (less than 30% of the national average; Figure 4b).

A comparison between per capita spending in 2020 and its change from the average of the previous five-year period clearly shows how the budget cuts have been more severe in the regions where the spending on culture was already lower (Figure 5). Thus, the territorial gap keeps widening, with a ratio of 20 to 1 between the extreme values (55 euros per capita in the Autonomous province of Bolzano, and 2.7 in Campania).

Figure 4a. Current expenditure of municipalities (a), in total and on Protection and promotion of landscape and cultural heritage and activities (b). Years 2011-2020. Index, 2011=100.

Figure 4b. Current expenditure of municipalities (a) on Protection and promotion of landscape and cultural heritage and activities (b), by geographic area. Years 2011-2020. Euro per capita.

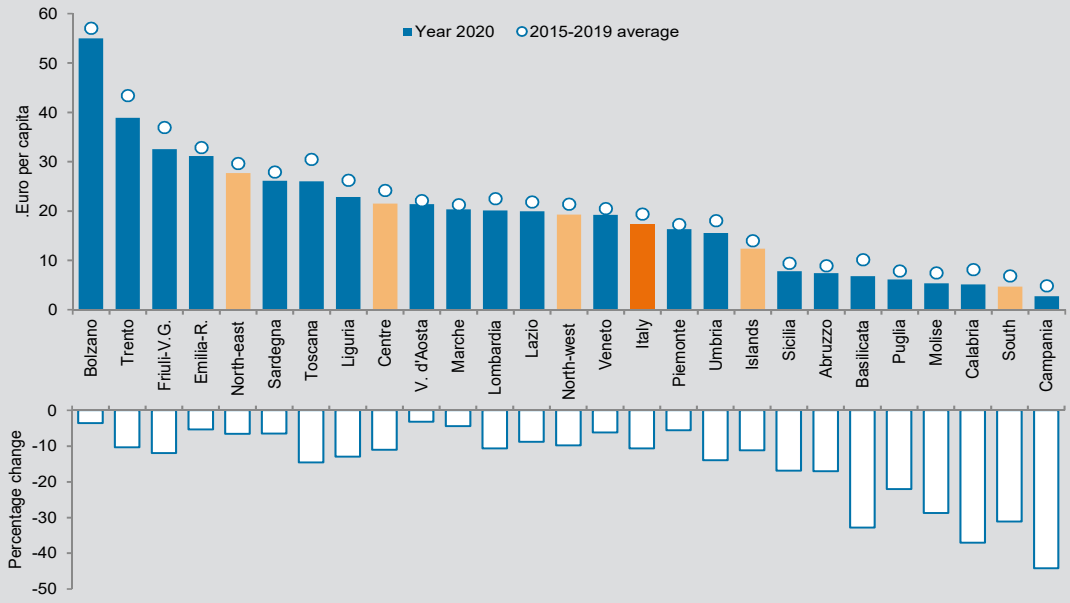


Source: Istat, Final balance sheets of Municipalities, Provinces and Metropolitan areas
(a) Accrual payments by municipal administrations.
(b) Until 2015, Functions relating to culture and cultural heritage.

Flow of museum visitors more distributed, but still far from pre-pandemic levels

In 2021, the indicator of density and relevance of the museum's heritage, which represents the number of permanent exhibition facilities per 100 km^2 (museums, archaeological areas and monuments open to public), weighted by the number of visitors, is 1.42 per 100 km^2. Although marking a progress, compared to the previous year (1.30), this value remains far below the average pre-pandemic value (1.62, in the three-year period 2017-2019). The indicator doubles its value in the Centre (2.85), is close to the Italian average in the North and well below it in South and Islands (0.80). Among the regions, Lazio retains the highest value (4.09), despite suffering the largest loss compared to 2019. Most regions, however, shows values close to the pre-pandemic ones (Figure 6a). The overall number of visitors to museums, monuments and archaeological sites (48.7 million) increases by 34.9% over the previous year, but is still far from the level of 2019 (Figure 6b).

Figure 5.Current expenditure of Municipalities for Protection and promotion of cultural and landscape heritage and activities (a) by region and geographic area. Years 2020 and 2015-2019. Euro per capita and percentage changes from the average values of the period 2015-2019



Source: Istat, Final balance sheets of Municipalities, Provinces and Metropolitan areas
(a) Accrual payments by municipal administrations.

Figure 6a. Density and importance of museums' heritage by region and geographic area. Years 2019 and 2021. Exhibition facilities weighed by the number of visitors, per 100 km²

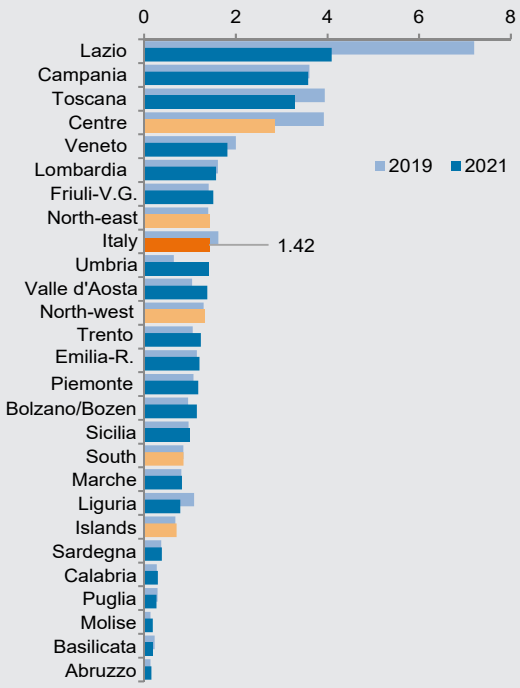
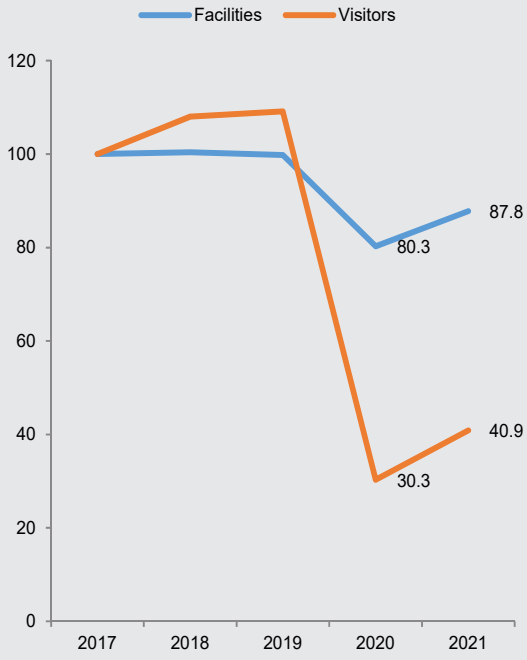


Figure 6b. Exhibition facilities (a) and visitors. Years 2017-2021. Index, 2017=100



Source: Survey on museums and other cultural institutions
(a) Accrual payments by municipal administrations.
(b) Until 2015, Functions related to culture and cultural heritage.

The growth of rural tourism continues, at a faster pace in South and Islands

In 2021, the farms that practice rural tourism are 25,390 all over Italy (+1.3% on the previous year and +3.3% on 2019). The indicator of spread of rural tourism facilities is among the few that were not affected by the pandemic, rising from 8.1 farmhouses per 100 km^2 in 2019 to 8.4 in 2021. The number of their guests is also growing again (around three million, almost fully recovering the level of 2019), and the share of foreigners is 37%. The density of rural tourism facilities rises to 15.9 per 100 km^2 in the Centre (23.4 in Toscana) and 11.7 in the North-east (with a maximum of 44 in the Autonomous province of Bolzano; Figure 7a). However, the largest increases compared to the pre-pandemic period (2019) are observed in South and Islands: +24.7% in Sicilia and +16.9% in Campania (Figure 7b).

Figure 7a. Spread of rural tourism facilities by region and geographic area. Year 2021. Number of farmhouses per 100 km^2

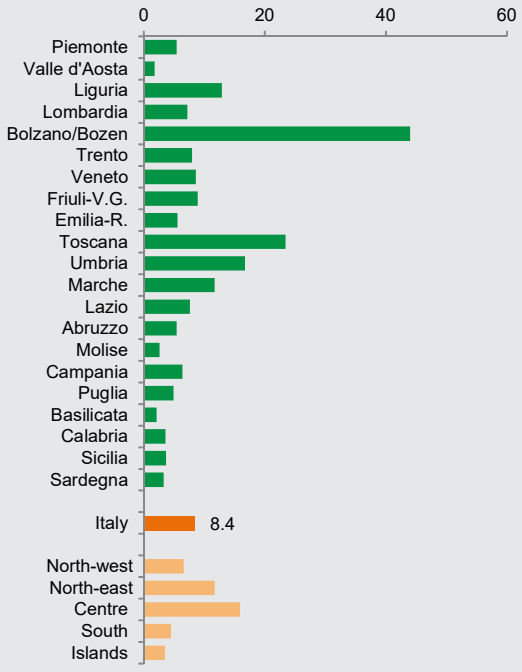
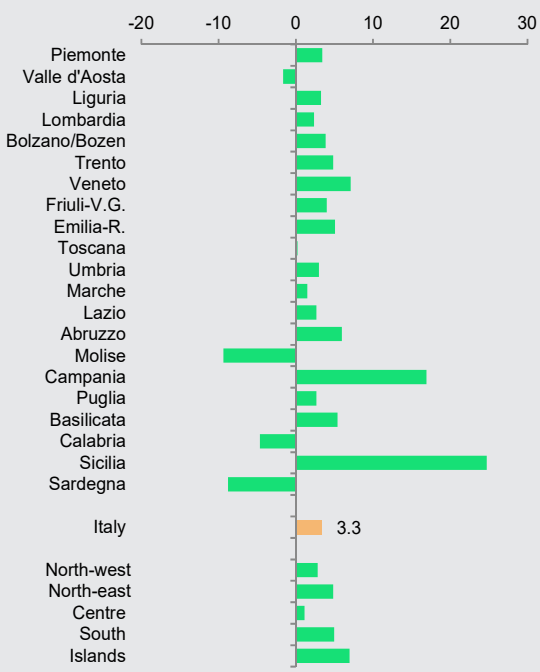


Figure 7b. Rural tourism facilities by region and geographic area. Years 2019-2021. Percentage changes



Source: Istat, Survey on farmhouses

One tenth of green areas in Italian cities is recognised of historic or artistic interest

Villas, gardens and urban parks recognised as being of outstanding historical or artistic interest under the Law on Cultural Heritage and Landscape account for more than 10 per cent of the total urban green areas in Italian cities. In 2021, the density of historic greenery over the municipal territory of the 109 provincial capitals is 1.7 m^2 per 100 m^2 of built-up area (2.3 in the North, 1.4 in the Centre and 0.9 in South and Islands).

Temporary drop in the pressure from mining and quarrying activities during the pandemic

In 2020, the extraction of non-energy mineral resources was affected by the pandemic-related slowdown in economic activity, leading to a drop in the pressure indicator to 274.5 m^3 per km^2 (-4.5% on the previous year). The most pronounced reductions are observed in Puglia (-19.0%), Toscana and Abruzzo (between -14 and -15%), but there are also regions that are bucking the trend: Campania (+25.5%), Lazio (+6.3%) and the Autonomous province of Trento (+5.6%). The highest values are found in Lombardia (547.6 m^3/km^2), Umbria and Molise (over 400 m^3/km^2). Over the 2013-2020 period, the pressure levels remain quite stable in the North-east, the South and the Islands (273, 229 and 179 m^3/km^2 in 2020, respectively), while a downward trend can be observed in the North-west and the Centre, where pressure is most intense (383.7 and 307 m^3/km^2 in 2020, respectively; Figure 8a). A comparison between the average values for the periods 2013-2016 and 2017-2020, however, shows that the pressure from mining and quarrying activities tends to increase especially in Abruzzo, Friuli-Venezia Giulia, Campania, Molise and Sardegna (Figure 8b). Besides, Eurostat's provisional estimates anticipate for 2021 a rebounce in the extraction of non-energy minerals as economic activity resumes, leading to fully recovering the pandemic-related decline, and even to exceeding the quantities extracted in 2019 (by 4.6% in the whole of EU countries, and by 17.7% in Italy).

Figure 8a. Pressures of mining and quarrying activities by geographic area. Years 2013-2020. Volume of non-energy mineral resources extracted (m^3 per km^2)

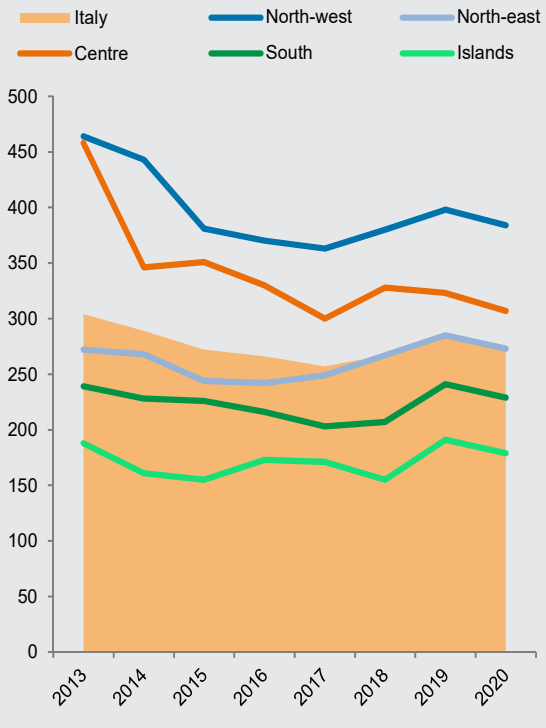
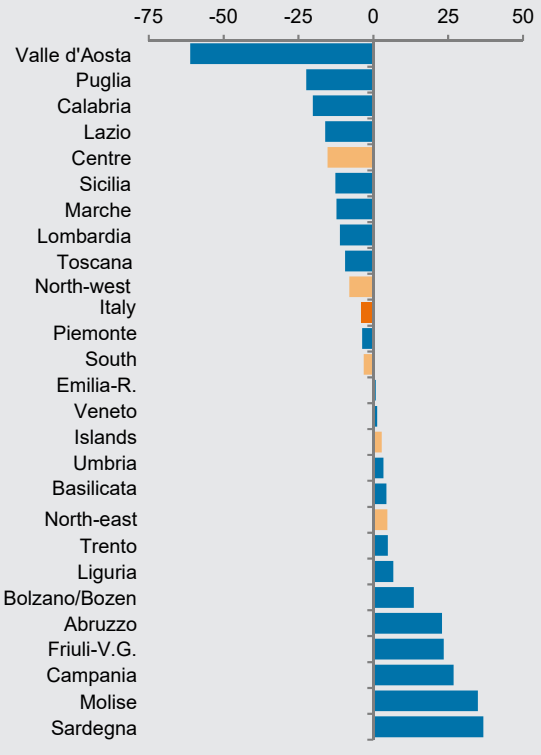


Figure 8b. Pressures of mining and quarrying activities by region and geographic area. Years 2013-2016 and 2017-2020. Percentage changes in average values between the two periods



Source: Istat, Anthropic pressure and natural hazards. Mining and quarrying extraction activities

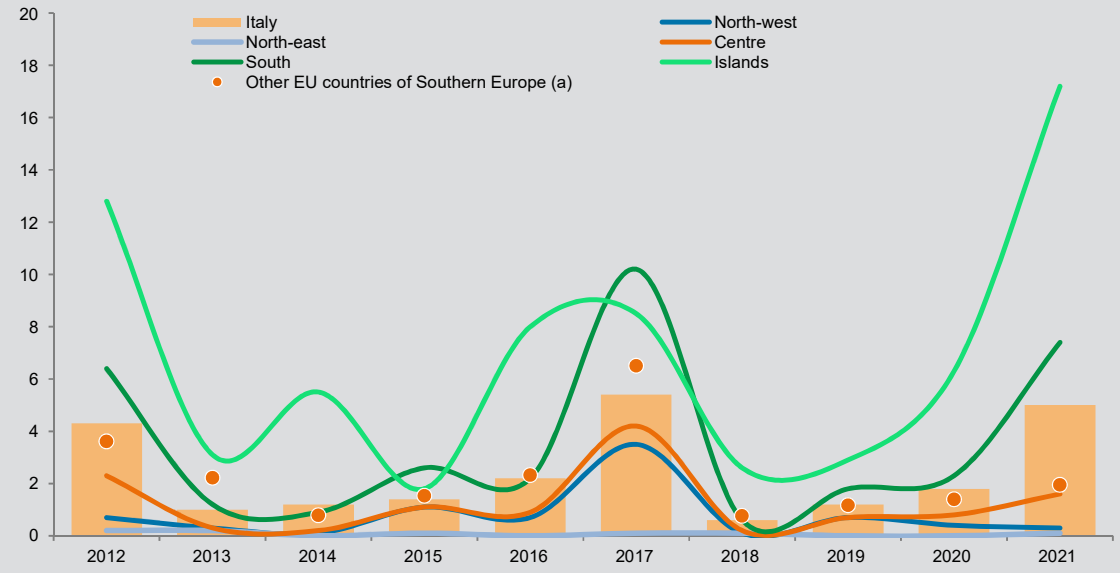
Severe impact of forest fires in 2021

In 2021 there was a sharp increase in both the number of forest fires (+23.1% on the previous year) and in their average size (from 11.4 to 25.4 hectares). A total of 152 thousand hectares were burnt, equivalent to 5 per thousand of the national territory. The forest fire impact indicator, up for the third consecutive year, is far higher than the average for the other EU countries of Southern Europe, second only to Greece. More than 75% of the area covered by fire is located in Calabria, Sicilia and Sardegna, where adverse weather conditions have favored the fires onset and made firefighting operations more difficult (Figure 9).

Illegal building rate stable in 2022, unsustainable situation in South and Islands

Also in 2022, more houses were built than those authorised by the Municipalities. According to the provisional estimates provided by Cresme, the illegal building rate (new unauthorised dwellings every 100 authorised) is 15.1, substantially unchanged from the previous year, as well as its territorial differences (Figure 10a). Illegal building remains marginal in the North, but has a significant weight in the rest of the country, and especially in the South (42.1) and the Islands (36.3). Besides, 2022 witnessed a net increase of illegal dwellings to an extent no longer observed since 2004 (+9.1%), which might be a side effect of the post-pandemic recovery in the construction sector (Figure 11b). What concerns most, however, is the long persistence of this phenomenon, that imposes very high social costs in terms of landscape degradation, seismic risk and hydrogeological instability.

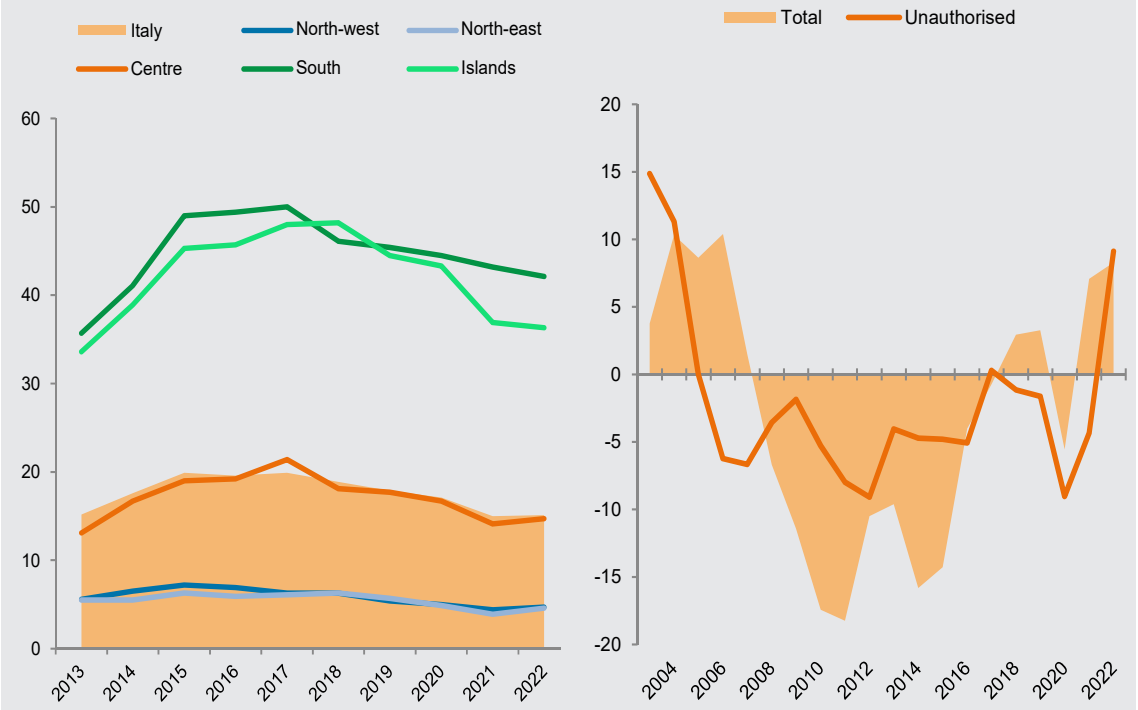
Figure 9. Burnt forest area in Italy (by geographic area) and in the other EU countries of Southern Europe. Years 2012-2021. Km² per 1,000 Km² of total land area



Source: State Forestry Corps and Civil Protection Service (Italy 2005-2015), Carabinieri Command for Forestry, Environmental and Agri-food protection (Italy 2016-2020), Processing on JRC data (other countries).
(a) Bulgaria, Cyprus, Croatia, Greece, Portugal, Romania, Slovenia and Spain. Data not available for Malta.

Figure 10a. Illegal building rate by geographic area. Years 2013-2022 (a). New unauthorised housing units every 100 authorised

Figure 10b. New housing units, total and unauthorised. Years 2004-2022 (a). Annual percent change rates



Source: Istat, Processing on Cresme data.
(a) 2022 data are provisional.

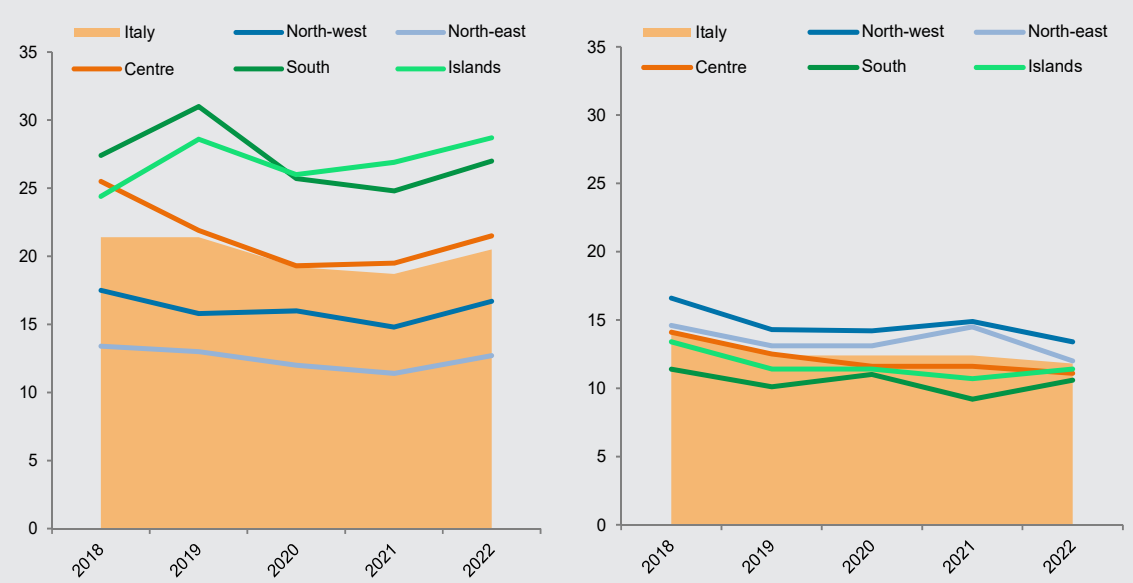
After the pandemic, the perception of landscape deterioration is back on the rise

In 2022, after the reductions observed in 2020 and 2021, the share of people that are not satisfied with the landscape of the place of living (i.e. those reporting to live in places "affected by evident deterioration"), returns to grow, rising to 20.5% of the population aged 14 years and over, from 18.7% in 2021 (Figure 11a). The territorial variability of this indicator is huge, with large gaps between Northern and Southern regions (ranging from 7.7% in the Autonomous province of Bolzano to 31.3% in Campania), and between small towns and big cities (from 12% of people living in towns up to 2,000 inhabitants to 32.5% of metropolitan centres).
Signs of a comeback to pre-pandemic "normality" also come from the indicator of concern for landscape deterioration, which measures social attention to protection issues, with special regard to land consumption. In 2022, the share of those who indicate this concern among the top five in the environmental area stands at 11.8%, after remaining stable at 12.4% for the previous three years. Although such change is not significant in itself, it resumes the downward trend observed from 2013 to 2018. Like for the other perception indicator, regional variability is significant, although less marked and tending to decline (Figure 11b). Compared to the dissatisfaction indicator, however, the geographic distribution follows an opposite pattern, with values generally lower in Southern regions and higher in the Northern ones (from 8.7% in Basilicata to 16.5% in the Autonomous province of Bolzano), and no major differences between large cities and small towns.
A joint representation of the two perception indicators (Figure 12) tries to outline a map of Italians' relationship with the landscape, for the two aspects considered: the judgment on the quality of landscape, based on their daily experience (dissatisfaction) and the aware-

ness about landscape value and fragility (concern). The resulting pattern, where the dissatisfaction with the landscape of one's place of living (with a wider variability) is clearly the determining factor, is consistent with other indicators relating to care/attention to territory and cultural heritage (such as municipal spending on culture and illegal building) in describing a critical situation in the Southern regions.

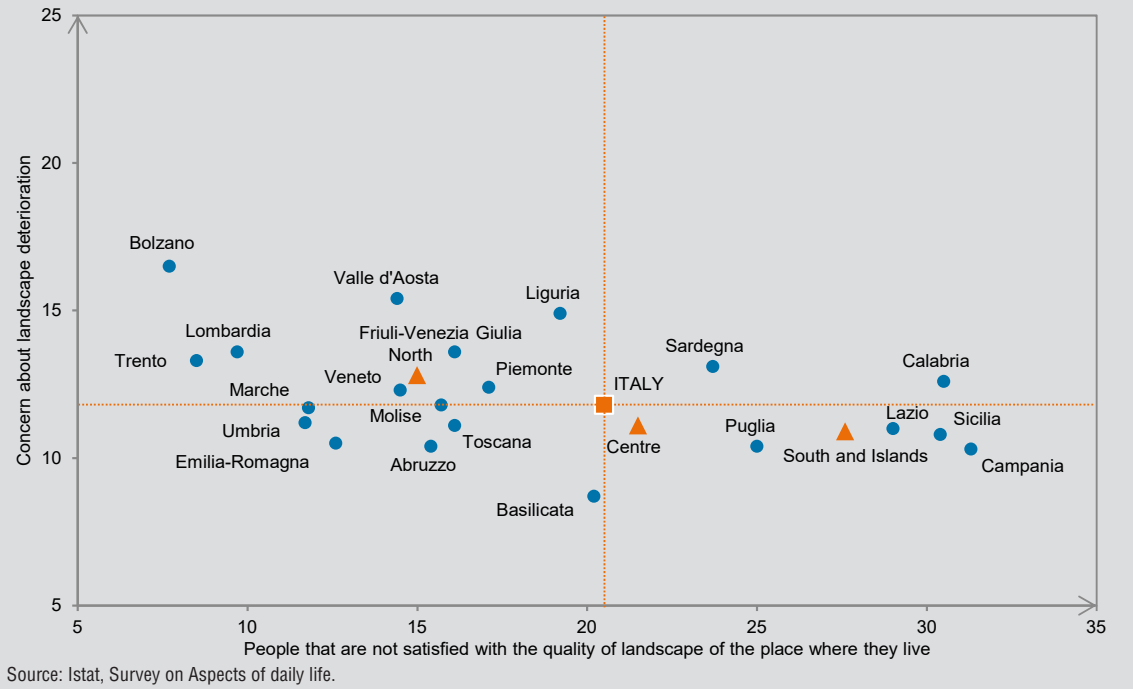
Figure 11a. People that are not satisfied with the quality of landscape of the place where they live, by geographic area. Years 2018-2022. Per 100 people aged 14 and over

Figure 11b. Concern about landscape deterioration, by geographic area. Years 2018-2022. Per 100 people aged 14 and over



Source: Istat, Survey on Aspects of daily life

Figure 12. People that are not satisfied with the quality of landscape of the place where they live and concern about landscape deterioration, by region and geographic area. Year 2022. Per 100 people aged 14 and over



Source: Istat, Survey on Aspects of daily life.

Indicators

1. **Current expenditure of Municipalities for culture:** Current expenditure for protection and valorisation of cultural properties and activities in euro per capita.
   Source: Istat - Processing of data from Final balance sheets of Municipalities, Provinces and Metropolitan areas.
2. **Density and importance of musems' heritage:** Number of permanent exhibition facilities per 100 sq.km (museums, archaeological sites, and monuments open to public), weighed by the number of visitors.
   Source: Istat - Survey on museums and other cultural institutions.
3. **Illegal building rate:** Ratio of the number of unauthorised buildings built in the reference year to the number of building permits issued by the Municipalities.
   Source: Center for social, economic and market research for building and the territory (Cresme).
4. **Erosion of farmland from urban sprawl:** Percentage ratio of rural areas affected by urban sprawl to the total of rural areas ("rural areas affected by urban sprawl": rural areas with increasing population and decreasing agricultural land).
   Source: Istat - Processing of data from General Census on Agriculture, General Census on Population and Housing, Census Mapping.
5. **Erosion of farmland from abandonment:** Percentage ratio of abandoned rural areas to the total of rural areas ("abandoned rural areas": rural areas with decreasing population and decreasing agricultural land).
   Source: Istat - Processing of data from General Census on Agriculture, General Census on Population and Housing, Census Mapping.
6. **Pressures of mining and quarrying activities:** Volume of non-energy mineral resources extracted (cubic metres) per sq.km.
   Source: Istat - Anthropic pressure and natural hazards. Mining and quarrying extraction activities.
7. **Impact of forest fires:** Burnt forest area (wooded and non-wooded) per 1,000 sq.km.
   Source: Istat - Processing of data from Carabinieri Command of Units for Forestry, Environmental and Agri-food protection.
8. **Spread of rural tourism facilities:** Number of farmhouses per 100 sq.km.
   Source: Istat - Survey on farmhouses.
9. **Presence of Historic Parks/Gardens and other Urban Parks recognised of significant public interest:** Percentage ratio of the area of parks and gardens classified as "historic" and/or "of a significant public interest" by the Legislative Decree no. 42/2004 to the total area of the provincial capital Municipalities.
   Source: Istat - Processing of data from Survey on urban environmental data and Census Mapping.
10. **People that are not satisfied with the quality of landscape of the place where they live:** Proportion of regional population reporting that the landscape of the place where they live is affected by evident deterioration.
    Source: Istat - Survey on Aspects of daily life.
11. **Concern about landscape deterioration:** Proportion of population reporting, among the environmental problems for which they express more concern, the decay of landscape due to overbuilding.
    Source: Istat - Survey on Aspects of daily life.

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Current expenditure of Municipalities for culture (a)	Density and importance of museum heritage (b)	Illegal building rate (c)	Erosion of farmland from urban sprawl (d)	Erosion of farmland from abandonment (d)	Pressure of mining and quarrying activities (e)
	2020	2021	2022	2011	2011	2020
Piemonte	16.3	1.2	4.2	18.5	41.4	311
Valle d'Aosta/Vallée d'Aoste	21.4	1.4	4.2	-	66.5	13
Liguria	22.8	0.8	6.4	31.8	57.4	226
Lombardia	20.1	1.6	4.7	24.0	31.0	548
Trentino-Alto Adige/Südtirol	46.9	1.2	3.3	-	28.4	194
Bolzano/Bozen	*55.0*	*1.2*	....	-	*31.3*	*148*
Trento	*38.9*	*1.2*	....	-	*24.9*	*249*
Veneto	19.2	1.8	5.3	56.9	23.1	363
Friuli-Venezia Giulia	32.5	1.5	3.3	7.0	54.2	238
Emilia-Romagna	31.1	1.2	4.2	27.0	42.6	259
Toscana	26.0	3.3	6.8	14.2	47.7	262
Umbria	15.5	1.4	10.9	8.3	50.0	474
Marche	20.3	0.8	10.9	14.7	38.8	147
Lazio	19.9	4.1	20.0	53.6	15.4	372
Abruzzo	7.4	0.2	30.0	16.3	43.1	165
Molise	5.3	0.2	30.0	6.9	74.4	443
Campania	2.7	3.6	50.4	29.6	34.2	264
Puglia	6.1	0.3	34.8	33.1	17.1	303
Basilicata	6.8	0.2	54.1	14.5	38.2	251
Calabria	5.1	0.3	54.1	22.0	54.3	71
Sicilia	7.8	1.0	48.2	16.9	29.5	199
Sardegna	26.1	0.4	22.5	6.5	27.1	158
North	22.9	1.4	4.6	24.3	37.5	326
North-west	19.3	1.3	4.7	20.9	40.0	384
North-east	27.7	1.4	4.6	27.4	35.2	273
Centre	21.5	2.9	14.7	25.1	37.0	307
South and Islands	7.1	0.8	40.2	18.8	34.2	209
South	4.7	0.9	42.1	23.6	38.1	229
Islands	12.4	0.7	36.3	11.8	28.3	179
Italy	17.3	1.4	15.1	22.2	36.1	275

(a) Euros per capita.
(b) Number of museums and similar facilities per 100 km^2, weighed by the number of visitors.
(c) Illegal buildings per 100 authorised buildings (Provisional data). Values for Piemonte and Valle d'Aosta, Trentino-Alto Adige and Friuli-Venezia Giulia, Umbria and Marche, Abruzzo and Molise, Basilicata and Calabria refer to the two regions as a whole.
(d) Percentage of total land area.
(e) Cubic metres extracted per km^2 of total land area. Data for Calabria is provisional.

	Impact of forest fires (f)	Spread of rural tourism facilities (g)	Presence of historic parks/gardens and other urban parks recognised of significant public interest (h)	People that are not satisfied with the quality of landscape of the place where they live (i)	Concern about landscape deterioration (i)
	2021	2021	2021	2022	2022
	0.4	5.4	3.8	17.1	12.4
	..	1.8	0.9	14.4	15.4
	1.3	12.9	1.0	19.2	14.9
	0.1	7.2	2.8	16.1	13.6
	..	27.6	0.3	8.1	14.9
	..	*44.0*	*0.1*	*7.7*	*16.5*
	..	*8.0*	*0.3*	*8.5*	*13.3*
	..	8.6	2.4	14.5	12.3
	0.1	8.9	6.0	9.7	13.6
	0.1	5.6	0.6	12.6	10.5
	0.4	23.4	1.3	16.1	11.1
	0.5	16.7	4.2	11.7	11.2
	0.4	11.7	1.4	11.8	11.7
	4.4	7.6	1.0	29.0	11.0
	2.8	5.4	0.9	15.4	10.4
	5.7	2.6	0.1	15.7	11.8
	5.1	6.4	1.7	31.3	10.3
	5.0	4.9	0.6	25.0	10.4
	3.8	2.1	0.2	20.2	8.7
	18.7	3.6	0.5	30.5	12.6
	23.2	3.7	1.2	30.4	10.8
	10.7	3.3	0.3	23.7	13.1
	0.2	9.3	2.3	15.0	12.8
	0.3	6.6	2.8	16.7	13.4
	0.1	11.7	1.9	12.7	12.0
	1.6	15.9	1.4	21.5	11.1
	11.3	4.1	0.9	27.6	10.9
	7.4	4.5	0.9	27.0	10.6
	17.2	3.5	1.0	28.7	11.4
	5.0	8.4	1.7	20.5	11.8

(f) Area covered by forest fires, values per 1,000 km^2.
(g) Number of farms per 100 km^2.
(h) Square metres per 100 m^2 of built-up area.
(i) Per 100 people aged 14 years and over.

10. Environment[1]

Despite the persistence of critical levels, almost all indicators that showed a long-term trend of improvement before the lockdown tend to maintain this trend during the COVID-*19* pandemic period. These include air quality, emissions of CO_2 and other greenhouse gases, urban green availability, landfilling of municipal waste and electricity from renewable sources. The latest available data for many indicators refer to the year 2021[2], with the exception of indicators on weather phenomena and subjective perceptions (satisfaction with the environmental situation, concern for climate change and biodiversity loss), which are updated to 2022 (Table 1).

Table 1. Environmental indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Air quality - $PM_{2.5}$ (%)	2010	2021	71.7	●	●	-	-
Emissions of CO_2 and other greenhouse gases (t/inhab.)	2008	2021	7.0	●	●	-	-
Population exposed to landslides risk (%) (a)	2015	2020	2.2	●	●	-	-
Population exposed to flood risk (%) (a)	2015	2020	11.5	●	●	-	-
Water losses in urban supply system (%) (a)	2005	2020	42.2	●	●	-	-
Protected natural areas (%)	2012	2021	21.7	●	●	-	-
Coastal bathing waters (%)	2013	2019	65.5	●	-	-	-
Urban green availability (m^2/inhab.)	2011	2021	32.5	●	●	-	-
Soil sealing from artificial cover (%)	2012	2021	7.2	●	●	-	-
Domestic material consumption (mln of t)	2018	2020	458.7	●	-	-	-
Municipal waste generated (kg/inhab.)	2004	2021	501	●	●	-	-
Landfilling of municipal waste (%)	2004	2021	19.0	●	●	-	-
Contaminated sites (per 1,000 inhab.)	2018	2020	7.9	●	-	-	-
Electrical energy from renewable sources (%)	2004	2021	35.1	●	●	-	-
Concern about climate change (%)	2012	2022	71.0	●	●	●	●
Satisfaction with the environmental situation (%)	2005	2022	70.6	●	●	●	●
Concern for biodiversity loss (%)	2012	2022	23.9	●	●	●	●
Weather and climate indicators	**Climatic reference period**			**Percentage changes**			
				Comparison with climatic period 1981-2010			
Warm spell duration index (days)	1981-2010	2022	40	●			
Extreme precipitation events (days)	1981-2010	2022	0	●			
Consecutive dry days (days)	1981-2010	2022	27	●			

● Better ● Worse ● Stable - Not available

(a) 2019 and 2021 data not available, changes are calculated between 2017 and 2020.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is less than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being. The indicator Sewage treatment is not shown in the table because no comparisons are available for the reference periods. The indicators Warm spell duration index, Extreme precipitation events and Consecutive dry days are compared with the reference climate period 1981-2010.

In 2021, compared to 2020, with the resumption of activities after the lockdown, there has been an increase in indicators of environmental pressure closely linked to the business cycle, such as emissions of CO_2 and other greenhouse gases and municipal waste generated. The effects of climate change are increasingly evident in terms of temperature and precipitation, with a very significant increase in extreme events related to warm spell duration and consecutive dry days, compared to the climate reference period. Citizens'

1 This chapter was edited by Domenico Adamo and Stefano Tersigni, with contributions from Luigi Costanzo, Elisabetta Del Bufalo, Aldo Femia, Silvana Garozzo, Antonino Laganà, Maria Rosaria Prisco, Simona Ramberti and Silvia Zannoni.

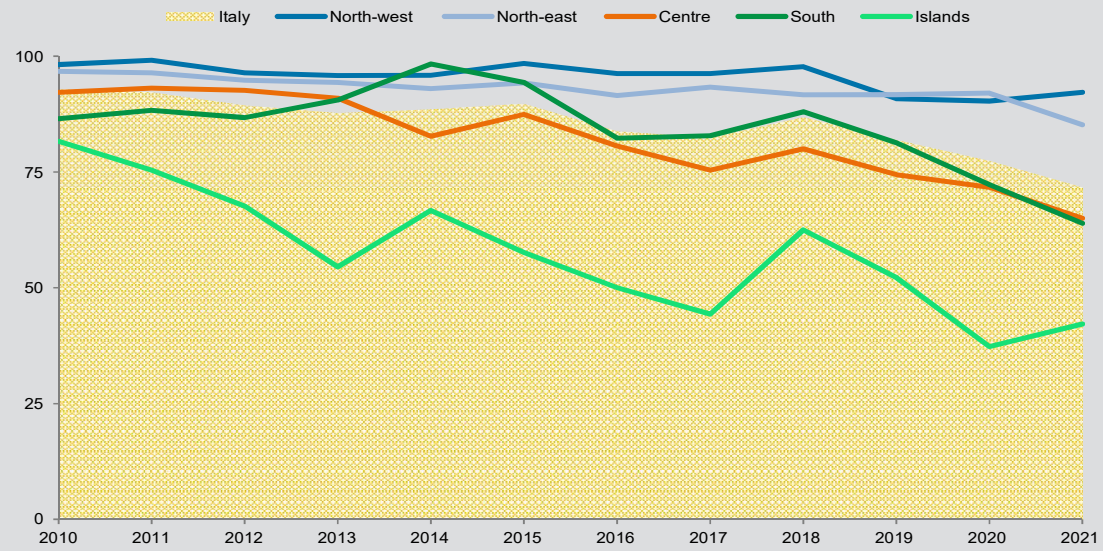
2 When analysing the environmental domain, it has to be taken into account that several indicators are validated and made available only two years after the event, also due to the complexity of the primary data sources (e.g. hourly air quality monitoring data). This structural limitation makes it difficult to assess the more recent situation, especially in relation to the pre-pandemic and pandemic periods.

concern about climate change has increased again in 2022, after the decline during the pandemic period, which interrupted the upward trend observed until 2019. In 2020 priorities may have shifted to pandemic-related issues, resulting in less sensitivity to environmental problems, which partially recover in 2022. The indicator of satisfaction with the environmental situation, on the other hand, shows a fluctuating trend over time, returning in 2022 to the level record in 2010. The assessment is much more complex for the indicators that showed a negative trend until 2019 (population exposed to landslides and floods, water losses in the public supply networks, coastal bathing waters, soil sealing from artificial cover and domestic material consumption) or a stable trend (natural protected areas): no significant improvement is observed even after the pandemic crisis. The resources made available by the National Recovery and Resilience Plan (NRRP) will be useful in accelerating the path of the Italian economy and society towards an ecological transition and in strengthening the resilience of production systems to changes, especially those caused by climate change. Among the six thematic areas of intervention of the NRRP, the mission most focused on this objective is "Green deal and ecological transition" (mission 2), followed by "Digitalisation, innovation, competitiveness and culture" (mission 1) and "Infrastructure for sustainable mobility" (mission 3). There are many components and measures into which these missions, and therefore the planned interventions, are divided. The components of mission 2 are "Sustainable agriculture and circular economy, renewable energy, hydrogen, network and sustainable mobility, energy efficiency and renovation of buildings, protection of soil and water resources". For missions 1 and 3 the components are "Tourism and Culture 4.0", "Intermodality and Integrated Logistics". The aims of the objectives proposed in the NRRP can promote the Country's development, particularly in terms of environmental sustainability.

Gradual improvement in air pollution, decreasing $PM_{2.5}$ air quality in the North-east, Centre and South

For air quality, there was a decrease in the percentage of $PM_{2.5}$ exceedances to 71.7% of the measurements taken in 2021. Since 2010, the indicator has been decreasing steadily with the exception of 2018 (Figure 1). This gradually positive trend is largely insufficient to significantly reduce the mortality caused by $PM_{2.5}$. This trend is less pronounced in the North, where historically the highest values of the indicator are observed with a substantial stability compared to the previous year.

Figure 1. Exceedances above the WHO health reference value (10 µg/m³) out of the total number of valid measurements of annual average $PM_{2.5}$ concentrations by geographic area. Years 2010-2021. Percentage values

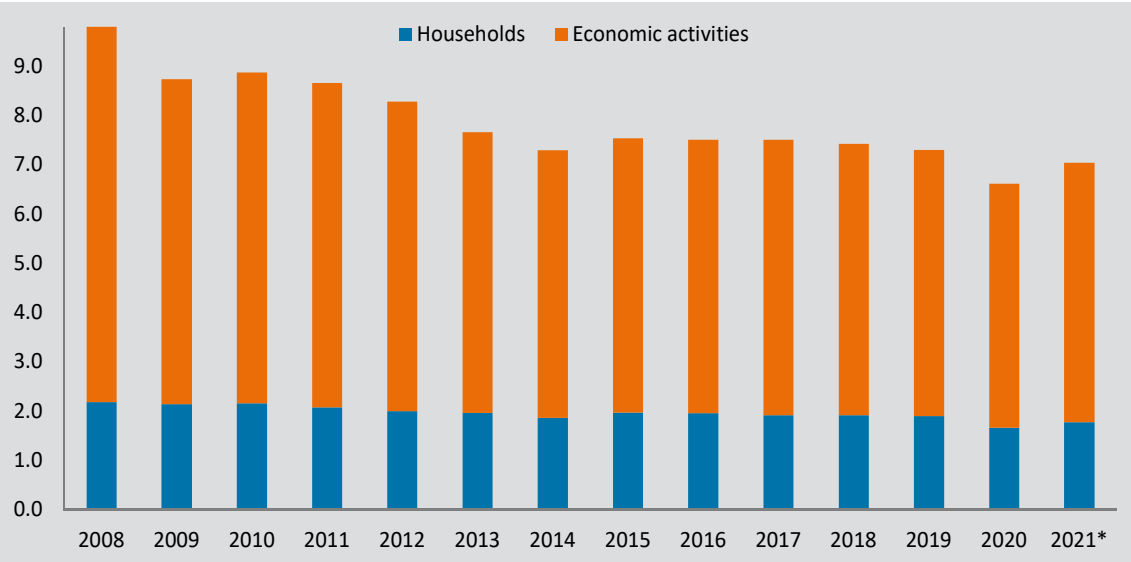


Source: Istat, Processing of data from ISPRA

Increase in CO_2 and greenhouse gases emissions

In 2021, emissions of CO_2 and other greenhouse gases generated by economic activities and households rose again, reaching 7.0 tonnes of CO_2 equivalent per inhabitant; the reduction recorded in 2020 due to the restrictions imposed during the lockdown period is partly recovered (Figure 2). In the long term, however, there was a decreasing trend that started in 2008 (when emissions where 9.8 tonnes per inhabitant).

Figure 2. Total CO_2 and other greenhouse gas emissions by emission source. Years 2008-2021. Tonnes of CO_2 equivalent per inhabitant

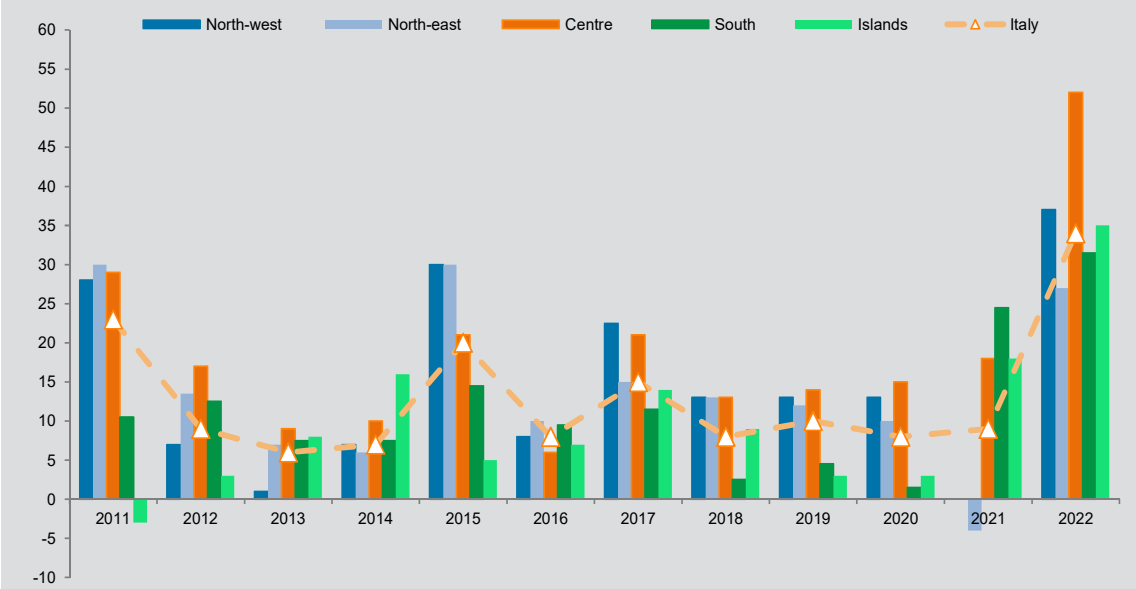


Source: Istat - ISPRA, Accounts and air emissions inventory
(*) 2021 data is provisional

Italy is warmer and with less precipitation

The effects of climate change in terms of temperature and precipitation are increasingly evident. In 2022, the phenomenon, already observed in 2021 is accentuated, with an average of 40 days of intense warm per year (Figure 3).

Figure 3. Warm spell duration index (WSDI): deviations from the climatic median (reference period 1981-2010) by geographic area. Years 2011-2022. Number of days

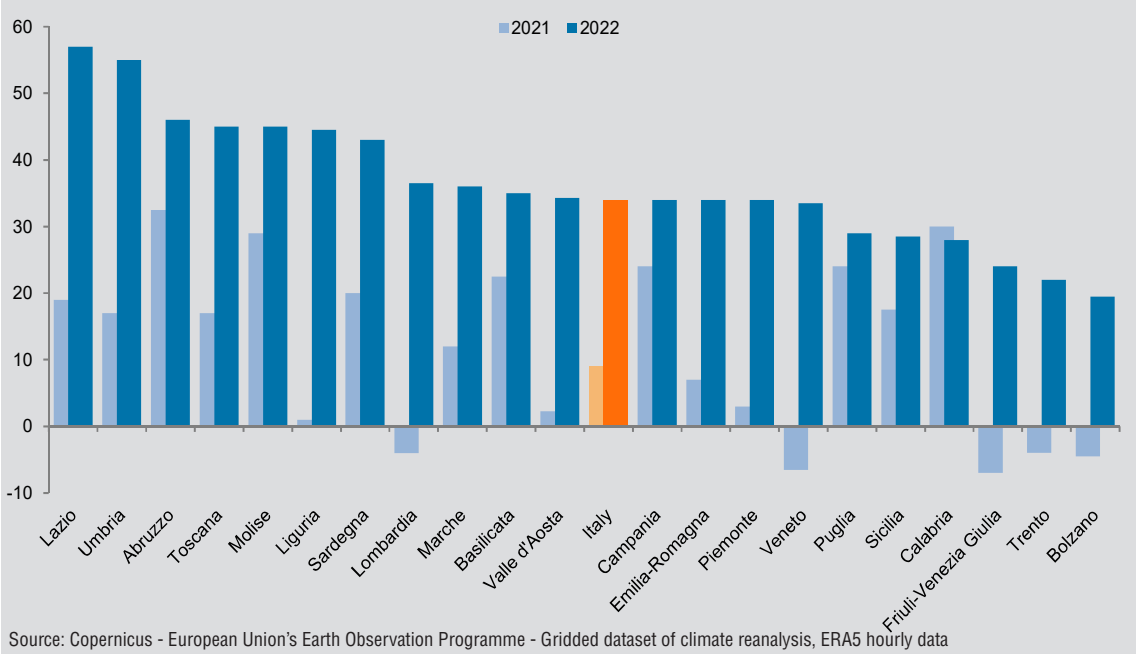


Source: Copernicus - European Union's Earth Observation Programme - Gridded dataset of climate reanalysis, ERA5 hourly data

Periods of prolonged warm are increasing in all regions

In 2022, +34 prolonged warm days were observed compared to the median of the 1981-2010 climate reference period. The intensity of warm days was even more marked in the Centre, with 55 days during the year (+52 compared to the climatic reference period). The increase is spread over the whole Country (Figure 4).

Figure 4. Warm spell duration index: deviations from the climatic median (reference period 1981-2010) by region. Years 2021-2022. Number of days

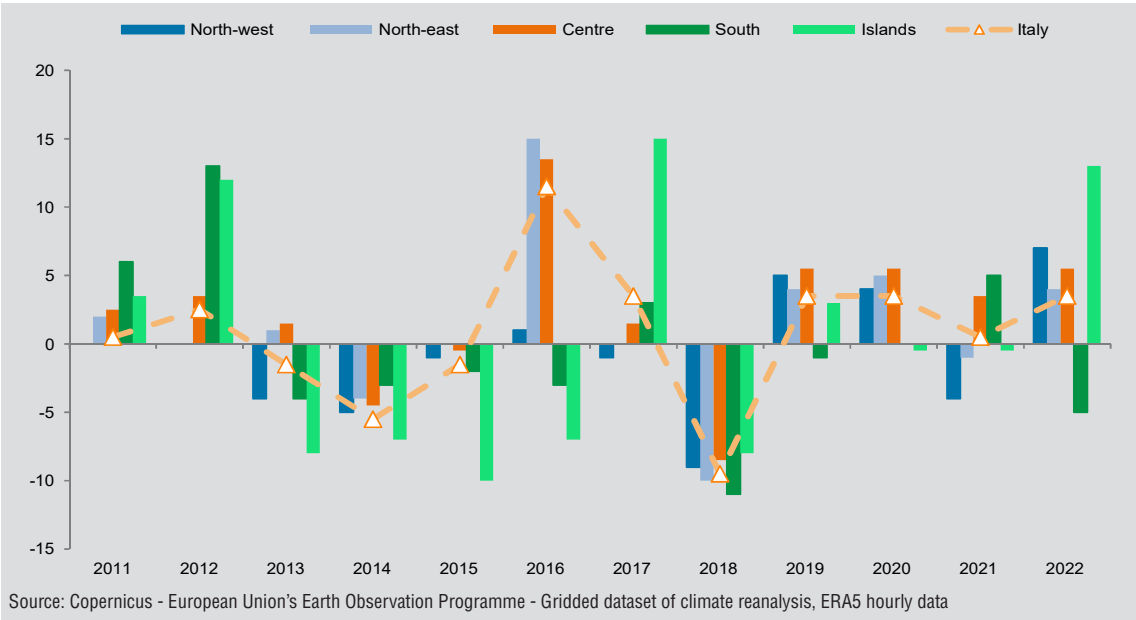


Source: Copernicus - European Union's Earth Observation Programme - Gridded dataset of climate reanalysis, ERA5 hourly data

Increase in consecutive dry days, except in the South

In 2022, the number of consecutive dry days returned to increase (Figure 5), reaching a value of 27 (+4 compared to the median of the climatic period 1981-2010). The increase is more marked in the Islands (+13 compared to the median of the climatic period), in the North-east (+7) and in the Centre (+6).

Figure 5. Index of consecutive dry days: deviations from the climatic median (reference period 1981-2010) by geographic area. Years 2011-2022. Number of days

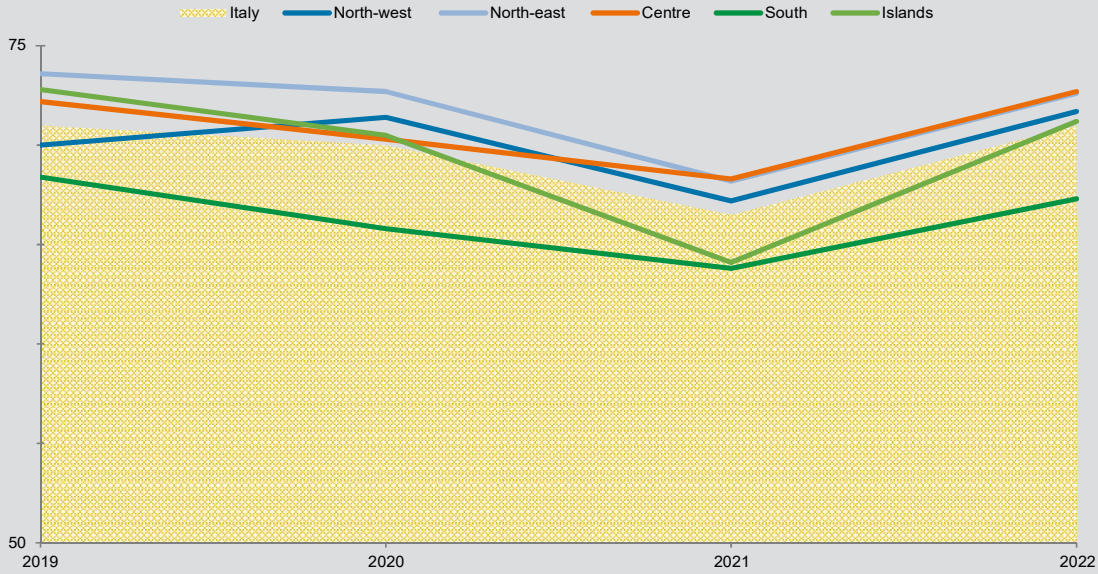


Source: Copernicus - European Union's Earth Observation Programme - Gridded dataset of climate reanalysis, ERA5 hourly data

Concern over climate change and the greenhouse effect rises back to 2019 levels

The effects of climate change and the increase in the greenhouse effect represent one of the environmental problems that people are most concerned about. In 2022, citizens' awareness of this issue is again on the rise, after the drop in attention observed during the pandemic: from 71.0% in 2019, it dropped to 70.0% in 2020 and 66.5% in 2021, while it rose back to 71.0% in 2022 (Figure 6).

Figure 6. Concern about climate change and/or increasing greenhouse effect by geographic area. Years 2019-2022. Per 100 persons aged 14 and over

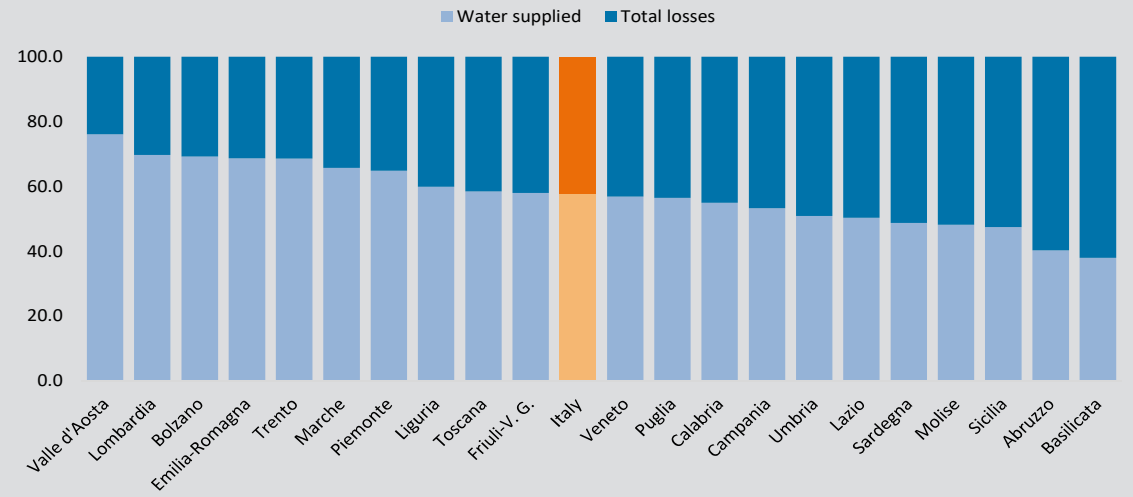


Source: Istat, Survey on Aspects of daily life

Water losses in public supply network are still high

In addition to the water crisis caused by climate change, in some areas of the Country there are also some structural criticalities in water supply infrastructures. In 2020, the percentage of total water losses in distribution stood at 42.2% of the water input into the network, with no substantial change compared to 2018 (42.0%) (Figure 7).

Figure 7. Water supplied for authorised uses and total water losses in public water supply networks by region. Year 2020. Percentage values of water input into the network



Source: Istat, Urban Water Census

1.3 million inhabitants live in municipalities completely without urban sewage treatment service

In 2020, the public urban sewage treatment service was completely missing in 296 municipalities (1.3 million inhabitants), recording an improvement on 2018 (-13% of municipalities, -19% of residents).

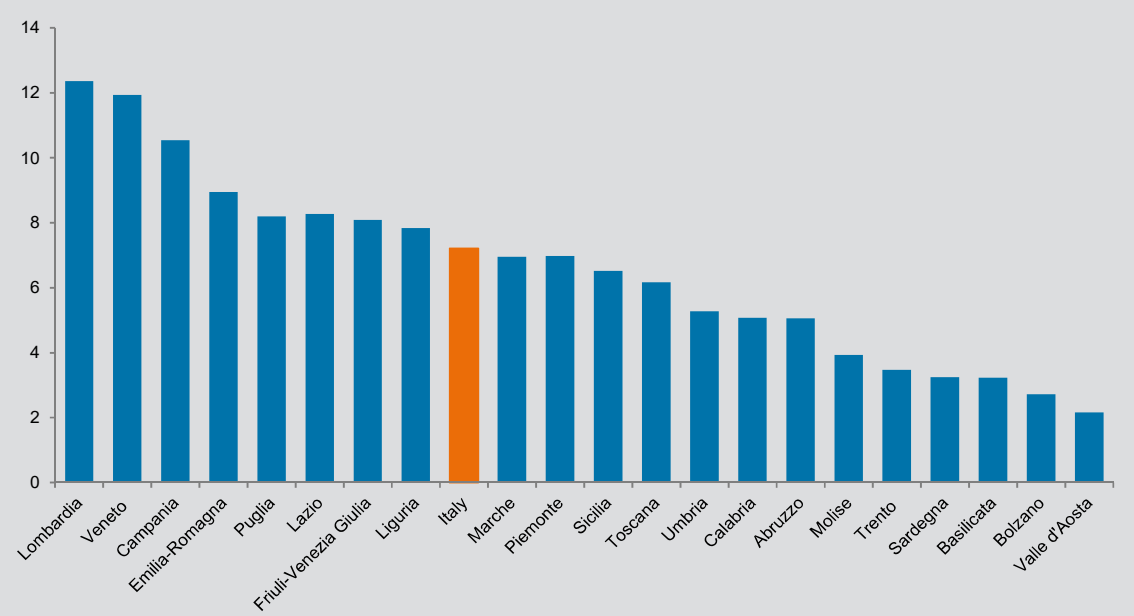
Increasing artificial land cover

In 2021, the increase in impermeable artificial cover causing 'land consumption'[3] is 69.1 km^2 more than in 2020, an average of about 19 ha per day, a worrying acceleration compared to previous years, for a total of 7.13% of land consumed nationally. The increase in artificial areas was only partly compensated by the restoration of additional agricultural, natural or semi-natural areas, amounting to 5.8 km^2. This is still not enough to reach the target of zero net soil consumption[4].
The changes observed last year are mainly concentrated in certain areas of the country: high values are found in Lombardia, Veneto and Campania (Figure 8).
The phenomenon remains very intense along the coasts of Sicilia and southern Puglia and in the metropolitan areas of Roma, Milano, Napoli, Bari and Bologna.

3 Soil consumption is defined as the change from non-artificial land cover (non-consumed soil) to artificial land cover (consumed soil).

4 Net soil consumption is assessed through the balance between soil consumption and the increase of agricultural, natural and semi-natural areas due to reclamation, demolition, removal of sealing, renaturation or other interventions (European Commission, 2012).

Figure 8. Soil sealed by region. Year 2021. Percentage values

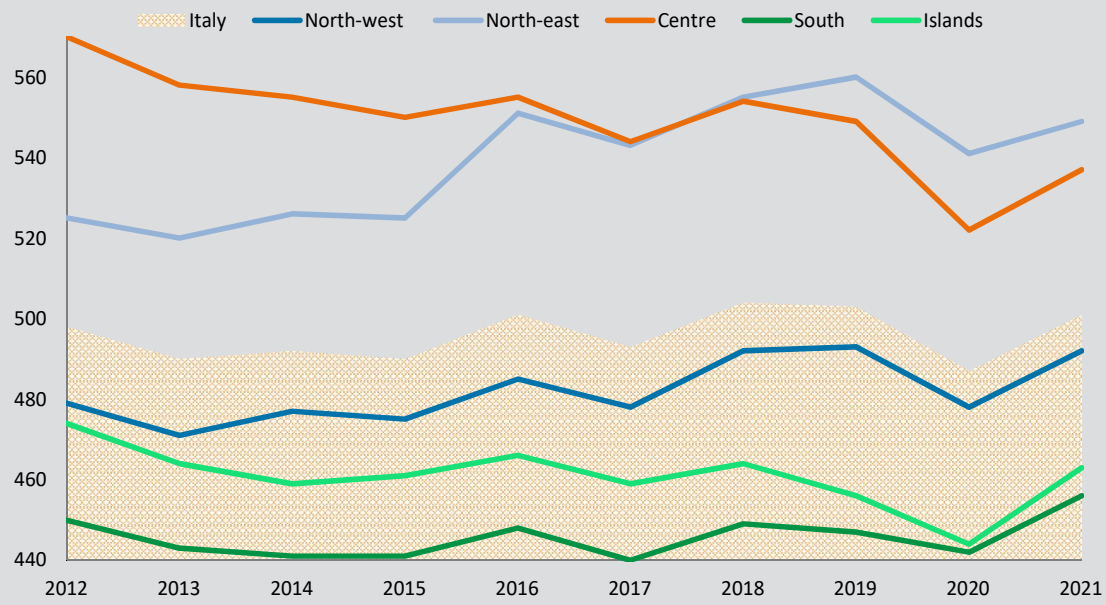


Source: ISPRA - Soil consumption, territorial dynamics and ecosystem services

Annual municipal waste generation returns to 2019 levels

As the economy recovers in 2021, municipal waste production in Italy has returned to increase, being equal to 501 kilograms per inhabitant, recovering almost entirely the decrease recorded with the economic crisis caused by the pandemic (503 kg/inhab. in 2019 and 487 kg/inhabitant in 2020) (Figure 9).
In 2021, the percentage of landfilling of municipal waste, which has a high impact on the environment and human health, continues to decrease to 19.0% (5.6 million tonnes); however, this is still far from the EU target of landfilling a maximum of 10% of municipal waste by 2035. Particularly critical is the unequal territorial distribution of urban waste disposed of in landfills: 1.7 million tonnes in the Centre and 1.4 million tonnes in the Islands. The percentage of urban waste delivered to landfills in the same region of generation did not exceed 90%. To be highlighted is the case of Campania, which exported 100% of its waste to landfills in other regions.

Figure 9. Municipal waste generated by geographic area. Years 2012-2021. Kilograms per inhabitant

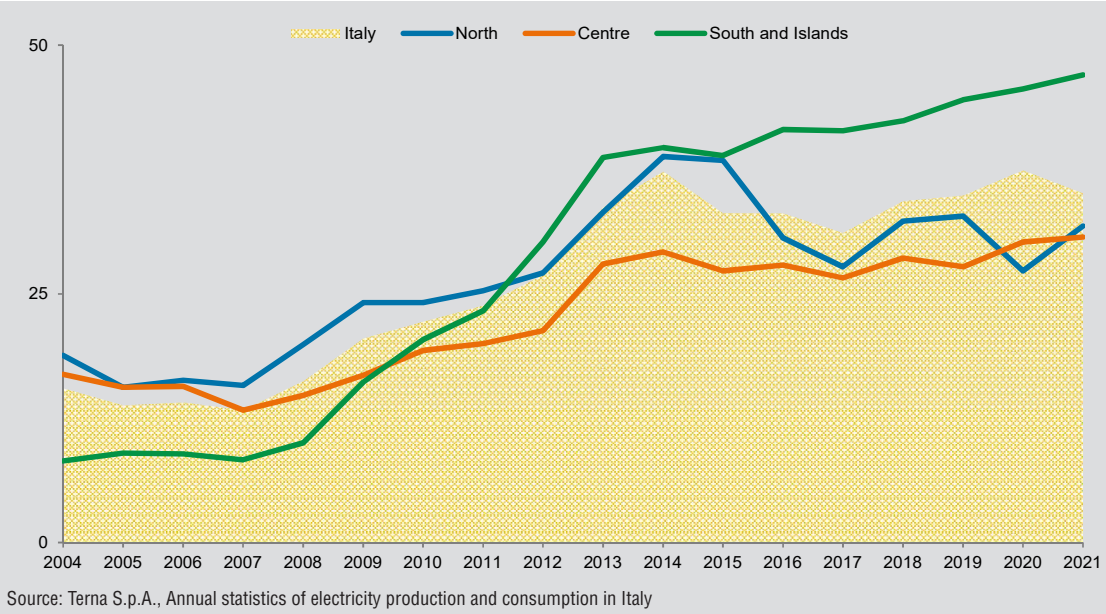


Source: Istat, Processing of data from ISPRA

Reducing the share of renewable energy in 2021

The share of gross domestic consumption of electricity generated from renewable sources has decreased: 35.1% in 2021 (it was 37.4% in 2020). This is due to an increase in the gross domestic consumption of electricity (+6.1%) generated from thermal sources, mainly natural gas, which produce a greater impact on the environment especially in terms of greenhouse gas emissions (Figure 10).

Figure 10. Electricity consumption from renewable energy sources by geographic area. Years 2004-2021. Percentage values on gross domestic electricity consumption



Source: Terna S.p.A., Annual statistics of electricity production and consumption in Italy

Indicators

1. **Air quality - $PM_{2.5}$:** Percentage of valid measurements above the WHO health reference value (10 µg/m³) out of the total number of valid measurements of annual average $PM_{2.5}$ concentrations for all station types (urban and suburban traffic, urban and suburban industrial, urban and suburban background, rural).
   Source: Istat - Processing of data from Ispra
2. **Emissions of CO_2 and other greenhouse gases:** Emissions of CO_2 and other greenhouse gases of the Italian economy expressed in tons of CO_2 equivalent per capita).
   Source: Istat-Ispra - Accounts and air emissions inventory
3. **Warm Spell Duration Index:** Warm spell duration index (WSDI) is defined as annual or seasonal count of days with at least 6 consecutive days when the daily maximum T exceeds the 90th percentile in the calendar 5-day window for the base period 1981-2010.
   Source: Copernicus - European Union's Earth Observation Programme - Gridded dataset of climate reanalysis, ERA5 hourly data
4. **Extreme precipitation events:** Frequency of daily rainfall exceeding 50 mm/day.
   Source: Copernicus - European Union's Earth Observation Programme - Gridded dataset of climate reanalysis, ERA5 hourly data
5. **Consecutive Dry Days:** Maximum number of consecutive dry days per time period with daily precipitation amount of less than 1 mm.
   Source: Copernicus - European Union's Earth Observation Programme - Gridded dataset of climate reanalysis, ERA5 hourly data
6. **Population at risk of landslides:** Percentage of population resident in areas subject to high and very high landslide hazard, identified on the basis of the ISPRA National Mosaicature of the Hydrogeological Planning Plans (PAI) and its updates. The population considered is that of the 2011 Census.
   Source: Ispra - Hydrogeological instability in Italy: hazard and risk indicators
7. **Population at risk of flood:** Percentage of population resident in medium flood hazard zones (Return period 100-200 years; D. Lgs. 49/2010), identified on the basis of the ISPRA National Mosaicature of the Hydrogeological Planning Plans (PAI) and its updates, with reference to risk scenario P2. The population considered is that of the 2011 Census.
   Source: Ispra - Hydrogeological instability in Italy: hazard and risk indicators
8. **Water losses in urban supply system:** Percentage of the total volume of water losses in municipal drinking water supply networks (difference between volumes fed into the network and supplied authorised volumes) on total water input.
   Source: Istat - Urban Water Census
9. **Sewage treatment:** Percentage of polluting loads collected in secondary or advanced plants, in equivalent inhabitants, compared to the total urban loads generated.
   Source: Istat - Urban Water census; Survey on urban environmental data
10. **Protected natural areas:** Percentage share of terrestrial protected natural areas included in Italian Official List of Protected Areas and Natura 2000 Network.
    Source: Istat - Processing of data from Ministry of the Environment and Energy Security
11. **Coastal bathing waters:** Percentage of authorised coastal bathing waters on the total of the coastal line in accordance with the regulations in force.
    Source: Istat - Processing of data from Ministry of Health
12. **Urban green:** Square meters of urban parks and gardens per inhabitants in provincial capital Municipalities.
    Source: Istat - Survey on urban environmental data
13. **Soil sealing from artificial land cover:** Percentage of soil sealed following a change from non-artificial to artificial coverage.
    Source: Ispra - Soil consumption, territorial dynamics and ecosystem services
14. **Domestic material consumption:** Domestic material consumption measures the quantity of matter, other than water and air, used every year by the socio-economic system and released into the environment (incorporated into emissions or effluents) or accumulated in new anthropogenic stocks (both capital goods and other durable goods and waste).
    Source: Istat - Material flow accounts
15. **Municipal waste generated:** Municipal waste generated per capita (in Kg).
    Source: Istat - Processing of data from Ispra
16 **Landfill of urban waste:** Percentage of municipal waste sent to landfill on total municipal waste collected.
    Source: Ispra - Waste statistics
17 **Contaminated sites:** Size of contaminated sites.
    Source: Processing of data from Ministry of the Environment and Energy Security and Ispra
18. **Electricity from renewable sources:** Percentage of energy consumption provided by renewable sources on gross electricity consumption. The indicator is calculated as the ratio between the gross electricity production from RES (actual, non-normalised) and the gross domestic consumption of electricity (e.g. the gross production of electricity, including pumping, plus trade balance).
    Source: Terna S.p.A. - Annual statistics of electricity production and consumption in Italy
19. **Concern for climate change:** Percentage of people aged 14 and over who believe that climate change, greenhouse effect and ozone hole are among the five most important environmental problems.
    Source: Istat - Survey on Aspects of daily life
20. **Satisfaction for the environment:** Percentage of people aged 14 and over very or quite satisfied of the environmental situation (air, water, noise) of the area where they live.
    Source: Istat - Survey on Aspects of daily life
21. **Concern for biodiversity loss:** Percentage of people aged 14 and over who believe that biodiversity loss is among the five most important environmental problems.
    Source: Istat - Survey on Aspects of daily life

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	Air quality - $PM_{2.5}$ (a) 2021	Emissions of CO_2 and other greenhouse gases (b) 2021	Warm Spell Duration Index (c) 2022	Extreme precipitation events (c) 2022	Consecutive Dry Days (c) 2022	Population at risk of landslide (d) 2020	Population at risk of flood (d) 2020	Water losses in urban supply system (e) 2020	Sewage treatment (f) 2015	Protected natural areas (g) 2021
Piemonte	87.5	....	40	0	33	1.9	4.9	35.2	69.7	16.7
Valle d'Aosta/Vallée d'Aoste	75.0	....	41	1	21	12.1	9.1	23.9	66.0	30.3
Liguria	56.7	....	52	0	25	5.9	17.4	40.1	61.2	27.2
Lombardia	97.1	....	43	0	32	0.5	4.4	30.3	62.9	16.1
Trentino-Alto Adige/ Südtirol	100.0	....	27	0	25	2.1	18.0	31.2	78.9	26.4
Bolzano/Bozen	*100.0*	....	*26*	*0*	*20*	*2.3*	*9.8*	*30.8*	*99.7*	*24.5*
Trento	*100.0*	....	*29*	*1*	*27*	*2.0*	*25.9*	*31.4*	*63.6*	*28.7*
Veneto	100.0	....	40	1	36	0.1	11.7	43.2	49.4	22.7
Friuli-Venezia Giulia	88.0	....	31	1	30	0.4	9.9	42.0	50.7	20.1
Emilia-Romagna	87.2	....	34	1	25	2.0	62.5	31.3	67.7	12.1
Toscana	73.5	....	48	0	27	4.2	25.5	41.6	49.5	15.5
Umbria	57.1	....	61	0	27	2.0	7.2	49.1	68.7	17.5
Marche	53.3	....	42	0	22	2.2	5.2	34.3	48.5	18.8
Lazio	66.0	....	63	1	27	1.6	3.2	49.7	67.0	27.9
Abruzzo	81.8	....	46	0	21	5.6	7.2	59.8	63.9	36.6
Molise	50.0	....	45	0	21	6.1	2.3	51.8	58.0	26.4
Campania	79.4	....	40	2	21	5.0	5.1	46.8	60.5	35.3
Puglia	69.2	....	29	0	22	1.4	3.4	43.6	68.3	24.5
Basilicata	8.3	....	41	1	21	7.0	1.1	62.1	67.2	23.1
Calabria	50.0	....	34	0	22	3.3	12.8	45.1	46.0	26.6
Sicilia	66.0	....	35	0	46	1.8	2.6	52.5	43.9	20.3
Sardegna	6.1	....	43	0	74	1.3	7.5	51.3	58.8	19.9
North	88.4	....	37	1	27	1.3	16.6	32.5	62.4	18.8
North-west	92.2	....	43	0	29	1.5	5.9	32.5	64.6	18.2
North-east	85.2	....	33	1	26	1.0	31.4	37.8	59.6	19.4
Centre	65.0	....	55	0	27	2.5	10.8	46.1	58.5	20.0
South and Islands	55.6	....	38	0	27	3.2	5.1	49.6	56.7	25.2
South	63.9	....	38	0	21	3.9	5.6	48.4	60.9	28.7
Islands	42.2	....	38	0	57	1.7	3.8	52.2	47.8	20.1
Italy	**71.7**	**7.0**	**40**	**0**	**27**	**2.2**	**11.5**	**42.2**	**59.6**	**21.7**

(a) Percentage of valid measurements above the WHO defined reference value (10 µg/m³) of total valid measurements of annual average concentrations of $PM_{2.5}$;
(b) Tonnes of CO_2 equivalent per capita;
(c) Number of days;
(d) Percentage on total population;
(e) Percentage of water input into the network;
(f) Percentage of the urban pollution loads generated;
(g) Percentage of land area;
(h) Percentage of authorised bathing waters on the total of the coastline;
(i) Square meters per capita;

Costal bathing waters (h)	Urban green (i)	Soil sealing from artificial land cover (l)	Domestic material consumption (m)	Municipal waste generated (n)	Landfill of urban waste (o)	Contaminated sites (p)	Electricity from renewable sources (q)	Concern for climate change (r)	Satisfaction for the environment (r)	Concern for biodiversity loss (r)
2019	2021	2021	2020	2021	2021	2020	2021	2022	2022	2022
....	26.7	7.0	....	500	12.2	42.7	36.9	71.9	71.6	25.4
....	19.3	2.2	....	600	38.2	0.7	255.1	71.4	83.5	24.7
57.4	18.5	7.8	....	543	39.6	5.1	7.3	71.0	76.0	24.4
....	28.0	12.4	....	480	3.6	8.2	24.4	71.7	69.1	25.8
....	319.2	3.1	....	505	10.1	0.4	144.7	69.6	86.7	24.3
....	*225.8*	*2.7*	....	*484*	*1.4*	*0.3*	*192.7*	*66.7*	*85.4*	*27.1*
....	*403.6*	*3.5*	....	*525*	*18.1*	*0.6*	*103.3*	*72.5*	*87.9*	*21.6*
64.2	33.8	11.9	....	487	16.1	1.7	26.5	75.9	75.6	24.8
42.2	65.4	8.1	....	501	5.2	18.4	31.5	71.5	83.5	25.7
61.7	45.0	9.0	....	641	7.5	1.7	20.5	69.8	74.5	24.3
71.3	24.5	6.2	....	598	35.2	5.1	41.3	73.4	77.7	25.2
....	100.3	5.3	....	517	33.6	0.8	42.6	71.3	79.7	23.6
73.2	29.8	7.0	....	526	50.1	0.2	25.8	72.8	77.2	24.2
69.5	21.9	8.3	....	504	13.7	4.2	16.0	72.4	67.7	25.7
75.5	29.1	5.1	....	459	27.5	0.6	45.9	71.8	74.2	23.8
71.9	317.3	3.9	....	383	90.4	0.3	85.1	68.9	80.2	21.9
70.0	15.5	10.5	....	472	0.0	5.8	33.0	68.7	58.6	21.5
74.7	9.7	8.2	....	475	28.1	6.5	55.3	66.4	67.0	18.3
90.8	92.6	3.2	....	356	44.0	4.0	111.5	67.9	73.3	19.5
85.3	33.3	5.1	....	408	27.6	0.7	77.7	62.0	66.9	21.7
50.8	15.4	6.5	....	460	51.5	3.2	28.0	71.3	64.6	20.7
64.9	35.8	3.4	....	470	27.9	12.4	39.0	71.0	74.0	28.6
56.9	41.7	8.6	....	516	10.4	12.7	31.8	72.1	73.2	25.2
57.4	25.9	8.7	....	492	10.1	22.6	....	71.7	70.5	25.5
56.5	63.2	8.4	....	549	10.7	3.5	....	72.6	77.0	24.7
71.1	27.4	6.8	....	537	27.2	3.4	30.7	72.7	72.9	25.2
65.8	23.8	5.9	....	458	26.7	5.2	47.0	68.6	65.5	21.4
77.0	26.5	6.6	....	456	17.5	3.6	....	67.3	64.7	20.7
58.5	19.3	5.0	....	463	45.6	7.6	....	71.2	66.9	22.7
65.5	**32.5**	**7.2**	**458.7**	**501**	**19.0**	**7.9**	**35.1**	**71.0**	**70.6**	**23.9**

(l) Percentage of land area;
(m) Milions tonnes;
(n) Kilograms per capita;
(o) Percentage of total municipal waste collected;
(p) Land area affected, values per 1,000;
(q) Percentage of total internal consumption;
(r) Per 100 persons aged 14 years and over;

11. Innovation, research and creativity[1]

Throughout the 2010-2019 decade, the indicators of the domain showed a steady and slow improvement. Nevertheless, results generally remained well below the European average and the levels of the main benchmark EU countries, underlining Italy's delay and weaknesses in the transition to a knowledge-based economy.
By the way, almost all Italian measures of the Innovation, research and creativity domain exhibited better results in 2019 than in the baseline year (Table 1).
The pandemic crisis had a strong negative impact on research intensity, innovation in enterprises and cultural and creative employment, and halted the growth of knowledge workers. In 2020-2021, the indicators related to research intensity (as a percent of GDP) and knowledge workers (as a percentage of employment) seemed to grow in Italy, but these changes are entirely due to the reduction of GDP and general employment rate.
Over 2021-2022, in the context of the general employment recovery, the human capital indicators followed different paths. The first and second years of the pandemic hit hard cultural and creative employment; in 2022 the indicator shows an improvement even though without a full recovery. Instead, the weight of knowledge workers on total workers remains broadly stable, as the employment recovery in 2021 and 2022 is more concentrated in other occupations and sectors of activity.
The outward flows of young Italians with a tertiary degree do not stop, but in 2021, for the first time after at least a decade, a reduction of net losses is recorded, as repatriations increase and expatriations decrease.

Table 1. Innovation, research and creativity indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
R&D intensity (%) (a)	2010	2020	1.5	Better	Better	-	-
Patent propensity (per millions of inhabit.)	2010	2019	80.7	Better	-	-	-
Gross fixed capital formation of intellectual property products (%)	2010	2022	120.0	Better	Better	Better	Better
Innovation rate of the national productive system (%) (a) (b)	2010	2020	50.9	Better	Worse	-	-
Impact of knowledge workers on employment (%)	2018	2022	17.8	Better	Better	Worse	Stable
Cultural employment (% of total employment)	2018	2022	3.5	Stable	Worse	Better	Worse
Brain circulation (Italians, 25-39 years old) (Per 1,000 resident graduates)	2019	2021	-2.7	-	Better	-	-
Regular internet users (%)	2010	2022	75.6	Better	Better	Better	Better
Availability of at least one computer and Internet connection in the household (%)	2010	2022	68.2	Better	Better	Worse	Better
Municipalities with online services for families (%)	2012	2018	25.1	Better	-	-	-
Enterprises with at least 10 persons employed with web sales to end customers (%)	2013	2022	13.3	Better	Better	Worse	Better

Better Worse Stable - Not available

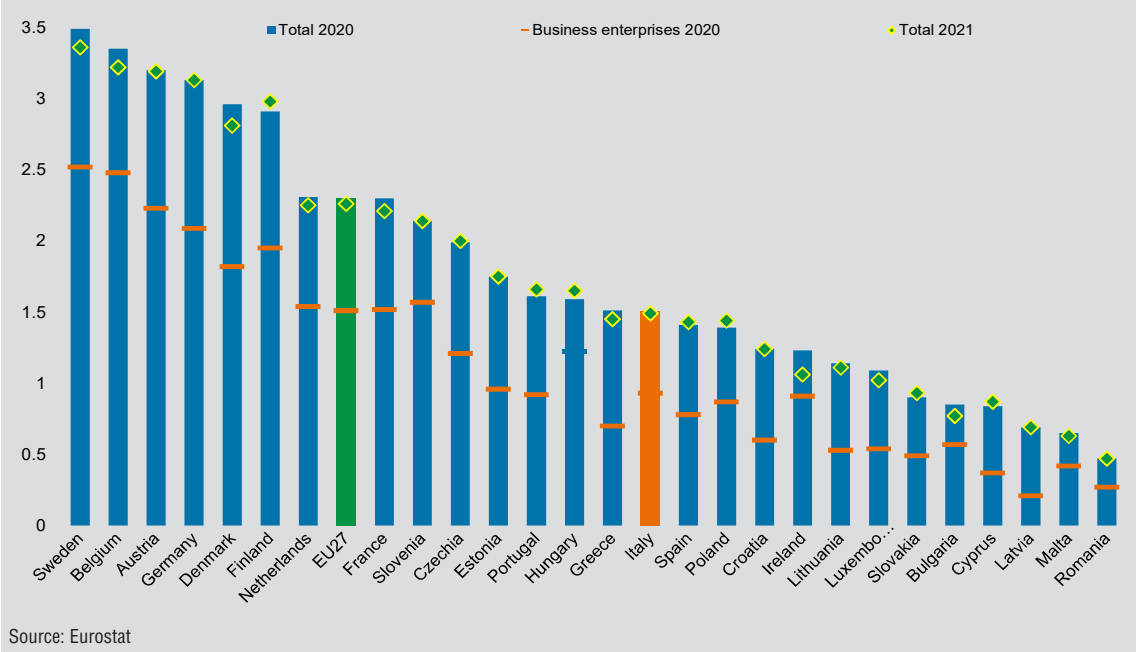
(a) Year 2021 not available. Changes referred to the year 2020.
(b) Year 2019 not available. Changes referred to the year 2018.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

1 This chapter was edited by Stefania Taralli, with contributions from Laura Iannucci, Francesca Licari, Valeria Mastrostefano, Alessandra Nurra and Laura Zannella. Alessandra Nurra, Stefania Taralli and Laura Zannella collaborated in realising the box "Citizens and businesses in the digital transition".

R&D recovery is expected in 2021 after the spending fall in 2020

In 2020, Italy's research intensity (percentage of R&D expenditure on GDP) stands at 1.51% (the EU27 average is equal to 2.3%). Italian research intensity seems to be growing in the first pandemic year (it was 1.46% in 2019) but the change is all due to the fall in GDP that was greater than that in R&D expenditure (-4.7%). The fall in Italian R&D expenditure is mainly due to businesses (-6.8%), which in 2020 contributed 61.8% of total R&D expenditure (65.8% the EU27 figure).
Preliminary data for 2021 indicate an important recovery in R&D spending by Italian companies (+5.2% compared to 2020) (Figure 1).

Figure 1. Total expenditure on research and development in Italy and in the European Union countries. Years 2020 and 2021. Values as a percentage of GDP

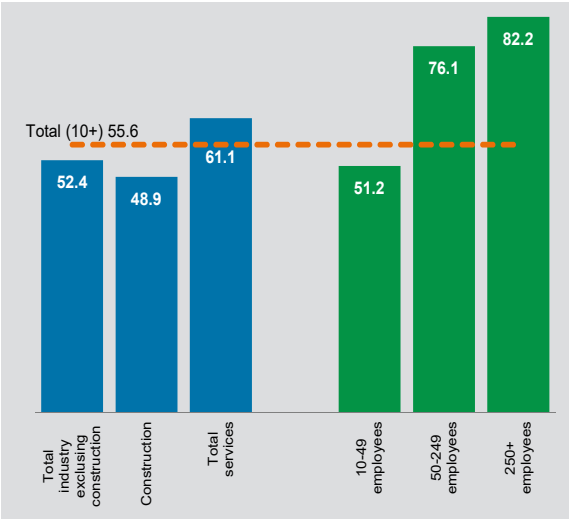


Source: Eurostat

Sharp decline in innovation in business enterprises. Industrial and small businesses the hardest hit

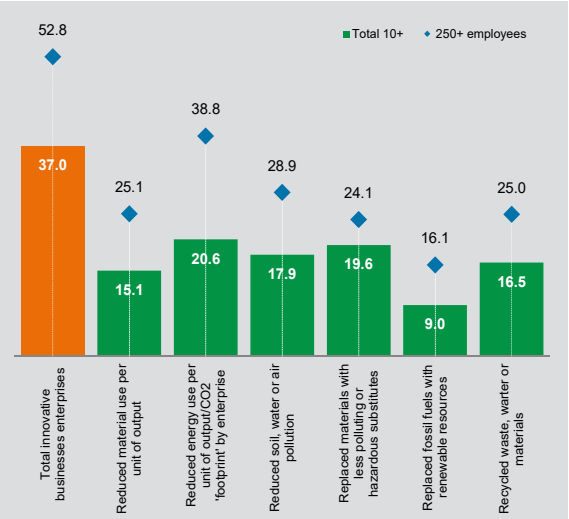
In the three-year period 2018-2020, only 50.9% of industrial and service companies with 10 or more employees carried out innovative activities; this share is in sharp decline compared to 2016-2018 (about -5 percentage points). The fall is largely due to the health emergency, as declared by almost two out of three companies with innovative activities.
In 2020, more than half (55.6%) of companies with innovative activities introduced smart working for the first time; 37.0% of innovative companies chose eco-friendly ways of innovating production processes (Figure 2; Figure 3).

Figure 2. Business enterprises with innovation activities that first introduced smart working by economic activity and size class of persons employed. Year 2020. Percentage on total business enterprises



Source: Istat, Cis (Community Innovation Survey)

Figure 3. Business enterprises that introduced product or process innovations by choosing environmentally sustainable ways in their production processes. Year 2020. Percentage on business enterprises that introduced product or process innovations

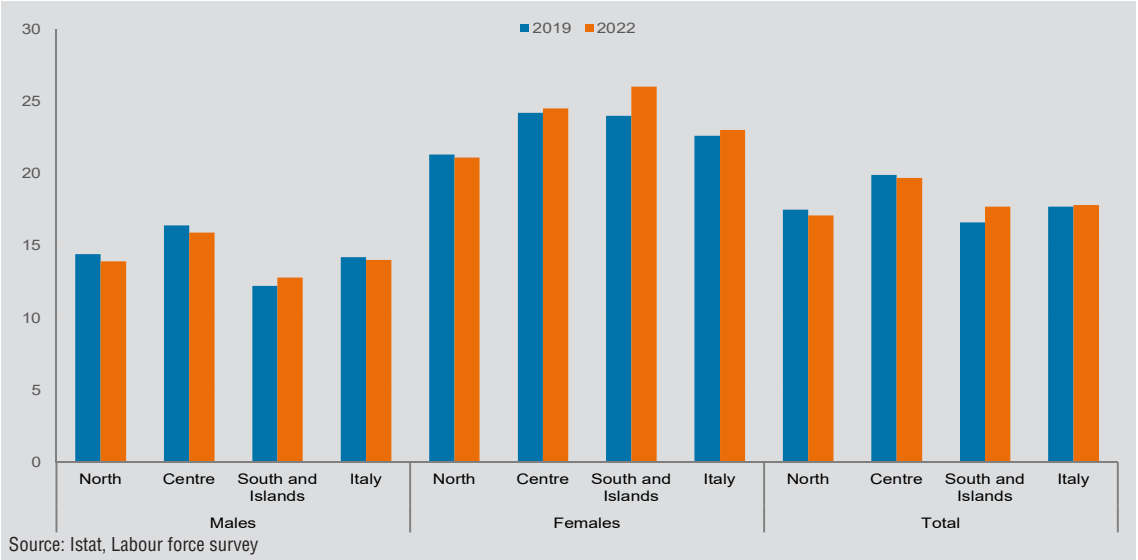


Source: Istat, Cis (Community Innovation Survey)

General employment recovery pulls knowledge workers and cultural employment in Southern Italy

In 2022, the share of knowledge workers comes back at its pre-pandemic level (17.8%), with a slight decrease in the last year (-0.4 percentage points).
In recent years, this indicator has accentuated its strong gender and regional features: it reaches the highest levels ever for women living in Southern Italy (26.0%) and at the national level it marks a 9 percentage points gap in favour of women (23.0% against 14.0% for men) (Figure 4).

Figure 4. Employees with tertiary education (ISCED 6-7-8) in scientific-technological occupations (ISCO 2-3) by sex and geographic area. Years 2019 and 2022. Values per 100 employees with the same characteristics



Source: Istat, Labour force survey

In 2022, cultural and creative employment is 3.5% of total employment.
This result indicates the full recovery for women (3.8%) who double their advantage over men (the gap is 0.5 percentage points; it was 0.2 in 2019).
The plus of the North over the South and Islands remains large (1.2 percentage points), but in southern Italy the cultural and creative employment had a quite lively dynamic in last years (+16.2% compared to 2021 and +4% compared to 2019), with accentuated growth in a picture of lower overall employment growth (+2.9% in the last year; +1.0% from 2019).

Brain circulation of young Italians declines

In 2021, for the first time in the decade, the loss of young Italian graduates (25-39 years old) due to migration flows gets smaller. The net migration rate to foreign countries of young Italians with a tertiary degree is still negative (-2.7 per 1,000) with greater losses in the North-east (-3.1 per thousand) and in the South and Islands (-2.8; -3.2).
Including the intra-Italian transfers of young graduates, the overall balance is positive, indicating a gain for the North and the Centre (+8.7 per thousand; +3.4), where the transfers from the Italian southern regions offset the losses to foreign countries. South an Islands in 2021 record a net loss of over 20 thousand young graduates (18 thousand of which migrated to central and northern Italy) (Figure 5).

Figure 5. Net migration rate of Italian graduates (aged 25-39 years) by origin/destination and geographic area. Years 2019, 2020, 2021. Values per 1,000 residents with the same characteristics

Source: Istat, Registrations and cancellations from the registry for residence transfer and Permanent census of population.

Age-related digital divides remain wide

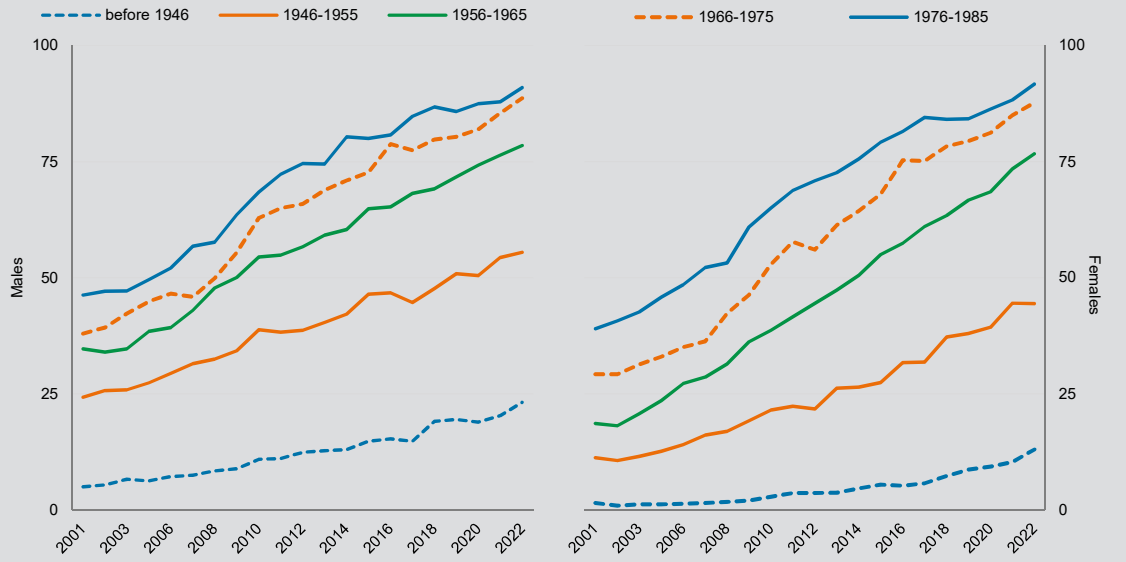
Regular Internet use is still growing in Italy (people aged 11 and over), but regional inequalities remain strong.
The Italian figure stands at 75.6% in 2022 (over 40 million people), with the North 8 percentage point higher than the South (78.6%; 70.6%).
The indicator is also increasing for the elderly, but they remain behind; regular Internet use is at 54.2% among people aged 65-74 and at 19.2% among people aged 75 and over. The gender gap is unchanged (on average men are 6 percentage points higher than women), but it's all concentrated in the over 60s age-group (Figure 6).

Figure 6. People aged 11 and over who used the Internet at least once a week in the 3 months prior to the interview. Years 2019-2022. Percentages

Source: Istat, Survey on the use of ICT in the Households and by individuals

Broadening the time series analysis to the last 21 years, a convergence on high levels of Internet use is clearly seen among the younger generations of digital immigrants (those born after 1955) and a growing gap with the two older age-groups, who remain even further behind. Both trends are more accentuated for women (Figure 7).

Figure 7. People aged 11 and over who used the Internet at least once a week in the 3 months prior to the interview by sex and cohort of birth (non-digital natives). Years 2001-2022. Percentages

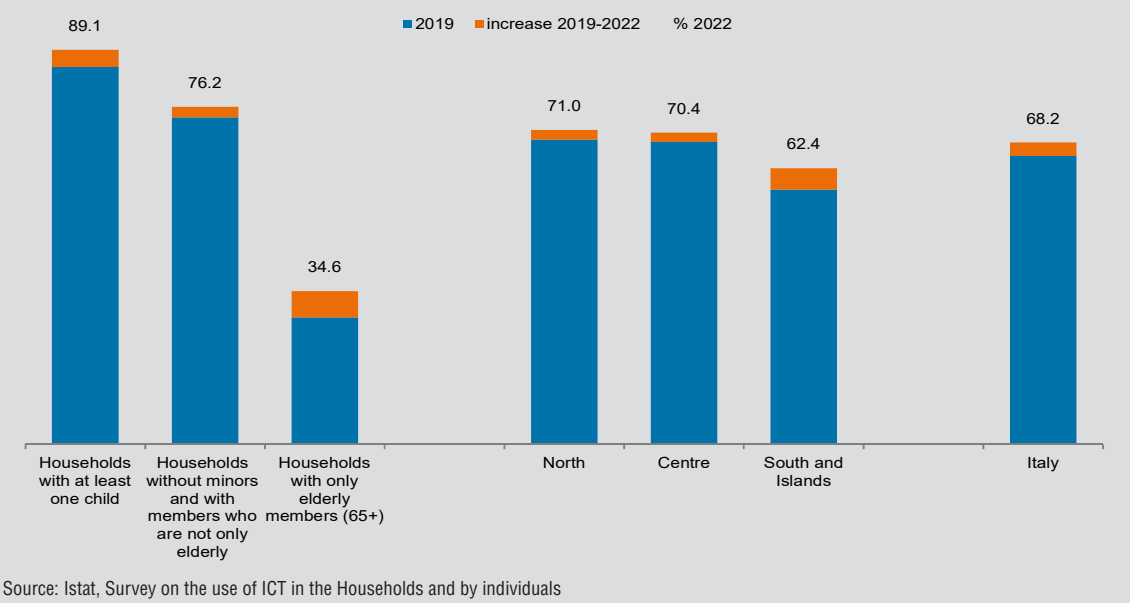


Source: Istat, Survey on the use of ICT in the Households and by individuals

Regional gap in households' access to the Internet narrows but is still wide

In 2022, 68.2% of Italian households have a PC and Internet connection at home (+3.1 percentage points compared to 2019).
When breaking down by household type or geographic area digital divides are wide: the indicator drops to 34.6% among elderly-only households; in southern Italy, one family in three remains excluded (62.4% have both PC and connection), and the figure is 8.6 percentage points lower than the North (Figure 8).

Figure 8. Households with Internet connection and at least one personal computer by family type and geographic area. Years 2019 and 2022

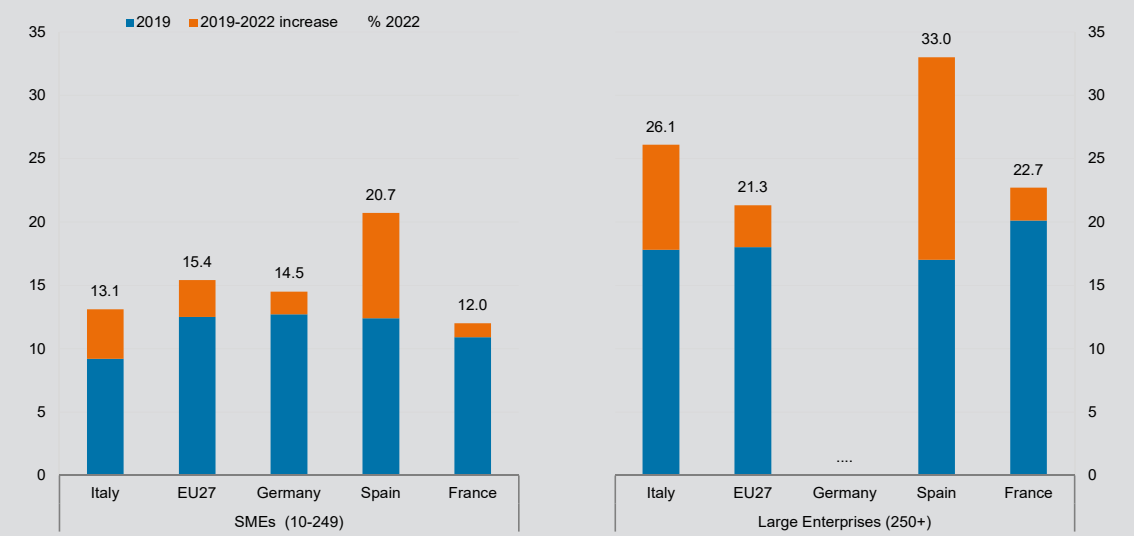


Source: Istat, Survey on the use of ICT in the Households and by individuals

E-commerce share of total sales grows in 2022

In 2022 (sales year 2021), 13.3% of Italian companies with at least 10 employees sold their goods and services to end consumers via the web. The Italian figure is about 2 percentage points lower than the European one (15.6%).
The indicator is increasing (+3.9 percentage points from 2019) but the growth is weaker for Italian SMEs (10-249 employees), which lag behind the EU27 average (13.1% and 15.4% respectively).
Conversely, in 2022 larger Italian companies (250 employees and over) surpassed their European counterparts by rising to 26.1% (the European figure is 21.3%) (Figure 9).

Figure 9. Enterprises with 10 or more persons employed that during the previous year sold via web to end customers (B2C) by size classes of persons employed. Italy and European countries. Years 2019 and 2022. Percentages

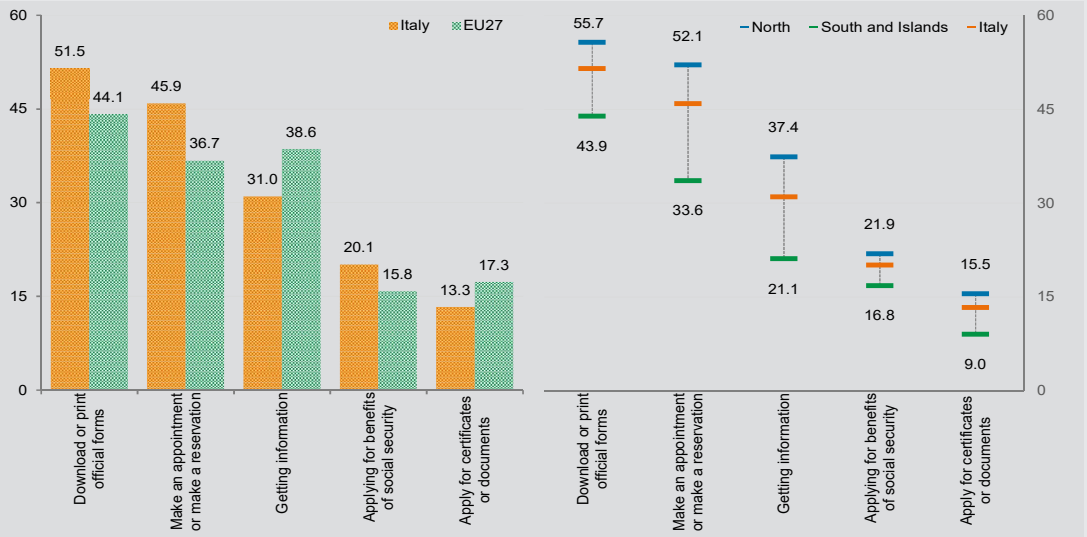


Source: Eurostat - Survey on information and communication technology in enterprises

CITIZENS AND BUSINESSES IN THE DIGITAL TRANSITION

Indicators related to the use of e-government services, show that Italy is rapidly approaching the EU27 average, and in many cases has exceeded it.
In 2022, 31,0 percent of Italian Internet users (16-74 years old) acquired information through the websites or the apps of Italian public administrations or public services providers (the EU27 average is 38.6 percent). A 51.5 percent of Internet users downloaded or printed official forms (44.1 percent the EU27 average); 45.9 percent scheduled on Internet an appointment or reservation to some public office (36.7 percent the EU27 average); 20.1 percent applied online for social security benefits (15.8 percent the EU27 average) (Figure A).

Figure A. People (16-74 years) who used government websites or apps in the past 12 months in Italy and the EU27 by type of online activity. Year 2022. Percentage values

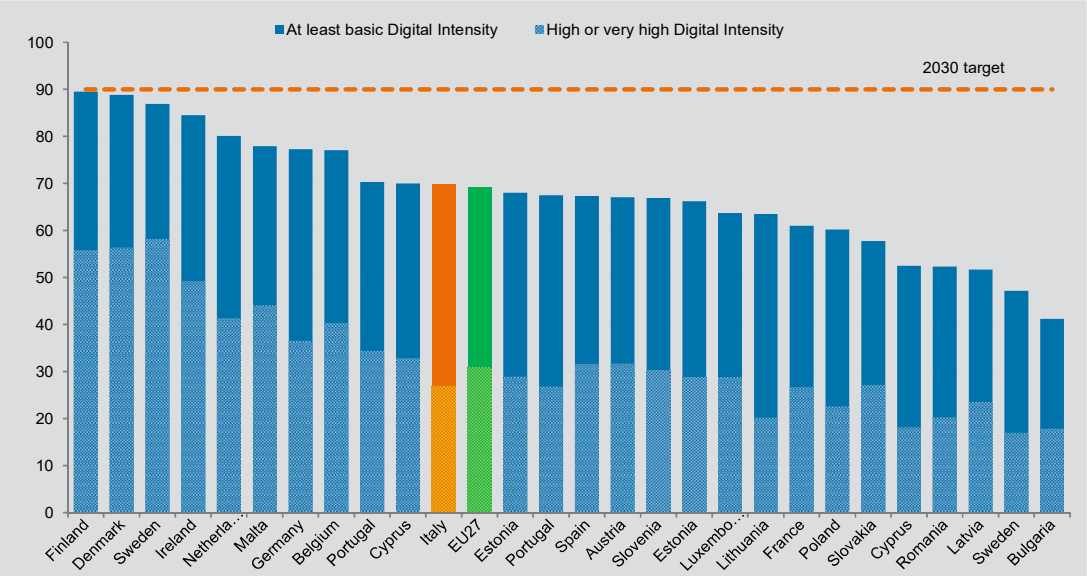


Source: Istat, Survey on the use of ICT in the Households and by individuals

Concerning the digital transition of enterprises with 10 employees and over, Italian indicators report contrasting results.
The growth rate of online sales is rather slow, but other measures show a greater push for digital transition. Examples include the availability of connectivity at speeds of at least 30 Mbit/s fixed broadband (from 37.4 percent in 2018 to 82.8 percent in 2022), the use of cloud services (from 22.5 percent to 60.5 percent), and electronic invoicing (from 41.6 percent to 94.9 percent).
Growth rates are much lower for online sales (18.3% in 2022; +4 percentage points from 2018) and web sales (15.5% in 2022; +3.4 percentage points).
One target of the Digital Compass is to achieve by 2023 the 90 percent of European small and medium-sized enterprises (SMEs) with at least a "basic level of digital intensity" (at least 4 out of the 12 items of the Digital Intensity Index - DII). From 2018 to 2022, the growth of the Digital Intensity Index took Italian SMEs from 20th to 11th position in the European ranking, bringing Italy (69.9 percent) just above the European average.

This good result, however, in 2022 is offset by the retreat from the EU27 average of the Italian SMEs at “high or very high digital intensity” (at least 7 out of 12 DII items). The Italian figure in 2022 (26.8 percent) is 4 percentage points lower than the EU27 one (30.8

Figure B. Small and medium-sized enterprises (10-249 employees) with at least basic digital intensity in Italy and European countries. Year 2022. Percentage values



Source: Eurostat

percent) (Figure B).

Indicators

1. **R&D intensity:** Percentage of expenditure for intramural research and development activities performed by business enterprise, government, higher education (public and private) and non-profit sector on GDP. Expenditure and GDP are considered in current prices, million euro.
   Source: Istat - R&D survey in companies; R&D survey in non-profit organizations; Survey on R&D in public bodies
2. **Patent propensity:** Number of patent applications filed to the European Patent Office (EPO) per million of inhabitants.
   Source: OCSE, Database Regpat
3. **Gross fixed capital formation of intellectual property products:** Research and development; mineral exploration and evaluation; entertaiment literary or artistic originals; computer software and database. Chained values, Indexed 2015 = 100.
   Source: Istat - National Accounts
4. **Innovation rate of the national productive system:** Percentage of firms that have introduced product or process innovation in a three-year period on total number of firms with at least 10 persons employed.
   Source: Istat, Cis (Community Innovation Survey)
5. **Impact of knowledge workers on employment:** Percentage of employees with tertiary education (ISCED 6-7-8) in scientific-technological occupations (ISCO 2-3) on total employees.
   Source: Istat - Labour force survey
6. **Cultural employment (% of total employment):** Percentage of employees in cultural and creative professions or sectors of activity (ISCO-08, Nace rev.2) out of the total number of employees (15 years and over).
   Source: Istat - Labour force survey
7. **Brain circulation (Italians, 25-39 years old):** Net migration rate of holders of a tertiary degree: (immigrants-emigrants) / total resident population * 1,000. Both numerator and denominator refer to Italian holders of a tertiary degree, 25-39 years old.
   Source: Istat - Registrations and cancellations from the registry for residence transfer and Permanent census of population
8. **Regular Internet users:** Percentage of individuals aged 11 and over who used the Internet at least once a week in the 3 months prior to the interview.
   Source: Istat - Survey on the use of ICT in the Households and by individuals
9. **Availability of at least one computer and Internet connection in the household:** Percentage of households with Internet connection and at least one personal computer (including desktop computers, laptops, notebooks, tablets; excluding smartphones, PDAs with phone functions, e-book readers and game consoles).
   Source: Istat - Survey on the use of ICT in the Households and by individuals
10. **Municipalities with online services for families:** Percentage of Municipalities that provide on line at least one service for families or individuals at a level that allows the electronic start and conclusion of the entire process (including any on line payment).
    Source: Istat - Survey on information and communication technology in public administrations
11. **Enterprises with at least 10 persons employed with web sales to end customers:** Percentage of enterprises with 10 or more persons employed that during the previous year sold via web to end customers (B2C). From the survey year 2021 economic activities from division 10 to 82 are included according to Ateco 2007 nomenclature (excluding section K - Financial and insurance activities). From the same survey year, estimates refer to the unit of analysis “enterprise”, i.e. a statistical unit that may consist of one or more legal units.
    Source: Istat - Survey on information and communication technology in enterprises

Indicators by region and geographic area

REGIONS GEOGRAPHIC AREAS	R&D intensity (a)	Patent propensity (b)	Intellectual property products (e)	Innovation rate of the national productive system (d)	Impact of knowledge workers on employment (c)
	2020	2019	2022	2020	2022
Piemonte	2.33	112.6	....	58.3	16.4
Valle d'Aosta/Vallée d'Aoste	0.58	31.8	....	35.3	14.0
Liguria	1.56	50.5	....	54.8	18.4
Lombardia	1.36	142.7	....	46.5	17.8
Trentino-Alto Adige/Südtirol	1.21	114.9	....	46.7	14.8
Bolzano/Bozen	*0.90*	*124.5*	....	*45.3*	*13.5*
Trento	*1.58*	*105.6*	....	*48.6*	*16.2*
Veneto	1.38	134.5	....	52.3	15.6
Friuli-Venezia Giulia	1.74	114.4	....	52.2	15.8
Emilia-Romagna	2.11	197.0	....	52.0	18.3
Toscana	1.66	87.0	....	43.6	16.7
Umbria	1.06	38.9	....	51.6	16.8
Marche	1.03	73.4	....	59.0	16.4
Lazio	1.98	35.9	....	46.6	23.2
Abruzzo	1.03	41.9	....	51.9	17.9
Molise	1.04	28.3	....	34.2	18.9
Campania	1.34	18.2	....	48.3	19.2
Puglia	0.85	14.4	....	48.2	16.4
Basilicata	0.68	6.3	....	44.8	16.3
Calabria	0.61	12.0	....	47.8	17.1
Sicilia	0.90	12.5	....	40.0	17.7
Sardegna	0.91	10.6	....	40.1	16.8
North	1.63	137.4	....	53.5	17.1
North-west	1.59	124.9	....	55.0	17.5
North-east	1.68	154.6	....	51.6	16.6
Centre	1.72	56.9	....	47.9	19.7
South and Islands	1.00	16.2	....	46.1	17.7
South	1.04	12.0	....	48.2	17.8
Islands	0.90	18.2	....	40.0	17.4
Italy	**1.51**	**80.7**	**120.0**	**50.9**	**17.8**

(a) Percentage of R&D expenditure on GDP;
(b) Per million of inhabitants;
(c) Per 100 in employment;
(d) Per 100 enterprises with at least 10 employees;
(e) Chain-linked values with reference year 2015;
(f) Per 1,000 inhabitants aged 25-39 with tertiary education (bachelor's degrees, AFAM, PhD);
(g) Per 100 persons aged 11 and over;
(h) Per 100 households;
(i) Per 100 Municipalities.

	Cultural employment (c)	Brain circulation (Italians, 25-39 years old) (f)	Regular internet users (g)	Availability of at least one computer and Internet connection in the household (h)	Municipalities with online services for families (i)	Enterprises with web sales to end customers (c)
	2022	2021	2022	2022	2018	2022
	3.5	0.4	75.4	67.9	15.0	11.7
	2.9	-9.2	75.3	67.5	21.6	19.7
	2.9	0.7	76.4	66.2	13.2	6.2
	4.1	14.6	80.1	72.9	41.3	12.4
	3.7	3.1	81.5	77.5	17.1	20.8
	3.6	*1.9*	*80.7*	*76.2*	*22.5*	*24.8*
	3.9	*3.9*	*82.2*	*78.8*	*13.6*	*15.0*
	4.0	-0.5	78.7	73.3	43.4	11.2
	2.9	-0.6	78.5	71.6	20.0	12.8
	2.9	17.8	78.7	68.0	45.6	11.4
	4.6	3.9	76.4	68.9	39.1	11.8
	3.8	-7.0	75.4	66.9	28.3	15.8
	3.5	-7.4	76.0	71.4	17.5	9.1
	4.8	7.3	77.9	71.7	20.9	16.7
	2.3	-12.9	73.4	67.2	12.5	13.8
	1.9	-30.0	73.7	64.7	5.9	12.5
	2.8	-22.2	71.8	65.3	18.5	18.6
	2.5	-21.8	70.3	60.3	25.2	11.1
	2.4	-37.0	70.3	58.3	15.3	13.9
	2.0	-32.9	64.5	56.9	8.7	11.0
	2.5	-23.5	70.6	60.6	12.3	20.1
	2.3	-11.8	72.1	67.3	21.8	18.2
	3.7	8.7	78.6	71.0	30.4	12.1
	3.8	13.7	78.4	70.8	28.2	11.9
	3.4	5.1	78.9	71.4	34.9	12.4
	4.5	3.4	77	70.4	25.9	13.7
	2.5	-22.7	70.6	62.4	15.6	16.1
	2.5	-57.0	70.5	62.5	15.0	14.8
	2.4	-8.6	71	62.3	16.9	19.6
	3.5	**-2.7**	**75.6**	**68.2**	**25.1**	**13.3**

12. Quality of services[1]

The indicators considered in this domain of well-being allow monitoring the situation in the country with regard to the provision of health, social care, utilities and mobility services, by means of an articulated information framework.
Between 2010 and 2019, most indicators of quality of services show an improvement. There is an increase in fast internet coverage, the prevalence of separate waste collection, the percentage of elderly treated in integrated home care, and the provision of healthcare staff. At the same time, there has been a reduction in difficulties in accessing utilities, irregularities in water distribution, and in unmet need for medical care.
However, a number of critical issues have persisted over the same period. Irregularities in the supply of electricity have worsened, as well as mobility services both on the supply side of local public transport (with a reduction of around 1,300 seat-km), and on the demand side (with a 4.5 percentage point reduction in frequent public transport users). In addition, some indicators in the health sector, are already showing signs of distress in the pre-pandemic period: there has been a reduction in the number of beds in high care facilities, an increase in the hospital patient emigration to a different region and a rise in the number of general practitioners with a patient load above the maximum threshold.
It is known that in 2020 and 2021, health and mobility services were among those most affected by the pandemic and by the measures taken to contain it.
The comparison of the most recent evolution of indicators with the pre-pandemic period shows a very mixed picture. In the health sector, integrated home assistance service continued to increase as did the number of physicians, while the number of nurses and midwives remained essentially unchanged (Table 1).
The indicator on unmet need for medical care, which had increased during the pandemic due to restrictions and closures of outpatient clinics combined with the decision to postpone medical examinations for fear of infection, almost returns to pre-pandemic levels in 2022, but critical issues on the reason for the unmet care persist.
Hospital patient emigrations, which declined in 2020, partly due to the pandemic-related inability to travel outside the area of residence, increase again in 2021, but not enough to return to pre-pandemic levels.
in terms of mobility, after the decline in 2020, the assiduous use of public transport increases but it is not yet back to pre-pandemic levels. Certainly, the increase in smart working has led to a reduction in the number of people who use public transport every day to commute between home and work, and people have changed their habits, preferring to walk for short distances, for example. Satisfaction with public transport has increased among those who use it regularly.
As far as utilities are concerned, the number of households reporting great difficulty in accessing essential services has also continued to fall in recent years, and the coverage of high-speed internet and separate waste collection continues to increase. In contrast, the evolution over time of discontinuities in water and electricity services is reversed, with the percentage of households reporting irregularities in water supply increasing, and interruptions in electricity service decreasing.

1 This chapter was edited by Manuela Michelini, with contributions from Lidia Gargiulo, Alessandra Burgio, Alessia D'Errico and Valentina Joffre.

Table 1. Quality of services indicators: value for the latest available year and percentage changes for different periods

Indicators	Starting year	Latest available year	Latest available year value	Percentage changes			
				2019 compared with starting year	2021 compared with 2019	2022 compared with 2021	2022 compared with 2019
Beds in the residential social-healthcare and social-welfare facilities (b)	2010	2020	69.6	Stable	Worse	-	-
Integrated home assistance service	2015	2021	2.9	Better	Better	-	-
Composite index of service accessibility (a)	2010	2021	5.1	Better	Better	-	-
Irregularities in water supply	2010	2022	9.7	Better	Worse	Worse	Worse
Irregularities in electric power distribution	2010	2021	2.1	Worse	Better	-	-
Seat-Km of public transport networks (b)	2010	2020	3622	Worse	Worse	-	-
Satisfaction with means of transport	2010	2022	23.9	Better	Better	Better	Better
Frequent users of public transport	2010	2022	11.8	Worse	Worse	Better	Worse
Overall Fixed Very High Capacity Network (VHCN) coverage	2018	2022	53.5	Better	Better	Better	Better
Separate collection service for municipal waste	2010	2021	58.7	Better	Better	-	-
Hospital beds in high-care wards (b)	2010	2020	3.0	Worse	Stable	-	-
Hospital patient emigration to a different region	2010	2021	7.8	Worse	Better	-	-
Unmet need for medical examination	2017	2022	7.0	Better	Worse	Better	Worse
General practitioners with a number of patients above the maximum threshold (b)	2010	2020	38.2	Worse	Better	-	-
Physicians	2012	2022	4.2	Better	Stable	Better	Better
Nurses and midwives	2013	2021	6.5	Better	Better	-	-

Better Worse Stable - Not available

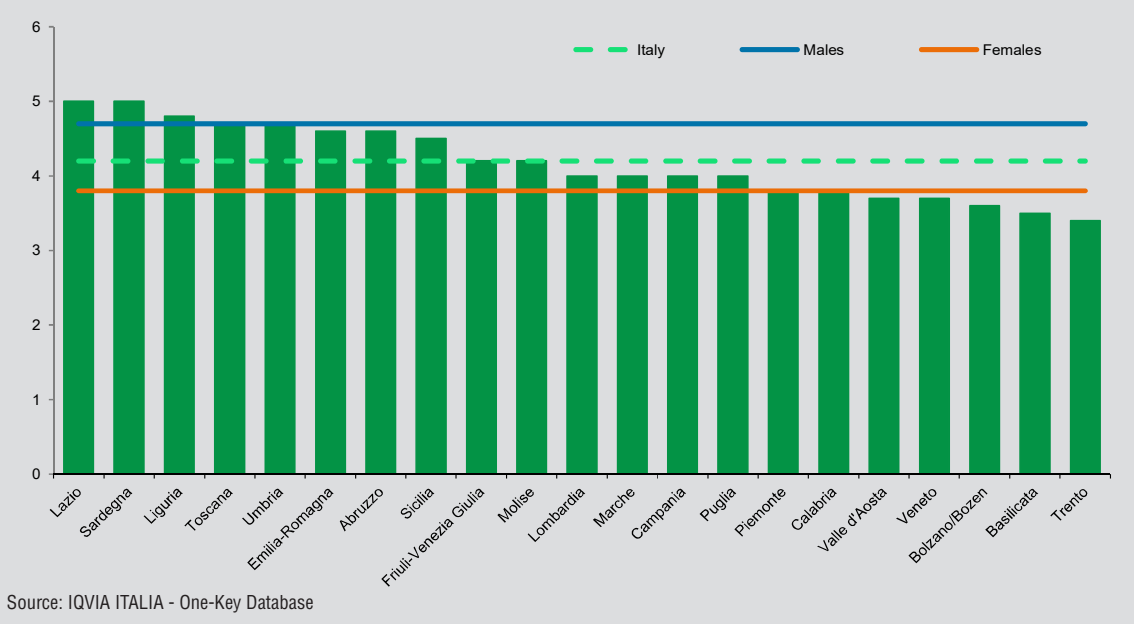
(a) Year 2019 not available. Changes referred to the year 2018.
(b) Year 2021 not available. Changes referred to the year 2020.
Note: If the relative change between the two years exceeds 1% it is considered positive (green), if it is lower than -1% it is considered negative (red). In the range -1 and +1% the change is considered stable (yellow). The polarity of the indicator was taken into account when calculating the changes to consider the improvement or worsening in terms of well-being.

The interventions foreseen in the NRP affect all three areas of which this domain of well-being is composed: health, mobility and public utilities. In fact, the plan envisages investments and reforms aimed at promoting the circular economy and improving waste management, renewing public transport (Mission 2), improving the health services provided in the territory and integrating more effectively social and health services (Mission 6), but also increasing the spread of fast Internet connections (Mission 1). The investments are accompanied by a plan of reforms, which are defined horizontal (public administration and justice) and enabling (simplification and competition), aimed at improving upstream efficiency and equity in the delivery of services to citizens. There are thus many objectives of the Plan which, if they are achieved, may have a spill-over effect on citizens' well-being, as measured by the domain indicators, in the coming years.

Slight increase in the number of physicians in 2022

The number of physicians has increased over the last 3 years, from 4.0 per 1,000 inhabitants in 2020 to 4.2 in 2022 (Figure 1).
At the territorial level, the increase is general but clear regional differences are confirmed with greater availability of physicians in Lazio, Sardegna and Liguria, with almost 5 physicians per 1,000 inhabitants, and lower availability in the autonomous provinces of Trento and Bolzano and in Basilicata with aroud 3.5 physicians per 1,000 inhabitants.

Figure 1. Physicians by sex and region. Year 2022. Per 1,000 inhabitants



Source: IQVIA ITALIA - One-Key Database

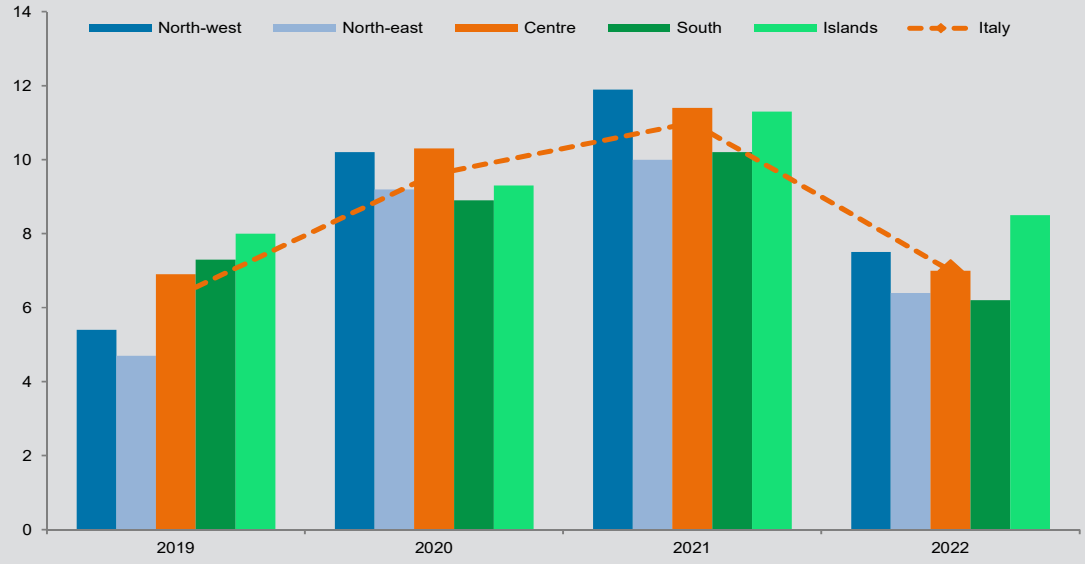
Decrease in the number of general practitioners and increase in patient overload

In 2020, 38.2% of general practitioners exceeded the maximum threshold of 1,500 assistants set by law in Italy. This figure has been steadily increasing since 2010, when it was 25%, due to the decrease in the number of general practitioners (42,428 in 2019 and 41,707 in 2020). Although the problem of saturation affects the whole country, there is a North-South divide to the detriment of the North. The percentage og GPs exceeding the limit ranges from 53.4% in the North-west to 49.7% in the North-east, 34.2% in the Centre, 27.3% in the South and 20.1% in the Islands.

Unmet need for medical examination returns to pre-pandemic levels

In 2022, after the increase observed in the two pandemic years, the percentage of the population reporting unmet needs for medical care drops to 7.0%, almost returning to 2019 level (6.3%, it was 7.2% in 2018) (Figure 2). However, criticalities persist, as we observe an increase in the share of those who do not seek care because of long waiting lists, which becomes the most frequently reported reason (4.2% of the population). At the same time the share of those who give up medical care for economic reasons decreases (it was 4.9% in 2019 and falls to 3.2% in 2022).

Figure 2. Unmet needs for medical care in the last 12 months, by geographic area. Years 2019 - 2022. Percentage values



Source: Istat - Survey on Aspects of daily life

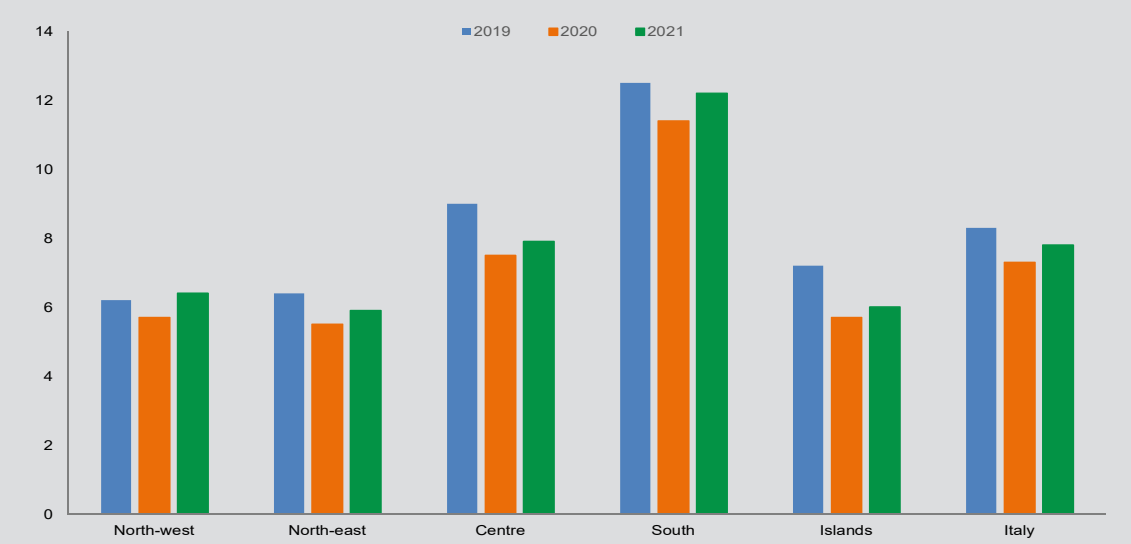
Persisting territorial disparities in integrated home care services

In 2021, 407,000 elderly people aged 65 and over, i.e. 2.9%, use integrated home assistance services, and the share rises to 4.8% when considering the population aged 75 and over. In some regions, such as Lazio, Veneto (+0.5 percentage points) and Abruzzo (+0.4 percentage points) the increase in the use of home-based care, which began in 2020, continues.

Increase in hospital patient emigration to a different region after the halt due to the health emergency

In 2021, ordinary acute care hospital discharges in regions other than the region of residence are 7.8%, a figure that is higher than in 2020 (7.3%), the year in which hospital emigration had slowed down due to COVID-19 pandemic-related restrictions, but lower than the pre-pandemic figure (8.3% in 2019) (Figure 3).
Despite these changes, the geography remains largely unchanged, reflecting the wide inequalities in health care provision between regions and, in particular, between the North and South of the country, with more out of region hospital discharges in the South.

Figure 3. Hospital patient emigration to a different region, by geographic area. Years 2019 - 2021. Percentage values

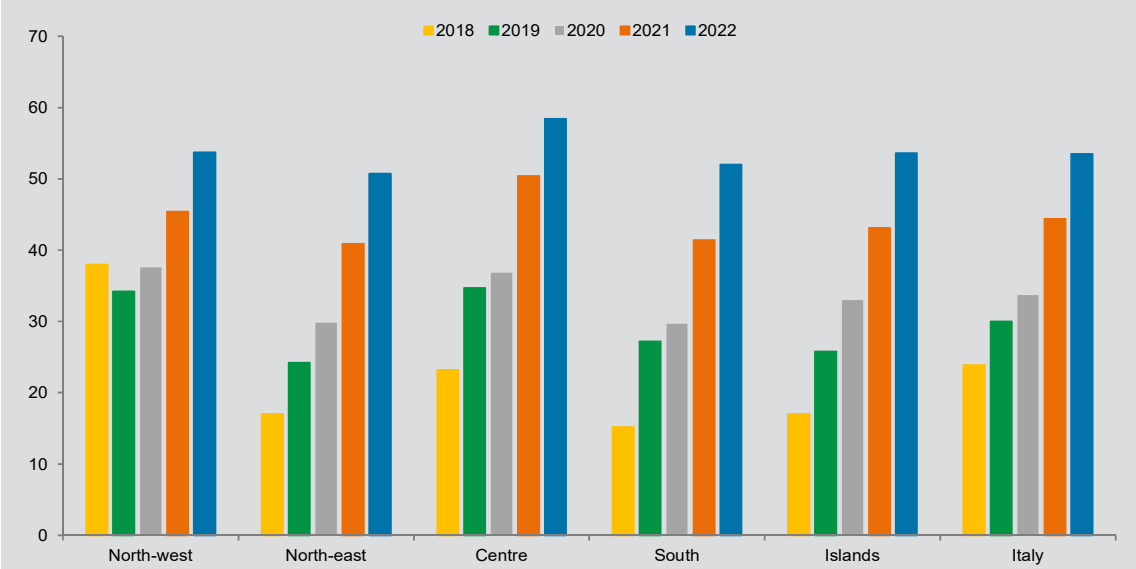


Source: Istat - Processing of data from Hospital Discharges of the Ministry of Health

High speed connection more spread, but the distribution is uneven across the territory

The Strategic Agenda for the Digital Decade, which will drive Europe's digital transformation, sets concrete goals and targets for 2030. Targets include achieving gigabit connectivity in all EU households and 5G coverage for all populated areas. Italy is still a long way from achieving these objectives, but it has taken a significant step forward: in 2022, the threshold of 50% of households living in an area served by high-speed Internet connection (VHCN) is exceeded. However, there are still significant territorial differences, ranging from 58.4% in the Centre to 50.7% in the North-east (Figure 4).

Figure 4. Households that are resident in municipalities with Overall Fixed Very High Capacity Network (VHCN) coverage, by geographic area. Years 2018 - 2022. Percentage values



Source: Istat - Processing of data from Agcom

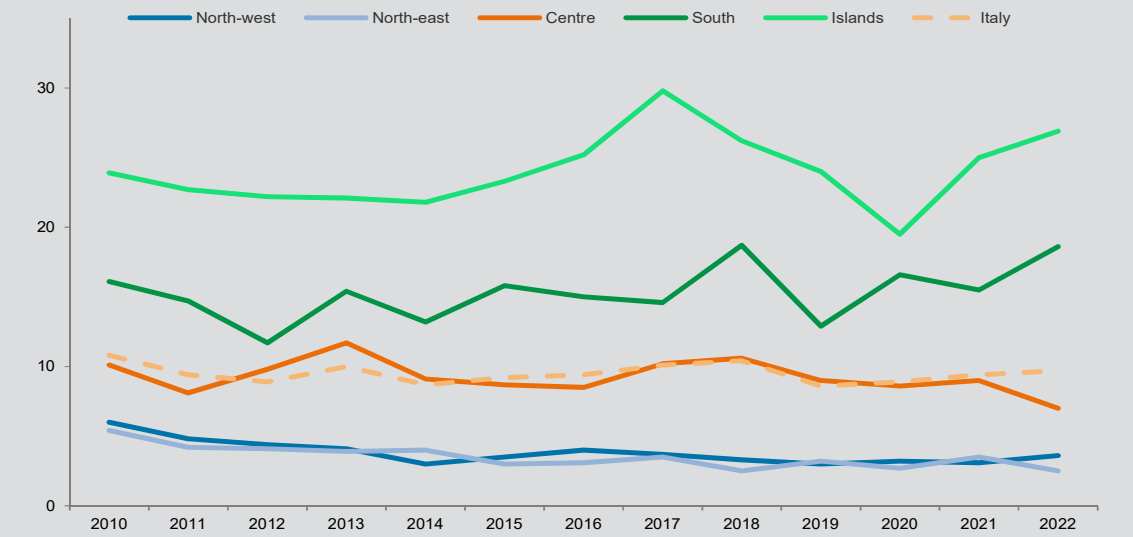
Strong territorial disparities in access to services persist

In the three-year period 2020-2022, 5.1% of Italian households experienced great difficulty in reaching at least three essential services, including pharmacies, first aid, post or municipal offices, supermarkets, schools or police and carabinieri stations. The lack of access to public services complicates everyday life; the situation is particularly critical in the South of Italy, where 7.8% of households experience this difficulty.

In Calabria and Sicilia more irregularities in water supply are reported

In 2022, 9.7% of households report irregularities in water supply, a figure that has remained almost stable over the last three years. There are still large territorial differences, ranging from 3.4% in the North to 7% in the Centre, 18.6% in the South and 26.7% in the Islands (Figure 5). The most critical situations are still reported by households in Calabria (45.1%) and Sicilia (32.6%), where there is a severe infrastructural problem in the water supply network, resulting in a constant poor quality of service.

Figure 5. Households that reported irregularities in water supply by geographic area. Years 2010 - 2022. Percentage values

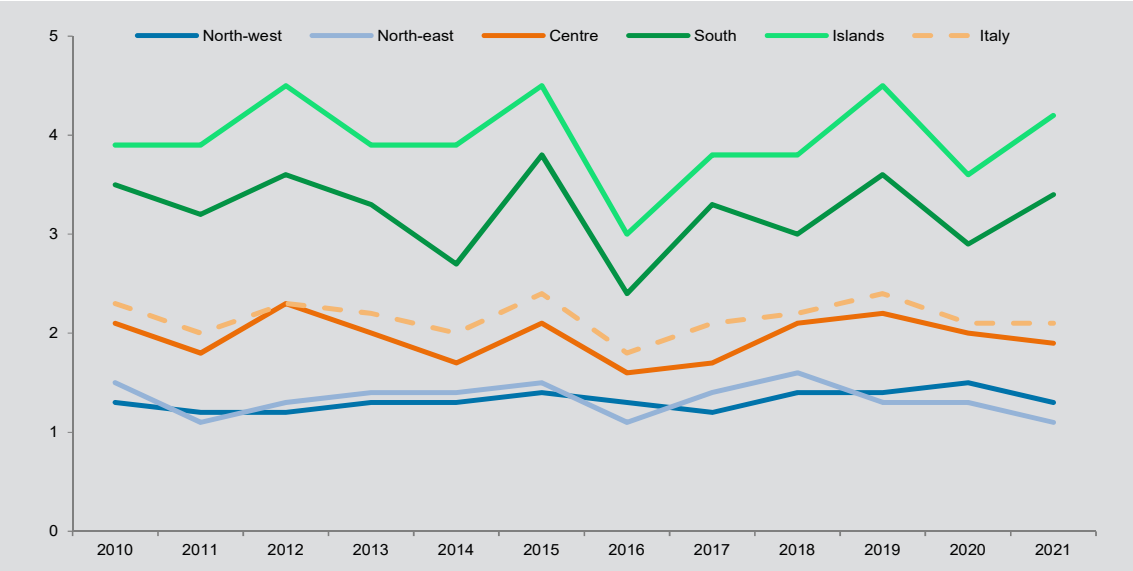


Source: Istat - Survey on Aspects of daily life

Irregularities in electric power distribution remain stable

In Italy, in 2021, the Energy Authority (ARERA) recorded 2.1 unintentionally long (more than 3 minutes) and unannounced power cuts per user (Figure 6).
The irregularity of supply does not affect the entire Italian territory, in fact it is almost non-existent in Valle d'Aosta, Autonomous Provinces of Trento and Bolzano, and Friuli-Venezia Giulia, where the number of interruptions per user is less than one per year; it exceeds 3 interruptions per user per year in Campania, Calabria, and Puglia, while in Sicilia the situation is particularly serious, reaching 4.7 interruptions.

Figure 6. Irregularities in electric power distribution by geographic area. Years 2010 - 2021. Average number per user

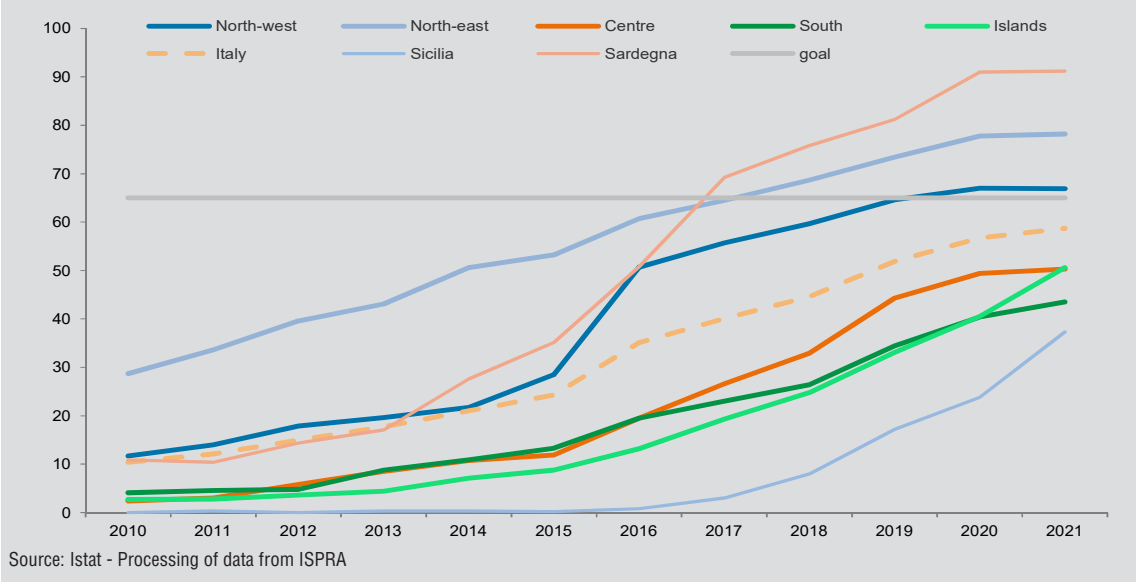


Source: Istat - Processing of data from the Italian Regulatory Authority for Energy, Networks and Environment (Arera)

Separate waste collection steadily improving, however the target has not yet been reached

In 2021, 5,265 out of 7,903 municipalities reached the target of 65% for separate waste collection: 58.7% of the population lives in one of these municipalities, but the service is not uniform across the country (Figure 7). The northern regions are furthest ahead with 71.7% of the population residing in municipalities that have reached the target; followed by the central regions (50%), while the southern regions have the greatest difficulties, with 45.8% of the population living in municipalities that have reached the target. The situation in Southern Italy is critical in all regions, also because of the delay in starting separate collection; an exception is Sardegna, where 91.2% of the population live in a municipality that has reached the target.

Figure 7. Resident population in municipalities with separate waste collection greater than or equal to 65%, by geographic area. Years 2010 - 2021. Percentage values



Source: Istat - Processing of data from ISPRA

Frequent users of public transport on the rise again

After the decline observed in 2020, 11.8% of people aged 14 years and over used mobility services assiduously in 2022. The indicator has risen again, but has not yet returned to pre-pandemic levels. This is probably also due to the increase in working from home, which has led to a reduction in home-to-work travel and a change in habits in favour of, for example, walking for short distances.

Indicators

1. **Beds in the residential social-healthcare and social-welfare facilities:** Beds in the public or private social-healthcare and social-welfare facilities that provide residential services (assisted hospitality with overnight stay) of a social welfare and/or social-healthcare type to people in need per 10,000 inhabitants.
   Source: Istat - Residential health and social care facilities.
2. **Integrated home assistance service:** Percentage of people aged 65 and over who benefited from integrated home assistance service.
   Source: Processing of data from Ministry of Health, Health information system.
3. **Composite index of service accessibility:** Percentage of households who find very difficult to reach some basic services (pharmacy, emergency room, post office, police, carabinieri, municipal offices, crèches, nursery, primary and secondary school, market and supermarket). The indicator is a three-year average.
   Source: Istat - Survey on Aspects of daily life.
4. **Irregularities in water supply:** Percentage of households who report irregularities in water supply.
   Source: Istat - Survey on Aspects of daily life.
5. **Irregularities in electric power distribution:** Frequency of accidental long lasting electric power cuts (cuts without notice longer than 3 minutes) (average number per consumer).
   Source: Processing of data from the Italian Regulatory Authority for Energy, Networks and Environment (Arera).
6. **Seat-Km of public transport networks:** Seat-Km of public transport networks per capita in provincial capital Municipalities.
   Source: Istat - Survey on urban environmental data.
7. **Satisfaction with means of transport:** Percentage of users aged 14 and over who rated 8 or more (over 10) for all means of transport used regularly (more than once a week).
   Source: Istat - Survey on Aspects of daily life.
8. **Frequent users of public transport:** Percentage of population aged 14 and over who use public transport several times a week (bus, trolley bus, tram within their own municipality; bus or coach connecting different municipalities; train).
   Source: Istat - Survey on Aspects of daily life.
9. **Overall Fixed Very High Capacity Network (VHCN) coverage:** Percentage of households which are resident in an area served by a very high capacity network (FTTH).
   Source: Processing of data from Agcom.
10. **Separate collection service for municipal waste:** Percentage of resident population in municipalities with separate collection greater than or equal to 65%.
    Source: Processing of data from Ispra.
11. **Hospital beds in high-care wards:** Hospital beds in high care wards in ordinary inpatient care in public and private health care institutions per 10,000 inhabitants.
    Source: Processing of data from Ministry of Health.
12. **Hospital patient emigration to a different region:** Percentage of hospital discharges carried out in regions other than that of residence on the total discharges of residents in the region. Data refer only to inpatient discharges for "acute" care (excluding hospitalizations of "spinal unit", "functional rehabilitation", "neuro-rehabilitation", "long-term care").
    Source: Processing of data from Hospital Discharges of the Ministry of Health.
13. **Unmet need for medical examination:** Percentage of the population reporting, in the last 12 months, unmet needs for medical care (specialist examination or diagnostic examination) due to one of the following reasons: he could not pay for it, it was too expensive; inconvenience (distant structure, lack of transportation, inconvenient hours); long waiting list.
    Source: Istat - Survey on Aspects of daily life.
14. **General practitioners with a number of patients above the maximum threshold:** Percentage of general practitioners with a number of patients above the maximum threshold of 1500 patients defined by the general practitioners' contract.
    Source: Processing of data from Ministry of Health.
15. **Physicians:** Practising physicians per 1,000 inhabitants.
    Source: IQVIA ITALIA One-Key Database.
16. **Nurses and midwives:** Practicing nurses and midwives per 1,000 inhabitants.
    Source: Co.Ge.A.P.S. (Consorzio Gestione Anagrafica Professioni Sanitarie) - National database of ECM credits (Continuing Medical Education).

Indicators by regions and geographic areas

REGIONS GEOGRAPHIC AREAS	Beds in the residential social-healthcare and social-welfare facilities (a) 2020	Integrated home assistance service (b) 2021	Composite index of service accessibility (c) 2021	Irregularities in water supply (c) 2022	Irregularities in electric power distribution (d) 2021	Seat-Km of public transport networks (e) 2020	Satisfaction with means of transport (f) 2022
Piemonte	116.9	2.0	4.0	5.1	1.6	3634	14.9
Valle d'Aosta/Vallée d'Aoste	109.8	0.4	6.2	3.6	0.7	536	44.9
Liguria	112.6	2.9	4.9	3.6	1.1	3243	20.8
Lombardia	84.8	2.8	3.1	2.9	1.2	9109	26.2
Trentino-Alto Adige/Südtirol	131.6	1.8	3.1	1.4	0.8	3287	51.5
Bolzano/Bozen	*116.1*	*0.4*	*2.2*	*1.6*	*0.9*	*3083*	*58.7*
Trento	*147.0*	*3.1*	*3.9*	*1.3*	*0.8*	*3470*	*41.3*
Veneto	91.7	4.3	3.7	2.0	1.2	4367	27.3
Friuli-Venezia Giulia	117.9	3.1	4.6	2.2	0.9	3260	40.4
Emilia-Romagna	94.1	3.6	3.3	3.4	1.0	2280	26.7
Toscana	61.3	3.7	5.7	6.3	1.5	2181	25.0
Umbria	66.2	2.3	4.8	6.9	1.7	1376	22.1
Marche	81.1	3.6	3.9	5.2	1.5	1668	30.5
Lazio	44.8	2.7	5.5	7.9	2.2	4816	18.2
Abruzzo	43.1	4.7	4.8	22.6	2.3	1758	16.0
Molise	65.0	2.9	4.1	15.4	1.7	383	26.7
Campania	18.8	2.3	8.8	16.0	3.5	1426	10.7
Puglia	39.9	1.9	7.9	8.7	3.8	1518	21.7
Basilicata	75.1	3.9	6.2	13.4	2.0	801	30.4
Calabria	39.7	....	7.7	45.1	3.5	1249	37.0
Sicilia	51.4	4.3	7.0	32.6	4.7	1306	25.1
Sardegna	50.2	....	3.3	10.7	3.0	2424	37.5
North	97.4	2.9	3.6	3.1	1.2	5015	26.4
North-west	96.2	2.6	3.6	3.6	1.3	6408	22.9
North-east	99.1	3.1	3.6	2.5	1.1	3118	32.3
Centre	56.1	3.2	5.3	7.0	1.9	3737	21.0
South and Islands	39.1	2.5	7.2	21.4	3.6	1455	21.3
South	33.4	2.2	7.8	18.6	3.4	1417	18.2
Islands	51.1	3.1	6.0	26.9	4.2	1518	29.2
Italy	**69.6**	**2.9**	**5.1**	**9.7**	**2.1**	**3622**	**23.9**

(a) Per 10,000 inhabitants;
(b) Per 100 persons aged 65 and over;
(c) Per 100 households;
(d) Average number of interruptions per user;
(e) Seat-Km per inhabitant. Data measured in the capital cities of the Italian provinces;
(f) Per 100 frequent users of at least one type of transport;
(g) Per 100 persons aged 14 and over;

Frequent users of public transport (g) 2022	Overall Fixed Very High Capacity Network (VHCN) coverage (c) 2022***	Separate collection service for municipal waste (c) 2021	Hospital beds in high-care wards (a) 2020	Hospital patient emigration to a different region (h) 2021	Unmet need for medical examination (i) 2022	General practitioners with a number of patients above the maximum threshold (l) 2020	Physicians (m) 2022*	Nurses and midwives (m) 2021
12.7	45.8	55.2	3.1	6.3	9.6	38.8	3.8	6.5
12.7	29.8	80.6	4.0	15.4	6.4	50.0	3.7	7.1
19.7	47.6	38.2	3.5	13.7	5.8	36.3	4.8	7.7
13.9	45.1	76.2	3.3	4.9	6.8	63.7	4.0	5.7
19.0	....	83.7	2.4	8.5	5.3	60.5	3.5	7.6
22.6	*12.3*	*69.4*	*2.3*	*4.6*	*4.7*	*63.7*	*3.6*	*7.1*
15.5	*52.2*	*97.8*	*2.5*	*13.1*	*5.9*	*57.8*	*3.4*	*8.1*
10.3	38.9	88.8	3.9	5.9	6.4	57.3	3.7	6.6
13.5	44.2	68.2	2.5	6.7	7.7	38.0	4.2	7.2
10.9	36.1	68.0	3.0	5.1	6.4	42.5	4.6	6.6
10.1	43.1	59.7	3.1	5.9	6.8	40.6	4.7	7.0
7.1	42.0	72.9	2.3	12.0	8.1	21.1	4.7	7.7
8.9	30.8	85.6	2.6	12.9	7.0	34.6	4.0	6.8
18.1	61.3	31.7	2.7	7.1	6.9	32.5	5.0	7.1
7.7	40.7	67.2	3.0	14.9	7.6	21.5	4.6	7.0
6.5	40.4	46.4	4.6	29.2	5.6	15.0	4.2	8.6
11.1	55.1	32.0	2.5	9.2	4.7	42.6	4.0	6.0
8.5	34.4	53.3	3.2	8.4	7.5	18.3	4.0	7.0
8.8	26.9	58.0	2.6	26.9	7.5	19.7	3.5	7.4
8.3	22.8	36.9	2.6	20.8	7.2	17.1	3.8	5.6
7.1	47.5	37.3	3.2	6.2	7.2	17.7	4.5	5.9
10.2	30.4	91.2	2.4	5.5	12.3	28.1	5.0	6.3
13.1	....	71.7	3.2	6.2	7.0	51.8	4.0	6.4
14.1	53.7	66.9	3.2	6.4	7.5	53.4	4.0	6.1
11.7	50.7	78.2	3.2	5.9	6.4	49.7	4.1	6.8
13.6	58.4	50.3	2.8	7.9	7.0	34.2	4.8	7.1
8.9	....	45.8	2.9	10.2	7.0	24.9	4.2	6.3
9.4	52.0	43.5	2.8	12.2	6.2	27.3	4.0	6.5
7.9	53.6	50.6	3.0	6.0	8.5	20.1	4.7	6.0
11.8	**53.7**	**58.7**	**3.0**	**7.8**	**7.0**	**38.2**	**4.2**	**6.5**

(h) Per 100 discharges of inhabitants in the region;
(i) Per 100 persons;
(l) Per 100 physicians;
(m) Per 1,000 inhabitants;
(*) Provisional data;
(**) From 2020 data also contains the waiver for reasons related to COVID-19;
(***) Regional data relates to 2021.