

OBSERVATORY OF THE IMPACTS OF THE HEALTH CRISIS RELATED TO COVID-19

September 2022

Note: This Observatory aims to measure the health and economic consequences of the Covid-19 epidemic in the Principality. It has been set up to complement the reports produced by Monaco Statistics in November 2020 and January 2021.

Thus, this publication presents a monthly analysis of health, mortality and birth data and is enriched quarterly with data on the economy and employment in the Principality.

For this edition:

- the health data are stopped at the end of August 2022;
- mortality and birth rate data are updated to August 2022;
- the data relating to the economy and employment are stopped at June 2022.



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KEY DATES

	August	September
Monaco	-On the 8 th : 14,165 confirmed cases of COVID-19 including 61 deaths. The screening centre has new opening hours. Weekdays: from 8:30 am to 4:30 pm, Saturdays: from 8 am to 10 am.	-On the 4 th : 14,409 confirmed cases of COVID-19 including 63 deaths.
France	-The 1st: the health pass is no longer in force. -On the 8th: 33,061,414 confirmed cases of COVID-19 including 149,083 deaths.	-On the 6 th : 33,572,945 confirmed cases of COVID-19 including 150,744 deaths.
<u>Italy</u>	-On the 8th: 21,313,427 confirmed cases of COVID-19 including 173,136 deaths.	-On the 6th: 21,944,877 confirmed cases of COVID-19 including 175,872 deaths.
World	-The 2 nd : 12,308,330,588 doses of vaccine administeredOn the 8 th : 581,686,197 confirmed cases of COVID-19 including 6,410,961 deaths.	-On the 6 th : 603,164,436 confirmed cases of COVID-19 including 6,482,338 deaths.



1 Health data

1.1 Covid-19 health monitoring indicators

The health monitoring data for Covid-19 are as of 31 August 2022. They come from the Ministry of Health and Social Affairs, which groups together data from the Department of Health Affairs, the Centre Hospitalier Princesse Grace, the Epidemiological Investigation Unit, the Home Monitoring Unit, town doctors, pharmacies, the Monaco Scientific Centre and medical analysis laboratories.

The scope of the data presented concerns the residents of the Principality. Before the 7th of May 2022, only people with a positive RT-PCR (Reverse transcription polymerase chain reaction) test were defined as Covid-19 cases. Since this date, positive antigenic tests carried out in the Principality's pharmacies have also been used to officially identify Covid-19 cases.

Table 1. Covid-19 monitoring indicators for Monaco residents as of 31 August 2022

No. of cumulative cases	14,386
of which no. of recontaminations	1,175
Share of infected residents	33.7%
Cumulative no. of hospitalisations	653
Share of hospitalisations on the no. of cumulative cases	4.5%
Cumulative no. of cases in intensive care	64
Share of cases in intensive care out of the no. of hospitalisations	9.8%
Share of cases in intensive care out of the no. of cumulative cases	0.4%
Cumulative no. of deaths	61
Share of deaths out of the no. of cumulative cases	0.4%

Sources: Ministry of Health and Social Affairs, Monaco Statistics

As of 31 August 2022, the cumulative number of cases since the beginning of the epidemic reached 14,386, including 1,175 recontaminations, representing 8.2% of cases. Thus, the proportion of infected residents stood at 33.7%¹.

4.5% of cases required hospitalisation, i.e. 653 cases in total, including 64 in intensive care. The average length of hospitalisation² was 12.2 days overall and 11.3 days for patients who did not stay in intensive care.

The 61 deaths (31 males and 30 females) represented 0.4% of cumulative cases. The average age at death was 85.0 years overall (83.8 years for men and 86.3 years for women). More than two thirds of the deceased residents (72.1%) were aged 80 years and over. 16 deaths concerned people of Monegasque nationality.

Table 2. Covid-19 monitoring indicators for Monaco residents per year (as of 31 August 2022)

	2020	2021	2022
Number of cases	875	4,292	9,219
Number of hospitalisations	81	241	331
Number of intensive care	19	39	6
Number of deaths	3	35	23
Mean age	46.2	39.7	42.1

Sources: Ministry of Health and Social Affairs, Monaco Statistics

As of 31 August 2022, 9,219 people were infected with Covid-19 in the year, compared to 5,167 in 2020 and 2021 combined.

In the first eight months of 2022, the number of hospital admissions (331) was higher than the cumulative number observed in 2020 and 2021 (322), and there were 23 deaths compared to 35 in the entire year 2021.

The average age of those infected was 42.1 years in the first eight months of 2022, compared with 39.7 years in 2021 and 46.2 years in 2020.

² The lengths of stay include those of patients in the Covid unit as well as those for other reasons.



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¹ Based on the most recent resident population estimate (as of 31 December 2021) of 39,150 inhabitants.

1.1.1 Recontaminations

Since the beginning of the epidemic, 1,175 cases concern residents who have already been infected. Recontaminations are almost evenly distributed: 52.2% women and 47.8% men.

37.2% 18.8% 17.4% 15.2% 6.8% 2.2% 2.3%

Figure 1. Distribution of recontaminations by age group for Monaco residents

Sources: Ministry of Health and Social Affairs, Monaco Statistics

30-39

40-49

0-29

As of 31 August 2022, 37.2% of recontaminations have been identified among people under the age of 30. The proportion of re-infections decreases with age: residents over 60 represented only 11.3% of cases.

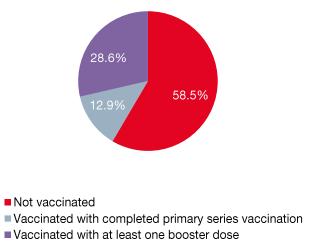
50-59

60-69

70-79

80 and more

Figure 2. Distribution of recontaminations according to vaccination status for Monaco residents



Sources: Ministry of Health and Social Affairs, Monaco Statistics

As of 31 August 2022, almost 60% of recontaminations involved unvaccinated people, more than one in four residents vaccinated with at least one booster dose³ and 12.9% with a complete primary vaccination⁴.

⁴ Vaccination with two injections of a two-dose protocol or one injection of a single-dose protocol.



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³ Vaccination with at least three injections of a two-dose protocol or a second injection of a single-dose protocol.

1.1.2 Situation in August 2022

Table 3. Monthly number of Covid-19 cases for Monaco residents

	July 2022	Share	August 2022	Share
No. of unvaccinated cases	319	30.0%	90	32.8%
No. of cases with completed primary series vaccination	152	14.3%	33	12.0%
No. of cases with at least one booster dose	594	55.8%	151	55.1%
No. of cases	1,065	100%	274	100%
of which no. of recontaminations	222	20.8%	49	17.9%

Sources: Ministry of Health and Social Affairs, Monaco Statistics

274 new cases of Covid-19 were recorded among residents of Monaco in August 2022 compared to 1,065 in July. 32.8% of the August cases (90) concerned unvaccinated residents, a share equivalent to that of the previous month (30% or 319 cases).

12.0% of the cases (33 patients) involved people with a complete primary series vaccination **Erreur! Signet non défini.** compared to 14.3% in July (152 cases). More than half of the cases (151 cases, representing 55.1%) had a vaccination schedule with at least one booster dose **Erreur! Signet non défini.** in August, a share comparable to July (55.8% for 594 cases).

The proportion of recontaminations has decreased but remains high with 17.9% of cases in August after 20.8% in July and 17.1% in June.

<u>Table 4. Monthly number of Covid-19-related hospitalisations and resuscitations</u> for residents of Monaco

	July 2022	August 2022
No. of hospital admissions	69	19
No. of hospital admissions unvaccinated	13	7
No. of hospital admissions with completed primary series vaccination	7	2
No. of hospital admissions with at least one booster dose	50	10
No. of cases in intensive care	2	1
No. of deaths	3	0

Sources: Ministry of Health and Social Affairs, Monaco Statistics

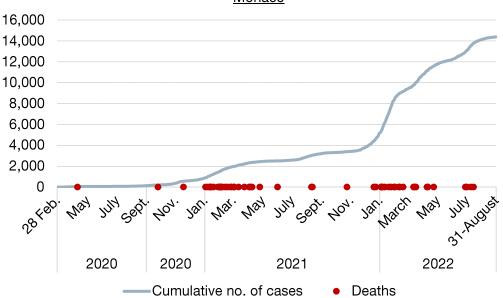
There were 19 Covid-19 related resident hospitalisations in August 2022 compared to 69 the previous month. Among these 70 hospitalisations, 7 were of unvaccinated individuals, 2 residents with a complete primary series vaccination schedule and 10 were of patients with at least one booster dose.

There were no Covid-19-related deaths in August 2022.



1.1.3 Evolution of the epidemic

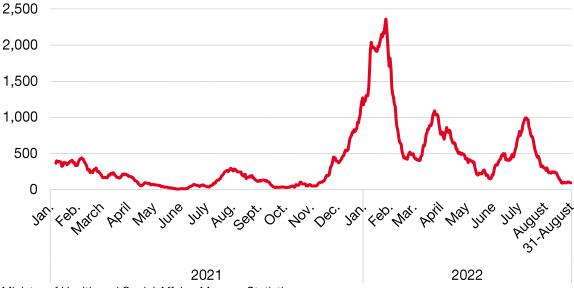
Figure 3. Evolution of the number of cumulative cases and deaths linked to Covid-19 for residents of Monaco



Sources: Ministry of Health and Social Affairs, Monaco Statistics

As of 31 August 2022, the cumulative number of cases since the start of the pandemic has reached 14,386, with a sharp acceleration in early 2022.

Figure 4. Evolution of the daily incidence rate⁵ of Covid-19 for residents of Monaco



Sources: Ministry of Health and Social Affairs, Monaco Statistics

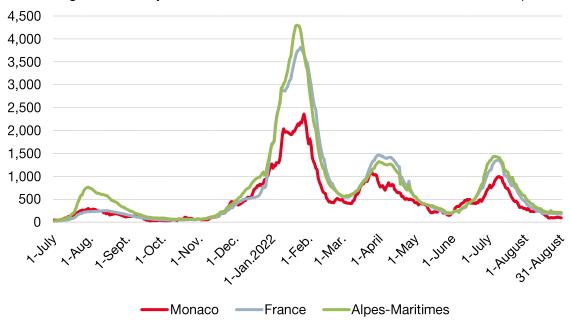
After reaching an all-time high of 2,360 at the end of January 2022, and a sharp drop in February, the incidence rate rose again to 1,091 on 25 March. The rate gradually declined until the end of May (202 on 31 May). In June, it increased again to 710 at the end of the month. After another peak (994) in the first half of July, the incidence rate decreased to 92 on 31 August.

⁵ The daily incidence rate corresponds to the number of positive tests over the last 7 days per 100,000 inhabitants, i.e.: 100,000 * number of positive cases over 7 days / estimated number of inhabitants. The most recent estimate of the resident population (as of 31 December 2021) is 39,150 inhabitants.



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Figure 5. Changes in the daily incidence rate of Covid-19 in Monaco, France and the Alpes-Maritimes

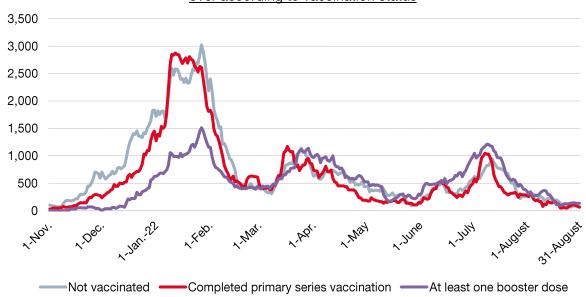


Sources: Ministry of Health and Social Affairs, Santé publique France, Monaco Statistics

During the first half of July 2022, the 7th epidemic wave continued in most European countries. The incidence rates of the three geographical areas increased significantly and were at 9 July at: 994 in the Principality of Monaco, 1,414 in the Alpes-Maritimes and 1,352 in France.

Since the second half of July, these indicators have dropped significantly, reaching 92 in the Principality of Monaco, 209 for the Maralpins and 174 in France on 31 August.

Figure 6. Changes in the daily incidence rate of Covid-19 for residents of Monaco of 12 years old and over according to vaccination status



Note: In this graph, three vaccination statuses are distinguished for residents:

- Not vaccinated which includes those who are not vaccinated or are only partially vaccinated (one injection of a two-dose protocol);
- Completed primary series vaccination, which includes residents with a 2nd injection of a two-dose protocol or an injection of a single dose protocol;
- At least one booster dose which is a 3rd injection of a two-dose protocol or a 2nd injection of a single-dose protocol. Sources: Ministry of Health and Social Affairs, Digital Services Department, Monaco Statistics

From November 2021 until the end of February, the incidence rate of unvaccinated residents was higher than that of residents with a complete primary series vaccination, which was itself higher than than the one of residents with at least one booster dose. From the end of February 2022, the gap narrows and the three rates are quite close.



Figure 7. Comparison of incidence rates by age group of Covid-19 of Monaco residents

Note: As children under 6 years old are not systematically tested, they are not represented on this graph. Sources: Ministry of Health and Social Affairs, Monaco Statistics

19-59: 7,680 cases

The evolution of the incidence rates of minors (6-18 years old) and over-60s differs from that of the rest of the population:

• From November 2021 onwards, the incidence rate for 6-18 year olds rose dramatically. It peaked at 5,901 on 24 January compared to 175 on 1 November. The gap with the overall rate had never been so high since the beginning of the pandemic. The incidence rate then fell back to around 700 in mid-February. It then rose again, reaching a peak of 3,038 on 24 March. In June there was a further increase, with the rate reaching 874 by the end of the month, before steadily decreasing. As of 31 August, it was 44;

60 and over: 2,935 cases

- The rate for those aged 60 and over becomes comparable to the overall rate since spring 2022, whereas it has been significantly lower since December 2021. As of 30 June, the incidence rate was 690. Since July, this indicator has also been decreasing and reached a level of 131 at the end of August;
- The incidence rate for 19-59 year-olds, relatively close to the overall rate, peaked at 2,658 on 10 January 2022. As of 31 August, it was well below the rate of the previous month, at 86, compared to 1,047 on 12 July, the peak of the 7th wave.

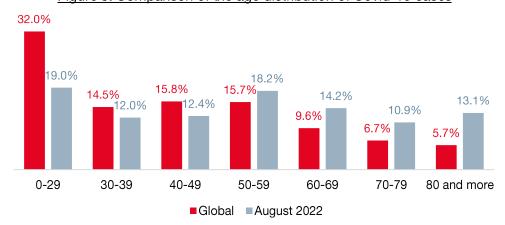


Figure 8. Comparison of the age distribution of Covid-19 cases

Sources: Ministry of Health and Social Affairs, Monaco Statistics

The age distribution of cases in August 2022 differed from that observed since the beginning of the epidemic.

Less than 2 out of 10 cases in August were under 30 years old, compared to about one third overall.

In August, more than half of the cases concerned residents aged 50 and over, compared to just over a third since the beginning of the epidemic.



1.1.4 Characteristics of Covid-19-related hospitalisations of Monaco residents

Figure 9. Evolution of active cases and hospitalisations linked to Covid-19 for residents of Monaco 600 100 500 80 400 300 Active cases 200 100 0 31-August March Hospitalisations 2022 2020

Sources: Ministry of Health and Social Affairs, Monaco Statistics

Since September 2020, the number of cases and the number of hospitalisations have been correlated, with a slight lag concerning the 5th wave (winter 2022) and the 6th (spring 2022).

As of 31 August, the Principality of Monaco had 9 hospitalisations of residents for 48 active cases.

for residents of Monaco 70 60 50 40 30 20 10 0 HU 31. August HU March 781 Nay 250 Nay 404 èéé 2020 2022 2021 Hospitalisations Intensive care Deaths

Figure 10. Trends in Covid-19-related hospitalisations, resuscitations and deaths for residents of Monaco

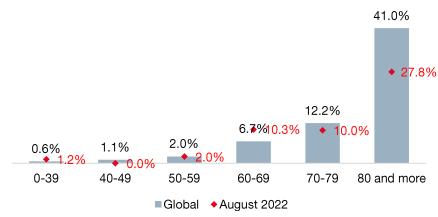
Note: Cases in intensive care are also counted as inpatients. Sources: Ministry of Health and Social Affairs, Monaco Statistics

Since mid-December 2021, the peaks in hospitalisations (66 on 1 February 2022 and 28 on 6 April) have not led to an increase in the number of intensive care (maximum 2 people between 21 and 24 January). As of 31 August, there were 9 residents hospitalised, including 1 in intensive care.

Since December 2021, there have been 25 Covid-19-related resident deaths.



Figure 11. Share of Covid-19-related hospitalisations by age group



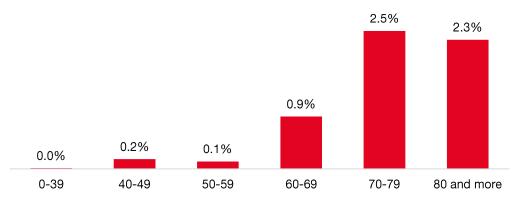
Interpretation: in August 2022, 27.8% of people over 80 years old who contracted Covid-19 required hospitalisation, compared to 41.0% since the beginning of the epidemic.

Sources: Ministry of Health and Social Affairs, Monaco Statistics

The proportion of hospitalisations increases with age. Since the beginning of the epidemic, 0.6% of cases under 40 years of age have been hospitalised, compared to 6.7% between 60 and 69 years of age, 12.2% between 70 and 79 years of age and 41.0% after 80 years of age.

In August 2022, the share of people hospitalised was lower or equal to the overall figure for each age group, except for those aged 0-39 and 60-69.

Figure 12. Share of Covid-19-related intensive care unite (ICU) hospitalisations by age group



Sources: Ministry of Health and Social Affairs, Monaco Statistics

Since the beginning of the epidemic, ICU hospitalisations represent 0.9% of cases between 60 and 69 years old, 2.5% of cases between 70 and 79 years old and 2.3% for residents over 80 years old.



1.2 Vaccination

The vaccination campaign started on 31 December 2020 in the Principality⁶ with the Pfizer/BioNTech's Comirnaty (messenger RNA-based vaccine), which requires the injection of two doses 21 days apart for people who have not previously been infected by the disease and a single dose for those who have already had Covid-19.

Since 10 June 2021, vaccination has been open to any person aged 12 and over and subsequently to non-residents working in the Principality. At the beginning of January 2022, children aged between 5 and 11 years, resident or attending school in the Principality, at risk of contracting severe forms of Covid-19 or living in the environment of an immunocompromised person could also begin to be vaccinated at the National Immunisation Centre.

In addition, an additional booster dose can also be given to people aged 18 years and over, provided that it has been more than four months since the last dose of Covid-19 vaccine was given.

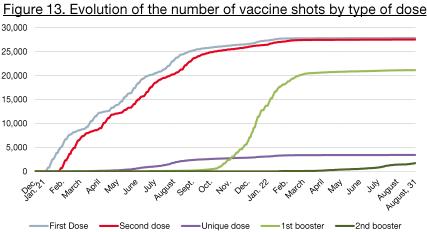
Since 22 March 2022, Novavax's Nuvaxovid vaccine (a so-called "subunit" vaccine) is also available. The primary vaccination schedule for this vaccine requires 2 doses, 3 weeks apart.

At the end of March 2022, a 2nd booster dose was generalised without prescription for people aged 65 and over, and from mid-April for people aged 60 and over. A delay of about 4 months between the last injection or the last contamination and the 2nd additional dose must be respected.

Vaccination data is as of 31 August 2022.

Note: The data presented in this study are consolidated for each publication, which explains the differences that may appear in relation to previously published statistics.

1.2.1 Evolution of vaccination



Sources: Ministry of Health and Social Affairs, Digital Services Department, Monaco Statistics

As of 31 August 2022, 81,604 vaccine shots have been administered to people aged 12 years and older. This includes more than 27,800 first doses, more than 27,500 second doses and more than 3,400 unique doses⁷. The number of first booster doses was 21,117 and second booster doses were 1,722.

Vaccination is gender-equal, as 50.7% of injections were given to women.

Table 5. Distribution of shots by country of residence as of 31 August 2022

		Type of doses				
	First	Second	Unique	1st booster	2nd booster	Total
Monaco	22,131	21,966	2,106	17,453	1,637	65,293
France	5,492	5,347	1,303	3,570	80	15,792
Italy	142	137	16	65	0	360
Others*	63	59	3	29	5	159
Total	27 828	27 509	3 428	21 117	1 722	81 604

^{*} Others including not filled in

Sources: Ministry of Health and Social Affairs, Digital Services Department, Monaco Statistics

Of the 81,604 doses administered in total, 15,792 were administered to people living in France and 360 to Italian residents.

⁷ Unique doses: People previously infected with Covid-19 are offered a single dose of vaccine, as they retain an immune memory. This single dose of vaccine thus acts as a booster after infection.



⁶ Source: https://covid19.mc/en/

1.2.2 Vaccination coverage

The vaccination coverage presented below concerns the resident population of Monaco. It includes:

- All injections given in the Principality to residents;
- Part of the injections given abroad to residents: on the one hand, cases where the first dose was given abroad and then declared to the Vaccination Centre in order to be able to give the second dose in the Principality and, on the other hand, cases where the 2 doses were given abroad and then declared to the Vaccination Centre in order to request a health pass or to have recourse to serological monitoring.

However, it is not possible to know which residents were vaccinated abroad and did not report to the vaccination centre. Thus, the vaccination coverage of residents remains underestimated by this unquantifiable part of residents vaccinated abroad and not declared.

100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% 12-17 years 18-34 years 35-44 years 65-74 years 55-64 years 75 years and over Total

Figure 14. Evolution of the completed primary vaccination coverage rate⁸ for residents by age group

Sources: Ministry of Health and Social Affairs, Digital Services Department, Monaco Statistics

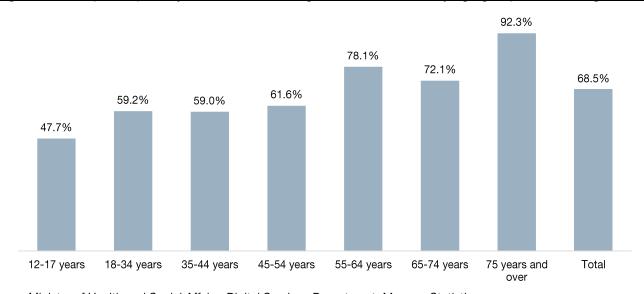


Figure 15. Completed primary vaccination coverage rate for residents by age group as of 31 August 2022

Sources: Ministry of Health and Social Affairs, Digital Services Department, Monaco Statistics

As of 31 August 2022, the completed primary vaccination coverage rate is 68.5% for the resident population of 12 years old and over.

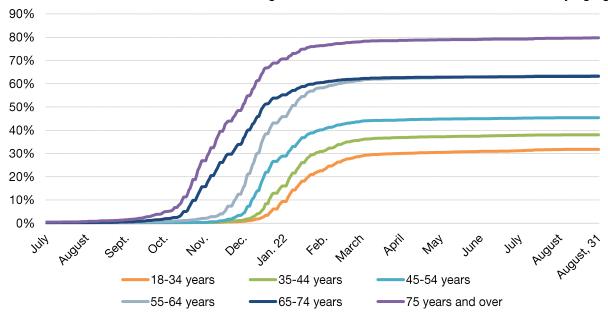
It is above 59% for all age groups from 18 years onwards. It is above 78% among 55-64 years old and exceeds 92% among those aged 75 and over. More than one resident in two of 12-17 years old has a complete primary vaccination schedule.

⁸ Completed primary vaccination coverage rate: Share of the population vaccinated with a second shot of a two-dose schedule or one shot of a single-dose schedule.



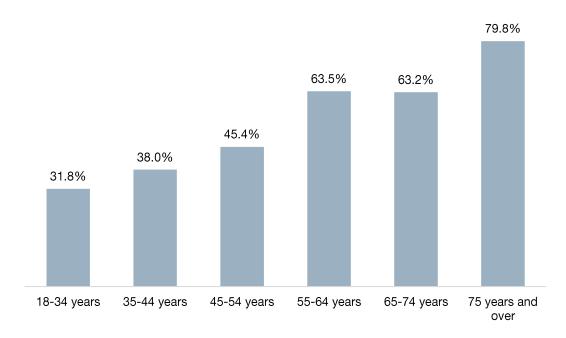
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Figure 16. Evolution of the vaccination coverage rate with at least one booster⁹ of residents by age group



Note: As the 1st booster mainly concerns people aged 18 and over, only these age groups are presented. Sources: Ministry of Health and Social Affairs, Digital Services Department, Monaco Statistics

Figure 17. Vaccination coverage rate with at least one booster of residents by age group as of 31 August 2022



Sources: Ministry of Health and Social Affairs, Digital Services Department, Monaco Statistics

As of 31 August 2022, the vaccination rate with at least one booster dose is approaching 80% for residents aged 75 years old and over, and it is above or equal to 63% for all age groups above 55 years.

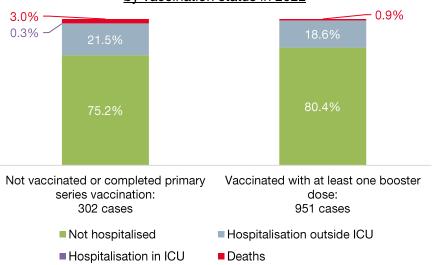
⁹ Vaccination coverage with at least one booster: Share of the population vaccinated with a third injection of a two-dose schedule or a second injection of a single-dose schedule



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1.2.3 Impact of vaccination on positive cases

Figure 18. Distribution of Covid-19 cases of 70 years old and over by vaccination status in 2022



Sources: Ministry of Health and Social Affairs, Monaco Statistics

In 2022, among residents aged 70 years and older, 3.0% of unvaccinated or who have a completed primary series schedule died, more than three times the number of those vaccinated with at least one booster dose (0.9%). As regards hospitalisations, these proportions are 21.5% and 18.6% respectively. Of the unvaccinated residents, 0.3% were hospitalised in ICU.



Mortality and birth rate

It is important to note that the deaths and births presented here are in the sense of the actual date of the event: a birth or death occurring at the end of the month but registered by the Town Hall at the beginning of the following month will be considered in the month in which the event occurred.

The data presented in this Observatory are therefore consolidated from one month to the next, which explains the slight differences that may appear in relation to previously published statistics.

The results presented should be interpreted with caution given the small size of the numbers studied.

2.1 Analysis of deaths

As a reminder, the cause of death is not available in the Civil Registry data.

The over/under-mortality corresponds to a two-sided confidence interval of the 2010-2019 average of deaths at the 99% threshold following a Student's law. By comparing it with the mortality observed between 2020 and 2022, it makes it possible to represent a significant excess or deficit of deaths compared with the normal.

Deaths in Monaco, all places of residence combined 2.1.1

These are all deaths registered in Monaco, regardless of place of residence.

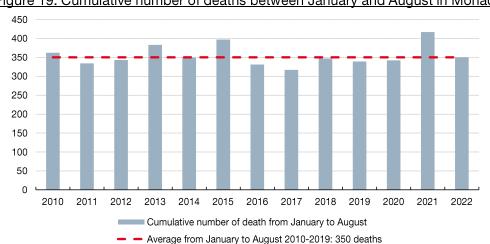
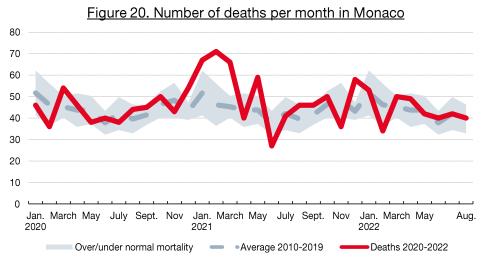


Figure 19. Cumulative number of deaths between January and August in Monaco

Sources: Town Hall, Monaco Statistics

From January to August 2022, 350 deaths were recorded in Monaco, which corresponds to the average from 2010 to 2019 and a decrease of 16.1% compared to the same period in 2021, which had 417 deaths.



Interpretation: in August 2022, 40 deaths were recorded in Monaco; this is equivalent to the average between 2010 and 2019, for a normal over/under mortality of between 33 and 46 deaths.

Sources: Town Hall, Monaco Statistics

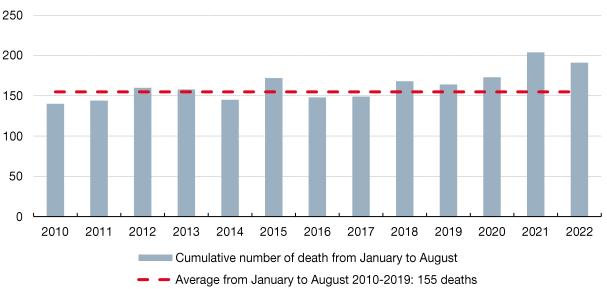
With 40 deaths, August 2022 is at its 2010-2019 average.



2.1.2 Deaths of residents in Monaco

These are only deaths of residents in Monaco. Deaths of residents outside Monaco are therefore not included.

Figure 21. Cumulative number of deaths of residents between January and August in Monaco

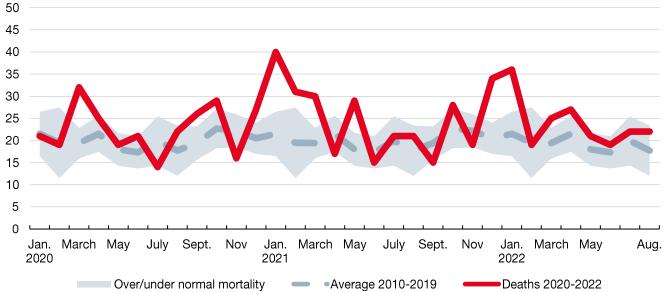


Sources: Town Hall, Monaco Statistics

In the first eight months of 2022, 191 resident deaths were recorded, 36 more than the 2010-2019 average. This is the second highest number of deaths in the first eight months of 2022 since 2005 (the beginning of the observation period).

Est number of deaths in the first eight months of 2022 since 2005 (the beginning of the observation period).

Figure 22. Monthly number of deaths of residents in Monaco



Interpretation: in August 2022, 22 resident deaths were recorded in Monaco compared to an average of 18 between 2010 and 2019, for a normal over/under mortality of between 12 and 23 deaths.

Sources: Town Hall, Monaco Statistics

In August 2022, the number of resident deaths (22) is above the 2010-2019 average (18) but remains within the normal over/under mortality range.



2.3 Analysis of births

The over/under birth rate is a two-sided confidence interval of the average 2010-2019 birth rate at the 99% threshold following a Student's law. By comparing it to the observed birth rate between 2020 and 2022, it allows a significant surplus or deficit of births to be represented in relation to the normal.

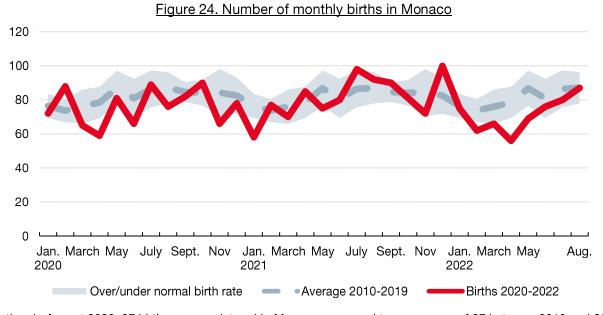
2.3.1 Births in Monaco, all places of residence combined

These are all births registered in Monaco, regardless of place of residence.

Figure 23. Cumulative number of births between January and August in Monaco Cumulative number of births from January to August Average from January to August 2010-2019: 646 births

Sources: Town Hall, Monaco Statistics

With 571 births recorded in Monaco between January and August 2022 compared with an average of 646 between 2010 and 2019, the birth rate is at its lowest level since 2005.



Interpretation: in August 2022, 87 births were registered in Monaco compared to an average of 87 between 2010 and 2019, for a normal over/under birth rate of between 78 and 96 births.

Sources: Town Hall, Monaco Statistics

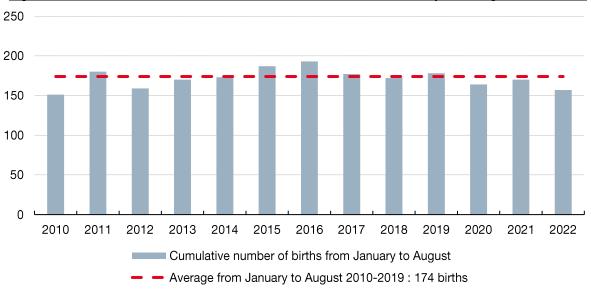
While during the first 7 months of 2022, the number of births in Monaco was overall well below the 2010-2019 average, in August 87 births were registered, exactly the 2010-2019 average.



2.3.2 Births of residents in Monaco

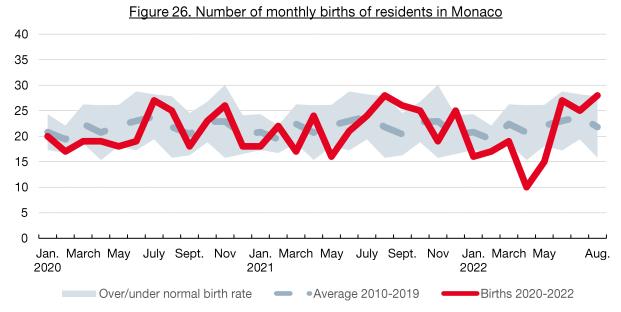
These are only births to residents of Monaco (resident father and/or mother).

Figure 25. Cumulative number of births of residents between January and August in Monaco



Sources: Town Hall, Monaco Statistics

As of 31 August, 157 resident births were registered in 2022, 17 fewer than the 2010-2019 average.



Interpretation: in August 2022, 28 resident births were recorded in Monaco compared to an average of 22 between 2010 and 2019, for a normal over/under birth rate of between 16 and 28 births.

Sources: Town Hall, Monaco Statistics

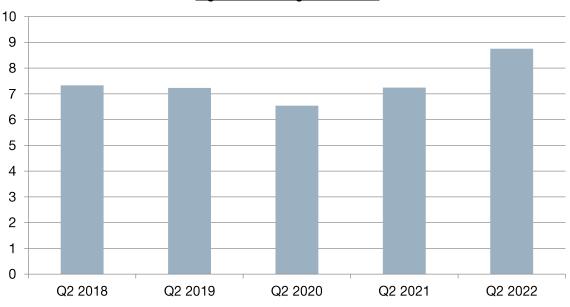
After being below the normal under-birth rate for the first 5 months of 2022, the number of resident births exceeds the 2010-2019 average since June and corresponds to the upper limit of the normal over/under birth rate interval (28) in August 2022.



3 Economy

3.1 Revenue¹⁰

Figure 27. Change in revenue



Unit: billion euros

Sources: Department of Tax Services, Monaco Statistics

At more than €8.7 billion, excluding Financial and insurance activities, Monegasque revenue reached an unprecedented level in the first half of 2022. It exceeded by €1.5 billion (+20.8%) its level of the previous year at the same period, as well as those of previous years, including pre-pandemic years.

Tableau 6. Change in revenue by MES

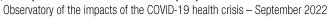
	Q2 2019	Q2 2021	Q2 2022	Var 21/22	Var 19-22
Financial and insurance activities	450.8	392.8	476.1	21.2%	7
Wholesale trade	1,128.1	1,096.0	1,277.3	16.5%	7
Retail trade	343.1	396.4	441.9	11.5%	7
Accommodation and food service activities	161.7	70.7	125.3	77.3%	7
Manufacturing, mining and quarrying, and others industries	213.3	195.9	215.1	9.8%	7
Real Estate activities	201.9	150.1	163.6	9.0%	7
Construction	392.4	469.2	564.4	20.3%	7
Transportation and storage	129.8	122.8	152.7	24.4%	7
Scientific and technical activities, administrative and support service activities	546.0	580.5	662.5	14.1%	7
Other service activities	159.2	148.2	162.9	10.0%	7
Information and communication	151.8	171.0	169.9	-0.7%	7
Public administration, education, human health and social work activities	26.8	27.1	25.7	-5.1%	7
Total	3,454.3	3,427.9	3,961.3	15.6%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

All Major Economic Sector (MES) show growth compared to 2021, and only two of them have not returned to their 2019 level.

Total revenue does not include that derived from Financial and insurance activities. As revenue is less relevant an indicator than for other sectors, it is presented for indicative purpose.



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¹⁰ Calculated on the basis of VAT declarations during the submission period.

3.1.1 Sectors increasing compared to 2021

NAF group of Wholesale trade	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Wholesale on a fee or contract basis	959.5	1,345.4	385.9	40.2%	7
Wholesale of food, beverages and tobacco	369.9	533.3	163.4	44.2%	7
Wholesale of household goods	424.6	471.3	46.7	11.0%	7
Other specialised wholesale	217.3	302.4	85.1	39.2%	7
Wholesale of other machinery, equipment and supplies	204.9	222.3	17.4	8.5%	7
Non-specialised wholesale trade	27.5	35.6	8.1	29.6%	7
Wholesale of information and communication equipment	23.3	25.0	1.7	7.3%	7
Wholesale of agricultural raw materials and live animals	0.8	0.9	0.1	18.6%	7
Grand total	2,227.7	2,936.2	708.6	31.8%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

Wholesale trade revenue, the spearhead of the Principality, accounts for more than a third of the overall result and grew by €708.6 million over the period (+31.8%). This is mainly the result of Wholesale on a fee or contract basis (+€385.9 million) and in particular the trading of fuels, ores, metals and industrial chemicals (+€137.8 million). Wholesale on a fee is also responsible for more than half of the sector's growth compared to 2019 (+€624.6 million, or +27.0%).

NAF division of Accommodation and food service activities	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Accommodation	132.9	275.0	142.1	107.0%	7
Food and beverage service activities	61.0	107.7	46.7	76.5%	7
Grand total	193.9	382.7	188.9	97.4%	71

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

Accommodation and food service activities almost doubled its revenue in the first half of 2021 (+€188.9 million, or +97.4%). The sector most affected by the health crisis, it is now close to its 2019 level for the same period (€382.7 million compared to €385.8 million).

NAF division of Construction	Q2 2021	Q2 2022	Var 21/22	% \	/ar 19-22
Specialised construction activities	704.5	817.0	112.6	16.0%	7
Construction of buildings	275.9	330.1	54.1	19.6%	7
Civil engineering	88.6	42.8	-45.8	-51.7%	7
Grand total	1,069.0	1,189.9	120.8	11.3%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

Construction, up by €120.8 million, continues to grow, notably through the Construction of residential and non-residential buildings and Masonery works and building structural works. With the preparatory work for the major Monegasque construction projects now completed, this explains the loss of revenue in Civil engineering, to the benefit of Specialised construction activities (masonry, finishing work, etc.). Compared to 2019, this MES also shows significant growth (+€289.3 million, or +32.1%).

NAF group of Retail trade	Q2 2021	Q2 2022	Var 21/22	% \	/ar 19-22
Retail sale of other goods in specialised stores	352.9	419.6	66.7	18.9%	7
Sale of motor vehicles	278.2	307.4	29.2	10.5%	7
Retail sale in non-specialised stores	88.1	86.3	-1.9	-2.1%	7
Retail trade not in stores, stalls or markets	33.6	57.2	23.6	70.3%	7
Retail sale of information and communication equipment in specialised stores	22.3	22.1	-0.2	-1.0%	7
Retail sale of other household equipment in specialised stores	25.8	22.0	-3.8	-14.7%	7
Retail sale of food, beverages and tobacco in specialised stores	13.4	17.1	3.7	27.7%	7
Sale of motor vehicle parts and accessories	17.2	14.5	-2.7	-15.9%	7
Retail sale of cultural and recreation goods in specialised stores	14.2	12.9	-1.2	-8.6%	7
Retail sale of automotive fuel in specialised stores	7.8	10.3	2.5	31.8%	7
Maintenance and repair of motor vehicles	3.8	4.1	0.3	8.1%	7
Retail sale via stalls and markets	3.5	3.1	-0.3	-9.4%	7
Sale, maintenance and repair of motorcycles and related parts and accessories	2.2	1.9	-0.3	-13.9%	7
Grand total	863.0	978.6	115.6	13.4%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

Retail trade increased by €115.6 million (+13.4%) thanks to the jewellery, car and clothing trade. It is also up almost 30% on 2019 (+€220.3 million) and all its NAF groups have revenue above their pre-pandemic levels.



NAF division of Other service activities	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Sports activities and amusement and recreation activities	154.6	203.9	49.3	31.9%	7
Gambling and betting activities	87.4	117.5	30.1	34.5%	7
Creative, arts and entertainment activities	42.7	64.6	22.0	51.5%	7
Other personal service activities	20.8	26.9	6.1	29.2%	7
Activities of membership organisations	13.9	15.2	1.4	9.8%	7
Repair of computers and personal and household goods	2.5	2.3	-0.2	-8.4%	7
Libraries, archives, museums and other cultural activities	1.1	1.1	0.0	-0.1%	7
Grand total	323.0	431.6	108.6	33.6%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

Led mainly by Sports activities and Gambling and betting activities, revenue from Other service activities increased (+€14.8 million, or +10.0%) and is now ahead of its 2019 result (+€51.3 million, or +13.5%).

NAF group of Transportation and storage	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Support activities for transportation	169.8	212.4	42.5	25.0%	7
Sea and coastal freight water transport	19.9	45.1	25.1	126.2%	7
Other passenger land transport	16.0	29.0	13.0	81.3%	7
Freight transport by road and removal services	25.4	27.5	2.1	8.4%	7
Sea and coastal passenger water transport	15.4	24.1	8.7	56.5%	7
Passenger air transport	9.4	8.2	-1.2	-13.0%	7
Other postal and courier activities	2.5	2.4	-0.1	-4.2%	7
Warehousing and storage	0.7	0.6	-0.1	-15.9%	7
Grand total	259.2	349.2	90.1	34.8%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

After slight declines over the last two years, Transportation and storage earnings are on the rise again (+€90.1 million or +34.8%), driven in particular by Support activities for transportation and more specifically by Chartering and transportation organisation (+€34.8 million, or +27.5%). This also enabled the sector to largely surpass its pre-crisis level (+€84.9 million, or +32.1%).

NAF division of Scientif. and tech. act., admin. and support service act.	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Other professional, scientific and technical activities	450.8	392.4	-58.3	-12.9%	7
Activities of head offices; management consultancy activities	195.4	282.2	86.8	44.4%	7
Architectural and engineering activities; technical testing and analysis	111.4	125.1	13.6	12.2%	7
Employment activities	105.9	121.7	15.7	14.9%	7
Rental and leasing activities	114.0	107.1	-6.9	-6.1%	7
Office administrative, office support and other business support activities	45.5	75.2	29.7	65.3%	9
Legal and accounting activities	47.6	50.6	2.9	6.1%	7
Services to buildings and landscape activities	27.8	29.4	1.6	5.7%	7
Travel agency, tour operator and other reservation service and related activities	40.5	27.9	-12.6	-31.1%	9
Advertising and market research	32.9	27.5	-5.3	-16.2%	7
Security and investigation activities	10.2	11.8	1.6	15.8%	7
Scientific research and development	3.9	5.0	1.1	29.4%	7
Veterinary activities	0.5	0.6	0.1	11.9%	7
Grand total	1,186.4	1,256.4	70.0	5.9%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

At the end of the second quarter, Business and other management consultancy activities (+€70.8 million) alone lifted Scientific and technical activities, administrative and support service activities (+€70.0 million, or +5.9%), and offset the loss of momentum in quantity surveyors (-€90.2 million). Nevertheless, it is the latter alone that allow the sector to be well ahead of its pre-crisis revenue (+€231.4 million, or +22.6%).

NAF code of Real Estate activities	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Buying and selling of own real estate	131.6	163.4	31.8	24.2%	7
Real estate agencies	73.4	94.7	21.3	29.0%	7
Letting of land and other own property	86.6	92.4	5.8	6.7%	7
Letting of dwellings	25.0	19.4	-5.6	-22.3%	7
Management of residential building and other real estate on a fee or contract ba	11.4	3.9	-7.5	-65.6%	7
Juridical arrangement of immovable property management	0.4	0.5	0.1	40.9%	7
Grand total	328.3	374.4	46.1	14.0%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics



After a significant decline in 2021, the result of Real Estate activities is back on the rise with +€46.1 million, or +14.0%. However, this is not enough for it to reach €430.1 million, its 2019 level.

NAF division of Manuf., mining and quarrying, and others industries	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Manufacture of rubber and plastic products	122.4	137.8	15.3	12.5%	7
Manufacture of chemicals and chemical products	66.3	72.8	6.5	9.8%	7
Electricity, gas, steam and air conditioning supply	39.2	44.5	5.2	13.4%	7
Manufacture of basic pharmaceutical products and pharmaceutical preparations	25.1	25.9	0.8	3.1%	7
Manufacture of wearing apparel	31.4	28.7	-2.7	-8.6%	71
Waste collection, treatment and disposal activities; materials recovery	16.1	18.3	2.2	14.0%	7
Repair and installation of machinery and equipment	13.8	18.1	4.3	31.1%	7
Manufacture of other non-metallic mineral products	16.1	17.1	1.1	6.7%	7
Other NAF divisions	78.3	86.2	7.9	10.1%	7
Grand total	408.6	449.3	40.7	10.0%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

Supported by the Manufacture of plastics products (+€15.3 million), industry grew by €40.7 million (+10.0%). Only the Manufacture of wearing apparel (-€3.3 million) and the Waste collection, treatment and disposal activities; materials recovery (-€0.5 million) remain below their pre-pandemic results.

NAF division of Information and communication	Q2 2021	Q2 2022	Var 21/22	% \	/ar 19-22
Telecommunications	118.1	126.8	8.8	7.4%	7
Motion picture, video and television programme production, sound recording and music publishing activities	99.7	108.6	8.9	8.9%	7
Computer programming, consultancy and related activities	73.7	81.0	7.3	9.9%	7
Publishing activities	28.0	18.5	-9.5	-34.1%	7
Information service activities	9.5	9.2	-0.3	-3.2%	7
Programming and broadcasting activities	2.8	3.1	0.3	11.5%	7
Grand total	331.8	347.2	15.4	4.6%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

NAF division of Public admin., educ., human health and social work act.	Q2 2021	Q2 2022	Var 21/22	%	Var 19-22
Human health activities	41.1	45.5	4.4	10.6%	7
Education	5.0	5.5	0.5	10.3%	7
Social work activities without accommodation	3.5	2.9	-0.6	-17.4%	7
Residential care activities	0.8	0.7	-0.1	-17.9%	7
Public administration and defence; compulsory social security	2.6	0.0	-2.6	-99.4%	7
Grand total	53.1	54.6	1.5	2.8%	7

Unit: million euros

Sources: Department of Tax Services, Monaco Statistics

Although more modest, Information and communication (+€15.4 million, i.e. +4.6%) and Public administration, education, human health and social work activities (+€1.5 million, i.e. +2.8%) also show growth in the middle of the year 2022, and both have higher revenues than in 2019.

3.1.2 Sectors decreasing compared to 2021

In the first half of 2022, no MES has a result lower than 2021.



3.2 Creations and strike-off establishments

3.2.1 Establishments created

The number of establishments created fell sharply in the second quarter of 2022 compared to the previous year (358 compared to 437 or -18.1%).

100 90 80 70 60 2021 50 2022 40 30 20 10 0 February January March April May June

Figure 28. Number of monthly creations in 2021 and 2022

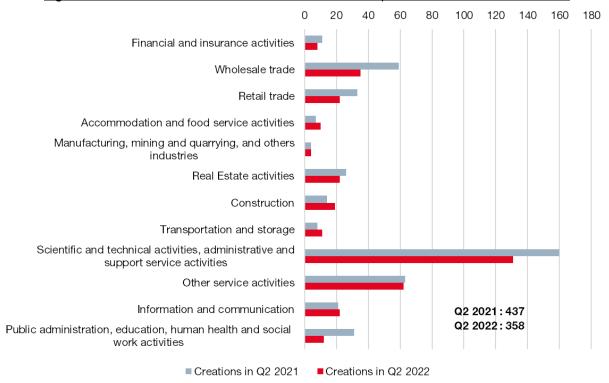
Sources: Business Development Agency, Monaco Statistics

While 27 fewer establishments were created in the first quarter than in 2021, the second quarter saw a drop of 52. The month of April has the largest drop with -28 new establishments. Overall, 79 fewer establishments were created compared to the same period last year.



3.2.2 Business started by Major Economic Sector (MES)

Figure 29. Cumulative number of new establishments per MES in Q2 2021 and 2022



Sources: Business Development Agency, Monaco Statistics

In the second quarter, Scientific and technical activities, administrative and support services and Other service activities accounted for almost 54% of the establishments created (36.6% and 17.3% respectively), i.e. 193 entities out of a total of 358.

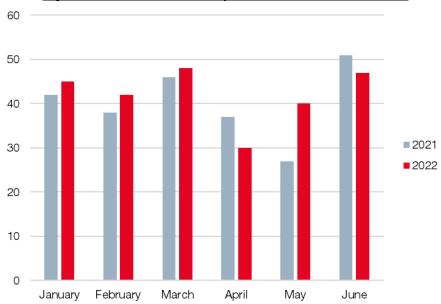
While Scientific and technical activities, administrative and support services recorded the newest establishments in relation to all MES, it is also the sector that lost the most establishments compared to the previous year (-29 creations). It is followed by Wholesale trade (-24), Administration, health and social work (-19) and Retail trade (-11). Manufacturing, mining and quarrying and other industries are stable (4 new establishments in 2Q 2021 and the same in 2Q 2022), while Construction has the largest difference in new establishments (+5), followed by Transport & storage and Accommodation & food services (+3 new establishments each).



3.2.3 Permanent closure of establishments

Strike-offs increased slightly this quarter compared to last year (+4.6%).

Figure 30. Number of monthly strike-offs in 2021 and 2022



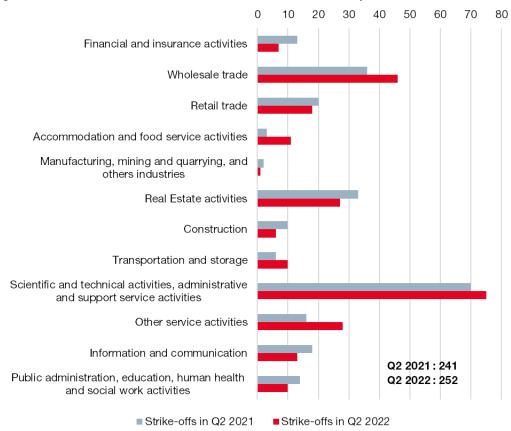
Sources: Business Development Agency, Monaco Statistics

In the second quarter, 252 entities were permanently deregistered, an increase of 11 compared with the same period in 2021. April recorded 7 fewer strike-offs while May had the most (+13) compared to the previous year.



3.2.4 Permanent closures of establishments by MES

Figure 31. Cumulative number of establishment strike-off by MES in Q2 2021 and 2022



Sources: Business Development Agency, Monaco Statistics

In the second quarter, four MES account for almost 70% of the establishments permanently deregistered: Scientific and technical activities, administrative and support services (29.8%), Wholesale trade (18.3%), Other services (11.1%) and Real estate (10.7%), i.e., 176 entities out of the 252 deregistered in total.

Other services and Wholesale trade register the most de-listings compared to the same period in 2021 (+12 and +10 respectively). Conversely, Financial and insurance activities and Real estate activities have the lowest number of strike-offs with -6 strike-offs each.



3.2.5 Balance (business started minus permanent closures)

Table 7. Balance creations and strike-offs in the second quarter of 2022

	Creations in Q2 2022	Strike-offs in Q2 2022	Balance
Financial and insurance activities	8	7	1
Wholesale trade	35	46	-11
Retail trade	22	18	4
Accommodation and food service activities	10	11	-1
Manufacturing, mining and quarrying, and others industries	4	1	3
Real Estate activities	22	27	-5
Construction	19	6	13
Transportation and storage	11	10	1
Scientific and technical activities, administrative and support service activities	131	75	56
Other service activities	62	28	34
Information and communication	22	13	9
Public administration, education, human health and social work activities	12	10	2
Total	358	252	106

Sources: Business Development Agency, Monaco Statistics

The balance of permanent creations and strike-offs increases from +196 in the second quarter of 2021 to +106 in the same period in 2022. It reaches +56 in Scientific and technical activities, administrative and support services, +34 in Other services activities and +13 in Construction. It is negative in 3 MES: Wholesale Trade (-11), Real Estate (-5) and Accommodation & Food Services (-1).



Hospitality 3.3

Tourism indicators continue to rise in the second quarter of 2022. However, they remain lower than in the same period in 2019.

Figure 32. Monthly change in occupancy (all hotels) between 2019 and 2022 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% January March May **2019 2020 2021 2022**

Note: year-round residents of hotels in the Principality are not included in the monthly statistics. Sources: Tourist and Convention Authority, Monaco Statistics

In the second quarter of 2022, the occupancy rate continued to rise as it did in the first quarter. In April it was 60.5%, i.e., three times higher than in the same period the previous year. It exceeded 70% in May and June, whereas it was between 33 and 36% in May and June 2021. Furthermore, May is the only month that has almost managed to return to its 2019 level (73.0% compared to 74.0% in 2019) thanks to the flagship event in the Principality, the Formula 1 Grand Prix.



Table 8. Change in hotel occupancy since 2019

Change in hotel occupancy	2019	2020	2021	2022
Q2	63.8%	23.5%	25.3%	52.3%

Sources: Tourist and Convention Authority, Monaco Statistics

Overall, for all hotel categories combined, the occupancy rate in the second quarter of 2019 was 63.8%. In 2020, it falls to 23.5% and then to 25.3% the following year. In 2022, the occupancy rate is 52.3%, double that of the previous year. However, the pre-crisis level is still not reached.

80% 70% 60% 50% 40% 30% 20% 10% 0% Q2 2019 Q2 2021 Q2 2020 Q2 2022

Figure 33. Change in hotel occupancy rates by category since 2019

Sources: Tourist and Convention Authority, Monaco Statistics

■ 2 and 3 star accomodation

In the second guarter of 2019, the hotel occupancy rate by category is high and ranges between 55% and 69%. In 2020, at the same period, the occupancy rate falls to between 20% and 25%. In 2021 it rises very slightly to between 22% and 34%. This year it is significantly higher than in the previous two years with an occupancy rate between 49% and 59%.

4 star accomodation

■5 star accomodation

The occupancy rate is up for all categories in the second quarter of 2022. It is 59.5% for 2 and 3 star accommodation, 49.8% for 4 star accommodation and 52.7% for 5 star accommodation. It has not yet returned to its 2019 level for all categories combined, although it is approaching its pre-crisis level for 5-star accommodation (52.7% compared with 55.7%).



4 Employment

The statistics relating to private sector employment are taken from the data provided to Monaco Statistics by the Caisses Sociales de Monaco.

As the Total Temporary Layoff measure (CTTR) ended on 31 March 2022, only changes in employment and hours worked are presented for the second quarter.

4.1 Evolution of private sector jobs

In the following analyses, the notion of "active" jobs is used to distinguish, within total employment, the jobs held by employees who are temporarily unemployed. Thus, active jobs correspond to those for which there is at least one hour worked during the month in question.

The total number of jobs includes all jobs, including those on CTTR (whether partial or total), in order to visualise the deadweight loss of jobs over the period.

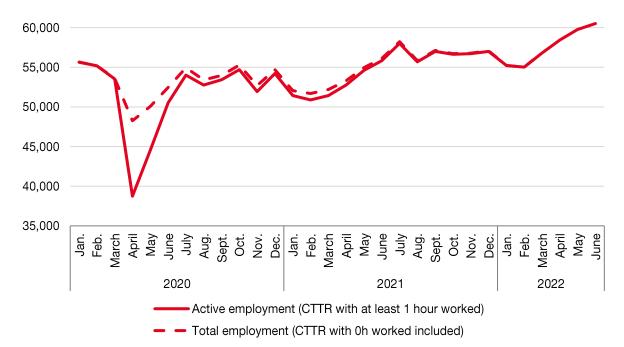


Figure 34. Evolution of the number of private sector jobs

Interpretation: in April 2020, the private sector has 48,234 jobs, of which 38,808 are considered 'active' (at least one hour worked). Note: the Total Temporary Layoff measure (CTTR) ended on 31 March 2022.

Sources: Caisses Sociales de Monaco, Monaco Statistics

Due to the measures in place in 2020, notably lockdown, the results for 2021 and the previous year must be compared with caution.

After returning to and then exceeding its pre-crisis level at the end of 2021, the number of jobs in the private sector rises above the 60,000 mark for the first time at the end of the first half of 2022, with almost 4,500 additional jobs compared to the previous year (an 8% increase over the period). This result is also higher than in the second quarter of 2019.

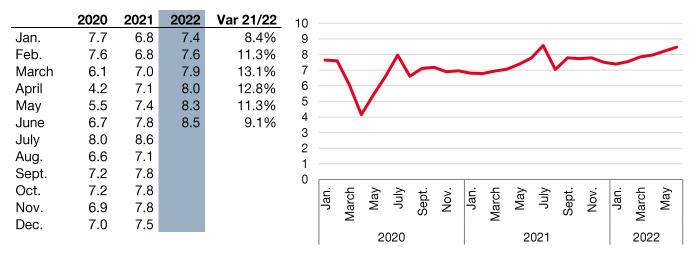
At the same time, the CTTR scheme, which expired on 31 March 2022, therefore no longer covers any jobs at the end of the second quarter.



4.2 Evolution of hours worked in the private sector

The comparison of hours worked in the private sector between 2020 and 2021 must again be done taking into account the different economic and health situations.

Table 9. / Figure 35. Monthly evolution of the number of hours worked in the private sector



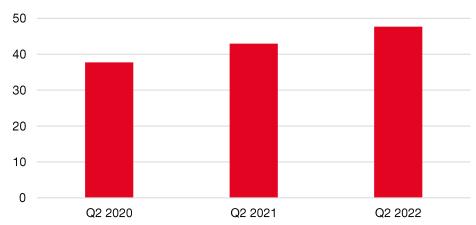
Unit: million hours

Interpretation: in June 2022, the number of hours worked is 8.5 million, compared to 7.8 million in June 2021 (i.e. a change of +9.1% between the months of the two years).

Sources: Caisses Sociales de Monaco, Monaco Statistics

The monthly volume of hours worked increased from March 2021 onwards, exceeding 7 million each subsequent month. By the end of the year, the number of hours worked approaches 8 million, returning to levels equivalent to those of 2019, reducing the gap created by two years of pandemic. This upturn continues into 2022, with each month in the first half of the year recording more hours worked than in 2021.

Figure 36. Change in the number of hours worked in the second quarter



Unit: million hours

Interpretation: In the 2nd quarter of 2022, the cumulative number of hours worked is 47.7 million, compared to 42.9 million in the 2nd quarter of 2021.

Sources: Caisses Sociales de Monaco, Monaco Statistics

The volume of hours worked in the private sector exceeded 47 million at the end of the quarter, up by almost 5 million compared to the previous year (+10.9%).



Observatory of the impacts of the COVID-19 health crisis

September 2022

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