World Health Organization

COVID-19 Weekly Epidemiological Update

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In this edition:

Global overview
Data as of 15 May 2022

Globally, after the continued decline observed since the end of March 2022, new weekly COVID-19 cases have stabilized during the reporting period (9 May to 15 May 2022), with over 3.6 million cases reported, a 1% increase as compared to the previous week (figure 1). On the other hand, the number of new weekly deaths continues to decline, with over 9000 fatalities reported during the same period, representing a 21% decrease as compared to the previous week.

At the regional level, the number of new weekly cases increased in the Eastern Mediterranean Region (+63%), in the Region of the Americas (+26%), in the Western Pacific Region (+14%) and in the African Region (+6%) and decreased in the remaining two regions. The number of new weekly deaths decreased in all the regions except the African Region, where a 48% increase in new weekly deaths was reported.

As of 15 May 2022, over 518 million confirmed cases and over six million deaths have been reported globally.

These trends should be interpreted with caution as several countries have been progressively changing COVID-19 testing strategies, resulting in lower overall numbers of tests performed and consequently lower numbers of cases detected.

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 15 May 2022**
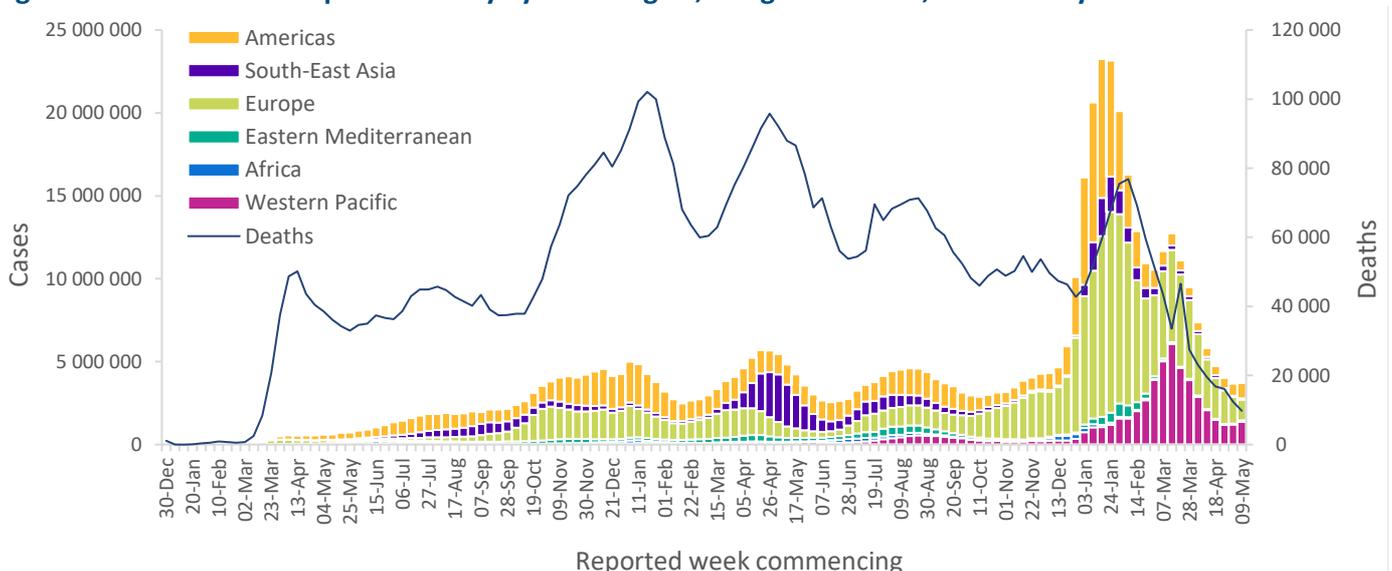
**See *Annex 1: Data, table, and figure notes*

At the country level, the highest number of new weekly cases were reported from the United States of America (605 547 new cases; +33%), China (389 901 new cases; +94%), Germany (376 959 new cases; -20%), Australia (332 451 new cases; -23%), and Japan (279 620 new cases; +54%).

The highest number of new weekly deaths were reported from the United States of America (1849 new deaths; -27%), Italy (765 new deaths; -16%), the Russian Federation (724 new deaths; -21%), Brazil (689 new deaths; +1%), and France (590 new deaths; -19%).

This week, state media in the Democratic People's Republic of Korea reported a COVID-19 outbreak for the first time.

Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 15 May 2022**

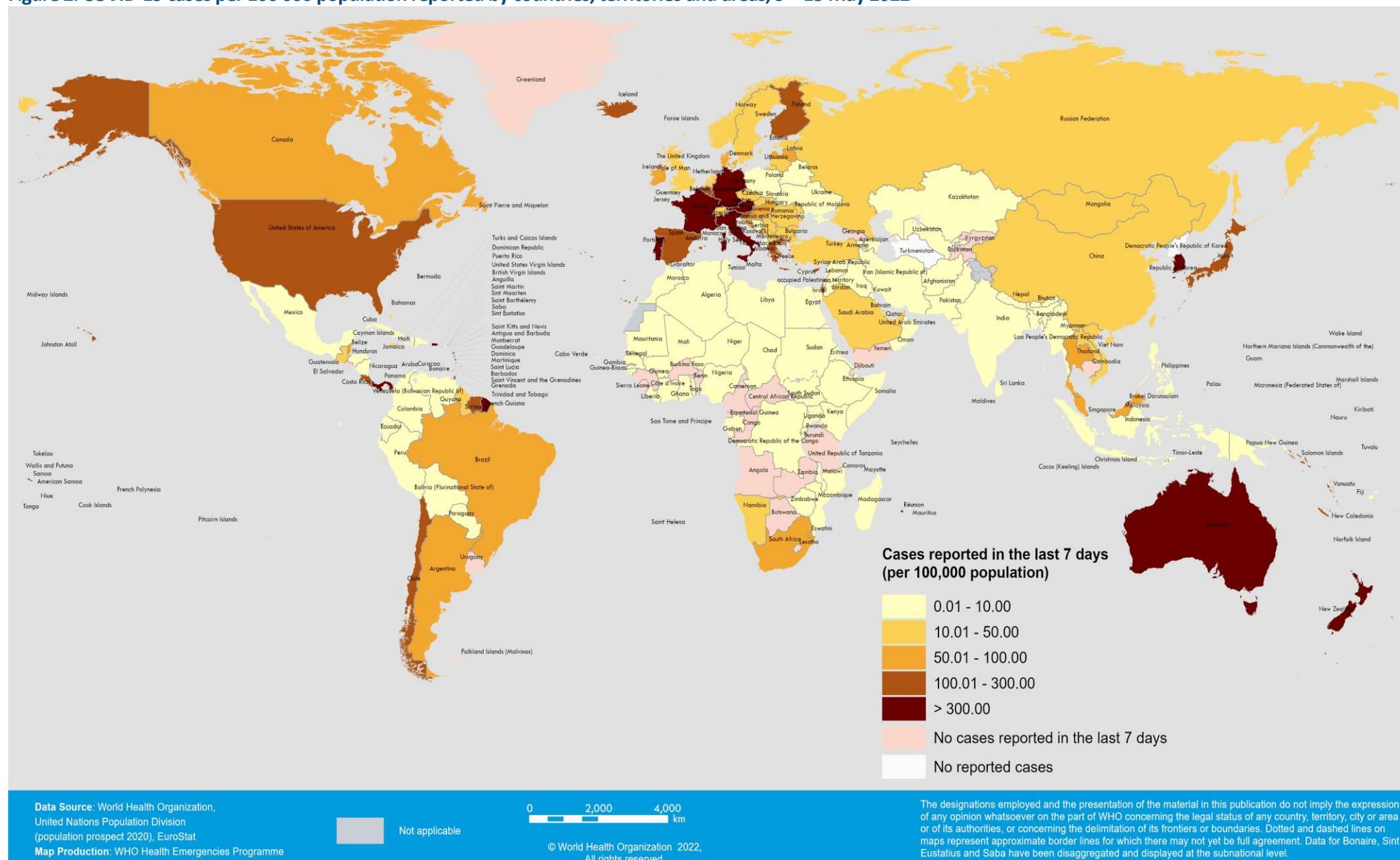| WHO Region	New cases in last 7 days (%)	Change in new cases in last 7 days *	Cumulative cases (%)	New deaths in last 7 days (%)	Change in new deaths in last 7 days *	Cumulative deaths (%)
Western Pacific	1 366 720 (37%)	14%	57 213 690 (11%)	1 267 (13%)	-10%	227 703 (4%)
Europe	1 266 355 (34%)	-20%	218 195 663 (42%)	3 951 (40%)	-29%	2 002 128 (32%)
Americas	912 887 (25%)	26%	154 815 697 (30%)	3 583 (37%)	-16%	2 733 894 (44%)
South-East Asia	71 347 (2%)	-19%	58 017 061 (11%)	614 (6%)	-24%	787 618 (13%)
Africa	63 149 (2%)	6%	8 897 180 (2%)	258 (3%)	48%	172 091 (3%)
Eastern Mediterranean	19 502 (1%)	63%	21 733 981 (4%)	133 (1%)	-20%	342 544 (5%)
Global	**3 699 960 (100%)**	**1%**	**518 874 036 (100%)**	**9 806 (100%)**	**-21%**	**6 265 991 (100%)**

Percent change in the number of newly confirmed cases/deaths in the past seven days, compared to seven days prior
**See Annex 1: Data, table, and figure notes

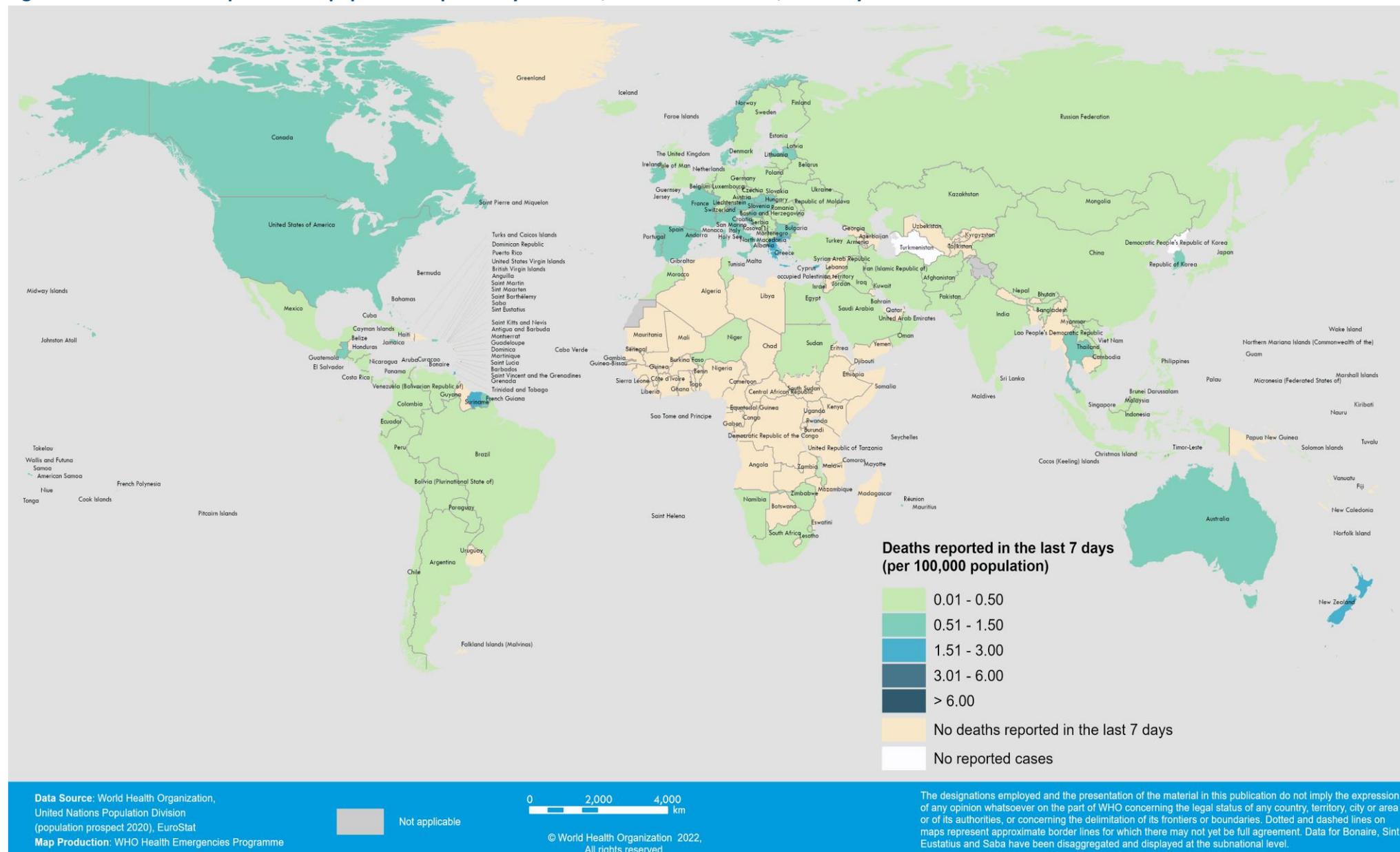For the latest data and other updates on COVID-19, please see:
- WHO COVID-19 Dashboard
- WHO COVID-19 Weekly Operational Update and previous editions of the Weekly Epidemiological Update

Figure 2. COVID-19 cases per 100 000 population reported by countries, territories and areas, 9 – 15 May 2022*

Cases reported in the last 7 days
(per 100,000 population)

- 0.01 - 10.00
- 10.01 - 50.00
- 50.01 - 100.00
- 100.01 - 300.00
- > 300.00
- No cases reported in the last 7 days
- No reported cases

Not applicable

0   2,000   4,000
km

See *Annex 1: Data, table, and figure notes*

Figure 3. COVID-19 deaths per 100 000 population reported by countries, territories and areas, 9-15 May 2022*

Deaths reported in the last 7 days (per 100,000 population)

- 0.01 - 0.50
- 0.51 - 1.50
- 1.51 - 3.00
- 3.01 - 6.00
- > 6.00
- No deaths reported in the last 7 days
- No reported cases

Not applicable

Data Source: World Health Organization, United Nations Population Division (population prospect 2020), EuroStat
Map Production: WHO Health Emergencies Programme

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Data for Bonaire, Sint Eustatius and Saba have been disaggregated and displayed at the subnational level.

**See *Annex 1: Data, table, and figure notes*

Special Focus: Update on SARS-CoV-2 variants of interest and variants of concern

WHO, in collaboration with national authorities, institutions and researchers, routinely assesses if variants of SARS-CoV-2 alter transmission or disease characteristics, or impact the effectiveness of vaccines, therapeutics, diagnostics or public health and social measures (PHSM) applied to control disease spread. Potential variants of concern (VOCs), variants of interest (VOIs) or variants under monitoring (VUMs) are regularly assessed based on the risk posed to global public health.

The classifications of variants will be revised as needed to reflect the continuous evolution of circulating variants and their changing epidemiology. Criteria for variant classification, and the lists of currently circulating and previously circulating VOCs, VOIs and VUMs, are available on the WHO Tracking SARS-CoV-2 variants website. National authorities may choose to designate other variants and are strongly encouraged to investigate and report newly emerging variants and their impact.

Geographic spread and prevalence of VOCs

The Omicron VOC is the dominant variant circulating globally, accounting for nearly all sequences reported to GISAID. Among Omicron, BA.2 and its descendent lineages (i.e., BA.2.X) are the dominant variants, comprising 97% of all sequences submitted to GISAID from the week of 1 May 2022. Within the last 30 days, BA.1 and its descendent lineages (i.e., BA.1.X), BA.3 and the Delta variant have further declined in prevalence, falling below a global prevalence of <1%.

In recent weeks, Omicron descendent lineages BA.4, BA.5 and BA.2.12.1 (all three with characteristic mutations in the spike region and locus S: L452) have increased in prevalence within the countries in which they were first detected (South Africa and the United States of America, respectively) and spread to additional countries. To date, BA.4 has been detected in 20 countries (1 333 sequences submitted to GISAID), BA.5 has been detected in 19 countries (757 sequences), and BA.2.12.1 has been detected in 38 countries (21 711 sequences). At the global level, BA.4 and BA.5 account for 0.5% and 0.4% of all circulating variants, respectively. Lineage BA.2.12.1 accounts for 10% among BA.2 lineages globally as of 24 April 2022.[i]

In South Africa, BA.4 and BA.5 appear to be driving an increase in the numbers of cases, accounting for 89% and 7% of sequences submitted as of 13 May 2022, respectively.[1] Since late April, South Africa has also reported a moderate increase in hospital admissions, although this rise has been significantly lower than that observed during the emergence of Omicron in late 2021. Similarly, the first indications of a rise in the number of cases have been observed in Portugal, which recently confirmed circulation of BA.5. Hospital and ICU admissions remain stable in Portugal as of 13 May. In the United States of America, where the prevalence of BA.2.12.1 is 48%, the numbers of cases and hospitalizations have been rising since April 2022, with a 33% increase in cases and 19% increase in admissions during the week of 9 May, respectively, as compared to the previous week. [2]

Preliminary modelling by WHO based on sequences submitted to GISAID indicates that BA.4, BA.5 and BA.2.12.1 have a higher growth rate than other circulating variants, such as Delta, BA.1 and BA.2, that may be attributable to increased immune evasion and/or intrinsic transmissibility.

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[i] Data for the last three weeks (25 April to 17 May 2022) were incomplete due to delays in submission and, thus, were excluded from the analysis.

BA.4, BA.5, and BA.2.12.1 remain lineages monitored by WHO under the umbrella of the Omicron VOC given their current low prevalence at the global level and the insufficient evidence of a change in diseases characteristics, such as severity, associated with these Omicron lineages.

Additional resources
- [Tracking SARS-CoV-2 Variants](#)
- [COVID-19 new variants: Knowledge gaps and research](#)
- [Genomic sequencing of SARS-CoV-2: a guide to implementation for maximum impact on public health](#)
- [Considerations for implementing and adjusting public health and social measures in the context of COVID-19](#)
- [VIEW-hub: repository for the most relevant and recent vaccine data](#)
- [WHO Statement on Omicron sublineage BA.2](#)

Special Focus: Environmental surveillance for SARS-CoV-2 to complement public health surveillance

The management of the COVID-19 pandemic continues to be challenging, for a number of reasons, including the evolution of the virus and the impact of VOCs on control measures.

The primary source of evidence about the incidence of SARS-CoV-2 infection in any geographic location is the testing of upper respiratory tract samples. However, in an increasing number of settings around the world, routine COVID-19 surveillance programmes have supplemented diagnostic testing with community-scale environmental surveillance (ES) of SARS-CoV-2 in wastewater samples.

Prior to the COVID-19 pandemic, ES to detect circulating pathogens in wastewater had been used extensively in public health, particularly for poliovirus[3], typhoid[4,5] and more recently antimicrobial resistance (AMR).[6]

On 14 April 2022, WHO released interim guidance on Environmental surveillance for SARS-COV-2 to complement public health surveillance in order to provide Member States with advice on how to establish an effective ES programme for SARS-CoV-2. This includes the minimum requirements for planning and coordinating ES in different resource settings and good practice for data collection, analysis, interpretation and communication.

Applications of environmental surveillance for SARS-CoV-2

Leadership by the public health agencies responsible for the overall COVID-19 response is critical for SARS-COV-2 ES programmes. Health authorities in charge of infectious disease surveillance should have the responsibility to design ES for SARS-CoV-2, coordinate interpretation and communicate findings.

At their most basic, SARS-CoV-2 ES programmes indicate whether, at the level of the community, the virus is above (present) or below (absent) the limits of detection of the testing methods used. This is particularly relevant in zero- or low-prevalence settings to confirm the absence of virus circulation or warn about the (re)emergence of the virus. Most ES programmes in high prevalence settings involve quantification of results to identify trends in SARS-CoV-2 infection in the community. In the most advanced settings, SARS-COV-2 ES programmes can detect emerging variants and monitor circulating variants. These findings can then help target SARS-CoV-2 responses and interventions.

SARS-CoV-2 ES programmes add value by:
- Early warning signalling of SARS-CoV-2 (re)emergence approximately seven days in advance of clinical case detection, including in areas thought to be free of SARS-CoV-2.
- Supporting risk communication to help promote good behaviours – detection of SARS-COV-2 in wastewater can be used to remind the community that the virus is circulating, encourage people to seek diagnostic testing, and reduce complacency about control interventions, such as masking, distancing and vaccination.
- Enabling cost-effective targeting of public health surveillance – hotspot areas with higher SARS-CoV-2 ES signals can be prioritized for the deployment of scarce diagnostic testing resources and implementation of localized restrictions.
- Allowing targeted surveillance for early warning of circulation in vulnerable or high-risk settings, isolated communities, transport vessels, and multi-day events and gatherings.

- Identifying known variants of interest or concern and detecting the emergence of novel variants (albeit challenging in sewage samples).
- Enabling retrospective analysis through banking of samples.

Key considerations for planning and coordination

The components of a wastewater surveillance programme and the requirements for establishing one that is credible and effective include:
- Public health agencies and policymakers who frame the questions that the programme needs to answer and use the information generated to guide decisions.
- Epidemiologists and data managers who collect, manage and interpret data.
- Water, sanitation and environment agencies and municipal authorities responsible for wastewater management and (usually) for sampling who understand wastewater flows and how they relate to residential locations of populations and to public health districts.
- Laboratories which perform the testing, report the results, and undertake quality management, and which have expertise in handling wastewater samples and molecular biology.
- Information technology and communications personnel who undertake spatial mapping and data interpretation, prepare reports and maintain dashboards on behalf of all parties.

The objective of the SARS-CoV-2 ES programme is to inform decision-making processes for SARS-CoV-2 monitoring and management as part of the broader COVID-19 response strategy. This requires linking the SARS-CoV-2 ES programme with other pillars of the response.

Conclusions

There is no universal standard method or approach to ES for SARS-CoV-2. However, there are several communities of practice at the national, regional and global scales, and several proficiency programs, along with many published protocols. The guidance has more information on the key considerations for data collection, analysis and interpretation.

A range of research projects and innovations are in progress to improve ES for SARS-CoV-2 and other pathogens. ES has the potential to detect novel variants, as well as to increase understanding of the ecology and zoonotic potential (e.g., from sampling of animal rearing operations) of SARS-CoV-2 that has not been identified in human clinical samples, and to monitor wastewater from transport hubs, to support global pandemic intelligence.

WHO regional overviews:

Epidemiological week 9-15 May 2022**

African Region

For almost a month, the African Region has shown an increasing trend in new weekly cases, with over 63 000 new weekly cases reported, a 6% increase as compared to the previous week. Seventeen (35%) countries in the Region reported an increase in cases of over 20%, with some of the greatest proportional increases observed in Malawi (76 vs 30 new cases; +153%), Mozambique (74 vs 32 new cases; +131%) and Mauritania (104 vs 48 new cases; +117%). The highest numbers of new cases were reported from South Africa (51 547 new cases; 86.9 new cases per 100 000; +17%), Réunion (7865 new cases; 878.5 new cases per 100 000; -28%), and Zimbabwe (674 new cases; 4.5 new cases per 100 000; +58%).

The Region reported over 250 new weekly deaths, a 48% increase as compared to the previous week. The highest numbers of new deaths were reported from South Africa (237 new deaths; <1 new death per 100 000; +55%), Zimbabwe (eight new deaths; <1 new death per 100 000; +100%), and Réunion (six new deaths; <1 new death per 100 000; -14%).
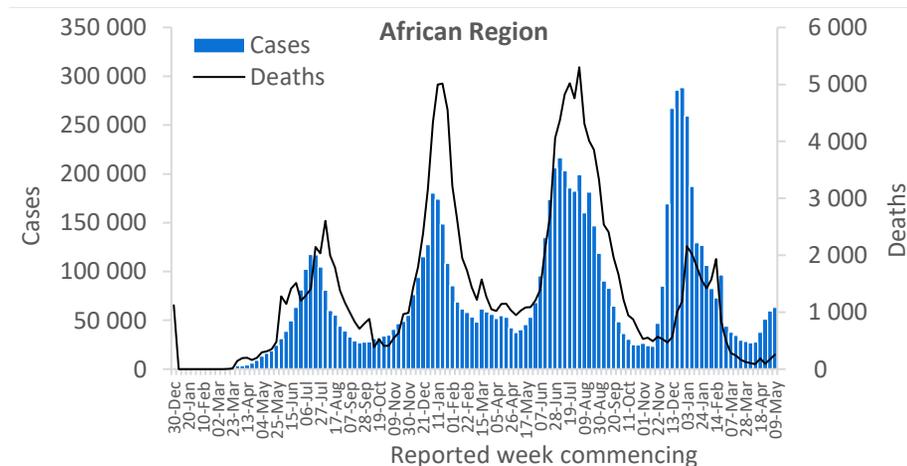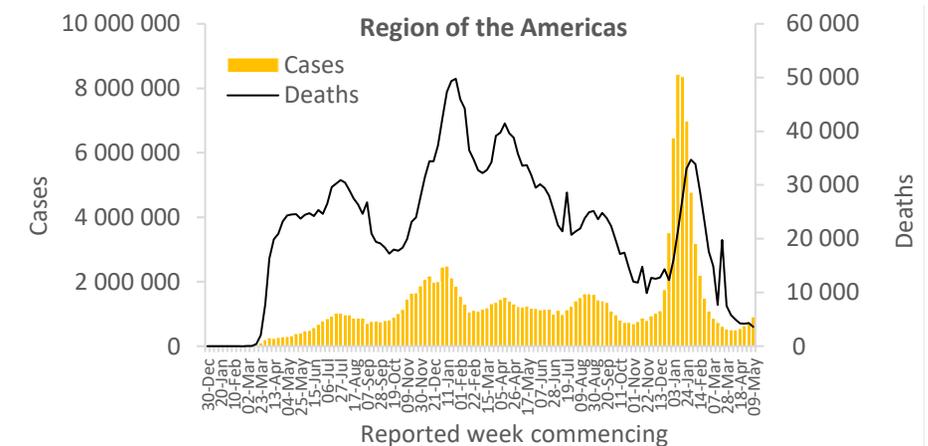

Updates from the African Region

Region of the Americas

The Region of the Americas has continued to report an increasing trend since mid-April 2022, with over 912 000 new weekly cases reported, a 26% increase as compared to the previous week. Twenty-six (46%) countries in the Region reported increases in new cases of 20% or greater, with some of the greatest proportional increases observed in Suriname (615 vs 57 new cases; +979%), Falkland Islands (Malvinas) (734 vs 211 new cases; +248%) and Guyana (233 vs 83 new cases; +184%). The highest numbers of new cases were reported from the United States of America (605 547 new cases; 182.9 new cases per 100 000; +33% increase), Brazil (120 831 new cases; 56.8 new cases per 100 000; +9%), and Argentina (33 989 new cases; 75.2 new cases per 100 000; +93%).

The number of new weekly deaths in the Region decreased by 16% as compared to the previous week, with over 3500 new deaths reported. The highest numbers of new deaths were reported from the United States of America (1849 new deaths; <1 new death per 100 000; -27%), Brazil (689 new deaths; <1 new death per 100 000; +1%), and Canada (501 new deaths; 1.3 new deaths per 100 000; +3%).
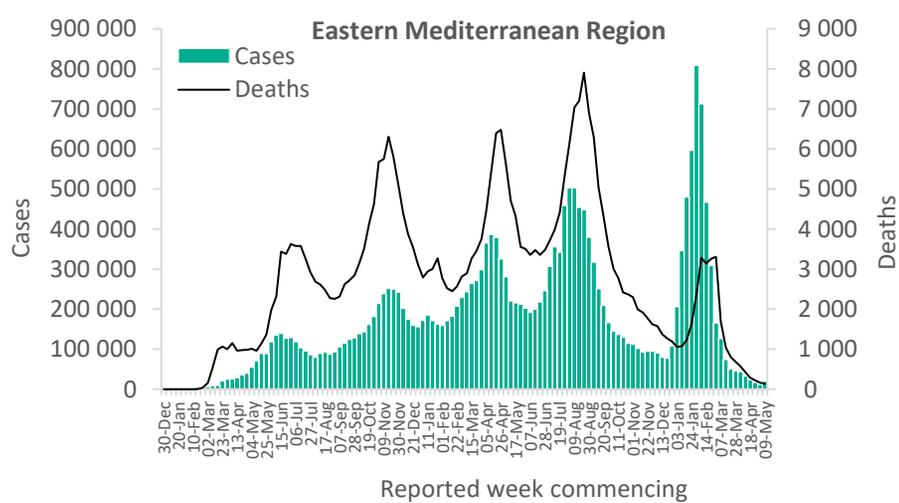

Updates from the Region of the Americas

Eastern Mediterranean Region

After the declining trend observed since mid-February 2022, the Eastern Mediterranean Region reported over 19 000 new weekly cases, representing a 63% increase as compared to the previous week. Nine (41%) countries in the Region reported increases in new cases of 20% or greater, with some of the greatest proportional increases observed in Libya (35 vs three new cases; +1067%), Afghanistan (320 vs 44 new cases; +627%) and Saudi Arabia (3719 vs 1065; +249%). The highest numbers of new cases were reported from Bahrain (4915 new cases; 288.9 new cases per 100 000; +46%), Saudi Arabia, and the Islamic Republic of Iran (2982 new cases; 3.6 new cases per 100 000; -2%).

The number of new weekly deaths in the Region decreased by 20% when compared to the previous week, with over 130 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (51 new deaths; <1 new death per 100 000; -38%), Egypt (28 new deaths; <1 new death per 100 000; -20%), and Saudi Arabia (15 new deaths; <1 new death per 100 000; +25%).
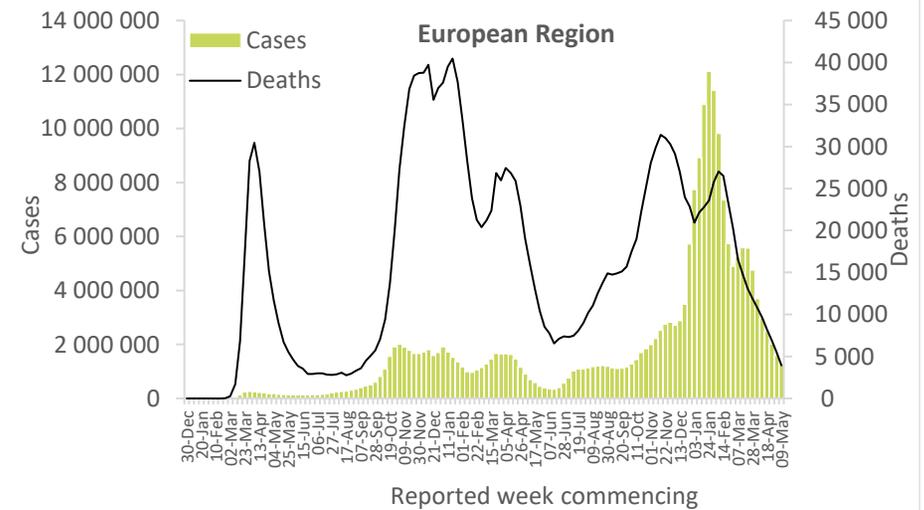
European Region

In the European region, cases have continued to decrease since mid-March 2022, with over 1.2 million new weekly cases, a 20% decrease as compared to the previous week. Five (8.2%) countries in the Region reported increases in new cases of 20% or greater, with some of the greatest proportional increases observed in Ukraine (3590 vs 200 new cases; +1695%), Hungary (6748 vs 2183 new cases; +209%) and Portugal (115 560 vs 85068 new cases; +36%). The cases in Ukraine should be interpreted carefully due to the impact of the ongoing conflict on testing capacities. The highest numbers of new cases were reported from Germany (376 959 new cases; 453.3 new cases per 100 000; -20%), Italy (262 374 new cases; 439.9 new cases per 100 000; -14%), and France (217 932 new cases; 335.1 new cases per 100 000; -18%).

The Region reported just over 3900 new deaths, a 29% decrease as compared to the previous week. The highest numbers of new deaths were reported from Italy (765 new deaths; 1.3 new deaths per 100 000; -16%), the Russian Federation (724 new deaths; <1 new death per 100 000; -21%), and France (590 new deaths; <1 new death per 100 000; -19%).


Updates from the Eastern Mediterranean Region

Updates from the European Region

South-East Asia Region

The South-East Asia Region reported over 71 000 new cases and 614 new deaths, decreases of 19% and 24% respectively as compared to the previous week. All countries except for Bangladesh (213 vs 83 new cases; +156%) and Indonesia (2345 vs 1391 new cases; +68%) reported a decrease in weekly cases. The highest numbers of new cases were reported from Thailand (48 996 new cases; 70.2 new cases per 100 000; -21%), India (19 405 new cases; 1.4 new cases per 100 000; -16%), and Indonesia (2345 new cases; <1 new case per 100 000; +69%).

The highest numbers of new weekly deaths in the Region were reported from Thailand (384 new deaths; <1 new death per 100 000; -18%), India (150 new deaths; <1 new death per 100 000; -32%), and Indonesia (77 new deaths; <1 new death per 100 000; -29%).

A first outbreak of COVID-19 has been reported in the Democratic People's Republic of Korea through official media on 12 May 2022. However, at this time no counts of confirmed cases or deaths are available.
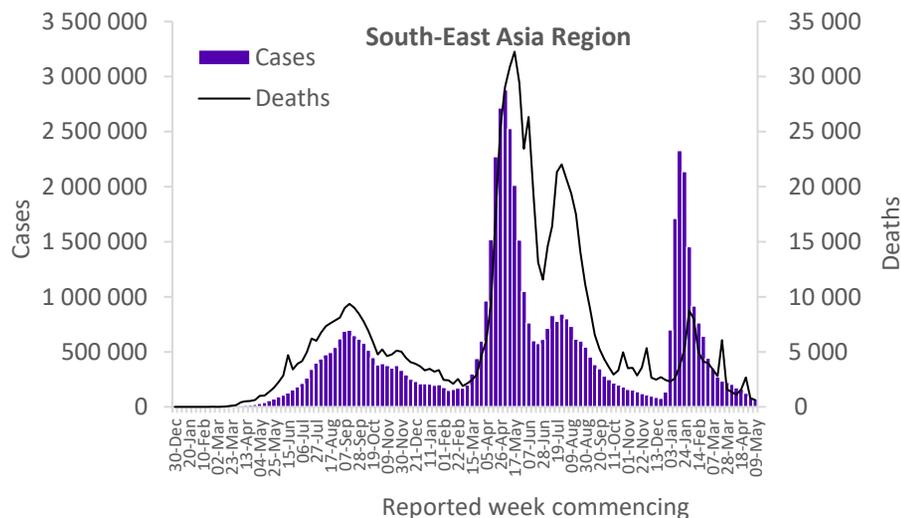

Updates from the South-East Asia Region

Western Pacific Region

The Western Pacific Region had shown decreasing trends in new weekly cases since mid-March 2022. However, an increase has been observed in weekly new cases in the last two weeks, with over 1.3 million new cases, a 14% increase as compared to the previous week. Nine (31%) countries in the Region reported increases in new cases of 20% or greater, with some of the greatest proportional increases observed in Papua New Guinea (279 vs 22 new cases; +1168%), Brunei Darussalam (1784 vs 77 new cases; +129%) and Malaysia (19 137 vs 8732 new cases; +119%). The highest numbers of new cases were reported from China (389 901 new cases; 26.5 new cases per 100 000; +94%), Australia (332 451 new cases; 1303.7 new cases per 100 000; -23%), and Japan (279 620 new cases; 221.1 new cases per 100 000; + 54%).

The Region reported just over 1200 new weekly deaths, a 10% decrease as compared to the previous week. The highest numbers of new deaths were reported from Republic of Korea (349 new deaths; <1 new death per 100 000; -28%), Australia (267 new deaths; <1 new death per 100 000; +16%), and Japan (254 new deaths; <1 new death per 100 000; +17%).
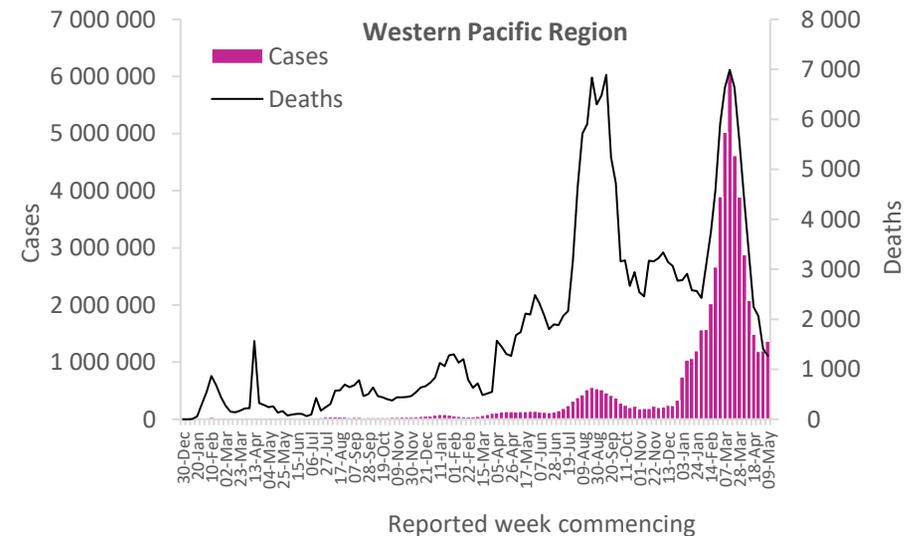
Updates from the Western Pacific Region

Annex 1. Data, table, and figure notes

Data presented are based on official laboratory-confirmed COVID-19 cases and deaths reported to WHO by country/territories/areas, largely based upon WHO case definitions and surveillance guidance. While steps are taken to ensure accuracy and reliability, all data are subject to continuous verification and change, and caution must be taken when interpreting these data as several factors influence the counts presented, with variable underestimation of true case and death incidences, and variable delays to reflecting these data at the global level. Case detection, inclusion criteria, testing strategies, reporting practices, and data cut-off and lag times differ between countries/territories/areas. A small number of countries/territories/areas report combined probable and laboratory-confirmed cases. Differences are to be expected between information products published by WHO, national public health authorities, and other sources.

Due to public health authorities conducting data reconciliation exercises that remove large numbers of cases or deaths from their total counts, negative numbers may be displayed in the new cases/deaths columns as appropriate. When additional details become available that allow the subtractions to be suitably apportioned to previous days, graphics will be updated accordingly. A record of historic data adjustment made is available upon request by emailing epi-data-support@who.int. Please specify the countries of interest, time period, and purpose of the request/intended usage. Prior situation reports will not be edited; see covid19.who.int for the most up-to-date data. COVID-19 confirmed cases and deaths reported in the last seven days by countries, territories, and areas, and WHO Region (reported in previous issues) are now available at: https://covid19.who.int/table.

'Countries' may refer to countries, territories, areas or other jurisdictions of similar status. The designations employed, and the presentation of these materials do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Countries, territories, and areas are arranged under the administering WHO region. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions except, the names of proprietary products are distinguished by initial capital letters.

[1] All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999). In the map, the number of cases of Serbia and Kosovo (UNSCR 1244, 1999) have been aggregated for visualization purposes.

Technical guidance and other resources
- WHO technical guidance
- WHO COVID-19 Dashboard
- WHO Weekly Operational Updates on COVID-19
- WHO COVID-19 case definitions
- COVID-19 Supply Chain Inter-Agency Coordination Cell Weekly Situational Update
- Research and Development
- Open WHO courses on COVID-19 in official UN languages and in additional national languages
- WHO Academy COVID-19 mobile learning app
- The Strategic Preparedness and Response Plan (SPRP) outlining the support the international community can provide to all countries to prepare and respond to the virus
- EPI-WIN: tailored information for individuals, organizations, and communities
- Recommendations and advice for the public: Protect yourself; Questions and answers; Travel advice

References

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