

WE KEEP

THE PORT AT DEPTH

Water depth maintenance in the Port of Hamburg
Annual Report 2025

Introduction

In 2025, the total dredging volumes in Hamburg were just as high as in 2024 (Fig. 1), and this meant that the port could be kept in a predominantly good condition (Fig. 14). This is encouraging, as the headwater discharges were consistently very poor, unlike in 2024 (Figs. 4 and 5). However, the consistent reduction in cyclical dredging and the increased sediment discharge in previous years, tailored to demand, is having a clear effect, even under unfavourable conditions. We adjusted our maintenance programme in 2025, increased the relocation to buoy E3 again compared to the previous year, and were thus even able to reduce the relocation of sediment at Neßsand once more. Although costs have risen due to the associated longer transport distances and payments to Schleswig-Holstein, we have been able to keep the sediment inventory in the upper tidal Elbe as low as possible, which benefits both future maintenance and the aquatic ecology.

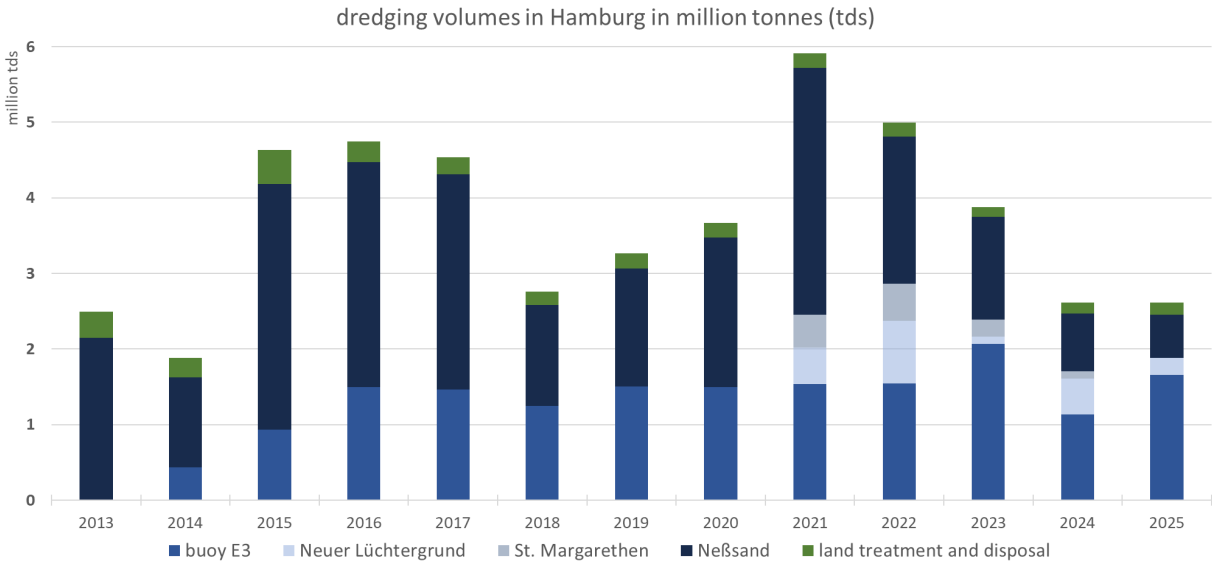


Fig. 1: Trend in dredging volumes in Hamburg in million tonnes of dry substance (TDS).

However, the poor headwater conditions are set to persist into 2026. Consequently, the improved hydrological conditions in 2024 were not a reversal of the trend, but merely an anomaly within a new hydrological reality. With our maintenance strategy, we are well positioned to meet this challenge and ensure that the port—*arguably Germany’s most critical piece of infrastructure*¹—maintains the necessary draught levels in line with demand in the years to come.

¹ Federal Minister of the Interior Alexander Dobrindt in Hamburg on 30 March 2026

Only if ships always have sufficient water under their keels can they call at the terminals unhindered, and the port can fulfil its role in international supply chains, for the energy transition, as a driver of jobs and value creation, and from a geostrategic perspective. Only water depth maintenance tailored to demand ensures the supply of goods to the population and the economic well-being of Germany as an exporting nation – even in difficult times. It is not just the cargo throughput (which we were able to increase significantly in 2025 – as were the calls by large container ships) that is decisive, but the long-term reliability of the Port of Hamburg as a location factor for Germany.

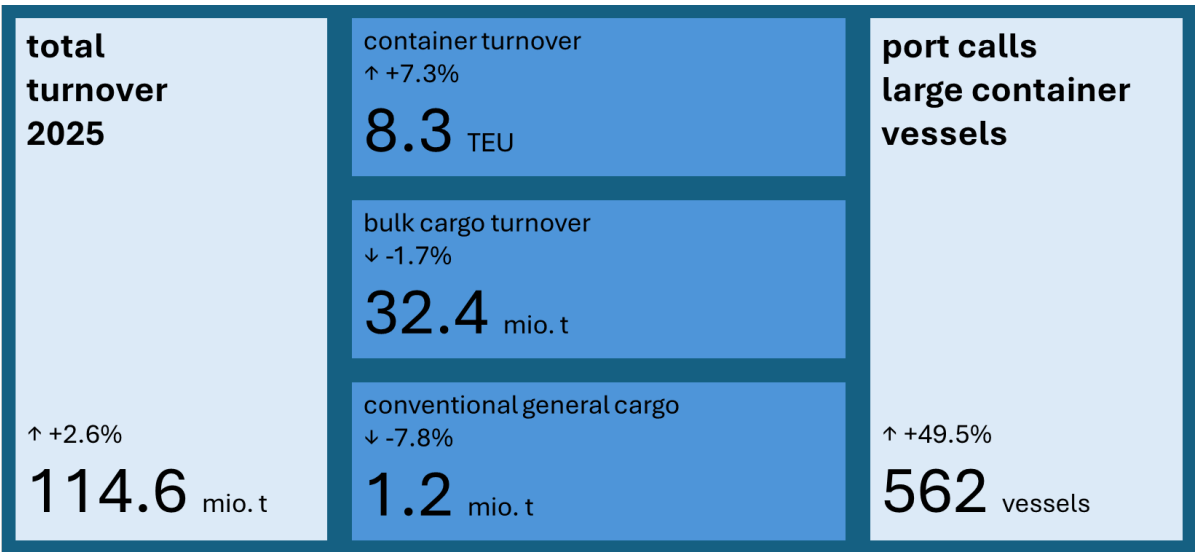


Fig. 2: The Port of Hamburg as a location factor: Key figures for 2025.

This is because the Port of Hamburg offers major advantages: via the Elbe, goods can be transported a further 120 kilometres by large seagoing vessel deep into the country, close to the well-connected markets. This saves costs and significantly reduces emissions compared to other modes of transport. This is particularly the case when large ships can be deployed. However, the location deep inland also presents challenges. For instance, several million tonnes of Elbe sediment must be dredged and removed every year, which requires flexible and adaptive sediment management.

From an international perspective, large-scale dredging operations to maintain ports and their access channels are quite common. In Europe alone, according to OSPAR ⁽²⁾, around 130 million tonnes of sediment were dredged and deposited in coastal waters in 2023. Obtaining

² No recent valid data was available to OSPAR at the time of going to press

up-to-date, reliable figures, for example from the other North Range ports, is virtually impossible; no port is as transparent and prompt as Hamburg when it comes to publishing dredging volumes, analyses and costs.

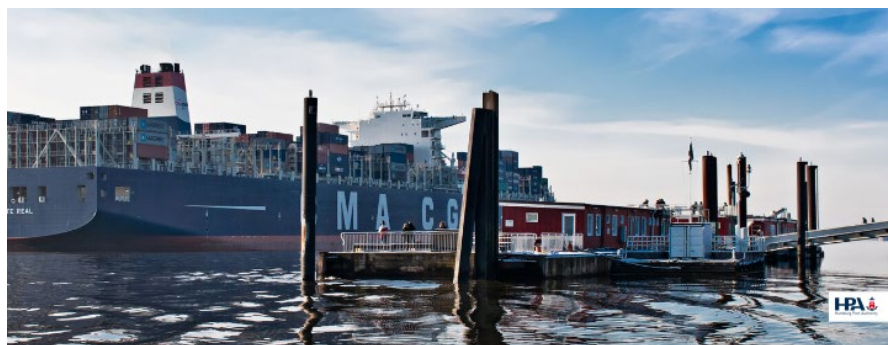
Whilst water depth maintenance is an ongoing task, much like street cleaning or repairs, expansion – such as the adjustment of navigation channels – is a time-limited project, similar to the construction of new roads or their widening. New target depths approved in planning are established on a one-off basis and must then, as before, be maintained – only now at the new depth. The figures on vessel calls show that the greater depths are well received by shipping companies.

This report is limited to the regular water depth maintenance required in Hamburg. The annual analysis for 2025 is extended to cover the period from November 2024 to April 2026, as dredging work is often carried out in campaigns spanning several years. The report outlines the measures taken by the HPA to ensure depths meet requirements, the respective constraints involved, and the costs incurred.

Further information is available on the HPA's **Tidal Elbe information blog** at www.tideelbe.info.

It is an easy-to-understand e-magazine and platform for facts and information. It offers the latest news, detailed analyses and background information on the tidal Elbe and sediment management.

And, of course, you can also find this report there.



Welcome to the HPA's Tidal Elbe information blog

Here you will find current topics, interesting stories, analysis and background information on sediment management and the Tidal Elbe. Or to put it simply, how we in Hamburg ensure that ships always have enough water under their keels.

Above water

No ports without dredging - this also applies to the universal port of Hamburg

Hamburg is one of the top three ports in Europe. One of the key requirements for an overseas port of this scale is that it must be accessible at all times. To ensure safe access, our engineers must regularly clear the shipping channel of sediment.

→



For immersion



Our water level reports
We always have something new to tell. Click here to keep up to date with all things Elbe and port.

[To the news](#)



Analyses and reports at a glance
Are you looking for analysis, reports and brochures on the tidal Elbe? Click here for an overview of our download area.

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Current data on the Elbe

Measurements taken on Jun 3, 2025 at 9:58 AM

Water level St. Pauli
39 cm
(91%)

Discharge off the Elbe at Max. Dammsau
239 m³/s
(average annual discharge 648 m³/s)

More data on the tidal Elbe can be found on [www.tideelbe.info](#) from the HPA.

Overview

Total volumes remain stable, despite low headwater.

In 2025, a total of approximately 2.96 million tonnes of dry substance (tds) of sediment was dredged. Of this, around 1.65 million tds was transported to the North Sea to buoy E3, around 0.57 million tds was relocated at the state border, and 0.16 million tds had to be treated and disposed of on land. In addition, around 0.23 million tds was relocated at the Neuer Lüchtergrund. In addition, 0.35 million tds of sand was dredged and used for construction works, beach nourishment and scour filling. Thus, the total dredging volumes remained at the previous year's level, despite very unfavourable hydrological conditions.

The results show that the strategy of consistent discharge-optimised dredging in previous years is the right one. Despite the persistently very low discharges, dredging for maintenance purposes could even be reduced slightly once again. At the same time, water depths in the harbour were maintained in a predominantly good condition. To achieve this, however, the dredging volumes at buoy E3 had to be increased again, which led to a corresponding rise in costs due to longer transport distances and compensation payments.

The renewed decline in Elbe headwater to the levels seen in the very dry years 2014–2023 makes it clear that the year 2024, with its higher discharge, should be regarded as an exception. Very low headwater is a new normality to which water depth maintenance must adapt.

It is therefore all the more important that Hamburg has access to sufficiently flexible and reliable disposal options for surplus sediment from the Port of Hamburg and the federal waterway. Efforts to secure and expand disposal options are therefore being pursued with determination. The assessed and suitable disposal site in the Outer Elbe is an option that could be utilised if necessary. An application to transport dredged material to the Exclusive Economic Zone (EEZ) has been submitted to the competent Federal Maritime and Hydrographic Agency (BSH) and is currently undergoing the approval process. New technical requirements for the project are currently being added and the application documents adapted. The permits for disposal at buoy E3, with a maximum volume increased to 2 million tonnes per year, continue to form the backbone of the discharge-optimised water depth maintenance programme, supported by the shared use of the WSV disposal site at Neuer Lüchtergrund.



Fig. 3: The small V.d.Graaf Sr. hopper dredger is particularly suitable for narrow and confined harbour areas (Photo: Boris Hochfeld).

Boundary conditions

Once again, unfavourable hydrological conditions.

The extent of sedimentation and thus the maintenance requirements in the Port of Hamburg and along the Delegation Route are largely determined by the discharge³ of the Middle Elbe. Put simply: the drier the weather in the Elbe catchment area and the lower the discharge, the more sedimentation there is in the port, and the greater the maintenance requirements. The only advantage is that when discharge is low, fewer suspended solids – and thus fewer pollutants – reach Hamburg from the Elbe catchment area, entering the tidal Elbe and the North Sea.

After above-average discharge levels were recorded on the Elbe in 2024 for the first time in over a decade, the *hydrological* year 2025 (November 2024 to October 2025) was again characterised by exceptionally low discharge: With a mean discharge (MQ) of 401 m³/s at the Neu Darchau gauge, 2025 ranks fifth in the ‘ranking’ of the lowest mean annual discharges (the ‘top spot’ is held by the year 1934, with a mean discharge of 345 m³/s). The highest daily flow

³ Water flowing from the Elbe catchment area into the North Sea; also referred to as ‘headwater’. The discharge at the Neu Darchau gauge on the Middle Elbe is the decisive factor for Hamburg.

(HQ) in 2025 was also extremely low at just 864 m³/s (measured on 17 January). By comparison, in 2024 the highest flow was 2 470 m³/s – almost three times as high.

Looking at the course of the year, it was only in December 2024 that the high-water level in Neu Darchau was roughly on a par with the long-term monthly average (time series 1961 to 1990⁴); in all other months of 2025, discharges were below average, in some cases by a very significant margin (Fig. 6). In addition to the dry summer months, the almost complete absence of the spring floods that are characteristic of the Elbe is once again striking: in March and April 2025, the mean discharge was only 45% and 32% respectively of the respective long-term monthly average. As a result, April 2025, with a monthly average (MQ) of 369 m³/s, was the driest April on record since data collection began. The lowest daily value of the year (NQ) was 167 m³/s (measured on 13 July). On 13 days in 2025, the discharge at Neu Darchau was below 180 mm³/s; such low discharge volumes were not recorded in the five preceding years (2020 to 2024). However, 2025 does not quite match the two extremely dry years of 2018 and 2019, during which discharge fell below this level on 36 and 44 days respectively.

Nevertheless, the hope fuelled by 2024 for higher discharge rates in 2025 has not been fulfilled. The Elbe's 'dry spell', which has persisted since 2014, is clearly not over. On the contrary, there is much to suggest that Hamburg and the port must prepare for permanently low discharge rates in the future in the face of climate change.

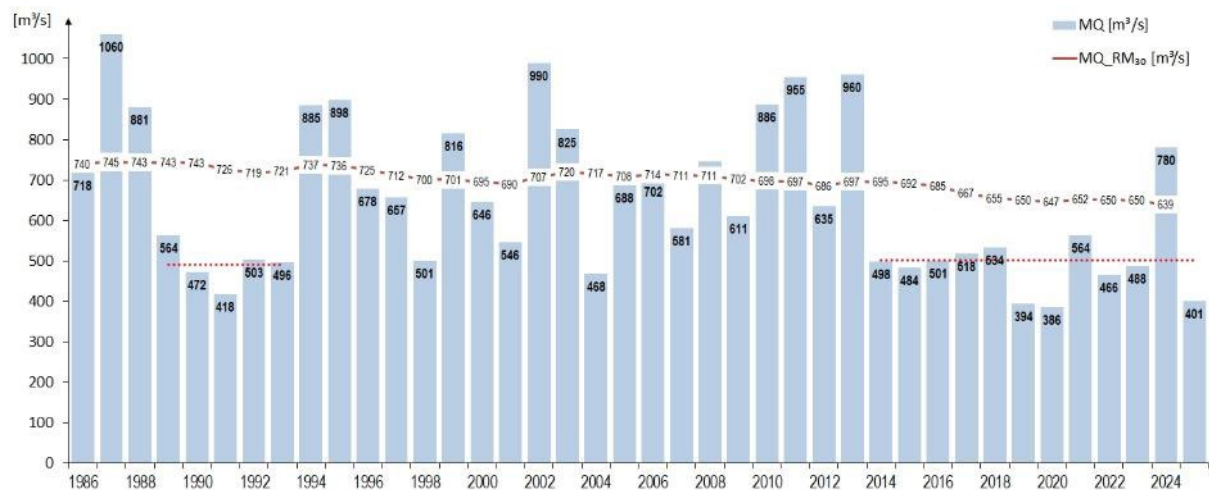


Fig. 4: Annual average discharge at Neu Darchau (MQ, in m³/s) since 1986

⁴ The 30-year time series 1961–1990 is recommended by the WMO (World Meteorological Organization) as the climatological reference period.

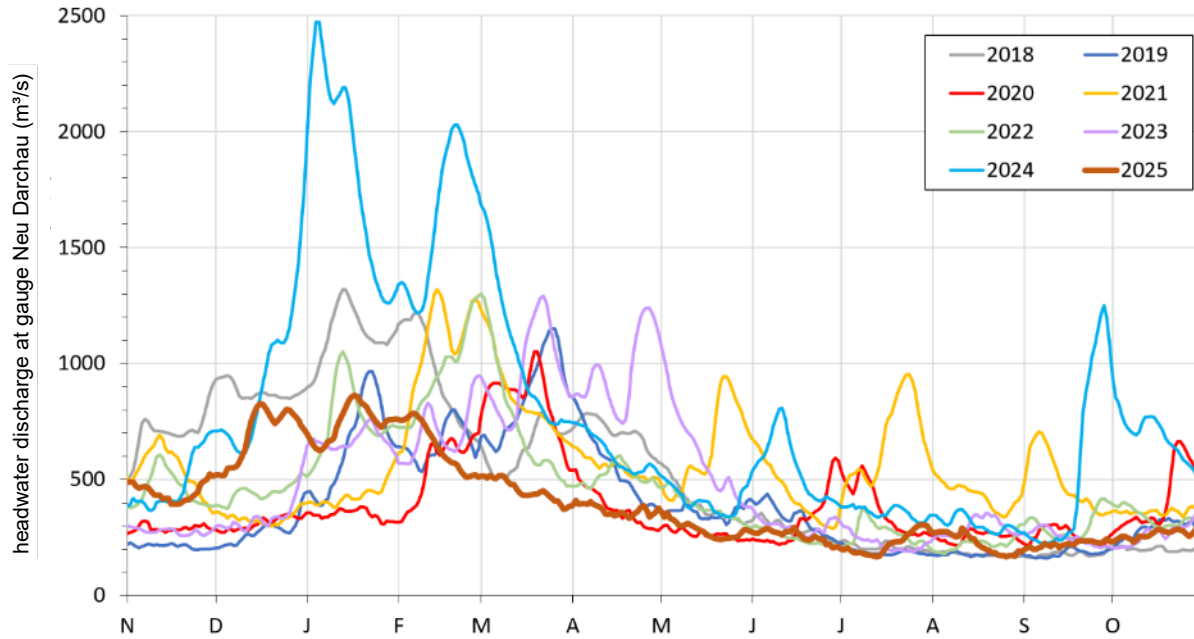
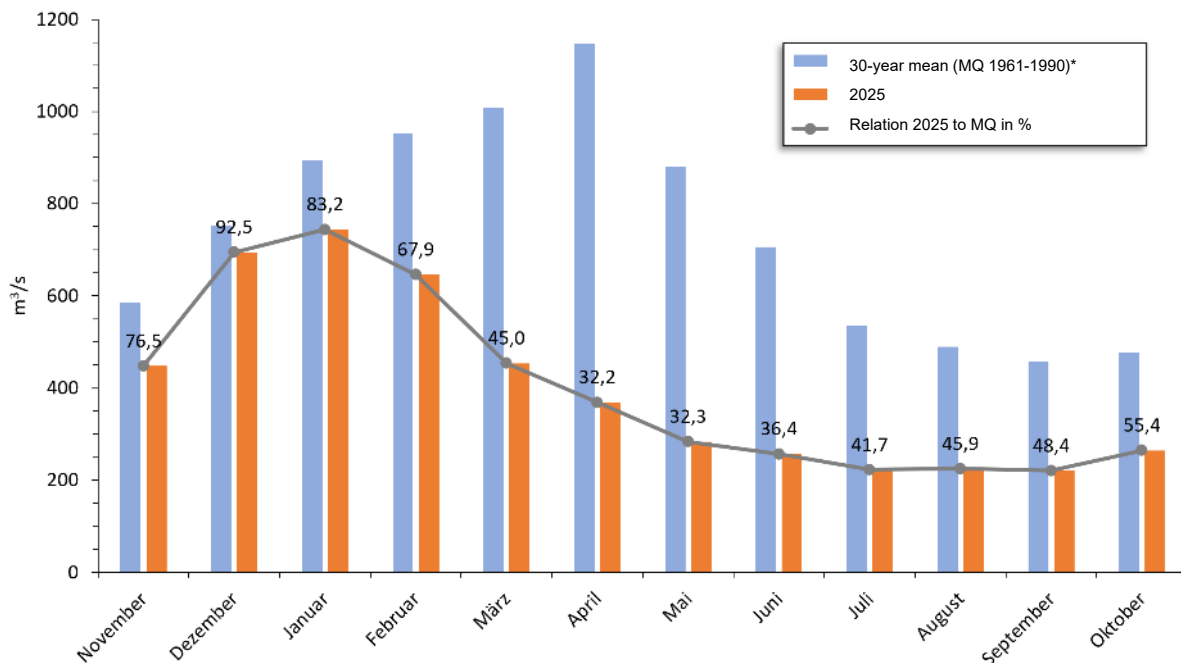


Fig. 5: Annual hydrographs of the Neu Darchau discharge in m^3/s since 2018



*) 1961-1990: climatological reference period acc. To WMO

Fig. 6: Monthly average discharge at Neu Darchau (m^3/s) in 2025 compared with 30-year averages.

Oxygen conditions in the harbour were also poor in 2025. In general, summer oxygen depletion in the harbour and the Lower Elbe has been the norm for decades. The severity of this phenomenon each year is primarily influenced by the extent of nutrient and algal input from the Middle Elbe and, above all, by water temperature, as the solubility of oxygen in water decreases with rising temperatures and algal growth in the Middle Elbe increases.

In 2025, the oxygen content at the Blankenese monitoring station fell below the defined fish-critical limit of 4 mg/l for the first time on 5 June. Following a two-week period with higher values in the first half of August, there were subsequently several further instances where levels fell below the limit for several days. From 15 September onwards, oxygen levels remained consistently above the threshold. In total, the threshold of 4 mg/l was undershot on 92 days (either throughout the day or at times). Thus, in 2025, the number of days with unfavourable oxygen conditions was of a similarly high order of magnitude as in the previous year (98 days). At least, fortunately, no particularly low oxygen levels were recorded in 2025; on no day did the summer oxygen level (daily average) in Blankenese fall below 2 mg/l. In the previous year, this had been the case on 24 days.

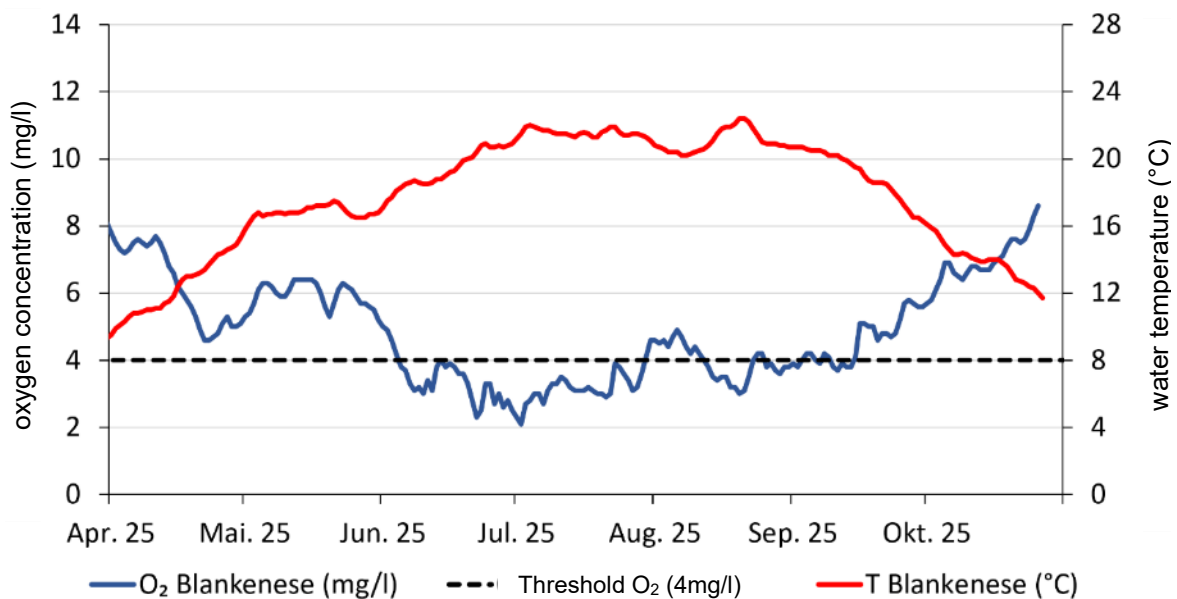


Fig. 7: Daily average values of oxygen concentration (in mg/l) and water temperature (in °C) at the IHU monitoring station in Blankenese, April to November 2025.

Figure 8 shows that, although there have been slight fluctuations, pollutant levels have stabilised at a low level in recent years. The lower discharge volumes in 2025 contributed to a further slight reduction in pollutant levels compared with 2024. With lower discharge, the proportion of marine sediments in the Port of Hamburg increases. Thus, in 2025, five dredging areas (B-Box, Norderelbe Blatt 7, Köhlbrand, Köhlfleet and Parkhafen) were classified for the first time under Case 2 of the GÜBAK⁵, which involves lower pollutant levels. Dredged material from the port areas of the Süderelbe, the Rethe, the Sandau Harbour and the outer harbour was, as in previous years, classified under GÜBAK Case 3. This means that the harbour sediments are more than three times as contaminated as the coastal sediments, although this now applies only to the parameters DDT metabolites and hexachlorobenzene. The permitted disposal quantities for buoy E3 in the North Sea (max. 2 million tds) did not have to be fully utilised, despite poorer outflow conditions than in 2024. Permits for North Sea disposal were granted for the Köhlbrand, Norder- and Süderelbe, as well as for the federal port waters of Köhlfleet, Parkhafen, Vorhafen, Rethe and Sandauhafen (sediments from the encounter box were relocated at the federal disposal site Neuer Lüchtergrund). All clearance analyses can be viewed at www.tideelbe.info prior to the respective disposal.

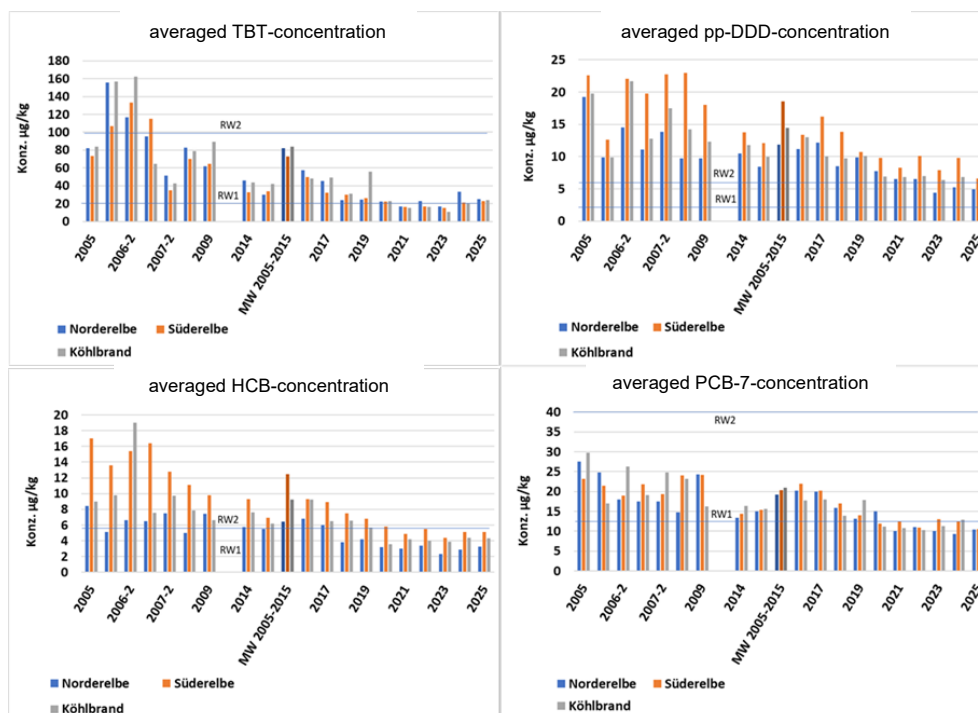


Fig. 8: Temporal development of selected pollutants based on the clearance analyses for the disposal of dredged material into the North Sea (RW1 and RW2 are guideline values from the Joint Transitional Provisions on the Management of Dredged Material in Coastal Waters (GÜBAK); no disposal took place between 2010 and 2013)

⁵ GÜBAK: Joint Transitional Provisions on the Management of Dredged Material in Coastal Areas

Strategic framework

Our strategy is successful. We are working to ensure that it remains so.

The consolidation of dredging volumes, and in particular the maintenance of circular dredging at a low level – despite extremely poor hydrological conditions – demonstrates that our strategy of flexible and demand-driven disposal is both correct and successful. The available capacity in 2025 was sufficient to keep the port in a predominantly good condition even under difficult circumstance and to meet the needs of port customers.

Nevertheless, we will not cease in our efforts to safeguard our existing disposal options and to expand the scope for action where feasible. New developments, such as further tightening of (EU) environmental requirements or the needs of third parties in the buoy E3 area (e.g. LNG terminals), must not be allowed to restrict our options to such an extent that a further increase in circular dredging becomes necessary. The shared use of the WSV disposal site at Neuer Lüchtergrund for dredged material from the Hamburg delegation section is an important and integral part of our sediment management. The use of the disposal option in the Outer Elbe on Hamburg state territory would also be a fallback option that is being maintained. To date, however, buoy E3 is the only disposal option available for sediments from the federal port waters.

Against this background, the application for the disposal of dredged material from the Hamburg federal waterway and the federal port waters into the EEZ remains an important strategic component. The technical additions to the application are largely complete, so that the revised application will be submitted to the BSH in mid-2026.

However, looking ahead, for reasons of climate protection (targets for carbon reduction and CO₂ taxes), it is mandatory to transport dredged material only as far as is absolutely necessary to achieve effective removal from the tidal Elbe. This is the only way to save costs and reduce emissions and energy consumption. The use of dredged material in nature- and coastal conservation, for example by replenishing mudflats, will become increasingly important in view of the predicted rise in sea levels and is already common practice in other countries. If of suitable quality, dredged material from water depth maintenance can also play a resource-conserving role. Without support, the mudflats and foreshores cannot keep pace with rising sea levels. Disposal sites in coastal areas are therefore also sensible from this perspective. Examples from the Netherlands impressively underpin this view.

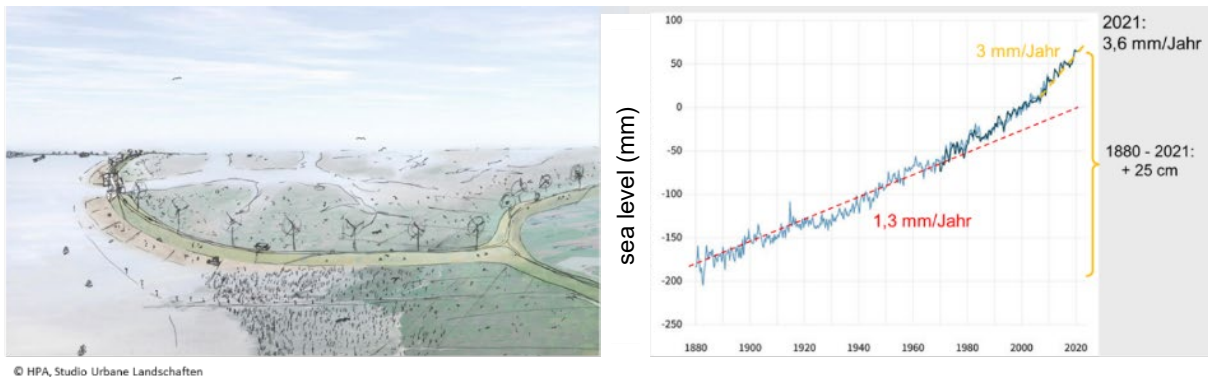


Fig. 9: The use of dredged material could in future be an indispensable component in adapting the coast to sea-level rise.

To increase acceptance of and opportunities for the use of dredged material, measures to remediate Elbe sediments remain a key component of sediment management and marine conservation. Consequently, the most extensive project undertaken on the Elbe in decades – the removal, onshore treatment (METHA⁶) and disposal of highly contaminated Elbe sediments in Hamburg – is being continued at considerable financial cost. However, effective measures must also be implemented within the areas of responsibility of upstream stakeholders. At the same time, steps must be taken to ensure that new projects, such as the resumption of mining (e.g. for lithium extraction), are carried out in such a way that they do not lead to a deterioration in sediment quality. Rising water demands can also have a detrimental effect on sediment management in Hamburg if they further reduce the already low headwater discharges. In principle, therefore, all activities in the Elbe catchment area must be coordinated and agreed with downstream stakeholders.

⁶ METHA is HPA's dredged material treatment plan



Fig. 10: Internationally, the Kreetssand shallow water area continues to attract attention. An exchange group from Germany and the USA is receiving an on-site explanation of the PIANC award-winning project. As a pilot project, it provides a valuable basis for the discussion and planning of other river engineering measures on the tidal Elbe and other estuaries. Photo: Thomas Gräbel.

The development of further river engineering measures is being continued by the Lebensraum Elbe Foundation, which is largely funded by the HPA, through the preparation of expert studies. The experience gained from the planning, construction and maintenance of the Kreetssand pilot project provides a valuable basis for this work, which is also attracting international attention. Tidal attenuation measures in the Elbe estuary are also currently being investigated and could regain significance. In parallel, the focus is on options for the environmentally sound restoration of tidal volume in port areas that have not been maintained for some time. A management approach presented by the relevant authorities is currently undergoing political consultation.

The HPA has published all areas of sediment management for the Port of Hamburg in an overarching strategy⁷. Further information is also available on the HPA's Tideblog at www.tideelbe.info.

⁷ [Strategy waterside access Port of Hamburg 2022.pdf](#)

Operational water depth maintenance

No prosperity without dredging.

To ensure that Germany's largest seaport can fulfil its vital role as critical infrastructure for supply, prosperity and security, its accessibility must be continuously maintained through dredging work, just as is the case in all tidal ports worldwide and just as other infrastructure must be maintained. Water depth maintenance is therefore an ongoing task that requires flexible and continuous action, the scope of which is largely determined by natural factors over the course of the year (weather) – but also by a system-appropriate selection of disposal sites.

Due to the poor hydrological conditions in 2025, the volume of fine sediment relocated to buoy E3 had to be significantly increased compared with the previous year, which had high head-water discharge levels, in order to keep dredging operations to a minimum. The shared use of the federal disposal site at Neuer Lüchtergrund for dredged material from the federal waterway (delegated section) was also continued. The St. Margarethen disposal site (from which return transport also takes place) was not used in 2025 but remains an important option.

In total, around 2.96 million tonnes of sediment were dredged in 2025, a reduction of 0.11 million tonnes compared with the previous year. Of this, 1.65 million tonnes of sediment were deposited in the North Sea, 0.23 million tonnes at the Neuer Lüchtergrund, 0.57 million tonnes for relocation at the state border, 0.16 million tonnes for onshore treatment and disposal, and a further approximately 0.36 million tonnes of sand for river engineering and construction works (Fig. 1). The dredging volumes for 2025, broken down by origin and destination, are presented in the appendix. Table 1 provides an overview of the volumes and temporal distribution of the maintenance campaigns, some of which span multiple years.

Table 1: Temporal distribution and volumes of maintenance in the period from November 2024 to March 2026 (in million tTS).

relocation site	2024		2025										2026						
	month	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
Neßsand			0,55											0,63					
buoy E3		...0,93										1,8							
St. Margarethen																			
Neuer Lüchtergrund					0,15													0,3	

As the campaign-based dredging operations are guided by navigational requirements and the legal conditions for authorisation, the maintenance measures are presented chronologically below.

The penultimate *Neßsand relocation season* for 2024/2025 was completed as scheduled at the end of March 2024. A total of 0.55 million tds was dredged between November 2024 and March 2025 and relocated at Neßsand. In the first quarter of 2025, a further 0.06 million tds of

dredged material was also transferred to buoy E3 by the end of January (remaining quantities from 2024) and 0.15 million tds from the delegated Elbe section to the Neuer Lüchtergrund. All dredging work was completed in April, prior to the so-called red herring restriction.

Following completion of the finishing works (levelling of the riverbed using a water injection device and a bed leveller), water depths in the main harbour areas were in a very good state of maintenance in April 2025. During the summer months, the relocation works at the state border and the dredging works in certain sections of the waterway are suspended for reasons of waterway and species protection.

Due to increased sedimentation, the relocation to buoy E3 had to begin on 5 August 2025, around a month earlier than the previous year. The work was initially carried out using the powerful *Kaishuu* suction dredger with a 16,500 m³ hopper capacity; from the beginning of October, the 7,500 m³ hopper dredger *Vitus Bering* was also deployed, which can operate efficiently even in tighter harbour areas. The areas of Köhlbrand, Süderelbe, Norderelbe, Parkhafen, Sandauhafen, Vorhafen, Rethe and Köhlfleet were worked on successively. During the entire campaign up to 28 January 2026, around 1.8 million tonnes of sediment were transported to Tonne E3, almost twice as much as in the previous year's campaign.

On 10 November 2025, the relocation work at Neßsand began in parallel, which is essential for clearing narrower harbour areas. Due to poor headwater conditions and high sediment returns, only around 0.18 million tonnes of dredged material had been relocated by the end of the year using the 3,600 m³ dredger *Ijsseldelta*. From 22 February 2026, the 1,200 m³ dredger *Van de Graaf Sr.* was also deployed, primarily to work on harbour areas with inland waterway depths. By the end of the season on 31 March 2026, approximately 0.69 million tonnes of dredged material had been relocated at Neßsand. This means that the seasonal volumes are slightly higher than in the previous season, but the total annual volumes are lower.

Between 7 March and 25 March 2026, immediately prior to the start of the dredging restriction, a final 0.32 million tonnes of dredged material was transported from the Lower Elbe (B-Box) and the Northern Elbe to the Neuer Lüchtergrund, thereby ensuring that the port and the shipping channel in Hamburg were brought to a very good state of maintenance by the end of the season.

Figure 11 provides an overview of the geographical distribution of all maintenance works in 2025.

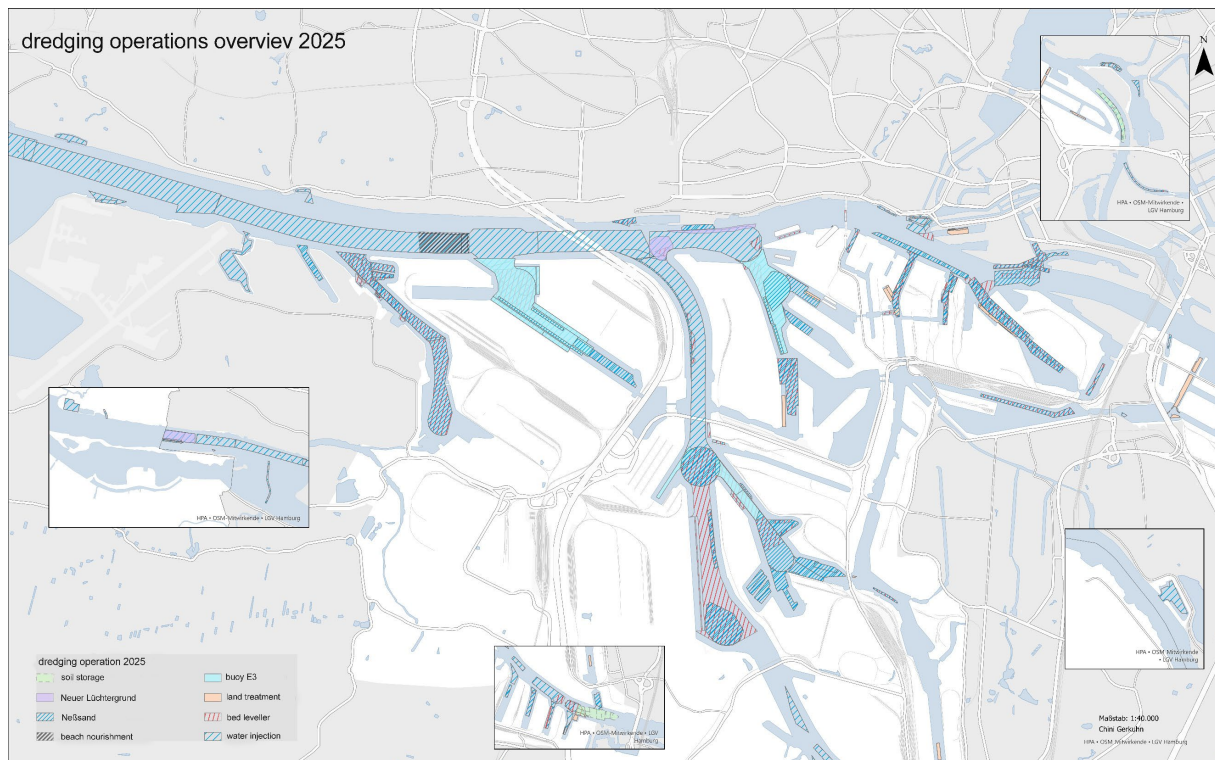


Fig. 11: Water areas in which maintenance works were carried out by the HPA in 2025 (overlaps possible).

In addition to dredging with hopper dredgers, the use of bed levellers throughout the port area has now become an integral part of water depth maintenance. This allows berths to be cleared flexibly, on a small scale and with precision as soon as they are not occupied by vessels. The silt is moved in an environmentally friendly manner, without any significant change in consistency, to deeper storage areas (so-called silt traps), where it can then be efficiently collected using the hopper dredger. In total, bed levellers were deployed for 2,632 hours in 2025, around 100 hours less than in the previous year, primarily for the maintenance of berths but also for preparatory and follow-up work in the approach channels. Water injection equipment was in use for a total of 1,181 hours, primarily for the removal of sand bars on the Lower Elbe and for finishing work following hopper dredger operations (Figs. 12 and 13).

In addition to the large hopper dredgers and grading machines, a range of other smaller machines were deployed depending on specific requirements. These included grab dredging operations followed by treatment of the sediments in the METHA (HPA's mechanical port sediment separation plant) or on the dewatering fields for disposal at the HPA's Feldhofs dredged material landfill site. Smaller quantities from third parties, such as those resulting from waterway maintenance works in the districts, are also accepted by the HPA and treated onshore. However, these quantities are not part of the HPA's water depth maintenance programme or this report.

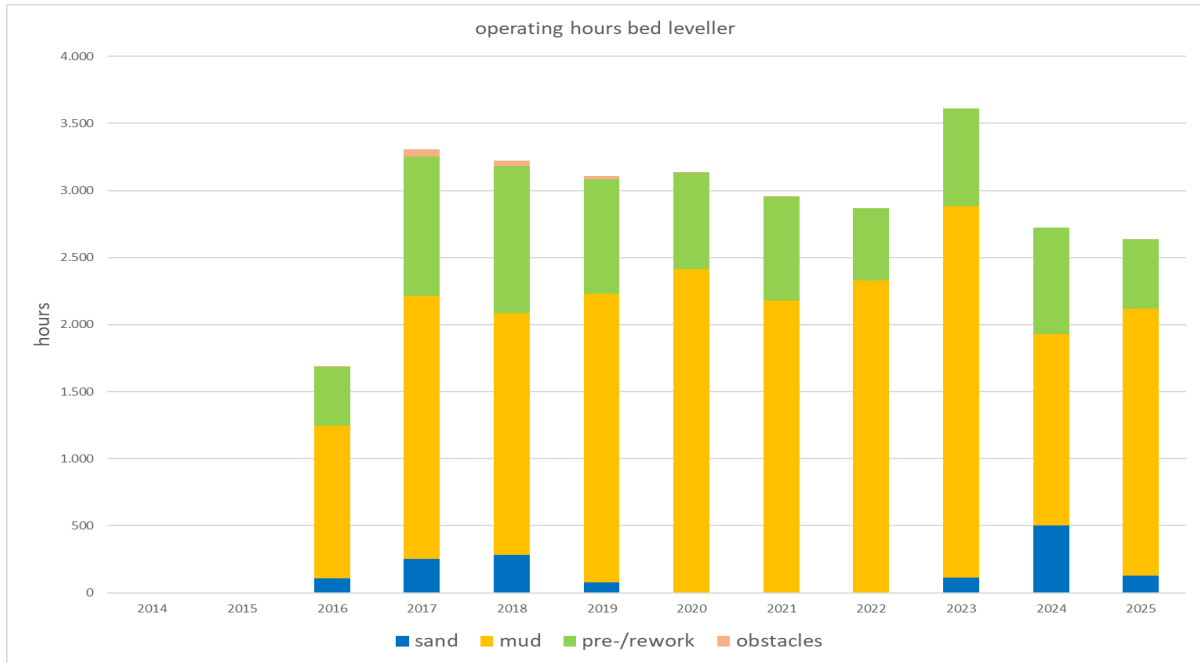


Fig. 12: Operating hours of bed levellers by type of operation

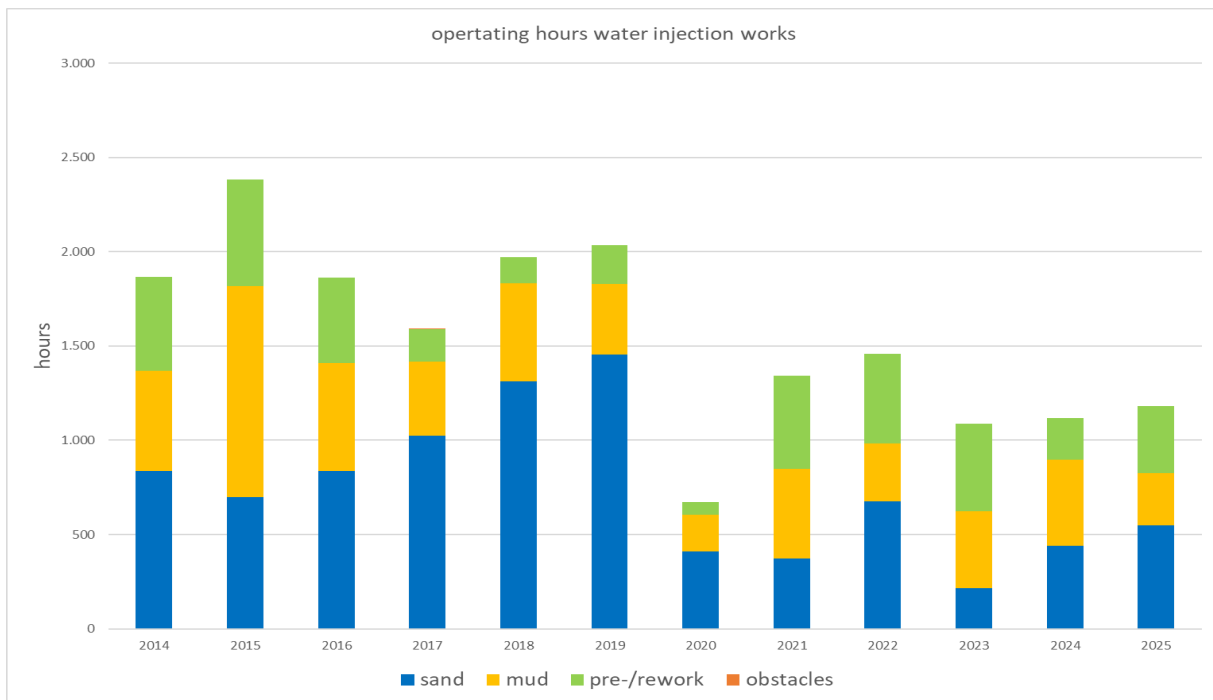


Fig. 13: Operating hours of water injection equipment by type of operation

Costs

The price of prosperity and security.

In 2025, provisions amounting to €8.3 million were set aside for services that could only be completed in the first quarter of 2026. In addition, some dredging work was financed from projects on a cost-allocation basis. Considering the provisions and project financing, the total costs of water depth maintenance in 2025 amounted to €126 million, approximately €27.5 million higher than in the previous year.

The main reason for the rise in costs was the necessary increase in the volume of material transported to Tonne E3 (longer transport routes and payments to Schleswig-Holstein).

The costs for land treatment and disposal were slightly lower than in the previous year, although this is attributable to operational fluctuations.

Given that maintaining water depths is essential for the operation of the Port of Hamburg, and that the port generates a gross value added of around €51 billion and tax revenues of around €2.6 billion, as well as supporting 607,000 jobs nationwide⁸, the investment remains more than justified. Even against the backdrop of global and geopolitical challenges, dwindling raw materials, disrupted supply chains and climate change, the established port location deep inland with excellent connections to the hinterland markets is of vital importance for the region and Germany.

⁸ https://www.tideelbe.info/fileadmin/user_upload/Downloads/Berichte/BeschaefigungsstudieHafenHamburg2019_ManagementSummary_final.pdf

Table 2: Annual costs of water depth maintenance in million euros.

costs in Mio €	2025			2024		
	public	com mercial	total	Public	com mercial	total
water depth maintenance: external costs of dredging operations	11,6	40,7	52,3	14,3	28	42,4
of which: relocation into the North Sea (Tonne E3)	3,8	24	27,8	6,7	12,8	19,5
of which payment to the S-H special fund/compensation payment for nature conservation	2,8	7,9	10,7	2,2	6,8	9,1
of which: relocation to Neuer Lüchtergrund	3,3	0	3,3	1,7	0	1,7
of which: relocation to St. Margarethen	0	0	0	1,2	0	1,2
of which: relocation to Neßsand	0,5	4,1	4,6	0,2	4,4	4,6
of which underwater levelling work	0,9	1	1,9	1	0,9	1,9
of which: sand dredging (beach nourishment, scour filling, etc.)	0	0	0	1,1	0	1,1
of which: grab dredging (removal of obstacles, delivery for land treatment, etc.)	0,2	3,7	4	0,2	3	3,3
other direct costs (surveys, monitoring, laboratory analyses, expert reports, approval pl	9,7	3,1	12,8	8,8	3,9	12,6
Land treatment and disposal	29,9	0	29,9	31,6	0	31,6
Indirect costs & overheads (IT, rent, central services, support functions, etc.)	7,5	4,6	12,1	5	4,4	9,4
Total excluding provisions and project financing	58,7	48,5	107,2	59,8	36,3	96
Total, including provisions and project financing	67	48,5	126	59,8	38,8	98,5

Results

Water depths tailored to the needs of our port customers.

An objective assessment of the success of water depth maintenance is subject to several challenges inherent to the system. The natural conditions of a tidal port such as Hamburg are subject to significant fluctuations. In particular, the upstream water has a direct influence on sedimentation and thus on the actual maintenance requirements, meaning that dredging volumes have fluctuated by a factor of 7 within a few years in the past. Absolute dredging volumes are therefore of little significance and must always be assessed in the context of the hydrological situation and the maintenance status achieved. Furthermore, the description of a condition (soundings) always represents only a snapshot in a dynamically and constantly changing system. Ultimately, the key factor is that all vessels can enter and leave the port efficiently and safely. This was also the case in 2025.

A good indicator of the success of water depth maintenance is berth availability. Figure 14 shows the quarterly analysis of available water depths at the 15 largest terminals, comprising a total of 47 berths, from 2020 to 2025. A reduction in water depth of up to 0.5 metres (light green) reflects the (agreed) tolerance range and can be considered good. The analysis shows – despite poorer discharge conditions – availability that is comparable to the previous year.

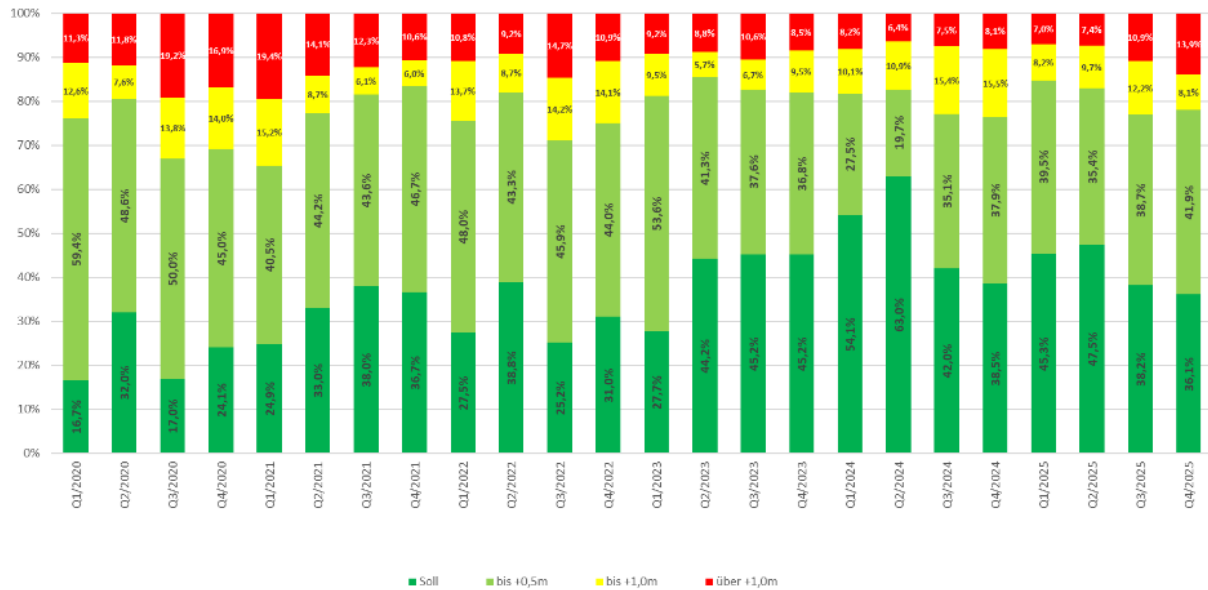


Fig. 14: Quarterly availability of the 15 largest terminals with a total of 47 berths.

Even though not all customer contacts are recorded centrally, the HPA was once again confirmed in 2025 to have good customer satisfaction regarding water-side requirements. This is aided by the close personal customer contacts, intensive dialogue and information on measures and constraints relating to water depth maintenance. These enhance understanding and acceptance of the complex processes among all stakeholders. In 2025, the HPA was once again able to demonstrate its ability to act and maintain confidence in the Port of Hamburg, thereby enabling an increase in cargo throughput. This was also aided by the fact that the temporary draught restrictions imposed by the federal government in the Elbe estuary area could be partially lifted. To ensure competitive navigational conditions in all port areas in the long term, it remains essential to secure and expand sediment discharge capacities in a manner that is both practical and tailored to actual needs.

Outlook

Seizing opportunities, acting together.

Developments in recent years – low and highly fluctuating headwater flows, new target depths, geopolitical crises, changing cargo flows, and increasing environmental and social requirements – demonstrate one thing above all: effective water depth maintenance for the Port of Hamburg, and indeed for Germany, must be able to respond flexibly to these constraints.

We cannot influence the headwater discharge, i.e. the weather. However, the fact that we were able to keep our dredging volumes stable in 2025 shows that the discharge of fine sediments, adapted to the system, has a significant impact on sedimentation in Hamburg, which benefits not only water depth maintenance but also aquatic ecology. This ability to influence the situation must be secured and expanded.

In mid-2026, the revised application for the disposal of dredged material in the EEZ will be submitted to the competent Federal Maritime and Hydrographic Agency. Given the importance of the Port of Hamburg to Germany, it is vital to be able to utilise sufficient scope for action. Many years of experience with disposal at buoy E3 demonstrate that the HPA takes its substantial responsibility seriously and ensures that the disposal does not result in any significant adverse environmental impacts.

It is also important to maintain the disposal options in the outer Elbe estuary, as these sites also ensure discharge from the tidal Elbe with minimal transport distances. A system study⁹ by the Federal Institute of Hydrology confirmed as early as 2014 that this can also be the preferred option from an ecological perspective.

Furthermore, a shift in thinking is required, leading to sediments from water depth maintenance being regarded not as 'waste' but as a resource. Numerous studies show that sediments are urgently needed in coastal areas to enable foreshores and mudflats to keep pace with rising sea levels. Concerns must be taken seriously, but decisions must continue to be based on scientific assessments which already confirm that dredged material is well suited for a wide range of uses (many of our dredging areas were classified as GÜBAK Case 2 in 2025).

The remediation of remaining sources of pollution in the Elbe catchment area and an understanding of activities such as waterway maintenance, mining, agriculture, water abstraction, reservoir management or other works in the aquatic environment – which also considers the legitimate concerns of downstream users – play a decisive role in improving sediment quality. Only by working together can the increasing quality requirements of the Water Framework Directive and the Marine Strategy Framework Directive regarding the management of dredged material be met.

⁹ https://www.bafg.de/SharedDocs/Downloads/DE/bfg_berichte/Archiv/bericht_1763_systemstudie_tideel-bell.pdf?__blob=publicationFile&v=2

The HPA will continue to pursue the task entrusted to it of safeguarding water-side infrastructure with all means at its disposal and will continue to rely on the active support of the federal government and the neighbouring countries that also benefit from the port.

All areas of action relating to sustainable sediment management for the Port of Hamburg are set out in our [overall strategy](#). This and all other documents, such as analysis and reports, are available on our [Tidal Elbe information blog](#) in a transparent, timely and accessible manner.

Appendix: Dredged volumes in 2025 by origin and destination in tTS

location	Neßsand	buoy E3	Neuer Lüchtergrund	land treatment and disposal	construction	elevations	filling in	obstacles	total
REIHERSTIEGSCHLEUSE				305					305
Norderelbe (2-5)				2848					2848
Koehlbrand									0
Rethe				7312	162				7474
Fleete/Speicher				10541					10541
Muegg.-Hovek.westl.T.				3403					3403
Querkanal				802					802
Norderelbe (2-5)						117739			117739
Suederelbe (2-3)						174494			174494
Norderelbe (6-7)	20272		50769						71041
Suederelbe	30328	361878					20279		412485
Koehlbrand	15653	213070							228723
Untereelbe			175525			50863			226388
Steediekkanal	14680								14680
Noerdl.Reiherstieg	44621			6718					51339
Suedl.Reiherstieg	2271			6299					8570
Rethe	48822	165229			433				214484
Kattwykhafen	5050								5050
Blumensandhafen	14977								14977
Neuhoefer Hafen	3685								3685
Hansahafen	19002			33486					52488
Steinwerder Hafen	8543								8543
Wendemuthkai Liegepl				324					324
Baakenhafen	2836								2836
Sandtorhafen				25558					25558
Elbufer	23442								23442
Kuhwerder Vorhafen	10952	332150						4	343106
Werfthafen B+V	73294								73294
Kuhwerder Hafen	21633			6568					28201
Kaiser-Wilhelm-Hafen	4536								4536
Rosshafen	81931			2676					84607
Sandauhafen		73751							73751
Parkhafen	3825	311905							315730
Waltershofen Hafen	12477							2	12479
Koehlfleet	61803	194759		81					256643
Seehafen 2	4215								4215
Seehafen 3	3182								3182
Seehafen 4	1563								1563
Reiherstieg Vorhafen	3162								3162
Billwerder Bucht	2922								2922
Innere Durchfahrt				203					203
Fleete/Speicher	3776								3776
Peutekanal				17220					17220
Muegg.-Hovek.oestl.T.				10249					10249
Muegg.Zollh.m.Durchf.				2479					2479
Saatehafen	18102								18102
Spreehafen	6334								6334
Steinwerder Kanaele	2305								2305
Lauenbrucher Hafen				6459					6459
Kreetsand Spadenlander Busch					1746				1746
total	570194	1652742	226294	143531	2341	343096	20279	6	2958483

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