Ministry of Transport

Feasibility study of storm surge protection around Copenhagen

Consolidated report summary

FEASIBILITY STUDY OF STORM SURGE PROTECTION AROUND COPENHAGEN

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In 2022-2025, the Danish Ministry of Transport, in collaboration with the municipalities of Copenhagen, Hvidovre, Tårnby and Dragør and infrastructure owners Copenhagen Airports, Metroselskabet, DSB, Banedanmark and Sund & Bælt, carried out a feasibility study of comprehensive storm surge protection for the central part of the capital (hereinafter referred to as feasibility study of storm surge protection around Copenhagen).

This feasibility study comprises four sub-studies, each of which is anchored in its own working group:

- Protection levels
  (Ministry of Environment and Gender Equality)

- Technology, environment and economy
  (Sund & Bælt)

- Financing, organisation and regulatory framework
  (The Danish Ministry of Transport)

- Socio-economics
  (Sund & Bælt)


The dyke at Kalvebod Fælled

Background to the feasibility study

The Copenhagen area plays a central role in Denmark's cohesion, not only as the capital, but also as the country's economic centre. Copenhagen is home to a large number of Denmark's businesses, cultural institutions and critical infrastructure. Copenhagen is also a popular tourist destination and attracts millions of tourists each year who contribute significantly and ever-increasingly to the Danish economy. Overall, the Capital Region accounts for more than 40 per cent of Denmark's GDP.

Climate change projections indicate that as sea levels rise, severe storm surges with high water levels will occur more frequently. This also applies to Copenhagen, which is vulnerable to storm surge events due to its coastal location. The flooding of Copenhagen would not only impact the city's many residents and businesses, but would also have major consequences for the Danish economy and Danish society as a whole.

Protection levels

A key element of the feasibility study is to investigate the threat Copenhagen faces from storm surges now and in the future. For the sub-study on protection levels, the Danish Coastal Directorate and the Danish Meteorological Institute (DMI) calculated how high the water level from a storm surge could be today, in 2075 and in 2125 in order to assess the protection level necessary to safeguard Copenhagen against future storm surges.

A storm surge typically occurs when strong winds push water inland over the coast, which may lead to flooding in low-lying areas. Storm surges are divided into categories based on statistical frequency. A so-called 20-year event refers to the water level that, statistically speaking, occurs once in a 20-year period. However, statistical probability does not mean that there will necessarily be 20 years between such events.

The frequency of flooding from the sea is increasing as a result of climate change and rising sea levels. Events that we today refer to as 20-year events or 100-year events will probably occur significantly more frequently within a few decades.

To protect against a storm surge event, protection level is determined based on the water level that an engineering structure must be able to withstand to protect against flooding. The protection level consists of a design water level and a wave allowance as shown in Figure 1.

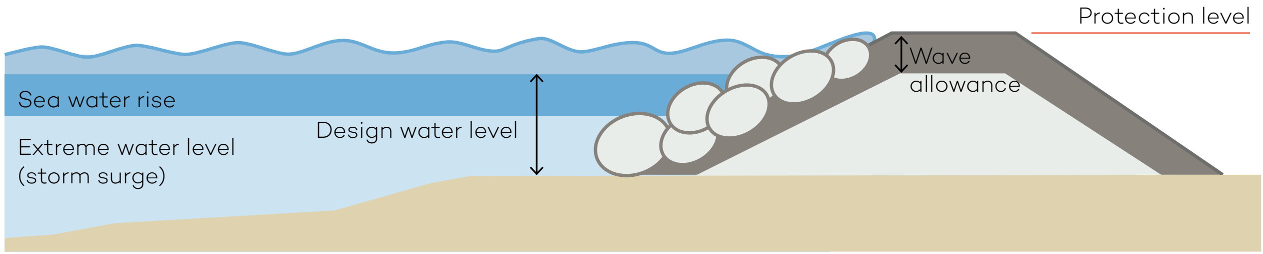
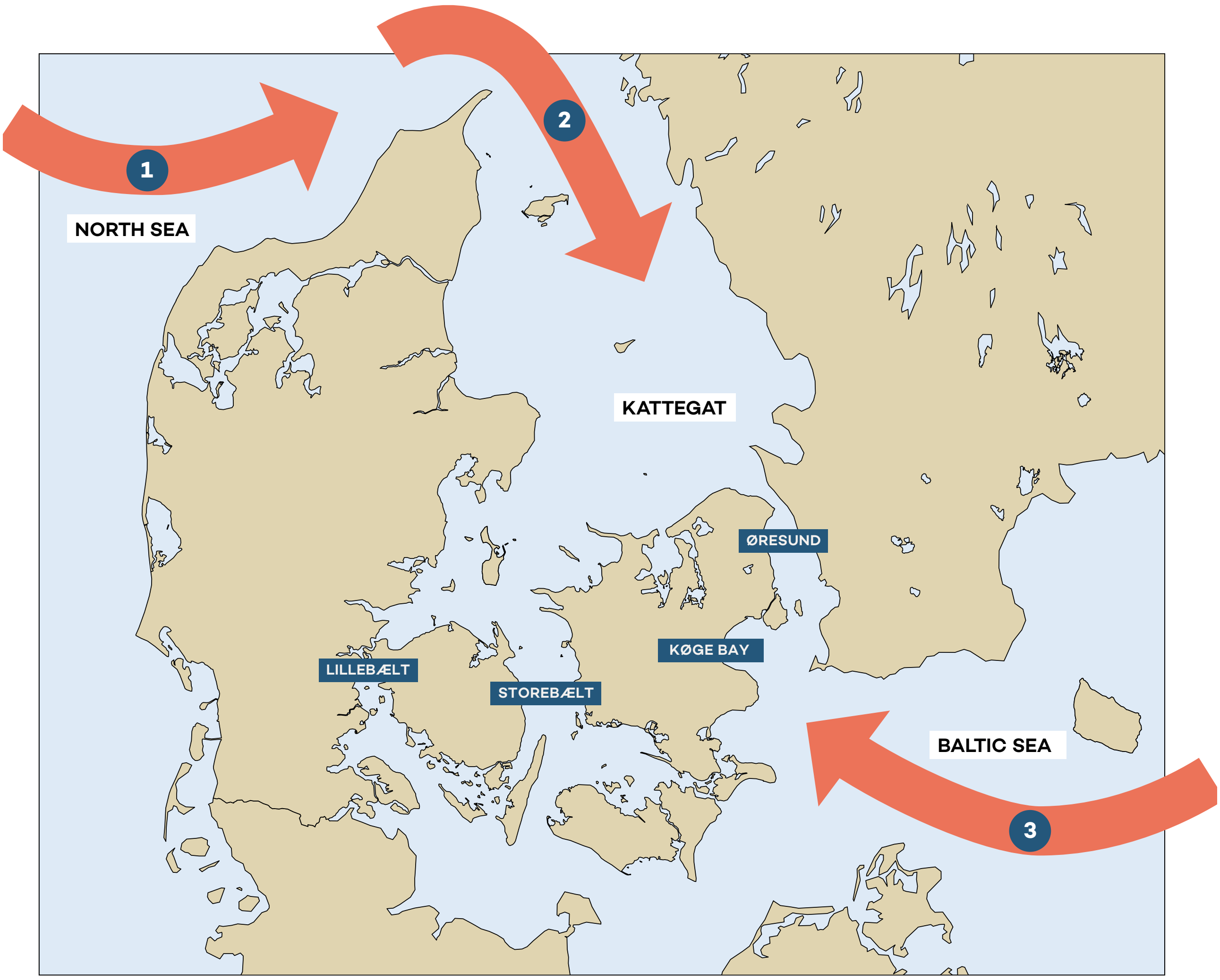


Figure 1. Elements in a storm surge for determining protection level

Copenhagen's position on the Øresund means that the city could be hit by storm surges from the north (i.e. from the North Sea, via Kattegat and through the northern part of Øresund) and from the south (i.e. from the Baltic Sea, the southern part of Øresund and Køge Bay) as illustrated in Figure 2. This makes the analysis of storm surges highly complex and has implications for the design of storm surge protection around Copenhagen, which must be adapted to local conditions and will vary depending on whether a storm surge comes from the north or the south.

To calculate the necessary height of storm surge protection systems, the starting point is the calculated design water level. The design water levels in each of three sections, NORTH (Svanemøllen-Kastrup Halvø/Copenhagen Airport), MID (Kastrup Halvø-Dragør) and SOUTH (Dragør-Avedøre Holme), were calculated for today, 2075 and 2125 as illustrated in Figure 3.



1

NORTH SEA
WESTERN STORM SURGE

Water is pushed in from the North Sea into the Kattegat.

2

KATTEGAT
NORTHERN STORM SURGE

Water is pushed down through the Danish Belts. Large volumes of water are forced into the Baltic Sea.

3

BALTIC SEA
EASTERN STORM SURGE

An easterly storm in the Baltic Sea pushes the water back towards the Danish waters, Køge Bay, and Copenhagen.

Figure 2. Wind directions contributing to storm surges around Copenhagen
Source: City of Copenhagen Storm Surge Plan, 2017

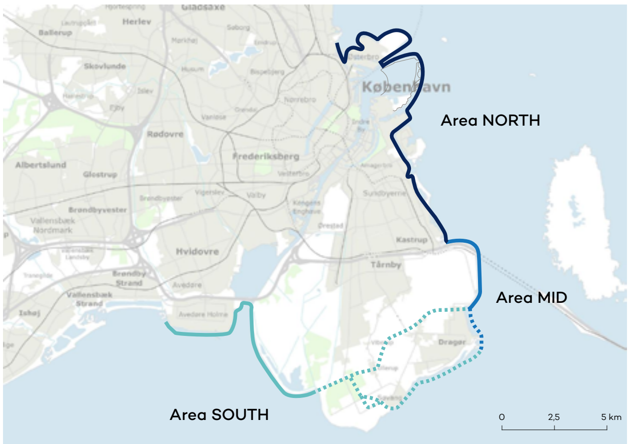


Figure 3. Division of the coastline into design water level areas and sub-sections, respectively.

The calculated design water levels based on the analysis and used to determine the level of protection are shown in Table 1 below. As stated above, a wave allowance must be added to the design water level to define a level of protection for each individual section.

Location	1990	2023	2075	2125
Design water level **NORTH**	2.8 m	2.9 m	3.4 m	4.0 m
Design water level **MID**	3.3 m	3.4 m	3.9 m	4.5 m
Design water level **SOUTH**	3.8 m	3.9 m	4.4 m	5.0 m

Table 1. Design water levels excl. wave allowance for each area – NORTH, MID and SOUTH

A storm surge with the above water levels would result in flood coverage today, in 2075 and in 2125, respectively, as shown in Figure 4.

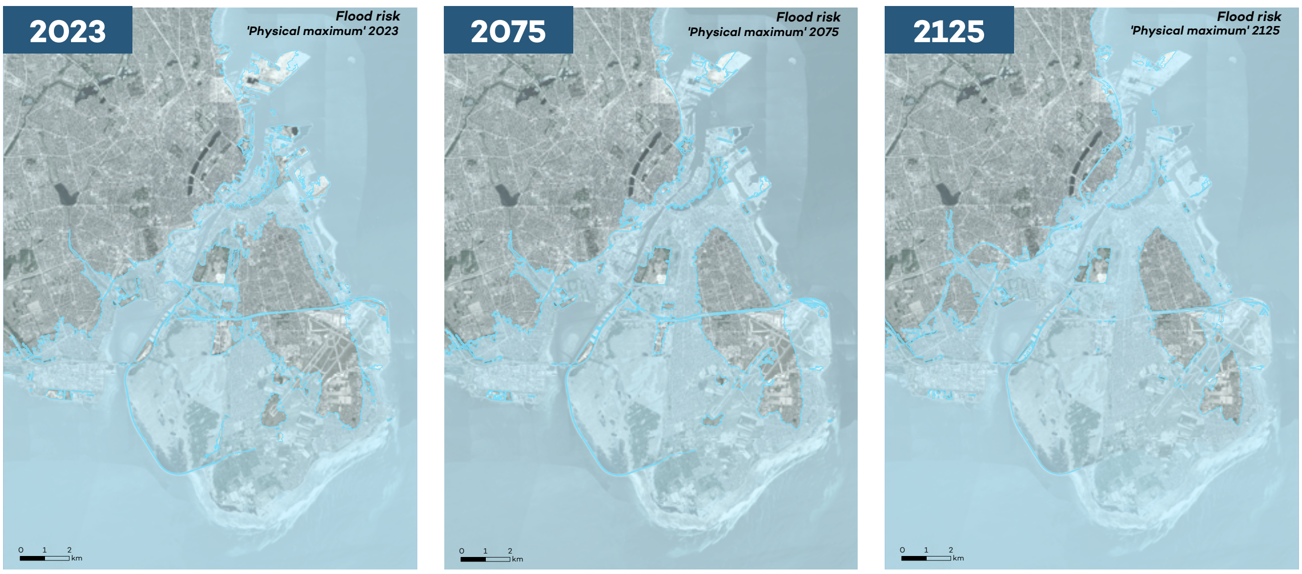


Figure 4. The extent of flooding in 2023, 2075, and 2125 during an extreme storm surge

Technology, environment and economy

Based on the resulting levels of protection, a sub-study on technology, environment and economy examined how the Copenhagen area can be protected against future storm surges, so that overall effective protection of the area's assets and critical infrastructure is achieved.

The risk of a destructive storm surge in the Copenhagen area already exists and increases as sea levels rise. The projections for sea level rises and the risk of storm surges in this report extend until 2125, but the longer the time perspective, the more uncertain the projections. Therefore, the design of the protection system proposed in the feasibility study is based on the projections for 2075 – that is, a medium-term outlook in terms of climate. However, sea levels will continue to rise for several hundred years. It is also assumed that the system will be constructed over a period of approximately 30 years (e.g. from 2030 to 2060). This will allow the expansion to be adapted to the increasing flood risk, while also being carried out in conjunction with urban transformation and development and other major infrastructure projects.

The basic approach of the feasibility study is one of approximate zero tolerance for flooding. This means that the protection systems are designed to withstand the extreme, or so-called physical maximum, storm surge in 2075. This physical maximum corresponds to what previous analyses referred to as protection against a 10,000-year event.
The approach of approximate zero tolerance or protection against the physical maximum storm surge was chosen to ensure that a comprehensive storm surge protection system that safeguards everyone within the study area, is examined. This includes utility companies and infrastructure that require high levels of flood protection.

At the request of Dragør Municipality, two alternatives were considered for Dragør – one whereby the municipality is protected to approximately zero tolerance like the rest of Copenhagen, and one whereby local protection safeguards the municipality against a 100-year event, which combined with protection north of Dragør protects the rest of Amager against an extreme storm surge from the south.

The sub-study on technology, environment and infrastructure economy analysed three proposed solutions for comprehensive storm surge protection around Copenhagen:

- A basic solution
- A reduced basic solution
- An extended basic solution

In the *basic solution*, Dragør is protected to the locally determined protection level (a 100-year event) and the remaining sections are protected to the high protection level (physical maximum).

In the *reduced basic solution*, alternative measures have been incorporated for individual sections that are slightly cheaper than the basic solution, but which deviate from the alignment set out in the terms of reference.

In the *extended basic solution*, all sections, including Dragør, are protected to the high protection level (physical maximum).

An overall outer protection system, approximately 60 km in length, was analysed. This protection system includes a combination of land-based and marine structures with more than 20 different types of protection (system typologies), such as dykes, high-water sea walls and storm surge gates.
On land, the systems would have a height of up to 5.5 m above existing terrain. In most places, the protection would be above human height and could thus also be perceived as a barrier between the city and the sea.

In order to adapt the system to the specified alignment set out in the terms of reference and to identify the most appropriate types of protection, the existing characteristics and properties of the local areas, planning and legislative frameworks, environmental conditions as well as existing technical infrastructure were reviewed and mapped. The mapping was used to weight existing values with a view to finding the least intrusive solutions while taking economic factors into account.

As shown in Figure 5, the entire protection system is divided into 14 sub-sections. In order to make an initial assessment of the construction costs, a suitable type of system (dyke, gate, wall, etc.) was identified for each of the 14 sub-sections.

Basic solution

In this proposed solution, Dragør is protected to the locally determined protection level (corresponding to a 100-year event in 2075), and the remaining sections are protected to the high protection level (corresponding to the physical maximum in 2075). This proposed solution does not include alternatives at the individual section level.

Figure 5. Overview map showing the basic solution for all 14 sections. The extent of flooding at the physical maximum in 2075 is marked in blue.

Based on this, three construction estimates of between DKK 12 and 13 billion were calculated for the three proposed solutions. Table 2 shows the construction estimate for the basic solution. The construction estimates for the 14 sections range from DKK 0.2 billion and 2.4 billion.

	2024-prices
Construction cost estimate	mDKK 12800
Annual operating and maintenance costs	mDKK 163

Table 2. Total construction costs, basic solution

Design year 2075. Basic solution incl. correction allowance and DSA (design, supervision and administration), land acquisition, survey costs and offset by revenues from soil reuse excl. VAT.

Photo: Colourbox

Financing

The financing sub-study analysed and prepared cost allocation models intended to secure funding for implementing storm surge protection around Copenhagen.

The examined cost allocation model is based on the benefit principle in the Coastal Protection Act, cf. the mandate in the feasibility study's terms of reference. It follows from the benefit principle that payment contributions for the establishment of coastal protection (storm surge protection) can only be imposed on those who achieve protection or otherwise benefit from coastal protection. The feasibility study therefore also opted not to look at other, e.g. tax-funded, models.

The benefit principle may be considered a cost allocation mechanism applied to allocating the total cost of establishing storm surge protection to individual property owners. Under the benefit principle, individual property owners pay the share of the total costs for construction, operation and maintenance of the coastal protection project equivalent to the proportion of the total project benefit that constitutes their individual benefit.

The benefit is calculated by comparing a theoretical zero scenario, where no storm surge protection is constructed, with a project scenario where full storm surge protection is constructed, as described in the sub-study of technology, environment and infrastructure economy. The benefit is thereby defined as the cost of the damage avoided that would occur in the zero scenario up to the year 2125 were coastal protection not implemented in the four municipalities. For calculation purposes, it is assumed that payment from all contributors would only be collected when all sub-sections have been constructed by 2060.
In a later phase, construction and the allocation of contributions can be divided into stages.

The specific benefits to be included in the cost allocation have not been defined or specified.
The feasibility study assesses a cost allocation model based on current rules and practices in the area, which solely include direct and indirect material damage. This model draws on publicly available objective data regarding direct material damage (damage to buildings and homes).

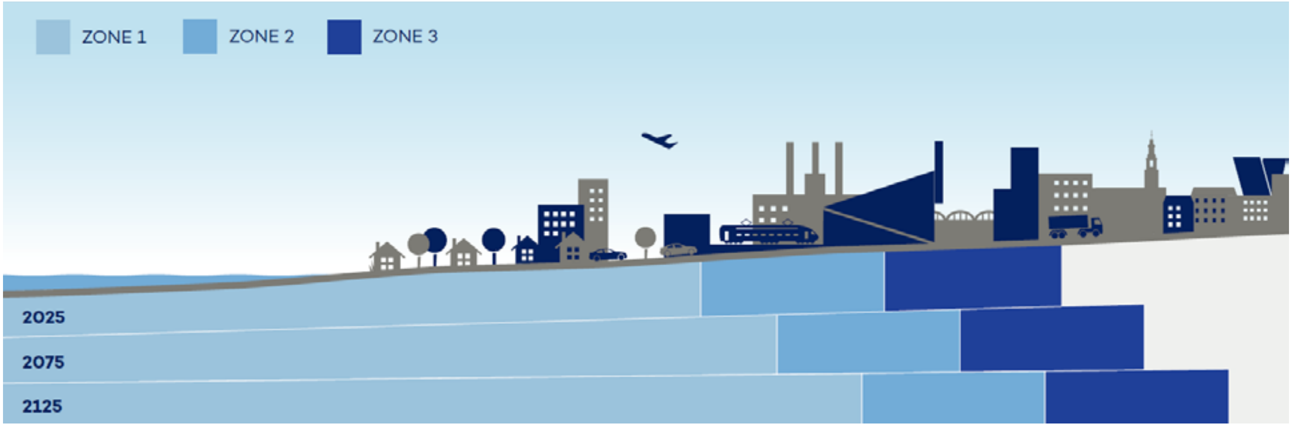


Figure 6. Illustration of flood events and distribution over time (zonal model)

As regards indirect material damage (operational losses), this information has been gathered specifically for this sub-report.

Applying the benefit principle to a large urban area like Copenhagen has never been tested. The feasibility study indicates that some of the consequences of a flooded city, such as damage to various intangible assets and public goods, may be difficult to quantify and operationalise within the framework of the existing benefit concept. For example, many people benefit from a well-functioning transport network, stable electricity and heating supply, continued waste collection and so on. This can be addressed in further analyses so that the cost allocation model more accurately reflects who benefits from the storm surge protection.

The cost allocation analysis includes two significant inputs: Flood risk and scope of damage.

The flood risk is based on detailed modelling of 24 storm surge events from the sub-study of protection levels, identifying for each event which zones and thus plots of land would be flooded, and at what water level they would be flooded.

The scope of damage is based on direct and indirect material damage, i.e., damage to buildings, household goods, infrastructure, etc., as well as operational losses for infrastructure and utility companies.

Cost allocation models

Two models for cost allocation were developed:

- Cadastral model
- Zone model

The cadastral model represents cost allocation in its most individualised form. Based on a specific water level from the storm surge simulations and a specific damage function, a unique payment contribution is calculated for each individual property. The cadastral model can thus be said to be closest to the benefit principle, as a very direct connection is created between the benefit and the payment obligation.

The zone model is characterised by the division of plots of land affected by storm surge into "bands" from the coast and inland. The boundaries of the zones follow the spread of the water from a 20-year event to a 100-year event, from a 101-year event to a 1,000-year event and from a 1,001-year event to the physical maximum (the extreme storm surge). It is assumed that a flood would affect the entire zone equally, and that the water depth would be uniform throughout the zone in question. The zone model mitigates minor variations in calculation inputs to ensure a more consistent assessment of economic contributions of comparable plots. In effect, the zone model facilitates an equitable distribution of costs among property owners whose land is included in the model.

Although the zone model creates a slightly weaker connection between a specific property's flood risk and payment, it is still based on a specific damage function for each individual property and thereby ensures an individualised calculation of payment contributions. The zone model is therefore deemed to still ensure a sufficiently direct link between the individual property owner's direct benefit from the storm surge protection system and the payment requirement to finance the system. However, both the cadastral and zone models are deemed to require a change in the law, as the data-driven approach in both models eliminates the individual case-by-case estimate, which is implicit in the Coastal Protection Act. The zone model serves as the basis for the presentation of the analysis results.

The main result of the cost allocation analyses is shown in Figure 7.

As can be seen in Figure 7, the main contributors to storm surge protection funding will be private homeowners and businesses.

Furthermore, a model has been outlined that, prior to cost allocation, takes risk aversion into account. The feasibility study assumes a near-zero tolerance for flooding. It is noted that there is some variance among the infrastructure companies in the understanding of the zero tolerance level, although all companies are working to secure their facilities against even very rare flooding events.

This means that protection is set to be able to withstand the physically maximum storm surge expected in 2075. However, the study does not take into account differences in risk aversion between, on the one hand, infrastructure and utility companies, which have higher risk aversion and thus a potentially higher need for flood protection, and on the other hand, traditional businesses and homeowners, who typically have lower risk aversion and thus a lesser need for flood protection. This is one reason why the contribution of infrastructure and utility companies of approximately 9 per cent is considered to be underestimated overall, since a significant part of the costs for the higher protection level is due to the higher protection level needed by these companies.

For one sub-section in Dragør, a differentiated estimate of construction costs was calculated, where the cost of protection against the 100-year event constitutes 2/3, while 1/3 refers to the upgrade from 100-year protection to physical maximum protection, cf. table 2.2. This differentiation forms the basis for cost allocation in figure 8. Here, 1/3 of the construction costs have simply been shifted to Infrastructure and utilities to illustrate differences in risk aversion.

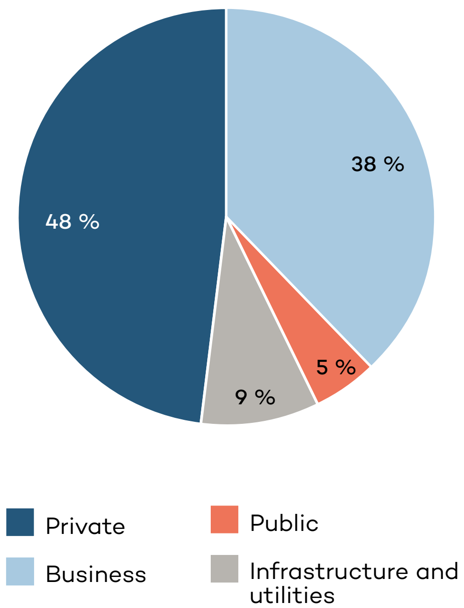


Figure 7. Cost allocation across stakeholders

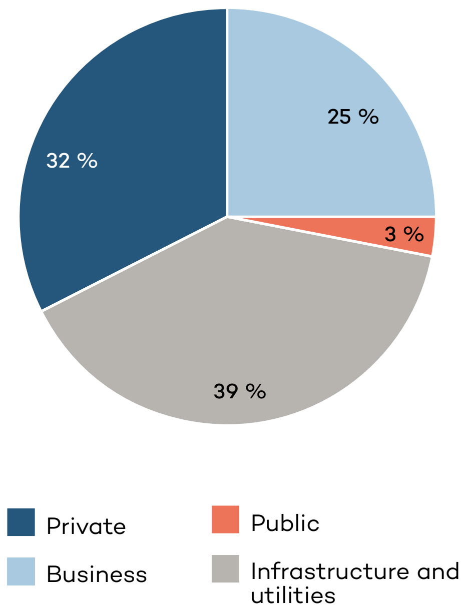


Figure 8. Technical example. Cost allocation among stakeholders with consideration of risk aversion.

As can be seen from the figure, this results in a significant increase in the utility companies' contribution from 9 per cent to 39 per cent, reflecting the companies' elevated protection needs.

In the next project phase, a differentiated capital expenditure estimate may be calculated, allowing for cost allocation to reflect the differing levels of risk aversion for the entire project, just as in a later phase public co-financing reflecting the intangible and collective benefits that cannot be valued may be considered.

Debt financing

The sub-report on financing and organisation assumes that the costs of constructing storm surge protection will be financed by the construction authority taking out loans during the construction phase. In addition to the cost allocation model itself, describing how large a proportion of the total costs for storm surge protection each property owner must pay, a model must also be developed for how the contributions will be used to repay these loans.

The sub-report assesses several models:

- A public loan and guarantee model, where the loans taken out during the construction phase are retained by the construction authority and repaid through ongoing collection of contributions from the parties benefitting from the storm surge protection.

- A private loan model whereby the loans taken out during the construction phase are repaid and replaced by 40-year loans taken out by the parties benefitting from the storm surge protection. These new loans are registered as a senior charge on the property that is transferred to new owners in the event of a sale.

- A hybrid model, where the loans taken out during the construction phase are retained by the construction authority, but are secured against the individual properties of the parties benefitting from the storm surge protection. Loans are repaid through ongoing collection of contributions from those parties.

Photo: Colourbox

Public borrowing would benefit from lower financing costs because of government guarantees. Conversely, borrowing by individual parties would allow for increased interest deductions and thus, from the individual's perspective, reduce costs and increase flexibility in terms of being able to make individual adjustments. Overall, however, private borrowing is estimated to be more expensive in net terms than public borrowing. The feasibility study did not consider the choice of financing model in more detail.

Socio-economic analysis

In order to carry out an overall assessment of the advantages (benefits) and disadvantages (costs) of storm surge protection around Copenhagen, a socio-economic analysis was carried out, in which the benefits and costs of the project are valued and quantified in monetary terms. If the total value of the project's benefits exceeds the costs of the project, the project will result in a positive socio-economic return, and the project will thus be socio-economically worthwhile.

The socio-economic analysis indicates that the project would result in a positive socio-economic net benefit, as the gains from shared external storm surge protection around Copenhagen exceed the costs associated with the construction, operation and maintenance of the project by between DKK 1.7 and DKK 5.4 billion, as shown in Table 3. The project is therefore deemed socio-economically viable, even when only the most basic benefits (the basic analysis) are included. The analysis also indicates that the additional value of a large number of further indirect benefits has not been monetarily quantified, but can be assumed to contribute to making the socio-economic outcome even more positive were this to be calculated.

The analysis is based on the findings from the sub-study of technology, environment and economy and the sub-study of financing and organisation. The costs included comprise the costs of construction, operation and maintenance of a comprehensive storm surge protection system around Copenhagen as described in the technical, environmental and economy sub-study.

The benefits of storm surge protection around Copenhagen consist primarily of material gains in the form of avoided damage to buildings, household goods, infrastructure, etc., as well as avoided operational disruption for utility and infrastructure companies, as described in the sub-study on financing.

	Basic analysis	Additional analysis 1	Additional analysis 2
Facility	-6,676	-6,676	-6,676
Operation and maintenance	-3,079	-3,079	-3,079
Avoided damage	11,423	11,423	11,423
Reduced traffic disruptions	0	133	3,753
Present value, total	**1,668**	**1,801**	**5,421**
Internal interest rate	**3.5 per cent**	**3.6 per cent**	**4.5 per cent**

Source: Interim report on socio-economics (EY), December 2024 based on data on construction costs, operation and maintenance from the interim report on technology, environment and economy, (Rambøll), September 2024 and data on avoided damage costs from the interim report on financing and organisation (KPMG), April 2025.

Note: Costs are denoted with a minus sign. Avoided damage costs are probability-weighted. Costs are discounted to the so-called present value and calculated at market price.

Table 3. Results of the socio-economic calculations (million DKK, present value in 2024)

The baseline analysis includes only the avoided damage costs from the financing sub-study.

The effects from supplementary analyses of traffic disruption during storm surges (EY, 2024) are included in supplementary analysis 1 and supplementary analysis 2. The supplementary analyses thus include the benefits of avoiding delays for travellers using the metro, S-train, long-distance and regional trains, Copenhagen Airport and the Øresund Bridge in the event of storm surges. The two supplementary analyses differ from each other only in the use of different methods for probability weighting. The supplementary analyses show that the socio-economic surplus increases from DKK 1.7 billion to DKK 1.8 billion and DKK 5.4 billion, respectively, when the value of avoided inconveniences for travellers in the Copenhagen area is also included.

Beyond the investigated traffic disruption, storm surge protection around a large urban area like Copenhagen would be expected to bring a number of intangible benefits, which are difficult to quantify and therefore not included in the socio-economic analysis. This applies, for example, to the benefit of having a well-functioning capital with security of supply or the benefit of special national cultural assets safeguarded from damage and loss. These are a number of positive effects, all of which will to some extent contribute to increasing the overall benefits of storm surge protection around Copenhagen. If it were possible to quantify these effects, it would therefore, everything else being equal, further enhance the socio-economic outcome.

Organisation and governance

Establishing a comprehensive, external storm surge protection system around Copenhagen will be a very extensive undertaking and complicated in all phases of the project – from planning to construction to operation. The project will, of course, have to be implemented in stages over approximately 30 years, across four municipalities and with a total construction budget in excess of DKK 12 billion. In addition, the protection system must be adapted to the dense urban environment, and large sections will be located close to or in protected natural areas (Natura 2000). The organisation serving as the project client will have to manage planning, financing, construction and the operation and maintenance of the protection infrastructure. This requires a strong mandate and places great demands on the skills of the organisation.

Three basic models for organising storm surge protection around Copenhagen have been analysed:

- A municipally controlled dyke association
- A publicly owned company - state-owned, municipal or joint state/municipal
- Public-Private-Partnership (PPP)

The analysis of organisational models points to pooling expertise and responsibility for storm surge protection around Copenhagen in a publicly owned company, the organisational form overall considered most robust and suitable for handling the complexity of the project through all phases – from planning and construction to payment collection, operation and maintenance. The company would be able to operate as the client for certain sub-projects in the overall protection scheme and as a coordinator for other sub-projects which are part of the overall protection system, but may be delivered by other parties.

The special circumstances and challenges of the storm surge protection project around Copenhagen may call for an organisation under joint state/municipal ownership that can combine the advantages of a state company and those of a purely municipal company. The state-owned corporate structure would ensure that existing expertise in terms of environmental challenges and managing largescale construction projects is leveraged to the greatest extent possible, which is considered crucial for the project to be realised in the first place. Municipal involvement would also ensure local representation and legitimacy in the municipalities, which may promote a more efficient and locally adapted implementation of the project.

Joint state/municipal ownership could be established in several ways and in its purest form could be a separate partnership (I/S), in which the state and the four municipalities are all represented, similar to Metroselskabet or By & Havn.

In a further phase, more detailed analyses of specific corporate models can be carried out.

Perspective and further process

It is inherent in the nature of a feasibility study that some issues are too complex to be addressed within the time and finances available. Consequently, a number of factors will need to be investigated in more detail in the ongoing work on storm surge protection around Copenhagen.

Organisation

The feasibility study's analysis of organisational models for storm surge protection around Copenhagen has aimed to identify an organisation with sufficient local and national support, so that legislative tools commonly used by the state (Construction Act) can be used, while maintaining local responsibility and scope for decision-making to the greatest extent possible. The costs of storm surge protection fall under public administration and services, and the construction costs are therefore within the municipal construction framework, which is why a future storm surge protection organisation would need to resolve the issue that investment in storm surge protection would exceed the construction funding that the municipalities are able to allocate for the facility.

Additional calculations and models

The terms of reference for the feasibility study called for a thorough testing of a cost allocation model within the benefit principle of the Coastal Protection Act. In this context, the municipalities have requested alternative cost allocation models that take into account the significant differences in the need for protection for private homeowners and for infrastructure and utility companies and, thus, in the derived costs for protection. As an alternative to the cadastral model, the zone model was developed to divide risk into designated zones, therefore resulting in a more equitable distribution of contribution obligations across plots of land and among different stakeholders. The model deviates to a certain extent from the benefit principle of the Coastal Protection Act and will require further study for upcoming reports.

A major flood in the Copenhagen area will most likely have far-reaching consequences well beyond the physical damage to properties and breakdowns in the transport infrastructure included in the calculation of the socio-economic impact of this feasibility study. Since these effects are difficult to quantify and to assign a monetary value, they are not included in the study's socio-economic analysis, which probably underestimates the full socio-economic value of storm surge protection around Copenhagen. It will therefore be relevant in future work to investigate how the socio-economic analysis can take these effects into account.

Inclusion of additional data

The recognition that the climate is changing rapidly and that elements of the data used in the feasibility study will need to be updated in future recalculations is a fundamental condition of this feasibility study. As an example, a storm surge that hit southern Denmark in 2023 provided up-to-date insight, which could not be incorporated into the feasibility study's damage cost calculations.

In addition, the protection systems are designed to be as adaptive as possible, allowing them to be raised as necessary. It is expected that the outlined protection systems will need to be adapted, for example, to a greater rise in sea level than assumed. The results of the feasibility study will therefore require ongoing monitoring and inclusion of available knowledge in the area in order to constantly correspond to current knowledge about the threat from future storm surges.

Project planning

A storm surge protection system to be established over approximately 30 years must be built to last more than 100 years and therefore designed to be raised, reinforced and adapted in other ways. At the feasibility study level, however, it has not been possible to detail the protection system in physical or temporal terms to a level whereby an adaptive programme for prioritisation and implementation sequence has been determined. A more detailed analysis of a number of factors will be necessary for the development of a prioritisation sequence.

Next steps

The feasibility study was carried out with a view to informing political discussion and position-taking in the four municipal councils, the government and among the parties in the Danish Parliament. If a decision is made to move forward with the development of a comprehensive external storm surge protection system around Copenhagen, a project organisation must be determined and a programme prepared for the entire system, so that relevant environmental impact assessments can be initiated. Since the comprehensive storm surge protection system is large scale and will need to be implemented over many years, environmental studies, sub-projects and cost allocation will have to be phased both geographically and temporally.

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- Delrapport om samfundsøkonomi
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- Delrapport om finansiering og organisering
  (KPMG), April 2025
- Tillægsanalyser af trafikantgener ved stormflod
  (EY), November 2024

Who is involved in the collaboration?

Work to undertake the feasibility study of a storm surge plan for Copenhagen has been organised in a steering group chaired by the Ministry of Transport, with participation from all parties in the study.

To ensure cross-sector coordination, a coordination group was established chaired by Sund & Bælt, comprising the leaders of the working groups and other project participants.

The Ministry of Transport, the Ministry of Environment and Gender Equality/ the Danish Coastal Authority, the Danish Meteorological Institute (DMI), the Municipality of Copenhagen, Hvidovre Municipality, Tårnby Municipality, Dragør Municipality, Sund & Bælt, Metroselskabet, Copenhagen Airports, DSB and Banedanmark participated in the study. In addition, a stakeholder group was established comprising key stakeholders, including, for example, By & Havn, the Danish Road Directorate, HOFOR, BIOFOS, Energinet and Ørsted, who were able to provide input on specific sections.

Study participants:

- The Danish Ministry of Transport
- The Danish Ministry of Environment and Gender Equality/ The Danish Coastal Authority
- The Danish Ministry of Climate, Energy and Utilities/ Danish Meteorological Institute (DMI)
- Municipality of Copenhagen
- Municipality of Hvidovre
- Municipality of Tårnby
- Municipality of Dragør
- Sund & Bælt
- Metroselskabet
- Copenhagen Airports
- DSB
- Banedanmark

Feasibility study of storm surge protection around Copenhagen (sundogbaelt.dk)

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