Environment has a history
Exhibition Catalogue
Hamburg, the winner 2011, has shown major achievements in the past years and at present, has also achieved excellent environmental standards across the board. The city has set very ambitious future plans which promise additional improvements.
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Why Hamburg became European Green Capital...

When applying for the title of European Green Capital, Hamburg didn’t adhere strictly to the conditions of entry. These stipulated that applicants should list their achievements — in everything from waste disposal to eco education — but only from the last five to ten years. If Hamburg had followed these guidelines, it would never have been able to demonstrate exactly why it so unequivocally deserved to win.

Many achievements that have contributed to environmental protection and the high standard of living we enjoy in our city are rooted in choices made over ten years ago — and some even date back well over a century! The idea of creating a “HafenCity” — a designated residential area in the former port — was born more than fifteen years ago. The move to grant public access to all of Hamburg’s lakes and waterways was also anchored by political decisions taken over fifty years ago. And what about the city’s countless trees — a feature we never tire of highlighting? Well, they have been part of Hamburg’s public persona for as long as we can remember!

Throughout its entire application for the title of “Green Capital”, the city focused on its heritage of “green politics”, drawing parallels between modern-day developments and decisions taken during the past 60 years. In retrospect it proved the ideal approach to take, with the judges awarding Hamburg maximum scores.

Since then the European Commission has actually changed the criteria for selecting future European Green Capitals and included historical factors:

“The assessment of the applications will also take into account the impact of identified historical and/or geographical factors which may have influenced the environmental status and policies of individual cities.” There were many historical factors impacting the city’s environmental status, some of them from long ago. A lack of space made it impossible to include them all in the application.

So this exhibition aims to provide a longer-term picture of Hamburg’s “green” history.
An analysis of Hamburg’s history poses a range of questions:

• Which geographical conditions have helped to foster the city’s positive eco development?

• Which political decisions made by successive Hamburg governments have promoted a greener city?

• Which political leaders have specifically contributed towards the sustainable growth of the city?

• What part have residents and community action groups played?

• Did Hamburg’s government succeed in acting on its residents’ demands?

**Lady Luck has often smiled upon Hamburg**

In the Middle Ages, Hamburg fought off challenges from towns like Harburg and Stade to become the major port on the River Elbe. The city’s geographical location played a key role. While other ports had relatively limited space for expansion and were often too far from the river, Hamburg was perfectly positioned at the confluence of the Alster, Bille and Elbe rivers.

North of the Elbe is a broad ridge of sandy moorland running from Lauenburg to Wedel. It only has one opening – the low-lying Alster valley in present-day Hamburg. The first port of Hamburg was established in the Nikolai “Fleet” (Hamburg’s name for a canal) on the River Alster. The Alster also remained a vital shipping route north-eastwards – towards Lubeck and the Baltic Sea – as it was significantly easier to navigate than the awkward country road.

Its fortunate location has always been the key cornerstone of Hamburg’s generally sustained development. And whether intentionally or coincidentally, Hamburg’s governing bodies and officials have always made excellent choices that allowed it to tap the city’s – natural and historical – potential.

**The river Elbe as a commercial and recreational space**

Once Hamburg’s port began to grow, it expanded southwards, to the east of Baumwall, and later into the River Elbe itself, where ships were moored well into the 19th century. As a result of the Treaty of Gottorp in 1768, Hamburg acquired more land, including some to the south. This allowed the port to expand onto the islands of Steinwärder, Kleiner Grasbrook and Neuhof between the northern and southern arms of the Elbe.

From the start of the 20th century, more and more of these areas were being used to han-
dle cargo that had been shipped to Hamburg from all over the world.

The end of the 1960s brought the introduction of container shipping, culminating in two significant new developments. One was a westerly port expansion towards the Elbe islands of Waltershof and Altenwerder, something which ultimately prevented major increases in the city’s noise and air pollution levels. The second was that former port areas, located north of the Elbe and within a stone’s throw of the city, had now been vacated. Since 1995 Hamburg has been building the “HafenCity” – a new residential area right alongside the River Elbe.

In places, the ridge of moorland north of the Elbe can reach elevations of up to 200 ft, ensuring that the port of Hamburg has always expanded southwards. This is fortunate, in that it has allowed the northern river bank to serve almost exclusively as living space – like a green ribbon it meanders along the Elbe all the way from Altona to Blankenese. The geological conditions on this side of the river have not only made this area an important commercial zone but a popular recreational area for Hamburg’s inhabitants as well. Over the last fifteen years, the trading and industrial district south of Altona has been converted into attractive residential buildings and offices – stretching along the riverfront from St. Pauli’s famous fish market to Neumühlen.

The southern shore of the Elbe is low-lying marshland, allowing stunning views from the north into the distance – down to where the Harburg Hills merge into heathland over 12 miles away. The views are one more reason why the people of Hamburg love the city’s “green lungs” – such as Baus Park and Jenisch Park on the Elbchaussee.
“Conveyor of Felicities!”
– the River Alster

The River Alster and its two inner-city lakes are known in Hamburg as “the internationally admired wet bits that make Hamburg what it is!” This, however, has not always been the case.

Basic commercial interests prompted the decision to create the Alster’s two lakes: they were needed to power the city’s mills. In 1130, the first dam was built on the river at the current location of Jungfernstieg. As a result the marshy Alster basin outside the city’s northern gates was ignored by its merchants for centuries.

It wasn’t until the 18th century that residents began using the inner and outer Alster lakes for recreational purposes. In 1757, the Hamburg-born poet Friedrich von Hagedorn wrote:

Conveyor of manifold felicities,
O Alster, with your flow so divine,
You render Hamburg’s gifts multiplicities,
And make merry this city of mine.

The Elbe’s trade makes us richer;
The Alster sociable and fine!
The former fills our stocks and stores
On the latter we sip our sweet wine.

And in 1850, during the reconstruction following a massive fire eight years earlier, the formerly private shores of the Small Alster (next to the Alster arcades) and the Inner Alster were opened to the public. The plans for reconstruction were drawn up by architects like Alexis de Chateauneuf and Gottfried Semper and the English engineer William Lindley.

For the most part, the areas surrounding the River and Outer Alster had been privately owned until 1950. Max Brauer, Hamburg’s Mayor at the time, revived claims and plans from the 1920s and made public accessibility to all the outer Alster and at least one side of the river the Senate’s goal in 1949.

The local residents soon realized that their privileges were under threat and, in line with the spirit of the times, began to protest “the quest for communist socialization”. The possible disturbance to local birdlife was even touted as an argument to thwart Bauer’s plans. It didn’t work. The Mayor prevailed, and today people of Hamburg regard walking or cycling along the Alster, from the river’s mouth all the way up to the Walddörfer villages in Hamburg’s north, as their natural right.

The philosophy of enabling public access to Hamburg’s waters was also followed when drawing up plans for the Neumühlen development (on the north bank) of the Elbe and the HafenCity. Many private properties there have upper floors that overhang public prom
enades, offering protection from the rain and elements. However, all access to the water is public.

Anybody who has attempted and failed to reach the waterfront at lakes in southern Germany, Switzerland, Austria and Italy will appreciate this almost unique feature of Hamburg.

The green trees of Hamburg

Even in pictures from the 16th century, the city is densely populated with trees. As a city state, Hamburg has always owned numerous forests on its borders. A host of regulations have always ensured that every tree felled must be replaced with a new one.

Around 1800 – in an attempt to demonstrate its entirely peaceful nature during the Napoleonic Wars – Hamburg pulled down its city walls. This ploy backfired. French troops occupied Hamburg from 1806 to 1814, even incorporating it into the French Empire. There was worse to come. To prepare for an anticipated siege, the city’s residents were not only forced to rebuild its fortifications in the winter of 1813-14, but to burn down all the trees surrounding the city so that the French artillery had a clear line of fire.

It was a similar story during the Second World War. By 1945, some 90% of the trees lining Hamburg’s streets had been destroyed, not just as a result of allied bombing and the resulting fires, but also through illegal felling for firewood.

However, after every historical catastrophe there were huge efforts to restore Hamburg’s tree population. This wasn’t restricted to the city’s streets. In the 1950s, Hamburg’s schoolchildren joined forces on reforestation projects across Hamburg. Today some of these plantings have grown into fully-fledged woods. At present, some 230,000 street trees and a further 1 to 2 million in gardens, parks and forests make Hamburg one of the “tree-
richest” cities on the planet. Fortunately, Hamburg has no need for campaigns like the one run in London – where residents were encouraged to reforest their substantially larger capital and plant a million new trees from 2002 – 2012.
Public recreational areas for one and all

At the start of the 19th century, Hamburg’s government decided not to build on the site of the city’s former fortifications but to use plans by Isaak Altmann, a landscape gardener from Bremen, to transform the space into a park with promenades. This led to the creation of the still aptly-named Wallanlagen of today – and the opening of the Botanical Garden within the “Planten un Blomen” park behind Dammtor train station.

Preserving (rather than developing) attractive green recreational areas within the city is another longstanding Hamburg tradition. Moorweide opposite Dammtor Station and the popular Schanzen Park exemplify this.

The idea of “green areas”, i.e. public parks where people can gather and relax, was powered by two major philosophies: upper middle class philanthropy and the notion of a people’s park championed by the workers movement.

In the 18th and 19th centuries, wealthy residents liked to escape the noisy, foul smelling city centre – especially during the hot summer months. Ideally, they built their vacation homes, which ultimately became their main residences, on the Elbchaussee boulevard. Many of these magnificent manors still adorn the skyline today. It also became fashionable among merchants to own your own park, a trend which over time created a series of private parks – including Jenisch Park in Klein-Flottbek, Hirsch Park in Nienstedten and Hamm Park in Hamm. In the 19th century, the public was granted access to many of these parks at the weekend, sometimes for a small fee but often for free. Over the years, they were donated to or repurchased by the city.

In the second half of the 19th century, the principle that the general public should have access to ample recreational areas near their own homes was incorporated into Hamburg’s urban planning program. In 1884, Franz Andreas Meyer drew inspiration from the English to design Innocentia Park in Harvestehude. It was the first such municipal park to be built by the city authorities.

Urban designer Fritz Schumacher (1869-1947) and horticulturalist Otto Linné (1869-1937) were responsible for creating large public parks in Hamburg. Notable examples are the Stadtpark (the city’s central park) in Winterhude, the remodelling of Hamm Park and the expansion of Ohlsdorf Cemetery. In new quarters like Dulsberg, Jarrestadt and Langenhorn, green areas for recreational purposes became an integral part of the plans.

Their 20th century counterparts in neighbouring Altona – still an independent town at the turn of the century – were building senator and surveyor Gustav Oelsner (1879-1956) and his horticulturist Ferdinand Tutenberg (1874-1949). They designed a green belt for Altona
and prevented land from being divided into separate lots by creating public parks. The walkways along the banks of the Elbe are also their achievement. Covering some 500 acres, the Volkspark in Altona is Hamburg’s largest park. Like the city’s central park, it was designed to fit its natural location and surroundings, thus bucking the Anglo-French trend of laying out parks according to architectural rules.

For the most part, the urban planning heritage shared by Hamburg and Altona, cities which were only amalgamated after the Greater Hamburg Act of 1937, has been preserved until the present day – despite pressure from traffic planners and the construction industry.

**Industrialization and civic involvement**

Every major urban problem – be it sewage, waste disposal, or noise and air pollution – is a product of both industrialization and the growth spawned by this industrialization.

Towards the end of the 19th century, people had almost unlimited confidence in new technologies. The discovery of electricity and the invention of everything from telephones to cars led them to believe that anything was possible. The future seemed bright.

At the same time, the effects of industrialization were starting to leave their mark on the city. Houses were built with coal stoves and smog soon darkened the skies. Noise and air pollution from the nearby industrial areas and the port’s ships aggravated the situation.

Often the air pollution in Hamburg became unbearable. In 1893, as one observer wrote, “I’ve often noticed that it got so dark in winter that you needed to put the lights on indoors, but if you travelled to Harburg, Pinneberg or Bergedorf you discovered the sun was shin-
ing! It isn’t fog or the clouds that are dark-
ening the heavens but chimney smoke that, 
lingering above the rooftops in the still air, 
looks like a sea of cloud from afar.”

In 1907, another wrote “If you arrive in Ham-
burg on dark winter morn, a delightful sight 
unfolds before you. Slowly but surely small 
alcoves and walls in the port become visible 
though the fog. It is as though a piece of Old 
Hamburg, the real Hamburg, is rising out of 
the thick smog that covers everything, like in 
a fairytale. However, when it reaches midday, 
and the air is still clouded, the street lights 
are still lit, the tram lights shining out and 
the busy traffic moving sluggishly through the 
city, the image loses all its charm. Common 
sense takes over and any normal human ex-
periences the conditions as an ordeal.”

With some 130 “foggy days” a year, Hamburg 
had some of the worst air quality in Germany. 
Something had to change.

Records in Hamburg’s state archives are full 
of complaints dating from the end of the 19th 
century. They also document how the Senate, 
Hamburg’s ruling government, responded to 
the objections. The early community action 
groups protested the unpleasant smells and 
increasing levels of factory noise. Although 
these complaints were initially lodged in mid-
dle-class districts such as Winterhude and 
Uhlenhorst, complaints about declining living 
standards were soon being voiced in working 
class suburbs as well.

Most civic initiatives took the form of legal 
appeals where interested parties submitted 
a type of petition to the authorities. Officers 
from the relevant city department then dis-
cussed these cases, often in meetings with 
those concerned, until a political decision 
could be reached and announced to both par-
ties.

The more people that signed and the higher 
their social standing, the more intense the 
pressure on the authorities was — so what’s 
new?! When the minister at Hamburg’s St. 
Michaelis church joined forces with residents 
from Veddel in 1901, their cause assumed a 
far higher profile. The residents were protest-
ing against yet another chimney that the re-
fining plant Norddeutsche Affinierie wanted 
to build. They wanted the new stack to be at 
least 10 meters taller than the previous ver-
sions — to prevent the filth and odours from 
polluting their homes.

When he became involved, the St. Michaelis 
minister argued the city had already suffered 
enough from industrialization and that the 
chimney should be extended to carry pollution 
further away. Ultimately the Senate granted 
the residents’ petition and the Norddeutsche 
Affinerie withdrew its plans because “the 
increase in chimney size was not considered 
feasible by technical experts.”

During a similar case in Winterhude in 1875, 
the Senate’s commission was way ahead of
the times. They demanded that soot filters similar to those designed by Professor Robert Wilhelm Bunsen (now familiar to us all from chemistry lessons) be installed in chimneys.

Although, in these two cases, residents broadly got what they wanted, in 1919 the Senate ruled in favour of a factory owner in a noise pollution case, albeit with considerable wisdom. The owner argued he had consciously moved his metal plant to an area where industrial work was permitted, and that the residential housing had only been erected afterwards. He also argued that work – at this time of great economic instability – was exceptionally important and that his factory only operated between 7 am and 4 pm. The Senate allowed work to continue but ordered that the iron hammers be stabilized to reduce noise and vibration. It was a wise decision that meant neither party lost face.

**Community initiatives as a modernizing force**

It is surprising how consensually the Senate attempted to resolve conflicts even back then. And Hamburg’s government was again put to the test in the second half of the 20th century when environmental protests of unprecedented size and intensity broke out in the 1970s and 1980s. Anti-nuclear activists and environmentalists soon became a significant political force.

The Senate tried different approaches and opted for confrontation when tackling the anti-nuclear movement. The infamous protest in 1986 known as the “Hamburger Kessel” (“Hamburg Corral”) culminated in 800 demonstrators being penned inside a tiny section of Heiligengeistfeld for thirteen hours by police. The anti-nuclear activists had gathered to demand the “right to demonstrate” and to protest against arbitrary arrests. The previous day a train with campaigners from Hamburg had been stopped en route to the nuclear plant in Lower Saxony’s Kleve, sparking the spontaneous protests.

The end result was a small victory for the protestors. The police actions were ruled unlawful by Hamburg Administrative Court, and every demonstrator was awarded the sum of 200 marks in compensation.

The Senate took a very different approach with the second major cause of the demonstrators, actively approaching and engaging
with the environmental conservationists. The main protests were against the Boehringer chemical plant and the garbage dump in Georgswerder. In both cases the sites were eventually closed and cleaned. But industry too began to seize the initiative, with many comparable companies modernizing their facilities to meet tighter eco regulations.

Of course, events around the globe – not just those in Hamburg – helped to secure victory for the Green movement, but the landmark protests at the Boehringer plant certainly attracted international attention and showed the way ahead.

In the end the civic protests impacted positively on Hamburg as an industrial location. Production lines that comply with eco standards are more effective and competitive. A host of Hamburg based companies have since made this their credo. In this way popular protests have added to Hamburg’s appeal to companies.

**High standards for all green parameters**

The exhibition’s info boards about water, sewage and air and noise pollution reveal obvious parallels in Hamburg’s eco policies. The people protest and the state responds with political solutions: windows, walls and lids to reduce noise pollution, new subterranean drainage technology to prevent sewage leaking into rivers, limits on emissions, and the renaturalization of streams and lake shores. All of these are classic examples of a “bottom-up” process.

There are some civic and political party initiatives concerning waste disposal. However, here the process is clearly “top-down”. The sheer and ever-growing volume of waste is forcing Hamburg’s planning department and refuse collection services to find innovative political solutions. Landfill has been replaced by waste incineration. Regular collections of bulky waste from the streets have yielded to drop-offs at recycling centres and special, individually scheduled pickup services.

Put simply: the 21st century solution is to avoid unnecessary waste and to recycle wherever possible. Hamburg’s waste authorities are currently drawing up plans that place them in the vanguard of climate protection.
Climate protection – intuitive tradition and political concepts

During the course of the 20th century, Hamburg constructed an outstanding traffic network. This happened for a number of reasons. However, in retrospect, it represents a huge contribution to climate protection as 29% of Hamburg’s emissions are caused by motorized travel.

The axis concept of urban planner Fritz Schumacher foresaw residential areas developing mainly along specific public transport routes. Although people soon started to populate the space between these routes, causing traffic levels to increase, the design helped prevent an uncontrolled overspill into Hamburg’s surrounding countryside.

Retrospectively, the importance traditionally attached to trees in Hamburg has also proved an environmental boon: by absorbing large quantities of CO₂, trees also contribute to climate protection. An equivalent number of trees in London would reduce regional emissions by up to 10%.

The same also applies to the countless natural conservation sites throughout Hamburg, all of which also soak up man-made CO₂. Hamburg is at the top of the German league when it comes to green belts. Conservation sites make up over 8% of the city’s area – a statistic no other German state comes close to matching. A further 19.4% is designated a nature reserve, with another 16.7% made up by recreational green space and forests.

Much of this has occurred historically without conscious reference to environmental concerns. However, since the mid-1990s Hamburg has been actively adopting policies that are specifically designed to promote environmental protection.

For example, the 1998 Work & Climate Protection initiative is geared to promoting renewable energies and saving energy in buildings. The program is flanked by a development program fostering the use of solar energy, photovoltaic technology and building insulation. As part of the Enterprises for Resource Protection initiative, Hamburg’s Authority for Urban Planning & Environmental Protection has been working with industry since 2002 to encourage businesses to save resources. All these activities form part of the so-called Eco-Partnership which was co-founded in 2003 by the Senate and Hamburg’s companies.

These initiatives were all subsumed into Hamburg’s 2007 Strategy for Climate Protection, which is committed to reducing emissions by 20% in 2012, 40% in 2020 and 80% in 2050. An annual fund of 25 million euros has been allocated to this project.
Conclusion

Hamburg’s residents love to hear visitors commenting on how green the city is, and how many trees it has — or praising the environmental features large and small found everywhere within the city limits. Compared with the world’s other major cities, it is no wonder that so many visitors are immediately impressed by the quality of life in Hamburg.

However, the ball is still very much in the city’s court. Despite topping the environmental table, we can’t allow ourselves to sit back. As the 2011 European Green Capital, we need to sustain our pioneering eco work.

On the one hand, our exhibition “Environment has a history” demonstrates how our ancestors’ actions have shaped the city.

But, on the other, it shows that civic initiatives have always been at the forefront of solving our own homemade eco problems.

The Senate has heard the voice of the people and taken the political action needed.

At present, however, it is the Senate itself leading the way. The actions of a majority of residents do not suggest full acceptance of some of its ambitious goals — 40% lower CO₂ emissions by 2020 and 80% less by 2050. Climate protection can only be achieved through constructive dialogue and mutual consensus at every level of society. Managing this dialogue is the challenge facing us in the years ahead.

Joachim W. Frank / Rainer Scheppelmann
Belief in the Future

The 20th century starts with the absolute belief in progress and the limitless prospects of technology. Hamburg booms, not least due to its port, its shipyards and its industry.
But the consequences of industrialisation already become evident in the 19th century. Smoke and soot from thousands of chimneys plague Hamburg’s population. The residents complain about the factories’ production noise and air pollution. As of 1875, citizens’ initiatives are formed. They collect signatures and submit these as “recourse”, as a protest note, to the city administration.
The Well-Off Are the First to Oppose

In 1875, the Reiss & Philippi company wants to build a new chimney in Dorotheenstrasse. The villa owners in the Koernerstrasse, Bellevue and Sierichstrasse streets collect signatures and file a “recourse”. The responsible authority approves the chimney construction - provided that it be equipped with a modern installation operating with the professor Bunsen method which prevents soot generation. It is even decreed that the factory’s existing furnaces must be likewise retrofitted.
In 1901, residents demand that the Norddeutsche Affinerie’s new chimney should be built at least 100 meters high. They complain that “the soot raining incessantly year in, year out, day and night, is a plague which seriously endangers the lives and health of the citizens in this poisoned air.” Even the Chief Pastor of St. Michael’s joins the protest – with success, since Hamburg’s Senate approves construction of the new chimney only with the requested height. The Norddeutsche Affinerie thereupon cancels its chimney project.
Compromise 1919

In 1919, the residents of Papenstrasse street in Hamm complain about the noise from the Klement & Son metal factory’s iron hammers. The factory owner argues that noise is only emitted during working hours from 7 a.m. to 4 p.m. and that jobs have to be secured in these times of crisis. In the end, Hamburg’s Senate approves continued operation - provided that all iron hammers in the factory be equipped with new foundations which reduce ground vibrations.
The Boehringer chemical plant in Hamburg Moorfleet is located adjacent to agricultural areas. From 1975, locals and environmental groups protest against the factory’s air pollution and wastewater discharges. The company rejects all accusations. At first, Hamburg’s Senate sides with Boehringer - for reasons of job security. Controls are only intensified when the protests increase in strength. In 1984, the plant is shut down.
After the “case” Boehringer, the Senate implements a policy of strict enforcement of the new environmental regulations and laws. Over time, this brings about an ecological modernisation of Hamburg’s industry. This does meet opposition. Industries see their competitiveness endangered. But the supposed disadvantage offers opportunities. Ultimately, Hamburg’s industry has to thank the environmentalists. They forced it into a modernisation that accounts for much of its current technological strength. For example, Hamburg’s copper plant Aurubis is today’s world leader in the field of environmental protection in copper production.
The struggle for air quality has a macabre start. In 1806, Hamburg is occupied by Napoleon’s troops and, thus, part of the French Empire. Just as elsewhere, Hamburg’s well-off families entomb their deceased inside of churches. This causes considerable stench and increases the consumption of incense during church services. Therefore, the French city commander bans this custom. By and by the corpses are moved to the new Dammtor burial grounds and, from 1890, to the Ohlsdorf Cemetery.
Let the Chimneys Smoke!

In the 19th century, factories are mostly located in outlying areas of cities. The stinking whale oil factory is set up in the no-man’s land between Hamburg and Altona, below St. Pauli. Initially, the new steam ships may only travel up to the St. Pauli landing bridges, in order to keep fire hazards as well as stench and soot out of the city. But to no avail. Soon, nobody can flee the effects of industrialisation any more – apart from the well-off, who relocate their residences to Harvestehude or to Elbchaussee.
The consequence of the all-encompassing use of coal in industry, shipping and households is air pollution. In 1905, contemporaries report, “While in Hamburg you might believe the whole world to be covered with clouds, you just have to pass the city borders towards Bergedorf to find clear and bright sunshine.” This only changes after 1960, when coal is substituted as primary energy source – in Hamburg mainly by gas and nuclear power with all their unsolved disposal and safety questions.
Air Quality Becomes a Locational Factor

Since 1958, the Institute for Public Hygiene has continuously measured the sulphur dioxide content of Hamburg’s air and, since 1970, Hamburg’s municipal electricity company HEW has organised measurements of air quality - resulting in today’s monitoring network, whose grid covers all of Hamburg and allows the authorities to react should certain limits be exceeded. Therefore Hamburg is today - despite the concentration of major industries south of the Elbe river - a metropolis proud of its excellent air quality.
The seventies bring numerous advances for environmental protection. Noise pollution from industry, ground and air traffic has become a nuisance, citizens protest and go to court. Hamburg’s Senate passes noise protection regulations and creates an own department to enforce these laws. This is the precursor of Hamburg’s Ministry for the Environment, which is established in 1979.
City Airport Hamburg

Hamburg’s airport is Germany’s oldest. Originally, it was located far beyond the city gates. After 1930, residential areas are built in its surroundings whose inhabitants complain about the increasing noise pollution accompanying the rapid air traffic growth after 1950. Since the airport premises also host the Lufthansa aircraft maintenance and overhaul facility with its frequent noisy engine test runs, the first noise protection hall is built in 1963, the second in 2002.
Residents living near the airport have state-subsidised noise protection windows fitted. Due to a decree on night flight restrictions in 1971, nocturnal takeoffs and landings require exceptional permissions. Since 1993, Hamburg has been charging noise-dependent landing-fees. They have reduced aircraft noise even further.
Fighting for a Roof

In 1975, the new river Elbe tunnel is opened, and the motorway A7 is built in the green corridor between the Volkspark and the Elbe river. After protests from residents, first noise protection walls are built, but the city districts Othmarschen and Bahrenfeld remain divided by the motorway. The idea of a roofing arises. In 2008, Hamburg’s Senate decides to build a roofing superstructure to cover large sections of the motorway between Othmarschen and Stellingen.
Around 1600, Hamburg, with its more than 50,000 inhabitants, is Germany’s biggest city. Its daily waste, at that time called “dirt”, is becoming a problem. For some time, the former prison inmate Michael Schott provides relief with his waste carts. Later, the household waste piles up ever higher and the Senate has to repeatedly pass decrees which prohibit dumping of waste into the streets. Hamburg’s Alley Ordinance is created.
Early Progress

Hamburg moves in the right direction early on. Already in 1896, the first waste incineration plant is inaugurated. The heat generated in its furnaces is used to heat public buildings, such as the Music Hall and Town Hall. Unfortunately, this path is not pursued consistently. Until the 1990s, Hamburg’s waste is predominantly deposited in landfills.
Four hundred years after the first Waste Decree, little has changed in Hamburg. The citizens still dump their waste in the woods or public parks or simply throw their refuse into the streets. In the late 1960s, the Ministry for Public Works starts a campaign in order to raise citizens’ awareness of how relevant cleanliness is in the public’s interest.
“Stadtreinigung Hamburg”, the municipal sanitation department, relentlessly educates Hamburg’s citizens, for environmental as well as economic reasons. Until well into the 1990s, Hamburg’s waste is deposited in landfills. But these reach the limits of their capacities, and new landfills or potential sites within the city are not available. Therefore, the “Stadtreinigung” promotes the concept of waste prevention. Over and over again, Hamburg’s citizens are made aware of the huge amounts of waste they produce.
Since 1970, ecology groups have been active on the issue of waste. For example, in the winter of 1971 the “German Youth for Nature Conservation” collects all bulky waste dumped in the Volksdorf forest and displays it in the Volksdorf market square. Posters with the slogan “Do you recognise old acquaintances?” call on the citizens’ conscience.
Over time, the isolated actions of single groups become a broad movement. The political parties pick up the subject, and prominent politicians clean up public parks and green areas.
Since 1972, Hamburg’s municipal sanitation department has channelled this civil involvement in its campaign “Hamburg cleans up”.
Up to the present day, youth groups and volunteers rally once a year under the motto “Hamburg cleans up”, scour green areas and nature reserves and collect any waste left there by city residents.
Environmental awareness is improving, but what to do with bulky household waste?
In order to prevent wild dumping, Hamburg’s municipal sanitation department has organised bulky waste collection days since 1968. They are an Eldorado for young families and collectors, but do not present a long-term solution.
To put an end to the littering associated with the bulky waste collection days, Hamburg’s “Stadtreinigung” introduces bulky refuse collection on demand.
Alternatively, the citizens can dispose of their bulky waste and hazardous refuse free of charge at the municipal recycling yards.
The idyllic picture of “dancing” gulls at the Georgswerder landfill is deceiving. Barrels with hazardous materials are hidden under the waste. After the Seveso disaster of 1976, the fear of dioxin grows in Hamburg, too. The city government decides to shut down and remediate all landfills. Hamburg opts for recycling and encourages collection of recyclable materials, such as waste paper and biomass. As of 1999, non-recyclable household waste is completely burnt in waste incineration plants and, at the same time, used for power and heat generation.
Up to the mid 19th century, Hamburg’s drinking water is taken directly from the Alster and Elbe rivers. The city’s tap water system is only created after the Great Fire of 1842. Before then, water was transported into the city districts with tank lorries or by water carriers. The most famous of these was Johann Wilhelm Bentz (1787-1854), nicknamed “Hummel-Hummel”. He was rather an exception, since nearly all professional water carriers were women.

Pure Alster Water

Northwest view of the Inner Alster Lake, 1830
Until 1930, it was possible to swim in the Alster, Bille and Elbe rivers without any health risks. Later, however, waste waters and frequently overflowing street sewers pollute Hamburg’s natural water bodies. Only since about 2000, Hamburg’s rivers and lakes have been restored to almost bathing water quality.
Before 1842, only the residences of some few rich citizens are supplied with tap water by the “Alsterwasserkunst” (Alster Waterworks).

After the Great Fire of 1842, the English engineer William Lindley builds a fresh water and waste water system for Hamburg.

At Grasbrook, Rothenburgsort and Kaltehofe, new water works are constructed, which filter and process ground water and Elbe river water for drinking purposes.
Cholera and Consequences

The cholera epidemic of 1892 reveals that Hamburg’s water supply still has shortcomings. For years, experts have been demanding to upgrade the water works with sand filters. More than 8,000 citizens die during the epidemic. In the subsequent years the water works are modernised. As next step, the sewage system, which was created in 1850, is expanded beyond the city centre into the surrounding districts.

Distribution of sterilised drinking water during the cholera epidemics
As of 1900, the northern city districts are connected to the sewer system, too. The main sewer is conducted below the river Elbe to the waste water treatment plant at the opposite river bank. Hamburg now has a state-of-the-art sewage disposal system.
Dead Elbe River Fish

Up to about 1950, it was perfectly possible to eat fish from the Elbe river. Later, however, the Elbe pollution increases so much that consumption of Elbe fish becomes a health risk. Moreover, frequent mass deaths of fish occur due to oxygen deficiency in the river. Today the Elbe is a “clean” river: its fish is edible and swimming is allowed again, if you beware of the current. The river’s oxygen content, however, has still to be monitored. The regulations for licensing industrial operations are taking this into account.
The Alster river and lake have always been rather clean. But sometimes mass deaths of fish occur even there, when the sewers overflow. In Hamburg, rain effluent and household waste water are channeled through the same sewers. When there is heavy rain, this mixed water spills over into the Alster and its branch channels. As from 1990, this problem is being remedied.
Clear Target

From 1990 to 2005, Hamburg’s municipal drainage department is building huge underground storage basins to prevent sewage spills during heavy rainfalls. An amusing advertisement campaign succeeds in convincing the citizens to tolerate the lengthy construction works and associated inconveniences. Today, the Alster river and lakes have regained bathing quality.
The railway from Hamburg to Bergedorf already opens in 1842 and, therefore, is one of Germany’s very first railway lines. With the construction of the Hamburg-Berlin line, the connection to the national railway network is achieved in 1846. In the east, its tracks run through the city’s former defense trenches and, in the north, on top of the former defense ramparts.

In the late 19th century, the railway is complemented by Hamburg’s tramways and, since 1907, by urban railway lines.
Hamburg’s metro system is called “U-Bahn” even though sections of it are elevated railways. Hamburg’s “Hochbahn”, in operation since 1911, is supplemented by the “S-Bahn”, the Bundesbahn’s (German National Railroad) urban railway network. In 1965, both rail networks as well as the bus and tram lines are integrated in the “Hamburger Verkehrsverbund HVV” (Hamburg Transport Association). The HVV is the world’s oldest integrated public transport system and now encompasses nearly the whole area of Hamburg’s metropolitan region.

The first metro railway lines are built on stilts, so that they don’t use up any road space, Roedingsmarkt street 1912
Until about 1960, cars are still luxury items for most Hamburg citizens. They travel by bicycle, rail or bus instead. Then, the city is redesigned in favour of car transport. There are even plans for a motorway around the Outer Alster Lake which are, however, cancelled after protests.

Since 1980, thinking has been changing. Extensive 30 km/h speed-limit zones are established. Bicycling becomes fashionable again. Local public transport experiences considerable passenger increases. Today, 98% of Hamburg’s households are less than 300 metres away from a public transport stop.
Brave New Electricity

Hamburg’s electricity company HEW is founded in 1894. Since 1921, HEW has also operated Hamburg’s district heating system, with combined heat and power (CHP) plants. Electricity and the use of its waste heat for district heating revolutionise life and are perceived as symbols of progress. In the last decades of the 20th century, the increase of energy prices and the looming climate change give rise to discussions about alternative energy generation methods and possibilities to save energy.
As of 1972, the anti-nuclear movement becomes Germany’s then strongest extra-parliamentary force. Since 1976, hundreds of thousands protest against the planned nuclear power plant in Brokdorf, which is located only 70 km northwest of Hamburg and would therefore, in case of an accident, contaminate Hamburg with radiation.

On 25 May 1981, Hamburg’s then First Mayor, Hans-Ulrich Klose from the Social Democratic Party, resigns from office – not least, because he cannot convince all of his party to cancel the Brokdorf nuclear power plant project.
Search for Alternatives

Hamburg’s electricity company HEW, heavily attacked for their nuclear power plants, starts re-searching energy efficiency and alternative energy technologies early on. In the 1970s, frequent exhibitions about environmental issues and economical use of energy are held in the HEW service centre. Already in 1978, the HEW subsidises model houses which are heated by solar thermal installations.
In addition to alternative energy sources, Hamburg focuses on energy efficiency early on. The city promotes the installation of heat pumps in model projects. Since 1993, project Fifty-Fifty has been teaching school students how to responsibly use energy. As incentive, the schools receive 50% of saved energy costs for their free disposal. Up to now, 132,000 tonnes of CO₂ and 38 million euros have been saved.
Spleen for Green

At the end of the French occupation (1806-14), almost all of Hamburg’s street trees are cut down. The Great Fire of 1842 and the bombardments of 1943-45 also decimate Hamburg’s trees substantially. This may explain the eagerness of Hamburg’s citizens to plant trees. After each disaster, even more trees are planted. Alongside the city’s streets, there grow 280,000 trees – plus an estimated 2 million trees in parks, gardens, woods and green areas.
The old city ramparts to the west of Hamburg are converted into public promenades in the 19th century. Many private owners open their parks for the public already during their lifetime, at least for the weekends, and often bequeath them to the city, e.g. Bauers Park, Jenischpark or Hirschpark. In the 20th century, the city parks in Hamburg and Harburg, the “Volkspark” in Altona and countless smaller parks in all city districts increase Hamburg’s public green spaces and considerably enlarge the local recreational areas available to the population.
The Great Fire of 1842 destroys about one third of the city. The best planners of their time are in charge of Hamburg’s reconstruction: Chateauneuf, Schinkel and Lindley. Lindley also ensures that the city gets a new sewer network and a modern water supply system. After the cholera epidemic of 1892, the old “Gängeviertel” districts are demolished and redeveloped - resulting in Hamburg’s spacious and homogeneous cityscape.
Hamburg’s population increases from 324,000 citizens in 1890 to 1,145,000 in 1930. This calls for comprehensive new housing and infrastructure construction and an intelligent traffic and urban planning. From 1908 to 1933, architect and urban planner Fritz Schumacher is Director of Urban Development and, therefore, in charge of changing Hamburg’s cityscape in a lasting and positive way. He develops an axis model as basis for planning new urban areas and for managing traffic flows. He insists on preserving fresh air corridors and creating generous green spaces in new urban areas. As architect, he is responsible for the construction of hundreds of public red-brick buildings, such as schools, museums and office buildings, and for complete city districts such as Jarre City or Dulsberg.
From 1946 to 1953 and from 1957 to 1960, Max Brauer (1887-1973) is First Mayor of Hamburg.
At the time of his inauguration, the front gardens of the mansions along the Alster and Elbe reach down to the riverbanks and block public access to the water.
Max Brauer overrules the protests of the land owners and implements laws that guarantee free public access to the Alster Lake and the river Elbe between Altona and Blankenese. It is also decreed that all other water bodies must be publicly accessible on, at least, one side.
The Alster Lake is created in the 13th century, originally as a dammed pond to power the council's mills. Looking back, we have to thank our ancestors for this. The Outer and Inner Alster Lakes characterise Hamburg's cityscape. They are beautiful inner city recreational areas as well as fresh air corridors. The extensive water body of the Alster Lakes forms a most effective retaining basin for heavy precipitation and thus prevents flooding. The Alster presents a natural opportunity for Hamburg: the citizens make excellent use of it.
Since 1995, the “HafenCity” has been planned and built as a new city district on former port areas, a mere 800 m away from Hamburg’s town hall. Public promenades run alongside all waterfronts, there are no access restrictions to the water – in accordance with Hamburg’s “best practice” tradition.
The HafenCity is located outside of Hamburg’s main dike line. It is built on settlement mounds, so-called “Warften”, and therefore even the highest imaginable storm surges cannot harm it. The buildings are highly energy-efficient.
HafenCity combines housing and working and is integrated into the city’s public transport system via a newly built underground railway line.
The release of former port areas in 1995 was a huge opportunity. Hamburg has made use of it.

The jury’s laudation, “Hamburg has shown major achievements in the past years and at present, has also achieved excellent environmental standards across the board. The city has set very ambitious future plans which promise additional improvements.” Hamburg regards this honour as both commendation and challenge: to become even better and prove that a booming trade and services metropolis, which is also an industrial hub, can be a pioneer in terms of climate and environment protection.
Exhibition „Environment has a history”

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Environment has a history

Hamburg would not be European Green Capital 2011, if not for the actions of earlier generations. Hamburg’s citizens have a long-standing commitment to managing industrial noise, air pollution and waste water. Throughout the years, the Senate has taken citizens complaints into account and integrated them into comprehensive policies. Moreover, the aftermath of the Great Fire of 1842, provided some of Hamburg’s best architects an opportunity to re-create the urban landscape. In the early 20th century, Chief Planning Director Fritz Schumacher designed natural fresh air lanes throughout Hamburg to improve air quality. Further, Mayor Max Brauer ensured all Hamburg citizens free access to the Alster and Elbe.

The exhibition features the environmental milestones of how the European Green Capital developed.