COPENHAGEN GREEN ACCOUNTS 2014

PARTNERSHIP IS THE NEW GREEN

Everyone knows that when we pull together, we can lift a greater burden. Therefore, strategic partnerships are gaining awareness in society, and in recent years, we in the public sector have become aware that we can achieve much better results, when we cooperate with companies and organizations, than we can alone. It requires the municipality to step out of the authority role and become equal partners who solve the city's challenges together. It also demands that we can aim for common goals, and that each of us can contribute by achieving our objectives. Among other things, Copenhagen is contributing by making our data and knowledge available and opening our city as a laboratory for the development of new green solutions.

In 2014 under the title of 'Sharing Copenhagen', we entered into more than 90 partnerships and by virtue of those held over 250 events, which together marked Copenhagen as European Green Capital 2014. The events have reached Copenhageners as well as delegations of experts from cities all over the world, who participated and exchanged knowledge and ideas in Sharing Copenhagen.

Partnerships also play an important role in the joint effort of cities to limit climate change and its consequences. When cities use each other's solutions the effects multiply. Mega-cities on all continents are watching us when it comes to climate protection, CO_2 reduction, sustainable urban development and green growth. Therefore, in spite of our limited size, our Lord Mayor is now a member of the steering committee of C40, the world's largest city network for green transition, addressing climate change in collaboration with research institutions and donors.

Like many other cities, Copenhagen is struggling with congestion, cloudburst, air pollution and noise. Together with our ambitious climate targets, these challenges encourage us to rethink the way we organize the city. In 2014 the Copenhagen Solutions Lab opened as the municipality's platform to test solutions that will support Copenhagen as a so-called Smart City, where smart solutions promote green growth, innovation and quality of life. The solutions combine large amounts of data, technology and – of course – partnerships. In 2014 a central area of Copenhagen was turned into a lab for smart solutions, for example to get traffic to flow more easily, assign vacant parking spaces and identify full waste bins.

In 2007, we set 13 targets for Copenhagen to become the world's Eco-Metropolis in 2015. The targets for CO_2 reduction, access to green and blue areas and the removal of waste in public streets have already been achieved, and we are close when it comes to cycling, feeling of safety on the bike paths, organic food and cleanliness. However, we must acknowledge that, despite improvements, still too many cyclists are seriously injured, that traffic emit too much NO_2, that locals spend too little time in the city's green areas, and that too many homes and institutions are still burdened by traffic noise.

The results we have achieved have only been possible because of the interaction of many actors, each of which has contributed to a greener Copenhagen – interaction between elected representatives and municipal employees who work every day to create a green city; the Copenhageners, who commit to a green life style by cycling, saving energy and water and sorting their waste; and the companies that contribute sustainable solutions and growth.

Lord Mayor
Frank Jensen

Technical and Environmental Mayor
Morten Kabell

CONTENTS

CAN WE ACHIEVE THE GOALS?

It will be possible to achieve the goal on time with unchanged municipal efforts.

It will be possible to achieve the goal with reinforced municipal efforts.

It will be possible to achieve the goal with reinforced municipal efforts of considerable extent.

In addition to the City's efforts, assessments may comprise factors that are important for meeting the goals, but that lie outside the responsibilities of the City.

GOALS FOR 2015	CAN WE ACHIEVE THE GOAL?	HOW FAR HAVE WE COME?
THE WORLD'S BEST CITY FOR CYCLISTS		
At least 50% of people to cycle to their workplace or educational institution in Copenhagen	😐	The percentage of people who commute by bicycle increased from 41% in 2012 to 45% in 2014. This increase involves a certain statistical uncertainty; however, the continued expansion of the cycle grid, another mild winter and the extensive construction work on the metro probably led to a certain shift from car to bicycle.
The number of seriously injured cyclists in Copenhagen to be halved compared with 2005 (when there were 118 serious injuries)	☹	There were 91 serious or fatal accidents involving cyclists in 2014. This is 20 fewer seriously injured cyclists than in 2013, and compared with 20 years ago, it is a 60% decrease. Because there are more bicycles in the traffic, the relative risk of accidents decreased even further. In spite of this significant improvement, it is not deemed realistic to achieve the target of halving the seriously injured compared with 2005, which will correspond to 56 seriously injured cyclists.
At least 80% of cyclists in Copenhagen to feel safe and secure in traffic	🙂	In 2014, 74% of Copenhagen cyclists responded that they feel safe in traffic and thus maintained the level from 2013. The stable increase of 23 percentage points compared to 2008 is estimated to reflect recent years of effort with conversions of intersections, wider bike paths and campaigns for more considerate behaviour.
CLIMATE CAPITAL		
Copenhagen's CO_2 emissions to be reduced by at least 20% by 2015 compared with 2005.	🙂	In 2011, Copenhagen had already achieved its goal to reduce carbon emissions from the city by 20% compared with 2005. In 2014, CO_2 emissions were reduced by 31% relative to 2005. In the same period, the population has grown by 14%.

A GREEN AND BLUE CAPITAL CITY

90% of Copenhageners to be able to walk to a park, a beach, a natural area or sea swimming pool in less than 15 minutes.		Today, 96% of Copenhageners are able to walk to a large green or blue recreational area in less than 15 minutes. This means that we have achieved the goal. However, Copenhagen will continue to improve access to its blue and green recreational areas. In 2013, two new pocket parks opened.
Copenhageners to visit the city's parks, natural areas, sea swimming pools and beaches twice as often as today (2007) (on average 1 hour every other day)		Figures from 2013 show that Copenhageners visit the city's green and blue areas 24% more often than in 2007. The City assesses that it will not be realistic to achieve the goal of doubling the visits by 2015.

A CLEAN AND HEALTHY BIG CITY

Copenhageners to be able to sleep peacefully, free from noise harmful to health from street traffic.		Noise-reducing asphalt, traffic planning and speed reduction have reduced traffic noise in general in the city. In addition, the municipality subsidizes noise insulating windows in urban renewal projects. In 2014, the city subsidized 442 homes. However, it will require reinforced municipal efforts of considerable extent to achieve the goal in all homes.
All schools and institutions to be subject to only low traffic-noise levels during the day		As described above, traffic noise has been reduced in general through the city's efforts on the road, which means that the noise impact on schools and daycare centres is reduced. In addition, noise reduction is part of the overall renovation of public schools. However, it will require reinforced municipal efforts of considerable extent to achieve the goal in all schools and institutions.
The air to be so clean that Copenhageners' health will not be damaged.		The EU limits for particles were observed in 2014, but the level of nitrogen dioxide remains far above the limit. The goal can not be achieved, as the municipality has not been allowed to establish a clean air zone in Copenhagen. According to the Air Quality Plan of the Environmental Protection Agency, the target can be met shortly after 2015.
There should be at least 20% organic food in the city's food consumption.		The share of organic food sold in retail remained unchanged at 17% in 2014. Due to reduced prices of organic food, the share is expected to increase in 2015. However, it is uncertain whether it will reach 20%.
The City to lead the way with at least 90% organic food in its institutions.		The share of organic food in the city's institutions amounted to 83% at the beginning of 2015. Copenhagen Food House in charge of the conversion believes, however, that it will require intensified efforts to reach the last stretch up to 90%.
Copenhagen to be Europe's cleanest capital and one of the cleanest capitals in the world.		For the third time In 2014, Copenhagen was in an international benchmark survey of street cleaning in six European capitals. Copenhagen has moved from sixth place to a third place. 2015 is the first year with a reorganized Technical and Environmental Administration, where cross-disciplinary collaboration on street and park cleanliness is improved, and this should help strengthen the effort to be Europe's cleanest capital in Europe in 2015
Litter to be cleared from public streets within eight hours.		The City has met this goal since 2011 by systematically clearing litter from public streets within eight hours in the city centre and in other areas with many litter incidents. Moreover, when citizens report more serious litter incidents in public areas, litter will be removed within eight hours.

SHARING COPENHAGEN

In 2014, Copenhagen was appointed European Green Capital by the European Commission. The award was won not only because of the municipality's green efforts, but because those who use the city every day are helping to create the green city. Therefore, the municipality wanted to celebrate the prize along with the people of Copenhagen, while fans from around the world were invited to participate and exchange ideas. Under the headline Sharing Copenhagen, more than 250 events were held in 2014 in the form of events, conferences, guided tours and master classes with special focus on greening, climate, environment, energy, mobility and quality of life. Despite the fact that Copenhagen citizens had limited knowledge of the relationship between the European prize and Sharing Copenhagen, the city regards the celebration as successful thanks to the large participation in the events.

PARTNERSHIPS AND CO-CREATION

Along with more than 90 partners, the city managed to create a programme for the year, where five green themes succeeded one another, each with 30-60 activities. The partners were co-organizers of the activities and contributed with sponsorships, conference facilities, presenters, exhibitions and press work. Below a few, but essential activities are lined out.

In connection with the theme "Good City Life of the Future", the temporary construction the Dome of Visions was erected at Søren Kierkegaard's Square in collaboration between the NCC, the Royal Library, the Danish Architecture Centre and the city of Copenhagen. The Dome of Visions served as a "sustainable community center" and had about 20,000 visitors in 2014.

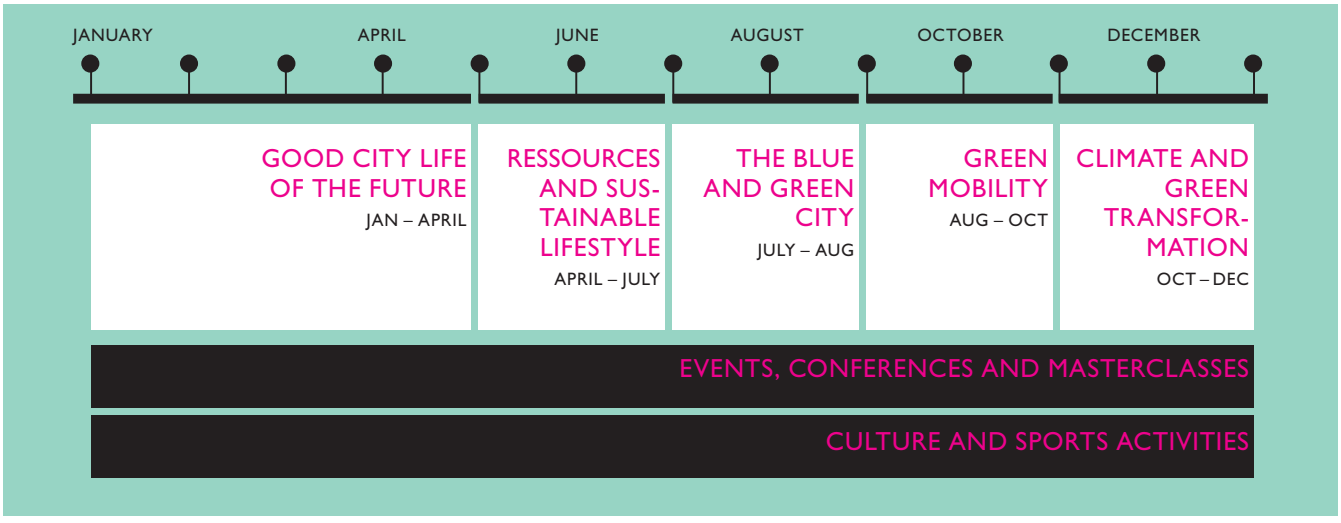
On 20 September, 26 partners joined forces to organize the "Copenhagen Harvest Festival" attended by 2,600 locals. The focal point was local produce, sustainability, reduction of food waste, ecology and climate. The result was a national festival that both strengthened the organization and cooperation between the actors and demonstrated what Copenhagen and Copenhageners are good at in the above areas.

The partners behind the theme of "Green Mobility" launched a series of events in September under the title "Copenhagen Mobility Days", which focused on green mobility – including cycling, alternative fuels, public transport, mobility planning and green city logistics.

In December, a partnership between the EU Commission, the Capital Region, Danish Industry, Ramboll and the city of Copenhagen organized the two-day event "Sharing Copenhagen – Green Capital days", where about 800 participants from home and abroad, among others debated climate, urban life and urban development.

SHARING COPENHAGEN LIVES ON

The partnership behind Sharing Copenhagen and launch of the many joint activities in 2014 have shown that public involvement, innovation and co-creation can help to solve complex tasks that the municipality would find difficult to solve alone. In addition some strong partnerships have been built across sectors through Sharing Copenhagen that can, in the furture, contribute to lifting the priority areas, such as the work of implementing the Climate Plan. Therefore, Sharing Copenhagen continues as a platform for partnerships and innovation, and the goal is now to maintain and further develop partnerships and joint activities, which can among other things, help the city with the knowledge, technology and investment.



GREEN GROWTH METROPOLIS

KNOWLEDGE BASED GREEN ECONOMY

Copenhagen's goal to become CO_2-neutral by 2025 requires a significant transformation of energy supply, construction, waste management, transport and infrastructure. At the same time, the city must adapt to the expected climate change in the form of stronger and more frequent rain falls, flooding and heatwaves. All these tasks need to be carried out in ways that ensure and improve the quality of life for citizens and create the basis for innovation and growth.

The transition to a green economy in Copenhagen cannot be achieved in a single year or by any single party alone. Copenhagen is working with a wide range of companies and knowledge institutions to find new solutions to everyday challenges. And the city is working increasingly to document the impact of these efforts and launch new initiatives accordingly. In addition, Copenhagen participates in national and international networks of cities in order to exchange knowledge and experience, get new inspiration and market the city's innovative and green solutions.

COPENHAGEN DECOUPLES CO_2 EMISSIONS FROM GDP GROWTH

As part of the efforts to promote green economy, Copenhagen has collaborated with the London School of Economics and Political Science (LSE) to analyze the green economic transformation in Copenhagen over a long time horizon. The analysis is based on the observation that many "normal" decisions regarding the city, transport, energy, infrastructure, construction, etc. have environmental effects (eg. energy and resource consumption, emissions to soil, air and water), while many environmental improvements have economic consequences (eg. investment, employment, exports). The green economic transformation is about getting these relationships to work in a positive spiral over time.

The analysis shows, among other things that the CO_2 emissions per capita in Copenhagen from 1994 to 2010 fell by approximately 40%, from 7.3 tCO_2e to 4.3 tCO_2e, while the added value per capita has grown by about 25% during the same period. In this period, Copenhagen thereby decoupled CO_2 emissions in the city from economic growth. The calculation of CO_2 emissions includes only transport, heat and electricity, and not the CO_2 emissions from Copenhagen's consumption caused outside Copenhagen.

THE CITY'S ROLE IN GREEN TRANSITION

The analysis of the LSE also shows that Copenhagen is doing well in a number of other areas in terms of green growth drivers, but that there are challenges in some areas where an integrated effort in the forthcoming years is needed to maintain Copenhagen's position.

THE GREEN ECONOMIC TRANSITION IN COPENHAGEN CONTINUES

The LSE has identified Copenhagen as a "Green Economy Leader" based on three characteristics:

1. **Competitiveness in the short and medium term**
2. **High and growing levels of environmental performance**
3. **Sustainable growth in output and welfare**

The LSE concludes that integrated policies and programmes in three main strategic areas are necessary to maintain Copenhagen's position:

1. **CO_2-neutral in 2025**
2. **Maintaining a dense and accessible city**
3. **Effective support for growth and innovation**

Previous studies conducted by the LSE of over 100 cities worldwide have confirmed that:

- Decision-makers at city level have significant influence on the transition to a green economy,
- More and more cities see a potential to realize economic gains through interdisciplinary urban climate and environment,
- Cities are able to generate first mover benefits of a green transition,
- Cities play a special role in spatial planning, which can help create positive effects for both economic development and environmental quality,
- The transition will include a combination of leadership at the city level, strong national frameworks, partnerships and funding.

THE WORLD'S BEST CITY FOR CYCLISTS

EVEN MORE PEOPLE BIKE TO WORK AND EDUCATION

After a number of stagnant years, the bicycle share of trips to work and education in Copenhagen is now steadily increasing. From 2012 to 2013, the proportion rose from 36% to 41%, and in 2014, the share further increased to 45%.

More figures suggest that there are more and longer cycle trips in Copenhagen than before. It is assumed that the unprecedented level of investments in the Copenhagen bicycle infrastructure moves more people on to their bikes. Temporary factors such as two mild winters and extensive construction around the city are also estimated to have affected the bicycle share positively.

More locals than ever are satisfied with cycle track width and condition, and the network of attractive bicycle connections is becoming larger and denser. In 2014, the Bicycle Snake that connects Vesterbro and Islands Brygge was opened, and Vestergade was converted into a Dutch inspired bicycle street. Additionally, the expanded network of Super Cycle Paths in the Capital Region granted even better conditions for commuters, encouraging more people to cycle to and from work on longer distances.

GREATER SAFETY AND FEWER INJURED

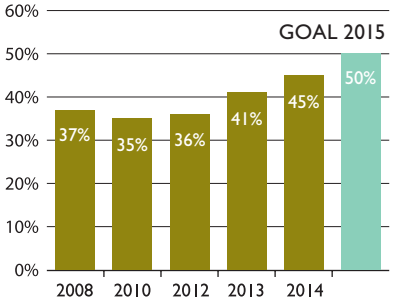
The improved network of bicycle connections means that many people find that it is fast, safe and convenient to get around by bike in the city. 74% of Copenhagen bikers felt safe on the bike in 2014 against 51% in 2008. Safety in traffic is an essential precondition for people who are not accustomed to cycling to start using their bike every day.

Also, the number of seriously injuries has declined over the years despite the growing number of cyclists. This may be explained by the improved condition and width of the cycle tracks, alterations of the crossings as well as campaigns aimed at good behaviour and attention in traffic.

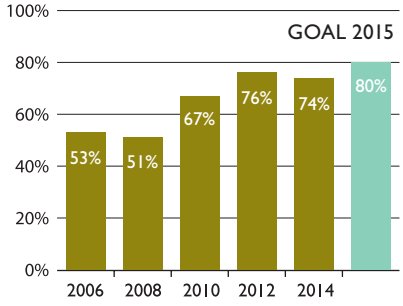
ACCESSIBILITY FOR ALL

As Copenhagen grows by 1,000 citizens a month, the pressure on the city's transport system increases. Although cyclists are already relieving the pressure significantly, as bikes take up less space on the road than cars, there is still a need to increase bike capacity in the most crowded areas of the city to avoid delays and unsafety as a result. In other words, the city needs to continuously improve conditions for cyclists if the cycle path network is to absorb a large share of the future increase in traffic to the benefit of the overall traffic flow in the city. It should still be easy and quick to get from A to B for people who choose the bicycle. Similarly, bicycle parking facilities at stations, shops and generally in the city must be improved and prioritized.

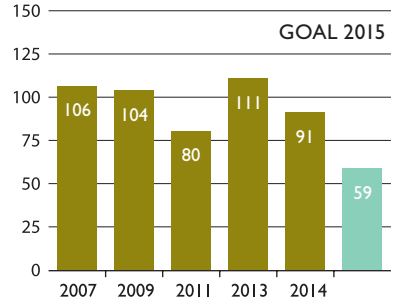
PERCENTAGE OF PEOPLE CYCLING TO WORK OR EDUCATIONAL INSTITUTION IN COPENHAGEN



PERCENTAGE OF CYCLISTS FEELING SAFE IN TRAFFIC



NUMBER OF CYCLISTS SERIOUSLY INJURED OR KILLED ON THE ROADS.



CLIMATE CAPITAL

COPENHAGEN IN PROGRESS

Copenhagen reached the goal of reducing carbon emissions by 20% relative to 2005 already in 2011. In 2014, the city took another major step towards carbon-neutrality by 2025. Thus, carbon emissions compared with 2013 decreased by 13%. Where wind energy was slightly below average in 2013, 2014 was an average year. Therefore, the share of coal as fuel for electricity generation decreased, and the proportion of wind increased.

The total reduction in the period 2005 to 2014 is calculated at 31%. This is realized in spite of a population growth of 14% in the same period.

The government's 2012 energy agreement and the CPH 2025 Climate Plan provide a good basis for maintaining the carbon reductions achieved so far and for building on these reductions in the years to come.

The carbon emissions avoided because electricity is produced from renewable energy sources have been credited, i.e. deducted, from the carbon emissions from electricity consumption in Copenhagen. Thereby carbon emissions from electricity consumption in 2014 were reduced from 980,000 tonnes to 824,000 tonnes.

GREENER ELECTRICITY AND DISTRICT HEATING

At national level, Denmark succeeded in cutting the average CO_2 emission per kilowatt-hour of electricity produced by over 19% from 2013 to 2014, which equals a 36% reduction since 2005. The decrease from 2013 to 2014 is primarily caused by increased wind production as well as the Danish power plants having produced and imported less coal-based electricity than the year before. The total reduction from 2005 to 2014 is primarily due to the increased use of biomass in the City's combined heat and power production as well as the increase in wind production.

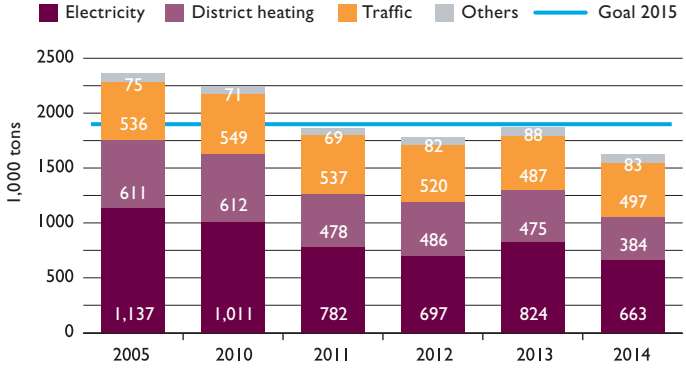
Electricity consumption in Copenhagen rose by about 2% compared with 2013. This increase is primarily due to increased activities in industry, building and construction, but also slight increases of almost 1% in public institutions and private households. In the same period, the population grew by almost 2%, and dropped the electricity consumption by 0.5%.

District heating consumption fell by appox. 14% in 2014 compared to 2013; mainly due to milder weather. The carbon emissions fell by 19% due to increased use of biomass in cogeneration. The carbon emission per kilowatt-hour of district heating was almost 6% lower in 2014 compared to 2013 and 32% below the level in 2005.

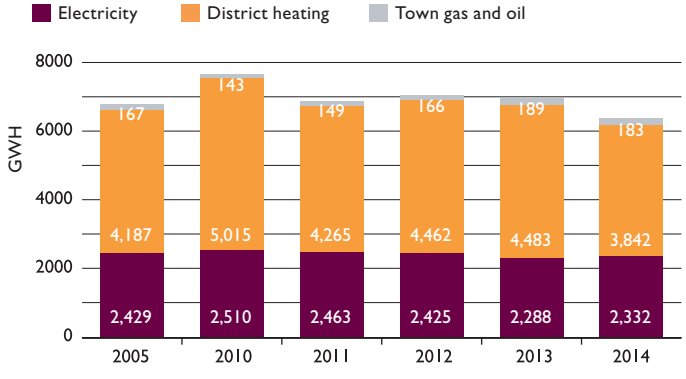
GOALS FOR CO_2

- **Copenhagen's carbon emissions are to be reduced by at least 20% in 2015 compared with 2005**
- **Copenhagen to be carbon neutral by 2025.**

CARBON EMMISSIONS BY SECTOR
INCLUDING CREDITTED RENEWABLE ELECTRICITY PRODUCTION



ENERGY CONSUMPTION BY SECTOR
EXCLUDING TRANSPORTATION



THE COURSE TOWARDS A GREEN ECONOMY

Copenhagen has ambitious goals for the city's development towards becoming an eco-metropolis and carbon-neutral by 2025. This will be achieved through a major transformation of, among others, construction, energy and transport.

COPENHAGEN WAS EUROPE'S GREEN CAPITAL IN 2014

In 2012 the City Council adopted the Climate Plan to ensure that Copenhagen is on a green track. A crucial element of the plan is the many partnerships that Copenhagen Municipality continuously established with companies, universities and organizations that all want to help focus on the environment, climate challenges, sustainable solutions and quality of life of the citizens. Copenhagen had the honor to win the European Commission's "Green Capital Award" in 2014. See page 6 for further details.

INNOVATION CREATES RESULTS IN CONSTRUCTION

Copenhagen has focused on energy efficiency and energy savings in the existing building stock, but the current pace of building modernization must be increased, if ambitions are to be met in the end. It is necessary to have better data on buildings and their energy consumption to focus the efforts. Then, there will be a focus on energy-efficient operations and the right investments in energy initiatives. There are plans to use the so-called Smart City tools for this purpose.

Both large and small players must participate in the necessary radical and comprehensive renovation of existing buildings, and energy-efficient and energy-saving measures must be included in all new construction. Many good trends towards this goal were seen in 2014. For example ATP, one of Denmark's largest pension funds, built a new office building which has become one of the most energy-efficient office buildings across the country thanks to innovative engineering. As another good example, the North Harbour will be extended to a sustainable new district and achieved a golden pre-certification from the international DGNB certification system in 2013. As a last example, energy consumption is significant in connection with the city of Copenhagen's own buildings. Therefore, the City Council has allocated a budget for the energy renovation of 32 out of 72 primary schools, and new child care centres built for low power consumption.

COPENHAGEN INVESTS IN GREEN ENERGY

In order to stay on the course towards carbon neutrality by 2025, 360 MW wind turbines – or about 100 wind turbines - must be established on- and offshore; and the district heating must be made carbon neutral. Copenhagen has invested in three wind turbines on Prøvestenen at the entrance to Copenhagen's harbour. They were put into use in January 2014 as part of the opening of Copenhagen as the European Green Capital. Another 32 MW wind turbines have been built on land outside Copenhagen. At the turn of 2013/2014, the capital's utility company, HOFOR, took over the district heating plant, Amagerværket. This is an important step towards greener energy, as it accelerates the plant's conversion to biomass. Furthermore, a series of initiatives have been implemented in relation to household waste, where plastic is sorted out for recycling, thus reducing the carbon content of incinerated waste.

GREEN AND BLUE CAPITAL

Research has shown that physical health increases and stress levels decrease when the distance to green areas is short. Green areas can also add value for the merchants nearby and affect property prices. In 2014, Copenhagen assessed the value of green spaces in the city by studying the green areas at Sønder Boulevard and their impact on property values, trading life, park activity and health. The study showed that Sønder Boulevard creates DKK 12 million a year in tax revenues as a result of the increased valuation of properties in the vicinity, while the value of park activities for visitors in the area is estimated at DKK 125 million a year.
In 2014, the municipality decided to change the frequency of measuring the number of visits to recreational areas to once every two years with the next measurement in 2015. The goal for accessibility to the city's green and blue areas was reached in 2011. However, the frequency of visits is not expected to double by 2015.

COPENHAGENERS ARE FOND OF NATURE AND ACCEPT NOISE

In order to plan and develop the city according to the Copenhageners' needs, in 2014, the city launched a number of studies of the citizens' view on city life, urban spaces, green areas and more. The studies show that most citizens appreciate the green spaces and would like more of them. Copenhageners prefer wild nature compared to other factors such as cultural touch and supervision in both parks and wilderness areas, and they do not perceive noise in the urban space as an obstacle to finding peace and contemplation, as long as the noise source is accepted and predictable.

GOALS FOR THE GREEN AND THE BLUE

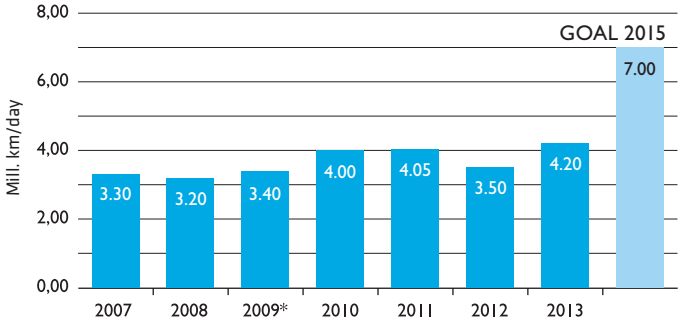
- 90% of Copenhageners to be able to walk to a park, a beach, a natural area or sea swimming pool in less than 15 minutes.
- Copenhageners to visit the city's parks, natural areas, sea swimming pools and beaches twice as often as today (2007) (on average 1 hour every other day in 2007).

THE CITY NOW HAS A DANISH NATURE PARK

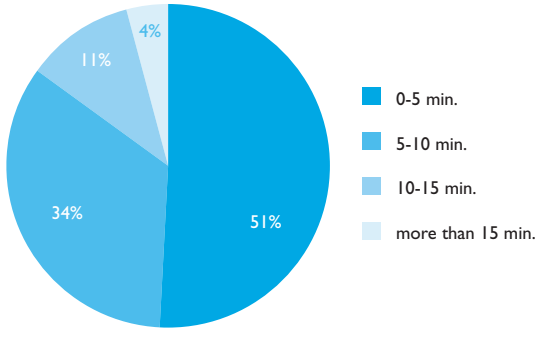
In 2014, Naturpark Amager achieved the Danish Outdoor Council quality label "Danish Nature Parks," which is given to large contiguous areas with outstanding nature, scenic beauty and cultural value. Natural Park Amager covers a 3,500-hectare area comprising of Amager and Kalvebod Fælled, Kongelunden and the maritime landscape South Amager. The park is located less than half an hour's walk from the Copenhagen Town Hall Square.

VISITS TO RECREATIONAL AREAS

* DATA IS BASED ON ESTIMATES FOR 2009, NO MEASUREMENTS MADE THAT YEAR (NO MEASUREMENTS IN 2014)



COPENHAGENERS' WALKING DISTANCE TO RECREATIONAL AREAS



CLIMATE ADAPTATION – ADAPTATION TO FUTURE WEATHER.

The Copenhagen Climate Adaptation Plan was adobted by the City council in 2011. The plan is based on the UN Climate Panel (IPCC) forecasts that predict an increase in annual rainfall of 30% and up to 1 meter higher sea levels due to climate change over the next 100 years. In the future, the number of incidences of heavy rain in a short time – the so-called cloudbursts – will increase. This will impact the city and everyday life considerably. The Climate Adaptation Plan describes, how the city will be adapted to the future climate conditions including increase in everyday rain, cloudbursts and rising sea levels.

EVERYDAY RAIN

In Copenhagen, a large portion of the rain that falls runs into the sewer system. The limited capacity of the sewer system and the wastewater treatment plants means that mixed wastewater and rainwater may overflow into streams, lakes and the harbour. In order to prevent that large quantities of rainwater result in the emission of large amounts of mixed sewage and rainwater into the harbour, in the future rainwater must be guided away from the sewers. This can be done by handling it on the surface. In Copenhagen, it will be done by withholding the rainwater in green and blue structures, from where it can be directed and used for irrigation or included as a recreational item, before it seeps into the ground or evaporates. This way the rainwater becomes part of the natural water cycle instead of overloading the sewer system and wastewater treatment plants.

CLOUDBURST

The Cloudburst plan for Copenhagen, adopted in 2012, describes the objectives of securing the city against cloudbursts. With this plan, the city will ensure that rainfalls of an intensity that statistically occurs only once every hundred years are handled in a way to avoid damage to the city.

In 2013 and 2014 the municipality has made more detailed plans for dealing with cloudbursts, which describe how cloudburst solutions can be combined with development of urban green and recreational areas. Managing everyday rain and cloudbursts must be combined into a total solution for rainwater. The total cloudburst plan is expected to be adopted in 2015.

GOALS FOR ADAPTING TO INCREASING AND MORE INTENSE PRECIPITATION:

- In Copenhagen 30% of regular rain is to be uncoupled from the sewer system before 2110 by way of green (plants) and blue (water) solutions at surface level.
- In Copenhagen, cloudburst solutions will help ensure that the city does not suffer damages during a 100-year cloudburst event, and that water levels on roads do not exceed 10cm.

SEAWATER

If the water level caused by the storm Bodil in 2013 was exceeded by one meter, it would cause significant damage to Copenhagen. Therefore, further work to secure of Copenhagen against future flooding has been initiated.

GREEN CLIMATE ADAPTATION PREVENTS THE CONSEQUENCES OF A WARMER WEATHER

Climate adaptation can be coordinated with the development of a greener Copenhagen, so that the solutions include green areas that can retain water and prevent heating of the city during heat waves. The need for green and blue structures that can alleviate heat waves has been mapped. At the same time, the potential of these areas for developing biological diversity and recreational functions has been outlined.

The "Green Climate Adaptation" is developed in order to qualify the green rainwater solutions and ensure that the green and blue structure is prioritized in the overall planning. Green Climate Adaptation is implemented via an overall vision describing the city's green structure in its entirety, when the city is climate adapted.

A CLEAN AND HEALTHY BIG CITY

MOBILITY SHOULD BE GREEN, EASY AND HEALTHY

Copenhagen is challenged in mobility, because the number of citizens and jobs are both increasing. It is positive for the city's development, but it also puts greater pressure on the transport systems. Significant combined efforts are needed to achieve effective mobility which is also green and contributes to city life.

The Municipality of Copenhagen promotes green mobility by expanding the cycle path network, the metro and the network of buses, and by streamlining the car traffic. In 2014, one of the planned results was realized when the Bicycle Snake opened to cyclists who make a short cut by crossing the harbour between Vesterbro and Amager. Over 14,000 cyclists are benefiting from the new cycle link every day.

STREET NETWORK PLAN SETS THE DIRECTION FOR THE ROAD TRAFFIC

In 2014, Copenhagen has drawn up a new plan of city streets to determine which function each section must have in the future. Targets have been set for the prioritization bicycles, pedestrians, buses and cars on the various sections. The basic idea is to concentrate car traffic on the main roads and strengthen the urban qualities of trade streets in each district. In trade streets, soft road users must be prioritized over cars.

THE MUNICIPALITY RUNS ON ELECTRICITY AND HYDROGEN

According to the Copenhagen Climate Plan, a greater share of the traffic must be converted to alternative fuels. To take the lead and show that there are good alternatives to fossil fuels, the municipality has invested in electric and hydrogen cars, and by the end of 2014, the city had 177 electric and hydrogen cars, which represent 53% of the total fleet. The plan is that, by the end of 2015, 85% of all municipal light vehicles are running on alternative fuels.

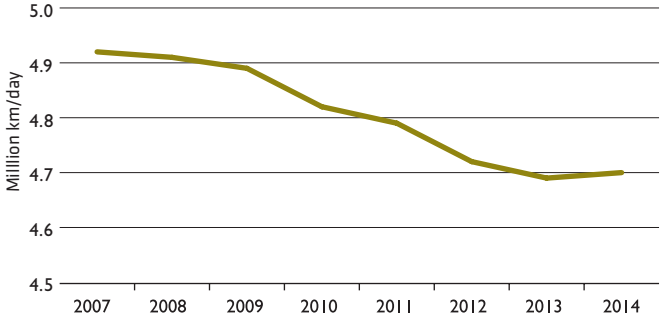
VISION FOR GREEN MOBILITY

- Mobility in Copenhagen to be more efficient and green in order to stimulate growth, and to contribute to a carbon neutral city and a good life for Copenhageners.
- At least one-third of all journeys in the city to be by bike, at least one-third to be by public transport and no more than one-third to be by car.

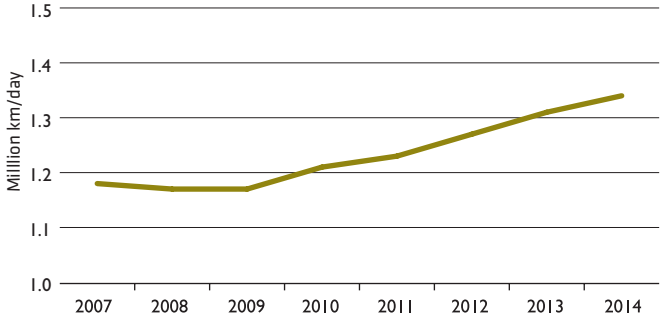
DEVELOPMENTS

Since 2007, the number of kilometres by car has been declining, while the number of kilometres cycled and trips by public transport have increased. This suggests that the trend is moving in the desired direction, and that road users have moved from cars to bikes, buses and trains. There has also been an increase in the number of pedestrians.

KM DRIVEN BY CAR



KM CYCLED



NOISE COSTS HEALTH AND MONEY

According to the World Health Organisation, traffic noise may cause health problems such as headaches, insomnia, stress, increased blood pressure, increased risk of heart disease and hormonal influences. Noise can also affect performance and children's learning and motivation. Especially noise at night is considered harmful, because noise at night can make it harder to fall asleep, provide poorer quality of sleep, disrupt sleep and cause premature awakening. Noise has both harmful effects on human health, quality of life and the economy in a larger perspective.

In 2012, the City carried out the statutory mapping of road noise that is conducted every five years. In between the two last mappings, the number of dwellings exposed to excessively high noise levels dropped. A dwelling is exposed to noise at 58 dB and significant noise at 68 dB at the facade. The limits are 3 dB lower at night.

THE NOISE IS TACKLED FROM SEVERAL ANGLES

In 2014, the city continued its work to implement the Noise Action Plan from 2013, which is divided into six focus areas as described below.

Noise-reducing asphalt is laid on roads in need of maintenance and having a traffic load of more than 2000 vehicles a day, on which the speed exceeds 40 km/h. In 2014, 9 km noise-reducing asphalt was laid, bringing the total to 73 km since 2004.

Noise at schools is reduced through full renovation. Thus, when schools in areas with heavy traffic and therefore high exposure to noise levels are renovated, noise is a focus area. The city grants subsidies for the replacement of noise insulating windows in places where noise exposed homes are being renovated and windows are replaced. In 2014 there were 442 housing subsidies.

GOAL FOR NOISE

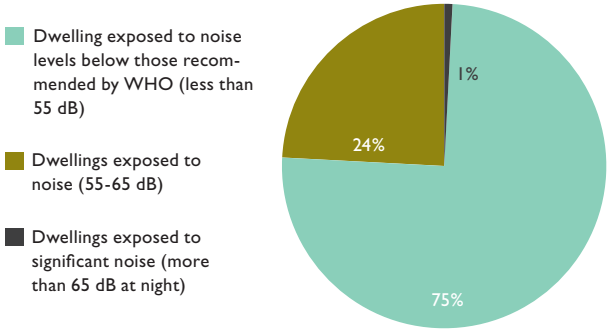
- Copenhageners to be able to sleep peacefully, free from noise harmful to health from street traffic.
- All schools and institutions to be subject to only low traffic-noise levels during the day.

The City has laid down regulations for noise in new buildings. These regulations ensure that new buildings include recreational areas where noise levels do not exceed the Danish EPA's limit values for noise.

Speed reduction means less noise. The municipality has not reduced the speed limit on major roads in 2014, but the needs and possibilities are regularly assessed.

Traffic noise is reduced by promoting green mobility. Read more about municipal initiatives in the section on green mobility on the opposite page.

NOISE FROM TRAFFIC AT NIGHT AT FACADES



AIR POLLUTION

Air pollution has harmful effects on our health and leads to great socio-economic costs. The City's mapping shows that air pollution in Copenhagen costs society DKK 4 billion and causes 540 premature deaths annually. It particularly affects the weak elderly and people who are already suffering from cardio-vascular diseases and respiratory disorders.

The air pollution that Copenhageners are exposed to comes from many difference sources inside and outside the city. The mapping shows that the majority (about 90%) of the particles harmful to health in Copenhagen come from sources outside Copenhagen. The City can only directly influence the remaining 10% of the particle pollution that originates from local sources in Copenhagen; primarily road traffic and wood-burning stoves. Nitrogen dioxide (NO_2), which is harmful to health, comes from local sources in particular; primarily road traffic.

AIR QUALITY IN COPENHAGEN

The most recent air quality measurements in Copenhagen show that the majority of air pollutants identified in the EU Air Quality Directive do not exceed limit values. However, Copenhagen continues to exceed the limit value for the air's content of nitrogen dioxide (NO_2). This limit value entered into force in 2010. The limit value for NO_2 is set at 40 µg/m^3, and so far, the annual mean value has been 52 ug/m^3.

HOW TO IMPROVE AIR QUALITY IN COPENHAGEN

The implementation of a low emission zone in Copenhagen has proven to be an effective means to limit air pollution,

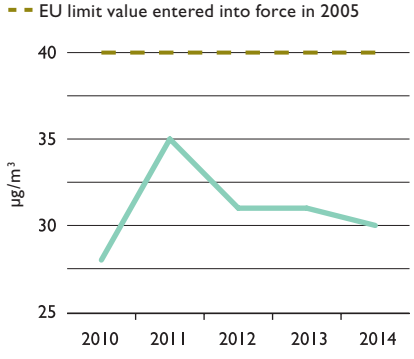
GOAL FOR AIR IN 2015

- The air to be so clean that Copenhageners' healt will not be damaged

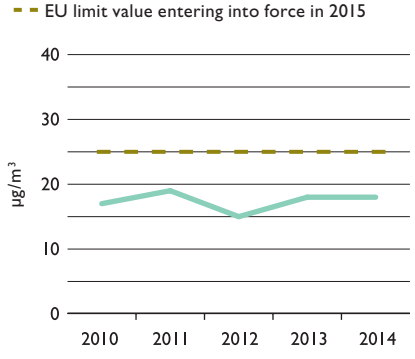
and the City of Copenhagen estimates that expanding and tightening environmental requirements in the Low Emission Zone will further reduce pollution with particles and NO2. In 2014, a clean air act for Denmark was drawn up (effective from 2015) covering a number of focus areas such as less pollution from wood-burning stoves and cleaner buses in Copenhagen. In addition, an air quality plan for NO2 was adopted in Copenhagen, after which the limit for NO2 will be met, not in 2015, but shortly after.

The Clean Air Plan for Copenhagen adopted by the City Council in September 2013 consists of focus areas including Clean air zone, cleaner workstations, marine traffic, stoves and public transport.

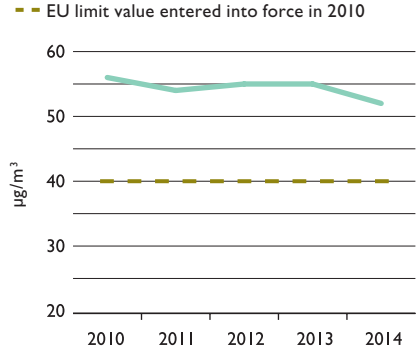
AIR CONTENT OF PARTICLES (PM10) ANNUAL MEAN
H.C.ANDERSENS BOULEVARD
AT AMBIENT TEMP. AND PRESSURE



AIR CONTENT OF PARTICLES (PM2.5) ANNUAL MEAN
H.C.ANDERSENS BOULEVARD
AT AMBIENT TEMP. AND PRESSURE



AIR CONTENT OF NITROGEN DIOXIDE (NO_2) ANNUAL MEAN
H.C.ANDERSENS BOULEVARD



ORGANIC FOOD IS FOR EVERYONE

In 2014, the Copenhagen House of Food increased its campaign for 90% organic food focusing on the citizens and those eating in the city. The campaign 'Everyone is Entitled to a Good Meal' emphasizes that organic food is not just for the elite, but for everyone: students, children in day care, the elderly in nursing homes, residents of social institutions and users of sports facilities. Everyone should have equal and good quality. Organic products are part of the quality, and it can be afforded because of new practices when it comes to shopping, seasons, fresh produce and reducing food waste. In 2014, Copenhagen's institutions prepared about 11 million kg food, of which 9 million kg of the raw materials were organic. Thus, the share of organic food in the kitchens is 83%.

THE ELDERLY GOT ANOTHER ECO-BOOST

Copenhagen's day care centres have long been ahead in the switch, and 3 out of 4 have already reached the target of 90% organic food. The largest increase in 2014, however, was created in the kitchens serving meals to the elderly in nursing homes and by home delivery. Copenhagen Food Service that delivers food to the elderly, have tripled the organic percentage to 53 over two years.

CONVERSION OF HEADS AND POTS

When the Copenhagen House of Food helps a kitchen with the organic switch, they start a change process that reaches far beyond the saucepans; the switch happens in the entire approach to the meal. The institution is involved, focusing on economy, purchasing, preparations and hosting at mealtimes. Habits and routines are challenged, and there may be a need for lifting skills, training and further development to achieve the objective of 90% organic food.

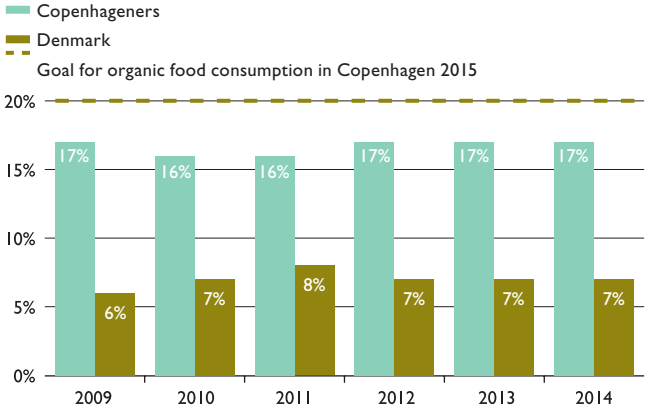
GOALS FOR ORGANIC FOOD IN 2015

- There should be at least 20% organic food in the city's food consumption.
- The City to lead the way with at least 90% organic food in its institutions.

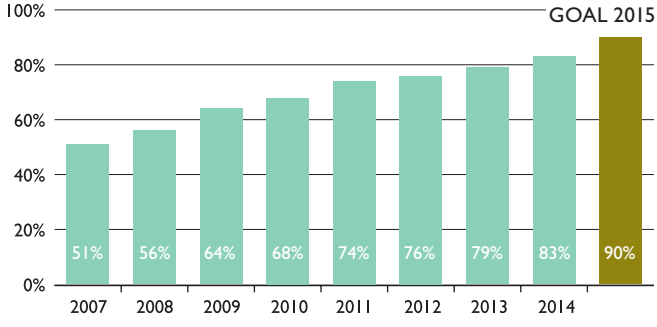
COPENHAGENERS STAY AT 17% ORGANIC

The share of organic food in private Copenhagen households remains unchanged at 17% in 2014. It is still twice as much as the national average. Consumption of organic food has been stable during the last 6 years, but it is expected to increase in 2015, because several retailers have announced lower prices on organic products.

PERCENTAGE OF ORGANIC FOOD CONSUMED BY COPENHAGENERS



PERCENTAGE OF ORGANIC FOOD IN ALL MUNICIPAL INSTITUTIONS AND KITCHENS



WASTE IN THE CITY – THE CITY'S RESOURCES

Copenhagen's waste must be utilised better in order for our resources to stay in circulation as long as possible. The Resource and Waste Management Plan 2018 is the City's plan for optimizing waste use in the period 2013 to 2018, so that valuable resources are not lost.

Four themes pave the way to less waste and more recycling
The initiatives in the Resource and Waste Management Plan are grouped into four themes, each of which includes special focus areas:

Theme 1:	Theme 2:	Theme 3:	Theme 4:
Less waste	Better separation of waste from private households and enterprises	More efficient and eco-friendly waste collection	Better waste treatment
Flagship:	**Flagship:**	**Flagship:**	**Flagship:**
Sydhavn Recycling Center	Copenhageners seperate their waste!	Bio-waste and biogas driven trucks	Prevention and recycling of plastic

The flagships and several initiatives are already underway in 2013 and 2014. The remaining initiatives are rolled out towards 2018.

BETTER OPPORTUNITIES FOR SEPARATION OF WASTE

One of the initiatives in the Resource and Waste Management Plan that has already been launched is waste containers for plastics, metal and small electrical appliances for apartment buildings in most of the city. This has made it much easier for residents in apartment buildings to recycle empty ice cream tubs, tins, toys etc. From 2013 to 2014, the quantity of separated plastic, metal and small electronic waste doubled, and the quantity collected in 2014 was somewhat higher than expected.

WASTE MINIMIZATION AND BETTER WASTE TREATMENT

The Resource and Waste Management Plan outlines several initiatives on preventing waste generation and diverting waste away from incineration and towards recycling. Efforts include minimizing waste from public events and separation of waste by the source into recyclable fractions. Similarly, efforts are being made to introduce better separation of waste at the municipal institutions – particularly for children and young people. Other initiatives have focused on hazardous waste – ensuring that it is collected for special treatment.

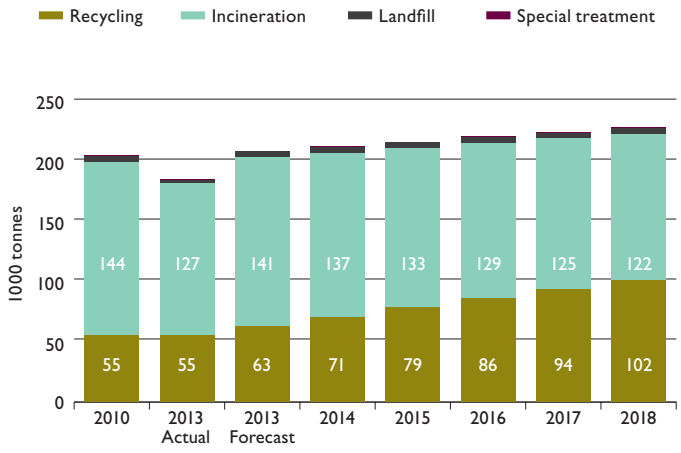
MAIN GOALS OF THE RESOURCE AND WASTE MANAGEMENT PLAN:

- In 2018, at least 45% of household waste is to be recycled
- In 2018, waste volumes for incineration are to be reduced by 20%

FUTURE INITIATIVES

In 2015, among other things, the so-called villa concept will be introduced, making it easier for citizens in detached houses to separate their plastic and metal (mandatory) and their cardboard and biowaste (voluntary) for recycling. Another initiative in 2015 is "Fractioned Bulky Waste" aimed at separating wood suitable for recycling from bulky waste, thereby preventing the wood from being burned. Other future initiatives for reducing waste volumes include initiatives to reduce food waste and increase direct reuse.

WASTE FOR INCINERATION AND RECYCLING – HOUSEHOLD WASTE



THE WAY TO BECOME THE CLEANEST CAPITAL IN EUROPE

Clean streets, squares and parks contribute to the feeling of safety and well-being of Copenhageners and visitors to the city.

Copenhagen is experiencing a positive development with an increasing population, more outdoor life and large construction projects under way, such as the expansion of the Metro transit system. Even though these many activities lead to more litter being thrown in the streets, the City has been able to maintain a steady level of street cleaning. An international benchmark of European cities reflects this.

COPENHAGEN IN CLOSE RACE FOR THE TOP IN INTERNATIONAL BENCHMARK

In September 2014, Copenhagen was close to second among six European capitals, all of which were measured on the cleanliness of the city centre, surrounding boroughs and parks. Copenhagen got 4.3 points on a scale of 1 to 5, while Vienna scored highest with 4.4 points, and Berlin scored lowest with 3.9 points.

In September 2010, the same capitals were only measured on street cleaning of their city centres. At that time, Copenhagen came in last with 4.1 points. If we only include the city centres, Copenhagen moved up to a fifth place in 2014 with 4.3 points. Berlin comes in last with 3.9 points, whereas Vienna is in first place with 4.7 points.

If we look at the cleanliness of the surrounding boroughs, Copenhagen moved from 4.0 points and fifth place in 2013 to 4.3 points and a second place in 2014. In the case of residential neighbourhoods, Copenhagen came in first in both 2013 and 2014, with 4.2 and 4.3 points, respectively. Copenhagen came in third for the upkeep of parks in both 2013 and 2014, with 4.4 and 4.5 points respectively.

GOALS FOR STREET CLEANING IN 2015

- Copenhagen to be Europe's cleanest capital and one of the cleanest capitals in the world
- Litter to be cleared from public streets within eight hours.

Thus, Copenhagen is close to the top in cleanliness of streets, alleys and parks, and efforts are still being made to achieve the goal of becoming the cleanest capital of Europe in 2015.

INCREASED FOCUS ON NIGHTLIFE LITTER

A pilot project in Gothersgade in the city centre has introduced specially designed street litter bins targeted at the city's night life litter habits. Measurements from the pilot project show a reduction in litter of over 50%. Expanding these results to the rest of the city could help Copenhagen achieve the goal of becoming the cleanest capital of Europe.

CLEAN AT HEART CONTINUES

The "Copenhagen – Clean at Heart" campaign continues as an initiative for a cleaner Copenhagen. In addition to nudging, the campaign focuses on partnerships and a voluntary approach. In 2015, the campaign will continue its increased focus on cigarette butt litter.

NO MORE THAN EIGHT HOURS

The goal to clear litter from public streets within eight hours was already achieved in 2011. Litter is cleared within eight hours, seven days a week in the city centre and in particularly dirty areas. In the event of more serious litter incidents in public areas, following hints from citizens, litter is removed within eight hours in all parts of the city. Citizens can report such litter incidents via an app or the City's website at www.kk.dk/givetpraj. Overall compliance with the eight-hour rule is ensured through street cleaning efforts in the city 19 hours a day, seven days a week.

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The purpose of this booklet is to provide an overview of the progress in 2014 forwards the 13 goals that support the vision that Copenhagen is to be the Eco-metropolis of the world in 2015.

Moreover, the booklet describes the City's efforts with regard to other relevant areas and important goals for the environment. The report is for everyone interested in the City's environmental initiatives, including citizens, enterprises and local politicians, as well as other decision makers in Copenhagen and other cities.

You can find the complete and more detailed Green Accounts for Copenhagen (in Danish) on the City of Copenhagen's website: **www.kk.dk/miljoeregnskab**. The website also describes the background for the data material on which the Green Accounts are based.

In addition to the Green Accounts, the City of Copenhagen also publishes urban life accounts **www.kk.dk/metropolformennesker (in Danish)** and cycling accounts every other year **www.kk.dk/cyklernesby (in Danish).**

If you have any queries about the report, please contact
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