



The Stockholm  
**ENVIRONMENT  
PROGRAMME**

# Welcome ...

...to this short version of the Stockholm environment programme! Below, you will find a presentation of the environmental goals set up by the city of Stockholm for the next four years.

Stockholm is world-renowned for environmental awareness and healthy living conditions. We intend to preserve those qualities, but we must not rest on our laurels and be content with what we have achieved so far. Therefore, we raise our ambitions for a clean environment and climate-smart choices.

*“...we must not rest on our laurels and be content with what we have achieved so far.”*

Stockholm is unique among big cities, with its waterways and its many green areas. The Hammarby Sjöstad housing estate embodies sustainable environmental solutions for city development, and has gained international respect through many study visits from abroad. Hammarby Sjöstad is proof that the city can grow in a sustainable way. What we learned from developing this new estate, we will apply to the continued development of the city. We intend to carry out two housing projects with environmental profiles.

On the web site of the city's environment administration there is an environment barometer, indicating the current environmental situation in Stockholm. There, you will find several examples of positive development, in various areas. In many ways, Stockholm is somewhat of a pioneer in environmental work, but this kind of effort must never cease. One important priority ahead is better energy management in our own buildings.

To succeed, environmental work must go on all the time. Prevention is always better than cure, and it is unproductive to keep the environmental issues in the background. Our environmental programme lays a solid foundation for result-orientated environmental work.

*“To succeed, environmental work must go on all the time.”*

Environmental technology has brought us a long way forward, and the number of impressive new solutions emerging seems unlimited. However, technological solutions are never sufficient. Even a fuel-efficient car will use less fuel if driven sensibly. Batteries do not end up in the collection bin by themselves. This is where we all have a responsibility.

Many of the goals of our environmental programme can only be achieved if both the city administration and the citizens contribute. Sometimes it may seem demanding and difficult to know what to do, and doubtful if it really matters. It is important to realize that all contributions actually make a difference. We can all take responsibility for not throwing dangerous items into the dustbin, for choosing an energy efficient alternative when replacing the old refrigerator, replacing incandescent lamps with fluorescent ones, turning off appliances rather than leaving them standing by, taking the bicycle to work, or letting the new car be a green one. At the end of this brochure, you will find tips on individual contributions to a better environment.



A blue ink signature of Irene Svenonius, consisting of a large, stylized 'I' followed by a horizontal line.

Irene Svenonius, City Director



A blue ink signature of Ulla Hamilton, written in a cursive style.

Ulla Hamilton, Vice Mayor

# Vision 2030

– the Stockholm of the future

The city council has adopted a document outlining the future, Vision 2030. According to the Vision, the Stockholm of 2030 is one of the most attractive cities of the world, and the cleanest and safest capital. There are clean lakes and waterways, providing unique opportunities for boating and bathing. The parks of Stockholm are beautiful and safe. Historical sites have been preserved during the continued development of the city. New housing has been built using environmentally adapted and efficient materials and methods.

Technological advances and economic growth have laid the ground for an ecologically sustainable society. Stockholm is an energy efficient city, at the frontline of environmental technology, and on its way to becoming free of fossil fuels by 2050. The energy consumption has been reduced considerably.

Stockholm is a world leader when it comes to developing, commercializing and applying new energy and environmental technology. The improved energy efficiency and increased use of non-fossil energy sources have made the city's contribution to the greenhouse effect smaller.

Stockholm and the Lake Malar region have a well established system of transport, with minimal climate impact. New bypass roads have reduced environment impact and improved accessibility. The cars in Stockholm are almost entirely green. In Stockholm, the inhabitants use public transport more than anywhere else in the world. The city has a large and safe network of bike routes, and comfortable ferry services.



*The vicinity of nature and open water makes Stockholm an attractive city, where many people want to live and work. To preserve the fine living environment while continuing to grow is a common challenge. Some of the top priorities for the city are the following:*

## Traffic

Stockholm has made some progress in reducing the environmental burden caused by traffic. 30 per cent of the citizens of Stockholm walk or cycle to work or school. 61 per cent of the people passing the toll points are using public transport. 25,000 of the cars in Stockholm are green. In 2006, one car in six that were sold in Stockholm was a green car. The city owns or leases about 1,200 cars. In 2006, 626 of these were green. The city's cars ran on renewable fuels to 26 per cent.

## Chemical substances

In Sweden, there are over 12,000 chemical substances in the 64,000 products manufactured here or imported. Many of these substances can damage our health and our environment. Using environmentally screened goods, services and buildings can contribute to a better city environment.

## Energy

The average Stockholmer causes the emission of 4 tonnes of greenhouse gases, as compared to 6.5 tonnes for the average Swede. A Finn emits 12 tonnes, an American 22 tonnes, and an African 1 tonne. The air in Stockholm has become cleaner, as district heating has replaced local oil-fired furnaces. The transition to renewable energy sources and efficient conversion technology should make Stockholm free of fossil fuels by 2050, at the latest.

## Land and water

45 per cent of the area of Stockholm is developed, 21 per cent is fields, 20 per cent is forest and 14 per

cent is water. Stockholm covers 22,000 hectares, of which 1,510 are protected according to the Environmental Act. There are seven nature reserves in the city proper, and 200 in the county of Stockholm. Traffic, housing and industries put a burden on the environment, and increase the amount of nutrients entering lakes and waterways. Environmental steps are taken to reduce the amount of phosphorus and nitrogen in the city's soil and water.

## Waste

95 per cent of all household waste is reclaimed. Most of the household waste in Stockholm is burnt for energy in the Högdalen combined heat and power station. Hazardous waste is to be treated separately, but in spite of this, about one per cent of the household waste consists of dangerous substances. In 2005, the collected waste amounted to 574 kilograms per inhabitant.

The amount of hazardous waste turned in by the households was 1,030 tonnes, corresponding to 1.3 kg per person. 9.9 kg of electric waste products per person were collected.

## Indoor environment

The amount of housing space in Stockholm corresponds to 43 square metres per person. 80 per cent of the households consist of one or two persons. 26 per cent of the Stockholmers are troubled by asthma or allergy. In 2005, 29 per cent of the city's schools and nurseries lacked approved ventilation control. 57 per cent of the Stockholmers are disturbed by noise in their homes, at least once a week. In 2005, the environment administration received 166 complaints on noise.



# Six goals

*The environmental programme of Stockholm sets six overall goals for the city's environmental work during the years 2008–2011.*

## 1 Environmentally efficient transport

Using new technology and new products, the impact of traffic on the environment can be reduced. The goal is to establish a sustainable system of transport, based on new technology, fossil free fuels, better logistics, and more information.

## 2 Goods and buildings free of dangerous substances

The city of Stockholm will reduce the spreading of dangerous substances by choosing environmentally screened goods and services. In the development of estates, environmentally sound methods and materials will be used.

## 3 Sustainable energy use

Increased energy efficiency and renewable energy sources are needed to reduce the greenhouse effect. High energy efficiency will make the city a promoter of environmentally driven growth and development, and will reduce its operational costs.

## 4 Sustainable use of land and water

The vicinity of nature is an important part of the attraction of the city and provides the citizens with recreational opportunities. The goal is to use land in a sustainable way, contributing to economic development without causing the loss of important environment values.

## 5 Waste treatment with minimal environmental impact

Effective and environmentally sound waste management is an important part of the infrastructure. The goal of the city is to reduce the amount of waste created and increase the share of the waste that is recycled and reused.

## 6 A healthy indoor environment

In spite of high residential standards and fine housing environments in Stockholm, health problems develop in some buildings. The goal of the city is to reduce the number of people affected by the indoor environment, especially in day nurseries, schools and nursing homes.



## 1 Environmentally efficient transport

Competitiveness and welfare depend on a well-functioning system of transport. Thanks to new technology and new products, the impact of traffic on the environment can be reduced. The city will keep striving for traffic solutions that use energy more efficiently and create less risk for the environment or people's health.

*The intermediate goals for the city's own operations during the programme period:*

- ▶ Reducing the environmental impact of its own and chartered transports.
- ▶ Having only green cars in its fleet, being fuelled to 85 per cent by renewable fuels.

*The city administration will promote the following intermediate goals:*

- ▶ Reducing the emissions from traffic.
- ▶ Increasing the share of travellers who use public transport, ride bikes or walk.
- ▶ Increasing the proportion of green vehicles and renewable fuels.
- ▶ Reducing the noise of traffic in the outdoor environment.

The intermediate goals place a special responsibility on the city, to closely watch technological advances. Alternative fuels should be used. The city must strive to improve logistics and information to reduce the environmental impact of traffic. We know that the emission of carbon dioxide from petroleum-based fuels contribute to the greenhouse effect. At the same time, tougher demands for exhaust cleaning improve the air in our cities. The city of Stockholm has considerable influence on traffic planning, housing development and road system expansion. The city also influences transport by its parking policies, economic pressures and local traffic regulation. When making purchasing decisions, the city may choose green vehicles. The city can influence development by improving public transport, roads, bike paths and walkways.

## 2 Goods and buildings free of dangerous substances

In Sweden, there are over 12,000 chemical substances in the 64,000 products manufactured here or imported. Many of these substances can damage our health and our environment.

*The intermediate goals for the city's own operations during the programme period*

- ▶ The emission from goods and buildings of substances dangerous to the environment and to health must be reduced.
- ▶ At least 15 per cent of the food bought by the city should be ecologically produced.
- ▶ Two housing development projects should be carried out with strong environmental profile during the programme period.

The city of Stockholm can influence the spreading of dangerous substances by choosing environmentally screened goods and services. When providing land for building, the city may make environmental demands. The experiences gained from the Hammarby Sjöstad development should be applied to local planning.

Chemical substances are spread with chemical products, goods and buildings, during their production, use and disposal. Clearly dangerous substances should be avoided, and other chemicals or goods should be handled so as to minimize risks. Waste disposal, energy efficiency, construction processes and choice of materials should be based on environmental concerns.

The city should purchase goods and use materials that are sustainable and clean. This can be accomplished by using tools like BASTA<sup>1</sup>, construction materials evaluation, and the city's purchasing guide Materials and products containing harmful substances should be replaced with better alternatives.

## 3 Sustainable use of energy

The supply of energy for heating, lighting, transport and manufacture is essential for our welfare. High energy efficiency will allow the city to reduce its operational costs and to become a promoter of environmentally driven growth and development.

*The intermediate goals for the city's own operations during the programme period:*

- ▶ Reducing the consumption of energy in the city's own buildings and plants with 10 per cent from the level of 2006.
- ▶ Electric power purchased for the city's own use should be eco-labelled.

*The city administration will promote the following intermediate goals:*

- ▶ Reducing the average emission per citizen of greenhouse gases from energy production by 10 per cent.

The greenhouse effect is mainly a result of the emission of carbon dioxide from burning fossil fuels. These emissions can be reduced by increasing the efficiency of energy consuming processes, and by transition to renewable energy sources. The city and the municipal housing companies play an important part, as does AB Fortum Värme, the district heat producer, which is part-owned by the city. The administrations and companies of the city must use energy more efficiently. Individual measuring and billing of heat and hot water shall be installed in all new housing and other premises let by the city. The city shall encourage installation of individual measuring in existing housing and premises.

## 4 Sustainable use of land and water

The vicinity of nature provides the citizens with recreational opportunities. Parks and green areas reduce noise and filter the air. Wetlands help clean the natural waters. Forests near the edges of the city, and the archipelago, are important for the open-air activities of the citizens.

<sup>1</sup> The Swedish construction sector has agreed on a common definition of the substance properties for the decision as to whether a product is to be accepted or not, [www.bastaonline.se](http://www.bastaonline.se).

*The intermediate goals for the city's own operations during the programme period:*

- ▶ Particularly valuable land and water areas must be preserved.
- ▶ When valuable land and water areas are developed, compensation must be paid.
- ▶ The Stockholmers shall have easy access to land and water of many types.
- ▶ City development must be sustainable.

*The city administration will promote the following intermediate goals:*

- ▶ The biological diversity of parks and nature reserves is protected.
- ▶ The ecological status of the lakes and waterways in Stockholm is improved.

Traffic, housing and industries put a burden on the environment, and increase the amount of nutrients entering lakes and waterways. The challenge for the city is to promote sustainable uses of land, contributing to economic development without causing the loss important environment values. For city growth, already developed land should be used in the first place. To make the most of public transport, district heating and developed land, the city should grow inwards. Valuable green areas must be saved. The city must manage its parks and nature reserves with an ecological focus. Surface water from heavily used roads must be cleaned, ploughed snow must be disposed of without stressing the environment, and the overall level of phosphorous in the lakes must be reduced.

## 5 Environmentally efficient waste management

Effective and environmentally sound waste management is an important part of the infrastructure. As the consumption of goods increases, the amount of waste that must be collected and disposed of grows. Waste is also part of the material flows of industry, it is part of the natural cycle, and it is raw material for energy production.

*The intermediate goals for the city's own operations during the programme period:*

- ▶ Reducing the amount of waste created by the city's own activities.
- ▶ Increasing the utilization of waste from the city's own activities.

*The city administration will promote the following intermediate goals:*

- ▶ Increasing the proportion of dangerous waste that is collected.
- ▶ Reducing the amount of waste created per citizen, and increasing the utilization of the waste collected.

In Sweden, the municipalities are responsible for household waste, and the industry is responsible for its own waste. For some products, the manufacturer or importer is responsible for collecting and recycling the discarded products.

Today, 95 per cent of all household waste is utilized. Most of the household waste in Stockholm is burnt for energy in the Högdalen combined heat and power station. Hazardous waste is to be treated separately, but in spite of this, about one per cent of the household waste consists of dangerous substances.

The city of Stockholm is responsible for the waste created by its own activities, but also influences how the households manage their waste, through various committees and companies. The city is responsible for educating the households about waste handling.

When purchasing goods and services, the committees and companies of the city must try to minimize the amount of waste created. Products and equipment must be reused, and information about available items must be distributed to all concerned.

At least 35 per cent of the waste food from restaurants and institutional kitchens is to be treated biologically. The system for collecting hazardous waste is to be improved.

## 6 A healthy indoor environment

In Stockholm, the housing standards are high and the living environments are good. In spite of improving standards, health problems occur indoors because of unclean air, contaminated by particles or mould. High noise levels can also damage people's health. Health risks in the indoor environment must be prevented and removed.

*The intermediate goals for the city's own operations during the programme period:*

- ▶ Reducing the number of people being troubled by health problems because of the indoor environment in the city's own buildings.
- ▶ Checking 70 per cent of the municipal housing estates for radon.

*The city administration will promote the following intermediate goals:*

- ▶ Reducing the number of complaints regarding indoor environment that need to be addressed by the house owner.
- ▶ Reducing the number of people being disturbed by noise indoors.
- ▶ Eliminating harmful levels of sound at concerts and discotheques.

The Stockholmers spend 85 per cent of their lives indoors, 65 per cent in their homes. Hence, the environment in homes, schools and work premises is very important for people's health and comfort.

The city is responsible for providing a healthy environment in its own buildings, and can influence other operators in connection with planning, developing or supervising activities.

All day nurseries, schools and nursing homes must have approved ventilation control. Nurseries, schools and after-school centres must provide an acceptable noise environment. The city must consider noise issues when planning activities and traffic in areas with domestic housing. The city must eliminate harmful levels of noise at concerts in its own premises.



# Do you want to contribute to a better environment and a sustainable Stockholm?

*Below, you will find ten simple everyday tips.*

- If you drive 20,000 km per year, and you choose a car with a fuel consumption of 7 litres per 100 km (40 miles per British gallon) rather than one that uses 9 litres per 100 km (31 miles per gallon), you save more than 4,000 SEK per year. In addition, your carbon dioxide emission is one tonne less per year.
- The water in Stockholm is soft. That means you can use the lowest dosage of detergent. That is kind to your wallet and reduces the amount of nutrients reaching our waterways.
- Switch from incandescent to fluorescent light bulbs. A 60 W light bulb uses 1 kWh of energy in 16 hours. The corresponding 11 W low energy lamp can stay lit for 90 hours on the same 1 kWh.
- The fridge and the freezer are responsible for one fifth of the energy consumption of a normal Swedish household. When you replace them next time, make sure they are energy class A.
- Sort your used tealight cups as metal. To make a new tealight cup from ore you need 20 times more energy than to make one from recycled aluminium. In Sweden, we use 300 million tealights per year, corresponding to 225 tonnes of aluminium. If those tealight cups are recycled, we save 4 million kWh in the smelting works.
- Keeping your tyres well inflated is a simple and effective way of reducing carbon dioxide emissions. If all car owners in Stockholm had their tyres inflated to the right pressure, we would save almost 20 million litres of fuel per year, and keep 47,000 tonnes of carbon dioxide from reaching the atmosphere.
- Switch off your electric appliances. Attach all flex cords to a multiway socket with a switch. That way, you can turn off all the attached equipment using one switch. If each person in Sweden keeps one piece of equipment on standby for 20 hours per day, those appliances will consume over 30 GWh per year. That equals the total yearly energy consumption of 1,200 family homes.
- Recycle your waste paper. Recycling paper reduces the energy consumption and the carbon dioxide emissions by 35 per cent, compared with production of paper from virgin pulp.
- Turn in hazardous waste. On [www.stockholm.se/avfall](http://www.stockholm.se/avfall), you will find information about the various waste collection systems in Stockholm.
- Use your bike. If a person living 5 km from work takes the bike instead of the car, the emission of carbon dioxide is reduced by 0.7 tonnes per year.

You will find more tips on how to contribute to a sustainable Stockholm on the website of the Environment Administration, [www.stockholm.se/miljo](http://www.stockholm.se/miljo), and that of the waste disposal administration, [www.stockholm.se/avfall](http://www.stockholm.se/avfall). If you want to read the complete environment programme of the city of Stockholm, and the full text of Vision 2030, they are available at [www.stockholm.se](http://www.stockholm.se).



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