

# Helsingborg, Sweden

## Environmental education and participation for local sustainable development



Through the education of young citizens and their participation in the city's development process, Helsingborg promotes long term behavioral change towards sustainability. By raising the awareness of and engaging young people in environmental themes, the Environment Workshop and the Sustainable School Campus project represent successful approaches for improving the environmental performance of Helsingborg.

153

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### Abstract

One important aspect for Helsingborg's progress towards becoming a sustainable community is the role of future generations of decision makers in the city's development process. By making young people familiar with the principles of sustainable development, the Environment Workshop and Sustainable School Campus are long-term educational approaches towards this aim. The Environment Workshop started in 1989 as a collaboration between the municipal departments School and Youth Service, and City Planning and Technical Services. In the same collaborative spirit, another program was launched in 2010 involving several stakeholders: the Sustainable School Campus project. As part of these programs, students between the age of 5 and 18 years participate in processes and initiatives aimed at reducing the city's environmental footprint. The two programs encourage Helsingborg's primary and high school students to become environmental ambassadors. In the process, students learn to envision and to participate in a democratic sustainable city.

### The importance of participation in environmental programs

The choices students make in their everyday life directly affect the city. Policies therefore need to take into account young people's views. Providing students with opportunities to be engaged in discussions, take responsibilities over their actions, as well as being agents of the future, contributes to securing sustainable development. Environmental school programs can develop a greater understanding of the dynamics involved in transforming a society towards a more sustainable place. Young people can early on be engaged, be more interested in policy issues, and develop their own views. Students can learn that their opinions matter and that they can influence the sustainable development of their city.

To facilitate a dialogue with the younger members of society, Helsingborg established a platform to exchange experience and ideas between the current and the next generation of decision makers. In the process, the culture of participation and cooperation should be strengthened.

When encouraging students to participate and contribute to creating a sustainable city, a school program has to ensure that the students' involvement and sense of responsibility goes beyond the school setting and education period. Students should have a sense that their involvement in such issues actually matters. This is not an easy task.



#### Population / Land area

~130,000 (2011)

346 km<sup>2</sup>

#### Municipal budget

SEK: 5,7 billion SEK (2012)

USD ca. 0.9 billion

*Helsingborg joined ICLEI in 2000*



HELSINGBORG

This case study was prepared with the support of the City of Helsingborg

## Case Study



Photo: © Ingemar Nyman, City of Helsingborg

Energy experiments for students

### City context

Helsingborg has a long standing commitment to sustainable development and is reflected in significant achievements. In 1970, the city established the first nature reserve to protect the natural environment. As of May 2012, there are 16 nature reserves, two of which are marine ecosystems. Greenhouse gases emissions have been reduced by 49% reduction between 1990 and 2008. The city, moreover has adopted four comprehensive plans since 1989, the latest being adopted in 2010. These plans are very important for the land use and water management as well as for infrastructure, green areas and sustainable traffic development.

Cooperation with different stakeholders and citizen participation is crucial for meeting environmental targets. Participation has been an important approach for establishing important documents such as the 'ÖP2010 - A strategic comprehensive plan for Helsingborg', the 'Sustainable Helsingborg Vision 2035' and the report on climate adaptation

published in 2011. In 2009, Helsingborg was recognized as the best performing environmental municipality in Sweden and has since been amongst the top ten. The current Environmental Program (2011 to 2015) has six main focus areas:

- Inspiration and cooperation
- Sustainable transport
- Sustainable energy system
- Sustainable planning and maintenance
- Clean water
- Healthier Helsingborg

The programs, Environment Workshop and Sustainable School Campus, have sought to extend and deepen the collaborative and participatory approach especially amongst students. The programs allow students to gain a greater understanding of the environment and today's environmental challenges, to encourage them to participate and be part of creating a sustainable city, to facilitate discussion on the current way of living and to stimulate intellectual reflection. Using a similar approach, the outdoor museum Fredriksdal provides residents with the important opportunity to see and experience the advantages and services of biodiversity. In the museum, which is public and open to everyone, students can take part in tours.

### Students participation for a sustainable community

#### The Environment Workshop.

In 1989, the local government of Helsingborg initiated the Environment Workshop through the collaboration of the Department of School and Youth Service and the Department of City Planning and Technical Services. The Environment Workshop aims at facilitating environmental education in the city. The workshop provides young students with the opportunity to learn about the city's environmental make-up, to reflect upon it and to voice their opinion. Through dialogues and

opportunities to access key public areas (e.g. waste-treatment plant) the young students are prepared and encouraged to be active members of the city life.

The Environment Workshop employs nine teachers and offers a variety of activities. A center, set up by a group of highly motivated teachers, provides exhibitions, equipment for experiments and classes on many topics, such as energy and water. The teachers give classes and presentations at the center and in the schools of the city. For some themes and programs, they also bring school groups into nature and run technical visits, such as trips to the waste disposal site and to the waste water treatment plant, to provide a first hand picture of how the city addresses environmental issues.

Although the focus is education, the Environment Workshop is managed by the Department of City Planning and Technical Services. The programs of the Workshop are booked by individual teachers that want environmental education for their class.

**The Workshop's Programs.** Since 1989, the workshop has engaged students, teachers and other stakeholders. Over 10,000 pupils are engaged in the activities of the Environment Workshop at least once a year. For every school grade there is a specially designed program that is sponsored by different organizations, including companies owned by the local government of Helsingborg.

The environmental education teaches children that humans are not the only species on Earth and that they need to take responsibility over their actions. This acquaints them with the principles of a democratic process and sustainable development. One example of the many programs is the *Smart Travel* initiative, which shows students how to travel in a sustainable way. As a part of this program, students travel wherever they like in the region for one day only using public transportation. The objective is to learn how to read the timetables and how the ticketing system works. Another example is *Vital Water*, where students visit treatment and sewage plants. They also have the opportunity to go sailing on the Öresund, the strait between the Danish island Zealand and the Swedish province of Scania, to study the marine wildlife. They learn about the hydrological cycle and its importance to people. The program *The Children's Forest*, applies the same principles to trees and vegetation. Students plant every year over 1,500 trees as part of the cities'

#### Environment Workshop: Different programs for different age groups

Electric and Traffic safety	year 1 (7 years old)
Joy of Growing	year 2
Recycling	year 3
The Children's Forest	year 4
Vital Water	year 5
Climate Change and Energy	year 6
Fresh Air	year 7
Organic Waste	year 8
Climate Change	high school
Climate Change and Sustainable Future	high school

green structure plan. In the process they can envision what a “dream” forest could look like.

Other programs provide students with opportunities to question their own and other people’s behavior. Movies, public exhibitions and other forms of exchange and dialogue are drawn upon. The students are given particular tasks where they need to work together and come up with a shared decision. Even very young children are taught to cooperate with each other. Other assignments include writing slogans to promote clean air, which are then published in the local newspaper. The Environment Workshop is also connected to other projects in the Helsingborg region. The Environment Workshop also is directed not only at students. The objective is to offer a great variety of projects, getting young people to participate in the whole development of the city and be to active also outside of the school system.

*The following transport-related programs are associated with the Environment Workshop:*

**Around the World in 80 days.** This program consists of a competition between Helsingborg in Sweden and the city Helsingør in Denmark. The aim of the competition is to encourage students between twelve and thirteen years old to use their bike more often. The school class which completes by bike the longest distance in eighty days wins the competition. School children learn to use their bike, as a healthy and environmentally friendly way of traveling to school.

**Children’s School of Traffic.** This program provides children with a space to learn about traffic rules and traffic safety. It features small streets with traffic signs, lines in the street, children on bicycles, etc. All children in the Environment Workshop programs visit the School of Traffic, which is also open for children during the summer holidays.

**Getting to School.** This is a program where seven-year-old children (first year of primary school) are encouraged to go to school on foot, by bicycle or by bus. This program targets also the childrens' parents. It encourages them to follow their children to school either by bike or on foot rather than using the car. School classes in Helsingborg compete for the most trips to school by walking, biking or taking a bus.

## The Sustainable School Campus



Children at the Environment Workshop in Helsingborg

The environmental and pedagogical tradition of Helsingborg is reflected in the *Sustainable School Campus*. The project involves both the school campus and the municipal company that owns the school buildings. Other stakeholders are Lund University and Öresundskraft, the largest energy company in the area. The common interest is to reduce the energy consumption of the campus. In 2009, the project was granted a fund from the Swedish Energy Agency, which rewarded the pedagogical focus of incorporating energy behavior in education. The fund, which made up



25% of the budget, allowed the project to start in the summer of 2010 with a timeframe of 3-4 years.

The project includes five neighboring high schools, which aim at optimizing energy use through efficiency. The objective for 2013 is to cut the five schools' energy consumption by 20% of the 2008 level, and to educate 5,000 students and teachers to be innovative and knowledgeable future ambassadors on energy efficiency and leaders of sustainable development.

To reach this goal, the project's stakeholders committed to install energy efficient technologies and involve high-school students and teachers in educational activities. The project is expected to influence the young environmental ambassadors, their families and relatives. For example, the Sustainable School Campus has a Sustainability Board composed of students and teachers, who work to make the environmental achievements visible in the schools and also on different environmental projects. One of these is called *The Environmental Pursuit*, where the classes compete to solve local environmental issues. This competition is the source for innovative ideas for sustainable development.

It is envisioned that through the greater environmental awareness of students and teachers, along with advancements in environmental technologies, significant improvements can be achieved in the energy efficiency of school buildings. Environmental awareness and changing behaviors and attitudes are assessed through annual questionnaires and surveys compiled and analyzed by the Department of Environmental Strategy at Lund University.

## Results

### Environment Workshop

Since 1989 the workshop has cooperated with students, teachers and other stakeholders. Every year, over 10,000 pupils are in some way engaged in the Environment Workshop through visits to the workshop's center, presentations in schools and field trips. A new challenge for the Environment Workshop is to expand its work to include city staff. Since autumn 2010, the Environment Workshop seeks to organize an environmental education workshop for all of Helsingborg's employees and politicians. Around 7,500 people will participate in the course to reflect on and discuss their workplace and their impact on the environment.

The results of the Environment Workshop are difficult to quantify in GHG emissions reduction or increased recycling, as the focus of the project is on environmental awareness and changing behavior, rather than an infrastructure or technical change. A greater environmental awareness of students is likely to contribute to a variety of environmental benefits, as a result of changes to



A creative installation from the Environment Workshop

Photo: © Ingemar Nyman, City of Helsingborg



Sign made at the Environmental Workshop



Workshop with trees for preschool children

their behavior, and that of their families, friends and the wider community. As these changes are often coupled with other societal and technological changes, there is no clear cause and effect relationship that can be quantified.

**Greater recognition of the educational approach.** The Environment Workshop has been running for over twenty years and during these years its activities have focused on behavioral change. The methods and ideas on behavioral change have spread through multiple activities such as technical visits and participation to conferences on education and environment.

The idea of involving students and letting education take place through field trips has been acknowledged by Linköping University. The university provides courses on outdoor education. These courses take place in the Environment Workshop center and in the museum Fredriksdal. Also in 2011, the project leader Klas Nyberg and the Environment Workshop received a honorary award from the regional board: “For his great dedication to the Environment Workshop in Helsingborg and its importance for environmental and climate change awareness among students in Skåne.”

Another measure of success of the Environment Workshop is the high number of schools that voluntarily participate. This reflects the interest of schools and the value they see in the project. In some programs, over 90 % of the students in the city are engaged.

**Changing behavior for the benefit of sustainable development.** In one of the Environment Workshop’s programs the students learn about separating waste at source and how to use organic waste in different areas. It can be assumed that this has contributed to Helsingborg achieving that 50% of the organic waste is separated at source. This compares to only 20% at national level. Helsingborg has in Sweden the best result.

In another program, students learn about travel safety, to be more energy efficient when travelling, and about the impact transportation has on air quality. It can be assumed that this has contributed to a shift in travel patterns. In Helsingborg traveling by bus has increased by 61% between 2004 and 2011. The goal is to reach an increase of 100% over ten years, which would equate to fifteen million trips by bus per year in 2014 in Helsingborg.

## **Sustainable School Campus**

The whole outcome of the Sustainable School Campus will only be clear at the end of the project in 2013. The objective of the project is to reduce energy use and to make sustainability an educational topic. Participation and involvement has been high. Energy consumption has fallen by 16.4% between 2009 and late 2012. The project aims to reduce energy consumption by 20%.

## **Lessons learned and replication**

In Sweden, the education approach of Helsingborg has been a unique project in the way it was organized and developed during its long history. Important factors of the programs are the cooperation between the many stakeholders, the long-term approach and the enthusiasm of organizers and participants.

Cooperation is needed because sustainable solutions are not found and cannot be implemented in one single part of a society. All parts of society need to join in. A greater number of stakeholders also helps to show the different aspects of sustainability. The role of stakeholders in the implementation of actions is strengthened.

In Sweden, students are in school for twelve years before they start to work or enroll in a university. A long-term approach allows that environmental education is an ongoing process that informs behavior and deepens the understanding for sustainable development. It should not be a short-term exam-oriented program.

As well as many other successful projects, the Environment Workshop was started and managed by enthusiasts. For the continuous improvement and development of the project it also needed the support from key city departments. This allowed the program to be set up and run by enthusiastic teachers that know how to engage schools.

In Helsingborg, the Environment Workshop targets not only students and teachers, but also employees of the local government of Helsingborg. This in turn allows all employees of the local government to be aware of the problems that exist and to get respective departments involved in the educational program.

Five key lessons to improve environmental performance through education:

- Ensuring participation draws upon methods that engage students and provides an interactive experience. One example, is to teach particular environmental issues at a topic-relevant location.
- Showing how new ways of thinking and new technologies can change a society. This can create inspiration, and trigger new ideas and ways of thinking amongst participants.
- Providing knowledge in the form of statistics and case studies. The topic should also be analyzed within the context of other issues relating to nature and society.
- Providing students with knowledge that can be used outside of the classroom. Usable knowledge creates motivation and can be directly drawn from and inform the context of a student's life.
- Discussing the role of each individual and providing opportunities to reflect upon one's role in practice. The idea is not only to present environmental problems, but also to provide tools to address and solve them. This can help to ensure that participants remain motivated.



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## Budget and finances

The project Sustainable High School Campus runs from 1 June 2010 to 30 June 2013 and the budget is 40 million SEK (ca. 5.8 million USD), and is funded partly by the Swedish Energy Agency. The Environment Workshop has a yearly budget of around 6 million SEK roughly 852,000 USD.

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