



Green cities – fit for life

**The Expert Panel's
Evaluation Work
&
Final Recommendations for the
European Green Capital Award
of 2012 and 2013**

September 2010

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1 Introduction

The European Green Capital Award is the result of an initiative taken by 15 European cities (Tallinn, Helsinki, Riga, Vilnius, Berlin, Warsaw, Madrid, Ljubljana, Prague, Vienna, Kiel, Kotka, Dartford, Tartu & Glasgow) and the Association of Estonian cities on 15 May 2006 in Tallinn, Estonia. Their green vision was translated into a joint Memorandum of Understanding establishing an award to reward cities that are leading the way with environmentally friendly urban living. Currently, more than 40 major European cities, including 21 EU capitals support the initiative.

At a meeting on 29 June 2006 with the father of the initiative, Mr. **Jüri Ratas**, a former mayor of Tallinn and current Vice-President of the Estonian Parliament, EU Environment Commissioner Stavros Dimas expressed his support and offered to contribute to the development and implementation of the award scheme. President Barroso also wrote to the Mayor of Tallinn supporting the Green Capital initiative.

The establishment of this award is timely since Europe is now an essentially urban society, with four out of five Europeans living in towns and cities. Most of the environmental challenges facing our society originate from urban areas but it is also these urban areas that bring together the commitment and innovation needed to resolve them. The European Green Capital Award aims to promote and reward these efforts.

It is important to reward cities which are making efforts to improve the urban environment and move towards healthier and sustainable living areas. Progress is its own reward, but the satisfaction involved in winning a prestigious European award spurs cities to invest in further efforts and boosts awareness in other cities. The award enables cities to inspire each other and share best practices, in the context of a friendly competition. The first proud title-bearers are **Stockholm for 2010 and Hamburg for 2011**. Both were recognised for their consistent record of achieving high environmental standards and commitment to ambitious goals.

Winning the title of the European Green Capital brings advantageous side effects such as increased tourism, more investment and an influx of young professionals. It is therefore in a city's interest to become a prosperous place to live and work.

It is important to note that the policy background of the European Green Capital Award is the **Thematic Strategy on the Urban Environment** of 11 January 2006, which outlines the European Commission's commitment to support and encourage Europe's towns and cities to adopt a more integrated approach to urban management. This will ensure that they become better places to live in and reduce their environmental impact on the wider environment. The strategy also invites local and regional authorities to exploit the opportunities offered at EU level.

As the Thematic Strategy on the Urban Environment does not contain legislative measures, and because incentives are important, the European Green Capital Award can play a useful role here.



Similarly, the renewed Sustainable Development Strategy for an enlarged European Union aims to identify and develop actions that will enable the EU to achieve continuous improvement of the quality of life of both current and future generations. This can be done through the creation of sustainable communities which is precisely what the European Green Capital Award intends to create.

The **objectives of the European Green Capital Award** are to:

- a) Reward cities that have a consistent record of achieving high environmental standards;
- b) Encourage cities to commit to ongoing and ambitious goals for further environmental improvement and sustainable development;
- c) Provide a role model to inspire other cities and promote best practice and experiences in all other European cities.

The overarching message that the award scheme aims to communicate to the local level is that Europeans have a right to live in healthy urban areas, and cities should therefore strive to improve the quality of life of their citizens and reduce their impact on the global environment. This message is brought together in the Award's slogan "**Green cities – fit for life**".



2 Evaluation procedure

2.1 Theoretical framework

The European Green Capital award scheme is open to EU member states, candidate countries (Turkey, FYROM, Croatia, Iceland) and European Economic Areas countries. All cities from the countries listed above which have **more than 200,000 inhabitants** can apply for the award. However, in order not to exclude any European country from competing for the European Green Capital Award, it has been decided that countries which do not have a city with more than 200,000 inhabitants, the largest city will be eligible to participate.

The title may award different elements of environmental achievements in a city. What the title is rewarding may influence which type of cities will have the best chances of being rewarded. Furthermore, it is decisive for the type of information the cities must provide. Therefore, the evaluation criteria must reflect what the title is actually rewarding.

In accordance with the Award's 3 objectives, the evaluation criteria are based on the following:

A. The 'greenest' city

The Award rewards the 'greenest' city in Europe based on the city's state of the environment as defined by the performance relative to each of the proposed indicators (see further): measures of the present environmental situation and the development over the last five to ten years. The city with the highest urban environment quality in Europe will be rewarded.

It is important to note that achievement in relation to improving the current state of environment not only depends on initiatives implemented by the city itself but also on legal, economic and/or other initiatives stemming from the national government, initiatives from private enterprises or private funds and the level of awareness of the citizens. The title shows that European cities can be nice and green provided that there is the necessary commitment and prioritisation, as well as funding. The assessment of the applications also takes into account the impact of identified historical and/or geographical factors which may have influenced the environmental status and policies of individual cities.

B. Implementation of efficient and innovative measures & future commitment

The Award rewards the city that has implemented the most innovative and efficient measures and that has shown that it is committed to do the same in the future. It does not look at the overall environmental state of the city which means that a city with low urban environment quality may receive the award if it has recently implemented innovative and efficient measures and aims to continue to do this in the future.

This does not give preference to any specific type of city.



C. Communications and networking

The Award rewards the city that can become a role model and inspire other cities to boost their efforts towards a greener urban environment by sharing experiences and promoting best practice among all applicants as well as other interested European cities. Given that the award is intended to help European cities become more attractive and healthy places and also provide an excellent opportunity to learn from each other, the rewarded city should develop and implement an ambitious communications strategy and programme of actions and events. If awarded the title, the city will commit itself to implement the programme.

A combination of all 3 theories was deemed the most suitable, as

- it ensures that the rewarded city has a high urban environment quality;
- it does not exclude cities which inherited an overall deteriorated environment because of identified historical and/or geographical factors;
- it rewards initiatives made by the city itself;
- it ensures that cities commit to continue striving for environmental improvement in the future;
- it guarantees that the rewarded city will act as a role-model and help spread best practice.

2.2 Indicator areas

The selection of the European Green Capital 2012 and 2013 is organised on **two evaluation rounds** and based on the following **11 environmental indicator areas**:

- Local contribution to global climate change
- Local transport
- Green urban areas
- Sustainable land use
- Nature and biodiversity
- Quality of local ambient air
- Noise pollution
- Waste production and management
- Water consumption
- Waste water treatment
- Environmental management of the municipality



The indicator areas were inspired by the 10 European Common Indicators developed by the EU Commission, DG Environment and the European Environment Agency¹, and the indicators developed as part of the so called Aalborg process². Compared to the previous selection round, a distinct 'Nature and biodiversity' indicator has been added to underline their environmental benefits.

In addition to the 11 environmental indicator areas, a **twelfth indicator area** is included: the programme of communication actions aiming to disseminate experience and best practice on environmental matters.

2.3 Evaluation panel

The evaluation panel consists of members with internationally recognised expertise within each of the areas covered by the indicators, and a representative from the EU Commission, DG Environment.

1. Local contribution to global climate change

Mr Pierre Laconte, President of the Foundation for the Urban Environment and Vice-Chairman of the Scientific Committee of the European Environment Agency
pierre.laconte@ffue.org

2. Local transport

Dr Jean-Pierre Nicolas, Researcher at the CNRS and Deputy Director, LET-ENTPE
Jean-pierre.NICOLAS@entpe.fr

3. Green urban areas

Ms Birgit Georgi, Project manager on urban Issues at the European Environment Agency
birgit.georgi@eea.europa.eu

4. Sustainable land use

Ms Birgit Georgi, Project manager on urban Issues at the European Environment Agency
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5. Nature and biodiversity

Mr Stamatis Chondrogiannis, Expert at the Commission on Ecosystem Management, IUCN
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6. Quality of local ambient air

Dr Matthias Ketznel, Senior researcher at the Danish National Environmental Research Institute
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7. Noise pollution

Mr J. Luis Bento Coelho, Associate Professor at Instituto Superior Técnico (TU Lisbon), Portugal - bcoelho@ist.utl.pt

¹ http://ec.europa.eu/environment/urban/common_indicators.htm

² <http://status-tool.iclei.org/content.php/demo>



8. Waste production and management

Mr P.J.Rudden, Director of the Irish consultancy RPS
pj.rudden@rpsgroup.com

9. Water consumption

Mr Giovanni Bidoglio, Head of Rural, Water and Ecosystem Resources Unit, Joint Research Centre - giovanni.bidoglio@jrc.ec.europa.eu

10. Waste water treatment

Ms Eduarda Beja Neves, Principal Researcher, Hydraulic and Environment Department, LNEC - ebneves@lnec.pt

11. Environmental management of the municipality

Ms Maria Berrini, Director of the consultancy Ambiente Italia
maria.berrini@ambienteitalia.it

12. Dissemination programme

Ms Thea Pieridou, Information and Communication Officer, DG Environment of the European Commission - thea.pieridou@ec.europa.eu

2.4 Peer review

It is important to note that a peer review was carried out for both evaluation rounds. All evaluation panel members assessed their respective indicators, and each indicator was also assessed by a second panel member. The peer review ensured that the main evaluator looked at his/her assessment again if there were any serious inconsistencies between the two evaluations. It also rendered the whole evaluation procedure more credible.

Therefore, the responsibility for assessing each indicator was as follows:

- Local contribution to climate change: Pierre Laconte / Jean-Pierre Nicolas
- Local Transport: Jean-Pierre Nicolas / Pierre Laconte
- Green urban areas: Birgit Georgi / Stamatias Chondrogiannis
- Sustainable land use: Birgit Georgi / Giovanni Bidoglio
- Nature and biodiversity: Stamatias Chondrogiannis / Maria Berrini
- Quality of local ambient air: Matthias Ketznel / Luis Bento Coelho
- Noise pollution: Luis Bento Coelho / Matthias Ketznel
- Waste production and management: P.J. Rudden / Maria Berrini
- Water consumption: Giovanni Bidoglio / Eduarda Beja Neves
- Waste water treatment: Eduarda Beja Neves / P. J. Rudden
- Environmental Management of the municipality: Maria Berrini / P. J. Rudden



2.5 First evaluation round

In the first evaluation round, the applicant cities described the results achieved, the measures taken and the short and long term commitments for each indicator area, as well as their proposed programme of actions and events to disseminate experiences and best practice. The description was limited to max. 3000 words per indicator area. (In the first round no documentation was requested). Each indicator area was assessed and scores were given by the evaluator and co-evaluator.

Seventeen cities applied³, within which sixteen cities with more than 200,000 inhabitants covering 12 European countries and, the largest city of a (candidate) country which does not have a city with more than 200,000 inhabitants (Reykjavík). The applicant cities included major European capitals such as Rome, Budapest, Ljubljana, Reykjavík as well as large and small cities, such as Barcelona or Toruń respectively.

The **applicant cities** for the EGCA title 2012 and 2013 include:

- Antwerp, Belgium
- Barcelona, Spain
- Bologna, Italy
- Budapest, Hungary
- Espoo, Finland
- Glasgow, United Kingdom
- Łódź, Poland
- Ljubljana, Slovenia
- Malmö, Sweden
- Nantes, France
- Murcia, Spain
- Nuremberg, Germany
- Reykjavík, Iceland
- Rome, Italy
- Seville, Spain
- Toruń, Poland
- Vitoria-Gasteiz, Spain

³ For the first selection round EGCA 2010 & 2011, thirty-five cities applied covering 17 European countries



Award criteria:

For each of the 11 **environmental indicator areas**, the evaluation panel assessed the following data:

- *Achievements relating to the present situation*
(max. 5 points)
- *Measures taken by the local authority*
(max. 5 points)
- *Short and long term commitments*
(max. 5 points)

Total number of points per indicator area: 15 points

Total number of points for all indicator areas: 165 points

For the criterion **communication & dissemination programme**, the evaluation was based on the following:

- *Content*
(max. 5 points)
- *Completeness*
(max. 5 points)
- *Creativity / Originality of ideas*
(max. 5 points)
- *Proposed effort & project management*
(max. 5 points)

Total number of points attributed to communication: 20 points

The six cities with the highest scores were short-listed and went to the second evaluation round. See Annex I. It is important to note that cities applied for both 2012 and 2013 and all applicants were evaluated in the same way.

The **six short-listed** cities include:

- Barcelona, Spain
- Malmö, Sweden
- Nantes, France
- Nuremberg, Germany
- Reykjavík, Iceland
- Vitoria-Gasteiz, Spain



2.6 Second evaluation round

In the second evaluation round, the shortlisted cities were invited to revisit their original application and consider whether they found a need to elaborate further on the information submitted in relation to the 11 indicator areas and the programme for dissemination of experience and best practice. Furthermore, the evaluation panel specified issues that they would especially like each city to consider and decide whether there was a need to elaborate on the information already submitted.

In addition, a **meeting** with each of the six short-listed cities was also organised as part of the second evaluation round on 7 & 8 September 2010 with a threefold objective:

- 1) Giving the cities the opportunity to present their application to the panel in person. The cities had 25 minutes to give a presentation arguing why their respective city should and can be a European Green Capital. Cities were asked to focus on the overall performance and vision of their work;
- 2) Allowing the evaluation panel to meet the team responsible for all the effort that had gone into the application, their commitment, vision and enthusiasm;
- 3) Allowing the evaluation panel to ask questions / clarifications from the city's representatives about the city's performance in relation to the environmental indicators and their communication and dissemination programme.

Award criteria:

Based on the additional information submitted by the cities and their presentations, the evaluation panel made their final assessment:

- a) For each of the 11 proposed **environmental + dissemination programme indicator areas**, the evaluation panel gave their final scores.

Total number of points for all indicator areas: 165 points + 20 points = 185 points

- b) For the presentation meeting on 7 & 8 September 2010:

- *City's presentation (content, clarity, conciseness etc)*
(max. 5 points)
- *City's overall performance and city's commitment, vision and enthusiasm*
(max. 5 points)
- *City's questions and answers session*
(max. 5 points)

Total number of points for the presentation session: 15 points

Total maximum number of points: 200 points

Based on the application, the additional information and the meeting with each of the six shortlisted cities, the expert panel finished its evaluations and gave scores to each city thus coming to a conclusion on which two cities should be selected as the European Green Capitals for 2012 and 2013. See Annex II.



3 Final Recommendations

The evaluation panel has made its final assessment with regards to all six short-listed cities. It is clear that all candidates have many impressive achievements and strong ideas for improved urban environment as well as future ambitious projects. Their work is overall outstanding and the evaluation panel has agreed that all six cities have the potential to become a European Green Capital and an excellent role model for other cities all over Europe.

The final evaluation and summary table of scores (see Annex II) shows that Barcelona and Malmö come out first and second respectively. Nevertheless, the final ranking shows three top cities: **Barcelona, Malmö and Vitoria-Gasteiz** with very close final points.

As a result, **the evaluation panel recommends the jury to designate two cities out of the three top as the European Green Capital of 2012 and 2013.**

3.1 Barcelona

The city of Barcelona, the second largest city in Spain with a population of about 1.6 million people, is one of the most densely inhabited metropolitan areas⁴ on the Mediterranean coast as well as being Europe's principal Mediterranean port. Barcelona faces many metropolitan and "Southern" challenges, but also brings together many comprehensive approaches, policy commitment and the necessary funding needed to resolve them, in a process which started more than a decade ago.

The high population density results in a very efficient urban land use. This dense and compact urban form saves land and energy but poses certain challenges: the urban fabric increases the heat island effect and can lead to higher use of air conditioning if green infrastructure is not developed intensively. Another challenge is to provide green areas for its population. Due to active management, a steady increase of green areas and elements over time was developed, including moving industries out of the city to create new inner-city green areas and the recovery of space including beaches. The Green Area Strategic Plan integrates biodiversity and ecosystems, energy, climate, air quality and social services, in a comprehensive and visionary plan.

On the transport side, Barcelona takes advantage of its Mediterranean city model and its very high density: about half of the trips are made on foot or by bicycle, and the individual motorised mode-share is the lowest percentage of the 6 short listed cities (20% for car and motorbike together). However, the use of the bicycle is just at its beginning, and the share of green buses remains limited. The city is served by a comprehensive local public transport network that includes a metro, a bus network, two modern tram networks and several funiculars and aerial cable cars. The Urban Transport Plan has been very ambitious, with a particular effort to increase accessibility (to cover the whole area, during the night, for disabled people). All these measures are reinforced by car policy management (speed limits on fast roads, zone 30 development, car sharing, parking regulations).

⁴ About 3,5 million people live in the Barcelona area.

Located in a Mediterranean region that suffers from low levels of rainfall and high temperatures during several months, Barcelona has put in place forward looking plans for the management of the water scarcity. The water treatment plants aim at an efficient use of water and reuse of treated waste water. Waste water and rainwater are collected by a large collector, preventing polluted water from being dumped directly into the sea. The regenerated water is used as a barrier against salt intrusion as well as for farm irrigation, maintenance of wetlands and industrial use. In addition, the waste water treatment is based on a biological treatment achieving the average elimination of 94% of the pollutant load and at the same time generating green electricity. In parallel, the city continuously raises the population's awareness on water shortage and a rapid decrease of water consumption per capita has been recorded.

What is impressive in a big city like Barcelona is the active participation of all parts of society, which represents a huge number of partners (inhabitants, associations, business, academia, political groups,...) into a sustainable vision of their city. Its commitment is also international by working in cooperation with other cities throughout Europe and the world. Barcelona is an active member of different networks such as Agenda 21, ICLEI, Energie-Cités or Covenant of Mayors. From commitments to actions, indicators are regularly updated and monitored and several certifications (EMAS, ISO 14001, Public building energy management,...) demonstrate high achievements.

Finally, as European Green Capital, Barcelona has foreseen a list of well-structured, concrete and feasible objectives, not only focusing on the city's own urban environmental improvements and acting as a role-model to inspire other cities, but also focusing on the future and the way the city overcomes future environmental challenges in order to leave behind a heritage that will last beyond the year of the event. It would be a privileged voice for best practices and replication of innovative solutions for cities in Southern of Europe, the Mediterranean area, and even Latin America.

3.2 Malmö

Sweden's third-largest city is a model of sustainable urban development. Malmö, one of the earliest and most industrialized towns in Scandinavia, is challenged by the adaptation to post-industrialism and a regular population increase (20% since 1997, today 240, inhabitants). With the goal of making Malmö an eco-city, an active and holistic approach to sustainable development was initiated more than 10 years ago, based on in its three dimensions: ecological, social and economical.

Malmö works to reduce greenhouse gas emissions by putting strong emphasis on energy efficiency, reducing consumption and renewable energy. The overarching goal is that by 2020 the city's activities will be climate neutral and that by 2030, the entire city will run on 100% renewable energy. Heavy investments are being made to produce biogas with the building of one of the world's largest plant. Nowadays, the per capita emissions of 3.4 CO₂ tons, including electricity, are favourable and relates to a well-targeted energy strategy, showing a strong decrease compared to 1990 figures. Around 30% of electricity is from renewable sources (the largest offshore wind farm in Sweden is 10 km off the coast, photovoltaic installations are all over the city).



With a temperate climate and only one hill, the bicycle is an obvious choice of transport in Malmö. Even better, the city is linked by 430 km of cycle paths. If an encouraging result is that about 40 % of all commuting to work and school is done by bicycle (30% in average in the inner city), still, supportive measures are implemented every year. These measures come from the Traffic Environment Programme which foresees 100 new measures over 5 years to make transport in the city cleaner, quieter and healthier, focusing on increasing the share of sustainable means and multimodal transport. The realizations include: 96% of inhabitants living within 400 meters from a bus stop, a bus fleet with low emissions operating with natural gas and biogas, significant development of rail traffic and green trams. Today, the total share of car journeys has fallen by 10% in 5 years.

In Malmö, everybody lives within 300m of at least a small green public area. An innovative greening strategy developed the inclusion of green roofs, green walls, ponds, tree planting, butterfly gardens, bat and bird houses, etc. Several neighbourhoods have already been transformed using innovative design combined with park spaces.

Indeed, what is impressive in Malmö is the transformation from a declining former industrial city with many brownfields towards a new green, efficient and dynamic city. Many projects - often award winning - to redevelop brownfields are implemented in a holistic approach. There is a comprehensive treatment of soil contamination and an active strategy to maintain a high percentage of unsealed surfaces and to prevent further urban sprawl. Then, the redevelopment of these neighbourhoods integrates urban planning, energy-efficient buildings (the eco-city quarter "Bo01" is Sweden's first climate neutral district), transport facilities, economic growth, access to green and blue areas, waste management, etc.

Malmö also has a holistic approach to waste and applies the waste management hierarchy: reduce, reuse, recycle, incinerate and landfill. Municipal waste recycling stands at 45% and incineration with energy recovery at 55% of the waste stream. The city incineration plant produces hot water for the district heating system providing around 70,000 houses, and some 250,000 MWh of electricity fed into the national grid. The city has an effective and visible campaign to collect food waste and to transform it into biogas to fuel the city's fleet.

In addition to traditional waste water management measures, the city is already looking to long term evolution. Together with the regional responsible authority, they have analysed various climate change scenarios to address the present and future climate change effects, not only on water supply, but also on increased levels of storm water.

Last but not least, the future is very much a concern in Malmö, in particular educating the next generation on sustainable development. Various activities are developed for children and students, but also to support educators. Learning is about tangible things like organic food, solar energy installation, urban wind turbines, open storm water systems, recycling, green roofs,... This is also reflected in the city's ambitious communication strategy which has a very good focus on youth and universities and an eye on the future vis-à-vis resource consumption and urban living. Overall, it will draw attention to Malmö's efforts as well as instigating curiosity, motivation, and consequent action in order to green Europe's cities by demonstrating the various possibilities that exist. The proposed theme of the city will be 'sustainable urban lifestyles', which can easily demonstrate the opportunities and benefits of a city which goes green from environmental, so-



cial and economic perspectives. A 25-manned unit responsible for organising events, Tourist Malmö and the city's own office will work in an integrated way with a view to implementing such a holistic and ambitious communications plan.

3.3 Vitoria-Gasteiz

Vitoria-Gasteiz is a medium sized city from the medieval time and the capital city of the Basque Country since 1980. Its population has tripled since the sixties, attracted by the industrial sector and the derived job opportunities, and reaches 240,000 inhabitants today. It is the only inland city within the 3 top cities competing for the European Green Capital award 2012 & 2013. The city of Vitoria-Gasteiz has received several international awards for its urban development.

With 65% of its CO₂ emissions coming from the transport and factory sectors, the city has put in place a long-term coherent set of policies and actions at local level which associate all political parties. Vitoria-Gasteiz signed the Covenant of Mayors, committing the city to go beyond the 20% reduction by 2020. A full palette of renewable energies is produced on spot: biogas, photovoltaic solar power, solar thermal energy, geothermal energy, co-generation, wind energy. In the field of transport, actions include switching from car to public and non-motorised transports. A special attention was given to land use planning and to improving energy efficiency in new and existing constructions (bioclimatic buildings, energy certification, domotics). This allows the city to cope with the growth in activities and population.

Vitoria-Gasteiz is made of concentric circles, the most central of which contains the city itself. The "Green Belt", a semi-natural green area partially recovered from degraded areas, surrounds the centre and brings nature into the city. The third circle is dominated by forestry and mountains. The city has a very high proportion of green public areas, giving the opportunity to the entire population to live within 300m of an open green space. There are a lot of concrete measures planned to help and increase biodiversity and ecosystems services. For example, there is a good monitoring made of flora and fauna species, reduction of habitat fragmentation, decrease of light pollution.

The built areas are well concentrated and that allows a high use of the walk (half of the trips are made by foot) instead of the car (only 37%). An active policy in favour of eco-friendly modes has been conducted with, between others, the implementation of a pedestrian areas and a network of bike lanes. Last years, an important restructuring of the public transport system has been implemented, with the introduction of tramways and more efficient bus lines.

Clean air is essential for healthy environment and populations. With the Air Quality Management Plan established in 2003 to control and improve air quality, monitoring stations were installed. Actions in favour of a cleaner air, like the reduction of industrial emissions and use of fossil fuel are combined with measures related to mobility and transports. Today, indicators related to air pollution are below the limit value, and express a downward trend.

The city has also monitored noise pollution since years and taken regulatory measures. Like for the air quality, main actions were related to mobility and industry. As a result,



relatively low values of population exposure to noise are established since 1999. For the future, the Noise Management Plan foresees to work with catering and leisure establishments.

Vitoria-Gasteiz has also an ambitious objective aiming at a reduction of domestic water consumption below 100 litres per capita per day. Already today, consumption of water has been decreasing steadily from 1999 to 2009. Water-related investments have been made in the context of the Agenda 21 environmental action plan for improving water supply, reducing losses, working on sustainable consumption and water quality. Indeed, one of the most important challenges for the current sanitation system is overload during periods of heavy rain. Measures to improve waste water treatment and to protect the overall ecological quality of water were included in the Plan. These were backed up by a series of awareness raising campaigns, involving also the creation of a citizen's information office on water consumption and efficiency, and contributing to the implementation of the Water Framework Directive. Studies on new sources of water supply, the use of rainwater for non-direct human consumption were part of the package.

With the very nice motto "Verde por fuera-Verde por dentro" ("green inside – green outside"), the communications programme presents a good range of activities, events, actions and networking opportunities in order to disseminate the city's best practices, but also the future improvements envisaged as European Green Capital. The city shows much enthusiasm and dedication to the EGCA project and is keen to act as a role-model. A strong aspect in Vitoria-Gasteiz' candidature is its inland location, with less access to water than those near the sea. It must be underlined that the 2 already selected Green Capitals and of the other 2 top cities competing for the titles 2012 & 2013, are seaside cities.



4 Detailed Evaluation of Shortlisted Cities

4.1 Evaluation Report for Barcelona

1. Local contribution to global climate change

Main evaluator:	Pierre Laconte
Co-evaluator	Jean-Pierre Nicolas
Final score	9 out of 15
Comments	

The emissions data remain imperfectly comparable due to unexplained differences in accounting methods. Different methods entail different estimations. Barcelona uses its own methodology "El Comptador" (Spanish word for "Accountant") which, according to the newly provided 3.1. material, is "similar to the CO2 Globalitzant" (Catalan word for "All-inclusive"). The low estimated emissions level (3.35 ton/inhab. including emissions from electricity) is explained in the new 3.1. material by specific measures. "District heating and cooling provides climate control for 53 buildings". PV installations have been implemented in "more the 30 public buildings". The use of zero emissions hydrogen is experimented.

Barcelona is by excellence a city of high-intensity urban land use and very large blocks, an urban form that saves energy, among others through a modal split favourable to public and non-motorised transport (also stressed by co-evaluator). However, this also generates a predominantly mineral environment and a heat island effect entailing heavy use of air-conditioning and an acknowledged city-wide rise in temperature. The mark seems to remain appropriate.

2. Local transport

Main evaluator:	Jean-Pierre Nicolas
Co-evaluator	Pierre Laconte
Final score	12 out of 15
Comments	

1. Present situation:

Barcelona takes advantage of its Mediterranean city model and its very high density: 46% of the trips are made by foot or bicycle, and the individual motorised mode share is the much lowest of the 6 cities in competition (20% for car and motorbike together). However, the development of the bicycle is just at its beginnings, and the share of green bus remains limited.

2. Past measures:

The Urban Transport Plan has been very ambitious for the public transport system (new tram lines, and in terms of p.km capacity +36% for metro and +45% for buses), with a particular effort to increase accessibility (to cover the whole area, during the night, for disabled people). A strong concern exists for walk and the bicycle has begun to be taking into account since last years. All these measures are reinforced by the usual car policy management (speed limits on fast roads, zone 30 development, car sharing, and parking regulation).

3. Short and long-term measures:

The Urban Mobility Plan of Barcelona pursues the past measures, by encouraging pedestrian and bicycle traffic, with increasing the green bus fleet and investing on the public transport network development. For car, electric mobility and car sharing are proposed. The PMU is included inside a Barcelona regional mobility plan, which allows taking the connection with the suburb into account. However, the measures are not described.

3. Green urban areas

Main evaluator: Birgit Georgi
Co-evaluator Stamatis Chondrogiannis
Final score 11,5 out of 15
Comments

The city demonstrates well thought through strategies for green urban areas, which is a huge challenge given the very high population density and compactness of the city. Nevertheless, due to active and careful management, a steady increase of green areas over time could be achieved and the beaches regained, mainly by reusing industrial brownfield (21 parks in 1983 up to 72 parks now).

99.4 % of population lives within 5 minutes distance from public open space with green (however, space with green elements like trees is different from typical green urban areas). Other green elements such as green roofs (currently 35 ha) or trees are actively used to improving the situation in a densely populated city. Particular focus is set to improve the situation in the densest districts – pushing towards opening space inside the blocks.

The Green Area Strategic Plan integrates furthermore biodiversity, energy, climate, air quality concerns, as well as different ecosystem and social services related to urban green

In the current 4-year Green Plan, to increase urban green and improve existing areas, the budget increased by factor 3 related to the anterior plan - by far more than population grew during that time (originally 24.7 EUR per inhabitant to 84 EUR in the current plan).

The overall approach is integrated, comprehensive and visionary.

4. Sustainable land use

Main evaluator: Birgit Georgi
Co-evaluator Giovanni Bidoglio
Final score 12,5 out of 15
Comments

The city has one of the highest population densities in Europe on built up land (292 people/ha) besides still being a city with a high quality of life. The soil sealing per inhabitant is very low with only 34m² per inhabitant. The city is compact, complex and attractive. The strategy to discourage urban sprawl is providing an attractive, liveable environment in the city. The focus on brownfield re-development and restoration with comprehensive projects already implemented, ongoing, and planned recovering space for residents and green areas. Innovative is the super-block concept with more space for pedestrians and cyclists. Eco-districts are developed which have to apply certain environmental criteria to plans and buildings. The city cooperated with the neighbouring 36 municipalities via the metropolitan area strategic plan.

The efficiency of urban land use and the progress towards a better quality during the last decade are remarkable. There is still a lot to improve in such a large town, but forward-looking plans to further improve the situation are evident.

5. Nature and biodiversity

Main evaluator:	Stamatis Chondrogiannis
Co-evaluator	Maria Berrini
Final score	13 out of 15
Comments	

Complete management based on systematic monitoring and analyse with a lot of action projects already implemented and projects planned for the future, but no budgets described.

This systematic monitoring, including also urban biodiversity, provides data used in the action plans.

Biodiversity policy seems to be integrated in planning, as in the Partial Territorial Plan of the Metropolitan Area of Barcelona and the Strategic Coastal Plan of the bigger area.

The results of light pollution on biodiversity and in general on the quality of life are mentioned but no data are given for concrete measures on street- and park lighting.

6. Quality of local ambient air

Main evaluator:	Matthias Ketzel
Co-evaluator	Luis Bento Coelho
Final score	12,25 out of 15
Comments	

13 air quality measurement stations that belong to the Atmospheric Pollution Prediction and Surveillance Network of Catalonia, Only ozone below limit value, PM10 and NO2 show exceedances at several stations with downward trend since 2006 for most stations and components.

Programme For The Improvement Of Air Quality In The Metropolitan Region Of Barcelona 2007-2009, includes 73 measures in sectors that include the domestic, energy and transport sectors aiming to reduce NOx and PM10 emissions by 30% also includes reduction targets for the port and airport . As: promotion of sustainable urban mobility, reduction of traffic, the regulation of parking, the promotion of public transport and less polluting vehicles. Thermal Solar Bylaw (1999), implementation of heat-cold distribution networks

Information of public by AQ index - online data from 13 stations, reports, numerous publications/ guides to raise awareness.

Long list of ambitious projects and plans, Barcelona Urban Mobility Plan 2006-18, LIVE Project (Logistics for the Implementation of Electric Vehicles), Master Infrastructures Plan for the Barcelona Metropolitan Region, work has begun on a new Energy, Climate Change and Atmospheric Quality Plan 2011-2020, including specific software to calculate and model the dispersion of the pollutants and effect of measures taken, Lighting Improvement Plan (2008). Also measures on port and airport, electric vehicles for waste collection and in municipal fleet. Budgets provided now.

7. Noise pollution

Main evaluator: Luis Bento Coelho
Co-evaluator Matthias Ketzl
Final score 12,25 out of 15
Comments

A) Very large percentage of population exposed to high noise levels, both for the Lden (above 65 dBA) and Ln (above 45 dBA) indicators. The values are not so high when only the city, not the agglomeration, is considered. The argument on the cultural variable is raised, especially for the Lden indicator, but each country has defined the time limits of the reference periods considered in the calculation of Lden according with specific culture.

Still no data provided on recent achievements and on evolution of the city soundscape, as required.

B) Excellent performance of measures taken by the municipality, namely institutional noise awareness campaigns, publications and media presence, premises licensing system, "town planning based on acoustic criteria".

C) Excellent list of commitments for improving the city's soundscape, namely the change of mobility encouraging the use of public transportation, protection of the city sensitive and quiet areas, "encouraging the incorporation of acoustic criteria in the design and management of the city", "raising awareness and encouraging citizen involvement in noise pollution issues".

8. Waste production and management

Main evaluator: P.J. Rudden
Co-evaluator Maria Berrini
Final score 13 out of 15
Comments

Barcelona has an efficient integrated waste management system primarily based on maximising separate collection. Between 2002 and 2008, separate collection doubled from 16% to 34% and now stands at 40%. Some 18% of the waste stream is incinerated with district heating and cooling and there are plans to extend this waste recovery system further by adding an additional 400,000 tonnes per annum capacity.

Plans to install biological treatment are now also in train which will eventually treat a further 21% in 3 new ecoparks. There is a short-term target for a 10% reduction in waste generation in 2010 from 2006 figures and a 55% overall recovery target by 2016. Waste landfilling in Barcelona is currently at 28%, which will only reduce further significantly when biological treatment and incineration is fully extended in the future as planned.

The current Metropolitan Programme for Municipal Waste Management 2009 - 2016 sets out the medium term aims of the programme to meet the EU Landfill Directive over the next 6 years.

9. Water consumption

Main evaluator:	Giovanni Bidoglio
Co-evaluator	Eduarda Beja Neves
Final score	12,5 out of 15
Comments	

Barcelona is a town facing actual problems of water availability that has taken measures and adopted forward-looking plans - also in light of possible climate change impacts. Major freshwater source is surface water.

Barcelona went through a rapid decrease of water consumption even though the town experienced a population increase. In the reference year 2008, the total per capita consumption was 169 (l x day), comprising 112.9 (l x day) for domestic and 57 (l x day) for municipal (7) and industrial/commercial (50) uses. Metering covers more than 99.6 % of all type of users, with water losses of the drinking water supply network at about 6 %.

For a town with low annual precipitation levels irregularly distributed throughout the year, Barcelona proved to be proactive in the development of plans to tackle possible events of water scarcity (as occurred in 2007 and 2008). Alternative water supply systems have been investigated with the creation of new non-potable water distribution systems. Measures adopted and to be implemented in the long-term include the reuse of purified water, the injection of purified water into aquifers, the extension of use to large scale consumers, e.g. industries, of non-potable waters; a desalination plant providing 25% of the water supplied in Barcelona and its metropolitan area became operational in 2009. During the next 12 years, the City of Barcelona aims at increasing to 90 % the use of untreated groundwater for irrigation of parks (representing half of the municipal water needs) and other municipal uses. Farming irrigation (not quantified) has been stated to reuse purified water. Technical options are accompanied by policy measures such as the Plan for the Use of Water in the Subsoil, the development of bylaws promoting responsible consumption, the Municipal Action Plan for the Risk of Drought, and the adoption of a tariff system with a fixed and a variable component according to consumption volumes. Barcelona action plans are integral part of the River Basin Management Plan of Catalonia, which is the regional answer to the implementation of the Water Framework Directive (WFD). Awareness increasing campaigns are essential in the Barcelona's strategy to change consumer's behaviour.

10. Waste water treatment

Main evaluator:	Eduarda Beja Neves
Co-evaluator	P.J. Rudden
Final score	13 out of 15
Comments	

(10d.) The Mediterranean climate is a key factor for Barcelona's wastewater sector dimension and efficiency, in particular the low levels of rainfall and its concentration in certain months of the year. To minimise this problem, the City has built 11 rainwater retention tanks over the last 15 years. Another problem related to the above is the high temperatures during several months of the year, which increases the dispersion of bad odours from the sewage networks and/or the wastewater treatment plants.

(10a. and 10b) In what relates to floods management, Barcelona has modernised its drains network with a remote control system that allows for advanced flood control management in the city. Wastewater and rainwater are collected by a collector's network extended for more than 3000 km, which can transport 900,000 m³/day of wastewater to the treatment plants. One of the of the drains network features is the rainwater retention tanks that prevent floods and polluted water from being dumped directly into the sea.

In what relates to infrastructure sustainability, all the water treatment plants in Barcelona's metropolitan network apply (or are preparing to apply) biological treatment achieving an average elimination of the pollutant load of 94% (DQO, DBO5 and suspended matter). The El Llobregat wastewater treatment plant has a nutrient-elimination system for reducing nitrogen and phosphorus contents.

In what relates to environmental sustainability, both Besòs and Llobregat wastewater treatment plants generate electricity from heating the sludge from the treatment process.

In what relates to efficient use of water and reuse of treated wastewater, the treatment plant of El Llobregat allows for 3.5 m³/s of treated water to be reused, the regenerated water is used as a barrier against salt intrusion, as well as for environmental purposes in the River Llobregat, for farm irrigation, maintenance of wetlands and industrial use.

To adapt to climate change in terms of its wastewater management systems, Barcelona has come up with three basic lines: minimisation of urban runoff, use of wastewater treatment plants to maintain and increase seawater quality, regenerate the Mediterranean coastline and the ecological flow of rivers and aquifers, and to continue raising the population's awareness of the fact that there is a shortage of water and that the entire cycle must be taken into consideration.

In what relates to describe planned long and short term measures to improve wastewater treatment, the modern drains network of the city of Barcelona have been developed together with the city's growth and expansion for more than a century, 40% of the network is less than 40 years old, however 12% of the network is at least 94 years old. To correct the existing deficiencies in the current network, an Integral Plan for the Barcelona Sewage System (PICBA) 06 is being put in place.

11. Environmental management of the municipality

Main evaluator: Maria Berrini

Co-evaluator P.J. Rudden

Final Score 15 out of 15

Comments

Very high achievements, measures, commitments on EMS, GPP, Pub. Building energy management.

The Env. Dep and the 3 public utilities (10.230 workers) are ISO 14001. A pioneering Agenda21 (2002/2012) plays as EMS, regularly updated and monitored by indicators, signed by 620 local organizations. In 2011, a signatories' forum will be held to define new targets beyond 2012. As part of the Ag21, a 2001/2005 Green Office Plan 2006 Ayuntamiento sostenible have been adopted to reinforce internal measures (as info campaign to green employees behaviours, strategies to integrate EMAS with CSR certification, actions to reinforce GPP and Energy efficiency in public buildings, see below).

GPP is a consolidated strategy (Guidelines, procedures since 2001) and for this has been awarded by ICLEI and EC in 2006. Data are very well documented and advanced (e.g.: Paper 100% Blue Angel and 70% recycled; Timber products 76% certified; 100% eco for cleaning products: 5% of childcare facilities use organic food). The ambitious target / by 2012 / is to get 50% of GPP (of which 100% recycled paper and paper consumption minimization and 500 toilet water saving).

Improvement in Energy efficiency in public buildings (more than 2.000) is the first mandatory project of the 2010 / 2020 dedicated Plan. Since 1999, measures are in place and data are monitored. In 2008 the average performance is very good: 50,90 kWh/m² for heating (gas) and 42,74 for electricity. Measures taken are comprehensive and ambitious: regulations (1999 Solar ordinance, 2005 Mayor's directive setting max indoor summer temp., high standard (B) for new buildings), installation of solar panels (52 TH and 40 PV) on municipal facilities, extended lighting replacement. The target by 2020 is getting a new 10% reduction (20% on municipal facilities) by means of energy audits and retrofit. Target set up also for RES in munic. buildings. All these measures have been planned, and a dedicated budget of 12 millions of Euro (60% in 2010 and 2011) has been approved.



12. Dissemination programme

Main evaluator: Thea Pieridou

Final score 20 out of 20

Comments

Content: Excellent proposal, demonstrating understanding of important urban policy context and the need to do even more, learn from others and foster dialogue and exchange of experiences across European cities. Barcelona has a list of well-structured, concrete and feasible objectives, not only focusing on the city's own urban environmental improvement and acting as a role-model to inspire other cities, as the European Commission specifies, but also focusing on the future and the way the city overcomes future environmental challenges in order to leave behind a heritage that will last beyond the year of the event. Barcelona's bid includes a 4-axed strategy in order to achieve all its objectives at various geographical levels. The 4 lines of actions are: Barcelona moves, Barcelona changes for the better, Barcelona eco-innovates and Barcelona learns and shares with European & Mediterranean cities. A number of specific target audiences are also identified since the City believes that participation and cooperation of all will ensure a successful year. The proposal has an attractive programme of events focusing on the 4 lines of action and includes a very large range of communication tools: ex. opening & closing ceremony, exhibitions, visits to sites of urban interest, conferences/debates/workshops, merchandising, competitions, digital information platform & social networks, official website, educational projects, Ambassadors, printed material, publications, advertising. If a winner, the City will also be promoted at public events and fairs regularly held in Barcelona like the Barcelona World Race and also associated with international events such as the EXPO12 in South Korea and the 2012 London Olympic Games.

Completeness: The City proposes a well-designed, ambitious and complete package of events and actions including very good objectives and an appropriate strategy.

Originality of ideas: There are lots of creative elements included in Barcelona's proposal: new tourist bus route passing through sites of environmental interest, a competition involving customising Metro coaches to represent different European habitats, eco-souvenirs created by local artists using eco-design principles and produced by social integration groups, an environmental map of the city, postcards with household green tips, online competition for the best green initiatives with user scoring, youth involvement like a photography exhibition and research projects as well as non-lucrative exchange markets to encourage recycling and reuse.

Proposed effort & project management: The creation of the Barcelona Green Capital Agency responsible for planning and implementing the whole communication plan seems to guarantee a successful year. The Agency will also maintain and promote relations with other cities and maximise the use of existing cooperation networks. The Agency's work brings added value since it will ensure that sustainability criteria are included in the organisation of all events. The Agency will also produce a post-assessment report on the results. Overall, the proposal demonstrates enormous effort, enthusiasm and dedication to this project.

13. Presentation at meeting 7-8 September 2010

Criteria evaluated:

- 1) Technical Presentation
- 2) Vision/ambition
- 3) Answers given to the experts' questions

Score	12,3
Total Score	168,3



4.2 Evaluation Report for Malmö

1. Local contribution to global climate change

Main evaluator: Pierre Laconte
Co-evaluator Jean-Pierre Nicolas
Final score 14,5 out of 15
Comments

The per capita emissions of 3.4 tons including electricity are favourable and relates to a well-targeted energy strategy. District heating and cooling providing climate control for 95% of buildings, the largest wind farm of Sweden (10 km off-coast), PV all over the city, strong green communication programmes (exemplified by their exhibition in Shanghai Expo), citizen involvement with emphasis on secondary education, and other features seem to justify the mark.

2. Local transport

Main evaluator: Jean-Pierre Nicolas
Co-evaluator Pierre Laconte
Final score 14 out of 15
Comments

1. Present situation:
Malmö presents very good results with the high bike use (22% on average, growing up until 40% for commuting trips in the city centre), even if the car is still used for 41% of the trips. The bus fleet is also completely green, and people have a good accessibility to the public transport system.

2. Past measures:
Malmö has deeply invested in a green transport system since the 10 last years through a global Environmental Program. The transport measures are coordinated, with a multimodal point of view. They mix infrastructure investment and mobility management, and specific actions are targeted to commuters and school children. Bicycle and green public transport are really promoted while the car is discouraged.

3. Short and long-term measures:
the transport policy will stay in coherence with the Environmental Program for the coming years. Two points can be highlighted:
=> The previous policy will be pursued, with on one hand a significant development of the railway and green electric public transport and on the other hand an extension of the bike network, in order to continue the decrease of car dependency.
=> There is an increasing focus on city planning and densification, in combination with public transport investment, and cycle and pedestrian development.

3. Green urban areas

Main evaluator:	Birgit Georgi
Co-evaluator	Stamatis Chondrogiannis
Final score	12 out of 15
Comments	

97% of the population lives within 300m to public green urban areas, which offers 33 m² to each inhabitant. This amount of green area per inhabitant could be maintained over the last years besides high population growth in the past. Further improvements are planned to ensure an easy access by 100% of the population but also to improve the quality of green areas.

The city has conducted many innovative projects concerning besides recreation other ecosystem functions, like well functioning open storm water management, green roofs, habitats for wildlife in new and old developments of the city. Furthermore, focus is set on the potential of green areas to improve the social situation. Among others, the Tree plan, as well as the inner-city organic garden, is actively used for education and for awareness raising complemented by the Nature School and the application for the Öresund classroom.

Innovative management tools like Green Points system and Green Space Factor are in place and work.

The city shows a very comprehensive and holistic approach to green urban areas with very good achievements and strong commitments. Remarkable are the many innovative and awarded actions regarding the consideration of different ecosystem functions.

4. Sustainable land use

Main evaluator:	Birgit Georgi
Co-evaluator	Giovanni Bidoglio
Final score	11,5 out of 15
Comments	

The transformation from a declining former industrial city with many brownfields towards a new clean, efficient and dynamic city is impressive. Many projects - often award winning - to redevelop brownfields are implemented and further planned. There is a comprehensive treatment of soil contaminations.

The population density in the built up inner city is only 36 people/ha (but the highest in Sweden). In some new developments, population density is 106 people /ha. Compared to the lower density, the city seems to deal efficiently with soil sealing as the value per person is with 98m²/inh is medium. An active strategy to reduce the impermeability of soil and maintain a high percentage of unsealed surfaces is in place.

The spatial planning of urban developments is holistic and aims on further densification and inward growth, keeping / improving quality of the places, favouring mixed uses, focussing on sustainability, linking with transport infrastructure, high accessibility to services. Make living in the city attractive shall further prevent urban sprawl.

Cooperation with neighbouring municipalities on certain issues like transport links is important. The city is expecting further massive population growth and addresses actively the related challenges in their urban planning. The holistic approach for sustainable land use integrates the other sustainable issues, in particular climate change.

So far only 22% of new dwellings on brownfield sites between 1997 and 2006 – probably due to the high population growth, but this number is planned to move towards 50% for future developments. The rest shall be filling of gaps and densification of existing urban areas.

The city has a clear vision and strong focus on sustainable land use. Several important vision documents as precursors of formally adopted and binding programmes exist.



5. Nature and biodiversity

Main evaluator: Stamatis Chondrogiannis
Co-evaluator Maria Berrini
Final score 8,5 out of 15
Comments

Although strategies are being adopted to preserve intact natural areas, described in a variety of plans and measures like 'the nature protection programme 2000' or 'the green plan 2003', there are no real numbers or other data offered for those specific projects.

Short and long-term measures are plenty, one (Kalkbrottet) even with a budget. However, analyse on the results for biodiversity is missing.

These measures, as well as integrating policies and planning (e.g. the Light Plan) are described too generally and mention more the principles and the goals than the procedure and contents of each project.

6. Quality of local ambient air

Main evaluator: Matthias Ketzel
Co-evaluator Luis Bento Coelho
Final score 12,5 out of 15
Comments

Information and graphs added under 6a) PM10 and ozone below limit value, NO2 limit exceeded in some places, even constant / increasing trend.

Environmental zone for HDV since mid '90. Traffic main source, All city buses on natural gas. Action Plan for Nitrogen Oxide since 2007 now under revision, prioritising cleaner public transport and promoting bicycle commuting, bus-only lanes, banning private vehicles from various streets, railway City tunnel. Also Environmental programme 2009-20 and Traffic Environment Programme 2005-10, led the EU-financed CIVITAS (Clean and Better Transport in Cities) SMILE project together with 5 other European Cities, install titanium plates that can potentially reduce NOx. Other sectors than traffic not mentioned

Web page with 'live' information as well as TV screen, annual reports air quality and newsletters.

Action Plan is continued with number of measured, particular to traffic. Holistic and creative transport strategy. Comprehensive public transport survey, additional new Traffic programme underway, dispersion calculation programme. Again, no other sectors mentioned focus on traffic, some actions related to indicator 2 local transport. Metering CO2 good, but not air pollution issue.

Budgets still missing, Section 6e) no strong arguments considered.

7. Noise pollution

Main evaluator: Luis Bento Coelho
Co-evaluator Matthias Ketzel
Final score 12,75 out of 15
Comments

A) About 33% of the population is reported exposed to Lden above 55 dBA, and about 38% exposed to Ln above 45 dBA. No changes reported in the last 5 to 10 years, due to quieter transport. In addition, better indoor noise conditions reported due to better windows, since 1994.

B) Interesting list of measures taken, mostly addressed to traffic noise planning and to the acoustic window programme. Other general measures are mentioned without being clear what actions were effectively done.

C) Very good list of short and long-term commitments, adopting a "holistic approach to addressing noise", as in their Environmental programme (2009-2020). A comprehensive noise assessment programme, noise pollution awareness campaigns, a review of the transport system are mentioned.

8. Waste production and management

Main evaluator: P.J. Rudden
Co-evaluator Maria Berrini
Final score 13,5 out of 15
Comments

Malmö has a well developed integrated waste management system with little or no landfill of household or municipal waste - except for some inert items. Municipal waste recycling stands at 45% and incineration with energy recovery at 55% of the waste stream. Split trucks are used to maximise waste collection efficiency thus collecting organic and combustible waste respectively.

The city has an effective and visible campaign to use food waste as biogas to fuel the city's waste fleet. Underground vacuum systems service the Turning Torso apartment block and are planned later for the Western Harbour area. Thus compact new urban design areas do not have to use traditional waste collection trucks as these new urban spaces can more sustainably cater for mobility by cyclists and pedestrians.

The city incineration plant treats 550,000 tonnes of waste per annum producing some 1,400,000 MWh of district heating providing for 70,000 houses. The steam boilers produce some 250,000 MWh of electricity fed into the national grid.



9. Water consumption

Main evaluator: Giovanni Bidoglio
Co-evaluator Eduarda Beja Neves
Final score 9,75 out of 15
Comments

Domestic use of water is the major consumption (166 l per day per capita) versus a total consumption of 221 l per day per capita. The main source of water appears to be groundwater together with rain and snow fall. 89 % of water users are metered. The water supply network is systematically kept under control and losses are constant at about 10 %. Malmö is a former industrial town with still undeveloped brownfields and about one third of the total area agricultural and rural. Protection areas for drinking water are in place.

Water consumption does not appear to be considered as an area for improvement certainly due to the abundance of water typical of the region. Awareness raising focused more on quality aspects making consumers understand the advantages of drinking tap water with respect to bottled water, which in a life cycle thinking context would result in a decreasing indirect environmental impact through e.g. reduction of emissions during transportation of goods. Good approach, but of course, Malmö profits from a favourable situation. Geographical factors and water availability are such that there is limited motivation to encourage consumers to invest in water-efficiency devices. This is left to the individual initiative of citizens. May this favourable situation modify with climate change? Sustainability implies to act locally, but thinking beyond local borders and present conditions.

10. Waste water treatment

Main evaluator: Eduarda Beja Neves
Co-evaluator P.J. Rudden
Final Score 12,5 out of 15
Comments

(10a.) Nearly 100% of Malmö's total amount of wastewater is treated, with a high degree of organic material (more than 95%), phosphorus (more than 95% reduction), and nitrogen (over 80%) reduction, becoming rather difficult within reasonable cost to reduce these percentages further. Efforts are ongoing to reduce the amount of non-treated wastewater. The capacity of the sewer network is costly and time-consuming being increased, maintained and expanded. New techniques and treatment stages are added in order to reduce the small amount of by-pass water.

(10b.) More than 10 years ago, the wastewater treatments were upgraded to better extend nitrogen removal. To address the removal of organic material, phosphorus and nitrogen, new and more stringent requirements were introduced four years ago. Sludge from Sjölanda treatment plant is authorised to be used as fertiliser returning nutrients to the farmland, and turning wastewater into a valuable resource.

In addition to traditional wastewater management measures, the City and VA SYD (the Regional Water, Sewage and Waste Authority) have analysed various climate change scenarios to address the present and future climate change effects on water supply, as well as increased levels of storm water. VA SYD and Malmö are working on disconnecting storm water from the combined drainage system, for flow and overflow risk reduction. The City aims to manage rainfall in a more 'natural' manner, by also creating pockets of urban biodiversity. This strategy was roughly initiated 10 years ago, with various pilot projects in Malmö neighbourhoods.

(10d.) The biggest coming challenge will be the appropriate management of increased levels of rainfall, flooding and storm surges, as predicted from climate change analysis. The city is working on storm water management, but such strategies take time, as well as infrastructure investments.



11. Environmental management of the municipality

Main evaluator:	Maria Berrini
Co-evaluator	P.J. Rudden
Final score	13 out of 15
Comments	

High achievements, measures, commitments for EMS (very good EMS as policy system), GPP, P. Building energy management (very good commitments).

The 20% of the Municipal Dep. and utilities are EMAS or ISO 14001 and the city and all dep. have an Environmental programme yearly updated, using reporting indicators, under the responsibility of a dedicated person. The financial budget is integrated by environmental data (Malmö's 2010 Budget for a sustainable future). A new 2009 / 2020 Env. Programme and a new Energy Strategy have been approved with partnership set up and citizen consultation.

GPP is a consolidated strategy (a product catalogue is promoted, 2009 Green Fleet Award achieved) and results are well documented: e.g. 27% of budget spent for schools and elderly houses is spent for organic food and 24% for Fair Trade food; 80% of city cars are clean (biogas, electric, hydrogen). Measures have been taken as education and farmer markets to increase vegetarian diet, rules for ecolabelled IT as standard. The challenging target is to get 100% organic food by 2020.

Energy consumption in public buildings is decreased of 20% in the last 6 years (now at 112 kWh/m² for heating and 62 kWh/m² for electric and warm water). The local Energy strategy has planned many actions (also including LED use for public lighting). The city has adopted a long-term vision with a No Carbon target (100% RES) by 2030.

12. Dissemination programme

Main evaluator:	Thea Pieridou
Final score	20 out of 20
Comments	

Content: The proposal is very well-designed showing that Malmö has an excellent story to tell but simultaneously lessons to learn and share by looking both inwards and outwards. The City's ambitious communication strategy focuses first on drawing attention to Malmö's efforts as well as instigating curiosity, motivation, and consequent action in order to green Europe's cities by demonstrating the various possibilities that exist. The proposed theme of the city will be centred on 'sustainable urban lifestyles', which can easily demonstrate the opportunities and benefits of a city which goes green from environmental, social and economic perspectives. The City's bid has a very good focus on youth and universities and an eye on the future vis-à-vis resource consumption and urban living. The proposal clearly outlines the various target groups and includes the creation of a variety of stakeholder messages catered to each of the various target groups. A whole range of communication tools is put forward such as publications, an interactive website, film production, conferences, workshops incorporating the three pillars of sustainability, festivals, themed study tours and a monthly agenda of environmentally friendly events including an opening and closing ceremony.

Completeness: Malmö's communication plan demonstrates a holistic approach with a complete package of events and communications tools accompanied by a well-structured strategy.

Originality of ideas: There are many creative propositions put forward such as the discussion event composed of our future's decision-makers (Green Youth Dialogue), a green film festival, a 'physical climate-smart home' depicting a sustainable lifestyle, collaboration with cities outside the EU and a green travelling exhibition where students would join a bicycle caravan across Europe's greenest cities or to the next European Green Capital.

Proposed effort & project management: The City of Malmö shows much dedication and enthusiasm to act as a role-model and eagerness to share the city's know how and experiences with other cities. A 25-manned unit responsible for organising events, Tourist Malmö and the City's own office will work in an integrated way with a view to implementing such a holistic and ambitious communications plan.



13. Presentation at meeting 7-8 September 2010

Criteria evaluated:

- 1) Technical Presentation
- 2) Vision/ambition
- 3) Answers given to the experts' questions

Score	13,2
Total Score	167,7



4.3 Evaluation Report for Nantes

1. Local contribution to global climate change

Main evaluator:	Pierre Laconte
Co-evaluator	Jean-Pierre Nicolas
Final score	13,5 out of 15
Comments	

The Nantes submission is presented jointly by the Municipality and Nantes-Metropole. The data are combining both sources. CO2 per capita emissions amount to 4.77 tons. Although the commuting by car is high, this is the result of policies beyond municipal control. Because of its pioneering transport achievements (first new tram in France, complemented by quality bus schemes, short-term and long-term bicycle rental, car-sharing, etc.), and because of its strong commitment to a climate plan and its strong policies in favour of urban living, the mark seems justified.

2. Local transport

Main evaluator:	Jean-Pierre Nicolas
Co-evaluator	Pierre Laconte
Final score	12 out of 15
Comments	

1. Present situation:

In Nantes Metropole, the car dependency remains important in comparison to the other cities (57% of the trips are made by car), even if the 10 last year efforts provide encouraging results.

2. Past measures:

Nantes has developed an active transport policy since the 10 last years, with big efforts in the public transport development, a strong investment in bicycle policy and a planning in the city centre in favour of walk and public transport, and discouraging the car. That leads Nantes to be the winner of the 2009 Civitas award among 58 other cities.

3. Short and long-term measures:

For the coming years, the investment in tramway and high quality service buses will continue. As the bike share is still low, a strong effort on its development and promotion will be made (services, renting, network and separate lanes, security). However, the 57% car trip figure is mainly due to the mobility of people living in the suburb. Urban planning is there important. It is evocated in the text, but the measures are not really described.

3. Green urban areas

Main evaluator:	Birgit Georgi
Co-evaluator	Stamatis Chondrogiannis
Final score	10 out of 15
Comments	

100% of population live within 300m distance to green space (however, it is not completely clear if that includes or not private green area); public green amounts to 57m² per inhabitant for the agglomeration and 37m² in the city of Nantes. The situation was more or less stable over the last years. A tree charter and a countryside charter are in place.

There is, besides recreation, also an emphasis on the social and educational function of green. Furthermore, some ecosystem functions and ecological networks are considered: biodiversity is a concern in green area management which is done as a differentiated ecological management at 85% of the green public area, e.g., experimenting with biological pest management, beekeepers in the inner city, biomonitoring (bees as an indicator for air quality), biological corridors and hydrographical network along the waterways, renaturing of areas and regaining ecosystem services to store and clean water. Currently, a study to improve the ecosystem understanding is ongoing.

The budget for green areas in 2010 had a share of 3.89% of the overall budget corresponding to 14,48 EUR per inhabitant per year. With additional action from other budget lines, the share increases to 9.8%. Overall, a good approach but not yet as comprehensive and consistent like in some other cities.

4. Sustainable land use

Main evaluator:	Birgit Georgi
Co-evaluator	Giovanni Bidoglio
Final score	7 out of 15
Comments	

Currently a slight increase of the density in the municipality can be observed; however, the population density is with 34 persons per built-up land rather low. The soil sealing per person is with 185 m² very high and points to a very low efficiency of urban land use. Urban growth happens mostly at the fringe.

There is a strong awareness of the serious problems with urban sprawl. It shall be tackled by encouraging people to live in the city. Another approach is the promotion of peri-urban farming in order to protect arable land from urban sprawl. There is cooperation with neighbours under the SCOT-plan opting for a polycentric development and consolidating the area inside the ring road as the city centre. However, more concepts are developed than measures implemented so far. Given the extent of the problem, questions remain if even the concepts will be sufficient.

A guideline plan to redevelop a former ship yard (350ha) in the centre of the agglomeration is set up.

5. Nature and biodiversity

Main evaluator:	Stamatis Chondrogiannis
Co-evaluator	Maria Berrini
Final score	12 out of 15
Comments	

A lot of green- and water areas in and around the city. Protection of agriculture and piscicultural restoration but besides declarations the present situation is not very clear nor the description of development of biodiversity over the last years.

Many concrete steps have been taken the last few years for increasing biodiversity, e.g. the measures for reducing pesticides.

Concerning future plans; emphasis is on pedestrian access routes, the significance of those green corridors for biodiversity is only under research.

There is monitoring of birds, participation of the municipality on scientific research on ecosystems, survey on light pollution and specific measures on public lighting.

6. Quality of local ambient air

Main evaluator:	Matthias Ketzel
Co-evaluator	Luis Bento Coelho
Final score	12 out of 15
Comments	

All indicators for NO₂, PM₁₀ and ozone below the limit values, for NO₂ just below. Missing details to see the trends. Still not provided all information on a yearly basis as asked for. Trend is more constant than reducing. One station increasing for PM
Information on pollen monitoring added.

Regional Air Quality Plan (PRQA) of 2002 and Atmosphere Protection Plan for Nantes-Saint Nazaire (PPA) in 2005 with number of relevant measures implemented: for A) emissions from mobile sources: urban transport plans (UTP) in order to limit urban sprawl, develop public transport networks and green modes of transport, manage the parking, adapt road infrastructures (converting urban motorways to urban boulevards, 30-kph zones, road-sharing, etc.), purchasing clean vehicles, and B) emissions from fixed sources: reducing industrial and agricultural emissions

Web pages, fax to press organs, news letter annual report.

Urban Travel Plan 2000/2010 currently reviewed, Territorial Climate Plan Future Regional Climate Air Energy scheme. Not clear how much of the budgets are adopted.
Still no budget numbers provided.

7. Noise pollution

Main evaluator:	Luis Bento Coelho
Co-evaluator	Matthias Ketzel
Final score	12 out of 15
Comments	

A) A relatively large percentage of the population of Nantes is exposed to noise. There is not a history of noise assessment. No reports on recent achievements or evolution.

B) Excellent record of measures taken by the local authority to improve the acoustical environment. Nantes has been a pilot city since the 1980's and received the Golden Decibel Award in 1993. The measures include noise information, education and awareness campaigns, integrating noise in transport policies, prevention of noise from different types of sources.

C) Interesting list of future actions, although commitments seem to follow the mandatory action plans as in EU Directive 2002/49/EC. However, the lines of action are correct, integrating the expectations of the citizens, making the noise problem part of all public policies, with the objectives of a good quality sound environment.

8. Waste production and management

Main evaluator:	P.J. Rudden
Co-evaluator	Maria Berrini
Final score	12 out of 15
Comments	

Nantes has a well functioning integrated waste management system with a separate collection recycling system (35%) and energy recovery by incineration (54%) with minimal landfill (11%). No biodegradable waste is sent to landfill. There are proposals to develop the 'tri-sac' system of source separation into the suburban area of the Nantes Metropolis catering for both dry and wet recyclables.

The production of household waste destined for incineration has decreased from 318 kg/inhabitant/year in 1999 to 260 kg in 2008. Of the 35% municipal recycling - 23% is materials recovery and 12% organic recovery. Residual household waste is incinerated and only the bulky waste sent to landfill. The local landfills were replaced by 2 incinerators in the 1990s.

Nantes Metropole is still a young authority (since 2001) creating considerable challenges in terms of extending the 'tri-sac' system into the rural and semirural areas of the City Region. Nantes participates in national waste prevention projects with organisations like ADEME and ACR (Recycling for Cities).

9. Water consumption

Main evaluator:	Giovanni Bidoglio
Co-evaluator	Eduarda Beja Neves
Final score	10,5 out of 15
Comments	

Average water consumption in Nantes showed a continuous dropping trend from 139 (litre per capita per day) in 2004 to 120 in 2008, in spite of the large increase population observed during the last decade. This is due to a targeted water price policy. Capillary awareness campaigns have been organised aiming at all type of users. During the last few years, the City of Nantes has developed action plans for detection of leaks, renewal of the water supply network and improvement of water metering. Water losses are estimated to be 15.6 % in 2008 (figure including non-billed volumes).

The described long-term management plans are based on a favourable situation for water availability, which is not presently a problem for the town of Nantes that withdraws water from the Loire River. Focus is then mostly on ensuring supply of good quality water, rather than considering scenarios for possible changes of water availability. Increasing efforts have been made to enlarge water protection zones for drinking water.

10. Waste water treatment

Main evaluator:	Eduarda Beja Neves
Co-evaluator	P.J. Rudden
Final score	11,5 out of 15
Comments	

(10a.) Waste water is treated in 12 treatment plants, with capacities that vary from 1,200 to 600,000 population equivalent, with a total capacity of 780,000 population equivalent, which will increase to 840,000 population equivalent by the end of 2010, with the updated biological treatment process. This capacity allows for expansion, and treatment of systematic and regular monitored industrial biodegradable wastewater. Effluent from the unitary part of the network (345 km out of 1,953 km) can also be treated. Since Nantes Métropole was created in 2001, treatment plants were rebuilt and comply with European and domestic standards. Sludge is recovered for agricultural land application. By 2011, a solar sludge dryer will reduce the tonnages transported to land application. The 2007 of "Water-treatment" zoning plans approved for 24 municipalities with local urban development plans. They set out the current and future public treatment sectors. The non-public treatment plants have undergone an initial diagnostic inspection. The public collective treatment service is financed primarily by the water treatment service charge and sewer connection fee (PRE). The charges are determined on the basis of a long-term technical and financial forecast which begun in 2001, when Nantes Métropole was created.

(10b.) The "treatment projects" are part of the Neptune programme (1990) to consolidate the different players, which is under the "Urban Community" since 2001, intended to be a long term (1990-2015) programme designed to reclaim natural environment quality through various investments. By 2011, the new Petite Californie treatment plant (180,000 population equivalent) will become one of the most modern and efficient in Europe. The sludge digestion process will reduce the volumes produced by one third. It will produce biogas to be used for heating premises and to generate electricity. In total, the project (biogas, photovoltaic, etc.) will avoid 434 tonnes of CO₂ being emitted per year. A campaign to systematically inspect the networks, intended to cover all of the waste water networks over a ten-year period, was begun in 2006. It makes it possible to programme structural restoration work on the sewers. To date, 500 km of the network have been inspected since 2006 and network restoration works amounting to €7.2 million have been undertaken. The treatment projects are programmed in line with the technical and financial forecast drawn up in 2001, when Nantes Métropole, was created to achieve standard charges. This forecast makes it possible to determine with clarity the local authority's short, medium and long-term investment capacity.

The planned long and short-term measures to improve wastewater treatment, are under the Neptune IV programme (2010-2015). The Nantes Métropole's multi-annual plan for public policy initiatives on water includes strategic studies to determine the main policy lines for waste water and rainwater treatment. The objectives of these policy documents (master plan for wastewater treatment and rain water master plan), which are due to be completed at the end of 2010 and the end of 2011 respectively. In addition, projects already approved and covered by the multi-annual investment programme will be undertaken.

(10d.) Prior to 2001, when Nantes Urban Community was created, responsibility for waste and rain water treatment was fragmented and lay with the (24) municipalities and three municipal consortia. Without a holistic master plan, the treatment networks developed without any overall consistency and based on disparate operating principles. This resulted, notably, in the existence in the territory of more than 300 backflow stations, sites with potential for failure and discharges into the natural environment and consuming energy, as well facilities on an inadequate scale in certain sectors. The initiatives launched and undertaken to complete the master plans in 2010 and 2011, and the initiatives deriving from these plans proposed in the years thereafter, should lead to a significant improvement in the organization and operation of the infrastructures.

11. Environmental management of the municipality

Main evaluator:	Maria Berrini
Co-evaluator	P.J. Rudden
Final score	10 out of 15
Comments	

Good in GPP achievements, recent measures and commitments for future. Good measures for PB energy management. Weaker than other cities: Ag21 process is still at its beginning, Emas is not adopted and a very high energy consumption in PB, the worst out the six cities. Medium range for: EMS + PB commitments.

2 Directorates are expected to become ISO14001 by 2010. Since 2007 an Agenda21 has been set up together with a Sustainable Economic Development Plan. The Agenda21 will be relaunched in 2010.

GPP (and Fair Trade) procedures are applied to a wide range of products (ITC / timber / food). The 37% of municipal vehicles are clean. To promote organic food and short circuits has been developed peri-urban agriculture and public contracting for school meals. Target for the future have been detailed: by 2014 2/3 of yearly contracts must include environmental or social criteria; 20% of food being organic/fair/short/circuit; 100% paper being recycled; timber and baloon certified (other data available).

The average energy consumption in public building is very high, 199 kWh/m² per year. Energy audit has been carried out (130 pub. buildings) and investments have been recently planned for the retrofit with 5-year payback time. Building code, Energy certifications and remote energy metering have been adopted. 4000 public lights have substituted with efficient ones. A wider number of measures have been planned for the future.

12. Dissemination programme

Main evaluator: Thea Pieridou
Final score 15 out of 20
Comments

Content: Nantes' communications proposal clearly outlines specific objectives such as publicising and sharing the city's innovative actions, creating networks, linking experts from various fields of European research and involving the citizens amongst others. The proposal outlines a good programme of events including an Open Day, plenary sessions, and workshops on the topic of the sustainable city, conferences / debates, themed weeks, visits to exemplary sites and a good range of communication tools such as a website, journal, film shows and a poster campaign.

Completeness: Very good approach and package of communication actions and events. However, no mention of any selected target audiences.

Originality of ideas: Youth exhibition and study visits of eco-districts as well as 'Allo climat', a single number to call for everything to do with climate and CO2 emissions were the creative elements mentioned in the proposal. The idea of the Aéroflorale project is also very original and dynamic.

Proposed effort & project management: The city shows that it is eager to act as a role-model with its good communication proposal coupled with Agenda 21 and its Climate plan in place. However, the necessary human +/- financial resources needed with a view to implementing such a communications plan are not that clearly explained.

13. Presentation at meeting 7-8 September 2010

Criteria evaluated:

- 1) Technical Presentation
- 2) Vision/ambition
- 3) Answers given to the experts' questions

Score	11,8
Total Score	149,3



4.4 Evaluation Report for Nuremberg

1. Local contribution to global climate change

Main evaluator:	Pierre Laconte
Co-evaluator	Jean-Pierre Nicolas
Final score	10 out of 15
Comments	

The CO2 equivalent per capita was 9.32 tons in 2004, what reflects the industrial character of the city, but power generation is switching from coal to natural gas and hydroelectric. District heating and energy saving measures in buildings look promising. Considering both the present situation and the targets for the future the overall mark seems justified.

2. Local transport

Main evaluator:	Jean-Pierre Nicolas
Co-evaluator	Pierre Laconte
Final score	11 out of 15
Comments	

1. Present situation:

The high use of the bicycle (10% on average) limits partially the car (46%). The bus fleet is medium green in comparison to other cities. Figures on public transport accessibility are not provided.

2. Past measures:

The city centre has been progressively pedestrianised since the 70's, and this policy is still continued. The last 10 years, great efforts have been made on bike accessibility with network development, service improvements, parking and hiring systems implementation. The public transport, urban and suburban railway have been optimised and reinforced while car traffic has been restricted (park management, intelligent logistic concept, special planning at hot spots). All these measures lead to a decrease of the car use from 47% to 44% between 1999 and 2009 and a growth of 14% for both bike and public transport.

3. Short and long-term measures:

For the coming years, the will is to shift as much car trips as possible to the green network, in favour of public transport, bicycle and walk.

One main objective is to achieve a bicycle share of 20% inside the city, by strengthening its network, increasing the number of bike parks and improving the rent services.

At long term, the second main point is the reinforcement of the public transport system - but the plan is there still in progress and cannot be assessed.

3. Green urban areas

Main evaluator:	Birgit Georgi
Co-evaluator	Stamatis Chondrogiannis
Final score	9 out of 15
Comments	

The majority of people have access to public green areas; however, with some problems in the city centre which for its cultural heritage leaves not much space for green areas. The cities approach to deal with this situation is to connect these areas with urban green areas further away by other green infrastructure, walking and cycling routes. The proximity of the important forest area, which could be mostly protected from new developments over the last years, private allotment gardens and green along streets improve the situation.

The implementation of the Green Campaign has led to a substantial number of new projects; some future projects planned (conversion areas along the railway).

Overall, it is a good approach with potentials to improve it and link it even more with activities from other areas.

4. Sustainable land use

Main evaluator:	Birgit Georgi
Co-evaluator	Giovanni Bidoglio
Final score	9 out of 15
Comments	

The city is compact in its centre. The sealed area per capita shows with 138m² a medium to high level. That is partially due to the old historic "carved in stone" centre and partially due to industrial areas.

There is a comprehensive registration, examination and treatment of contaminated land; the challenges are huge due to the industrial history, but the city follows a consequent step by step approach. Urban renewal projects ongoing and brownfield sites are redeveloped, the conversion of former railway sites started. There is the potential to meet the land demand for settlements by conversion, which in the future shall be the main approach.

Interesting actions on participatory approaches for the future development were shown.

Regarding urban sprawl: there are reflections on internal development as a way to avoid urban sprawl, but it seems that it is currently not actively enough used within in a comprehensive urban development approach. The city is co-operation with the metropolitan region on certain issues in formal as well as informal ways.

The challenges for a city with a highly industrial city are huge and Nuremberg is on a good way.

5. Nature and biodiversity

Main evaluator:	Stamatis Chondrogiannis
Co-evaluator	Maria Berrini
Final score	11 out of 15
Comments	

Quite a number of areas of a big total surface are under protection .Good monitoring of flora and fauna habitats, biotope mapping and a serious number of management plans but not every case is very precisely described, just like several short and long-term measures.

There are no analytical data of the monitoring of species already done, no mention of any policy for impact on biodiversity outside of the city boundaries, no information in relation to the light pollution.

6. Quality of local ambient air

Main evaluator:	Matthias Ketzel
Co-evaluator	Luis Bento Coelho
Final score	13 out of 15
Comments	

6 fixed AQ monitoring stations and one mobile station. Both PM10 and ozone concentrations are below the limit and show a downward trend. NO2 still above still above the limit for one of the street stations, with downward trend at most stations. Trend for PM10 mainly constant.

Clean Air Action Programme Nuremberg since 2004 and twice extended is under implementation. in 4 main areas: I.) Environmental Network II.) Traffic Guidance III.) Energy Efficiency and Climate Protection IV.) Vehicle technology. In detail: Further development of public transport, Further development of cycle path system, Promotion of metropolitan railway network for commuters, Promotion of traffic flow by adjustment of traffic lights, Development of traffic guidance system and parking space guidance system, "Environmental zone" (only vehicles meeting certain exhaust gas standards are allowed within the area), Reduction of heavy traffic in the city centre, Projects promoting energy efficiency and climate protection, Domestic heating: reduction of wood, coal and oil heating and promotion of district heating and gas heating, Low emission standard retrofit for municipal vehicles. CAAP provided as reference in 2.round.

Information on web pages, information screens on real time data and reports every 3 months. List of measures given from CAAP, grouped after spatial effect and time of implementation, however, no budgets given.

7. Noise pollution

Main evaluator: Luis Bento Coelho
Co-evaluator Matthias Ketzel
Final score 10,75 out of 15
Comments

A) Low percentage of population exposed to noise.

No history of noise assessment. No data available. No explanation or considerations given. No information on recent developments provided.

B) List of measures taken by the municipality mostly directed to traffic and acoustic window programme. Noise taken into consideration in building development planning. No reference to noise information or education programmes.

C) Future commitments involve public stakeholders, the citizens and planning measures. Aims seem somewhat vague, though. No reference to noise awareness campaigns or to methods to get the public involved.

8. Waste production and management

Main evaluator: P.J. Rudden
Co-evaluator Maria Berrini
Final score 14 out of 15
Comments

The City has a very high municipal recycling rate of 56% while residual waste is incinerated with energy recovery. Since 2001, no municipal waste has been landfilled.

There is a very holistic approach to waste management in Nuremberg in terms of optimising materials flow to further the concepts of maximum resource recovery and reducing climate change effects. By incinerating residual waste and generating heat for district heating, some 110,000 tonnes of harmful CO₂ are avoided.

Special challenges in waste management arise in a historic city centre with small shops, many and varied 'catering events' and a series of public events each year. The proportion of single households is above average at 43% thus proportionately producing more waste. An annual Waste Guidebook published each year for public distribution outlining the waste management facilities and choices available for the citizen.

The establishment of a product related environmental compatibility assessment is a necessary pre-requisite to life cycle analysis which Nuremberg have been pursuing to ensure continuous upskilling on the EU Waste Hierarchy - prevention, recycling recovery and final disposal.

9. Water consumption

Main evaluator:	Giovanni Bidoglio
Co-evaluator	Eduarda Beja Neves
Final score	11 out of 15
Comments	

Including domestic, industry and trade uses, consumption is reported to be 158 litre per capita per day, with a decreasing trend since 2006. A water pricing system linking costs of wastewater treatment to the volume of drinking water consumed is in place, which helps trigger a loop for reduction of water consumption.

Good set of actions and plans to tackle water consumption. A proactive approach to the management and reduction of water losses in pipelines has been adopted. Short-term measures for 2010 envisage an investment of 7.5 MEuro for rehabilitation and renewal of selected components of the water supply network. In 2008, estimated average water losses were about 7 %. Leakage monitoring is conducted in the order of 400 Km/year and average renewal of network pipes of 5 Km/year. Household, commercial and industrial uses are all metered. Groundwater protection zones have been implemented through special agreements with farmers and companies, including also purchase of land. Groundwater monitoring is in place, with no quantitative trends reported. The link to the web site of the Bavarian region where monitoring data are reported is not useful to this purpose as we are evaluating here the performance of the city. For a town with many formerly industrial sites, risk of pollution of groundwater (main water supply) might be high, especially considering that the brownfield register lists a total of 3200 brownfield areas, which "...may reasonably be expected to have contaminated soil".

10. Waste water treatment

Main evaluator:	Eduarda Beja Neves
Co-evaluator	P.J. Rudden
Final score	11 out of 15
Comments	

(10a.) Waste water collection for the Nuremberg city area (with 502,815 inhabitants) is mainly achieved with a combined system. The sewage network has a length of 1,415 km. The wastewater of 99.9 % of all properties is connected to the central sewage treatment plants. The sludge removed from these plants is monitored by the City Waste Water Treatment Department and is treated in the central sewage treatment plant. Nuremberg's two waste water treatment plants have been adapted to increasingly strict stipulations. For over 10 years, they have been up to the current state of technology fulfilling all requirements for further waste water treatment for the elimination of nutrients according to the Urban Waste Water Directive.

(10b.) Investment for improvement of waste water treatment plants was finalized 10 years ago, including nitrogen and phosphorus removal as well as a final fine filtration. In the recent past, the emphasis has been on the reduction of the amount of waste water including storm water discharged into the water bodies, as well as on the reduction of the volume of surface water carried in rainy weather. The City Waste Water Treatment Department aims to avoid any discharge of untreated storm water into the receiving water bodies. As far as the waste water treatment plants are concerned, efforts have been made to optimize processes. Control technology measures resulted in savings in energy (electricity and heating oil) and other resources (methanol as substrate, precipitating and flocculating agents). In addition, the use of hazardous materials was reduced, or they were replaced by less hazardous substances.

(10d.) The industrial region of Nuremberg lies within the Middle Franconian basin, one of Bavaria's low precipitation areas and has low flow rivers. Waste water treatment plants were therefore adapted to these conditions. Major efforts had to be made and strict stipulations concerning water protection and neighbourhood protection had to be fulfilled, because there was not much space available and this was in the immediate vicinity of residential areas. In the past 10 to 15 years, there has been major structural change. Many companies in the metal-working and electrical trades have partly or completely closed down. Similarly, in the food industry, the abattoir and a dairy plant, as well as a major brewery have moved to the surrounding countryside. The amount of waste water and the time distribution and load have changed considerably since the plants were planned. In order for the plants to continue fulfilling the official stipulations, existing management and control concepts had to be adapted, or newly designed, as in the case of biological waste water treatment.

11. Environmental management of the municipality

Main evaluator:	Maria Berrini
Co-evaluator	P.J. Rudden
Final score	11,5 out of 15
Comments	

Very good achievements, measures, commitments for EMS, GPP, P. Building energy management.

Since 1997, an Agenda 21 process is in place, strongly participated. EMS is applied to utilities (3 with ISO 14001) and to other pub. buildings (5 schools, the Theatre, the Env. Dep with EMAS). the 1st Env. Report has been realised in 2009 and the Plan is under construction with the intention to regularly update them in the future, in partnership with the other 33 municipalities of the Region.

GPP Guidelines set up since 1990. 100% of paper is recycled and 100% of lights are efficient. Office furniture is all Blue Angel labelled. For the future, a target of 50% organic food is set up together with internal campaign and Guidelines refinement. GPP is applied to local events, and the yearly Fair Trade fair complement this policy.

Energy consumption decreased of 10% in the last 5 years (now the average is 146 kWh/m² and 124 for the most schools and museums). Local rules define passive house standard for all new houses (20% better than the federal standard). Two main buildings have been refurbished cutting of 50% energy consumption and the New Forum Building is 38 kWh/m².

12. Dissemination programme

Main evaluator:	Thea Pieridou
Final score	18 out of 20
Comment	

Content: Nuremberg presents a detailed and well-structured communications plan with the overarching objective of developing a green city fit for the future, building on present economic and cultural structures and linking up with the urban and rural surroundings. The plan's strategy is focused on specific topics and clearly states the very wide range of communication tools to be implemented such as opening conference / closing ceremony, series of international conferences and workshops, PR activities, visitors programme, films, city cycles, an official website as the City's main communication medium, publications/papers, underground info screens, cinema spots and educational work.

Completeness: The communications proposal represents a coherent and complete package of events and actions with a strong focus on 'organic Nuremberg'. Apart from mentioning citizens and young people, other selected target audiences are not well-developed.

Originality of ideas: A series of creative ideas is included in the proposal such as organising conferences in the context of the world's largest trade fare for organic products, 'Mobile Citizens' Meetings, days dedicated to proactive greening up, actions targeting young people and competition with awards, cinema spots and decorating public transport vehicles with designs by school children on the topic of Nuremberg Green City.

Proposed effort & project management: The city portrays itself committed to acting as a role-model and would like to focus on the idea of developing a green city fit for the future which will inspire and encourage other cities to follow suit. A special entity responsible for event management and another unit within the municipality will collaborate and coordinate efforts in order to carry out the city's dissemination programme.

13. Presentation at meeting 7-8 September 2010

Criteria evaluated:

- 1) Technical Presentation
- 2) Vision/ambition
- 3) Answers given to the experts' questions

Score	13,1
Total Score	152,35



4.5 Evaluation Report for Reykjavík

1. Local contribution to global climate change

Main evaluator: Pierre Laconte
Co-evaluator Jean-Pierre Nicolas
Final score 10 out of 15
Comments

The unbridled increase in car ownership (70% between 1990 and 2007) and the related urban sprawl entail a high energy consumption, using not only the abundant local energy resources (geothermal and hydropower) but also more and more imported fossil fuel. 120.000 inhabitants generate 335.000 ton in total (i.e. 2.79 ton per inhab.), of which 235.000 are generated by the sole motor transport. The emissions are thus low in total thanks to external benefits but could still be much lower through green policies. Piecemeal measures are mentioned (tree planting and carbon sequestration) and may reduce the local contribution to climate change. All in all the mark seems fair.

2. Local transport

Main evaluator: Jean-Pierre Nicolas
Co-evaluator Pierre Laconte
Final score 8 out of 15
Comments

1. Present situation:
 Reykjavík is a spread city, and the car remains essential for its inhabitants (78% of the trips in 2009), even if the covered distances are not longer than at Malmö or Nuremberg where the bicycle is much more important.

2. Past measures:
 One of the most important measures for Reykjavík concerns land planning in order to allow alternatives to car to be relevant.
 This policy is reinforced with measures on the transportation system, on public transport (separate lanes, cross priorities, subsidised fares, etc.), on walking and cycling, and also on car traffic flow by reducing speeds and by enhancing priority to other modes; but it still seems to remain under the other cities investment.

3. Short and long-term measures:
 A Green Travel Plan has been adopted for the city administration and institutions.
 For the long term, the aim of densification and mixing of build-up areas is still maintained, with the promotion of environment friendly modes of transport as walk and bike, or green technologies for motor vehicles.
 As Reykjavík is characterised by a reduced size and a low density, these solutions seems to be well adapted, but they will need a long-term action to reduce the car traffic and the energy consumption of the city transport system as a whole.

3. Green urban areas

Main evaluator:	Birgit Georgi
Co-evaluator	Stamatis Chondrogiannis
Final score	10 out of 15
Comments	

The city has a high percentage of green areas, which are very easy accessible - 91,7% of the population has access to public green urban areas within 300m distance. The coastline is fully integrated into the green and blue urban planning. Substantial tree planting action happened over the past with a focus on adapted trees. Other ecological services like air quality, clean water, wildlife considered in the planning. There is also a focus on awareness and education with interesting projects and activities. Furthermore, interesting participatory approaches (budget prioritisation by on-line polls) are in place. The water quality in rivers and at the coast is high allowing swimming and fishing.

The overall situation is good; however, there are only a few future commitments for future action, mostly in the planning stage. Due to the high availability of land and nature and the low density of the city with a lot of private green, there is not much pressure on protecting even further green areas and ecosystem services, making it eventually difficult for politicians to further prioritise this area.

4. Sustainable land use

Main evaluator:	Birgit Georgi
Co-evaluator	Giovanni Bidoglio
Final score	7 out of 15
Comments	

As with another shortlisted city, the soil sealing per capita is with 186m² very high (following the EEA data, which is comparable with the other cities; data from the city's own calculation method states 167 m² per capita). 37% of total built-up land is dedicated to transport of all modes, on the other side 33% is reserved for green urban area. The population density on built-up land is very low with 23 inh/ha.

There is the necessary awareness of the challenges of low density development and car dependency. In the future, the city shall develop towards higher densities with an environmentally friendly transport infrastructure. This change is reflected in the approved planning and policy and implementation towards higher densification shows a positive trend. The city has defined its ultimate urban boundaries. Furthermore, the focus lies on encouraging mixed land use and self-sufficient neighbourhoods.

Brownfield development as the places of densification has the priority. Currently, 75% of new developments take place on brown fields; 92% are planned for the future. A regional development plan with neighbours was initiated by the city. Special attention is given to the impact of urban development on climate change as well as on climate change adaptation capabilities. Sustainable land use has definitely become a high attention in the city's policy.

The problem of unsustainable land use is well perceived and intentions are high, but success is still partially, what might change in the future if the city and neighbours continue with the initiated changes.

5. Nature and biodiversity

Main evaluator: Stamatis Chondrogiannis
Co-evaluator Maria Berrini
Final score 9,5 out of 15
Comments

Big amount of areas, natural monuments, country parks and species protected by national and local laws; which are renewed every 5 years.

Systematic research on invasive alien plants and animals, give the possibility of reacting in the right way to the problem.

Some of the long and short-term measures are already approved in 2006 but they are described in a poor and general way.

Good plans for outdoor and environmental education.

6. Quality of local ambient air

Main evaluator: Matthias Ketzel
Co-evaluator Luis Bento Coelho
Final score 15 out of 15
Comments

Nice clear presentation, many graphs.

Pollution levels for PM10, ozone and NO2 are far below the limit values with downward trend for NO2 and constant level for PM10. In addition, H2S as special pollutant was monitored.

Fig.6.7 Why background higher than traffic (answered in the Q/A session - reindeers as source)

Air Quality Action plan approved in March 2009 providing short-term measures, forecast and warning system and mitigation measured to be taken in case of exceedances. Climate and Air Quality Policy formulated and approved in September 2009. Along with this a number of other important plans and campaigns aiming at reducing emissions from transport (reduced use of studded tyres, cleaner cars (methane, electric), cleaner buses, promote public transport, walking and cycling) and from construction sites.

Information of the public with website and in case of warnings via all major media and to all preschools and schools. Campaigns raising public awareness and changing habits (use of studded tyres).

Long list of short and long-term objectives/ measures with budget is provided. Including e.g. purchase of Urban Air Quality Management System support of health research, study the composition of PM, acquire another mobile monitoring station, dust binding for roads and construction sites, reduce traffic speed, promote public transport, green (electric) vehicles, use of geothermal energy.

Budgets added to most points.

7. Noise pollution

Main evaluator: Luis Bento Coelho
Co-evaluator Matthias Ketzel
Final score 11,5 out of 15
Comments

A) Low percentage of population exposed to noise.

No data on recent achievements. No data or information on recent evolution on urban noise was provided, although a reference is made to attention being given to noise issues since the 1980's.

B) Measures taken by the local authority mostly directed to traffic (management, speed reduction, green transport), construction sites and window sound insulation reinforcement programme. Very vague reference to urban planning. No reference to noise awareness or citizens involvement campaigns.

C) Future commitments follow lines similar to measures taken in recent years. Reference to action plans in accordance with Directive 2002/49/EC.

8. Waste production and management

Main evaluator: P.J. Rudden
Co-evaluator Maria Berrini
Final score 10 out of 15
Comments

There has been a dramatic falloff in waste production of some 23% between 2008 and 2009 due to a falling economy. Municipal recycling is relatively high at 40% for an island nation far removed from the economy of scale of European markets.

Nevertheless, there is a significant residual waste, which must be landfilled in the short term and planned for either thermal treatment or incineration/co incineration in cement kilns in the longer term.

The Regional Waste Management Plan revised in 2009 set out the challenges facing the region and a plan for actions to be undertaken to prepare municipalities to meet the demands of handling waste in a sustainable way in the future.



9. Water consumption

Main evaluator: Giovanni Bidoglio
Co-evaluator Eduarda Beja Neves
Final score 10,5 out of 15
Comments

Reykjavík has a very high abundance both of clean groundwater for human consumption and of geothermal hot water. The latter is the only source of house heating, with savings of other energy sources and then of CO2 emissions. Hot water of geothermal origin is priced per cubic meter for all users. Metering of freshwater use is not considered a necessity (fixed price per household irrespective of volume used) and it is limited to the public and business sectors (representing 52% of total supply in 2009), which are then the only ones motivated to reduce water consumption. Per capita freshwater consumption in 2009 is reported to be 150 litres per day (excluding water loss in pipelines) and 192.5 litres per day (considering also water losses). Losses of potable water have decreased significantly since middle of the 1980's, reaching 8 % in 2008. Great improvement of drinking water quality took place since the last 10 years, also thanks to the establishment of groundwater protection zones.

Past measures and long-term plans target water quality (and aquatic ecosystems sustaining both hydro-power and fish population) rather than reduction of consumption, as impairment of quality is felt to be the main risk. Long term measures to promote saving of water are limited. A clearer vision in this field would help promote sustainability.

10. Waste water treatment

Main evaluator: Eduarda Beja Neves
Co-evaluator P.J. Rudden
Final score 10,5 out of 15
Comments

(10a.) During the past two decades much development has taken place in waste water treatment in the City of Reykjavík and a large part of the surrounding area. In 1992, the City and neighbouring communities cleaned up the shoreline by developing the waste water treatment and collecting system. Sewage was piped through pumping stations and into waste water treatment plants before disposal at sea. Treatment plants will be able to serve the increased number of inhabitants in the capital area until at least 2050. The operating cost for the system is around 4,4 million EUR per year. Reykjavík Energy, owned by the city, operates the collecting system, meeting the demands of three quality management standards. The Sewerage section has implemented an internal control system. The total length of the collecting system amounts to 1.018 km, including a single drain system of 227 km and a double system of 791 km. With a single drain system, mixed urban waste water can escape through overflows to the shore, causing temporary bacterial pollution.

Primary treatment of takes place in two waste water treatment plants under Icelandic regulations based on Urban Waste Water Directive 91/271/EEC. Sludge is controlled land filled. The plants have operating licences and are subject to regular inspections and monitoring. Research has concluded that since the second waste water treatment plant became operational, shoreline bacterial pollution has been within guideline limits and that the area is fit for recreational use research has concluded that since the second waste water treatment plant became operational, shoreline bacterial pollution has been within guideline limits and that the area is fit for recreational use.

(10b.) There have been improvements to the waste water treatment and collecting system over the past two decades, namely: pipes lining, single pipe system changed into to a double one wherever possible, systematic search for incorrect connections. Using strict licensing preconditions and systematic monitoring Reykjavík's Public Health Authority has improved commercial and industrial waste water treatment and required that the best available technology (BAT) be used for treatment, Reykjavík Energy takes pride in building waste water facilities that blend well with the surrounding urban environment. Emphasis is on low-rise green buildings with grass on roofs and walls. The waste water facilities are thus a natural part of the green areas and lanes by the shoreline which are very popular for outdoor recreation by the people of Reykjavík.



Planned long and short term measures to improve wastewater treatment: a third waste water treatment plant is under construction and will be completed until 2011, meaning that that the Reykjavík's last residential area will be connected to the sewerage system. Reykjavík Energy aims to continue to operate the waste water collecting system with the same quality standards and in compliance with current regulation on waste water treatment. The company is ready to meet further demands on improved treatment should they arise. It has also operates the waste water treatment system for some of the city's neighbouring communities and the future goal is to provide the same standard of treatment there as in Reykjavík.

(10d.) On account of the difficult financial situation in Iceland following the collapse of the banks in 2008, Reykjavík Energy had to temporarily halt construction of the third waste water treatment plant for the Grundarhverfi district in Kjalarnes. The plant's inauguration has been postponed until the end of 2011.

11. Environmental management of the municipality

Main evaluator: Maria Berrini
Co-evaluator P.J. Rudden
Final score 11 out of 15
Comments

Good for EMS and GPP achievements, recent measures and commitments for future. Medium range for: PB energy management (but not very relevant due to high use of local RES).

The main city utility is ISO 14001 and the Env. Dep was waiting for it in February 2010. Other env certifications (Green or Blue Flags) achieved by schools and beaches. Since 1980, a good Env policy is in place as EMS and the Agenda21, recently revised, awarded for public consultation quality. The policy and the Green steps programme are yearly updated and financed.

GPP procedures are set up and well structured. Organic foods are not used due to the local context (mainly fish diet). City vehicles use methane. RES are used at 80% of tot consumption and 100% for buildings heating (by geothermal source). Due to RES use energy efficiency is so not so relevant in the agenda (179 kWh/m²), but measures (remote monitoring and energy retrofit) have been taken.

12. Dissemination programme

Main evaluator: Thea Pieridou
Final score 20 out of 20
Comment

Content: Excellent proposal, denoting understanding of the need to make the city a better place to live in and also have a positive influence on other cities across Europe. The proposal's key message is that through cooperation and creativity the City will share experiences and best practices in order to inspire other cities to create a better and healthier environment for their citizens at the same time reducing their own impact on the environment. The bid boasts a nice motto 'Reykjavík - European Green Capital - Naturally urban' and shows a thorough approach to communicating the award including objectives and target groups. Detailed proposal with an attractive and wide range of events focusing on green themes aiming to disseminate experiences and best practices. The plan includes an opening/closing ceremony, an interactive official website & specific thematic portals, conferences and seminars based on a clear thematic structure, various exhibitions, use of social networks, written media such as tourist brochures and articles in international periodicals, film production, green city tours and green study visits. The City makes a special emphasis on schools/young people and environmental education.

Completeness: The City's communications plan is coherent, meticulous and holistic with particular emphasis placed on opportunity, cooperation and innovation. The approach includes a very good strategy for implementation.

Originality of ideas: There are lots of creative elements suggested such as: a portal where people can send in their ideas on environmental actions, weekly environmental tips sent by SMS from the website, a green map system helping people to create a sustainable community, youth competitions for short films on green city projects, an Information Centre to be set up in the city on Green Options, eco-tourism promotion, hydrogen-powered bus available for Green Sight-seeing tours and a special Green and Blue Path for visitors.

Proposed effort & project management: Much commitment and eagerness emanates from the city's proposal to showcase itself and encourage others to develop innovations and achieve results. The Department of Environment and Transport together with Visit Reykjavík will be carrying out the city's communication and PR efforts. A Green City Council, acting as a steering group, including representatives from the City and other interest sectors such as tourism, will be in the lead for all operations with financial flexibility.

13. Presentation at meeting 7-8 September 2010

Criteria evaluated:

- 1) Technical Presentation
- 2) Vision/ambition
- 3) Answers given to the experts' questions

Score	9,6
Total Score	142,6



4.6 Evaluation Report for Vitoria-Gasteiz

1. Local contribution to global climate change

Main evaluator: Pierre Laconte
Co-evaluator Jean-Pierre Nicolas
Final score 15 out of 15
Comments

The city has a long-term coherent set of policies and actions at local level, accepted by all political parties, mainly in the field of transport (switching from car to public and non motorised transport thanks to a new PT grid network) and in the field of land-use planning (high-density medium-rise development, mixed use blocks, planned urban corridor to the new high-speed station). This allows the city to cope with the growth in activities and population resulting from its accession to capital of the Basque country and justify the mark.

2. Local transport

Main evaluator: Jean-Pierre Nicolas
Co-evaluator Pierre Laconte
Final score 14,5 out of 15
Comments

1. Present situation:
the build areas are very well concentrated and that allows a high use of the walk (half of the trips are made by foot) instead of the car (only 37%).

2. Past measures:
a global, systematic and long term approach of the transport system has been implemented to lead it to a better environmental performance.
=> An active policy in favour of eco friendly modes has been conducted, with the implementation of a pedestrian network and the support of bike (network of bike lanes, loan services, etc.)
=> Last years, an important restructuring of the public transport system has been implemented, with the introduction of tram in 2008 and more efficient bus lines.

3. Short and long term measures:
=> The actions for walk and bike are still carried on through a pedestrian and a bicycle master plans
=> A "superblock" program with very low speed zones (10 km/h), parking reduction and freight distribution management, will be extended to the whole city.

3. Green urban areas

Main evaluator:	Birgit Georgi
Co-evaluator	Stamatis Chondrogiannis
Final score	11 out of 15
Comments	

100% of population has access to public open and green space within 300m. Green space (as well as the urban areas) has doubled since 1974 and were stable over the last years besides development pressure and growing population. The focus is on smaller areas but these distributed more evenly across the city.

Overall, a good green city network well connected with the Green Belt at the fringe, which brings nature into the city (ecological connectivity and access to nature). The Green belt was partially recovered from degraded areas and is now a more continuous belt. The municipality (which expands far beyond the actual city) includes areas with a high nature value and protection status.

The focus is mainly on recreation, natural habitats and education, with interesting educational and participation projects, like community gardens, in place. There is some consideration of other ecosystem services like water services. The municipality is committed to further extensions and improvements of the quality.

4. Sustainable land use

Main evaluator:	Birgit Georgi
Co-evaluator	Giovanni Bidoglio
Final score	10,5 out of 15
Comments	

The city is very compact; 81 % of the population lives in 1500m distance to the centre. The city builds on this potential and focuses on keeping short walkable distances to services. There is a substantial renovation of the historic centre. The "super-block concept" for new developments facilitates traffic calming, reduces the area for transport by 70% in these blocks, and creates space for pedestrians and cyclist thus improving the quality of life.

The application states that there is a long and effective tradition of brownfield redevelopment; however, the provided numbers are less convincing. The urban area has doubled over the last 15 years meanwhile population grew at a lower rate. Reasons for that are seen in the general trend for more living area per person and smaller households. However, the city remains medium to high population density on built up areas (73 inh/ha) and the soil sealing with 117m² per inhabitant can be seen as medium.

Overall, there is a strong commitment to keep density and compactness of the city and to further renewal to meet environmental, social and overall quality of life needs. Work is supported by a think tank for future development.

5. Nature and biodiversity

Main evaluator: Stamatis Chondrogiannis
Co-evaluator Maria Berrini
Final score 12,5 out of 15
Comments

There are a lot of concrete measures planned to help and increase biodiversity. There is a good monitoring of flora and fauna species. Efforts against habitat fragmentation, as well as against light pollution.

The joining and management of many green and blue areas in the so called "Green Belt", helps the integration of nature in the urban area also in terms of horizontal pollution (aesthetical and ecological values of the landscape). Measures have been implemented in the Green Belt but the existing plan is rather limited and there is no serious development over the past years.

6. Quality of local ambient air

Main evaluator: Matthias Ketzel
Co-evaluator Luis Bento Coelho
Final score 15 out of 15
Comments

All air pollution indicators below the limit value, also a downward trend is observed over the last 3- 5 years, air quality monitoring is well established. In addition, other compounds reported and below Limit.

Q: Values in Table 1-4 for highest station or average??

Air Quality Management Plan approved in 2003 with budget of 3.91 Mio € with a number of measures / activities: emission inventory database, solar panels, cleaner fuels, efficient driving course, Awareness raising campaigns, Bicycle loan service

Public information boards and information sent to public via information technology showing Air Quality Index, AQI including a 36h forecast.

Working on a new AQMP for further Emission Reduction and Communication programmes. Development of the "Sustainable Mobility and Public Space Plan". With measures: improve local cycle network, further local AQ monitoring. Promoting electric public transport (trams) and EV's.

7. Noise pollution

Main evaluator:	Luis Bento Coelho
Co-evaluator	Matthias Ketzler
Final score	14 out of 15
Comments	

A) Relatively low values of population exposure to noise.

Consistent noise assessment reported since 1999. A slight worsening of the acoustical climate is reported. The city has implemented in 2008 a noise monitoring network with 17 terminals providing real time information.

B) Excellent records of measures taken basically on all relevant aspects. Reports on dealing with noise from industry and from transportation. Noise ordinances, which seem to be enforced, since 2000. Interesting information and dissemination programmes.

C) Interesting list of future commitments, though somewhat vague, with references to mobility, to removal of sources of noise, especially industrial sites, to new development planning and to quiet areas. Very interesting the integration of the concept of perception of noise by the citizens.

8. Waste production and management

Main evaluator:	P.J. Rudden
Co-evaluator	Maria Berrini
Final score	12 out of 15
Comments	

The recycling rate is relatively modest at 24% in 2008 but will increase when the planned MBT plant comes on stream. Even with the planned MBT plant it is estimated that some 35% of the city's waste will still be landfilled pending the production of SRF for co-incineration in cement kilns.

Urban waste production in Vitoria-Gasteiz is a result of high consumption and the relative wealth of its citizens. The City currently collects glass, paper and carton, packaging and 'grey fraction'. Household and commercial waste such as furniture, or paints are disposed off at fixed Clean Points or Green Points. A pneumatic waste collection system has been introduced in the most vulnerable historic centres to avoid heavy truck movements.

Going forward there is an objective to provide a minimum of 45% source separation to include biodegradable waste and to valorise or recover energy from some 70% of the municipal waste stream.

9. Water consumption

Main evaluator:	Giovanni Bidoglio
Co-evaluator	Eduarda Beja Neves
Final score	12 out of 15
Comments	

Vitoria-Gasteiz draws its water resources mainly from surface waters managed by the Ebro Hydrographic Confederation. Consumption of water has been decreasing steadily from 1999 to 2009 reaching a total value of 249 litres per capita per day, irrespective of random occurrence of dry years. The relative shares of water consumption per sector are 51 % for domestic use (ca 119 litre per capita per day), 28 % for industry and related services, and the remaining fraction for municipal uses. The FUTURA plan for 2009-2012 aims at a reduction of domestic water consumption below 100 litres per capita per day, which is quite an ambitious plan.

Thanks to a new tariff scheme, domestic consumption decreased of 20 % from the year 2001. Metering of supply improved from 72 % in 1998 to 83 % in 2007. During the same time span, water losses decreased from 23 % to 9.2 % (in 2008). Water-related investments made in the context of the Agenda 21 environmental action plan for the period 2002-2007 and of the Integrated Water Saving Action Plan 2004-2008 aimed at improvement of water supply and sustainable consumption and water quality. These were backed up by a series of awareness raising campaigns, involving also the creation of a citizen's information office on water consumption and efficiency, and contributing to the local implementation of the Water Framework Directive. Studies on new sources of water supply, the use of rainwater for non-direct human consumption were part of the package.

A large part of Vitoria-Gasteiz municipality is rural with agricultural activities within the municipal boundaries. Indeed, in 2001 the City Council put in place a collaboration agreement with farmers associations in order to assess the effectiveness of environmental measures in the field of agriculture. Focus in the short term will be the implementation of the 2009-2012 Integrated Water Saving Action Plan targeting domestic, industrial, commercial, and institutional sectors. The renewal of the water supply network is an objective common to the short- and long-term programmes of measures. Cost recovery is also indicated as an ambitious goal.

10. Waste water treatment

Main evaluator:	Euarda Beja Neves
Co-evaluator	P.J. Rudden
Final score	11 out of 15
Comments	

(10a.) In Vitoria-Gasteiz the system takes sewage to the wastewater treatment plant (WWTP) in Crispijana. Where it is treated before returning to the river Zadorra, with quality levels in compliance with the conditions set out in the waste water dumping authorisation granted by the Hydrographic Confederation of the River Ebro, which is the competent authority. In turn, the conditions imposed by the Hydrographic Configuration of the River Ebro are based on the European framework directive for the treatment of waste water. The WWTP has 4 activated sludge treatment lines to eliminate organic matter, and physical-chemical treatment to remove nitrogen, and phosphorus. In the future, the WWTP will be able to eliminate phosphorus by biological treatment. The wastewater treated in the Crispijana WWTP plant represents 97% of the waste water generated by the citizens of this municipality. The remainder, up to 99.45%, is treated in accordance with the population in simpler filtering systems.

The Crispijana WWTP collects the water transported by a single sewer system covering 77% of the city, as the remaining 33% of the urban area is collected by means of a separation system. When rain events occur, the system transports a mix of sewage and rainwater. In 88.10% of cases, the water is treated completely and on other occasions, diluted water is discharged via the plant's by-pass and the system's four spillways. Today, the construction of a tertiary treatment system and a rain water treatment system discharged via the bypass is currently under development, as well as the construction of a 17,500 m3 storm water tank.

One of the most important challenges for the current sanitation system is that, during periods of heavy rain, the flows from rivers and streams overload the sewage and the treatment plant. A collaboration agreement has been signed between Vitoria- Gasteiz City Council and URA, the Basque Water Agency valued at 3,000,000 € to develop the projects required in order to solve this situation.

(10b.) Measures taken in order to improve waste water treatment and protect the overall ecological quality of water were set out in the "Environmental Action Plan of the Local Agenda 21 2002-2007". During recent years a number of actions have been undertaken in 3 key areas: discharges (study to improve hydraulic operations and the quality of the sewage spillways network collection - 28,000€); sewerage and sanitation (economic support to industries for the installation of waste treatment facilities - 366,383€, and building of collectors within the sewerage network to increase its capacity and prevent flooding - 8,760,000€; and general protection of the quality of the environment (monitoring and control). Major infrastructure renewal was undertaken to improve the overall operation of the waste water treatment plant of Crispijana and to improve the quality parameters of effluent water discharged into the river Zadorra.

Actions have been taken to combat climate change, namely: installation of a power generator taking advantage of the chute of effluent water from the sewage treatment plant; reuse sewage plant installations treated water for non-drinking consumption.

11. Environmental management of the municipality

Main evaluator: Maria Berrini
Co-evaluator P.J. Rudden
Final score 10 out of 15
Comments

Medium range in EMS measures and PB energy management commitments for the future. Weaker than other cities due to No EMS achieved, but as EMS a good and wide Agenda 21 is in place. Good energy consumptions in PB. Weaker than other cities in commitments for future GPP policies. Medium range for: GPP achievements and measures.

No EMAs or ISO14001 in use, but a good Agenda21 is in place since 1995 and regularly updated. In 2005 set up of a Geo system and of a Local agency for environment diagnosis and Ag21 implementation. A new 2010/2014 Agenda21 is under public consultation.

GPP guidelines and binding procedure are in use. Paper is 80% recycled, wood product 50% FSC. The target is that all contractors under Env. Dep. will be required of ISO 140001. A GPP Plan is expected by 2012.

Energy consumption in public buildings are very good (2008: 59,47 kWhh/m2). Measures taken include performance contracting for 307 buildings, training courses for 80 employees, investments of 8 millions Euro in 2008 mainly for PV installations. To reduce of 40% the light flow in the industrial area dimmers have been installed. For the period 2009/2010 have been planned 3 millions 0of investment on energy efficiency, cogeneration, PV, etc.).

12. Dissemination programme

Main evaluator: Thea Pieridou
Final score 15 out of 20
Comment

Content: Within the context of the city's very nice motto "Verde por fuera-Verde por dentro" the city's communications programme presents a good range of activities, events, actions and networking opportunities in order to disseminate the City's best practices. Including an opening and closing event, technical seminars, monthly workshops on sustainable urban management, professional & technical study visits, participation in other international events, competitions, a dedicated website and a public volunteers campaign focusing on the current situation of the city but also the future improvements envisaged as European Green Capital.

Completeness: Very good package of communication actions and events. Key objectives and selected target audiences however are not that clearly developed in the proposed communications plan.

Originality of ideas: A number of good creative elements suggested in the proposal such as the Green Inventor Award in the field of science and technology aiming to find a solution to a current environmental cross-border challenge, an EU-wide schools competition to find the best advertising campaign for the EGCA, downloadable mp3 files to follow specially-designed eco-routes in the city and the creation of a network of schools from all European cities working on School Agenda 21.

Proposed effort & project management: The city shows much enthusiasm and dedication to the EGCA project and portrays itself as committed to sustainable urban development and keen to act as a role-model. The human/financial resources that will be needed in order to manage and implement the City's full communications programme are however not that clearly explained.

13. Presentation at meeting 7-8 September 2010

Criteria evaluated:

- 1) Technical Presentation
- 2) Vision/ambition
- 3) Answers given to the experts' questions

Score	14,1
Total Score	166,6



Annex I Overview of evaluation of 17 applications for the European Green Capital Award of 2012 & 2013

City	1. Local contribution to global climate change	2. Local transport	3. Green urban areas	4. Sustainable land use	5. Nature and biodiversity	6. Quality of local ambient air	7. Noise pollution	8. Waste production and management	9. Water consumption	10. Waste water treatment	11. Environmental management of the municipality	12. Dissemination programme	Grand Total
Barcelona	10	14	13,5	13,75	13	12	12,5	15	12,5	13,5	13,5	20	163,25
Malmö	14,5	15	13	11,5	7,5	11,5	12,5	11	9	11,5	13	20	150
Vitoria-Gasteiz	14	13	8,75	11,75	11,5	15	11,5	14,5	11,5	12	7,5	8	139
Reykjavik	7,5	10	11	10	11	15	11,5	8,5	10,5	11	11,5	20	137,5
Nantes	14,5	15	9,75	8	10	13,5	11,5	13,5	10	5	10	14	134,75
Nuremberg	11	8	8	6	12,5	13,5	9,5	13	10,25	10,5	11	18	131,25
Antwerp	14	14	8,75	10,5	9,5	5,5	8	11	7,5	11	10	16	125,75
Murcia	6,5	12	11,25	6,25	9	13	10,75	10	10	14	10	12	124,75
Glasgow	9	10	5,5	10	8,5	13,5	13,5	12,5	9	8,5	8,5	12	120,5
Budapest	8	9	9,25	10	7	11,5	10,25	10	11,5	9	4,5	16	116
Espoo	8	9,5	13,5	7,75	13	9	9,5	11	8,5	10	10,5	5	115,25
Ljubljana	6	9	10,75	9	9,5	8	7	14	11,5	8,5	7,5	12	112,75
Bologna	6,5	10	9	10,25	7,5	11	8,5	10	7	6	7,5	6	99,25
Torun	3,5	8	9,75	7	7,25	7,5	6	9,5	9,25	9,5	2,5	18	97,75
Rome	7	8	8,75	9	8,5	5	8	9	6	8,5	5	12	94,75
Lodz	3	7	10	4,5	8,5	12	7,5	10,5	8,75	10,5	1	5	88,25
Seville	8	9	5	1	3,5	11	8	7	9	8	0,5	8	78

Annex II Overview of evaluation of 6 short-listed cities for the European Green Capital Award of 2012 & 2013

City	1. Local contribution to global climate change	2. Local transport	3. Green urban areas	4. Sustainable land use	5. Nature and biodiversity	6. Quality of local ambient air	7. Noise pollution	8. Waste production and management	9. Water consumption	10. Waste water treatment	11. Environmental management of the municipality	12. Dissemination programme	Presentation/ Q&A	Total score
Barcelona	9	12	11,5	12,5	13	12,25	12,25	13	12,5	13	15	20	12,3	168,3
Malmö	14,5	14	12	11,5	8,5	12,5	12,75	13,5	9,75	12,5	13	20	13,2	167,7
Vitoria-Gasteiz	15	14,5	11	10,5	12,5	15	14	12	12	11	10	15	14,1	166,6
Nuremberg	10	11	9	9	11	13	10,75	14	11	11	11,5	18	13,1	152,35
Nantes	13,5	12	10	7	12	12	12	12	10,5	11,5	10	15	11,8	149,3
Reykjavik	10	8	10	7	9,5	15	11,5	10	10,5	10,5	11	20	9,6	142,6