



City of Helsinki

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# Towards Environmental Sustainability

## Report of the Peer review of the city of Helsinki

Jan Dictus and Allen Creedy (eds.)



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City of Helsinki Environment Centre  
Helsinki 2009

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# Contents

<b>Summary</b> .....	<b>2</b>
<b>Yhteenveto</b> .....	<b>5</b>
<b>Sammanfattning</b> .....	<b>8</b>
<b>Foreword</b> .....	<b>11</b>
<b>1 Introduction</b> .....	<b>12</b>
<b>2 Review method</b> .....	<b>13</b>
2.1 Background to the peer review .....	13
2.2 What does the peer review involve? .....	13
2.3 What will the peer review achieve? .....	13
2.4 Performance assessment by peer review.....	14
2.5 The Peers .....	14
2.6 Advocating judgements .....	15
<b>3 Sustainable Transport</b> .....	<b>16</b>
3.1 Peer Review Assessment.....	16
3.1.1 Cycling .....	18
3.1.2 Regional Cooperation .....	18
3.1.3 Freight transport .....	19
3.1.4 Transit hubs .....	19
3.1.5 Taxation and charging .....	20
3.1.6 Integration of spatial planning and mobility/freight logistics .....	20
3.1.7 Road safety.....	21
3.1.8 Alternative fuels .....	21
3.2 Conclusions and recommendations.....	22
<b>4 Air Quality</b> .....	<b>23</b>
4.1 Peer Review Assessment.....	24
4.2 Conclusions and recommendations.....	24
<b>5 Noise exposure</b> .....	<b>26</b>
5.1 Peer Review Assessment.....	27
5.2 Conclusions and recommendations.....	30
<b>6 Energy and Climate policy</b> .....	<b>31</b>
6.1 Peer Review Assessment.....	31
6.1.1 Targets and goals .....	31
6.1.2 Planning.....	32
6.1.3 New and existing buildings .....	33
6.2 Conclusions and recommendations.....	34
<b>7 Water</b> .....	<b>36</b>
7.1 Peer Review Assessment.....	36
7.1.1 Water consumption & security of supply .....	36
7.1.2 Drinking water quality.....	38
7.1.3 Urban wastewater.....	39
7.1.4 Bathing water.....	40
7.2 Conclusions and recommendations.....	41
<b>8 Soil Protection</b> .....	<b>43</b>
8.1 Peer Review Assessment.....	43
8.2 Conclusions and recommendations.....	44
<b>9 Leadership</b> .....	<b>46</b>
9.1 What to achieve? .....	46
9.2 Peer Review Assessment - relevant and shared .....	46
9.2.1 Leadership and ambition.....	47
9.2.2 Partnerships.....	48
9.2.3 Decision taking .....	51
9.3 Peer Review Assessment - Integrated leadership .....	52
9.4 Peer Review Assessment - Monitored & Updated.....	54
9.5 Leadership – conclusions and recommendations.....	56

## Summary

In the peer review of Helsinki, the city's actions are evaluated from the perspective of ecological sustainability. This peer review is the latter part of the two-part evaluation of the environmental management of the city. The topics of the peer review were sustainable traffic, air quality, noise, climate and energy policy, water supply and sewerage, soil, and leadership in environmental affairs. The evaluation was conducted by colleagues in Rotterdam and by the English consultancy partnership ethics etc...

The peer review is a performance evaluation, meaning a considered evaluation conducted by professionals on the performance of Helsinki in terms of the requirements presented in the benchmark model. The ideal model developed by ethics etc...has been planned to include criteria originating from legislation as well as best practice criteria that are achievable from the viewpoint of the ecological sustainability of the cities but which aim to raise the bar.

The peer review was conducted by evaluating differences or deficiencies which occur between the actual activities of Helsinki and the ideal model. The evaluators have defined the competence of the city based on one hand on the self assessment report drafted by the City of Helsinki and on the other hand the interview replies which the peer review group received on its review visit.

In terms of the sustainability of traffic, it was commented that even though Helsinki has excellent public transportation, a traffic policy which integrates environmental viewpoints should also include much more. The challenges presented by regional traffic require regional cooperation which is based on political decision-making in particular. Helsinki is aware of the problems connected with the capital region's commuter traffic as well as cross-regional traffic, but new procedures were needed to solve these problems.

New cycle paths planned to promote cycling are promising, but in order to make cycling a viable transport alternative along with public transport and driving, financial incentives and better advertising are needed, for example.

Even though Helsinki's air quality problems are not as considerable as in many other European cities, the city's air protection programme is of a very high quality. In particular, the health impact assessment is an exemplary best practice. However, the problem with the air protection programme lies in its implementation. Even though a working group for the technical implementation of the programme has been set up, partnerships are needed to secure investments and political commitment, among other things. Additionally, most of the programme's procedures require a cost estimate, an implementation plan or a follow-up system.

When it comes to noise issues, Helsinki implements its legislative obligations through its noise prevention plan. Despite this, the city's approach to problem of noise was evaluated as inadequate. This conclusion was justified, among other things, on the grounds that the health impacts caused by noise and the indirect financial impacts connected with it are not known, and noise impacts are not sufficiently emphasised in the planning process. In noise issues, developing cooperation with people and organisations on a national level requires political participation on a high enough level.

Helsinki's noise prevention plan includes some very good procedures. However, the procedures emphasise technical solutions, even though in order to prevent noise different procedures which have an effect on people's behaviour play a significant role. Additionally, the plans on partnerships, investments and follow-up needed to implement the plan are lacking.

In energy saving, the energy efficient aims set for new buildings are a good start, but they were considered modest compared with other European cities. In many cities, residential areas are already being developed to function on 100% renewable energy sources or to be zero energy consumption areas. In addition, it was suggested that Helsinki should improve the energy efficiency of all the buildings in the city – not just those belonging to the city.

Helsinki is increasing the share of renewable energy sources with wind energy, but Helsinki was considered passive as a developer of renewable energy sources when compared with many European cities.

An attempt has been made to increase the number of properties served by district heating in Helsinki; however, recent development in heating and energy production enable the introduction of more environmentally friendly solutions. It was hoped that Helsinki would clarify the usability of these different solutions.

To reach the climate and energy aims, Helsinki needs partnerships outside the city organisation. The lack of coordination between different people and organisations was regarded as a threat to achieving these aims. Additionally, giving Helsingin Energia too much responsibility in terms of achieving Helsinki's energy aims was considered problematic. The energy efficiency of building and renovation as well as decentralised energy production solutions is, above all, part of developing the city. Energy policy should be seen as an integral part of the activities of the whole city.

Helsinki and Helsinki Water are known for the good quality of drinking water as well as for efficient sewage treatment. The main problem with water supply and sewerage was evaluated to be the large consumption of water. Even though water resources are more than sufficient, water consumption requires water purification, heating, infrastructure, and so on. The actions of Helsinki Water directed at decreasing water consumption are good, but at the same time consumer behaviour needs to be influenced as well.

The issues connected with the role of water in the city are, among others, the recycling of rainwater and grey water as well as the natural handling procedures, of which there are only a few examples of use – both in the city administration and Helsinki Water. The evaluators suggest that the city clarifies the benefit of new kinds of procedures for conserving water resources.

Helsinki has excellent databanks, permission and follow-up systems concerning contaminated soil. In terms of the rehabilitation procedures for contaminated soil, it was hoped that Helsinki would revise its rehabilitation strategies for utilising up-to-date procedures and risk assessment. Finland does not have specific legislation requiring the protection of soil which would direct, among other things, the mapping, protection or re-use of extractable soil.

Helsinki was evaluated as showing strong environmental leadership on both national and international levels. The Baltic Sea challenge, for example, was

regarded as a good example both for creating an innovative image and producing a good quality of life for the residents.

The city has a long tradition of providing its residents with services in an efficient manner. The structure of the city organisation has been planned based on these services.

However, a conclusion of the peer review was that in order to fulfil the needs of the city, its residents and business life – and to face new challenges – a new operation model has to be found. This means increasing cooperation and sharing responsibilities and resources with external interest groups and partners. The review demands, among other things, a move away from traditional administration towards a method of administration which would enable the cooperation of different groups – administration, citizens and businesses.

Resolving the challenges of climate change requires a new kind of partnership between public and private performers and a more open approach from offices and partners. For example, the merging of waterworks in the capital region and YTV's new organisation were mentioned as examples of a new kind of operation model.

In addition, it was remarked that many good environmental projects have never been established as good practices. Learning from pilot projects, experiments and initiatives has, therefore, often remained deficient.

The peer review concluded with a wish: "More ambition, please!"



## Yhteenveto

Helsingin vertaisarvioinnissa arvioidaan kaupungin toimintaa ekologisen kestävyuden näkökulmasta. Vertaisarviointi on jälkimmäinen kaupungin kaksiosaisesta ympäristöjohtamisen arvioinnista. Vertaisarvioinnin aihealueena ovat olleet kestävä liikenne, ilmanlaatu, melu, ilmasto- ja energiapolitiikka, vesihuolto, maaperä sekä johtajuus ympäristöasioissa. Arvioinnin ovat tehneet kollegat Rotterdamista sekä englantilainen konsulttiyritys ethics etc...

Vertaisarviointi on 'suoritusarviointi', mikä tarkoittaa asiantuntijoiden tekemää 'harkittua arviointia' Helsingin 'suoritumisesta' ideaalimallissa esitetyistä vaatimuksista. Ethics etc:n kehittämä ideaalimalli on laadittu siten, että se sisältää lain-säädännöstä peräisin olevia sekä 'best practice' -kriteerejä, jotka ovat kaupunkien ekologisen kestävyuden kannalta tavoitettavissa, mutta rimaa kohottavalla tasolla.

Vertaisarviointi tehtiin arvioimalla eroja tai puutteita, joita esiintyy Helsingin varsinaisen toiminnan sekä ideaalimallin välillä. Arvioijat ovat määritelleet kaupungin suorituskyvyn toisaalta Helsingin kaupungin laatiman itsearviointiraportin ja toisaalta niiden haastatteluvastausten perusteella, jotka arviointiryhmä sai arviointikäynnillään.

Liikenteen kestävydestä todettiin, että vaikka Helsingillä on erinomainen joukkoliikenne, niin ympäristönäkökohdat integroiva liikennepolitiikka sisältää paljon muutakin. Seudullisen liikenteen haasteet vaativat alueellista yhteistyötä, joka perustuu erityisesti poliittiselle päätöksenteolle. Helsingillä on tietoisuus pääkaupunkiseudun työmatkaliikenteeseen ja poikittaisliikenteeseen liittyvistä ongelmista, mutta niiden ratkaisuun kaivattiin uusia toimenpiteitä.

Pyöräilyn edistämiseksi suunnitellut uudet pyörätiet ovat lupaavia, mutta jotta pyöräily olisi merkittävä liikkumisen vaihtoehto joukkoliikenteen ja autoilun rinnalla, tarvitaan mm. taloudellisia kannustimia ja parempaa mainontaa.

Vaikka Helsingin ilmanlaatuongelmat eivät olekaan yhtä tuntuvia kuin useissa muissa Euroopan kaupungeissa, on kaupungin ilmansuojeluohjelma erittäin korkeatasoinen. Erityisesti terveysvaikutusten arviointi on esimerkillinen paras käytäntö. Ilman-suojeluohjelman ongelmana on kuitenkin sen toteuttaminen. Vaikka ohjelman teknistä toteuttamista varten onkin perustettu työryhmä, tarvitaan kumppanuuksia mm. investointien ja poliittisen sitoutumisen varmistamiseksi. Lisäksi useimmat ohjelman toimenpiteet tarvitsevat kustannusarvion, toteutussuunnitelman tai seurantajärjestelmän.

Melun osalta Helsinki toteuttaa lainsäädännölliset velvoitteensa laatimallaan meluntorjuntasuunnitelmalla. Kaupungin lähestymistapa meluongelmaan arvioitiin kuitenkin puutteelliseksi. Tämä perusteltiin mm. sillä, ettei melun aiheuttamia terveysvaikutuksia sekä niihin liittyviä välillisiä taloudellisia vaikutuksia tunneta, ja ettei meluun liittyvien valitusten määrää ja vakavuutta tunneta, sekä ettei meluvaikutuksilla ole riittävää painoarvoa suunnittelussa.

Melukysymyksissä yhteistyön kehittäminen kansallisen tason toimijoiden kanssa tarvitsee riittävän korkean tason poliittista osallistumista.

Helsingin meluntorjuntasuunnitelma sisältää joitakin erittäin hyviä toimenpiteitä. Toimenpiteet painottuvat kuitenkin teknisiin ratkaisuihin, vaikka melun

ehkäisemiseksi erilaiset ihmisten käyttäytymiseen vaikuttavat toimenpiteet ovat merkittävässä roolissa. Lisäksi ohjelman toteutumiseksi suunnitelmat tarvittavista kumppanuuksista, investoinneista ja seurannasta puuttuvat.

Energiansäästöissä uusille rakennuksille asetetut energiatehokkuustavoitteet ovat hyvä alku, mutta niitä pidettiin vaatimattomina muihin eurooppalaisiin kaupunkeihin verrattuna. Monissa kaupungeissa kehitetään jo 100-prosenttisesti uusiutuvilla energialähteillä toimivia tai nollaenergiakulutuksen asuinalueita. Lisäksi Helsinkiä kehoitettiin parantamaan koko kaupungin rakennusten – ei ainoastaan kaupungin omien – energiatehokkuutta.

Helsinki on lisäämässä uusiutuvien energialähteiden osuutta tuulivoimalla, mutta yleisemmin Helsinkiä pidettiin passiivisena uusiutuvien energialähteiden kehittäjänä moniin eurooppalaisiin kaupunkeihin verrattuna.

Helsingissä on pyritty lisäämään kaukolämpöön liittyneiden kiinteistöjen määrää. Hajautetun lämmön- ja energiantuotannon viimeaikainen kehitys mahdollistaa kuitenkin ilmastoystävällisempien ratkaisujen käyttöönoton. Helsingin toivottiin selvittävän näiden eri ratkaisujen käyttökelpoisuutta.

Ilmasto- ja energiatavoitteiden saavuttamiseksi Helsinki tarvitsee kumppanuuksia kaupunkiorganisaation ulkopuolella. Koordinaation puutetta eri toimijoiden välillä pidettiin uhkana tavoitteiden saavuttamiselle. Lisäksi Helsingin energiatavoitteiden saavuttamisen vastuuttaminen liikaa Helsingin Energialle koettiin ongelmalliseksi. Rakentamisen ja saneerauksen energiatehokkuus samoin kuin hajautetut energian-tuotantoratkaisut ovat ennen kaikkea osa kaupungin kehittämistä. Energiapolitiikka pitäisi nähdä koko kaupungin toimintaan integroitavana näkökulmana.

Helsinki ja Helsingin Vesi tunnetaan hyvästä juomaveden laadusta sekä tehokkaasta jätevedenpuhdistuksesta. Vesihuollon keskeisimmäksi ongelmaksi arvioitiin veden suuri kulutus. Vaikkakin vesivarat ovat runsaat, niin vaatii vedenkulutus vedenpuhdistusta, lämmittämistä, infrastruktuuria jne. Helsingin Vedessä tehdyt veden kulutusta vähentävät toimet ovat hyviä, mutta samalla pitäisi pyrkiä vaikuttamaan kuluttajien käyttäytymiseen.

Veden rooliin kaupungissa liittyviä kysymyksiä ovat mm. sadeveden ja harmaan veden kierrätys ja luonnonmukaiset käsittelymenetelmät, joiden käytöstä Helsingissä – niin kaupungin hallinnossa kuin Helsingin Vedessäkin – on niukasti esimerkkejä. Arvioijat kehottivat kaupunkia selvittämään uudenlaisten menetelmien hyötyä vesivarojen säästämiseksi.

Helsingillä on erinomaiset pilaantunutta maaperää koskevat tietopankit, lupa- ja seurantajärjestelmät. Pilaantuneiden maiden kunnostamismenetelmien osalta Helsingin toivottiin tarkistavan kunnostamisstrategioitaan ajanmukaisten menetelmien sekä riskinarvioinnin hyödyntämisessä.

Suomella ei ole erityistä maaperänsuojelua vaativaa lainsäädäntöä, joka ohjaisi mm. maa-aineksen kartoitukseen, suojeluun tai uudelleenkäyttämiseen.

Helsingin arvioitiin näyttävän vahvaa ympäristöjohtajuutta sekä kansallisella että kansainvälisellä tasolla. Mm. Itämerihaastetta pidettiin hyvänä esimerkkinä sekä innovatiivisen imagon luomisesta että hyvän elämänlaadun tuottamisesta asukkaille.

Kaupungilla on pitkä perinne palvelujen tuottamisessa tehokkaasti asukkailleen. Kaupunkiorganisaation rakenne on suunniteltu näiden palvelujen perusteella.

Johtopäätöksenä arvioinnissa kuitenkin todettiin, että kaupungin, sen asukkaiden, liike-elämän tarpeiden täyttämiseksi – sekä uusien haasteiden kohtaamiseksi – on löydettävä uudenlainen toimintamalli. Tämä tarkoittaa yhteistyön lisäämistä sekä vastuiden ja resurssien jakamista ulkoisten sidosryhmien sekä kumppanien kanssa. Arvioinnissa mm. peräänkuulutettiin siirtymistä perinteisestä hallinnosta kohti eri toimijoiden – hallinnon, kansalaisten ja yritysten – yhteistyön mahdollistavaa hallintatapaa.

Ilmastomuutoksen haasteiden ratkaiseminen vaatii uudenlaista julkisen ja yksityisten tahojen kumppanuutta, avoimempaa virastojen ja kumppanien työtapaa. Esimerkiksi pääkaupunkiseudun vesilaitosten yhdistyminen ja YTV:n uusi organisaatio mainittiin esimerkkinä uudeltaisesta toimintamallista.

Lisäksi huomautettiin, että monet hyvät ympäristöhankkeet eivät koskaan ole valtavirtaistuneet hyväksi käytännöiksi. Oppiminen eri pilottihankkeista, kokeiluista ja aloitteista onkin jäänyt usein vajavaiseksi.

Yhteenvetona arviossa toivottiin ”Lisää kunnianhimoa!”

## Sammanfattning

Helsingfors kollegiala granskning är en utvärdering av hur bra staden har lyckats uppfylla kravet på hållbar utveckling. För Helsingfors kommer den kollegiala granskningen att bidra med den andra delen av en tvådelad utvärdering av miljöpolitiken. Granskade områden var ledarskap, hållbar transport, luftkvalitet, buller, klimat och energipolitik, vatten, mark. Den utfördes av kolleger från Rotterdam och den engelska konsultbyrån ethics etc....

Den kollegiala granskningen är en "prestationsbedömning". Detta är det "noga avvägda beslutet" (bedömningen) av experter, när det gäller "framsteg som har gjorts" (prestationen) av Helsingfors gentemot ett benchmarkideal. Idealmodellen som ethics etc... har utvecklat har skrivits för att innefatta rättsliga grunder och bästa praxis precis på eller över nivån för städernas hållbara utveckling.

Den kollegiala granskningen hade till uppgift att utföra en gapanalys för att fastställa skillnaden eller gapet som existerar mellan Helsingfors prestation och benchmarkidealet. Stadens faktiska prestationsförmåga har bestämts av kollegerna efter tolkningen av bedömningsrapporten, tillsammans med svaren som de har fått på sina frågor under den kollegiala granskningen.

I fråga om trafikens hållbarhet konstaterades att fastän Helsingfors har en utmärkt kollektivtrafik, så innehåller den trafikpolitik i vilken miljösynpunkterna är integrerade också mycket annat. Utmaningarna inom regionaltrafiken kräver regionalt samarbete som särskilt baserar sig på politiskt beslutsfattande. I Helsingfors finns en medvetenhet om de problem som anknyter till pendlingen och den tvärgående trafiken i huvudstadsregionen, men nya åtgärder behövdes för att lösa dessa.

De nya cykelvägarna som har planerats för att främja cyklingen är lovande, men för att cykling ska vara ett transportalternativ som är värt att beakta vid sidan av kollektivtrafiken och bilismen behövs bl.a. ekonomiska incitament och bättre reklam.

Även om problemen med luftkvaliteten inte är lika kännbara i Helsingfors som i flera andra europeiska städer håller stadens luftskyddsprogram mycket hög klass. Bedömningen av effekterna på hälsan är ett särskilt gott exempel på bästa praxis. Problemet med luftskyddsprogrammet är dock förverkligandet av det. Även om en arbetsgrupp har grundats för det tekniska förverkligandet av programmet, behövs partnerskap bl.a. för att säkerställa investeringarna och det politiska engagemanget. Dessutom behövs en kostnadsberäkning, en plan för förverkligandet eller ett uppföljningssystem för de flesta av åtgärderna i programmet.

I fråga om buller uppfyller Helsingfors sina lagstadgade plikter genom den plan för bullerbekämpning som har utarbetats. Stadens sätt att angripa bullerproblemet bedömdes dock vara bristfälligt. Detta motiverades bl.a. med att man inte känner till bullrets effekter på hälsan och de indirekta ekonomiska konsekvenserna av dessa effekter och att man inte känner till antalet klagomål som anknyter till bullret eller hur allvarliga dessa klagomål är, samt att bullerkonsekvenserna inte har getts tillräcklig vikt i planeringen.

För att utveckla samarbetet i bullerfrågor med aktörer på nationell nivå behövs en tillräckligt hög nivå på det politiska deltagandet.

Bullerbekämpningsplanen för Helsingfors innehåller några mycket goda åtgärder. Tyngdpunkten i åtgärderna ligger dock på tekniska lösningar, även om åtgärder som påverkar människornas beteende spelar en betydande roll för att förebygga buller. Dessutom fattas planerna för de nödvändiga partnerskapen och investeringarna samt den uppföljning som behövs för att planen ska förverkligas.

Inom energibesparingen är de nya energieffektivitetsmålen som har ställts för byggnader en god början, men de ansågs vara anspråkslösa i jämförelse med andra europeiska städer. I många städer utvecklas redan bostadsområden som helt och hållet använder förnybara energikällor eller bostadsområden med nollenergiförbrukning. Dessutom uppmanades Helsingfors förbättra energieffektiviteten i alla byggnader i staden – inte enbart i stadens egna byggnader.

Helsingfors håller på att öka andelen förnybara energikällor med vindkraft, men mera allmänt sett ansågs Helsingfors inta ett passivt förhållningssätt till utvecklingen av förnybara energikällor i jämförelse med många europeiska städer.

I Helsingfors har man strävat efter att öka antalet fastigheter som är anslutna till fjärrvärme. Den senaste tidens utveckling inom den decentraliserade värme- och energiproduktionen gör det dock möjligt att ta i bruk mera klimatvänliga lösningar. Förhoppningen var att Helsingfors skulle utreda hur användbara dessa olika lösningar är.

För att uppnå klimat- och energimålen behöver Helsingfors partnerskap utanför stadsorganisationen. Bristen på koordination mellan olika aktörer ansågs vara ett hot mot uppnåendet av målsättningarna. Dessutom upplevdes det som ett problem att ansvaret för att energimålen för Helsingfors uppnås i alltför stor utsträckning lades på Helsingfors Energi. Energieffektiviteten inom byggande och sanering, liksom de decentraliserade lösningarna för energiproduktionen, är framför allt en del av utvecklingen av staden. Energipolitiken borde ses ur en synvinkel som integrerar verksamheten i hela staden.

Helsingfors och Helsingfors Vatten är kända för den goda kvaliteten på dricksvattnet och den effektiva reningen av avloppsvattnet. Det mest centrala problemet inom vattenförsörjningen bedömdes vara den stora vattenförbrukningen. Även om vattentillgångarna är rikliga krävs vattenförbrukning för reningen av vattnet, uppvärmningen, infrastrukturen osv. De åtgärder som Helsingfors Vatten har vidtagit för att minska vattenförbrukningen är goda, men samtidigt borde man sträva efter att påverka konsumenternas beteende.

Frågor som anknyter till vattnets roll i staden är bl.a. återvinning av regnvatten och grått vatten samt naturliga behandlingsmetoder. Det finns få exempel på användningen av dessa i Helsingfors – såväl inom stadsförvaltningen som inom Helsingfors Vatten. Bedömarna uppmanade staden att utreda nyttan av nya metoder för att spara på vattenresurserna.

Helsingfors har ypperliga databanker och tillstånds- och uppföljningssystem för förorenade markområden. I fråga om saneringsmetoderna för de förorenade markområdena var förhoppningen att Helsingfors skulle granska hur moderna metoder och riskbedömning utnyttjas i saneringsstrategierna.

I Finland finns ingen lagstiftning som kräver särskilt skydd av marken och som skulle styra bl.a. kartläggningar, skydd och återanvändning av jorden.

Helsingfors är känt för att utöva starkt ledarskap på nationell och internationell nivå. Initiativet för "Utmaning för att rädda Östersjön" visade sig vara ett bra exempel som genererar en bild av att vara innovativ och ge en bra livskvalitet för invånarna.

Staden har en stark tradition av att effektivt erbjuda tjänster till invånarna och har en kommunal organisationsstruktur som är gjord för att ge dessa tjänster.

Men det beslutades att det fanns ett behov av ett byte till en ny modell för att tillgodose behoven för staden, dess invånare och dess affärer – och för att tillgodose kraven. Detta innebär mer samarbete och delning av ansvar och resurser med externa intressenter och partners. Det efterlystes ett behov av att flytta från administrativt utövande styre till administrativ fullmaktstyrning.

För att kunna lösa utmaningen klimatförändring krävs det en ny modell för offentligt och privat samarbete, en förflyttning mot ett öppnare arbetssätt mellan departement och delägare. Exempelvis nämndes omkonstruktionen av SAD och Helsingfors Vatten som ett exempel mot en ny modell.

Man drog också slutsatsen att många miljöprojekt är lovande men har aldrig fått en bred applicering. Inlärningspotentialen för pilotprojekt, experiment och initiativ har underutnyttjats.

Sammanfattningsvis framfördes ett önskemål om "Högre ambitioner!" i bedömningen."

## Foreword

The City of Helsinki set the target of integrating the management of environmental matters as part of the management of the whole city administration. The city's environmental policy (City Council 2005) requires that the departments, corporations and subsidiary organisations improve the effectiveness of their environmental management.

In order to develop Helsinki's environmental policy and management two-phased assessment has been conducted in 2007-2009. This report is the result from the second part of the assessment, Peer Review between the cities of Helsinki and Rotterdam. Helsinki Peer Review was performed by colleagues from the City of Rotterdam, the Netherlands in November 2008.

Peer Review was facilitated by the consultants Allen Creedy and Jan Dictus from ethics etc... Ethics etc... has designed and tested a peer review system that has been conducted e.g. in the cities of Stockholm, Oslo, Venice, The Hague, Bristol, Malmo, Bourgas (Bulgaria), Copenhagen, Aalborg, and Lille Metropole.

The work of the peer review was to carry out a gap analysis – to assess the difference or gap that exists between the actual performance of Helsinki and the benchmark ideal. The actual performance of the city has been determined by the peers from their consideration of the self-assessment report, together with the answers given to their questions during the peer review visit. Review team conducted about 50 interviews and two stakeholder workshops while in Helsinki.

We thank the colleagues from Rotterdam as well as Allen Creedy and Jan Dictus for the insightful review.

Päivi Kippo-Edlund  
Head of Environmental protection and research

# 1 Introduction

Helsinki Peer Review is the evaluation of city's performance on environmental sustainability. It was performed by colleagues from the City of Rotterdam, the Netherlands. Peer Review is a tool for mutual learning. The overall objective of the project is to support sustainable urban management in the participating cities by sharing knowledge and experiences to inspire each other. The result is a review report carried out by an external review team of experts. This contains feedback and recommendations for future improvements.

The peer review is a method used by cities to work together and critically review each other's environmental management system to improve the environmental performance and make suggestions for further progress. This peer review will be based on the PRESUD method (Peer Review for European Sustainable Urban Development).

A peer review helps to identify room for improvement within an environmental management system by setting up a benchmark with other city's environmental performance. It also provides an opportunity to learn and share experiences, practices and ideas between participating cities.

The peer review is a 'performance assessment'. This is the 'considered judgement' (assessment) of experts, on the 'progress being made' (performance) by municipalities towards a benchmark (or 'ideal'). The benchmark will be written to include the legal and best practice challenges just on or over the horizon for cities for environmental sustainability. The idea of a peer review is proposed in the new EU Sustainable Development Strategy, which was endorsed by the European Council on June 16th 2006. National governments use the peer review too and many European cities went before Helsinki, and Rotterdam.

For Helsinki the peer review will contribute another half of a two-part evaluation of the environmental policy. The first one was published in early 2008 (Assessment of the Environmental Management of the City of Helsinki, City of Helsinki Environment Centre, 2/2008). To complement this assessment following themes were selected for the peer review by the City of Helsinki.

- Leadership
- Sustainable transport
- Air Quality
- Noise
- Climate and Energy policy
- Water
- Soil



## **2 Review method**

### **2.1 Background to the peer review**

The choice of themes for environmental sustainability has been made by the host cities. Comments were invited from the city representatives on the scope of the themes and the proposed focus of the assessments.

### **2.2 What does the peer review involve?**

The peer review of the city of Helsinki involved the following elements;

- Helsinki provided a self assessment documents and reported on its progress towards environmental sustainability –this was supplemented by a visit to the city.
- The peers carried out a ‘desk review’ of the self-assessment report.
- The peers recommended lists of stakeholders to be interviewed
- The peer review team visited Helsinki and carried out a review of the published report meeting stakeholders and interested groups.
- The peer review team presented its ‘headline’ review ‘findings’ to the municipality stakeholders at the end of the visit.
- The peer review team has written this report and agreed its contents with the partner city.
- Helsinki is using the peer review report in redesigning their environmental sustainability objectives, targets, policies and practice

### **2.3 What will the peer review achieve?**

The peer review will support the sustainable urban management in Helsinki through sharing knowledge and experiences and by providing inspiration.

Helsinki has benefited from the peer review method in many ways:

- A fresh look at working with sustainability.
- Stimulation of internal and external discussion about current and future progress towards environmental sustainability.
- Allow the representatives from cities to share their varied skills and experiences and reflect on their own work.
- Comparison and exchange of information.
- External expert advice.
- Positive weight of external influence.
- Stimulation of competition.
- Comparing against an ideal model.
- Combination of objectivity of an ideal model and subjectivity of experts’ opinions.
- Raise environmental sustainability on the political agenda.
- Involvement of stakeholders, e.g. citizens, businesses and environmental organisations.

Reviewed themes for Helsinki
Sustainable transport
Air quality
Noise
Energy / climate policy
Water
Soil
Leadership

## 2.4 Performance assessment by peer review

The work of the peer review was to carry out a gap analysis – to assess the difference or gap that exists between the actual performance of Helsinki and the benchmark ideal. The actual performance of the city has been determined by the peers from their consideration of the self-assessment report, together with the answers given to their questions during the peer review visit. They have supplemented their assessment by independent questioning, internet searches etc.

The peer review is a ‘performance assessment’. This is the ‘considered judgement’ (assessment) of experts, on the ‘progress being made’ (performance) by Helsinki towards a benchmark ideal. The benchmark ideal has been written to include the legal and best practice challenges just on or over the horizon for cities for environmental sustainability.

The benchmark ideal used in this assessment has been developed from policy statements, legislation, and best practice current within the European Union.

## 2.5. The Peers

The peers were from the city and port of Rotterdam and the citywide environmental protection agency DCMR. They included the consultants Jan Dictus and Allen Creedy from ethics etc. The peers took the following thematic responsibilities.

Themes	Peers – From City of Rotterdam, DCMR, Port of Rotterdam & ethics etc...
Leadership	Marco te Veldhuis, Miriam van der Wees and Erik-Jan Wesemann
Sustainable transport	Alan Dirks, Lutske Lindeman and Jan Meijdam
Air quality	Alan Dirks and Lianne Elsman
Noise	Allen Creedy, Lianne Elsman and Jan Meijdam
Energy/climate policy	Jan Dictus, Peter Verschoor and Erik-Jan Wesemann
Water	Jan Dictus and Marco te Veldhuis
Soil	Allen Creedy and Miriam van der Wees

Each peer has contributed to the writing and editing of this report. Corrections and amendments have been suggested by representatives from the city council and its partner companies. These have helped to overcome confusions and errors. Nevertheless the responsibility for the report rests with the team.

## **2.6 Advocating judgements**

The assessment and judgements that follow in this report are based on the evidence that has been made available to the peers from the Self assessment report together with the responses to questions and findings from further investigation by the peers. The peers have used opinions expressed by interviewees to guide their questions but have based their judgements on fact.

The peer review principle criterion for advocating a judgement is that a proposed assessment finding or conclusion must be derived from two separate evidence sources. Such that the same answer or fact has been provided on at least two separate occasions or there are two independent sources. Where the expression “there is no evidence” is used this means that the peers (and the ideal) would expect the city council to be carrying out a particular activity. However in the course of the peer review assessment no evidence of this activity was found. This does not mean that the activity is not being carried out but that no evidence was found by the peers.

The peer review of Helsinki has carefully considered the leadership that the city council and officers exercise. In reaching a judgement it has been difficult to decide the most appropriate place to insert these judgments into the report. Consequently some of the assessments of leadership are contained within the individual thematic assessments. However where the assessment relates to cross departmental, partnership, institutional or wider political aspects these are generally contained within the final section on leadership.

## 3 Sustainable Transport<sup>1</sup>

### An ideal authority

***“ensures that the transport system meet society’s economic, social and environmental needs whilst minimising its undesirable impacts on the economy, society and the environment”***

#### **Benchmark ideal objectives and targets**

1. *Decoupling economic growth and the demand for transport with the aim of reducing environmental impacts.*
2. *Achieving sustainable levels of transport energy use and reducing transport greenhouse gas emissions.*
3. *Reducing pollutant emissions from transport to levels that minimise effects on human health and/or the environment.*
4. *Achieving a balanced shift towards environment friendly transport modes to bring about a sustainable transport and mobility system particularly with reference to cities and their hinterlands*
5. *Reducing transport noise both at source and through mitigation measures to ensure overall exposure levels minimise impacts on health. Modernising the public passenger transport services to encourage better efficiency and performance by 2010.*
6. *Measures are in place to meet the EU strategy on CO2 emissions from light duty vehicles, the average new car fleet should achieve CO2 emissions of 140g/km (2008/09) and 120g/km (2012).*
7. *Halving road transport deaths by 2010 compared to 2000.*

### 3.1 Peer Review Assessment

For the ideal **sustainable transport** the city politicians and officers<sup>2</sup> should have an integrated approach to urban mobility policy making and implementation that combines the most appropriate responses to each individual problem: technological innovation, the development of clean, safe and intelligent transport systems, economic incentives and amendments to legislation. The city can demonstrate this by having an overarching and integrated sustainable “mobility plan” which includes all the elements set out in the Green Paper “Towards a new culture for urban mobility.”

The city of Helsinki has an approved transport plan that dates from 2004 (the Helsinki Transport Strategy; HLK 2004) more that 60% of the measures from this

<sup>1</sup>Based on Review of the EU Sustainable Development Strategy (EU SDS) – Renewed Strategy

<sup>2</sup>See benchmark ideal for SUTP at [http://www.bustrip-project.net/documents/BUSTRIP\\_Whole\\_PartnerGuidanceManual.pdf](http://www.bustrip-project.net/documents/BUSTRIP_Whole_PartnerGuidanceManual.pdf) for more information

plan have been successfully implemented. However the peer review identified that many of the more challenging measures remain unimplemented.

The city of Helsinki is legally required to implement the relevant parts of the national transport action plan and has made available significant financial resources. However the implementation of many remaining measures depends on the national ministry providing the required matching funding.

Current provision of public transport is both extensive and economically priced. However it is not clear if the future revenue and capital costs of maintaining the high levels of service and accessibility of public transport can be maintained without significantly increasing fares or subsidies.

It is not clear if there is a consensus amongst politicians of the way forward for sustainable transport in the city. The peer review team is concerned that there does not seem to be a political commitment to the principle that large scale infrastructure developments and investments (e.g. central road tunnel, new harbour developments, etc.) should only be carried out as part of a comprehensive sustainable transport strategy. And that this strategy must include the parallel implementation of measures that will ensure that access limited to the ability of the environment to absorb the damage caused. Also that any private and public vehicular access is priced at a level based on the polluter pays principle with incentives to use cycling, walking and low/zero emission vehicles.

Although YTV understands the need to reduce the environmental impact of all kinds of transport, there is no evidence that Helsinki city council, YTV or the national government are taking the necessary action to move towards a low carbon transport strategy.

The demand oriented parking policy that allows sufficient parking space for residents, does not seem to be used as a controlling measure. The team is concerned that the high limit for parking together with the policy for a city tunnel, will have the direct effect of increasing the actual and latent demand for parking. The team is concerned that the cost of parking is very low and these do not reflect the environmental costs associated

The tunnel is connected to a more pedestrian and public transport friendly centre. It is not clear if this will lead to more parking spaces at the transfer points.

The responsibility for studies and implementation of Park & Ride policy seems fragmented and unclear although there is some evidence of research few beneficial actions seems to be taking place as a result of this work. It is not clear if an objective cost benefit assessment has been carried out to allow the politicians to come to a decision on the investments needed.

The ambition to increase the amount of walking seems to have no implementing policies - such that no additional pedestrian or car-free zones seem to be planned. There is a gap between ambition and action.

Speed limits were introduced to reduce deaths and injuries, any improvement in local environmental quality is accidental there is no integrated planning of road speed limits/air quality/noise etc.

A partnership has yet to emerge that recognises that all forms of motorised transport cause emissions and environmental damage.

When compared to other major cities there is infrequent and limited amount of research carried out into the attitudes of commuters to congestion, travel time and their sensitivity to incentives to modal switch. The peer review team does not consider that this is sufficient research so that YTV/HKL has a complete understanding of the patterns of travelling and in particular the travel time for different modes.

### **3.1.1 Cycling**

The resources available and measures being implemented are unlikely to be sufficient to achieve the objective of doubling the cycling modal share from 6% to 12% by 2015. This target is not very ambitious, given the importance of reducing emissions, noise and of improving health.

There are notable initiatives for new cycle paths such as the reuse of the old railway to the port and the planned connection to the old oil harbour. Although certain cycle lanes have lighting there is considerable scope to substantially improve the quality of surface, design, and maintenance of cycle lanes. The length of proposed new cycle route is very modest and is unlikely to be sufficient to encourage the significant shift in personal mobility to cycling that is required.

There was no evidence that comprehensive network of cycling routes is being prioritised that will allow people to cycle to and from work, leisure, and local shops is not yet being planned. There are no cycle lanes that are priority 'core routes for high maintenance', quick snow clearance etc. The cycle connections to the new developments at the eastern and western harbour do not have the same status as the public transport routes or roads.

Although there is evidence that large numbers of maps have been printed the effectiveness, quality, availability, and coverage of cycle maps brochures, posters, advertising, and media exposure could be significantly improved to bring it up to the standards of other major European city standards. Staff resources are inadequate to promote cycling to stakeholder groups and to review and comment on spatial and master plans.

Although some departments have cycles for officers to travel to meetings not all departments (or Helsinki Energy or Helsinki Water) have these bikes. Although there are financial incentives to promote commuting by cycle these are little used except in the health department.

### **3.1.2 Regional Cooperation**

An effective transport policy should have sub regional collaboration mechanisms in place. To solve the challenge of connecting the periphery with the city centre and to develop and implement metropolitan and regional sustainable urban transport plans, different partners, and all spheres of governance must be involved.

YTV is already influential in ensuring that regional spatial planning takes account of the needs of public transport. The current joint working between YTV and the city planning transport department does not yet involve the sharing of resources or of a shared vision for sustainable transport. Although there is a commitment to public transport there is no evidence that the actions and plans of the YTV &

Helsinki are fully aimed at a shift towards environmentally friendly passenger and freight transport.

From 2010 there will be a single organisation for transport planning for a larger geographical area. There is some confusion amongst staff about exactly which departments and individuals will be absorbed into the new organisation. Processes are currently being designed for the working arrangements of the new organisation - so far it is not clear if these processes and working methods will have sustainable transport at their heart. However it is not clear if the staff of YTV and the Helsinki City Transport fully understand the consequences for their functions and roles of their forthcoming merger.

### **3.1.3 Freight transport**

Freight policy should be in accordance with the objectives in the EU Communication on a freight-oriented rail network "towards making rail freight more competitive": in particular by ensuring lower transit times and increasing rail's reliability and responsiveness to customer requirements.

The relocation of the port to Vuosaari harbour with its excellent rail connections means that there is the potential for a significant modal shift of freight to rail. Although the responsibility for promoting rail is with the national agency it is in the interests of the city for it to be active in making sure that there are effective incentives and programmes of promotion to ensure that the benefits of the rail links are realised.

The congestion now taking place on ring road 3 confirms that the management of freight associated with the use of the port has not been adequately considered in the forward planning for the relocation of the port. Although this is a national investment issue the problems are being experienced by residents and businesses of the city and it remains a significant environmental issue to be addressed.

The modelling of freight transport is inadequate and uses out of date information. This is resulting in a lack of understanding about the patterns of freight and an inadequate consideration of its importance in spatial planning.

There is little evidence that there are adequate measures to understand, plan, control, and manage freight.

### **3.1.4 Transit hubs**

The review team has been looking for intermodality freight and passenger transit hubs and sustainable intermodal mobility policies for land use planning.

Unfortunately there are very few places for cyclists to safely park - particularly at transport hubs and at major shopping attractions. Although new buildings are required to provide cycle parking there is little evidence that cycle parking is considered as part of the management of existing buildings, public areas, and large scale developments. There is a need to either provide or allow residents to construct/provide secure cycle parking for all apartments across the city.

There seems to be no clear division of tasks and responsibilities for Park-&-Ride facilities, and as a consequence there is not enough capacity in place.

The review team has been looking for measures to generate a shift from road to rail, water, and public passenger transport, and effective measures that are improving the economic and environmental performance of all modes of transport. Although a key objective of YTV is to achieve a modal shift it is not clear from the research that the measures being used are effective in switching motorists to cycling, walking and public transport.

Public transport costs can be subsidised by employers: the system is complicated and conflicts with the tax system that exists. The take up of this instrument is less than 50%. There remains a significant potential to expand, simplify and develop this system.

Although providing free public transport has been rejected based on research on the costs there is evidence that the benefits of price reductions for students and the elderly have been recognised. However no research has been done into the economic and social consequences of varying the charges to elderly, students, or unemployed.

Overall the objectives of the communication, advertising and marketing of public transport and cycling are not clear and are not SMART (see page 50 for an explanation on SMART).

### **3.1.5 Taxation and charging**

Helsinki has the potential to improve efficiency in the transport sector by making use of cost-effective instruments (taxation and charging). Congestion charging has been identified as having the potential to provide many of the solutions to current transport problems (lack of investment, growing private motoring). Although research is now being carried out into the potential effects of congestion charging there does not seem to be a political commitment to ensuring that taxation and charging reflect the polluter pays principle or economic pricing.

There seem to be little support from central area located business & shop owners for a reduction in visitor parking. The city seems not to have explored or researched the possible implications of reducing the volume of parking. There is no evidence that there are any taxes or financial incentives for employees to use a cycle to get to work.

### **3.1.6 Integration of spatial planning and mobility/freight logistics**

There is some evidence that the planning department of the HKL does not implement the public transport planning guidelines for all developments. In particular a number of small scale developments were identified by interviewees that have been approved which are not compliant with these guidelines.

The availability of public transport as soon as houses start to be occupied at the redevelopment of the Oil Terminal is a very positive move and one that demonstrates forward thinking and a commitment to public transport and investment in infrastructure. However the team is concerned that there remains a



commitment to provide relatively high levels of resident parking of the western and eastern harbour redevelopment. Despite a commitment to maintain a ceiling in the number of parking places the team considers that the levels of parking provision remains in conflict with the need to reduce the environmental impact of private motoring.

The absence of any incentives for **not** having a car, to participate in car sharing, or to purchase/rent low emission vehicles is very surprising.

It is also very surprising that in the central area the number of spaces has been growing. The policy is apparently to follow demand (car parking places per square meter of floor space) instead of steering the offer.

### **3.1.7 Road safety**

Trends in accidents and deaths are carefully considered and potential measures are designed to reduce deaths and injuries. Traffic safety measures are carefully assessed prior to implementation to ensure that they will achieve their objectives.

The city of Helsinki has set the goal of a yearly reduction of 2% in the number of injuries/accidents and deaths. There is an annual report on accidents injuries and death from transport incidents. (Traffic deaths have fallen from 50 to 20 between 1987 & 2005 in the metropolitan area; traffic accidents have fallen from 9000 to 4200 between 1989 & 2006 in the metropolitan area; traffic injuries in Helsinki metropolitan area have fallen from 2100 to 1150 between 1989 & 2007). Figures show that the 2% goal has been met, but the downward trend seems to have come to a halt.

It is acknowledged that with relatively few deaths as a result of transport accidents there are difficulties associated with effectively targeting policy measures. However there does not seem to be a long term goal for the reduction of deaths or injuries from transport and the EU target of reducing deaths by 50% between 2000 and 2010 is unlikely to be achieved.

### **3.1.8 Alternative fuels**

The Public Works department is participating in a number of pilot projects and experiments with alternative fuels. However its role in stimulating new technology and as a first mover is unclear.

It is not clear if the research the public works department is carrying out will be shared with businesses and organisations in the city. Although the CNG-heavy goods vehicle trials by Public works were very successful, there is little evidence that these results have led to a commitment to investment in replacing Diesel with CNG. Significant benefits could be gained by jointly carrying out research and commissioning new vehicles with other private and public sector partners.

The public transport company has a commitment to purchase environmentally friendly technology and equipment for passenger transport - fuel, HDV, buses etc.

There is little evidence that the city administration has considered that Training for professional drivers of the city, e.g. bus drivers, towards energy friendly driving, has the potential to reduce the energy used in buses by 5 to 10%.

The biodiesel bus project will be expanded from 300 to 500 buses at the end of 2008 (33% of fleet). However there are no plans to convert the whole fleet to 100% biodiesel.

### **3.2 Conclusions and recommendations**

Helsinki is already delivering excellent public transport for most of the citizens who look forward to its continued modernisation. Despite Helsinki's great public transport there are many challenges. It should be realised that an integrated transport policy is much more than offering a high quality public transport system.

Reducing commuting into the city and the metropolitan area requires the city administration and in particular politicians to think carefully about how you work together. The new transport authority is the key to the public private partnership that is needed to solve many of the structural transport challenges.

The new transport authority will need to find the finance and an operator if the park and ride idea is to be realised.

Although there are some promising new cycling paths proposed there is a need for a comprehensive network, e-biking, tax incentives and a great deal of encouragement will be required if it is to become a real alternative to the car and to put in on an equal footing to public transport and cars. Promoting bikes for short business journeys needs to become trendy and sexy.

Congestion charging is a political time bomb – its ticking away, but will not go away. Most cities agree that getting motorists to pay the real cost of motoring is the only way forward. Some cities have decided to adopt a strict parking policy in combination with a zoning strategy. The challenge for Helsinki is to find realistic charges for parking in the city centre. Other tools can be found in the use of infrastructure charging for all modes of transport drawing on new opportunities arising with new satellite, information, and communication technologies. The health, mobility, and environmental qualities of car free areas cannot be felt in Helsinki as there are very few car free areas!

Although Helsinki has recently relocated its freight port it has not solved its congestion problems – just moved some of them! Personal transport by ferry remains a congestion, noise, and air quality generating problem in the city centre. It is not clear that either YTV or Helsinki have a clear understanding of the environmental and economic costs and benefits of car ferries being located close to the city centre, or of maintaining and extending the local ferries. Cost benefit assessments of ferries, trams and subways are a useful instrument to rationalise transport policies.

A comprehensive approach to integrating economic promotion and development with sustainable freight planning is missing – it doesn't seem to be anybody's responsibility but everybody's problem.

The city of Helsinki is aware of the problem of long distance commuting and transverse commuting. Solving this will require a suite of new policies and actions – incentives, taxation, and restrictions on urban sprawl will all be needed if the environmental consequences are too limited.

There is little evidence that the city administration has considered that in order to promote an efficient traffic flow, a comprehensive approach to the coordination of the different road works in the city could make a significant contribution.

## 4 Air Quality

### An ideal authority

***“effectively limits human and ecosystem damage from exposure to damaging chemicals and particulates”***

#### ***Benchmark ideal objectives and targets***

- 1. Monitor and report to stakeholders state of all air borne pollutants (especially) particulate matter (PM), nitrogen oxides and ground level ozone and take measures to bring air quality within limits within EU legislation*
- 2. Integrate policy planning for transport, mobility and heating/cooling with air quality planning*
- 3. Monitor and report on premature deaths and human health correlation with air quality.*
- 4. Review current PM2.5 levels in preparation for the current EU non-binding target value for PM2,5 in 2010 to be replaced by a binding limit value in 2015 (25 µg g/m3 for both target value and limit value);*
- 5. Directive 2008/50/EC on ambient air quality assessment and management sets certain standards for the concentration of pollutants in air. Some standards are legally binding, others are guidelines.*
- 6. Prepare for the 4th Air Quality Daughter directive – which requires monitoring of 4 heavy metals – arsenic, cadmium, mercury, nickel, and polycyclic aromatic hydrocarbons (PAHs for short).*
- 7. Prepare for the new emission ceilings (kton/year) to be respected by Member States by 2020 for SO2, NOx, VOC, NH3, and primary Particulate Matter (PM2.5).*

*To save about 1.71 million life years from exposure to particulate matter, to reduce acute mortalities from exposure to ozone by 2.200 relative to the position in 2000 and to reduce the threat to the natural environment from both acidification and eutrophication by 55% from what is technically possible, SO2 emissions will need to decrease by about 82%, NOx emissions by about 60%, VOCs by about 51%, ammonia by about 27% and primary PM2.5 by about 59% relative to emissions in 2000.*

## 4.1 Peer Review Assessment

For the *air quality benchmark ideal* the review team has found that the city politicians and officers are well aware where in the city the limit values for the different pollutants are exceeded. Based on these facts and knowledge the city of Helsinki has developed an action plan of measures to improve air quality levels within a set deadline. With these measures Helsinki will not achieve the EU NO<sub>2</sub> limit value by the year 2010 and intends therefore to ask for derogation according to the new air quality directive.

The action plan seems to be effective in monitoring the levels of PM<sub>10</sub>, PM<sub>2.5</sub>, ozone, and NO<sub>2</sub>. The plan contains measures to ensure that limit values are not exceeded or where they are currently exceeded there are measures to bring them within the limits, including short term actions to reduce pollution peaks.

The city of Helsinki has made the programme available to the public through providing hard copies and through the internet. As such members of the public can see where the pollution is excessive and the nature of the pollution.

In preparing the action plan a health impact assessment of the likely impact of each proposed measure was undertaken. However there is no evidence that Helsinki city council fully understands the current impact of air quality on the health of Helsinki residents and visitors. Neither is there any evidence that the impact of current air quality on human health is being monitored.

The measures to control or suspend activities such as motor vehicle traffic in the plan are mainly limited to promoting public transport. There is an implicit presumption in the air quality plan that increasing the modal share of public transport will improve air quality. There is little evidence in the plan that changes to transport policy to reduce emissions are a political priority.

Helsinki has established an air quality working and steering group with representation from most stakeholder organisations and departments, but there is little involvement by Helsinki politicians in either the steering group or in the monitoring of air quality or the effectiveness of actions. Although there is recognition of the need to reduce the impact of particulates from wood burning stoves it does not seem that the timetable and resources available will allow sufficient impact to be made quickly.

Also there is little evidence that the air quality plan has the necessary human resources to achieve its ambitions. The responsibility for the implementation of the action plan and each and every measure has yet to be agreed.

## 4.2 Conclusions and recommendations

The city of Helsinki has a privileged position with generally good background air quality, – its air quality problems are not as great as most European cities – notwithstanding this situation the Air Quality Action plan is of very high standard. Of particular note is the comprehensive health impact assessment of the likely implications of each of the measures. This represents ‘on paper’ best practice. What is missing is the translation of this work into monitoring of the health impact of emissions and a commitment to ongoing monitoring during the implementation of the plan.

Although the city of Helsinki has involved key legal partners and many technical institutions in preparing the plan the work should be described as a technical exercise.

The real challenge is to now establish the necessary partnerships that are needed to deliver the measures – the problems of particulates and NO<sub>2</sub> will not go away without effective working relationships, investment, and political commitment. The existing working group is a good start for the technical cooperation, but the political commitment and involvement necessary to put in place fundamental changes in policy are urgently needed.

Few of the measures in the plan have a budget, delivery mechanisms, phasing plan, or a reporting system for monitoring their success.

The team looks forward to successful implementation and the administration and its partners solving the NO<sub>2</sub> and particulates problems.

## 5 Noise exposure

### An ideal authority

*“effectively limits human exposure to excessive noise in accordance with EU legislation<sup>3</sup>”*

*The World Health Organisation estimates that 40% of the EU-15 population is exposed to continuous road traffic noise at levels which would cause significant annoyance. Noise levels for around 20% of the EU-15 population are at the level that may be associated with cardiovascular effects (above 65 dB (A)). Around 30% of the EU-15's population is exposed to night time noise levels from road traffic that could disturb sleep (above 55 db (A)).*

#### **Benchmark ideal objectives and targets**

1. *Monitoring the environmental problem; by drawing up "strategic noise maps" for major roads, railways, airports and agglomerations, using harmonised noise indicators Lden (day-evening-night equivalent level) and Lnight (night equivalent level). These maps will be used to assess the number of people annoyed and sleep-disturbed respectively throughout Europe.*
2. *The first priority noise maps must be completed by 30 June 2007.( Major roads > 6 million veh/year Major railways> 60 000 train/year Agglomerations> 250 000 inhabitants Major airports > 50 000 movts/year).*
3. *The second priority noise maps must be completed by 30 June 2012 (Major roads> 3 million veh/year Major railways > 30 000 train/year, Agglomerations > 100 000 inhab)*
4. *Informing and consulting the public about noise exposure, its effects, and the measures considered to address noise, in line with the principles of the Aarhus Convention*
5. *Addressing local noise issues by drawing up action plans to reduce noise where necessary and maintain environmental noise quality where it is good. The directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of authorities.*
6. *Integration of noise monitoring and mapping with all activities that generate noise and are causing excessive noise*

<sup>3</sup> Directive 2002/49/EC relating to the assessment and management of environmental noise requires authorities to produce strategic noise maps and actions plans for major transport infrastructure and major urban areas <http://europa.eu.int/comm/environment/noise/home.htm>

## 5.1 Peer Review Assessment

Noise is one of the biggest sources of complaints for people living in urban areas and it can seriously reduce their quality of life and have important consequences for health. The number of people exposed to different classes of noise levels can be converted into health effects such as; annoyance, sleep disturbances and premature mortalities. Monitoring of high noise levels but also of complaints and health aspects is important.

The monitoring of exposure to excessive noise is not a priority within the city, there is no categorisation or understanding of the health implications of the exposure to excessive noise. The responsibility for understanding and addressing the health implications of exposure to excessive noise is unclear.

There is no evidence that any health professionals have been involved in carrying out a health impact assessment or providing a commentary on the health implications of urban noise or the predicted values by the noise maps.

The city has an incomplete understanding of the current present and predicted noise levels. The team is concerned that the city has an incomplete understanding of those areas of the city where limit values are exceeded. There is need to improve the collection of real data on noise from road traffic, rail traffic, airports, and industrial activity including ports to improve this understanding.

The legally required noise maps have been prepared by the city of Helsinki. And measures are in place to prepare the second generation noise maps. The noise maps are open to the public on the internet and expert staff is available to meet the public.

The transport modelling for the noise maps is based on traffic not exceeding the speed limit. However there is considerable evidence that most traffic significantly exceeds the speed limit and generates considerably higher levels of noise than that predicted in the noise maps. This undermines the value and legitimacy of the noise maps as a tool. It also points towards a failure of the enforcement of the speed limits.

Helsinki has prepared a Noise Action Plan based upon noise mapping results. An ideal plan should include measures to manage noise issues and effects.

There is no central database of complaints about noise. Consequently no department, officer, or politician has a complete understanding of the true level of noise complaints. And because the understanding of complaints is incomplete the understanding of whether measures are effective is incomplete too.

Helsinki real estate and their partner construction companies are effective in notifying and discussing with neighbours of sites potential problems of excessive noise issues arising from construction.

The EU directive indicates that the plan should have measures to prevent and reduce environmental noise where necessary (particularly where exposure levels can induce harmful effects on human health). Above that the measures should preserve environmental noise quality where it is good (particularly protecting quiet areas against increase of noise in agglomerations above 250,000 inhabitants). The Helsinki noise action plan includes recommendations for quiet

urban areas. City planning department and environment centre are responsible for implementing the quiet areas policy in land use planning. However there is little evidence that there is a budget or the mechanisms in place to deliver these objectives.

Best practice elsewhere in Europe includes the effective integration of noise management with traffic planning and land-use planning. However the Helsinki Plan has very little evidence of effective integrating tools and techniques that are being used to restrict road traffic. Of great concern is the city councils willingness to accommodate the significant pressure to maintain good road and private car access to new residential areas.

Like most cities Helsinki is experiencing the same uneasy tension between the need to make the city more compact and meeting air quality and noise levels. However in trying to reconcile this tension it does not seem that noise considerations are central to spatial planning in the city. As a consequence there is evidence of new housing areas being planned which will expose residents to excessive traffic noise.

There is little evidence that protecting residents from excessive noise is a criterion that is central to spatial planning. Evidence was provided that the noise criteria to accommodate residential development is that there must be a place in the outside (e.g. garden) that is <55dB (daytime) and a place inside that is <35dB (daytime). However there was some concern that these were criteria not used by other cities and did not relate obviously to any health or quality of life criteria. Concern remained that exposure to excessive noise is given insufficient weight in the preparation of spatial and master plans for small developments.

There was no evidence that a noise impact assessment of the Masterplan for Sipoo has been carried out. The team carried out only a limited assessment. However from the evidence exposure to excessive noise seems highly likely in Sipoo as a result of the proposed development layouts and freight/harbour traffic.

The Action plan is unclear in defining the exact contribution that each proposed technical measure (e.g. noise barriers, retro-fitting vehicles, low-noise road surfaces, soundproofing buildings, modifying rail tracks) will make to meet the targets.

Although there is good understanding of the contribution that quiet concrete can make to reducing noise there is little evidence of a commitment to carry out further research into adapting it to meet the climatic needs/road tyre characteristics of the city cars and trucks. E.g. there are three test areas for quiet concrete. Tests have been going on for 2-3 years now and testing will continue for another 3 years. Although the Action Plan includes a commitment for some of the extra funding needed for quiet concrete on the city roads there is no long term commitment to the use of quiet concrete and no funding from the national ministry. As such there seems little prospect of any technical solution to the consequences of exposure to excessive noise from roads.

There is little evidence that city of Helsinki considers it important to address the issue of exposure to excessive noise. No evidence was found that any departments in the city provide technical information, grants, subsidies, or survey assistance to address the issues of exposure to excessive noise. There is little evidence that the city recognises that building occupants and owners need this support and in not providing any support the city council is unusual when



compared to many similarly sized cities. Many Dutch and German cities provide grants to building owners (e.g. Breda and Leipzig).

Helsinki has not yet implemented any noise related economic incentives or taxes (road traffic charging or parking fees differentiated according to noise levels of vehicles or to noise levels in the area).

Mechanisms for the implementation of measures in the noise action plan have yet to be fully established, existing cooperation arrangements will need to be strengthened with greater management involvement and programming of meetings if effective solutions to the exposure to excessive noise are to be found.

Although there is budget of 1-2m € for noise reduction measures there does not seem to be a mechanism for prioritising the use of this budget based on a risk approach.

The noise action plan includes only the direct costs of the proposed measures. There is no system for understanding or for valuing the external costs associated with health/ cost emissions/accessibility etc.

Reducing exposure to excessive noise from traffic on the national road system is the responsibility of the national ministry. However although Helsinki has made available its matching funding for the construction of noise barriers the finance is not available from the national government. Until these noise barriers are constructed the traffic noise from the roads cannot be mitigated and people will continue to be exposed to excessive noise.

There is concern that the system of giving a single environmental permit to the port authority does not give adequate control over the exposure to excessive noise. This relates to both the freight and passenger port. Although there is evidence that the system in place protects existing residents from exposure to excessive noise the systems does not anticipate potential complaints. There is no evidence that the spatial planning for the western harbour recognises the weakness in the noise control mechanisms from the port, the sensitivity of local residential areas and people to changes in the noise signatures and levels. It is surprising that the noise monitoring within the port is carried out by the port company itself and that there is no independent verification of the measurements. The measurements are used by the environmental centre for reporting purposes only.

Poor noise action planning (forward thinking and noise signature assessments) in the past resulted in the need to install electricity supplies for ships as a result of complaints about the on-board generators. Electricity for ships in the harbour has now been provided.

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## 5.2 Conclusions and recommendations

The city of Helsinki has met its legal obligations to prepare both the plan and the actions necessary to reduce exposure to excessive noise. However there are some very significant weaknesses in the current approach to noise in the city;

- The health problems caused but exposure to excessive noise are unknown.
- The indirect costs associated with health problems are not known.
- Because the noise action plan is based on predicted noise levels this undermines the credibility and reliability of the noise maps – unless the predicted values are regularly verified.
- The extent and significance of complaints about noise are unknown.
- Noise needs to be given equal weight in the forward planning of new communities and developments. Reducing exposure to excessive noise is compatible with good architecture and a compact city. However for it to be compatible noise must be given earlier and equal consideration in the planning and urban design process.
- The measures in the action plan are ‘on paper’ only. No procedures, partnerships, monitoring programme or investment plan are in place to deliver the measures.

It is difficult to work with the national agencies that don't want to either work with Helsinki, or make the necessary investments. Without active involvement of the national government some of the key noise problems cannot be solved. Here there is a need for high level political involvement.

Perhaps Helsinki needs to get national agencies and other partners to recognise the seriousness of noise problems of the city. Perhaps if these health problems and the costs are clear it would be easier to persuade partners of the seriousness of the issue and get them round the table and contribute the needed finances.

The Helsinki Noise Action Plan contains some great measures – but they seem to be dominated by technical solutions, noise barriers, quiet concrete etc. Although these technical solutions may solve some of the problems most solutions will come from reducing the generation of noise. These solutions must be aimed at changing people's behaviour, increasing cycling and walking, rethinking the way the city plans the urban fabric, etc. The action plan does not seem to give the necessary priority to these soft measures or to recognise that the solutions need to be implemented in a integrated way. Of particular concern is the fact hat the action plan does not include measures that will reduce the generation of noise.

A central database of complaints and more knowledge about the health implications of noise in the city would help the city government to improve the quality of life in Helsinki. Noise is perhaps a more significant environmental issue than many in Helsinki realise.

## 6 Energy and Climate policy

### An ideal authority

***“takes effective action to limit the city's impact on climate change and manage its costs and negative effects on society and the environment in accordance with international targets and commitments”***

#### **Benchmark ideal objectives and targets**

1. *Adopting the Kyoto Protocol commitments for an 8% reduction in emissions compared to 1990 levels.*
2. *Adaptation to, and mitigation of, climate change should be integrated in all relevant policies.*
3. *Committed a reduction of 20% of its CO<sub>2</sub> emissions by 2020, as a result of 20% increase in energy efficiency and a 20% share of renewable energy sources in the energy mix.*
4. *By 2010 5.75% of transport fuel should consist of biofuels, as an indicative target, (Directive 2003/30/EC), considering raising their proportion to 8% by 2015.*
5. *(Or: )By 2020 replace 10% of transport fuels with biofuels.*
6. *An overall saving of 9% of final energy consumption over 9 years until 2017 as indicated by the Energy End-use Efficiency and Energy Services Directive.*
7. *Commitment to move towards carbon neutrality.*

### 6.1 Peer Review Assessment

#### 6.1.1 Targets and goals

Helsinki has recently decided to sign the Covenant of Mayors, and with that committed a reduction of 20% of its CO<sub>2</sub> emissions by 2020, as a result of 20% increase in energy efficiency and a 20% share of renewable energy sources in the energy mix.<sup>4</sup> Despite these new targets for renewable energy and energy efficiency, Helsinki's ambitions are modest when compared with some other European cities, who target towards carbon neutrality.

Climate policy is the responsibility of the mayor. He chairs a climate commission with all the relevant vice mayors. This political cooperation is not evident at a management, operational or technical level, within and between the different companies and departments. The way the climate change programme is organised does not promote or facilitate horizontal and integrated working.

<sup>4</sup> Brussels, 10.1.2007-COM(2007) 1 final

Different opinions on monitoring, target setting, and resources between YTV, the Environment Centre, the city planning department and Helsinki Energy need to be managed more effectively to ensure that progress is made rapidly. Also there is little evidence of opportunities for NGO stakeholder involvement in implementation.

Although interviewees indicated that Helsinki energy has no budgets available for research into solar thermal, geo thermal or the use of biomass, further evidence received subsequent to the visit indicates that such a budget does exist. The peer review team is concerned that any research into renewable energy seems to be carried out in isolation from the strategic development planning of the site and in particular the development of new areas. As a consequence it seems unlikely that Helsinki Energy will achieve the 20% CO<sub>2</sub> reduction target without purchasing emission rights from other energy producers.

Helsinki Water does not have an adopted climate change and adaptation strategy. There is no evidence that the research into the consumption of warm water by households is used to change policy or charging costs.

Next to climate goals, resulting in CO<sub>2</sub>-targets, an overall saving of 9% of final energy consumption over 9 years until 2017 as indicated by the Energy End-use Efficiency and Energy Services Directive should be targeted.

Helsinki Energy has signed a triple agreement with the Ministry of Employment and the Economy (efficiency of own production and distribution and of customer advice, which are well under way already). These are in the same under ETS. There are separate agreements for the non-ETS sectors, and Helsinki energy is also part of the agreement the city has signed with the Ministry. But there are no action plans for existing private dwellings, for reducing fuel consumption, or for concentrating the city within its boundaries.

Adaptation to, and mitigation of, climate change should be integrated in all relevant policies.

### **6.1.2 Planning**

The potential to use the waste incinerator development to provide 3% of the renewable energy needs of the city seems to have been missed, by locating the new waste incinerator away from the city centre.

Helsinki Energy has developed and invested in a sophisticated infrastructure that is delivering heating and cooling to the city.

Although the Helsinki district heating and cooling system is internationally acknowledged as a efficient installation, the city has not taken the opportunity to embed renewable energy generating capacity into the design and construction of the new harbour and other residential development areas – either connected to the DH/C network or independent.

For the new development areas across the city, the team did not see research or investment in innovative concepts of local heating and cooling that makes use of other sources of energy than through district heating supply (heat condensing/ balancing heat loads between commercial and residential users, local use of renewables etc.).

There is little evidence of the recognition of the benefits of carrying out feasibility studies into the potential for new buildings to be supplied from on site/embedded renewable energy generation. It is unfortunate that the development planning process presumes that all sites and all buildings should rely on the district heating system connection.

The team considers that the present challenge of moving cities towards CO<sub>2</sub> neutrality requires energy companies and politicians to consider all possible means of energy saving, energy efficiency and also alternative energy sources. There are many examples in European cities where CO<sub>2</sub> neutral heat sources are fed into the district heating net (waste heat from industry or from offices, heat from sea water, geothermal energy, etc.). Although Helsinki has some excellent examples of this there are many more opportunities that must now be explored. Team believes that an "ideal city" has to research these options, also when they are economically unattractive at the moment. In conclusion the district heating infrastructure is ideal for making use of decentralised energy sources.

### **6.1.3 New and existing buildings**

It is not clear if the necessary investment is being made in reducing heat demand - through energy efficiency investments, education, promotion, and energy efficient refurbishment - both in the public and private sector. The very successful co-generation systems may even be a barrier to reducing heat consumption.

An effective change of behaviour can only be achieved if individual households and enterprises are: aware of their energy use, feel directly the costs of a high usage and can directly influence their usage. Majority of Helsinki's energy users do not experience all three of these criteria. Efforts need to be redoubled if all 300.000 electricity customers and 13:000 DH users experience all these three criteria.

PWD has started to incorporate energy efficiency in the refurbishment of public buildings. Specification for new buildings will be improved to reduce energy consumption by 50% - at an extra cost of 3-5% of capital cost. Although the extra costs for energy friendly buildings are accepted in the yearly budget the additional costs are not made explicit. There are no budgets available for the 20% reduction now required.

Although PWD is carrying out research into energy friendly offices the first pilot office has yet to be built in Viikki. It is unclear when if ever this form of development will be common practice. Also in Viikki there are examples of low energy houses, but there are no policies or measures to ensure that these will become common practice, e.g. in the old harbours.

Although 700 public buildings have energy monitoring and there is an action plan to reduce energy consumption, the on-line performance/consumption system is yet to become operational. Helsinki is negotiating with the chamber of commerce and ministry to establish an energy advice centre with the support of an ESCO (Energy Service Company). However it is surprising that there is no agreement among the relevant energy partners in Helsinki on the use of ESCOs to support the municipal energy policy.

The team is encouraged that energy metering (heat and electricity) has been introduced into public buildings. It is unfortunate that the very effective instrument

of heat metering to reduce energy use has not yet been implemented for individual households. The team is concerned that there seems to be little priority given to the installation of water meters. Of particular concern is the 'blind spot' as hot water consumption is a significant proportion of energy consumed.

There is evidence that the investment criteria used by the real estate department are dominated by short-term low costs and architectural aesthetics. There is little evidence that life cycle, carbon foot printing or whole life costing is included in the evaluation criteria.

Although investment in construction and technical solutions are important there is little evidence that the environmental costs associated with building management is considered a priority. The real estate department may not have invested sufficiently in the necessary controls and training for building occupiers and managers to ensure they can make their required contribution to meeting the targets.

The team received conflicting evidence of the effectiveness of Helsinki Energy Advisory Centre. It is surprising that the city of Helsinki does not provide advice or financial assistance for private households to improve the energy efficiency of their homes and flats. In due course the planned charging for actual use will be the most effective way to reduce consumption.

On the surface green procurement seems well advanced and integrated in the departments and companies of Helsinki. However closer examination seems to indicate that some of the criteria are rudimentary, in particular building materials are selected according to environmental criteria that do not include life cycle costing or a measurement of CO2 footprint.

According to the EU Directive 2003/30/EC by 2010 5.75% of transport fuel should consist of biofuels with consideration to raising their proportion to 8% by 2015. In Helsinki the policy for biofuels seems to be limited to the public transport fleet, and limited experiments at the PWD-fleet. There is no evidence that the city is concerned about including private cars in this policy.

The peer review team received conflicting evidence about the profile and effectiveness of the R&D work of Helsinki energy. However the team is clear that there is little known about its programme of work by key stakeholders in the city administration including engineers, planners, architects and politicians. In the absence of any public reporting the team also questions the usefulness of any budgets and investments in R&D.

## **6.2 Conclusions and recommendations**

Energy efficiency – Helsinki is aware that using energy more efficiently and reducing energy consumption is the first and most important step in addressing climate change - you also know that it is perhaps one of the biggest challenges Helsinki faces.

A good start has been made with setting energy efficient targets for new buildings – but the team are concerned that the ambitions are very modest whether in terms of thermal efficiency, air tightness – or the % of renewable energy - where other countries and cities are already developing 100% renewable and zero

energy new communities - the new communities at Kalasatama and Jätkäsaari only include a small number of energy efficient buildings - with no passive house or zero energy buildings – The insulation and thermal standards from being ahead of many cities are now only average and although Helsinki is exploring some renewable energy options it is not certain how much of these new communities will have their heat and electricity from renewable energy.

Dramatically improving the energy efficiency of all buildings in the city - not only the city council owned buildings but also private homes and buildings is just starting. More investments are being planned – but it is not clear if Helsinki is aware how much money is needed or what forms of investment will deliver the savings needed. Achieving the energy savings in private buildings will require new ways of working, new tools and new investment models both for Helsinki energy and for the city council.

Increasing the % of energy from renewable sources is a significant challenge – a start is the commitment to the wind park.

Many member states and cities legally now require all new developments to generate their own renewable energy – Helsinki seems strangely silent on this opportunity. It does not seem to be widely understood that the key climate change challenge is the need to produce heat and electricity without fossil fuels

The approach has been for many decades now to encourage connection to the district heating system – nothing wrong with this - but many developments provide the chance to locally generate both heat and electricity in a more climate friendly way. Urgently needed for that are feasibility studies into the use of geothermal, photovoltaic, local biomass and solar thermal renewable energy production on the new developments.

For effective climate policy Helsinki needs a climate adaptation plan that is informing the spatial, social, economic, and environmental development of the city. Remarkable is the lack of coordination between the different main actors in the city on reaching the climate and energy goals. Partnerships within and outside the municipal organisation are urgently needed. Citizens, NGOs and ESCOs should not be excluded from these partnerships.

The peers are concerned that energy consumption in Helsinki is being viewed as the responsibility of Helsinki energy – it is important to realise that the development and investment policies of the city administration are central to delivering emission targets – Changes to policies which deliver dramatically higher thermal standards for construction and renovation together with taking every opportunity to locally generate both heat and electricity must surely be the way forward.

The team is concerned that the city administration should consider energy as an integrated policy issue that demands a holistic approach to developing and implementing policies. The city has many local heat sources. Be it from water bodies, geothermal, or from different buildings or enterprises. In many European cities examples exist of local input of heat or of power in the net: IT-centres produce heat in Amsterdam, a theatre in Breda is connected to an ice skating hall and swimming pool, Vienna's metro stations, a school and fitness centre are heated with geothermal heat from the metro-tunnels, etc. We urge Helsinki to look at these options to support the excellent district heating network. And look

again at the targets for emission reduction targets –are they really ambitious enough for the capital city of Finland?

## 7 Water

### An Ideal authority

*“effectively promotes and practices sustainable water-use based<sup>5</sup> on the long-term protection of available water resources.”*

### 7.1 Peer Review Assessment

In order to come to grips with water scarcity and droughts, the first priority is to move towards a water efficient and water-saving economy. Saving water also means saving energy, as extracting, transporting and treating water comes at a high energy cost. In this context, it is essential to improve water demand management. A wide range of policy options will therefore need to be considered<sup>6</sup>. The EU recently presented an initial set of policy options at European, national and regional levels to address and mitigate the challenge posed by water scarcity and drought within the Union.

#### Benchmark ideal objectives and targets

*Put in place water tariffs based on a consistent economic assessment of water uses and water value, with adequate incentives to use water resources efficiently and an adequate contribution of the different water uses to the recovery of the costs of water services, in compliance with WFD requirements.*

*The 'user pays' principle needs to become the rule, regardless of where the water comes from. Nevertheless, private households should, irrespective of their available financial resources, have access to adequate water provision.*

#### 7.1.1 Water consumption & security of supply

For the **water consumption & security of supply it is important** that the city measures and monitors the consumption<sup>7</sup> and leakage<sup>8</sup>. Although Helsinki Water registers the leakages, it does not have a complete understanding of the consumption of all residential properties or of most businesses. Aggregated statistics are available but further refinement seems to be missing. The core

<sup>5</sup> The Water Framework Directive (2000/60/EC)

<sup>6</sup> [EU Communication on security of water supply](#)

<sup>7</sup> Average daily household water consumption per capita varies from Spain with 265 litres to Lithuania with just 85 litres.

<sup>8</sup> In some countries, leakage from urban water supply networks due to the poor condition of the pipes can account for as much 50% of all



business of Helsinki Water is supply of high quality and enough quantity of drinking water.

Helsinki Water uses more than 30% of its income (turnover) to reinvest in modernisation and renovation of the drinking water networks. It has a good understanding of the levels of total consumption (although not per individual household) and the standard of the network (condition, leakage etc)

Helsinki's drinking water is of good quality and is available as required with no known limitations of supply. There is no evidence of overexploitation of the drinking water resources. Notwithstanding the availability of this high quality supply, neither Helsinki nor Helsinki Water has any initiatives to encourage the reduction in the use of potable water in general.

There is no evidence that Helsinki City council or Helsinki Water have initiatives to encourage consumers to recycle or reuse water. No research has been carried out into the benefits of water reuse or recycling.

The team is concerned that the number of water meters that have been installed in households remains very low. The team is surprised that there is a general lack of stimulus given to reduce the use of drinking water. Even in new buildings there are no compulsory design measures in place to reduce consumption of water or a requirement that all apartments must have metered supplies.

The team acknowledges that Viikinmäki WWTP produced in the year 2007 19 GWh electricity and 35 GWh heat from biogas. It is impressive that 96 % of the biogas was used for power and heat production and 4 % was wasted due to capacity limitations.

However the peer review team is concerned that there seems to be no awareness within Helsinki Water or the administration that all the water that is delivered, will also have to be treated, to be pumped and heated (energy) and finally also have to be cleaned (capacity of water treatment plant). As such reducing the energy consumption and emissions of the city must involve reducing the water consumed or at least ensuring that all the energy used in pumping/treating etc is from renewable sources.

If the city has the goal to reduce the use of energy and emissions, and save finance, then an almost unlimited production and consumption of drinking water should be avoided.

The benefits of water reuse and water recycling as part of the sustainability criteria for giving building permits or master planning new developments are not considered. Also there are no incentives for support or guidance available from either the real estate department, Helsinki Water or the planning department for businesses who wish to install water reuse systems.

As the only shareholder of Helsinki Water, the Helsinki city council has an economic interest in Helsinki Water. There is the danger that reducing the amount of produced and delivered water is not in the economical interest of the city.

Despite assurances from Helsinki Water it remains unclear if the monopoly position means that there is a transparent price setting for the supply of the drinking water. For instance it is not transparent that the costs of water treatment

and water run-off are covered by the charges to those who cause and create the waste and run off.

There is evidence that rainwater strategy of the city council is not adapted to the Water Framework Directive. The team is also concerned that the strategy has as its objective to address climate change but includes few measures that are relevant.

There is no evidence that if water reuse and water recycling was practised there could be a reduction in the cost and extent of investment in new water infrastructure.

### **7.1.2 Drinking water quality**

To make sure drinking water everywhere in the EU is indeed healthy, clean and tasty, the Drinking Water Directive sets standards for the most common substances (so-called parameters) that can be found in drinking water. In the Drinking Water Directive a total of 48 microbiological and chemical parameters must be monitored and tested regularly. In principle WHO guidelines for drinking water are used as a basis for the standards in the Drinking Water Directive.

While translating the Drinking Water Directive into their own national legislation (transposition of the DWD), the Member States of the European Union can include additional requirements e.g. regulate additional substances that are relevant within their territory or set higher standards. But Member States are not allowed to set lower standards as the level of protection of human health should be the same within the whole EU.

Member States have to monitor the quality of the drinking water supplied to their citizens and of the water used in the food production industry. This has to be done mainly at the tap inside private and public premises.

For the drinking water benchmark ideal we are looking for evidence that the politicians and officers monitor nitrate<sup>9</sup>, bacterial and metal contamination in water supply.

The Environment Centre independently monitors no more than 445 drinking water samples each year (in accordance to control program), and these are in public places with high water use. The monitoring of drinking water is coordinated between the Environment Centre and Helsinki Water (who takes hundreds of samples every year) and there is an exchange of data. Environment centre takes samples as supervisory authority focusing on risk assessment where as Helsinki Water performs self control according to control program based on water quality. According this monitoring the drinking water supply meets all EU and national quality standards.

Helsinki has policies that are reducing the application of fertilizers and pesticides on agricultural and open space land that may affect the small open waters in the city. Helsinki Water has investment programmes for the replacement of drinking water infrastructure that allows it to meet quality criteria.

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<sup>9</sup> Nitrates Directive (91/676/EEC)

### 7.1.3 Urban wastewater

There seems to be an overall coverage of effective treatment of urban wastewater (sewage, run-off and some industrial discharges) to prevent ill-health and environmental damage in accordance with legislation<sup>10</sup>.

Targets have been set for the nitrogen and phosphorus content of discharge waters from the waste water plant in compliance with the legislation<sup>11</sup>.

The discharge from the waste water plant is even cleaned to a higher standard to compensate for the poor quality surface runoff.

The environmental impact of the waste water plant discharges are closely monitored by both Helsinki Water and by the environment centre.

Helsinki city council covers the costs associated with fish reintroduction programmes required as a result of poor surface and waste water discharges – Although waste water charges are significantly higher than these costs it is not clear whether the actual polluters meets the full environmental costs.

There are benefits to be gained from establishing and maintaining database of the different environmental sensitivities of different water courses (and therefore the different treatment levels) that are required.

Helsinki Water and Helsinki city council have not assessed whether the present urban waste water strategy and the disposal of sludge/compost is the most climate friendly strategy. As a consequence innovative waste treatment schemes (e.g. small urban areas) using more natural treatment processes such as reed beds and composting toilets are not promoted.

Sludge from residual waste water is cleaned and sold as compost. This compost cannot be used by farmers as the phosphorus content is too high to allow compliance with low phosphorus farming requirements. The production of the compost costs (rough estimation) €60/tonne but it is sold for (rough estimation) €16/tonne. Since this difference is paid through the waste water fees, one could say that the polluter pays.

In relation to the waste water and other discharges from major industries in urban areas in accordance with legislation<sup>12</sup> it has been found that there are no emergency procedures to manage risks to the water supply in the event of contamination/pollution etc. Just because these risks have not yet occurred does not mean that a risk management plan should not be prepared!

Charges to ships include unlimited disposal of waste water. Although this is a significant benefit for the ships the team is concerned that neither the port authority nor Helsinki Water consider it necessary to monitor the waste water quality of the ships discharge. The view is that the level of contamination would be so low as to be irrelevant to the plant. Given the costs associated with the waste water treatment plant evidence of the pollution levels of ship waste water discharge quality should be collected.

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<sup>10</sup> EC Directive 91/271/EEC as amended by Directive 98/15/EC sets out strict requirements for the collection and treatment of urban wastewater. From 31 December 2005, it applies to urban areas producing volumes of wastewater equivalent to 2,000 people. Smaller urban areas must treat their wastewater if connected to the treatment network.

<sup>11</sup> [www.europa.eu.int/comm/environment/water/water-urbanwaste/index\\_en.html](http://www.europa.eu.int/comm/environment/water/water-urbanwaste/index_en.html)

<sup>12</sup> IPPC Directive (96/61/EC)

It is not known if the waste water and disposal strategy is appropriate for climate change, or if Helsinki Water and Helsinki city council have prepared a water catchment plan based on current best practice.

#### **7.1.4 Bathing water**

The target for bathing water quality in the urban area should be that all bathing waters are registered under the Bathing Directive<sup>13</sup> and that they meet the guide values.

In Helsinki there are effective procedures in place to monitor and report on the bathing water quality in accordance with the BW directive. Effective procedures are in place to raise awareness about the quality of the city's bathing water. Information is available to the public about bathing water quality, pollution incidents affecting bathing water and measures are in place to close bathing waters if water quality is poor. Measures are in place to identify bathing waters used by the city's inhabitants that are not formally designated. The partnership between the sports department and the environment centre is effective in promoting the health benefits of bathing waters

Where bathing water quality does not meet the standard set out in EC law, the priority is to bring it up to that standard. The bathing water quality is closely linked to the release of untreated urban waste water and the measures to improve water quality that are usually relate to the construction of wastewater treatment plants or storm-water storage facilities. The peer review team has some concerns about the lack of active management of surface water quality by the planning department, real estate and Helsinki Water. There is evidence that Helsinki may not fully understand the consequences of how urban drainage specifications affect poor bathing water quality.

Of particular concern is the fact that there is no risk assessment process for the design of new development areas to manage the possible impacts of surface runoff for coastal water quality.

#### **7.1.5 Surface and groundwater**

According European legislation all surface water has to achieve 'good ecological status' and 'good chemical status' by 2015.<sup>14</sup>

The City of Helsinki together with regional environment centre has prepared protection plans for I-class ground water sites that include risk assessments.

Helsinki has prepared the Small Water Programme, an integrated management plan and programme of measures (that promotes the protection and enhancement of existing surface and groundwater bodies and achieve the aims of 'good ecological status' and 'good chemical status') for each river basin district.

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<sup>13</sup> [http://ec.europa.eu/environment/water/water-bathing/index\\_en.html](http://ec.europa.eu/environment/water/water-bathing/index_en.html)

Directive 76/160/EEC on the quality of bathing water requires that bathing waters are formally designated where bathing is authorised by the competent authority and also where bathing is traditionally practised by a large number of bathers

<sup>14</sup> Directive 2000/60/EC requires the management of water resources on the basis of the river basin by a 'competent authority' designated by national Governments.

Although the city has banned the use of pesticides on over 400 hectares of its agricultural land there is no evidence that all surface water will achieve good ecological status and good chemical status by 2015. Helsinki has its small water programme but the general responsibility for water resource management lies with the Ministry of the Environment.

Helsinki has not put in place Political **and** technical processes to ensure that the Small Water Programme will become the over-arching policy framework for all water policy initiatives. The budget available for maintenance of approximately 42 lakes and water bodies is not sufficient to make the needed investments for water quality improvement. The storm water handling plan, ground water management, small waters plan, coastal waters management & monitoring and the bathing water management & monitoring are independent and seem not to be developed or executed in a coordinated way.

There is evidence that some of the surface rainwater overflow causes peak values of pollution in open waters; however there does not seem to be any single department that is responsible for coordinating the management of all surface waters in Helsinki.

The Urban run-off water strategy for the City of Helsinki together with the surface and groundwater strategy for the city now need to be verified and updated to ensure that they are appropriate for future climate changes.

The participation of citizens or NGOs in the development of the plan is not stimulated. Although external fisheries associations are involved in the management of some small waters it is not clear if this involvement is ad hoc or part of a strategy to involve local stakeholders in the management of local waters.

## **7.2 Conclusions and recommendations**

Helsinki and Helsinki Water are well known for its drinking water quality and more recently for the sophistication of the new water treatment works –whether it is bathing water monitoring or protection of water in natural areas – Helsinki is impressive for its technical solutions and approaches.

Helsinki has already recognised the main challenges that face the city – climate change and Helsinki's contribution to the condition of the Baltic Sea. We commend Helsinki for the Baltic Challenge initiative.

A significant gap is however water saving. Helsinki has no goals, no strategies and no tools for water saving. With the high amount of good quality water supply there seems to be no priority for that. We encourage Helsinki to look at other aspects like the greater need for water treatment, heating, infrastructure, pumping, cleaning, etc.

The peer review team appreciates that Helsinki Water carries out technical measures to reduce consumption, however that the behaviour of consumers should not remain neglected. Further policy and behavioural measures are needed, according to data from Urban Audit the water consumption in Helsinki is 209 l/cap. We think there is a room for improvement. (In the Netherlands this is 126 l/cap)

Helsinki has identified many of the measures that will be needed for water management.

The need for a storm water handling plan, reducing runoff from agricultural land stopping wastewater discharges from ships will all be essential. But a few pieces of the jigsaw are missing.

The storm water handling plan is needed and soon as possible. Surface water, runoff, bathing waters and coastal water quality is being affected by poor storm water management. It is advisable to look again at the way all the water in the city is managed. Where does it go, how is it used? And it is not just the function of Helsinki Water, water management needs a cross sectoral and cross departmental approach; and one that includes all the key stakeholders – inside and outside the city boundaries.

Helsinki needs to rethink the place of water in the way the city plans new communities and developments. For instance, the way that surface water is dealt with and the role of permeable surfacing.

Surprisingly there is very little evidence in the city of how the city administration and Helsinki Water is using rainwater and grey water recycling, natural treatment systems and sustainable urban drainage to help solve urban water issues. Although there is some knowledge of these systems there is little evidence of even the technologically simple innovations being used – communal garden irrigation, water for wildlife reserves etc. The team encourages the administration and Helsinki Water to jointly explore the benefits of these as part of the holistic approach now needed to conserving water resources.

Helsinki needs to find out pretty quickly where these and other techniques will be needed and how each can help. It might be not too late to look again at the new development areas – and to future proof them for climate change.

The Small Waters Programme is a great start but like many of your initiatives for it to be an effective technical solution it now needs to be integrated with others – the message is that you need to have a planning and managing system in the city that looks after all of the water

## 8 Soil Protection

An ideal authority effectively protects the soils as a finite resource.

### ***Soil protection – benchmark ideal objectives and targets***

*The overall objective of the Soil Thematic Strategy is to the protection and sustainable use of soil, based on the following guiding principles:*

- 1. The protection and sustainable use of soil, based on the following guiding principles:
  - a. Preventing further soil degradation and preserving its functions: when soil is used and its functions are exploited, action has to be taken on soil use and management patterns, and,*
  - b. when soil acts as a sink/receptor of the effects of human activities or environmental phenomena, action has to be taken at source.**
- 2. Restoring degraded soils to a level of functionality consistent at least with current and intended use, thus also considering the cost implications of the restoration of soil.*

### 8.1 Peer Review Assessment

It has not been found if Helsinki integrates soil protection in the formulation and implementation of all policies. Neither have we found research programs that are closing any knowledge gaps in certain areas of soil protection. We have not found any activities for increasing public awareness of the need to protect soil.

Helsinki understands the risks associated with all contaminated sites and has a time limited and effectively financed remediation strategy based on sound and transparent prioritization of the sites to be remediated, aiming at reducing soil contamination and the risk caused by it.

A significant percentage of the planned increase in population of Helsinki will take place on brownfield remediated sites. Helsinki is aware of the risks associated with all contaminated sites and has a remediation program and a strategy that prioritizes their treatment based on risk to human health.

Soil remediation at the western & eastern harbour and oil terminal takes place using traditional technologies, with no excessive costs and uses site based research to select designs based on end use functionality. The proposed remediation demonstrates creativity to create natural capital and a commitment to establishing some natural drainage systems.

However it is clear that contemporary innovative remediation methods are not being used - e.g. linked to geothermal energy production.

The review team has not been able to determine if Helsinki has effective financial and legal instruments for the remediation of orphan sites, or if there is sharing of information between purchasers of contaminated land.

Next to remediation another aspect of soil policy is prevention. A city should have effective policies for the prevention of contamination via a requirement to limit the introduction of dangerous substances into the soil.

Although in Helsinki soil protection is part of the assessment for planning a site for development there is no evidence that it is considered as a priority criteria. For the selection of greenfield sites for development, the quality of the soil and its protection seems not to be regarded in Helsinki. There seems to be no, or not enough, awareness that e.g. agricultural land has a unique soil quality. Soil quality, that should be protected for removal, disturbance, erosion, etc. It is known that one of the biggest threats of the quality of small waters in Helsinki is the disturbance and erosion caused by building sites.

Also planning can take care of effective urban growth policies to limit soil sealing. A city should also have policies that are reversing the trend of soil sealing by rehabilitating 'brownfield sites' and mitigate its effects by using construction techniques that allow maintaining as many soil functions as possible.

The team is concerned that there is not a single person or department that is responsible for conserving soils or soil making materials. The biodiversity, agricultural and growing value of soils is not recognized in the way that approvals are given for the development of land. As such there are no mechanisms in place to conserve soils as a finite resource

There is evidence of recent attempts were recently made to conserve soils through 'soil banking'. However as these and other soil recycling projects have never been owned by any department and as such they have never become part of the service offered by the city administration. It seems that by 'default' the market is seen as the solution to the 'problem' of excavated soils.

The team is concerned that reliance on the market to recycle and reuse soils cannot be effective in protecting soils and conserving their inherent value as a finite resource.

## **8.2 Conclusions and recommendations**

There is no question that Helsinki has an excellent understanding of where contaminated land is located. There is a great data base, permitting and monitoring systems. Helsinki is just starting to address some significant sized sites. Elsewhere in Europe technologies for remediating these large sites have been advancing rapidly. Helsinki is advised to look again at the process of designing the remediation strategies, to make sure that the most up to date technologies are being used.

Helsinki should look again at the risk assessment systems to verify the remediation standards are appropriate. Such reconsideration may save money, time, energy, and natural resources.



Finland and Helsinki is unusual in not having a stand alone legal system for recording, protecting, conserving and reusing soils and soil making materials.

The background of this situation may be understandable. But on the one hand Helsinki sees the need to protect agricultural land from pesticide application because of runoff water. On the other hand Helsinki does not protect and conserve soils. When evaluating new sites for building sites it is not clear that the value of the soils on the site is considered.

Helsinki relies on the market to regulate the sale and distribution of excavated soils and rock. There has been set up a pilot soil and materials banks but this has never become established.

Quite what happens to excavated soils seems unknown. On the other hand Helsinki is considering using dredged sea sands to meet construction needs. While there might be other land in ownership with materials that could be used as an alternative.

## 9 Leadership

### 9.1 What to achieve?

The benchmark ideal requires Helsinki to provide clear community leadership and to be working with partners to deliver unambiguous and challenging ambitions for the local area. It is based on a shared understanding of the interests of all sections of the community. The benchmark ideal considers this element under three headings:

- **Relevant and shared** – ambitions reflect the vision for the area, the relevant issues, and opportunities, and are widely held.
- **Integrated** – ambitions are clearly reflected in both the municipality's and partners' plans and activities.
- **Monitored and updated** – the municipality knows whether ambitions are being achieved and updates them to reflect changing circumstances.

#### ***The benchmark ideal - relevant and shared leadership***

1. *The municipality is recognized internally and externally as providing effective leadership and being willing to champion and address difficult issues.*
2. *The municipality works with partners to address key local, national, and possibly international, challenges and, through this, secure the well being of local communities.*
3. *Clear ambitions reflect the scale of the issues and opportunities whilst remaining achievable. Ambitions are widely understood and supported by all stakeholders.*
4. *The ambitions reflect the shared understanding the authority and its partners have of the interests and needs of all sections of the community. This understanding is based on information gathered and shared in a coordinated way between the municipality and its partners, which take into account the demographic changes and the socio economic and environmental context that the municipality and partners are operating within.*

### 9.2 Peer Review Assessment - relevant and shared

The ***relevant and shared leadership ideal*** requires that the city politicians and officers understand the key geographic, demographic, economic, environmental, and social context that the city is operating within.

From the wider ranging discussion there is evidence that many of the private sector partners are not engaged with the city council and its departments sufficiently to allow them to have a full and shared understanding of this context. There is evidence that the city council exercises strong leadership in deciding

polices but that its partnerships with the private sector do not reflect the potential contribution that they can make to meet the challenges faced by the city. This represents a major lost opportunity.

### **9.2.1 Leadership and ambition**

Although the council has a number of corporate documents that present its leadership ambitions environment and sustainability are not mentioned in the three strategic themes and strategies of the city for 2005-2008, although there are many environmental and sustainability ambitions. The model of preparing shorter term plans (e.g. for 4 years) does not recognise the significance of some of the key environmental challenges. The Helsinki Action Plan for Sustainability in 2002-2010 was the first recognition of the need for a longer term plan, but measures to implement it and move to cross sectoral working do not seem to work well enough. For example there is little evidence that the climate change ambitions will be translated into precise actions with definitive timetables for implementation and new working arrangements. The ambitions of the Climate Change Action Plan are very modest and are unlikely to be sufficiently challenging if Finland is to meet its Kyoto and emerging reduction targets.

Departments and chief officers articulate environmental and sustainability ambitions in both literature and in discussions. However there is a gap between rhetoric and the achievements of some action programmes, new developments, and investments. Helsinki is no different to many administrations, with a greater need to stream line decision making, devolve responsibility, become more efficient, and identify new investment vehicles and models.

The Baltic Sea challenge represents an example of the new strategic leadership models required across all of the environmental and sustainability themes. Such models now need to be underpinned with innovation in funding and operational delivery of the programmes to deliver success.

Although the city council and some departments are engaged with many other cities in sharing their work and problems, this peer review is a relatively isolated example of the city administration seeking to benchmark its leadership aims objectives and performance against other capitals.

Although some ambitions are stretching and challenging, many ambitions in the area of transport, emissions, soil management and remediation, water management, and sustainable construction are very modest. The ambitions and targets in these themes need careful consideration.

There are gaps in the sustainability and environmental ambitions of the city administration and its companies when compared with other cities and even the national administration. Many cities are already 100% zero carbon through investment in renewable energy and offset. Within Finland the national railways use 100% renewable electricity, proving that it is possible and realistic. Currently there are no plans for Helsinki transport to move towards renewable energy. Similarly it is surprising that polices that promote economic development do not include promoting of the clustering of companies to provide economic and environmental synergies.

The peer review included a limited number of external 'stakeholder' panels and interviews. Many of the private sector representatives provided examples of a divergence between the ambitions of elected members, municipality officers,

partners, and those of stakeholders. With many private sector companies wanting the council to be more environmentally ambitious! What concerned the peer review team was that the private sector representatives provided examples demonstrating that there is not a partnership culture with citizens, stakeholders, elected members, and officers. As a consequence the peers consider that there is not a shared or common sustainability ambition nor are there clearly defined responsibilities and accountabilities between the actors.

The peers identified a number of examples and decisions where certain environmental ambitions and standards seem not to have been given due weight and consideration in decisions taken by the administration. This may be a result of the peers not having access to the full information. However it is indicative of the need to have a decision making system that ensures that all environmental standards and norms are applied. Many European cities provide funding for an independent environmental ombudsman who has the power to examine decisions that are challenged by businesses, citizens, and voluntary organizations. These cities consider that the environmental ombudsman improves democratic accountability, leadership, decision making, governance, and environmental quality.

### **9.2.2 Partnerships**

The peers were impressed with many of the partnerships established and managed by the city administration and its departments. However there is evidence that quite a number of Small and Medium sized Enterprises (SME's) are reluctant to join these partnerships (e.g. waste/energy) because they have experience of participating in partnership where they are not involved as equals and where their views have not been listened to.

Representatives from other municipalities have provided some evidence that Regional partnerships with other municipalities are dominated by Helsinki. This is not surprising given the dominance of the city within the region. It does however indicate that there are relationship and profile issues that need managing by the administration.

The administration conducts public engagement using a wide variety of tools and techniques. However it is not clear that there is a consistent approach to this engagement, either in the stakeholders that are targeted or the themes. Of particular concern is that there is little evidence of a public debate about the policies needed to address climate change/emissions and what balance there should be between encouragement and regulation and penalty and reward. Without this strategic discussion with key stakeholders it will not be possible to develop a comprehensive suite of integrated and supportive policies that are effective – addressing the climate change issue will require the active involvement of all stakeholders!

There is little evidence that the leadership has itself carried out a review of the effectiveness of its partnerships with the private and voluntary sectors and whether these partnerships are "fit for purpose" in agreeing ambitions and setting targets. Most partnerships seem to be focused on local issues (e.g. wholesale market).

The challenges of the Baltic Sea, reducing emissions and moving to a low carbon economy requires the administration to move to a cross sectoral approach that

realises the potential contribution of both the private sector and citizens. The present departmental approach to service delivery within the administration is not suitable or appropriate to engendering the partnership working that is needed to solving these problems. There is little evidence that the administration has policies and initiatives that are designed to promote creative solutions from businesses and citizens to key city wide environmental problems - "trust your citizens".

There is evidence that the competition that takes place between municipalities in the Helsinki region for employment, investment, and homes will continue to result in urban sprawl in the metropolitan area. Although it is encouraging that some limits are being placed to protect natural areas, there is a need to move towards a shared spatial vision and collaborative environmental planning if the wider damaging effects of urban sprawl and the high carbon economy are to be reversed.

It is clear to the peer review team that 'Silo' and 'vertical' policy development and decision making dominate working practices to the detriment of making progress on key sustainability issues – exposure to excessive noise, sustainable freight, emissions, renewable energy, storm water handling etc. Within the administration this is evidenced by the fact that the contribution of public lighting to climate change emissions is not well understood. The responsibility for planning and managing the lighting network is unclear. In order to make progress the relationship between Public Works and Helsinki Energy needs to be clarified as to who is responsible for reducing the emissions from lighting.

Certain politician and officers recognize that partnerships with the private businesses to assist in them becoming 'low carbon' and environmentally friendly need to be established. However initiatives seem to be taken by officers and funded from EU grants. There is little evidence that the critical role of these partnerships in delivering reduced emissions and improved environmental quality has been recognised by political leadership.

Other cities have recognized that a move to this partnership working requires a re-skilling and reorientation of human and financial resources – addressing the challenges of climate change, low carbon economy, storm water management, Baltic sea challenge will require Helsinki to invest in retraining staff and changing investment models.

In order for support services for businesses to become more environmentally friendly the administration needs to design these services in partnership with the businesses so that their needs are met (e.g. EcoCompass). There is evidence from meetings with stakeholders that businesses consider the administration to be failing to lead the city in dealing with some key problems - traffic, emissions, noise, increasing the facilities available for recycling.

There are many successes within the public transport sector and there is good cooperation between the main actors. However key weaknesses remain and there is little evidence that the failures of the existing partnerships in sustainable transport have been recognised in the way that the partnerships with the private sector are being established in the new transport authority.

It is not clear why Helsinki has not established a partnership with commercial car sharing clubs in the city and metropolitan region. There is evidence that because it is a commercial business there was reluctance from the city to become actively

engaged and to use it as part of its suite of tools to improve sustainable mobility. It is also surprising that there is no partnership with cycle shops to promote cycling. There is lack of involvement and support from Helsinki officers and politicians in the initiatives taken by the NGO cycling organisations to promote and market cycling in schools.

The administration is in partnership with the chamber of commerce to make progress on the emissions from the private sector. The peer review team is concerned that the majority of partnerships established by the administration seems to be based on tenders let by the administration rather than an open dialogue on how best to meet the needs of the city. The peer review team suggests that the partnership culture that exists needs to be changed - 'Joint ventures' and 'special purpose companies' are little used to deliver services and meet needs.

Few departments (if any) have officers who are designated as responsible for establishing and managing partnerships that will help in achieving targets. Evidence was presented that the neighbouring city of Espoo has reviewed the effectiveness of its existing partnerships and in establishing new partnerships adopted a SMART approach. This has ensured that each partnership is SMART = it has a *Specific* function, it has *Measurable* targets that are *Achievable*, and *Realistic* and all its targets and activities are *Time* limited)

The SMART management discipline is evident in a small number of activities of the administration. However the peer review team is concerned that few officers understand their role or expected contribution to achieving the long term ambitions in the climate change plan. It is not clear when the plan will be translated into SMART targets or who will lead in this work.

The peer review has not fully considered the role of the port in the environmental management or sustainability of the city, and so any assessments are only tentative. However there is evidence that the port has considerable independence in deciding the developments that take place within its boundaries. As a result it is not clear that there are effective procedures in place to manage the external environmental impacts of the activities of the port – freight, commuting emissions etc. The peer review team is concerned that although the port has an environmental management system there is no evidence that it is integrated with the decisions making systems that control the environment immediately outside the port.

The participation of the health and social department in the cycling working group is an isolated example of the cross sector working that is required to address key challenges that must be copied for other key sectors (transport/noise/air quality/planning/energy etc).

This is one of the few working groups with political representation and in this is a best practice example; it provides evidence that there would be considerable benefit if politicians were more actively involved in the implementation of environmental initiatives - through participation in working groups, boards, establishing partnerships etc.

There is a view from both internal and external stakeholders that their current involvement is superficial and that decisions are often made by the politicians without sufficient hands on involvement and without sufficient knowledge of the

issues. This raises issues of the ongoing training that is provided for politicians to ensure they have the appropriate level of technical competent to take decisions.

### **9.2.3 Decision taking**

Although the leadership decided to commit and invest in the wind parks there are many more key decisions and changes to existing policy that are needed if the city is to move towards becoming more sustainable. There is evidence that the city council has not yet taken a series of hard/unpopular decisions when necessary, as a result little progress is being made on key issues of congestion, emissions, noise, the economic pricing of energy, making the private motorist pay the cost of noise/emissions, economic pricing of parking and increasing the capacity of trains.

Although there is evidence that the city planning department usually considers transport issues in master planning and preparing spatial plans it is clear that it does not always take into account all the other environmental issues (health/noise/water/energy/air quality) in deciding on development proposals.

The successful preparation of certain plans (e.g. air quality, noise) and some developments (e.g. waste water treatment) has created a 'winner syndrome' ("target achieved – therefore we can close that issue!") The management approach (i.e. brief for working groups etc) and the way that decisions are taken needs to recognize the need for continual improvement in performance and the effective implementation of actions.

It is not clear if the administration has a full understanding of how investment and other policy decisions have an effect on the sustainability of the city. There is little evidence of the use of sustainability appraisals or policy impact assessments to understand the potential effects of programmes and initiatives. Of particular concern to the peer review team is that there is little evidence that the city administration understands the contribution that Helsinki Water or Helsinki energy presently makes to the sustainability of the city, and crucially what their potential contribution might be in the future.

An example of this is that the potential of the waste water plant to provide heat and electricity together with its future development, financing remains an unresolved issue amongst departments. There is little evidence that the full potential economic and environmental benefits of the waste water plant have been objectively evaluated. External environmental costs and benefits do not seem to have been included in the assessment.

### 9.3 Peer Review Assessment - Integrated leadership

***The benchmark ideal: “Integrated leadership”***

1. *Ambitions are clearly reflected in the municipality's strategies and plans, both statutory and otherwise. Within the authority people are enthusiastic about achieving the ambitions. All politicians contribute to the development and review of ambitions and related strategies.*
2. *The municipality understands how its own services and activities, and those of its partners, can contribute to achieving ambitions. There is an open and mature approach to sharing and combining resources between partners.*
3. *The environmental strategy reflects the ambitions, which are broken down into clear actions and SMART (specific, measurable, achievable, resourced, and timed) targets deliverable in the short, medium and long-term.*
4. *The municipality takes responsibility for ensuring that partnership arrangements are sound and deliver the priorities, which support the overarching community ambitions for the area.*

For the ***Integrated leadership ideal*** It was not possible to assess whether the aims and objectives of the various environmental and sustainability plans are reflected in the city councils corporate plan.

Helsinki has been one of the leaders in its adoption of sustainability programmes and more recently the 2004 Sustainable Development as one of the core strategies of the city council. However it is not clear if “sustainable development” remains a mainstream priority or whether there is a new shared vision for the Sustainable development of the city.

Although good progress is being made on adopting and starting to implement sectoral plans (noise air quality etc) it is not clear whether there is recognition of the importance of effective mechanisms for integrating these sectoral plans into a holistic “sustainable development” approach to planning the city.

Within the municipality, members and officers at all levels and contractors (e.g. internal and external providers) are engaged in a wide range of consultation around community needs. However there is some evidence that local people and sectors of the community do not always understand or support the municipality's environmental and sustainability ambitions. Stakeholders provided a variety of examples around parking, recycling, and renewable energy where the ambitions of the municipality are very different from those of small businesses and citizens.

There is evidence that some departments only carry out the legal minimum stakeholder engagement actions. The peer review team is concerned about the level and quality of engagement with service users, local citizens, partners, and stakeholders.



Although there are many established groups that are given the chance to comment on planning issues there is little evidence of innovative measures designed to understand the views and opinions of 'hard to reach' groups and individuals. Although the annual planning brochure is distributed to all householders there is a general reliance on the internet and displays in offices for development proposals and it is considered that this will not improve environmental governance and standards of decision making in planning.

It is not clear who plans, manages, coordinates, or collates this engagement or if the results are integrated to inform municipality and community ambitions.

Environmental education in schools is amongst the most effective engagement work carried out by the schools and environment centre. Stakeholders compared the environmental awareness and understanding of young people with other citizens and provided evidence that the communication to citizens about changes of environmental services, particularly waste collection, and recycling could be significantly improved. Notwithstanding the sharing of responsibility for this with YTV there is need for improved coordination between the administration Helsinki Water, Helsinki energy, and YTV in communicating information to stakeholders

The peer review team made a number of enquiries about how the economic benefits of proposed developments are assessed and traded against environmental and health costs and benefits. The team was looking for a transparent process and evidence that is in the public domain. However there was little evidence that the administration is considering these wider health or environmental costs associated with economic growth and promotion. Discussions with stakeholders panels, team observations, and evidence from interviews has given the team a suspicion that the hidden environmental costs (noise/air quality/emissions) may be being overlooked.

A similar issue revolves around evidence from businesses that the administration does not always understand or take into account the economic consequences of many of its decisions e.g. location of bus stops, frequency of bus times etc.

Both these issues indicate that the policy making of the administration would benefit from integrating economic and environmental policy evaluation.

## 9.4 Peer Review Assessment - Monitored & Updated

### ***The benchmark ideal leadership that is Monitored & updated”***

1. *The municipality and its partners monitor both what is and what is not being delivered.*
2. *Changes to, and progress against, the ambitions are communicated effectively to elected members, municipality staff, partner organisations, local people and other stakeholders.*
3. *Monitoring is used to anticipate new trends and challenges.*
4. *Mechanisms are in place to identify changing circumstances locally nationally and regionally and to respond proactively to these.*
5. *The municipality is practiced at making other’s initiatives its own and reflecting best practice in its activities and seeks to influence thinking sub-regionally, regionally, and nationally as appropriate*

The **Monitored & Updated** leadership ideal assessment identified that the monitoring of plans is irregular, fragmented, and uncoordinated. With a few notable examples there is not a culture or an operational procedure that requires plans to set SMART targets to assess progress.

There is evidence from the air quality and noise plans that effective action is not always taken if implementation progress is not satisfactory. There is failure of management and leadership in this aspect.

With the failure of these actions to be implemented and rapidly changing circumstances there is evidence that many plans are not updated nor are key stakeholders involved in these revisions.

An example is that although there is evidence that Helsinki recognises the need to develop intermodal and environmentally friendly transport of freight - there is little evidence that current initiatives will deliver the rapid progress that is needed to reduce the impact of progress.

The peer review team did not assess the environmental performance management of the city. As such any conclusions are only tentative and incidental. Nevertheless the team is concerned that it is not clear if the environmental management system is effective in focusing the resources of the administration and departments on addressing the most significant environmental aspects of departments’ work. There is some evidence that those who are involved in the reporting of progress do not understand the relationship between the environmental management systems, the annual environmental report, and targets in plans.

The protocols; responsibility, timing, scope, transparency etc for reporting on environmental performance by departments in the administration and companies is unclear. Helsinki Water has recently moved to produce a sustainability report – although an encouraging move the report does not obviously follow any of the international corporate social responsibility (CSR) reporting or auditing protocols.

Further clarification of these protocols and consistency of public reporting of the achievements of the environmental management systems will allow stakeholders to understand and monitor its effectiveness.

The administration is struggling to effectively monitor the actual environmental impact of developments. There is little evidence of the 'post construction' monitoring of the actual effects of developments as compared with predicted effects – noise, biodiversity, air quality, transport trips etc. This seems to be as a result of there being no resources for post construction monitoring. The peer review team are concerned about the long term effects of poor post construction monitoring the impact of developments.

Although the Baltic sea challenge is an excellent initiative it is not clear who is responsible in the administration for 'climate change planning' and in particular the modelling/forecasting of the expected rise in sea levels - or how this will relate to the challenge. The implications of the emerging climate change adaptation and mitigation policies for the Baltic sea challenge have yet to be fully understood.

The administration has established a SMART management approach and targets for the eco compass project with effective monitoring for the EU – and the project is delivering a series of light environmental management systems in private businesses. This best practice SMART management example has yet to be translated into most environmental strategies and action plans. As such few of them (noise, air quality, transport etc) have SMART targets to be achieved in the short medium and long term.

The relationship between the three environment centres (Finnish Environment Centre, Uusimaa regional environment centre, and Helsinki City Environment Centre) in Helsinki is unclear to businesses, residents, and voluntary organisations. Joint working, sharing of information and coordination of complaints between the three centres is poor. There is evidence that the potential of the city council environment centre to assist in changing behaviours of residents is not being realised. The staff in the centre; does "know the citizens" and could play a greater role in stakeholder consultation. Although customer satisfaction questionnaires are used to improve services recent reductions in the opening hours for telephone calls have reduced the volume of complaints and questions. The level of knowledge amongst the residents of the city about the services available from the environment centre could be improved.

The responsibility for reporting and publicising complaints about services and the environment in the city is unclear. Some systems of making complaints are very well developed - , e.g. the city map on the internet of YTV where you can click on a spot to complain about the condition of highways and cycleways. There is evidence that the full value of complaints is not being realised, there is little evidence that complaints (e.g. about noise, pollution, emissions etc) are used to improve policy - but rather are considered a problem to be solved.

The responsibility for carrying out research into the effectiveness of communication between the administration and business units and customers is unclear. Although two 'polls' have helped to identify the awareness of citizens it is not clear if there is any department that is responsible for carrying out research into the willingness of residents and businesses to change towards more environmentally friendly purchasing/actions/behaviour.

The role of the eco-persons as advocates of change is a good initiative that is improving the direct impact of the administration on the environment. However their role in influencing policies is unclear, particularly whether they could have a role in challenging policy decisions.

The relationship between the environmental management systems and action plans is unclear to officers and politicians. The outcome monitoring systems in place since 2000 do not help to understand whether policies are succeeding or failing. It is not clear how individual actions, policies and programmes are monitored and if this is a role for the environmental management systems.

Although environmental impact assessments are carried out by many departments there is no consistency in the methodologies that are used, the use that is made of the information and the availability of the information to stakeholders. The environment centre does not seem to exercise any coordinating or collating role.

## **9.5 Leadership – conclusions and recommendations**

Helsinki is exercising strong leadership on national and international level. The initiative for the Baltic Sea Challenge is a good example that generates an image of being innovative and providing a good quality of life for its citizens. The new generation of the Helsinki population is involved in environmental thinking through the outstanding education programs in schools.

The city has a strong tradition of efficiently supplying services to its citizens and has a municipal organisational structure that is designed to deliver these services.

The team has met with residents and partners. Both they and the team consider that there is a need for a move towards a new model for meeting the needs of the city, its citizens, and its businesses – and to meet the new challenges. – There is a need for more cooperation and sharing of responsibilities and resources with external stakeholders and partners. In the past there may not have been a need for this kind of approach but there is now a need to move from the administration exercising government to the administration enabling governance to take place.

The administration recognises that this governance or leadership model now needs to change – solving the challenges of climate change requires a new model of public private partnerships, moving towards an open form of working between departments and partners.

The team has seen some good examples that you are starting to recognise the need for these new models – the redesigning YTV and Helsinki Water both have the potential to help you better meet the new challenges of climate change.

Projects like the EcoCompass and the whole sale market are exactly that – projects. They have promise but many are isolated initiatives that never become main stream. Pilot projects, experiments, and initiatives are all important ways for the organisation to learn but does the city use this learning? – More investment in R&D is needed.

The new big challenges like climate and sustainable development, new development areas, etc. can only be achieved through a shared ownership with external and new partners.

Leadership means that the city should have the courage to delegate responsibilities, not only lower in the organisation, but also towards external partners, who might be better fit to lead specific strategies.

And to sum it all up “Raise your ambitions!”

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