

# Healthy urban planning in European cities

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## SUMMARY

*This article describes the WHO 'healthy urban planning' (HUP) initiative as it has developed through the laboratory of the Healthy Cities movement and evaluates the degree to which applicant cities successfully developed plans for HUP. The paper provides a brief historical perspective on the relationship of health and planning and an overview of the ways in which urban spatial development affects health. It then turns to the WHO European Healthy Cities Network (WHO-EHCN) and explains the evolution of the HUP programme through Phase III (1998–2002) of the Healthy Cities Project, showing how*

*the programme has grown from experimental beginnings to being 'mainstreamed' in Phase IV (2003–2008). Each city wishing to join the WHO-EHCN in this latter phase produced a programme for further development of HUP, and these were assessed by the Bristol Collaborating Centre. The paper presents the overall results, concluding that a significant progress has been made and the most advanced cities have much to offer municipalities everywhere in the best practice for integrating health into urban planning.*

**Key words:** Healthy Cities; urban planning; healthy environment

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## INTRODUCTION

Health and urban planning are natural allies. Modern town planning has its roots in the unhealthy industrial cities of the nineteenth century: endemic problems of poor water supply, sanitation, light and air triggered a response in terms of not only infrastructure engineering but also urban design. The codes of street and building layout were designed to banish forever the dank houses and airless streets.

It is ironic, then, that the connection between health policy and urban planning became tenuous in the twentieth century. The original health objectives of clean air and water are deeply entrenched in planning and building control systems, but contemporary diseases of

civilization have been ignored in many ways. Indeed, planning policies have facilitated if not actually fostered the powerful trends towards car-dependent, sedentary and privatized lifestyles, with their negative effects on health.

This paper highlights the important work of the Healthy Cities movement in seeking to reintegrate health and planning. The first section sets out the nature of the link and the problem of separation; the second section summarizes the evaluative methods used. The results are in two parts: an examination of the evolution of the WHO healthy urban planning (HUP) initiative, from inception, through pilot projects, to mainstreaming, and an evaluation of the progress made by the cities over Phase III (1998–2002) as evidenced by their applications for Phase IV (2003–2008). Subsequent

discussion points to five key elements in an ideal health-integrated planning system, concluding that health is a powerful motivator, capable of cutting across sectional interests in the process of city planning.

## URBAN PLANNING AS A DETERMINANT OF HEALTH

The environment has long been recognized as a key determinant of health (Lalonde, 1974; Whitehead and Dahlgren, 1991; Marmot and Wilkinson, 1999). The health-related professions increasingly recognize that promoting health solely through programmes of changing the behaviour of individuals or small groups is not very effective, reaching only a small proportion of the population and seldom being maintained in the long term (McCarthy, 1999; Lawlor *et al.*, 2003). What is needed is a more fundamental, social, economic and environmental change.

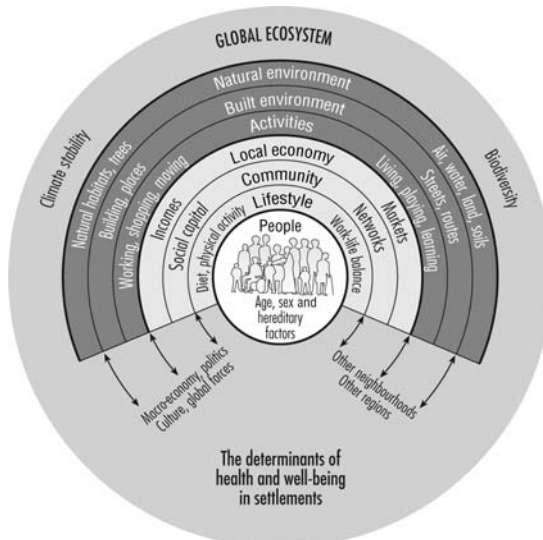
Urban planning as a mechanism of environmental control influences health in systematic ways. Figure 1 sets out a *settlement health map*, showing the various spheres of social and economic life and the wider environment that are affected by the spatial planning of settlements (Barton, 2005; Barton and Grant, 2006). It was inspired in part by Whitehead and Dahlgren's figure (Whitehead and Dahlgren, 1991), of the

determinants of health, and in part by the ecosystem model of human habitats (Duhl and Sanchez, 1999). The sphere of direct planning influence is the built environment: here defined broadly to mean the physical form and management of places: the buildings, spaces, streets and networks that make up human settlements. This sphere affects all the others to a greater or lesser extent, helping to shape some of the options that are open to individuals, social groups, businesses and state agencies. For example, through the provision (or lack of provision) of appropriate space, it influences what can take place and how accessible those activities are to different groups in the population.

Each outer sphere affects the health and well-being of *people*, represented by the inmost sphere (Whitehead and Dahlgren, 1991; Marmot and Wilkinson, 1999; McCarthy, 1999; Lawlor *et al.*, 2003)—the *natural environment*, for example, through the cleanliness of air and water; the *built environment* through the availability, convenience, safety and attractiveness of pedestrian and cycling facilities, parks and playing fields, and hence the propensity to take healthy exercise; *local economy* through inequalities in access to work and income; *community* through supportive social networks (or their lack). The model can be used therefore to help understand the relationship between health and planning.

Many of the urban development trends promoted by the market and facilitated by planning authorities are pandering to our unhealthy instincts (Barton *et al.*, 2000; National Heart Forum, Living Streets and CABI, 2007). Despite more than a decade of official advocacy of sustainable development, many conventions of the development industry remain trapped in a pre-Rio time warp. Across Europe, the expanding peripheral city areas exhibit a pattern of low-density, use-segregated, car-based development that not only uses land profligately but reduces the viability of local services, makes walking impractical because of distance and deters cycling. The fashionable office, retail and leisure parks that spring up in the wake of road investment typically rely on 90–95% car use. The segregation of land uses is undermining the potential for integrated neighbourhoods and local social capital. Unsustainability is literally being built into our cities.

In this context, health is a casualty. The decline in regular daily walking and cycling is



**Fig. 1:** Human ecology model of a settlement. Source: Barton and Grant (2006).

resulting in increased obesity and risk of diabetes and cardiovascular diseases (Franklin *et al.*, 2003). Social polarization of opportunity is exacerbated. People tied to locality—elderly people, children, young parents, unemployed people and immobile people—are increasingly vulnerable. The decline in local facilities, the reduction in pedestrian movement and neighbourly street life all reduce opportunities for the supportive social contacts so vital for mental well-being (Halpern, 1995). Health problems are being accumulated for the future, which will make the present problems of health service delivery look trivial by comparison.

Given that the quality of the urban environment is important for human health, it is puzzling that 'direct assessments of the links between the built environment and physical activity as it influences health are still rare' (Handy *et al.*, 2002). The research literature is divided between that focused on health outcomes (Halpern, 1995; Aicher, 1998) and that focused on planning interventions and behaviour (Hedcar and Curtis, 1995; Cervero and Kockelman, 1997; Williams *et al.*, 2000). Articles that make the connection explicit still promote the idea as innovative and newsworthy (Dubé, 2000; Jackson *et al.*, 2003; Barton *et al.*, 2003a, b).

This lack of progress is in part because of the difficulty in disentangling the influence of the built environment from related social, economic and personal variables in a rigorous way. Nevertheless, the evidence of the interconnections is steadily building. In relation to physical activity, for example, we can now say with confidence that incidental foot and bike trips (to get to somewhere for a specific purpose) are affected by a number of spatial variables: distance, density, form and layout; and recreational physical activity is influenced by the accessibility of parks and other facilities, the provision of pavements/bike-ways and the perceived aesthetic quality of the neighbourhood (Handy, 2005; National Heart Forum, Living Streets and CABE, 2007). We can link rising asthma levels generally to traffic-derived pollution (ozone), with some startling specific findings: in Atlanta when vehicle traffic was kept artificially low during the Olympics in 1996, traffic counts dropped by 22.5%, peak daily ozone levels by 27.9%, asthma emergency medical events by 41.6%, whereas other emergency events were much the same as usual (Jackson and Kochtitzky, 2001).

Rather tardily, the research community is embarking on a more cross-cutting research in this field. Its current relative paucity does not mean that health and planning have not been linked in practice. But normally this link is implicit, not explicit, lacking a systematic or comprehensive approach.

## METHOD

There are three stages to the evaluation of progress made towards a comprehensive approach to integrating health and planning in the World Health Organization European Healthy Cities Network (WHO-EHCN). The first is through participant observation in the development of the HUP programme over a number of years. In addition, self-identified cities reported on progress were interviewed individually and evaluated through discussion as part of a mutual learning exercise. Some of the results and conclusions were set out in earlier publications (Barton *et al.*, 2003a, b).

The second stage, in late 2005, involved the evaluation of 52 city applications for Phase IV of the Healthy Cities project. The raw material of this evaluation was the written applications supplied to the Bristol Collaborating Centre by the WHO Regional Office for Europe. They essentially show how far the cities had come during Phase III and by the start of Phase IV. The applications were, on occasion, supplemented by telephone calls to applicants to clarify particular statements. Where feasible, the accuracy of the written material was compared with the personal or reported knowledge of the applicant city and their programmes. With certain exceptions, there was consistency between the applications and reality. Where there was discrepancy, the actual performance was invariably better than the application suggested. Some applicant cities where English was not their native tongue had problems in conveying complex ideas with clarity. Overall, it is therefore likely—given the number of cities particularly in eastern Europe where no external check was available—that the results underplay the actual quality of the work going on.

The assessment of the applications involved three specific tests: the apparent level of understanding of HUP; the degree of involvement of planning agencies; and the quality of the programme to strengthen HUP. The way these

were assessed by the researchers is explained later.

The third stage is the evaluation of progress made by the end of Phase IV. This is the subject of another paper presented at the International Healthy Cities Conference in Zagreb in Autumn 2008 (Barton and Grant, 2010).

## THE DEVELOPMENT OF THE WHO HUP INITIATIVE

The WHO HUP initiative was borne out of a growing conviction that urban planning and related activities significantly influence the determinants of health (Duhl and Sanchez, 1999). Healthy Cities projects throughout Europe have sought, with limited success, to involve urban planners in their work since the late 1980s. The baseline was established in 1998 through a questionnaire survey. Respondents were the heads of urban planning departments in 38 cities participating in Phase II (1993–1997) of the WHO-EHCN. The survey found that regular cooperation between planning departments and health agencies occurred in only 25% of cases. Nearly one-third of planning heads considered that planning policies were actually incompatible with health in certain ways—especially rigid standards of zoning and design. Other anti-health issues highlighted were excessive levels of motorized traffic, the focus on private profit and public budgets, social segregation and the lack of attention to the everyday needs of citizens (Barton and Tsourou, 2000).

The foundations for the HUP initiative were laid in the mid-1990s with the participation of the WHO-EHCN in the European Sustainable Cities and Towns Campaign. The links between health and sustainable development formed an important element in the work of the Campaign (Price and Dubé, 1997) and provided an opportunity to begin to explore the relationship between health and urban planning. Meanwhile, urban planners across Europe were becoming increasingly aware of the importance of sustainable development, which emphasizes the need to tackle social, environmental and economic issues in a coordinated way. Their work in this area led planners to reconsider issues of the quality of life, well-being and, ultimately, health in cities.

In 1998, WHO began to work with urban planning practitioners and academics from across Europe in a more concerted way. A first step was to publish *Healthy Urban Planning—A WHO Guide to Planning for People* (Barton and Tsourou, 2000). It makes the case for health as a central goal of urban planning policy and practice, highlighting the role of planners in tackling the environmental, social and economic determinants of health. It discusses the relevance of the Healthy Cities movement to urban planners, drawing attention to the principles of equity, sustainability, inter-sectoral cooperation, community involvement, international action and solidarity. The book translates concepts and principles into practical ideas. It was produced in cooperation with a number of cities and academics who met to discuss the content at a seminar in Milan, Italy in October 1999 (WHO Regional Office for Europe, 1999). The group agreed 12 key health objectives for planners. The list provides a close parallel with the 12 goals of sustainable development:

- (i) promoting healthy lifestyles (especially regular exercise);
- (ii) facilitating social cohesion and supportive social networks;
- (iii) promoting access to good-quality housing;
- (iv) promoting access to employment opportunities;
- (v) promoting accessibility to good-quality facilities (educational, cultural, leisure, retail and health care);
- (vi) encouraging local food production and outlets for healthy food;
- (vii) promoting safety and a sense of security;
- (viii) promoting equity and the development of social capital;
- (ix) promoting an attractive environment with acceptable noise levels and good air quality;
- (x) ensuring good water quality and healthy sanitation;
- (xi) promoting the conservation and quality of land and mineral resources; and
- (xii) reducing emissions that threaten climate stability.

Urban planning, in this light, is seen as a key means of promoting health and well-being. Equivalently, human health, well-being and quality of life are seen as central purposes of urban planning.



The meeting and the book provided the momentum for the formation of the WHO City Action Group (CAG) on Healthy Urban Planning. The city of Milan agreed to lead and support the work of this group and hosted the first meeting at the Politecnico di Milano Technical University in June 2001 (WHO Regional Office for Europe, 2001). Senior urban planners and HC co-ordinators from 11 cities across Europe attended the meeting, making a commitment to begin a process to integrate health issues more fully into their work. The initial membership of the group included cities from all parts of Europe: Gothenburg (Sweden), Horsens (Denmark), Sandnes (Norway), Belfast and Sheffield (United Kingdom), Milan (Italy), Seixal (Portugal), Vienna (Austria), Geneva (Switzerland), Zagreb (Croatia) and Pécs (Hungary).

From 2001, this group of cities, working with specialist WHO advisors, was the focus for WHO's developing work on HUP (WHO Regional Office for Europe, 2001; WHO Regional Office for Europe, 2002; Barton *et al.*, 2003a, b). Group meetings provided a forum for sharing knowledge and experience of exactly what HUP implies in practice and how it affects day-to-day planning processes and outcomes. These planners developed understanding not just of each other's differences and unique perspectives but of their common situation and of how many European cities can draw on the experience of one city. The CAG provided the groundwork for subsequent expansion of the HUP programme. In Phase IV (2003–2008) of the WHO-EHCN, HUP was one of the four core themes for cities to develop. The other three were health impact analysis, physical activity and healthy ageing. HUP is still a new departure for many municipalities. The next section evaluates how far the whole network had learnt through Phase III and rose to the challenge of Phase IV.

## PROGRESS MADE BY THE START OF PHASE IV

By the end of 2005, 52 cities had been assessed for the membership of Phase IV. Each city was judged according to what improvements it planned above and beyond what had already been achieved. In some cases, cities had little tradition of land use planning (as in Seixal,

reported earlier) and therefore started from a low level. In others, there was a well-developed planning system but no established Healthy Cities programme which might already have built bridges between planning and health agencies. In a few, especially in Scandinavia, there were both appropriate legal systems for planning settlements and established planning/health links. It was possible for cities in any of these groups to perform well according to assessment criteria referred to in the Methods section.

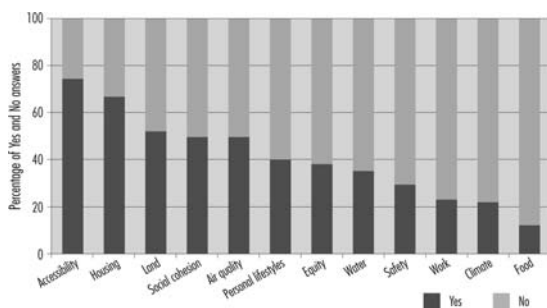
## UNDERSTANDING

The level of understanding of HUP was assessed by three tests, each of which relied on different parts of the application and thus helped to check on the significance and reliability of any particular facet:

- the range of relevant planning policy areas that were identified for action (using the list given earlier in this paper);
- the nature of the activities promised under the HUP heading: were they expressly about promoting change in the built environment, with health as an explicit driver for that change?;
- the degree of explicit linkage between HUP and the other main themes: for example, was HUP seen as part of the healthy ageing agenda?

All the cities were, of course, completely aware that their plans for the development of HUP were to be scrutinized. However, they did not know exactly how this would happen, so the opportunity for game-playing was reduced. The character of the answers generally suggests that applicant cities made a direct and honest response to the cues in the application form.

In relation to the first criteria, the applicants were not formally asked to reflect the full range of health objectives in their application, but specific aims and programmes might be expected to cover a number of relevant areas. The range encompassed helps to show the understanding of the multi-faceted nature of the health-planning relationship. Forty per cent of applicant cities mentioned at least half of the 12 WHO-EHCN objectives referred to earlier. However, 30% mentioned no more than 2 out of the 12. Housing quality and accessibility to



**Fig. 2:** HUP objectives identified in the applications.

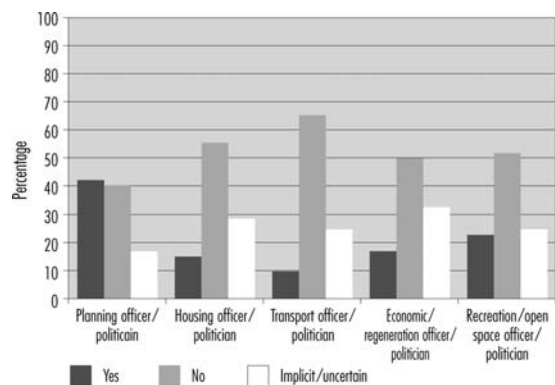
services were the objectives most commonly identified. Objectives of employment, food and climate change were all conspicuous by their absence from the vast majority of applications (Figure 2).

General understanding of HUP was judged by the degree to which applicants conveyed recognition of the integrated nature of land use/transport systems and the impact on health.

Most of the cities giving a good coverage of objectives also demonstrated a good overall understanding. Conversely, those identifying few objectives demonstrated poor understanding; the most common limitation was that they had not made the jump from a view of public health as purely about the co-ordination of services and campaigns, to one which was about the creation of a healthy urban environment. Twenty-five per cent of the cities showed weak or very weak understanding. The strongest cities not only demonstrated a coherent and well-developed understanding, but also linked together the three Phase IV themes: i.e. HIA was seen as a tool which could expressly be used to promote HUP, whereas HUP was seen as a process which could assist healthy ageing. Thirty per cent of cities showed a good or excellent level of understanding.

## INVOLVEMENT

Healthy Cities units in most municipalities are off-shoots of health departments and staffed by medical or public health practitioners. Planning agencies have not traditionally been involved. Phase IV acted as an incentive to broaden the management of the Healthy Cities programme. Without proper representation of planning



**Fig. 3:** Analysis of the involvement of planning agencies and officers.

agencies at a senior decision-making level in the programme, it is very difficult to achieve health-integrated plans.

A significant proportion of Healthy Cities steering groups had no obvious representation of planning agencies (Figure 3). This includes all the 'weakest' group of cities, as identified in the assessment of understanding. However, a few of the strongest cities also lacked representation. It may be that in some cities, effective power resides with the officers 'at the coal-face' (and at that level, there is effective co-operation) rather than with the steering group or management group (who may follow not lead).

## THE PROGRAMME

The programme for promoting HUP is the crux of the assessment. However, the evaluation process is not simple. The good applications, with relevant and coherent programmes and clear mechanisms for further building mutual understanding between health and planning professionals, are straightforward to assess. The poor applications, with no coherent approach, are also straightforward. But between lie many applications, over half of the total, which display some appropriate ideas without being sufficiently clearly argued or illustrated to judge their real merit. A majority of cities do have specific projects with a strong HUP dimension—in relation in particular to the topics of housing, accessibility, open space, regeneration and/or walking and cycling.

Although some of these projects are positive and innovative, others are not sufficiently tuned to a broad view of health. They appear spliced into the programme: perhaps from other agencies, without integrating the health angle. For example, some open-space projects are focused on issues of wildlife habitat preservation (valuable as that is) and do not address human recreational needs (with the accompanying health benefits) in any systematic way.

About a third of cities have gone the extra step and are integrating health objectives into their spatial strategies. Some cities have explicit 'bottom-up' programmes of community planning or public involvement in policy-making, enhancing social capital/empowerment. A very positive feature is that many cities have coherent programmes for the training and awareness-raising of staff, sometimes across organizational divides.

## OVERALL ASSESSMENT

The 52 Phase-IV applications can be divided into five groups (Figure 4).

Seventeen applications are very strong. These are from cities with a good understanding of HUP who also put forward an innovative, impressive or comprehensive programme. Sixteen applications are of good quality but are from cities with a less complete apparent

understanding of HUP. However, they show other strengths, such as a very good understanding in specific areas or they demonstrate the knowledge of their weaknesses, and their proposed activities address these. Others may lack current understanding but have demonstrated a good start in joining the WHO-EHCN and are pointing in the right direction.

Nineteen applications range from poor to very weak. These cities have been unable to demonstrate a real understanding of HUP in the application. Representation of planners in the core group is usually lacking, and the proposal may be vague or inadequate. The cities in this group usually do not display awareness of these weaknesses and consequently provide no remedy.

The development of the cities in the HUP CAG in Phase III provides insights into the way cities can progress from a weak one to a strong one. Three lessons stand out. The first is the critical importance of cross-sectoral co-operation. Collaboration between health and planning agencies is the starting point, but needs also to embrace transport, housing, regeneration, economic development and recreation. In Gothenburg, for example, a health group was established within the City Planning Authority to consider the health implications of planning proposals, drawing on expertise from other departments. In Milan, a pilot process was undertaken to introduce an intersectoral approach to developing three regeneration projects in the city, linking social and environmental interventions systematically.

The second lesson is the importance of producing a health-integrated spatial plan which involves the wider community in the issues. In Sandnes, health was fully integrated into the new municipal comprehensive plan (the main management document for all municipal activities). Health represented one of the three key themes of the plan, and is being implemented through a range of practical initiatives, with a focus on citizen participation. In Horsens, health was a central objective of all municipal activities and was integrated into urban planning processes. Neighbourhood regeneration and community empowerment activities have provided an important vehicle for implementing the health-oriented goals of the general municipal plan.

The third lesson is about the potential for radical change. In Belfast, where planning and

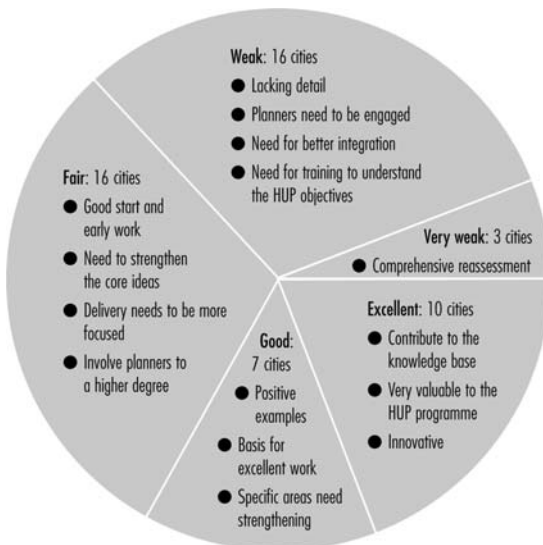


Fig. 4: Categorizing the city applications.

health have been institutionally divorced, the Northern Ireland Office of the United Kingdom Government Department of the Environment and Belfast Healthy Cities made a joint approach to promote and integrate health into a wide range of local and regional plans and policies. Tools such as strategic environmental assessment and a quality of life matrix were developed to assist this process. In Seixal, Portugal, there was little experience of town planning. Health provided a new motivation to promote it, and an interdepartmental working group was established to guide the integration of health into the emerging development plan and to implement this concept on a practical level.

## CONCLUSION

The WHO-EHCH HUP initiative provides a classic example of the development of a new principle, triggered by top-down encouragement and spread by networks of mutual support. For those municipalities that have only recently embarked on the journey, health is proving a powerful motivator for addressing planning issues that have not previously been faced, drawing in new constituencies of political support. For example, in Seixal, the health agenda has encouraged planning policies to protect allotments from development and to tackle problems of social exclusion (and related health inequalities) on isolated estates. Nevertheless, in many cities, there are difficulties because vertical departmental remits deter collaborative working—as one planner commented: ‘There are a lot of islands in this municipality’. Some municipalities—especially in northern Europe—have had health embedded in planning policy-making for some years. In these situations, interagency cooperation is the rule and not the exception, and the main planning documents reflect health priorities not only in their context but in decision-making processes that place a premium on building social capital.

Both the more experienced and the less experienced cities agree that health-integrated planning is valuable. Healthy opportunities are created. Planning policies become better, more responsive to community needs and more strongly supported.

An ideal health-integrated planning system has five key elements. The first is acceptance of

interdepartmental and interagency collaboration so that health implications can be properly explored and integrated solutions pursued across institutional remits. The second is strong political backing, which helps to ensure a consistent approach and the resources needed. The third is full integration of health with environmental, social and economic concerns in the main statements on land-use planning, transport, housing and economic development policy: placing health at the heart of planning. The fourth is the active involvement of citizens and stakeholders in the private, public and voluntary sectors in the policy process. The fifth is a toolbox of planning techniques that fully reflects health objectives and makes them explicit: quality-of-life monitoring, health impact assessment, strategic sustainability assessment, urban potential studies.

The WHO-EHCN experiment in HUP is not alone. Other cities around Europe are progressing in the same direction. Health arguments are increasingly being made explicit in planning policy debate (Breeze and Lock, 2001; Jones, 2002). Practitioners are grappling with the difficulties of assessing health effects (Morgan and Mahoney, 2001). But the WHO-EHCN does demonstrate both the power of the idea in changing minds and opening new avenues and the necessity of a sustained, progressively more systematic approach. Health is a powerful motivator, capable of cutting across vested interests in a way that sustainable development may not be able to.

## FUNDING

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