

ENVIRONMENTAL HEALTH BREAKS INTO URBAN PLANNING FOR CITIES OF THE FUTURE

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As the burden of mortality and morbidity due to poor quality environmental parameters becomes more evident, Environmental Health in the urban environment is becoming increasingly important. Thus, according to the OECD, **air pollution in cities will be the leading environmental cause of mortality worldwide by 2050.**

The World Health Organisation, the European Environment Agency, the Basque Government and specialised organisations also tell us that environmental factors affect human health. They also explain that **the main danger is to be found in urban areas**, where environmental parameters such as air pollution, noise levels and the heat island effect are greater.

What they all point out is that these environmental parameters contribute to increased mortality from cardiovascular diseases, respiratory diseases, diabetes and/or mental disorders, which are precisely the diseases that account for the highest percentage of mortality in Europe (86%). However, another key point that experts point out is that the approximately **1.4 million deaths per year in Europe could be prevented** by eliminating environmental health risks and reversing environmental degradation.

To do this, it is essential to focus **on denser urban areas, which are not only the most densely populated, but also the worst environmental performers.** This is because this is where most activity and traffic is concentrated, which increases emissions and noise, while there is less space to facilitate air dispersion and less green areas and trees, reducing air renewal, purification and cooling. In short: **where the most people live is where the poorest environmental quality is to be found.**

One of the usual patterns is to find dense residential areas with high population density, surrounded by large arterial roads and few open spaces as a model of urban development in our cities.

In these areas the income level can be variable, in the case of city centres the income level is higher than in residential neighbourhoods, and this attenuates the impact of poor environmental quality, but on the other hand it also concentrates a greater number of people attracted by commercial activity, business centres or the very centrality of services and facilities.



Stavros Niarchos Cultural Center in Athens, Greece

The opposite example would be suburban areas where open spaces, single-family buildings and green areas predominate. Here the quality of environmental parameters is good and the income level is high.

Other focal points are the areas close to industries, airports and major roads.

Once the spatial distribution of urban environmental quality has been addressed, another vitally important issue to take into account is the vulnerability of the population to environmental factors: age and income.

While in our cities **the level of income directly implies a higher life expectancy, the most vulnerable population (children, pregnant women and the elderly) are more sensitive to negative environmental parameters.**

Knowing the behaviour of environmental parameters in urban environments and their relationship with the age and income level of the population, a first approach to incorporate criteria that integrate the health perspective could start by acting in priority areas, i.e. where the largest population is gathered, and where this population is most vulnerable to low environmental quality standards. It is recommended to prioritise areas for action in the following places or zones:

- In public areas, avenues and main routes, school paths, parks and squares, meeting places and places of worship.
- In city centres and the busiest areas (squares and emblematic places, business centres, shopping avenues).
- In the vicinity of schools, playgrounds and health centres are also sensitive places that need special attention.

Once the priority areas for intervention to improve the environmental parameters affecting the health of the population have been identified, the next step would be to deploy a battery of strategic measures. Among the urban planning possibilities for improving environmental parameters, it is proposed to start with the following:

- Low Emission Zones are certainly one of the keys to this issue, aimed mainly at reducing road traffic, its emissions and the noise generated.
- Deploy Green Infrastructure. Increase vegetation and green areas in the city as a way of cooling and providing shade while retaining polluting particles and improving the well-being of citizens.
- Implement policies of various kinds to, among others, control noise sources, facilitate sustainable and healthy mobility, and develop promenades and itineraries with good standards of environmental parameters, among others.

Both the prioritisation of areas and the strategies are likely to mesh with city transformation processes that are on the table, in a way that feeds into each other and provides intervention projects with more holistic approaches that, in this case, incorporate the criterion of population health, since, **if we do not act**, by 2050 air pollution alone **will be the leading environmental cause of mortality worldwide**.

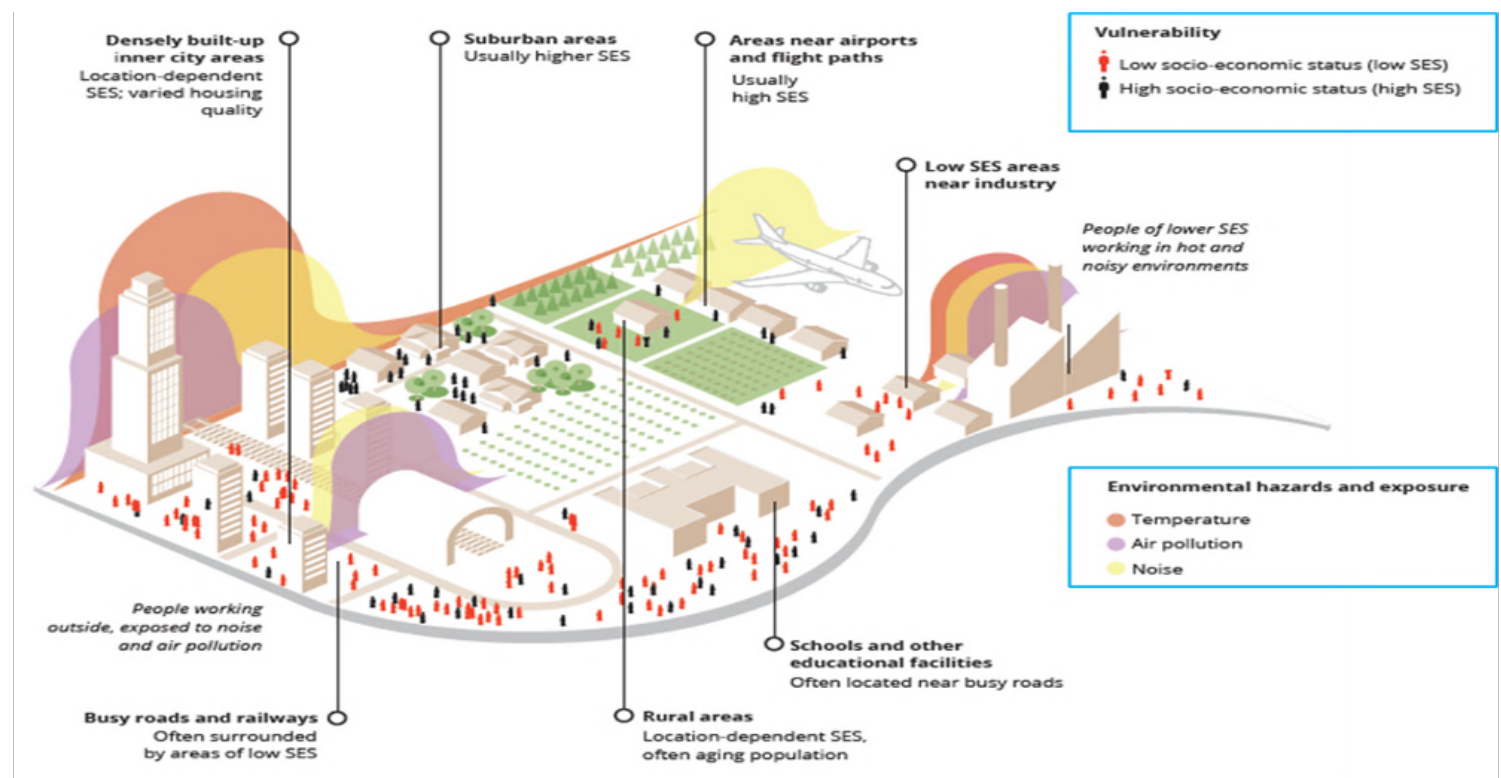


Figura 1. Comparativa de la amenaza y exposición de parámetros ambientales en zonas densas, áreas suburbanas, y zonas industriales, y nivel de vulnerabilidad.

