One planet regions: planetary health at the local level

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One of the key lessons that can be learnt from the history of public health is that many major public health advances—from clean drinking water to tobacco control—have been led at the local level. As we enter the Anthropocene, and strive to embrace an ecosocial approach that can address the implications for population health of the global ecological changes humans are creating,[1] once again much of the leadership and action will need to occur at the local level.

This position does not deny the need for global-level action to address boundary-spanning issues such as climate change, ozone depletion, or persistent organic pollutants (three examples for which international agreements have recently been made). Unfortunately, such global-level action is usually time-consuming and fraught with difficulties. Meanwhile, local governments have often shown more commitment and been quicker to act.[2]

Earth's human population is now mostly urban, with almost 55% of people living in cities, a proportion expected to grow to 66% by 2050.[3] Cities produce about 80% of global gross domestic product,[4] and are responsible for more than 75% of natural resource consumption, 60–80% of energy consumption, and 75% of global carbon emissions.[5] It can, therefore, be argued that the battle for planetary health will be won or lost in the world's cities.

One way to understand the scale of human impact on the Earth is the ecological footprint (EF).[6] Globally, the EF exceeded the Earth's biocapacity (put simply, the Earth's capacity to produce resources and ecological services) in about 1970, and as of 2012 had grown to 1·6 times that figure, even though in that period biocapacity itself grew slightly due to increased agricultural productivity.[7] Moreover, high-income countries (HICs) required 6·2 global hectares per person in 2012, which was 3·6 times the available biocapacity of 1·7 global hectares per person.[7] In other words, people living in HICs require, on average, 3–4 planet's worth of biocapacity to sustain present ways of living. Because this situation is unsustainable, we must learn to live on the one small planet that is our home, but in a way that also ensures a good quality of life, and a long and healthy life, for all.

This predicament has led to the concept of so-called One Planet living, in which all individuals, communities, and nations have to abide by inherent resource constraints.[7,8] The challenge is particularly hard for people living in HICs because of the need to reduce their ecological footprint by up to 75%. However, HICs have a responsibility and ethical duty to do just this for several reasons: they have become the model to which many people in many other countries aspire, and they take far more than their fair share of the Earth's resources and have done so for many decades, if not centuries.

The transformation in societies, economies, and ways of life to achieve One Planet living represents a key 21st century population health challenge. International movements are already based on local approaches to these issues, such as Healthy Cities, Sustainable Cities,

Panel: **One Planet Principles—ten principles for local and global sustainable living**

Health and happiness
Encourage active, social, meaningful lives to promote good health and wellbeing.

Equity and local economy
Create safe, equitable places to live and work, which support local prosperity and international fair trade.

Culture and community
Nurture local identity and heritage, empowering communities and promoting a culture of sustainable living.

Land and nature
Protect and restore land for the benefit of people and wildlife.

Sustainable water
Use water efficiently, protecting local water resources and reducing flooding and drought.

Local and sustainable food
Promote sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein.

Travel and transport
Reduce the need to travel and encourage walking, cycling, and low carbon transport.

Materials and products
Use materials from sustainable sources and promote products and services that help people reduce consumption.

Zero waste
Reduce consumption, and reuse and recycle to achieve zero waste and zero pollution.

Zero carbon energy
Make buildings and manufacturing energy efficient and supply all energy with renewables.

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and the Transition Network, but effective co-ordination between and integration of health and sustainable development is frequently not prioritised.[9] Because of One Planet living's concern to address both life quality and wellbeing and the EF, it offers an integrative approach with the potential to release synergies at local and regional levels. Bioregional, a UK-based charity and social enterprise working around the world with developers and municipal governments, among others, created its One Planet Living initiative in 2003.[8] Its ten One Planet Principles (panel) begin with health and happiness and also address other social concerns (eg, culture and community, equity and local economy) in addition to environmental and urban planning focus areas.

There is also a pressing need to change the way societal and community progress is measured to more accurately reflect an ecosocial approach to health. We are thus interested in applying the Happy Planet Index (HPI) at a community as well as at a national level. The HPI, an innovative measure developed by the New Economics Foundation,[10] measures precisely what population and planetary health is interested in: life quality (life expectancy × life satisfaction × equity factor) per unit of ecological footprint.

Each of the authors is working locally to convene key partners and explore what our local regions would look like if they had an EF of One Planet and a high quality of life, using the HPI at a local level to assess progress. Our intent is that planetary health understanding informs local action in the interest of the health and wellbeing of future generations, which makes it a vitally important task for public health in the 21st century.

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