

Urban Ecology: Philosophy and Practice

Professor David Goode, University College London

Put very simply urban ecology can be defined as a multidisciplinary approach which puts ecology at the centre of the way we investigate, conceptualise and manage towns and cities. It brings together participants from a wide range of disciplines concerned with environmental decision-making in an urban context. Ecology underpins the whole approach which includes urban design and planning, together with socio-economic, cultural, medical and political aspects of sustainable development. It also recognises the crucial need to work closely with local people.

The subject evolved very rapidly during the second half of the 20th century from a narrowly focussed academic discipline concerned with analysis and description of urban ecosystems, to a much broader set of activities that are directly involved with the way we live our lives. Understanding the fundamental ecology of cities is crucial for development of sustainable solutions. This involves ecological footprint analysis of towns and cities and detailed studies of urban metabolism. Urban ecology reaches beyond processes within individual towns and cities to the impacts of urbanisation on the wider world. The global scale of plastic pollution is a good example. There are many more. The philosophy has changed radically from an emphasis on pure ecology to one which recognises the crucial role of ecology in providing solutions to major challenges facing humanity.

The enormous challenges posed by climate change require a radical shift in the way that cities are visualised and managed. This will require new approaches of many kinds, in terms of both philosophy and practice. Ecology has to be seen as a major discipline alongside more traditional approaches such as architecture, engineering, planning and public health if we are to find effective long-term solutions. Ecologists will be central to the development of alternative scenarios at every scale from metropolitan planning to the detailed design of local environmental services.

There is now general agreement that green infrastructure provides a range of benefits that help to maintain sustainable conditions in the urban environment. These include provision of sustainable drainage systems and enhanced flood alleviation, local climatic amelioration, improved air quality, maintaining conditions for urban biodiversity, and providing green space for a variety of uses including the growing of food. There is also considerable evidence that green networks have an important role in maintaining people's health and well-being (including mental health) by lowering stress levels and providing opportunities for exercise, including walking and cycling. The value of these ecological services (i.e. the benefits we get from nature) is particularly high for people living in towns and cities. New concepts developed by ecologists, such as Biophilia and Eco-

urbanism, are now being adopted by architects and planners as a new mode of city living.

If urban ecologists work with local people profound changes in public attitudes can occur. The rapid growth of urban nature conservation since the 1980s is a good example of a whole new philosophy of *people and nature* being developed and put into practice. The concept of National Park Cities is another. Forging links between ecology and the social sciences, and the arts, is already bringing great benefits. Local people are the key to success. Urban ecology has to be based on local initiatives to make real progress.

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This brief summary draws on many detailed academic studies, together with radical new concepts and proposals made by practitioners over recent decades. Here are a few examples:

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