

Characteristics of Sustainable Cities



In order for a system to be sustainable, the system must operate without depleting the resources that are available for the future. Natural systems maintain their resources through recycling. In a forest environment, for example, decaying plant and animal materials are reused through processes like nitrogen and carbon cycles: the forest system can function effectively for very long periods of time because resources are not withdrawn from the system. If we apply the same process to cities – urban systems – then they too must operate without depleting the available resources.

Sustainable cities should have:

- efficient transportation systems that encourage use of public roads, minimizing energy consumption for transportation;
- well-developed infrastructure that include water supply systems, sewage treatment, waste recycling, health care facilities, education, and energy supplies, maintaining high qualities of life;
- maximized alternative energy sources, including solar and wind power, reducing dependencies on fossil fuels;
- mixes of land uses that put workplaces near homes, minimizing commuting and higher densities;
- heterogeneous mixes of housing types, from affordable to luxury, meeting the needs of community members; and
- high qualities of life through the development of civic amenities, such as green spaces and cultural centres.

Traditional ways of thinking about cities separate the three critical aspects of cities that make the workable. These aspects are:

- the economy,
- the environment, and
- the community.

Decisions about each of these aspects are usually made in isolation, so a decision made about the economy may take no notice of environmental or community concerns. For example, the decision to construct an expressway might make economic sense, but the expressway could have important negative consequences for the natural environment and the sense of community in a city. Or, the decision to preserve a sensitive ecological area could discourage economic activity and cause unemployment rates to rise or a change in the types of jobs available in the community. **A sustainable approach to cities would link all three critical aspects**, giving equal importance to the quality of community life, the strength of the economy, and the health of the environment. The benefits of this approach are cities that are healthy places to live and work without diminishing the environment – sustainable cities.

The two biggest threats to sustainable cities are cars and urban sprawl.