SUSTAINABLE COMMUNITIES

Just as all the other ecosystem components have roles to play, so does the city. However, as an artificially created component, this role is not as self-evident, and it must be studied to be properly understood and consciously planned for. The city draws on resources from the entire global ecosystem — air, water, land, energy, and a great variety of raw materials — to support its inhabitants and to create a vast range of goods and services. Local ecosystems are irreversibly changed both by the physical fabric of the city and by many urban activities, and these effects spread as the city grows outwards.

Similar to most of the other components of an ecosystem, a city also has its own internal systems. Unlike the systems of the other components, however, these systems rarely recognize one another or work together to enhance their existence. In fact, city systems tend to consume and destroy the ecosystem upon which they depend for survival.

Urban planning must, therefore, seek to develop a community model that mimics the constructive and supportive behaviour of the other ecosystem components. It must also recognize the interconnections between its own internal systems and explore and capitalize on these interconnections and interdependencies to maximize efficiencies and minimize redundancies and waste.

Paradigms that cities should mimic are found in the natural world: creatures taking only what they need and remarkable structures such as wasp nests, beaver dams, and spider webs built with little material, found locally, and returned to the earth eventually.

Urban planning must start not with the creation of urban form but with a recognition and definition of the place of the city in the larger ecosystem. Planning must determine which components of that ecosystem must remain as is, which require repair or regeneration, and how to achieve these goals. This means, for example, leaving rivers to meander and maintain their soft edges, trees to grow in mixed stands, and hills and habitat areas and corridors to remain intact. Urban ecosystem planning must start with the identification of where not to build and proceed to determine how to build and what forms to create to benefit from and support those unbuilt areas. For example, the amount of water available from a preserved watershed can be determined and the allowable water usage for a community can be predicated on that.

In general, Canadian cities have not been created and planned according to this premise. Forests and hills have been flattened, and permeable surfaces paved. Cities are emitting huge amounts of toxins and generating enormous quantities of extraneous and wasted material. Moreover, city systems are rarely mutually enhancing. They rarely produce heat, power, and water with one system, use landscaped areas to store and clean water as well as provide food and habitat, or use waste to generate nutrients and fuel. These actions, however, are slowly being introduced into community designs such as that of South East False Creek in Vancouver, British Columbia.

A strong case can be made that cities are better for environmental protection and resource conservation than dispersed patterns of settlement. Potentially, at least, the city permits economies and efficiencies in the provision of water, sewage treatment, and waste disposal (including recycling and reuse), in energy use (e.g., district heating), and in land use (through compact development). The city also provides opportunities to substitute walking, bicycling, and public transit for car use.

The challenge for city planners is to follow the ecosystem model, setting aside technological solutions that have "conquered nature" and selecting those that facilitate a full integration with it. On this basis, more responsive and responsible urban forms and more sustainable solutions can be generated to construct an organism for living that will not only care for its own inhabitants, but for the earth as well.

South East False Creek

A planned neighbourhood of 5000, South East False Creek is located in the core of Vancouver, British Columbia. The community has recognized its ecological role and developed extensive sustainable planning guidelines to regenerate habitat areas, return all rainwater to the soil on site, develop local food production, restore the waterfront to a natural state, reduce waste and water use and energy consumption significantly, and employ renewable energy sources. The result is an affordable, pedestrian-based, and fully ammenitized community where people can live and work, predicated on the paradigms found in the natural world. Much of this inner-city neighbourhood will be linked by "working" greenways and habitat corridors in lieu of roads.