

CURRENTS

Building Sustainable Cities

Scandinavia's "Eco-Municipalities" Show the Way

by Miranda Spencer

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Sustainable development is a popular environmental catchphrase, but it's not always clear what sustainability looks like beyond demonstration projects such as recycling centers or the occasional "green" building. Now North Americans are starting to look at Sweden for both models and methods of sustainability.

Since 1997, Esam, a self-described "human ecological corporation" based in Umeå, and the Minneapolis, Minnesota-based nonprofit Alliance for Sustainability have been co-sponsoring annual Sustainable Sweden Tours to some of the country's 70 "eco-municipalities." These places have voluntarily committed to integrating sustainability principles as official, across-the-board policy. From rural villages to the urban capital of Stockholm, the communities arrived at decisions and crafted innovative green solutions using a holistic, democratic planning process called the Natural Step framework (TNS).



The headquarters of Umeå Energy, which provides heat and electricity from residential solid waste.

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TNS combines a scientifically based definition of sustainability with a systems approach to community planning. Developed in 1988 by Swedish oncologist Karl-Henrik Robért and a group of European experts, it addresses the fact that the polluting substances we release into the natural environment never disappear, only transform or disperse. To become sustainable, societies need to meet four "system conditions": reduce or eliminate the use of substances extracted from the Earth's crust (like oil) and produced by society (like synthetic chemicals); reduce or eliminate the degradation of ecosystems (like sprawling development); and at the same time, meet human needs. Participants envision a better future, then figure out how to get there using community assets.

Sustainable Sweden Association Chairperson Torbjörn Lahti, a professional planner, helped found the Swedish eco-municipality movement in 1983 by guiding the town of Övertorneå, then rapidly abandoned by businesses and residents, in creating a sustainability plan. That decision has led to 200 new "eco-businesses," including a farmer-run organic food company. Övertorneå achieved 100 percent fossil-fuel-free government operations over 15 years, saving money as well as boosting public health.

Today, the tours and concepts are drawing community leaders from places like Dane County and Ashland, Wisconsin; Duluth, Minnesota; and Vandergrift and Pittsburgh, Pennsylvania, all of which are planning to incorporate sustainability principles and practices into their regions. Other visitors, from Santa Monica, Minneapolis and Whistler, British Columbia, are already guided by sustainability. Terry Gips, president of the Alliance, says, "This is a powerful way to bring about change in the U.S. These ideas are not coming top down but from the bottom up."

One of the tour highlights is Umeå in northern Sweden, a cultural center and one of the country's fastest-growing cities. Once plagued by deforestation and famous for its environmental indifference, it reduced its fossil fuel use about 90 percent by building a power plant fired by the town's own solid

waste.

Umeå also established a "Green Zone," a public-private enterprise comprising a Ford dealership selling mostly hybrid vehicles, a car wash and even a McDonald's, all of which are built from sustainably and locally harvested wood topped by green-sod roofs. The buildings stand atop permeable pavement that absorbs storm water, reducing runoff. Rainwater is collected, cleaned and recycled for reuse in the car wash, cutting energy consumption by 70 percent and freshwater use by 90 percent.

"I've seen stand-alone green buildings, but never three totally different businesses in a complete natural system like this!" marvels Joan Barlow, a planner and associate director of the nonprofit Sustainable Pittsburgh, who visited in summer 2004.

Places like Umeå might never have developed such efficient (and profitable) closed-circle technologies so rapidly without using TNS, which gained popularity after the 1992 Earth Summit in Rio because it is compatible with the global action plan outlined in United Nations Agenda 21. The American Planning Association's 2000 "Policy Guide on Planning for Sustainability" is also based on it.

There have been two Sustainable Sweden tours in 2005, and Swedish planners and trainers visited the U.S. earlier this year to lead workshops and provide consulting to communities they've already inspired. "There's a lot of interest and varying degrees of decision-maker support and funding," reports Cindi Contie, Sustainable Sweden's North American representative. She adds that state officials have already shown "significant interest" in Minnesota and Pennsylvania, including her hometown of Vandergrift.

A former steel mill community of 5,600 residents northeast of Pittsburgh, Vandergrift began revitalizing its downtown business corridor in 2004. Residents were initially skeptical when Contie proposed that sustainability be added to the town's plans. "To put it the best way possible, we said she's crazy!" recalls Tom Halufcak, project manager of the Vandergrift Improvement Program. But when Contie arranged for Lahti to do a workshop in Vandergrift "everyone loved the idea," Halufcak says. "It turned out to be easier than it sounded; farmers around here have practiced sustainability for years."

Sustainable Pittsburgh's Joan Barlow will begin training local leaders and community members in using TNS to envision their future. "Vandergrift is a Fredrick Law Olmstead-designed town, on the river, very walkable and friendly, so we'll focus our redevelopment efforts around that," she says. Meanwhile, demonstration projects are being discussed, including an "eco-municipal parking lot" with permeable pavement and a solar-powered "Welcome to Vandergrift" sign.

Some communities are further along, with comprehensive sustainability plans in place. Santa Monica, for example, has established goals and indicators on everything from air quality to citizen participation; its extensive programs include purchasing less or nontoxic products to clean public spaces. "The goals are very mom and apple pie," says Santa Monica Sustainable City Coordinator Dean Kubani. Santa Monica has been sharing information with partners in Gothenberg, Sweden to make the city a "net zero energy user."

The resort community of Whistler in the Canadian Rockies, site of the 2010 Olympics, adopted TNS principles after a lecture by vacationing founder Karl-Henrik Robért. It's recently embarked on a 15-year "Whistler 2020" plan that allows it to maintain a tourism-based economy while practicing

environmental stewardship, complete with transition guidelines and community-wide resource sharing. In the works: transforming an “athlete village” lodging development into a residential neighborhood of affordable housing that showcases sustainable building and land-use practices, according to Mike Vance, general manager of community initiatives.

Will the eco-municipality concept work on a wider scale in American communities not already on that path? Local governments in Sweden enjoy considerably more power than their U.S. counterparts, and the movement enjoys support at the federal level. But Terry Gips, who speaks widely on the topic, maintains “it will work better here in the U.S. because people are more entrepreneurial.” He adds that the TNS process “reduces bureaucracy, and saves businesses money and time, but it also provides a carrot to do the right thing.”

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