



The London ZED Pavilion at the Expo Garden is a zero-carbon building.

ZENG YI / XINHUA

Expo encourages a low-carbon diet

There are plenty of examples of environ-friendliness at Expo, but how many can be parlayed into the real world? **Matt Hodges** reports.

If the thought of living in a bamboo or zero-carbon house or using chairs made from recycled newspaper, or chopsticks made of chocolate biscuits, sounds a bit far-fetched, just take a look around the Shanghai World Expo.

The Madrid, London, Alsace and other city pavilions within the Urban Best Practices Area (UBPA), have adopted such ideas to promote a low-carbon lifestyle and, in more grandiose terms, map out a viable future for the planet.

The Alsace Pavilion has a waterfall running down one of its walls between two sheets of glass, one of which opens and closes, depending on the season, to heat

and cool the building. Solar power channeling photovoltaic panels act as pumps to send the trapped air up onto the roof, then inside.

Apparently, China is serious about taking the best of these ideas and using them as blueprints for future urban engineering projects.

"As science workers we will take the Expo as a good opportunity to learn R&D ideas of other countries and the latest technologies from them," said Wan Gang, China's Minister of Science and Technology, before the Expo began on May 1.

He and his colleagues could take further cues from the national pavilions, such as Japan's

footstep-absorbing floor space or the Swiss Pavilion's huge curtain extracted from soy fiber, both of which create electricity and help control temperature.

Other pavilions extol the virtues of recycling in their construction, such as Portugal with its cork walls. Meanwhile, Denmark rents out Copenhagen city bikes for free to encourage people to adopt healthier modes of transport.

Air pollution is a pressing concern for China, which last year leapfrogged the United States to rank as the world's biggest car market. It now has almost 200 million vehicles on its streets. Shanghai imposed a quota system a quarter of a century ago but 1.6 million vehicles — almost one for every 10 residents — clog up its city center every day.

When the 2010 Expo ends on Oct 31, organizers are scheduled to produce the Shanghai Declaration to try and fill in some of the blanks left by the Kyoto Protocol

and last year's failed Copenhagen Climate Summit.

Maybe the answer lies in the Madrid Pavilion's bamboo housing that filters sunlight, or its plants that water themselves by slowly releasing captured rainfall. Adjacent to this, an "Air Tree" made of black panels that move with the sun and wind, and gives people space to relax as electricity-producing mini-turbines generate power.

Unlike many of the ideas of the future espoused within the Expo Garden, the Spanish government practices what it preaches. The Bamboo House is a replica of a government-subsidized housing block in Madrid's Carabanchel district, while the Air Tree is an adapted version of the Technological Trees in the city's Vallecas eco-boulevard.

Or perhaps the future will take us to a vertically stratified society where one-person rent-a-cars trawl the streets below, while people live in houses above street

level on a greener second story. Those who want to check the CO2 count can do so with the aid of a new pollution-detecting cell phone made by Chinese company Broad Sustainable Building.

This vision is part of the Rhone-Alpes Pavilion's Multipolis Concept, which recommends inter-connecting groups of cities to maximize energy use. The pavilion, which is responsible for 75 percent of the lighting inside the UBPA, employs lighting and heating systems that adjust automatically to the number of people inside and power off when no one is there.

London's ZED Pavilion, based on the world's first zero-carbon house, has already impressed China's city planners enough that they are looking to include it in their redevelopment plans for tier-one cities such as Shanghai and Beijing.

CONTINUED ON PAGE 11