2010

STATE OF THE WORLD

Transforming Cultures

From Consumerism to Sustainability

THE WORLDWATCH INSTITUTE

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Advance Praise for *State of the World 2010*:

"If we continue to think of ourselves mostly as consumers, it's going to be very hard to bring our environmental troubles under control. But it's also going to be very hard to live the rounded and joyful lives that could be ours. This is a subversive volume in all the best ways!"

> —*Bill McKibben, author of* Deep Economy *and* The End of Nature

"Worldwatch has taken on an ambitious agenda in this volume. No generation in history has achieved a cultural transformation as sweeping as the one called for here...it is hard not to be impressed with the book's boldness."

> —*Muhammad Yunus, founder of the Grameen Bank*

"This year's *State of the World* report is a cultural mindbomb exploding with devastating force. I hope it wakes a few people up."

> —*Kalle Lasn, Editor of* Adbusters magazine

Like a tsunami, consumerism has engulfed human cultures and Earth's ecosystems. Left unaddressed, we risk global disaster. But if we channel this wave, intentionally transforming our cultures to center on sustainability, we will not only prevent catastrophe but may usher in an era of sustainability—one that allows all people to thrive while protecting, even restoring, Earth.

In this year's *State of the World* report, 50+ renowned researchers and practitioners describe how we can harness the world's leading institutions—education, the media, business, governments, traditions, and social movements—to reorient cultures toward sustainability.

full image

extreme close-up

Several million pounds of plastic enter the world's oceans every hour, portrayed on the cover by the 2.4 million bits of plastic that make up *Gyre*, Chris Jordan's 8- by 11-foot reincarnation of the famous 1820s woodblock print, *The Great Wave Off Kanagawa*, by the Japanese artist Katsushika Hokusai.

For discussion questions, additional essays, video presentations, and event calendar, visit blogs.worldwatch.org/ transformingcultures.

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Building the Cities of the Future

Peter Newman

Imagine a city that uses 100 percent renewable energy…where most transport is by electric light rail, biking, or walking...where the solar office block is filled with green businesses… where the local farmers' market sells fresh, bioregional produce…where parents meet in the parks and gardens while their children play without fear in streets that are car-free. This is a reality in Vauban, a new eco-city of 5,000 households within Frieburg, Germany. And in nearby Hanover, a city of 500,000 people has reduced its greenhouse gas emissions by 50 percent.[1]

How did these communities transform their cultures to make the transition that every city now faces? Vauban and Hanover took the opportunity to use every policy lever possible at every step of the way—from planning to delivery—to ensure that the goal of sustainability drove each decision.

Cities have always been places of economic and social opportunity. They emerged when hunter-gatherer societies were transformed into settled societies based on agriculture. Today's cities have grown large during the industrial era and still provide the main economic and social opportunities for the world's growing population. But cities are now having a signif-

icant environmental impact, as they are based around the consumption of fossil fuels and materials at increasing rates. They must continue to provide opportunities, but they must become more like Vauban and Hanover—sitting lighter on the planet. Indeed, the key question now is whether cities can not only reduce their impact on Earth but also contribute to its regeneration.[2]

Around the world, cities are becoming more sustainable through resilient buildings, alternative transportation systems, distributed and renewable energy systems, water-sensitive design, and zero-waste systems—with all the cleverness of a new industrial green revolution. From new cities like Masdar in Abu Dhabi to redeveloped areas like Treasure Island in the United States, Vauban and Hanover in Germany, and BedZED and the new Olympic village in London, these pioneers are dramatically reducing their ecological footprints.[3]

Helping Urban Residents Live Sustainably

BedZED is a carbon-neutral development and social housing experiment in inner London. It has many ecological innovations: it

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used local and recycled materials; its energy-efficient design is combined with photovoltaics (PV) and biomass-fueled combined heat and power; it recycles gray water and harvests rainwater; it has local facilities to reduce the need for travel and is near a train station; and it has on-site permaculture gardens. When a detailed assessment of residents' ecological footprints was made, however, a huge variation was found in how people made use of the area's ecological features. The average footprint for some residents was around 4.4 hectares per person (still less than the average for London of 6.6 hectares), yet some residents were able to get their impact down to 1.9 hectares per person.[4]

Experiences in many early European experiments in urban ecology may hold the explanation for this. Buildings and neighborhoods that were not developed within a community can fail to achieve their design outcomes. If innovations are imposed on people who do not know how to use the new buildings as designed or why they should use less power or water or fuel, residents can simply transfer their old consumptive lifestyles to the new "eco" situations. The growth of sustainable cities will only be mainstreamed when the green transformation involves all elements of the policy process—especially the processes that help people want to change.[5]

Several key government policies can help cities move toward sustainability:

- Infrastructure to enable energy, water, transport, and waste to be managed with minimal ecological impact;
- A design to ensure that the infrastructure is efficiently available to all;
- Innovation through R&D and demonstrations to continually ensure the latest eco-technology becomes mainstream;
- Tax incentives to direct investment into these new technologies and provide people with the motivation to change their behavior;
- Regulations to set the standards high enough

for sustainability technologies to cover their externalities; and

- Education to ensure households and communities want to make the changes needed.

Nowhere is this more evident than in policies about getting people out of cars.

Kicking the Car Habit

Car use is easily adopted as a way of life in cities, especially those that were developed in the past 50 years. U.S. cities use twice as much transport fuel per person as Australian cities, and those cities in turn use twice as much as European cities and five times as much as Singapore, Tokyo, and Hong Kong. Policymakers often claim that cities with a high dependence on cars are impossible to change. But with cars now being the largest single technology contributing to climate change and the one growing the fastest, it is time for decisionmakers everywhere to see how the policy changes just described can bring about a cultural transformation and get their cities to kick the car habit.[6]

A first priority is infrastructure. Cars are chosen for most destinations because they are quicker than other more-sustainable modes, and people do not like to commute more than an hour a day on average. Thus if a modern electric rail system or bus rapid transit can be installed down an urban corridor that is faster than the traffic, then people move quickly to use it. Perth's new Southern Rail meets this goal and now takes 55,000 people a day, compared with 14,000 who used to take the bus; this is the equivalent of eight lanes of traffic. Similarly, a good bicycle system and walkable urban environment means that in Copenhagen cars were used for only 27 percent of all work trips in 2003 compared with bicycles on 36 percent of such trips.[7]

The design of the city is totally enmeshed in its infrastructure priorities. When cities favor sustainable modes of transportation,

then land use tends to cluster around it. But if a city only builds highways, it generally scatters in highly car-dependent patterns. Density and transport fuel use are closely linked. Planning cities to be much less car-dependent will be a key part of any plan to reduce a city's carbon footprint. For example, "transit-oriented developments" have been shown to cut residential car use in half, and residents save 20 percent on their household income by having one less car per household.[8]

New technology to make cities smarter and more sustainable is appearing and needs government assistance to be facilitated and tested. The new plug-in electric vehicles (for cars and for transit) need testing, along with the associated Smart Grids and renewable energy use that can allow cities to become 100 percent renewable. Green transit-oriented developments that can demonstrate the new technology would seem to be ideal sites for trials of such technology so that renewable transport can also mean less car use.

Every nation and city has its own way of making the adoption of more planetary lifestyles convenient and easy compared with more consumptive lifestyles. When it comes to cars, however, the more that a city is car-dependent, the harder it is to use tax incentives to change people's lifestyles. European cities have much higher gasoline taxes than American and Australian cities, and accordingly they use cars less.[9]

In the car-dominated cities of North America and Australia, the major public policy to reduce the global and local impacts has been through regulations on vehicles that have forced them to become cleaner. Following introduction of these, most urban atmospheres have become cleaner, although fuel use has continued to increase as vehicles became bigger and their use has continued to grow. Regulations also are applied to safety and congestion management, but this will continue to worsen if more and more car use is facilitated.

All these necessary policy approaches will be wasted without education on a changed role for the car and on climate change. For example, something known as the Jevons Paradox—increasing efficiency means increasing consumption—has been found to apply to car use. If people buy cars that use less fuel, they just drive them more—undermining most gains made possible through the new technology. Thus cultural change to help people to want to drive less needs to be part of any city's policy arsenal if it is to face up to the challenge of growing a sustainable city. One such program shows that this is indeed possible.[10]

German sociologist Werner Brög has developed an approach to travel demand management that is based on the belief that cultural change toward less car dependence can happen in any part of any city as long as it is community-based and household-oriented. After some trials in Europe, Brög's approach was adopted in large-scale projects in Perth, Western Australia. It has since spread across most Australian cities and to other European cities, especially in the United Kingdom, and has now been piloted in six American cities.[11]

Known as TravelSmart, the approach targets individual households directly (rather than through mass media) in a letter from the Mayor or State Minister (funds for the program are usually a partnership of the two), asking them to participate in the program. Follow-up phone calls elicit the residents' interest in receiving information and, for the few who need extra support, a potential visit from a TravelSmart officer. People select information materials to suit their individual needs and these are delivered by staff using bikes and trailers. The information is packaged in specially designed TravelSmart bags and includes walking and transit information, as well as pamphlets on why it is good for their health and the planet for people to get out of their cars more often. They encourage people to start with local trips, especially the school trip for children, which is

now seen as an essential part of the healthy development of young people's sense of place and belonging in any community as well as a way to reduce obesity.

In communities where TravelSmart has been conducted, people have reduced the kilometers traveled by vehicle by around 12–14 percent— a result that seems to last for at least five years after the program ends. Where transit is not good and destinations are more spread out, the program may only reduce car use 8 percent, but where these are good it can rise to 15 percent. This is not a revolution, but it has many synergistic positive outcomes.[12]

The BedZED development, Hackbridge, London, U.K.

People involved in TravelSmart become real advocates of sustainable transport—telling their friends how much better they feel after bicycling, walking, or taking the bus or train instead of driving. They show friends how much money it saves as well as making them feel they are doing their bit for climate change and oil vulnerability. There is evidence in Brisbane, Australia, that at least 50 percent more people than those involved in the initial household interviews were actually following the program when the surveys were done; in other words, people were spreading the message to their friends and colleagues.[13]

When people start to change their lifestyles and can see the benefits, they become advocates of sustainable transport policies in general. Governments find it easier to manage the politics of transformation to reduced car use and lower oil use when the communities they are serving have begun to change themselves.

The city of Perth has been rebuilding its rail system over the past 20 years following a strong social movement that demanded a better system. The extension of the rail system to far outer suburbs has been more positive and politically achievable than expected, with a massive 90 percent support for the last stage, the Southern Suburbs Railway. In parallel to this political process, Perth had some 200,000 households undergoing the TravelSmart program, which seems to have helped. Indeed, the Southern Suburbs Railway increased public transport patronage by 59 percent in areas without TravelSmart but by 83 percent in areas where TravelSmart was deployed to promote the new rail services. Patronage on the rail system has gone from 7 million a year to 110 million in 17 years, moving public transport from 5 to 10 percent of the work journey trips taken in the city. Perth has become a model across Australia for other cities that are now determined to upgrade their rail system funds to provide the needed infrastructure.[14]

The TravelSmart program recognizes a fundamental principle about cultural change: it works best when the change is supported by a

community, when it is part of the development of social networks that support the changes in lifestyle. TravelSmart develops this social capital around sustainable transport modes rather than the dominant culture of the car. It does this through relationships established with the TravelSmart officer and with others in the local community who are making the same first steps to get out of their cars. In the workplace, TravelSmart is found to work well when a TS Club is formed that enables people to share experiences, bring in local speakers, and lobby for facilities like showers for bike riders and transit passes instead of parking spaces.

Planetary Lifestyles

The same approach to cultural change that TravelSmart uses can be applied to other aspects of sustainability at the household level—reducing energy, water, and waste. The program needs to provide infrastructure for the new technologies, an urban design that ensures the technologies are efficiently available for all residents, R&D on the best options available, regulations to set the energy and water use in buildings and appliances at the highest possible level, tax incentives to push people toward more "planetary lifestyles," and education to motivate people.

As with TravelSmart, the possibility of using educational programs to underpin these policy areas is critical to achieving the necessary planetary cultural change. In many cities, approaches to community-based planetary education are emerging as the politics of climate change becomes a major political force.[15]

Perth has built on its TravelSmart program to create a successful household education approach, known as LivingSmart, that brings sound and locally relevant material into people's homes. The eco-coaches who have worked with the first 15,000 households in a trial run have found enormous enthusiasm from people who have been looking for this targeted assistance. Using unsolicited phone calls to residents, the program is finding that 74 percent of households are interested in making changes to improve energy, water, waste, and travel sustainability. Half of the households contacted are signing up for ongoing coaching for special meters, advice on gardens, workshops, and home audits.[16]

Unlike TravelSmart, where change tends to occur slowly and incrementally, the LivingSmart program is receiving reports from households of instant and radical changes—replacing inefficient lights, for example, or ordering PV, solar hot water, and grey water recycling systems. The program is aiming to reduce carbon dioxide emissions 1.5 tons per household a year. (Australians on average are responsible for 14 tons per household.) This will save participants up to 10 percent in their gas, electric, water, and petroleum bills.[17]

The social capital being built up around these new technologies and lifestyles is also proving highly infectious and can become the basis of a major social movement if governments are prepared to adopt the approach more broadly.

The end result of household programs like these, combined with all the other policy initiatives, may be the beginning of a transformative sustainability process—not just in the actual savings in fossil fuels and other valuable materials, but in the growing sense that households and communities can achieve a transition to a more sustainable city. This hope is the currency of growth toward sustainable cities. It can enable people to begin to imagine a city that is more regenerative than destructive of Earth.[18]

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