Foreign Exchange

Comparative Analysis of Best Practices of Sustainable Communities: Adelaide, Australia Case Study

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Abstract

Asia Pacific Economic Cooperation member economies produce 55 percent of the world's gross domestic product and 64 percent of global greenhouse gas emissions. Many cities in this region are implementing sustainable development policies and practices to balance economic growth, quality of life, and environmental protection. As part of a research project examining best practices of sustainable communities in the Asia-Pacific region, we chose Adelaide, Australia, as one of six case study cities. This article introduces the larger project and summarizes the Adelaide case study. We also present key lessons learned during the research process and suggest next steps for further exploration of this topic.

Introduction

The Asia-Pacific region has experienced rapid urbanization in recent years, as well as the environmental impacts that accompany such growth. Asia Pacific Economic Cooperation (APEC) member economies produce 55 percent of the world's gross domestic product, and they also generate 64 percent of global greenhouse gas emissions. Major cities are implementing sustainable development policies and practices to balance economic growth, quality of life, and environmental health. We conducted a comparative policy study to identify best practices of sustainable APEC cities and review those strategies with the objectives of (1) identifying innovative policy tools or institutional structure to implement the sustainable community agenda, (2) reviewing the impact of these sustainable community projects on economic development and job creation, and (3) examining the applicability of the identified best practices in the United States and developing countries.

Adelaide, Australia Case Study

Adelaide, Australia, was one of six case study cities—including Tokyo, Japan; Yokohama, Japan; Tianjin Yujiapu, China; and Seoul, South Korea—that we chose for the research project based on their strong policy agendas for sustainability and for their economic importance to the sustainable community effort worldwide. We examined each city's policies in the areas of energy, urban transit, land use planning, and green building. This article summarizes the Adelaide case study.

Adelaide is the capital city of the state of South Australia, with a population of 1,200,000 that is growing quickly (Australian Bureau of Statistics, 2011). South Australia has a parliamentary government based on the model of the United Kingdom, and the Adelaide City Council manages day-to-day governance in cooperation with state entities (McDougall and Vines, 2006). The case study research identifies the following four primary program and policy interventions as most noteworthy in the sustainability agenda in Adelaide.

1. National-Local Policy Framework for Climate Change Policy: Adelaide Green City Sector Agreement

Adelaide established an intergovernmental framework to develop and implement the city's sustainable policies. In April 2010, the Adelaide City Council and the Minister for Sustainability and Climate Change for South Australia entered into the *Adelaide Green City Sector Agreement*, forming a joint commitment to "respond to climate change by pursuing development of the City of Adelaide as an environmentally sustainable city" (ACC and Government of South Australia, 2010: 1). South Australia set a target to reduce greenhouse gas (GHG) emissions by at least 60 percent of 1990 levels by 2050; this agreement is a means of collaboration between the two governments to achieve that goal.

2. Energy Management Action Plan

The *Environmental Sustainability Strategy 2009–2012*, the Adelaide City Council's guiding document for achieving sustainability, envisions Adelaide as an "energy efficient City that maximises the use of renewable energy and local renewable energy generation" (ACC, 2009: 19). The

Energy Management Action Plan 2011—2014 carries out these objectives with specific strategies (ACC, 2011b). For example, solar panels were installed on the iconic Rundle Lantern and Central Market buildings, and the Adelaide Sustainable City Incentives Program provides incentives to residents and community organizations to install solar panels and solar hot water systems. Adelaide also participates in the CitySwitch Green Office program, a national partnership between businesses and local governments to reduce GHG emissions that office tenants produce and to promote office energy efficiency (CitySwitch, 2011). In Adelaide, at least 43 offices have committed to participate in the program, representing about 18 percent of commercial office space in the city. In addition to establishing these priorities, the city participates in South Australia's GreenPower program, which sets a goal of buying renewable energy for 50 percent of the state government's electricity needs and at least 20 percent of the city government's needs by 2014 (Zeppel, 2011).

3. Sustainable Transport, Walking, and Cycling

In 2008, the South Australian state government began an unprecedented, decade-long investment in Adelaide's public transport with a $2.6 billion investment to transform the city's transportation network into a vibrant, state-of-the-art system providing faster, greener, and more efficient services for train, tram, and bus commuters (Government of South Australia, 2007). This investment is making Adelaide one of the country's most livable and sustainable cities, constituting the largest single state government investment in public transport in Australia. Milestones of this project include 400 additional buses on the network linking local areas to dedicated rail corridors and high-frequency bus corridors; extended tram lines and additional trams; train line upgrades, including electric trains; and a "smart" ticketing system. These upgrades contribute to the *South Australia's Strategic Plan* target of increasing the use of public transport to 10 percent of metropolitan weekday passenger vehicle distance traveled by 2018 (SA, 2011).

As part of the overall investment, cycling and walking are important sustainable transportation options. Moving Adelaide: Integrated Movement Strategy 2012–22: Draft for Consultation (ACC, forthcoming) is the overarching strategic framework for achieving a pedestrian- and cyclist-friendly city (exhibit 1). In addition, the city's *Bicycle Action Plan 2011–13* (ACC, 2011a) aims to strengthen opportunities for people to cycle to, from, within, and around the city and its park lands.

Exhibit 1

Moving Adelaide: Integrated Movement Strategy 2012–22 (draft cover)

Source: City of Adelaide, Australia

4. Compact Development

The *Adelaide Green City Sector Agreement* (ACC and Government of South Australia, 2010) also focuses on green buildings and urban design. One strategic direction is to support increased population density and activity in the city and reduce the need to travel. Ongoing priority projects to support this direction include (1) encouraging environmentally sustainable medium- to high-density residential and mixed-use developments, including through the Land Management Corporation and through zero-carbon neighborhoods, and (2) facilitating the *Development Plan Adelaide (City)* (Government of South Australia, 2012) amendments that support increased environmentally sustainable development. The Adelaide City Council developed a *Guide to Mixed Use Development* (ACC, 2008) to demonstrate how to successfully achieve mixed use in the city.
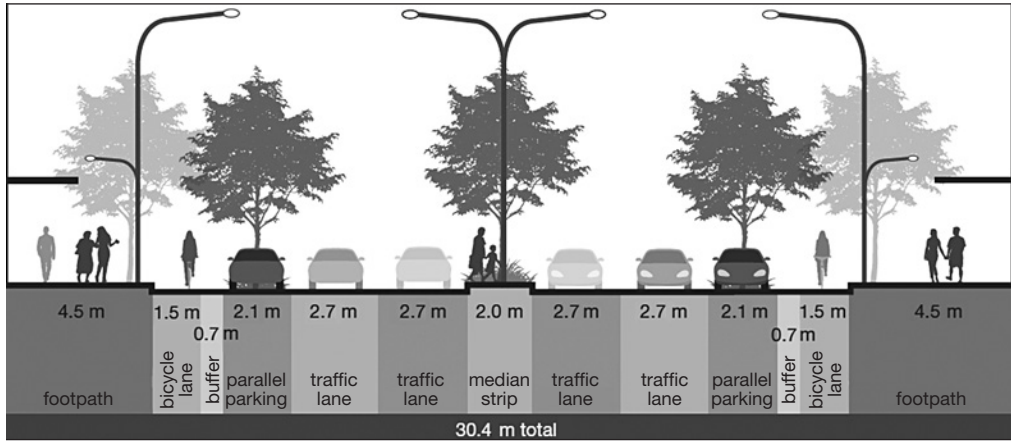
Policy Comparison and Applicability

Although it is not possible to examine every measure in Adelaide at this time, and although this article does not permit deeper discussion, it is clear that many of the strategies employed in Adelaide to increase the city's sustainable growth already parallel current initiatives in the United States, although others could be further adapted. For example, Adelaide has taken many steps toward promoting renewable energy, such as installing solar panels on public buildings and providing incentives to the community for solar panels and hot water systems. Local governments across the United States offer incentives for solar installations, including property tax incentives, rebate programs, and loan programs, among others (NC State, 2012). Another parallel policy is the implementation of mixed-use development. Adelaide is actively promoting its *Guide to Mixed Use Development* for city developers and planners to use (ACC, 2008). Similar design manuals and the promotion of these principles are evident in U.S. cities such as Colorado Springs, Colorado (Colorado Springs, 2004); Fort Worth, Texas (Fort Worth, 2005); and Germantown, Tennessee (Briley, 2007), among many others.

Several initiatives employed in Adelaide are well suited for implementation in the United States. For example, Adelaide is taking countless steps to promote cycling and walking as sustainable transportation options. Strategies include safely accommodating pedestrian movement and mandatory safety specifications for on-street cycle lanes. (See exhibit 2.)

The U.S. Federal Highway Administration disseminates standards for bicycle traffic control devices, such as provisions for signs, pavement marking, and signals, but these standards are limited in their consideration of cyclists' safety (DOT/FHWA, 2009). Adopting strict regulations for bike lane design and safety would be beneficial and promote this sustainable, economical mode of transportation in U.S. cities.

Exhibit 2

Example of Street Space Reallocation

4.5 m	1.5 m	0.7 m	2.1 m	2.7 m	2.7 m	2.0 m	2.7 m	2.7 m	2.1 m	0.7 m	1.5 m	4.5 m
footpath	bicycle lane	buffer	parallel parking	traffic lane	traffic lane	median strip	traffic lane	traffic lane	parallel parking	buffer	bicycle lane	footpath

30.4 m total

Source: Moving Adelaide: Integrated Movement Strategy 2012—22 (ACC, forthcoming)

Lessons Learned

The full paper for this research project, including case studies for all the cities, acts as a preliminary best practices reference for implementing sustainable community strategies. The larger products and present conclusions of this research include innovative individual strategies for promoting sustainability, as well as several broader or crosscutting policies. Key lessons learned include (1) establishing a governance framework with national and regional support for local policies is vital to the success of a city's mission to increase sustainability; (2) developing policy or financial incentive programs are an important tool, not only for promoting strategies for reducing emissions, but also for fostering a strong foundation for future initiatives through public-private collaboration; (3) implementing transit-oriented development is a strategic approach to achieving compact and mixed land use, transportation efficiency, and sustainability goals; (4) enhancing and improving public-private partnerships are key to leveraging resources and creating consensus within communities; (5) increasing implementation of energy strategies with promotion of renewable energy and carbon trading or green power purchasing can have long-term effects in cities of any size; and (6) monitoring and indicator systems are important for assessing the successes and challenges of each individual strategy and supporting knowledge sharing.

Among these larger sustainable policy measures are some specific creative actions that U.S. cities should consider: (1) integrating pedestrian planning and transit—walkability in city planning, (2) integrating green building and transportation in GHG-reduction strategies, (3) establishing a smartphone bike-sharing system, and (4) instituting measurable indicators for monitoring.

Policy measures that would be most effective for the cities in the emerging economies include (1) enhancing a policy implementation framework (national policy, local regulations, and action plans); (2) enhancing a planning framework to incorporate high-density, mixed-use development with transit, public-private sharing profits at station area—land value to finance infrastructure; and (3) establishing baseline and monitoring indicators.

Next Steps

The full paper for this research, which the U.S. Department of Housing and Urban Development produced, describes case study findings, best practices analysis, and U.S. applicability in detail; it can be used as a preliminary best practices guide for localities (Lam and Mullen, 2012). A condensed version of the paper was presented at the World Bank Research and Knowledge Symposium in Barcelona, Spain, in October 2012, and will be presented at other research and professional seminars and conferences. Through this dissemination, academic collaboration and avenues for continued research will be identified.

Although this type of best practices identification and analysis is valuable for developing sustainability strategies in U.S. cities, it simply sets a vague foundation for the planning process. Potential gaps in the research occur due to limited availability of information via city or national government resources and a general lack of monitoring and comparative studies on international sustainable development strategies. This research should be expanded to include analyses of the long-term benefits, challenges, and other effects of individual strategies in the case study communities. Also, further research is necessary to determine the specific applicability of strategies in U.S. cities—this research entails examining each strategy closely to determine its environmental, economic, developmental, and other effects and for identifying specific cities for implementation and the conditions that best suit each individual strategy.

Authors

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