

Shenzhen and Hong Kong: Planning Links and Challenges

By Michael R. Gallagher

Abstract: Over the past twenty years Shenzhen and Hong Kong have become more integrated, both economically and socially. Physical links have grown and have influenced planning in Shenzhen. However, greater cooperation needs to come about in order for the region to develop in a sustainable and efficient manner. Planning challenges—such as “one country, two systems”—and strategies are discussed.

INTRODUCTION

Since China's opening up twenty years ago Shenzhen and its neighbor Hong Kong have become much more connected—socially, economically, and physically. With globalization, both jurisdictions are realizing that it is the entire region that helps each city within the region grow. Thus a look at the two must look within the context of the Pearl River Delta which encompasses parts of Guangdong province as well as Hong Kong and Macau.

The Pearl River Delta Region is broadly polycentric in development with three major economic cities—Hong Kong, Guangzhou and Shenzhen—and several axes of development between them and other cities. Some people may know Guangzhou as Canton—the historical center of southern China that now has a population of 9.9 million. Hong Kong has been a trade entry port between China and the rest of the world and has 6.8 million residents. It has developed into a global financial center. On the western tip of the Pearl River Delta lie Macau and Zhuhai. Like Hong Kong, Macau was a colony of a western country (Portugal). The total population of the region is approximately 41 million.

SHENZHEN'S PLANNING WITHIN THE MAINLAND PEARL RIVER DELTA

With the opening-up of China, the central government delegated more economic responsibilities to the local governments. Since cities owned many of the local enterprises, cities were very interested in seeing those enterprises survive, often leading to local protectionism, uncoordinated infrastructure and uncontrolled development.

The Provincial government, through the Guangzhou Construction Bureau, therefore produced a 1989 study on a regional system plan. Cities were to follow the plan, but development was still out of control. Between 1990 and 1993 the amount of land labeled as developed tripled. One third of environmental land in the Pearl River Delta was threatened, and cleared land often was not being developed due to lack of financing. Urban settlements were popping up along many roads creating traffic problems and linear development, and there was a lack of a consideration of a high speed regional transport system. The Central government tried to get the provincial government to fix the problems but it was difficult as the Provincial government had little money for investments and inducements.

The Pearl River Delta Urban System Plan was completed in 1995 and focused on five areas: the urban system, environmental protection, infrastructure, economic development, and social development. The plan typed cities into a hierarchy of cities—A, B and C—Shenzhen being in the ‘A’ group. Certain facilities and road standards were designated according to city type to “eliminate redundancies in infrastructure and reduce wasteful resources through competition.” Buffer zones and green belts were also put in to reduce stress on the transportation infrastructure. Guangdong enacted legal, financial, management and other policies to make the plan more effective.

There were seven growth axes between the core and sub-core areas with the two axes of the core Guangzhou to the sub-cores of Shenzhen and Zhuhai linking to Hong Kong and Macau and their externally oriented economies. From the Hong Kong and Shenzhen core were to radiate 3 growth axes, and thus the plan has relevance for Shenzhen’s relationship with Hong Kong. Within the Urban System plan each city was given certain economic roles to concentrate in and complement the strengths of the other cities. For Shenzhen, they are high-technology, finance, logistics, and tourism. While Guangzhou as the central core would serve as a transportation hub, trade center, industrial base, and hi-tech center. Professors Mee-Kam Ng and Wing-Shing Tang note that the PRD USP was one of the first ways that China began to search for a system of regional governance.

LINKS BETWEEN SHENZHEN AND HONG KONG

The most obvious link between Shenzhen and Hong Kong, and the key reason for Shenzhen as China’s first Special Economic Zone, is that it is the only land crossing into Hong Kong. This is especially important considering that back in 1978 China did not have a port specifically for handling cargo containers. If China was to gain foreign currency and export goods, it needed a way to export those goods, and that way was through Hong Kong and its large and efficient ports.

Social

Native inhabitants of Guangdong province share a common dialect with Hong Kong and share family ties, as large numbers of Hong Kong citizens are Guangdong natives. This is important in Asian cultures where ‘Guanxi,’ or connections through personal relationships, carry so much weight in doing business. Guanxi were especially important in Shenzhen’s early days as an SEZ, when the legal structure for foreign joint ventures were not as well established. Guanxi gave the investors an added feeling of security.

Trips between Hong Kong and the mainland have been increasing every year. In 2000 the number of cross-boundary trips exceeded 100 million—more than twice the number of just eight years earlier. Approximately 90% of those crossings occurred at Shenzhen, and for 60% of those Hong Kong travelers Shenzhen, was the final destination. These flows however, were not symmetrical—as less than one-tenth the number of mainlanders were visiting Hong Kong as mainlanders visiting Hong Kong. The largest number of regular visitors from Shenzhen to Hong Kong may be young students, as approximately two-thousand make the trip daily.

According to surveys, an estimated 28,000 Hong Kongers live in Shenzhen, accounting for more than half of the 51,000 who live on the mainland. Recent surveys show that almost 1 million Hong Kong residents would consider living in Shenzhen within 10 years, and even more (43%) intend to buy property in Shenzhen. High housing prices in Hong Kong make Shenzhen an attractive option for living, especially for poorer segments of Hong Kong's population. This is not only forcing planners on both sides of the border to rethink land use development but has also raised Shenzhen property prices, now approximately US\$ 636 per square meter, higher than Beijing and Shanghai.

For people in Hong Kong the most common reasons for trips into Shenzhen were for shopping and leisure (31%), business (23%), visiting friends/relatives (22%), and sightseeing (14%). People from Hong Kong are attracted again by prices on the Shenzhen side. Leisure activities in Hong Kong, like golf, are out of the reach of all but a few, while they are more affordable in Shenzhen. Intermarriages are also on the rise, as are the number of Hong Kongers working on the mainland. Not only are more people travelling back and forth between Shenzhen and Hong Kong, but they are doing it frequently too.

Economic

Hong Kong's role in China and with Shenzhen is often that of financier, trading partner, middleman, and facilitator. As financier, Between 1986 and 1999, Hong Kong provided 63% of Shenzhen's foreign investment. They have reaped the benefits too, as last year, Hong Kong business accounted for 70% of total profits made by the SEZ's overseas investors. As middleman, in 1999, 83% of its exports went to Hong Kong—usually for re-export to other parts of the world. As facilitator, it has been Hong Kong's knowledge of capitalist methods and its business connections that have allowed Shenzhen to flourish.

The opening up of Shenzhen and, later, the rest of the Pearl River Delta has had a tremendous impact not only on the mainland's economy but also on the structure of Hong Kong's economy. In China the phrase most often used is "front office-back factory." Before 1978 Hong Kong itself was a "back shop", as 41% of Hong Kong's employment was in the manufacturing sector, but by 1999 it had dropped to 11%. Hong Kong's increase in employment in the service and office industries (such as financing, real estate, and other business services) came only after 1981. The cheap land and labor of Hong Kong's "hinterland" allowed the SAR to remain competitive and prosperous. The drop in lower paying manufacturing jobs corresponded with an increase in higher paying service and office jobs. Those manufacturing jobs went across the border first to Shenzhen, and later to other cities in the Pearl River Delta and beyond as Shenzhen's economy has evolved towards the hi-tech, logistics, tourism, and finance industries.

Thus, in a short span of twenty years Shenzhen has evolved from an agrarian village economy to a manufacturing "back factory" and is now moving towards trying to be a "front office". This may create conflicts in Shenzhen's and Hong Kong's relationship, yet can provide the impetus for Shenzhen and Hong Kong to search for their complementary strengths for the region to compete globally.

Not only is Hong Kong the largest investment source for Shenzhen, in 2000, Hong Kong visitors spent over \$US 840 million in Shenzhen; Shenzhen is often seen as a leisure destination by Hong Kongers, comparable to Tijuana's position to San Diego. Lower-end goods are cheaper in Shenzhen than in Hong Kong, not surprising given that—despite its impressive growth over the past twenty years, Shenzhen's per capita GDP is about 18% that of Hong Kong's. This has had a profound effect on Hong Kong's economy as it has forced Hong Kong retailers to compete not only with each other but with its neighbor to the north that is increasingly gaining the skills needed to cater to a wide demographic range of customers.

Physical Links

Land Connections

There are currently three road crossings and one rail crossing between the mainland of China and Hong Kong—all through Shenzhen. Shenzhen is the busiest border in China and one of the busiest in the world, putting a strain on Shenzhen's infrastructure.

Passenger Rail- The current commuter rail link between Hong Kong and Shenzhen is the LoWu border crossing where Hong Kong's KCR railway meets Shenzhen. The city of Shenzhen is currently building a subway system with a terminus of the first subway line at LoWu. In the second half of 2000, daily passenger traffic easily exceeded 280,000 during weekends and holidays. With such large numbers, waits to cross the border exceeded an hour and a half on some holidays. Currently the border crossing is open from 6:30 a.m. to midnight. Talks are ongoing to open the border around the clock. However, many Hong Kong property owners and shopkeepers are opposed to such a plan. The property owners fear a fall in Hong Kong housing prices. However, the developers have eased opposition with their increased involvement in the mainland development.

A terminus of the second line of the subway will be completed in 2007. Shenzhen planners cooperated with Hong Kong planners to link the West spur of the Hong Kong KCR railway, currently under construction. The new border crossing will have the capacity to process 300,000 people daily. This will help relieve congestion at LoWu as well as open up development for the new Central Business District.

The current SZ-GZ rail link is an electrified express link with an operating speed of 100-120 miles an hour, and about 2 trains leave each city every hour, making the trip in just over an hour. Before 1980 most of Guangdong's rails were operated by the national government, since then they have been put under local management. There are discussions for the purchase of a maglev train to reduce the 180 kilometers Hong Kong to Guangzhou transit to 30 minutes. Shenzhen government worries the connection would make it too easy to bypass Shenzhen. Shenzhen is trying to influence such talks but most likely decisions will be made on a provincial or national level.

Rail freight: Rail freight is currently limited and is largely related to livestock and some bulk goods. Because the rail lines do not link to Hong Kong's major port, Kwai Chung, transshipment by rail from other parts of the mainland need to rely on trucks to complete their journey to Kwai Chung. This further exacerbates traffic on Shenzhen's roads.

Auto/truck: currently the Huanggang border crossing carries 73% of the vehicular crossings as it links to the important Guangzhou/Dongguan corridor through the Guang-Shen expressway and is open 24 hours a day for cargo vehicles. Since 1990 traffic at this point has increased on average 30% annually. Due to the high number of crossings and few connections, waits are common. This is a problem for the Shenzhen side of the border as the city center abuts the border. Idling trucks waiting to cross the border contribute to air pollution and street congestion. It is projected that daily cross-border traffic volume will grow from 28,300 vehicles in 1999 to 154,000 vehicles in 2020--thus the need for efficient vehicle linkage. As a comparison, approximately 140,000 vehicles per day cross from New Jersey to New York on the George Washington Bridge. Provincial level talks with Hong Kong will put customs and immigration checks under one roof, and Huanggang would be the first crossing to test this plan that would increase crossing efficiency.

Year	1999	2006	2011	2016	2020
Vehicle flows	28,000	66,000	90,000	120,000	154,000

The Western Corridor Link, Shenzhen's most ambitious plan at \$US 700 million, will connect western Hong Kong and western Shenzhen across a five-kilometer long bridge. The bridge will allow cargo trucks (especially from Hong Kong's Kwai Chung port) and other road traffic to bypass downtown Shenzhen and go straight to Guangzhou--easing congestion in the city center. The link is expected to be completed in 2005, but may be delayed for further studies over environmental and community concerns regarding traffic on the Hong Kong side.

The Shenzhen Master Plan also proposes a new Eastern Crossing, now also under consideration by the Hong Kong government. This Eastern Crossing, at Liantang would ease congestion in the eastern part of central Shenzhen and directly link to the highway system. Because people in Hong Kong drive on the left side of the road while on the mainland they drive on the right, border crossings require additional land for direction transfers—difficult on the already built up Shenzhen side of the border.

Water

Passenger: Regular high-speed ferry service connects Shenzhen to downtown Hong Kong, Macau and Zhuhai. Similar service also links the Hong Kong and Shenzhen airports.

Cargo: Shenzhen has two major ports, Yantian on the east of Shenzhen and Shekou on the west. Also on the west are Ma Wan and Chi Wan ports, which are more specialized in nature. Most of the cooperation between Shenzhen, and Hong Kong ports is a result of Hong Kong business investment in Shenzhen and PRD port terminals. A Hong Kong company, Hutchison-Whampoa, helped develop the Yantian container port. As the port business becomes more global, these port developers will work more closely with regions to coordinate inter-port links.

Currently, Hong Kong is the world's busiest container port with a throughput of 18 million TEUs (20-foot equivalent units). Hong Kong, however, posted a one-percent drop last year, in contrast to the 27% surge in throughput at Shenzhen's ports, now at

5 million TEUs. With its ports' development, Shenzhen is pushing to be a hub for the region. Hutchison is the largest operator in Hong Kong's largest port, and the company's growth at Yantian more than offset the decline in its Hong Kong operations. Land use decisions in Hong Kong have been affected, as Disney is building its future Hong Kong theme park on land once earmarked for container berths.

Shenzhen's advantages are the cheaper land transportation costs to get cargo to the port and its cheaper port handling costs. Hong Kong's advantages lay in the sheer number of connections to other destinations and easier customs clearance. The competition between the two cities has nonetheless been a boon to shipping lines in negotiating conditions with the ports, thus reducing overall costs to get products in and out of the Pearl river Delta Region.

Environment

Hong Kong gets 80% of its water supply from Guangdong and 60% of its food is cultivated on Guangdong farms. Hong Kong lies downstream of the Pearl River and downwind of many of the province's factories, so Hong Kong citizens have quite a stake on the environment within Shenzhen and Guangdong. Unfortunately, Shenzhen has also been a polluter. In 1995 it contributed about 12% of the wastewater discharge into the Pearl River Delta. 80% of the river sections flowing through urban areas of the province are rated seriously polluted, which is why each side is trying to tap into the Dongjiang river--the area's main water source--as upstream as possible. The central government, back in the sixties, signed a contract with Hong Kong to supply water. Some of the supply comes from a reservoir in Shenzhen, which has caused Shenzhen planners to limit land use around the reservoir to keep the water safe for the residents of Hong Kong.

Air pollution is the most visible issue for residents in the region, but air pollution is expected to get worse in the short term, due to population growth, rapid industrialization, and higher per-capita incomes. As Professor Yok-shiu Lee points out: it may be one country, two systems but the region is still one eco-system.

Electricity

Daya Bay Nuclear Power Plant, a Guangdong and Hong Kong joint venture located on Shenzhen's eastern reaches, has 70% of its output go directly to Hong Kong for the SAR's power needs. Another nuclear power plant called Ling Ao is currently under construction near the Daya Bay power plant. Its output, as with the remaining 30% of Daya Bay's output, will link directly to the Southern China power grid. It is only via the Southern China power grid that the electrical power from the city's nuclear power plants power Shenzhen. It was not a city initiative that created the power plants rather a directive from the central government. Nevertheless, the city has to take the power plant into account in its land planning. Circles around the two plants represent precaution zones against mishaps, limiting the population in those areas. In such a way, electricity for Hong Kong, as directed by the central government, has determined land use in Shenzhen.

CHALLENGES

On July 1, 1997, Hong Kong was handed over from the British to the Chinese. However, Hong Kong possesses a mini-constitution called the Basic Law of the Hong

Kong Special Administrative Region of the People's Republic of China (HK SAR). This is the 'One Country, Two Systems' policy. Under it, the Hong Kong SAR has autonomy except in area of defense and foreign affairs. Citizens of Hong Kong are skeptical of any measures that may erode Hong Kong's autonomy. Thus, even though Hong Kong is part of China, there is still a border between the Hong Kong and the mainland. In fact, mainland people need a visa in order to visit Hong Kong, although talks are underway to allow more multi-entry permits for mainlanders.

China has been one of the most centrally planned economies in the world, while Hong Kong under the British government had a more laissez-faire attitude. Currently Hong Kong has a fully-formed market economy while Shenzhen is part of a reforming socialist system. There are different currencies, legal systems, education systems, and some differing religious and cultural institutions. Even differences in language exist as the mainland uses the simplified character set for writing, while Hong Kong uses traditional characters. Although natives of Guangdong and Hong Kong both speak the Chinese dialect (Cantonese), Mandarin is the predominant dialect in Shenzhen--since most people in Shenzhen are from other parts of the country.

Issues of late are forcing both cities to redefine their roles. As China enters the WTO and simplifies or ends many regulations, many of Hong Kong's advantages as an intermediary between China and the western world will come to an end. The government of Hong Kong further faces a dilemma in that strengthening economic, transportation and other links between Hong Kong and the rest of the Pearl River Delta will provide competitiveness for the region as a whole. However too many links may erode Hong Kong's current advantages, and make it just another city in the region.

Shenzhen, too, will be affected by the WTO entry as it will lose almost all of its advantages of being a Special Economic Zone. Shenzhen has already found that it is becoming too expensive as a manufacturing center but would like to go beyond being a financial back-office to Hong Kong's lucrative finance center. The city is trying to mold itself into a tourist, logistics, and research and development center, as well as being a financial center in its own right.

As more links from Hong Kong to the other parts of Guangdong develop, Shenzhen will lose much of its advantage as the SAR's closest neighbor. Shenzhen consequently needs to further improve its infrastructure, education, and environment, so that companies and people from Hong Kong come to Shenzhen not because they need to, but because they want to. Even the population of Shenzhen, as it becomes increasingly affluent, is demanding better infrastructure, schools and parks.

With globalization there is a concentration of management and a decentralization of production, creating what has been called a network city. Hong Kong, Shenzhen and other cities in the region are struggling to figure out where they fit in such a network.

PLANNING COOPERATION

The Current Mechanism for Cooperation and Coordination

Currently all planning mechanisms existing with Hong Kong officially interface with the Provincial government. Before the Hong Kong handover in 1997 there was very little cooperation between Hong Kong and the Pearl River Delta Region—even though there was a tremendous rise in private sector integration. A Sino-British Infrastructure Coordination committee was set up in 1994, but only issues regarding air, sea and land facilities straddling the border were discussed. The Hong Kong-Guangdong Cross Boundary Major Infrastructure Coordination Committee (ICC) was created after the return. The ICC is used to exchange information, to consider infrastructure projects that affect both sides and to shorten the decision making process on those projects. However, many feel there is insufficient long-term plan visioning being discussed by both sides.

Environment

The two sides set up the Hong Kong-Guangdong Environmental Protection Liaison Group in 1990 to exchange information and conduct joint research. However, during the 1990's atmospheric emission in the region increased by 120% even as the Guangdong government had coordinated it so that 80% of the factories in Guangdong treated industrial emissions in some manner. For the purpose of more detailed exchanges, in 2000, the Joint Working Group on Sustainable Development and Environmental Protection was set up. Under the Joint Working Group is an Expert Group that coordinates the specialized work of eight Special Panels: They deal in areas of air quality, motor diesel specifications, conservation, marine resources, Pearl River Delta water quality, town planning, Dongjiang River water quality, and Shenzhen Bay and Mirs Bay's regional Environmental management. Among the 21 members on the board of the Joint Working Group are two from Shenzhen government. Shenzhen officials are also on two of the eight special panels.

Although, for the most part, these panels do not have any legal bite and the problems are complex, some consider the exchanges to be quite successful as they provide a good basis on which to build and reinforce mutual trust between the two sides before any intensification of cross-border cooperation. Thus the group and panels provide only a first step. Shenzhen and Hong Kong have already successfully cooperated on the US\$ 200 million clean-up of the Shenzhen River—a cleanup that is now in its third phase, focusing on pollution prevention and environmental improvement.

Planning Cooperation Obstacles

Difficulties exist for planners in Shenzhen to cooperate with their Hong Kong counterparts. One is the difficulty of physically getting to Hong Kong. Visas need to be arranged and that can sometimes take weeks, hotels booked and money changed (not particularly easy when permission needs to be granted to exchange yuan with Hong Kong dollars). In many cases official invitations need to be offered to high-ranking planners, rather than simply calling up a counterpart and deciding to meet. Such issues make it even more difficult for lower level planners to get in touch with each other. Nonetheless planners do meet. On average last year there were meetings about once a month between the Shenzhen and Hong Kong planning departments. With specific projects like the Shenzhen subway construction, meetings occurred even more frequently. But if there were no concrete projects, meetings tapered off.

Professor Anthony G.O. Yeh of Hong Kong University believes there are two main obstacles that are preventing future integrated planning. The first is a need to change attitudes of the local governments in the Pearl River Delta region to see the area as one unit in which Hong Kong and Macau are vitally linked. He also believes attitudes need to change within the Hong Kong government. When Hong Kong was a colony, there was the idea that Hong Kong was a borrowed place disconnected from a closed China, one that would not be their's in the future. Professor Yok-Shiu Lee at the University of Hong Kong believes the remnants of such thinking are the greater reason for today's weak links than any technical barriers. He also believes many mainland officials are placing too much of an emphasis on economic growth rather than balancing it with environmental needs. With regard to environmental issues, it is hard for one side to demand the other to clean up its act, because both sides have their own internal pollution problems that need to be addressed. Tom Mitchell from the South China Morning Post, believes that, 'the stark contrast between the Hong Kong government's relative transparency and the opaqueness of its neighbors is arguably one of the biggest barriers to better regional cooperation.'

From a Shenzhen perspective, those difficulties are even greater because Shenzhen is a city, not a province. Hong Kong has equal status in the eyes of Beijing as a province (even more so due to its autonomy). So Hong Kong's preference is often with those who hold the power, either the central or the provincial government. It is tough on Hong Kong too, as the single government of Hong Kong as an autonomous region needs to talk to the central government on some issues, the provincial government on others and directly to Shenzhen on specific construction projects—creating headaches.

NEED FOR ACTION

Land use patterns and infrastructure are becoming more set with each passing year, so the sooner coordinated action comes about, the more efficient and sustainable the entire region can be. Past mistakes cannot be repeated. For example, the Pearl River Delta currently has new airports--or airports that have undergone major expansions in recent years—in Hong Kong, Macau, Shenzhen, and Zhuhai. Guangzhou is currently building a new airport. All these airports are within a three hours drive from each other. Zhuhai's airport is now only at 5% of capacity and is facing a cash flow crunch on its debt payments. The airports in the region have the capability of handling 210 million passengers per year, which is high for a region that is projected to have 60-70 million inhabitants in 20 years time.

The need for action is urgent further because within China, Shanghai and its Yangtze Delta region will provide much competition as an Asian hub due to its traditional financial skills and regional integration. Six out of ten European Companies in China stated that they would like to be headquartered in Shanghai or Beijing. Most of Shanghai's huge metropolitan region falls under the jurisdiction of Shanghai government, which has been accorded provincial level status, and so has a more direct link to the central government. The city is also seeking to reclaim its role the finance center of China—a role it held before 1949. Other regions outside of China also present challenges. Hong Kong—and therefore the Pearl River Delta--finds itself most often competing with Singapore for international business.

For infrastructure coordination, the needs are to:

1. Link infrastructure projects with regional economic development that plays to the strengths of each locality.
2. Link infrastructure projects with urban patterns and environmental protection.
3. Establish achievable goals and a timetable in which to implement them.

STRATEGIES FOR STRENGTHENING COOPERATION

Because of 'One Country, Two Systems', a Regional Planning Authority that has legal control over land use and other aspects of planning for the whole Pearl River Delta Region is not feasible. Therefore other strategies must be used:

- First and foremost, there needs to be a streamlined visa process for planners, other city officials, and businessmen on the mainland to visit Hong Kong. A quota of mainlanders visiting Hong Kong has just been dropped, but without the ability of planners to have spur-of-the-moment meetings, coordinated planning cannot come about.
- An exchange of planners, and other bureaucrats is needed. Because of the great differences in governance between the two sides, simply conducting meetings will not give each side a thorough understanding of the processes, goals and limitations of the other. Exchanges would be especially fruitful in a relationship-based society.
- Give it time. Although time is of the essence in coordinating infrastructure before land use patterns become set, one must realize that it has only been 5 years since the handover and roughly twenty since the opening-up. In such time the two sides have already grown closer together and, as the mainland further catches up economically and becomes socially integrated with Hong Kong—planning connections will also become easier. The flip side of this also means that, until the integration does occur, environmental matters may get worse before they get better.
- Hong Kong must be more willing to talk at all levels of government, rather than just central or provincial levels. Conversely, on the mainland, Shenzhen must be unified with the other layers of government in talking to Hong Kong.
- Coordinating mechanisms must have a large degree of transparency. Transparency will be the best way to engender trust between all forms of government and stakeholders.
- Need both sides to cooperate on a single, unified planning study. It is important that both sides come to a common conclusion so that each jurisdiction within the Pearl River Delta can complement the other jurisdictions so that a rational system of infrastructure results with a minimum of wrangling. Even though such a planning study would not be legally binding, it could be a guiding force and baseline from which the jurisdictions could negotiate infrastructure planning. Such a unified planning study would require both sides, especially the mainland, to be forthcoming in sharing information. Good planning is dependent upon good information.
- More planning cooperation on studies between the region's universities. Universities would be reaching common goals, and at the same time allowing the region's planners of tomorrow to acquaint themselves with one another.
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Some suggest that the inter-university research programs would be a short-term goal before the long-term creation of a research institute.

The need to think regionally has been great enough among the public that private companies and active citizens have taken the lead in commissioning studies. The privately organized Hong Kong *Project 2022* commissioned a study to envision a Pearl River Delta under various scenarios of intra-region cooperation or non-cooperation. It then proposed the creation of a Regional Planning and Research Institute made up of academic institutions, philanthropies, and others in the private sector from both Guangdong and Hong Kong. Such an institute would monitor on a regular basis, initiatives, plans and programs from throughout the region. It would also support public and educational initiatives on the importance of planning for the whole Pearl River Delta. Such education drives would also get citizens thinking of the region as a single unit. In the environmental sphere, a think tank like this might be the proper mechanism for drawing up a “Local Agenda 21” program to guide environmental planning for the area.

The institution would utilize a multi-functional Pearl River Planning Support System that would have four major capabilities:

1. Data management capability
2. Data Analysis capability
3. Cartographic capability
4. Network and Communications Capability to spread information through the internet or other means.

The costs of getting such a system up and running are high as are the differing levels of equipment and training that both sides possess. Such a program could start with just Shenzhen interfacing with Hong Kong, as Shenzhen, like Guangzhou, already has a computer based land management system. Other localities in Guangzhou are planning them, but early coordination is important. Once uncoordinated systems are in place it will be costly and hard to achieve consensus on region-wide standards and making the creation of a PRD Planning Support System almost impossible. Another possible hindrance to such a system is the fact that Shenzhen, or the other cities of the Pearl River Delta, cannot simply gather with Hong Kong and decide on statistical standards. Cities in China have to adhere to national standards. Thus, if such a system were in place, PRD cities may have to have two sets of statistics to gather—one for national statistics and one for a region-wide planning support system.

CONCLUSION

Ultimately each city needs to act in the region’s interest rather than selfishly, because if the Pearl River Delta region does not thrive, none of the cities will thrive either. The sooner the better, as Shenzhen, Hong Kong, and the rest of the Pearl River Delta have low levels of auto ownership. Coherent policies today can curb sprawl and make mass-transit feasible and profitable. If the Pearl River Delta is able to work together on environment standards and enforcement, then a healthy region will be a competitive region.

The situation is hopeful, as it has only been five years since the handover. Planners are still wary of treading on their counterparts’ toes, but as time goes by, and

procedures to meet become streamlined, cooperation will exist on a more equal basis—to the benefit of the whole region.

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